Public Archaeology Facility Report

Binghamton University
State University of New York
Binghamton, New York 13902-6000

CULTURAL RESOURCE MANAGEMENT REPORT

**PHASE 1A ARCHAEOLOGICAL/ARCHITECTURAL ASSESSMENT
COHOCTON WIND POWER PROJECT
TOWN OF COHOCTON
STEUBEN COUNTY, NEW YORK (MCD 10109)**

**PREPARED BY:
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PUBLIC ARCHAEOLOGY FACILITY**

**SUBMITTED TO:
UPC WIND MANAGEMENT, LLC.**

MARCH 2006

MANAGEMENT SUMMARY

PROJECT NAME: Cohocton Wind Power Project

SHPO PROJECT REVIEW NUMBER: (not available)

INVOLVED STATE/FEDERAL AGENCIES: NYSDEC, Public Service Commission, US Army Corps of Engineers

PHASE OF SURVEY: Phase 1A Archaeological/Architectural Sensitivity Assessment

LOCATION INFORMATION:
Town: Cohocton
County: Steuben
MCD: 10109

PROJECT DESCRIPTION/SURVEY AREA: (preliminary layouts - subject to change)

UPC Wind Management, LLC (UPC Wind) is proposing to develop an 82 megawatt (MW) wind-powered generating facility on approximately 5755 acres of leased land in the Town of Cohocton, Steuben County, New York. The project is anticipated to include 41 wind turbines, each with a generating capacity of 2.0 MW. For the purposes of this study, 48 potential turbine sites have been evaluated. The primary turbine array will be located on Pine Hill and Lent Hill northeast of the Village of Cohocton. Forty-four of the potential turbine sites are located on Pine Hill and Lent Hill. An additional four potential turbine sites are located on Brown Hill near the proposed point of interconnection with an existing New York State Electric and Gas (NYSEG) 230 kV transmission line. Each wind turbine will include an 87 meter (285 foot) diameter, three-bladed rotor mounted on a 78-meter (256 foot) tall steel tubular tower. Three meteorological towers will also be installed, along with an operations and maintenance building, approximately 13 miles of gravel access road, 27 miles of buried gathering lines (electrical interconnect), and a 9.2 mile long overhead 115 kV transmission line that will connect a central collection station on Lent Hill to a new substation adjacent to the existing NYSEG transmission line on Brown Hill. The 115 kV transmission line will be carried on treated wood poles and will cross the Cohocton River Valley and Interstate Route 390. The river and highway crossings are both currently anticipated to be above-ground crossings.

Buried interconnection cables will be placed in trenches at a depth of 1.2 m (4 ft), with trench width varying from 1-2 m (3.5-6.5 ft).Approximate distance between poles will be 92 m (300 ft); pole foundations will be drilled by auger and vary from 2.5-3.5 m (9-11 ft) in depth. Hole width will range from 80-91cm (30-36 in).

Visual assessment indicated all turbine locations are undisturbed and relatively flat to gently sloping agricultural fields and/or woods; proposed locations vary in elevation from 610-616 m (2000-2020 ft) ASL. The proposed access roads will connect each turbine location to the main roads, as well as to adjacent turbine pads. All new roads will be gravel atop the existing grade with a total width measurement of approximately 7.5 m (25 ft). Many of the proposed access roads will follow the footprint of an existing farm road.

USGS QUAD MAPS: 30-60' Hornell and Canandaigua, New York and 7.5' Naples, Avoca, and Haskinsville

SENSITIVITY ASSESSMENT:

Prehistoric sensitivity: Low potential for large residential sites throughout a majority of the project area; high potential for small camps and processing stations near the headwaters of upland creeks and streams. A portion of the above-ground transmission line will cross a section of the valley bottom south of the Village of Cohocton, and it is possible these landforms (outwash terraces and narrow floodplains) contain remnants of larger base-camp or village settlements.

Historic sensitivity: Low historic site potential throughout the entire project area; no map documented structures (MDSs) within or near impact areas. Large majority of the project area was (and continues to be) used for agriculture.

RESULTS OF ARCHAEOLOGICAL ASSESSMENT:

Archaeological testing is recommended for a sample of turbine pads, each measuring roughly 120 m (400 ft) in diameter, and portions of access road, buried interconnects, and substation locations. In terms of the prehistoric sensitivity model, many of these locations correspond roughly to the highly-valued upland knoll environments. Therefore, prehistoric sites are likely to be encountered in these areas. Testing is not recommended for portions of the project area exhibiting extreme (15% or greater) land slope. These portions of the project area are confined exclusively to the valley walls flanking the Cohocton River valley.

Subsurface Strategy: Current layouts for the Cohocton Wind Power Project are preliminary and subject to change throughout the testing process. Changes to the current layout will alter the number and extent of archaeological testing, but will not alter the basic testing strategy (based on new NYS SHPO guidelines).

Subsurface sampling is possible across all of the testable portions of the project area, but site sensitivity varies considerably across the upland environment. In general, upland prehistoric sites are likely to be clustered near water sources (e.g., headwaters, streams, and wetlands) or unique topography (elevated knolls) and less likely to be encountered on broad and homogenous upland plateaus. Therefore, the recommended methodology for upland projects should be geared toward the identification of sites on or adjacent to high sensitivity water sources and/or landforms.

The newly updated NYS SHPO guidelines for upland projects allow for such a testing method, focusing on the strategic placement of close-interval shovel test pits (STPs) on archaeologically sensitive parcels, rather than an equal distribution of pits across all landforms. For the project area a 5 m (16 ft) testing interval for sensitive parcels would be sufficient for identifying the small lithic scatters most commonly encountered within upland contexts. Total pits for the project area is calculated by combining the length of each impact area by the approximate width and dividing by 4047 meters to determine impacted acreage. Impacted acreage is then divided by 16 (the average number of pits per acre for NYS) to reach the total contribution of STPs per turbine/access road/buried interconnect to the entire project impact area. The calculated number of pits would then be used for close-interval testing (5 meters) on or near high sensitivity parcels; low sensitivity parcels would be excluded from the sampling. Using this method it is possible some portions of the complete project area would be exempt from testing (e.g., undifferentiated plateau), while other parcels (e.g., headwaters and stream/wetland fringes) would receive a bulk of the close-interval STPs. At present the current estimate for shovel test pits is roughly 3019-3069.

Combined Surface/Subsurface Strategy: Much of the project area for Cohocton Wind Power Project will impact existing agricultural fields or land immediately adjacent to agricultural fields. Many of these fields are currently plowed or are plowable, thereby allowing systematic surface surveys and artifact collection. Similarly, plowed lands immediately adjacent to proposed access road and buried interconnection routes can be walked to provide a sample of potential artifact scatters. Any artifact scatters would be collected and mapped with hand-held GPS units. Surface surveys of plowed fields would be combined with a limited amount of subsurface testing to identify soil horizon variations. A sufficient number would be one STPs for every 100 m (330 ft) and two pits for every turbine location. This limited number of STPs should be used for close interval testing (5 meter) at any high sensitivity areas or to help further define any sites identified during surface survey. Implementing a combined surface and subsurface testing strategy would decrease the number of shovel test pits to approximately 600-700.

Surface surveys would not be possible if crops (or hay/grass) are standing or visible, and any areas would also need to be freshly plowed and disked. Plowing is not an option for any project area landforms (e.g. forest or light-brush) that have never been previously plowed or cultivated.

RESULTS OF ARCHITECTURAL ASSESSMENT:

The architectural assessment documented at least 80 National Register Listed and/or Eligible historic structures/properties and one potential "historic district" within the Cohocton Wind Power Project visual study area. This total includes four National Register Listed structures (three for the Village of Naples and one for the Village of Cohocton). The potential historic architectural district spans North Main Street in the Village of Naples from CR 33 to the intersection with Mt. Pleasant Street. The extent of turbine visibility for each structure/property has yet to be determined.

A more detailed architectural reconnaissance will be completed for the Phase 1B testing. This reconnaissance survey will include descriptions and photographs of all structures/properties, as well as any specific recommendations, such as landscaping measures to block visual impacts.

AUTHOR/INSTITUTION: Public Archaeology Facility - Binghamton University
Samuel M. Kudrle
Cynthia Carrington-Carter

DATE: March 2006

SPONSOR: UPC Wind Management, LLC.

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INTRODUCTION

This report presents the results of a Phase 1A Archaeological and Architectural Sensitivity Assessment for the Cohocton Wind Power Project in the Town of Cohocton, Steuben County, New York. In compliance with the New York Standards for Professional Survey (NYAC 1994), this study was undertaken to assess the potential impact to cultural and architectural resources in the project area. The results of this report apply only to the project area as defined in Section I of this report.

The assessment summarized in this report was performed under the supervision of Dr. Nina Versaggi, Director of PAF. The project was directed by Sam Kudrle, who was also the primary author of this report. Architectural assessments were completed by Cynthia Carrington-Carter. All administrative duties were performed by Maria Pezzuti and Annie Pisani.

I. PROJECT DESCRIPTION

UPC Wind Management, LLC (UPC Wind) is proposing to develop an 82 megawatt (MW) wind-powered generating facility on approximately 5755 acres of leased land in the Town of Cohocton, Steuben County, New York. The project is anticipated to include 41 wind turbines, each with a generating capacity of 2.0 MW. For the purposes of this study, 48 potential turbine sites have been evaluated. The primary turbine array will be located on Pine Hill and Lent Hill northeast of the Village of Cohocton. Forty-four of the potential turbine sites are located on Pine Hill and Lent Hill. An additional four potential turbine sites are located on Brown Hill near the proposed point of interconnection with an existing New York State Electric and Gas (NYSEG) 230 kV transmission line. Each wind turbine will include an 87 meter (285 foot) diameter, three-bladed rotor mounted on a 78-meter (256 foot) tall steel tubular tower. Three meteorological towers will also be installed, along with an operations and maintenance building, approximately 13 miles of gravel access road, 27 miles of buried gathering lines (electrical interconnect), and a 9.2 mile long overhead 115 kV transmission line that will connect a central collection station on Lent Hill to a new substation adjacent to the existing NYSEG transmission line on Brown Hill. The 115 kV transmission line will be carried on treated wood poles and will cross the Cohocton River Valley and Interstate Route 390. The river and highway crossings are both currently anticipated to be above-ground crossings.

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II. GENERAL PROJECT AREA

Figure 1 depicts the project location in Steuben County and New York State. Figure 2 depicts the project area on the USGS 30-60' Hornell and Canandaigua quadrangles. Figure 3 is a copy of the project area layout provided by EDR based on a combination of the 7.5' Naples, Haskinsville, and Avoca, New York topographic maps.

Geographically, this region is part of the northern Allegany Plateau and greater Finger Lakes province of central New York State. Within the Town of Cohocton (located southeast of Canandaigua Lake) landform variation ranges from rolling upland plateaus, to steep valley bottoms. Dispersed between the uplands and valley bottoms are a network of small streams and creeks, most of which flow south toward the Cohocton River, eventually joining the Upper Susquehanna. Farther north near the borders of Livingston and Ontario Counties, drainage is directed toward the Finger Lakes and Lake Ontario.

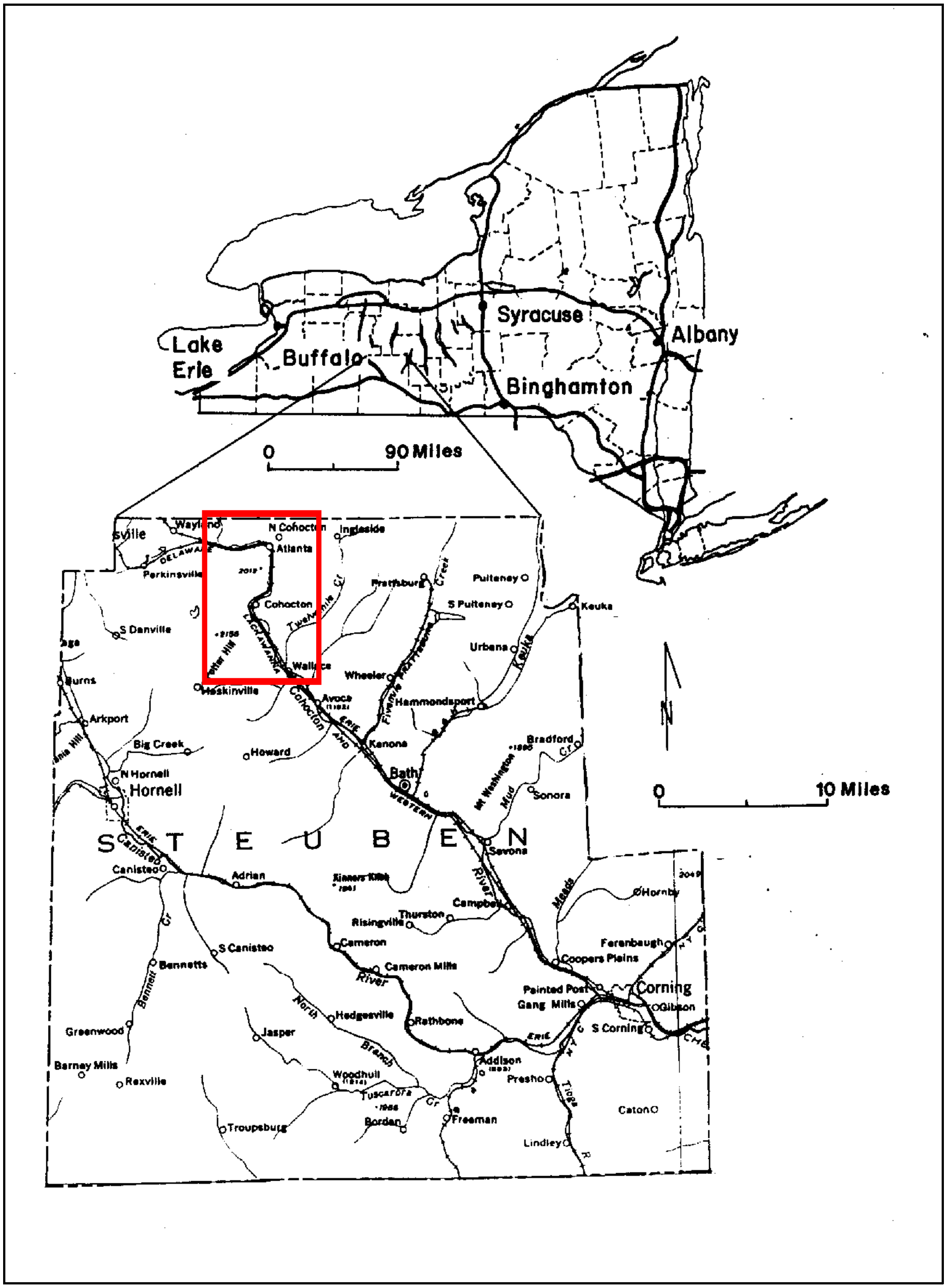

Figure 1. Location of Cohocton Wind Power Project area in New York State and Steuben County. (highlighted in red)

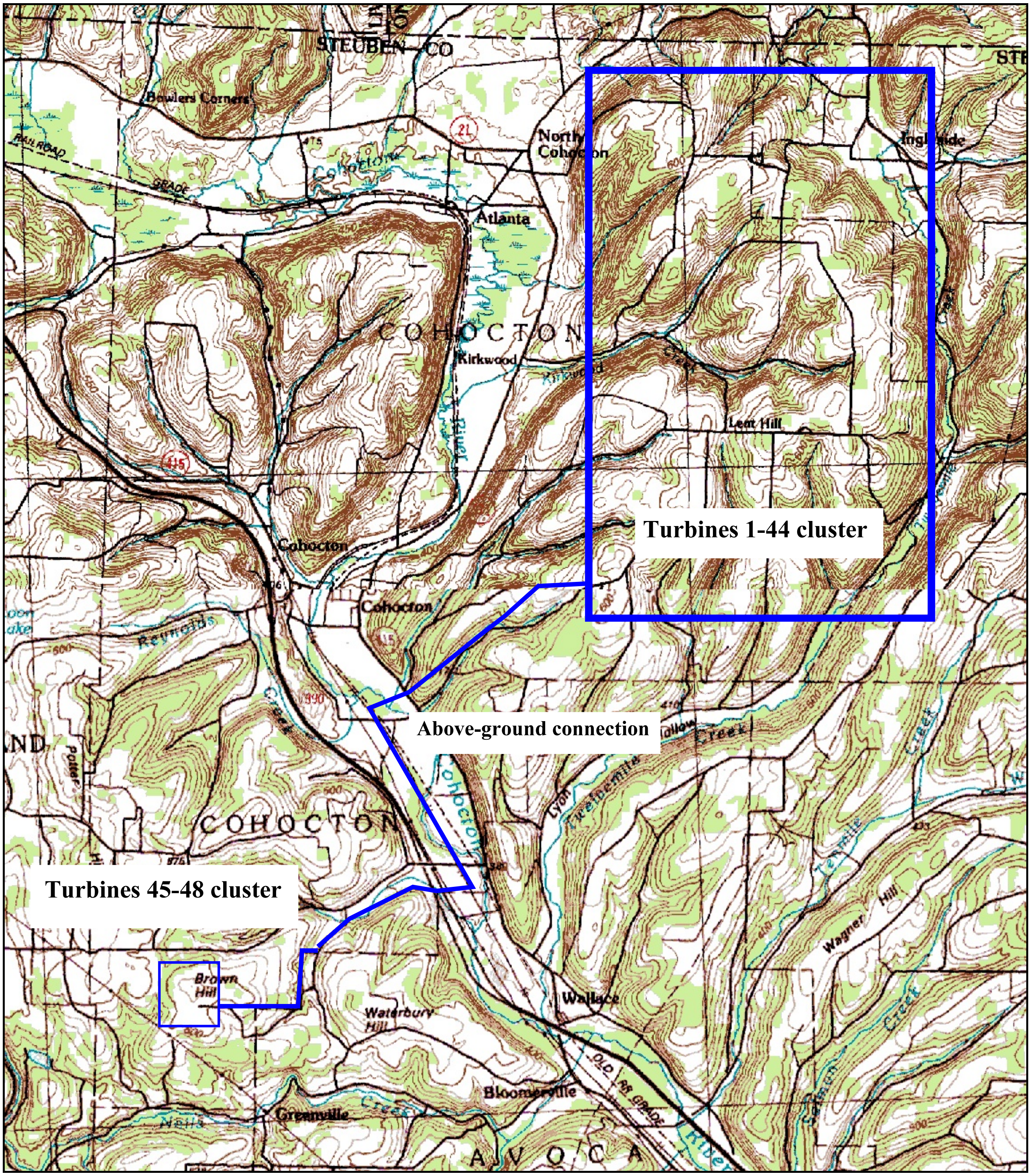

Figure 2. Location of the Cohocton Wind Power Project area on the USGS 30-60' Hornell and Canandaigua quadrangles.

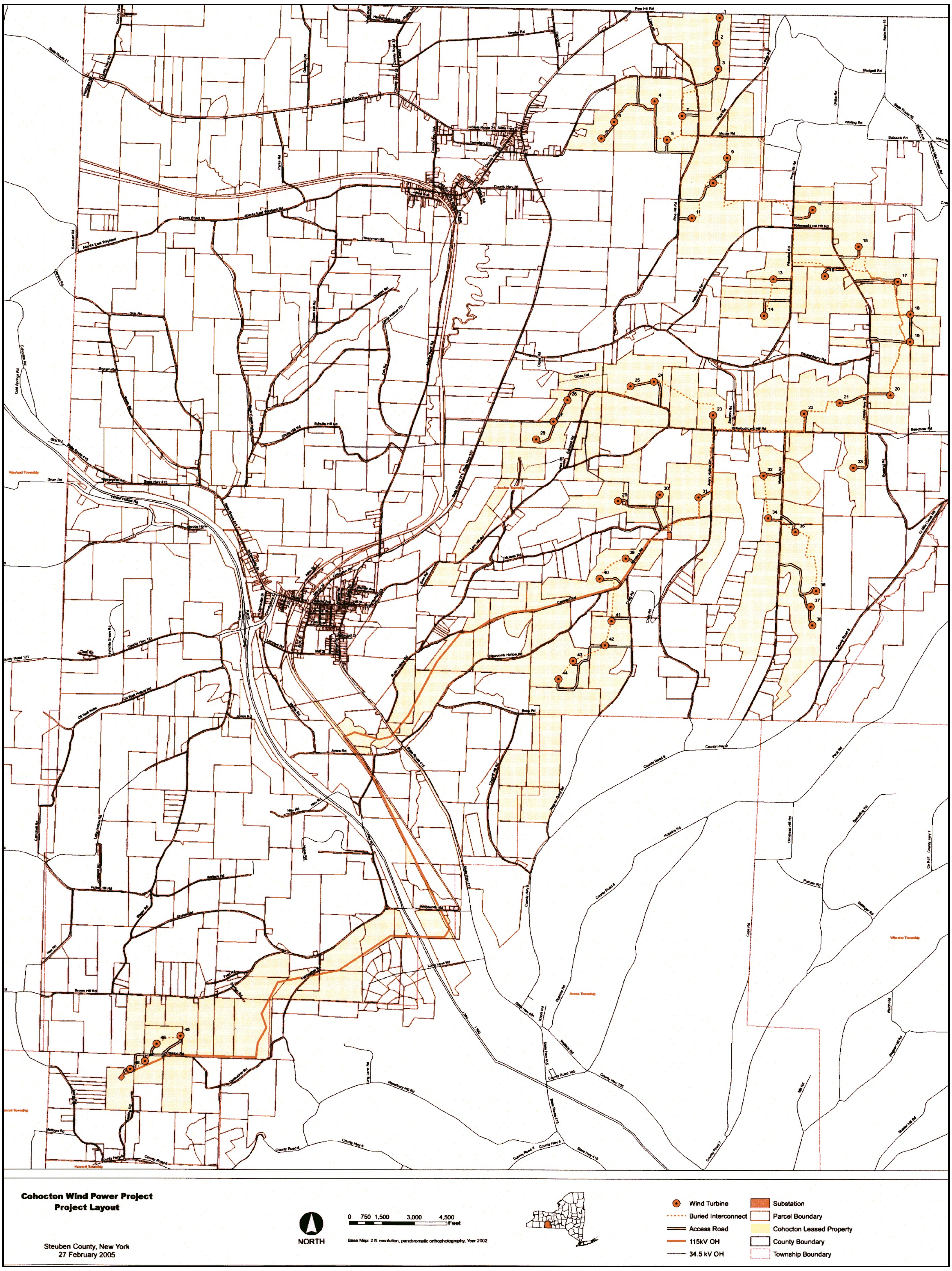

Figure 3. Location of the Cohocton Wind Power Project on the combined USGS 7.5' Naples, Avoca, and Haskinsville quadrangles.

III. BACKGROUND RESEARCH

Background research was conducted on the environment, prehistory, and history of the project area within Steuben County. This research addressed the types of sites likely to be located in the project area based on the results of site file checks, historic maps, county histories, archival documents, and settlement patterns in and around the Town of Cohocton.

3.1 Site Files Search

A site files check (conducted for the neighboring Prattsburg Windfarm Project) at the Public Archaeology Facility (PAF), New York State Museum (NYSM), and New York Office of Parks, Recreation, and Historic Preservation (OPRHP) listed six prehistoric sites and three historic sites within the regional vicinity of the Town of Cohocton. Information pertaining to the recorded archaeological sites and inventoried structures is presented in Tables 1-2.

3.1.1 Documented Prehistoric Sites

All six prehistoric sites documented in the Cohocton region are unidentified occupations. Three of the six sites were found in the early 1920s by archaeologist Arthur C. Parker. The first Parker site is ACP YATS-4, an unidentified "village" settlement in southern Yates County along an unnamed creek. An additional "village" site (NYSM 9294) was noted by Parker in southern Yates County on the east side of Hatch Hill. Both village sites are said to have contained "groove boulders" (Parker 1920). The third Parker site (NYSM 9287) is described as "traces of occupation" near Naples in Ontario County. This designation was used by Parker (1920) to denote small sites (primarily lithic scatters) lacking any structural or cultural features (post molds, hearths, fire-pits, etc.). The three remaining prehistoric sites were found during CRM investigations in the 1980s. During a survey for NYSDOT in the Town of Prattsburgh, archaeologists found evidence of prehistoric activity near a wetland east of NY 53. The site (identified as Faatz) produced a chert bifacial tool and two chert flakes during a surface collection and limited subsurface testing. Farther to the south and west near the Town of Wheeler are the Five Mile Creek 1-2 Sites. Roughly 550 m (1800 ft) apart, both sites are located along the western margin of Five Mile Creek. Artifacts from Five Mile Creek 1 include chert flakes, fire-cracked rock (FCR), and evidence of cultural features. Five Mile Creek 2 produced two chert flakes, one large oval-shape quartzite artifact, and fire-cracked rock. None of the six prehistoric sites are National Register Eligible or Listed.

Table 1. Summary of documented prehistoric archaeological sites within the Cohocton region

Site number / Site name	Site description	Site Type	Affiliation	NR Status
NYSM 5270 / ACP YATS-4	1 km (0.6 mi) north of Prattsburgh Town /County line; west side of road; 0.8 km (0.5 mi) south of School #10; 46 m (150 ft) north of creek	village	Unidentified	I
A10121.000005 Faatz Site	East side of NY 53; 1 km (0.6 mi) south of A101221.000006 / 244 m (800 ft) south of wetland	stray finds	Unidentified	I
NYSM 9287 / ACP YATS; ACP ONTO	1.6 km (1 mi) north of county line near Naples (Ontario County); general area from Reservoir Creek to Tannery Creek; crosses under NY 53.	traces of occupation	Unidentified	I
NYSM 9284 / ACP YATS; ACP ONTO	3.1 km (1.9 mi) north of county line on the east side of Hatch Hill; within 305 m (1000 ft) of a tributary of Tannery Creek	village	Unidentified	I
NYSM 5721 / RTE 53-5 Mile Creek Site 1	549 m (1800 ft) north of Wheeler Town line; adjacent to the west side of Five Mile Creek	traces of occupation	Unidentified	I
NYSM 5722 / RTE 53-5 Mile Creek Site 2	Prattsburgh Town line; 152 m (500 ft) west of Five Mile Creek	traces of occupation	Unidentified	I

***I=Inventoried; NE=Not Eligible; NRE=National Register Eligible**

3.1.2 Documented Historic Sites

The historic sites consist of the remains of three 19th century foundations and light-density sheet middens. The first is the Walsh Site (SUBi-1084), an 1850s foundation and sheet midden found during a CRM survey for NY 53 in the Town of Prattsburg. Artifacts from 35 STPs (shovel test pits) and two test units included a variety of decorated ceramics and bottle glass and mortared brick. Just south of the Walsh Site (on the opposite side of NY 53) archaeologists documented an 1850s outbuilding foundation and a light-density sheet midden of nails, concrete, and wood beam fragments. The area was identified as the Beach Site (A10121.000004). The third historic site was found near the Town of Naples during another CRM survey for NY 53. Designated as the Boon Site (A10121.000006), crews discovered the remains of a middle 19th and early 20th century foundation and well. Artifacts from the testing included a variety of 19th century ceramics, clay smoking pipes, cosmetic artifacts, architectural materials, and food remains. None are National Register Eligible or Listed.

Table 2. Summary of documented historic archaeological sites within the Cohocton region

Site number / Site name	Site description	Site Type	Affiliation	NR Status*
A10121.000003 / SUBi-1084 Walsh Site	North side of NY 53 / 10 meters (33 feet) from creek margin	Foundation	1850s	I
A10121.000004 Beach Site	South side of NY 53; almost opposite A10121.000003 / 20 meters (66 feet) from creek margin	Outbuilding foundation	1850s	I
A10121.000006 Boon Site	West side of NY 53 near Town and County line / 549 meters (1800 feet) south of wetland	Foundation and well	Mid 19th to early 20th cent.	I

***I=Inventoried; NE=Not Eligible; NRE=National Register Eligible**

3.2 Environmental Setting

3.2.1 Glacial History

The Allegheny Plateau forms the dominant geologic province in all of Steuben County. The plateau, derived primarily from Devonian bedrock, ranges in elevation from 214 to 730 m (700-2400 ft) ASL, cross-cut by tributary streams and large rivers that meander through steep valleys and rugged uplands (USDA 1973). During the Pleistocene period the plateau was significantly modified by several periods of glacial advance and retreat. Both processes eroded the underlying bedrock and deposited enormous amount of non-local sediments. As noted above, the glacial advance moved across central New York between 35,000-14,000 years ago (Van Diver 1985). As the ice moved over the landscape, surface sediment and shallow bedrock were scraped loose. Some of this sediment was incorporated into the basal layer of the ice-sheet (creating a sand-paper effect); the remainder was piled into terminal moraines at the head of the glacier (Van Diver 1985). The period of retreat began with the gradual warming of the region at the end of the Pleistocene. In the uplands, the material previously locked within the glacial ice formed a thin mantle of unsorted till (clay, sand, gravel, and boulders) and broken bedrock. Farther down the valley walls and bottoms the glacial melting produced a series of early braided rivers that deposited stratified layers of gravel and sand (outwash), forming the foundations of the broad gravelly terraces at the base of the uplands. Over time the braided glacial rivers slowed, and through gradual erosion and meander settled into the current channels occupied by the modern drainages.

Farther north toward Livingston and Ontario Counties, the land grades into the Portage Escarpment, a transitional landform that separates the rugged uplands of the Allegany Plateau from the lowlands associated with the Lake Ontario Till Plain (USDA 1973). Unlike the deeply dissected plateau uplands, the landscape of the Portage Escarpment is fairly smooth and rolling, owing in part to the erosion-resistance of the underlying sandstone and shale bedrock (USDA 1973). Although more resistant than the Devonian bedrock of the Allegany Plateau, glaciation also had a marked effect on the Escarpment bedrock. As the glacial ice moved south during the Wisconsin Period, the combination of till and glacial weight scoured the ground surface, in some instances leaving ripple-marks on the exposed sandstone (Van Diver 1985). Near the southern edge of the Escarpment, lobes of ice entered the pre-glacial valleys now occupied by the modern Finger Lakes. Moving slowing through these valleys, the ice gouged out deep and wide troughs, pushing loose sediment south towards the Allegany Plateau (Van Diver 1985). At the maximum extent the Finger Lakes lobes extended to the present locations of Spencer, Horseheads, and Hammondsport. A period of relative warmth followed, causing the ice lobes to melt north, thereby releasing an unsorted mixture of glacial drift at the southern edge of the Finger Lakes. This material, termed the Valley Heads moraine, blocked the southern drainage pattern of the pre-glacial valleys (Van Diver 1985). As a result, glacial meltwater filled the newly carved valleys, forming the modern Finger Lakes. The Valley Heads moraines, as well as the depression of the landscape along the Lake Ontario Till Plain, reversed the pre-glacial Upper Susquehanna drainage pattern. Instead, the newly filled lakes drained toward the north through narrow outlets to Lake Ontario (Van Diver 1985).

3.2.2 Modern Topography and Drainage

The present topography of Steuben County reflects a combination of glacial and post-glacial processes. The glacial processes, as noted above, tended to round the uplands and widen the existing valleys. Mapped onto these landforms were a series of modern (post-glacial) streams flowing from headwaters at isolated springs and wetlands. Winding through the widened valleys, these small drainages eroded new channels into the outwash and till deposits. This process of erosion and meander deposited alluvial sediments over the lowest portions of the gravelly drift, eventually forming the stretches of floodplain found at the base of the major valleys throughout all of Steuben County (USDA 1973). Streams flowing across the steep uplands cut deep vertical channels into the till and exposed bedrock, as evidenced by the numerous hanging valleys along many of valley walls surrounding the Finger Lakes (Van Diver 1985).

For most of Steuben County drainage is directed south toward the greater Upper Susquehanna River through upland tributaries of the Cohocton River. A drainage divide marking the northern extent of the Upper Susquehanna is formed by a ridge of steep uplands near the southern limits of Livingston County. Just north of this upland ridge a small upland stream drains north Honeoye Lake and ultimately Lake Ontario.

3.2.3 Soil Types

Most of the construction for the Cohocton Wind Power Project will impact land on the uplands around the Town of Cohocton (see Table 3 for soil descriptions). Therefore, shallow glacial till soils will be the prime medium of investigation. In Steuben County these soils are known as the Mardin-Volusia-Lordstown Association. All consist of moderately-drained to poorly-drained deposits with compact subsoil fragipans (USDA 1973). The A-horizons (usually a dark grayish-brown silt loam) typically hover around 25 cm (10 in) in depths, followed by a compact layer of yellowish-brown to brown clayey subsoil with abundant gravel (USDA 1973). No complex alluvial soils are expected for the uplands. Subsurface testing in upland till soils should reach at least 15 cm (6 in) into the subsoil to adequately test the surface A-horizon for cultural materials.

A small segment of the above-ground transmission line will cross valley bottom landforms containing both complex alluvial and stratified glacial outwash soils. Identified as the Middlebury-Wayland complex on the Steuben County soil map, alluvial soils have the potential to contain deeply buried cultural horizons, and can often exceed a depth of 1 m (3.3 ft). Most alluvial landforms are confined to narrow floodplains along the Cohocton River. If any shovel test pits (STPs) excavated as part of the windfarm project do not reach Pleistocene gravels, deep trenching with heavy machinery would be recommended to assess the potential for deeply buried cultural soil horizons.

Outwash soils overlook the narrow floodplains and spread out across wide swaths of the valley floor. Outwash soils (Howard-Chenango complex) are typically shallow, exhibiting a surface A-horizon of roughly 25 cm (10 in) and a bright yellow-brown gravelly subsoil. Any subsurface testing in glacial outwash soils should reach at least 15 cm (6 in) into the subsoil to adequately test the surface A-horizon for cultural materials.

Table 3. Summary descriptions for soil complexes identified within the Cohocton Wind Power Project

Soil Name	Soil Horizon Depth	Color	Texture	Slope (%)	Drainage	Landform
Mardin-Volusia-Lordstown	A: 0-25 cm (0-10 in) B: 25 + cm (10 +)	Dark gray-brown yellow-brown	silt loam w/ gravel clay w/ gravel	0-30%	fair-poor	uplands
Howard-Chenango	A: 0-25 cm (0-10 in) B: 25 + cm (10 +)	Dark brown yellow-brown	silt loam w/ gravel silt loam w/ gravel	0-8%	good	valley terraces
Middlebury-Wayland	A: 0-26 cm (0-10 in) B: 26-100 cm (10-33 in) C: 100 + (33 + in)	Brown Yellow-brown Gray-brown	silt loam silt loam sandy loam w/ gravel	0-8%	fair-good	floodplains

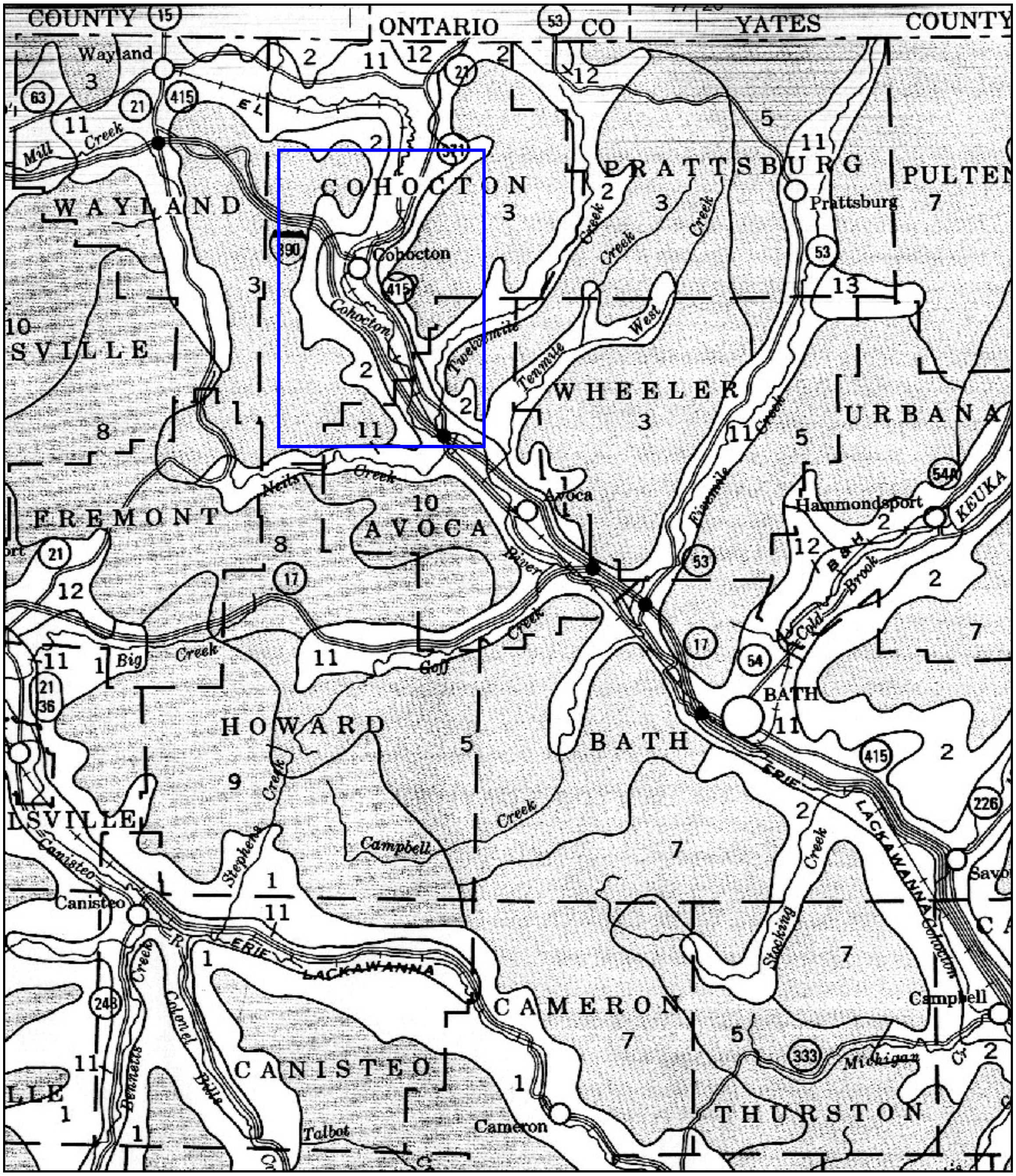

Figure 4. USDA Soil Survey map of Steuben County, New York (general project area highlighted in blue).

3.3 Prehistoric Context

The archaeological evidence indicates human populations moved into the newly glaciated Northeast during the last phases of the Wisconsin stadial retreat. Moving north from the warmer climates of southern and central North America, these populations encountered the new and diverse landforms of the northern Allegany Plateau. Although they brought cultural traditions derived from conditions farther south and west, the Plateau environment, along with its rugged uplands and steep valleys, had profound influences on future settlement/landuse patterns and material culture. Eventually two distinct settlement and subsistence patterns emerged. These settlement patterns would characterize the prehistory of upstate New York.

The first, designated as the pre-agricultural hunter/gatherer, was developed with the arrival of highly mobile groups during the Paleo-Indian and Early-Middle Archaic periods around 10,000-8000 BC and flourished in the region until the advent of early agriculture in the Late Woodland periods (AD 900-1650). It was during this period that human groups relied almost solely on gathered plant resources, fish, and game animals for daily subsistence. Therefore, mobility was fairly high as groups moved in search of seasonally available resources. Hunting and gathering continued to be an important part of the subsistence base during the later agricultural period, but a large part of the daily subsistence was increasingly shifted toward the production and consumption of the maize-beans-squash complex. This subsistence shift led to the development of larger and more sedentary human populations, and the subsequent construction of hamlet and village settlements near agricultural fields.

3.3.1 Prehistoric Site Sensitivity Assessment

Archaeological evidence suggests prehistoric groups were fully settled in the region from at least the Late Archaic to the Late Woodland periods (3500 BC - AD 1650). Conversely, isolated projectile points within the counties indicate sporadic occupations by Paleo-Indian and Early-Middle Archaic foragers. Within the vicinity of the Town of Cohocton, at least six prehistoric archaeological sites have been documented in the state Site Files. All six prehistoric sites are classified as unidentified occupations. Three of the six sites were recorded in the early 1920s by archaeologist Arthur C. Parker. The first Parker site is ACP YATS-4, an unidentified “village” settlement in southern Yates County along an unnamed creek. An additional “village” site (NYSM 9294) was noted by Parker in southern Yates County on the east side of Hatch Hill. Both village sites are said to have contained “groove boulders” (Parker 1920). The third Parker site (NYSM 9287) is described as “traces of occupation” near Naples in Ontario County. This designation was used by Parker (1920) to denote small sites (primarily lithic scatters) lacking any structural or cultural features (post molds, hearths, fire-pits...). The three remaining prehistoric sites were found during CRM investigations in the 1980s. During a survey for NYSDOT in the Town of Prattsburgh, archaeologists found evidence of prehistoric activity near a wetland east of NY 53. The site (identified as Faatz) produced a chert bifacial tool and two chert flakes during a surface collection and limited subsurface testing. Farther to the south and west near the Town of Wheeler are the Five Mile Creek 1-2 Sites. Roughly 550 m (1800 ft) apart, both sites are located along the western margin of Five Mile Creek. Artifacts from Five Mile Creek 1 include chert flakes, fire-cracked rock (FCR), and evidence of cultural features. Five Mile Creek 2 produced two chert flakes, one large oval-shape quartzite artifact, and fire-cracked rock. None of the six prehistoric sites are National Register Eligible or Listed.

In addition, PAF has recently completed a series of Phase 1B surveys and site examinations within the Towns of Campbell, Erwin, and Painted Post in southern and central Steuben County. These surveys have identified a number of prehistoric sites, two of which appear to be large Late Woodland villages or hamlets. The Scudder II and III sites were identified during an archaeological survey for a proposed gravel and topsoil mine along the Tioga-Canisteo Rivers in the Town of Erwin (Kudrle 2001, 2002, and 2003). Archaeologists identified over 1700 prehistoric artifacts, as well as intact cultural features dated to the Late Woodland Owasco period (Kudrle 2002). Botanical remains from the features included an abundant amount of maize, seeds, and nutshells, as well as some of the first evidence of Polygonum erectum (erect knotweed) in the Northeast (Asch-Sidell 2002). The sites (Campbell 1-3) identified in the Town of Campbell (roughly 48 km [30 mi] south of Prattsburgh) appear to be the remains of small campsites along the Cohocton River (Kudrle 2003).

Using the information gleaned from the environmental context, prehistoric background, and the site files a model of prehistoric site sensitivity can be generated for the Cohocton Wind Power Project. In physiographic terms the project is situated on several upland plateaus. The plateaus are bordered by gently rolling hills and steep ridges, interspersed with a network of small upland streams. Additional sources of fresh water are isolated wetlands and possible springs that dot the plateau depressions. Farther down the valley walls, Five Mile, Ten Mile, and Twelve Mile Creeks meander through the town, flowing south toward their confluences with the upper Cohocton River.

The upper Cohocton River provided not only fresh water for drinking and household tasks, but also an abundance of marine resources (e.g., fish, shell-fish, turtle). The river also served as an easy transportation route within the Upper Susquehanna drainage. To the north of Cohocton, the Finger Lakes/Lake Ontario drainage divide provided access to resources and landforms on the Ontario Lowlands.

In general, the sparse archaeological evidence has led to the assumption that prehistoric groups did not consider the Allegany Plateau uplands the most attractive region for long-term settlements (Funk's 1993 analysis recorded only 14 sites [3.3% of the total site sample] in upland environments). Not only are the uplands more rugged than the lower valley bottom environments (floodplains and outwash terraces), but accessibility to the uplands was limited to trails along steep valley walls or stream beds. In addition, although the uplands of the Allegany Plateau are dotted with a network of small streams and creeks, many of these fluctuate between periods of extreme dryness and rapid output. Soils in the uplands are also difficult to work, and during wet-seasons can be poorly-drained. This assumption has been challenged in recent years with the excavation of several small upland sites and a reevaluation of the existing literature (Versaggi 1996; Versaggi et al. 2001). Many of these sites have been found during CRM (cultural resource management) surveys, helping to redefine the uplands as a diverse landscape with attractive resources. Some notable examples for the uplands of the Allegany Plateau of New York State include: the Chautauqua County Pipeline sites (Versaggi 2002), the Tennessee Gas Archaeological District in Schoharie County (Versaggi 2002), the Herrick Hollow sites in Delaware County (Versaggi and Hohman 2006; Hohman 2001), the Park Creek I-II sites in eastern Broome County (Miroff 2002), and the Kukenberger I site in Otsego County (Kudrle 2001). The Herrick Hollow sites (situated at the edge of the Upper Susquehanna River and Upper Delaware River watersheds) also highlight the importance of drainage divides as natural conduits for transportation and trade. Versaggi's work on small prehistoric sites in the Southern Tier has shown that the past research focus on large residential sites has skewed traditional landuse and settlement models toward an exclusion or homogenization of upland landuse. Rather, she suggests future models should focus on a "whole-valley system", whereby sites in the uplands are linked (and not ignored) to settlement patterns in the valley bottoms (Versaggi et al. 2001).

Using the idea of a "whole-valley system", Versaggi's research has outlined the basic prehistoric site types and functions typically found in the Upper Susquehanna watershed (1987; 1996; Versaggi et al. 2001). Focusing on sites variables (such as location, site size, total artifacts, artifact diversity, cultural feature, etc.) as determinates of type and function, Versaggi proposed a settlement model for hunter-gatherer groups based on four inter-related site types (1987; 1996; Versaggi et al. 2001). The largest and most complex sites are residential base-camps and villages. Typically located on the valley floors near confluences, these sites produce large numbers of artifacts and tools, and high frequencies of functional (hearths/fire-pits) and structural (post-molds) features. Tethered to the larger base-camps and villages were a series of small camps (single-task and seasonal) and processing stations. Single-task camps were associated with intensive resource extraction. Examples include quarry sites and butchering stations, both of which produce high numbers of specialized tools. Seasonal camp sites tend to produce a moderate to low artifact density and limited numbers of cultural features (such as storage pits and cooking hearths) indicative of short-term occupation, usually during periods of population dispersal from the larger base-camps and villages. These sites tend to cluster near the margins of small streams or wetlands on the valley walls and uplands. Resource processing sites, found throughout the uplands, reflect short-term occupations for opportunistic resource preparation or extraction. In terms of material culture, these sites are usually associated with small artifact assemblages (primarily lithic scatters) characterized by expedient tools (utilized debitage).

The location of a majority of the impact areas for the project in the uplands significantly decreases the probability of encountering large residential base-camps or villages during subsurface testing. The expected site types for the area, based on Versaggi's settlement model, are limited to seasonal camps and processing stations. Prime locations for these sites include the crests of plateaus near upland tributaries and wetlands (Funk 1993).

A portion of the above-ground transmission line will cross a section of the valley bottom south of the Village of Cohocton, and it is possible these landforms (outwash terraces and narrow floodplains) contain remnants of larger base-camp or village settlements. Examples of such sites in the general region include the Scudder II and III sites on the outwash and floodplain terraces near the confluence of the Canisteo and Tioga Rivers in southern Steuben County. These site types typically contain a high-density artifact scatters and abundant feature remains (e.g. hearths, storage pits, and post-molds) indicative of intensive and long-term occupations.

3.4 Historic Context

The model of historic site sensitivity for the project area is based primarily on the background research, site files, and an analysis of the available historic maps. The background information indicates the area was originally settled in the late 18th century, but we have no direct information about the land within and surrounding the project impact areas. In general, the histories suggest most economic development took place within the hamlet center; outside of the hamlet isolated agricultural land and dispersed farms predominated. The historic site files confirm this trend. The three sites that have been documented appear to be all outside the main hamlet limits, and the majority are associated with rural farmsteads.

For the Cohocton area the historic maps span a time range from 1857 to 1873 (Figures 5-6). All show a somewhat similar trend of population aggregation within the Village of Cohocton, confirming the basic model generated from the historic background and site files. Both residential and rural industrial sites would be expected in the main hamlet. Outside of the village the maps show isolated farmsteads along the growing road system. In the vicinity of the windfarm impact areas we do not have much evidence for historic settlements until the middle of the 20th century. At present these settlements include clusters of post-1950 homes and cottages. Some isolated farmsteads are present in the area, but most are set far back away from the margins of the main roads. Most of the land in the uplands was, and continues to be, used primarily for agriculture. Historic cultural features shown on the map include the Erie-Lackawanna railroad tracks. These tracks (which parallel NY 415 to the Village of Cohocton) are still in use today.

Using this information, we can assess the type and intensity of historic settlements within and around the project area, and the type of historic sites that may be encountered during subsurface testing. Overall the potential for encountering historic sites within the impact area is low based on the relative lack of map documented structures (MDSs) and the location of the project outside of the main population clusters (specifically the Village of Cohocton). We have only a limited number of historic structures in the area, and all are located away from the margins of the roads.

In general, based on both the background research and historic maps, the probability of encountering buried or above-ground historic archaeological sites during any subsurface testing is considered to be low.

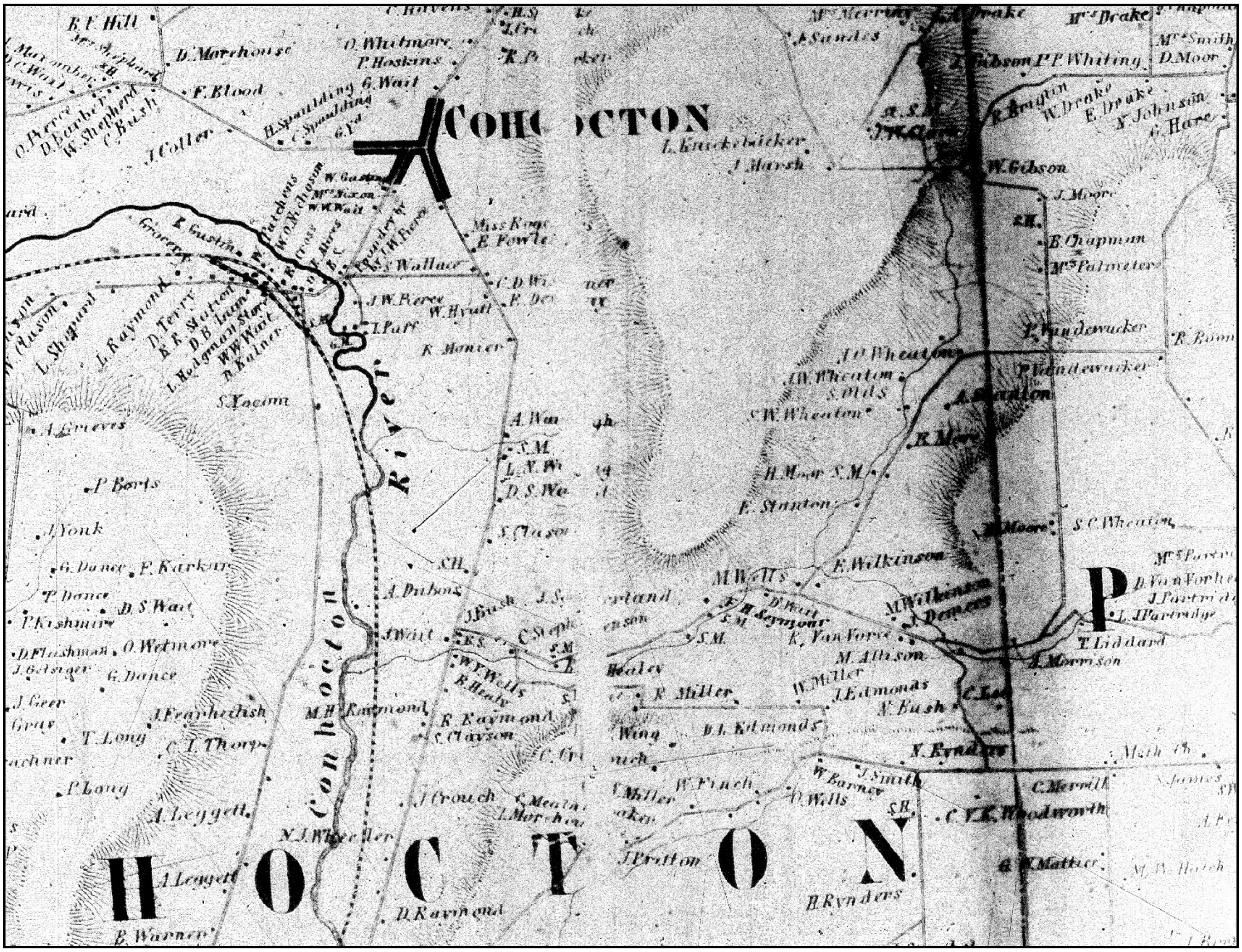

Figure 5. 1857 Levy Map for the Town of Cohocton.

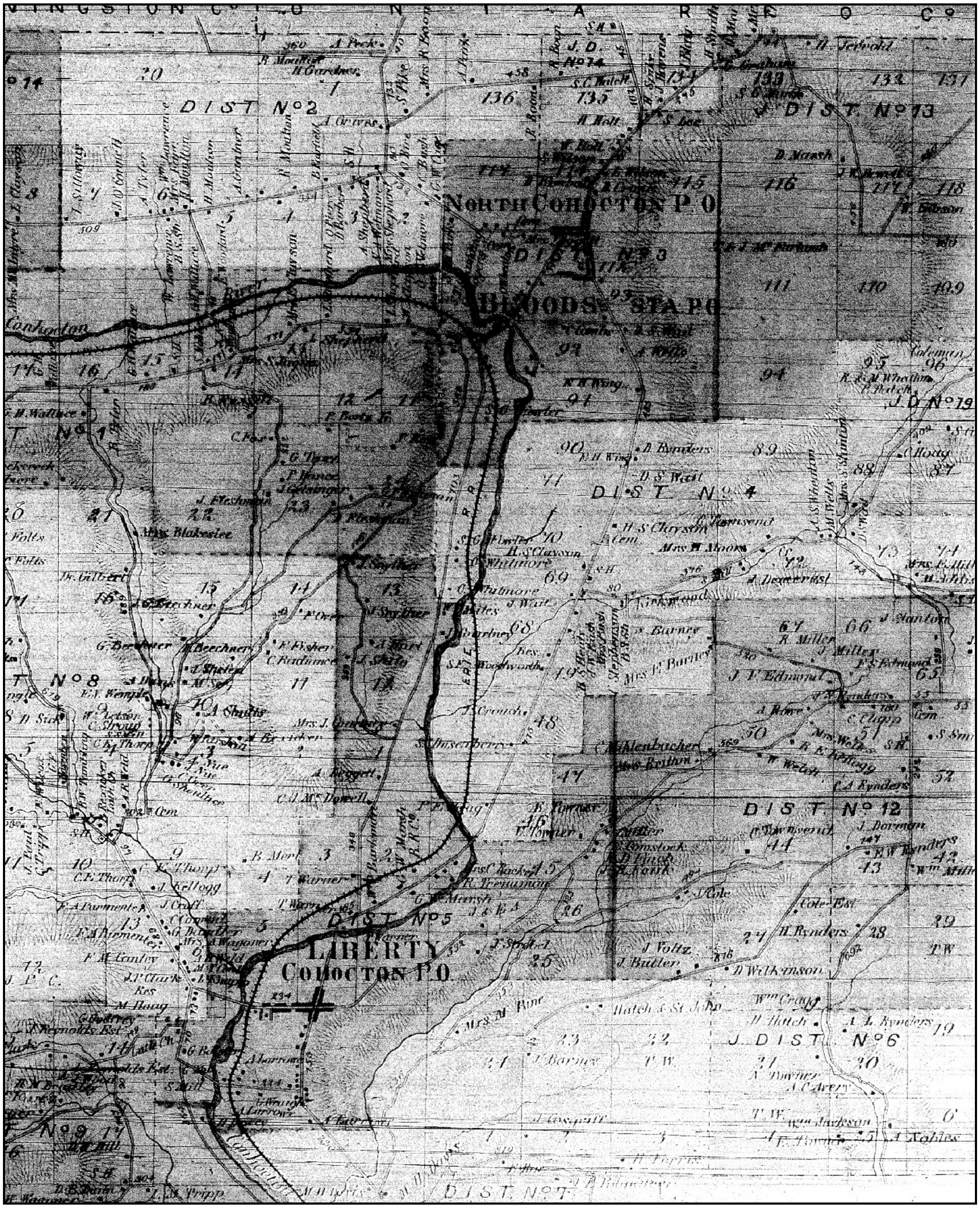

Figure 6. 1873 Beers Map for the Town of Cohocton.

IV. FIELD ASSESSMENT METHODS

4.1 Project Walkover/Driveover

A walkover/drive-over of the Cohocton Wind Power Project was completed in order to determine the potential strategies for archaeological testing, document areas of previous ground disturbance and slope, and to identify above-ground cultural resources (e.g. standing historic structures, cemeteries, etc.). Photographs of the project area were taken from different angles and elevations during the walkover/drive-over to provide a visual representation of the environment.

The assessment also included an analysis of aerial photographs (provided by UPC and the websites: www.nygis.state.ny.us and www.terraserver-usa.com) to aid in the determination of current landuse (agricultural vs. wooded) patterns throughout the uplands. Approximate landslope was calculated through a combination of field observations and contour intervals outlined on the topographic quadrangles. Slope calculations were base on the formula: slope (%) = (change in elevation / distance) * 100. Landslope considered moderate to excessive (and therefore undesirable for prehistoric occupations) for the area was set at 15% or greater based on Funk's study of Upper Susquehanna Valley prehistory (1993) and New York State Standards (1994).

V. FIELD ASSESSMENT RESULTS

5.1 Description and Landuse

Development for the Cohocton Wind Power Project calls for a wind-powered generating facility on approximately 5755 acres of leased land in the Town of Cohocton, Steuben County, New York. The project is anticipated to include 41 wind turbines, each with a generating capacity of 2.0 MW. For the purposes of this study, 48 potential turbine sites have been evaluated.

The primary turbine array will be located on Pine Hill and Lent Hill northeast of the Village of Cohocton. Forty-four of the potential turbine sites are located on Pine Hill and Lent Hill. An additional four potential turbine sites are located on Brown Hill near the proposed point of interconnection with an existing New York State Electric and Gas (NYSEG) 230 kV transmission line. Each wind turbine will include an 87 meter (285 foot) diameter, three-bladed rotor mounted on a 78-meter (256 foot) tall steel tubular tower. Three meteorological towers will also be installed, along with an operations and maintenance building, approximately 13 miles of gravel access road, 27 miles of buried gathering lines (electrical interconnect), and a 9.2 mile long overhead 115 kV transmission line that will connect a central collection station on Lent Hill to a new substation adjacent to the existing NYSEG transmission line on Brown Hill. The 115 kV transmission line will be carried on treated wood poles and will cross the Cohocton River Valley and Interstate Route 390. The river and highway crossings are both currently anticipated to be above-ground crossings.

Drainage in this area is directed primarily south along several upland tributaries toward the Cohocton and Upper Susquehanna Rivers. A small portion near turbines 1-3 drains north through upland tributaries of the larger Finger Lakes/Lake Ontario watershed. Soils within the upland area are derived from unsorted glacial till; valley bottom locations include a combination of alluvial and glacial outwash soils. The majority of impact areas appear to be moderately-well drained, although isolated wetlands and headwaters were identified throughout the area. Elevations for the most of the access road and turbine impact areas hover around 610-518 m (2000-1700 ft) ASL. Farther down the valley walls elevation drops off to 518-397 m (1700-1300 ft) ASL.

No above-ground prehistoric cultural features or artifact scatters were noted in the area during the assessment. The project visual survey and historic map analysis did identify two historic cemeteries adjacent to portions of the access roads leading to turbines 20 and 23. Both cemeteries are shown on the 1857 and 1873 historic maps under the family names "Hatcher" and "Wheaton". Neither property will be directly impacted by the proposed development. In addition, a segment of the above-ground transmission line will parallel a portion of the historic Erie-Lackawanna railroad tracks.

Current settlement in the region is limited primarily to farmsteads, post-1950 mobile homes, and seasonal cottages. Wire and wooden fences divide some of the sprawling agricultural fields, although most are demarcated by tree/brush lines. Utility disturbances in the general vicinity were limited to buried fiber-optic cables, gas lines, and above-ground elective lines paralleling most of the existing road system.

5.2 Access Roads and Turbines

Current layouts for the Cohocton Wind Power Project are preliminary and subject to change throughout the testing process. Changes to the current layout will alter the number and extent of archaeological testing, but will not alter the basic testing strategy (based on new NYS SHPO guidelines).

The current proposal calls for the development of 41 wind turbines (48 locations evaluated) and access roads (21.7 kilometers in total length). The additional four wind turbines have been tentatively planned for the crest of Brown Hill southwest of the main project area. Visual assessment indicated all turbine locations are undisturbed and relatively flat to gently sloping agricultural fields and/or woods; proposed locations vary in elevation from 610-616 m (2000-2020 ft) ASL. The proposed access roads will connect each turbine location to the main roads, as well as to adjacent turbine pads. All new roads will be gravel atop the existing grade with a total width measurement of approximately 7.5 m (25 ft). Many of the proposed access roads will follow the footprint of an existing farm road (see aerial photos in Figures 7-20 which show turbine and access road impact areas).

Table 4. Summary descriptions for access roads and turbines for project area

Location	Access length	Current landuse and visible ground disturbances	Slope
Turbines 1-3	1038 m (3400 ft)	Agricultural fields / no visible ground disturbances; existing farm road	0-3%
Turbine 7	186 m (610 ft)	Agricultural fields / no visible ground disturbances; existing farm road	0-3%
Turbines 4-6, 8	2715 m (8900 ft)	Agricultural fields / no visible ground disturbances; existing farm road	0-2%
Turbines 9-10	948 m (3119 ft)	Agricultural fields and woods (T9?) / no visible ground disturbances; existing farm road	0-9%
Turbine 11	171 m (560 ft)	Agricultural fields / no visible ground disturbances	0-3%
Turbine 12	427 m (1400 ft)	Agricultural fields / no visible ground disturbances	0-8%
Turbine 13	311 m (1020 ft)	Agricultural fields / no visible ground disturbances	0-8%
Turbine 14	607 m (1990 ft)	Agricultural fields and woods ? / no visible ground disturbances; existing farm road	0-3%
Turbine 15	397 m (1300 ft)	Agricultural fields and woods (T15 pad) / no visible ground disturbances	0-3%
Turbine 16	366 m (1200 ft)	Agricultural fields / no visible ground disturbances	0-2%
Turbine 17	787 m (2580 ft)	Agricultural fields / no visible ground disturbances; existing farm road	0-2%
Turbines 18-19	885 m (2900 ft)	Agricultural fields / no visible ground disturbances; existing farm road	0-4%
Turbine 20	409 m (1340 ft)	Agricultural fields / no visible ground disturbances; existing farm road (south of Wheaton cemetery)	0-2%
Turbine 21	416 m (1365 ft)	Agricultural fields / no visible ground disturbances; weather tower adjacent to impact area	0-5%
Turbine 22	275 m (900 ft)	Agricultural fields and woods (T22 pad) / no visible ground disturbances	0-2%
Turbine 23	200 m (660 ft)	Agricultural fields / no visible ground disturbances (west of Hatcher cemetery)	0-1%
Turbines 24-25	763 m (2500 ft)	Agricultural fields / no visible ground disturbances; existing farm road	0-2%
Turbines 26-28	1253 m (4110 ft)	Agricultural fields / no visible ground disturbances	0-2%
Turbines 29-30	1125 m (3690 ft)	Agricultural fields / no visible ground disturbances; existing farm road	0-3%
Turbine 31	168 m (550 ft)	Agricultural fields / no visible ground disturbances	0-4%
Turbine 32	207 m (680 ft)	Agricultural fields / no visible ground disturbances; existing farm road	0-6%
Turbine 33	631 m (2070 ft)	Agricultural fields / no visible ground disturbances; existing farm road	0-1%
Turbine 34	153 m (500 ft)	Agricultural fields / no visible ground disturbances	0-1%
Turbine 35	262 m (860 ft)	Agricultural fields / no visible ground disturbances	0-1%
Turbines 36-38	1370 m (4490 ft)	Agricultural fields and woods (T36-37?) / no visible ground disturbances; some existing farm road	0-3%
Turbine 39	174 m (570 ft)	Agricultural fields / no visible ground disturbances; existing farm road (possible pesticide use)	0-8%
Turbine 40	381 m (1250 ft)	Agricultural fields / no visible ground disturbances; existing farm road	0-3%
Turbine 41	313 m (1025 ft)	Agricultural fields / no visible ground disturbances	0-2%
Turbines 42-44	1772 m (5810 ft)	Agricultural fields / no visible ground disturbances; existing farm road	0-3%
Turbine 45	384 m (1260 ft)	Agricultural fields / no visible ground disturbances; above ground weather station adjacent to access road	0-8%
Turbine 46-48	903 m (2960 ft)	Agricultural fields / no visible ground disturbances	0-5%

5.3 Buried Interconnections and Above-Ground Transmission Lines

Proposed buried interconnection cables will be used to connect turbines pads and link some access roads. Total interconnection cable length is approximately 44 km (27 mi). At least 29.5 km (18 mi) will flank the ROW (right-of-way) of the existing road system or parallel proposed access roads; the remainder (14.5 km [9 mi]) will cross relatively undisturbed landforms between turbines and access roads (see aerial photos for segments outside of the ROW and proposed access roads).

Trench depth will be roughly 1.2 m (4 ft), with trench width varying from 1-2 m (3.5-6.5 ft). Included in the electrical system are two substations, each impacting an area of roughly 1.4 acres. Substation 1 is located on Rynders Road near turbines 29-30; substation 2 is situated atop Brown Hill near the proposed connection to the NYSEG transmission lines.

The 9.2 mile long overhead 115 kV transmission line that will connect a central collection station on Lent Hill to a new substation adjacent to the existing NYSEG transmission line on Brown Hill. The 115 kV transmission line will be carried on treated wood poles and will cross the Cohocton River Valley and Interstate Route 390. The river and highway crossings are both currently anticipated to be above-ground crossings. Approximate distance between poles will be 92 m (300 ft); pole foundations will be drilled by auger and vary from 2.5-3.5 m (9-11 ft) in depth. Hole width will range from 80-91cm (30-36 in).

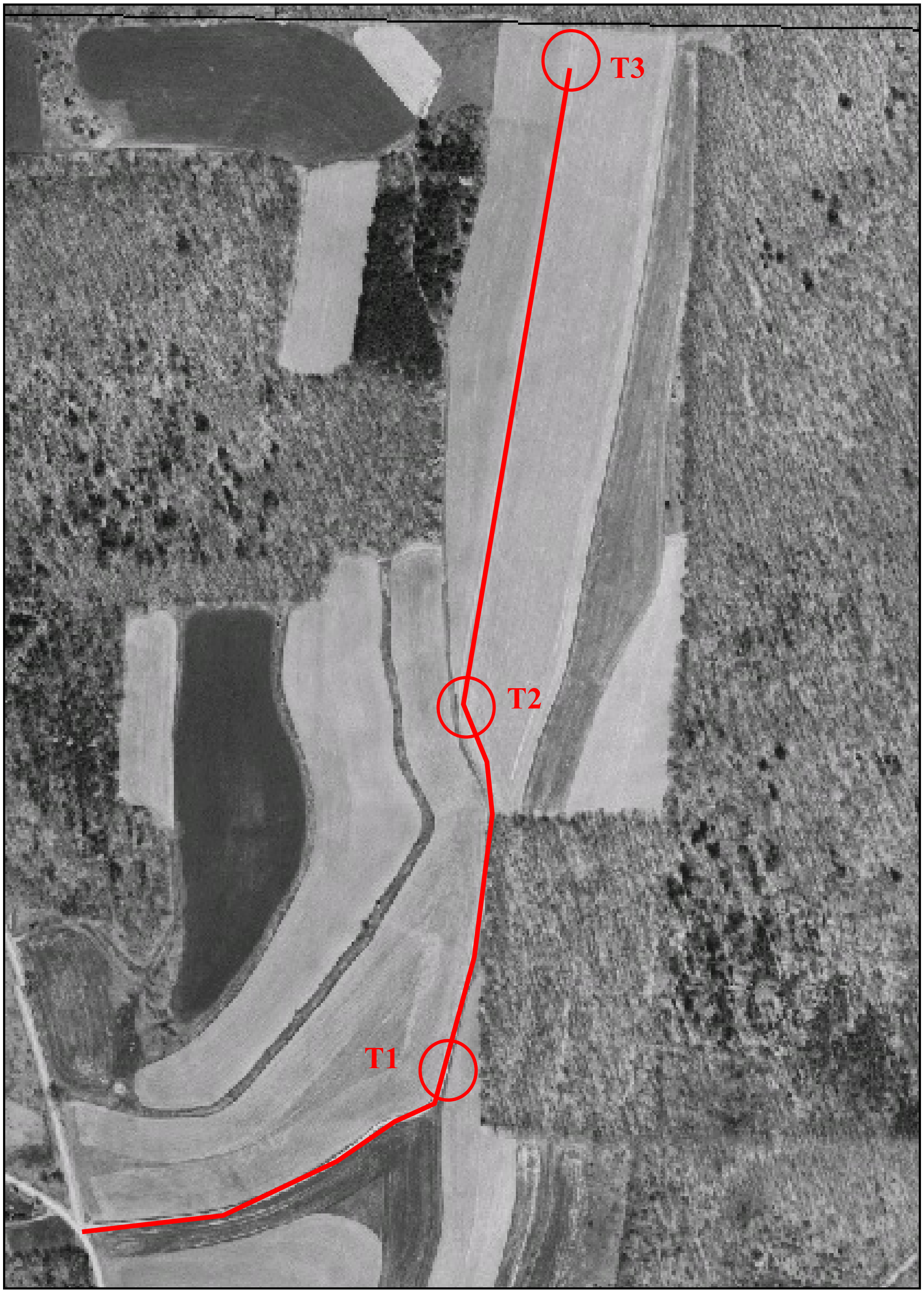

Figure 7. Aerial view of access/turbine 1-3 impact area.
(red: access and turbines)

Figure 8. Aerial view of access/turbine 4-8 impact area.
(red: access and turbines; blue: buried interconnect)

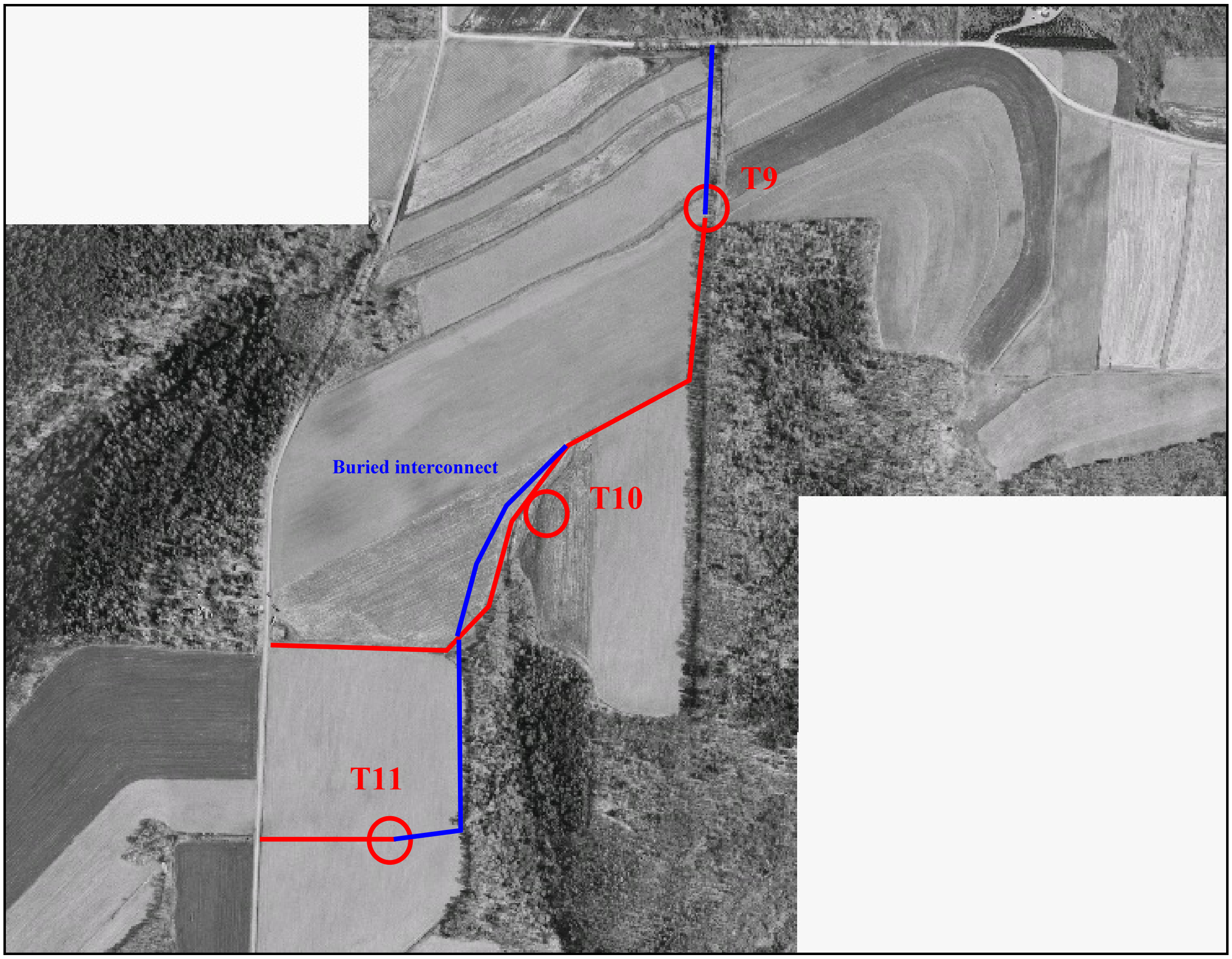

Figure 9. Aerial view of access/turbine 9-11 impact area.
(red: access and turbines; blue: buried interconnect)

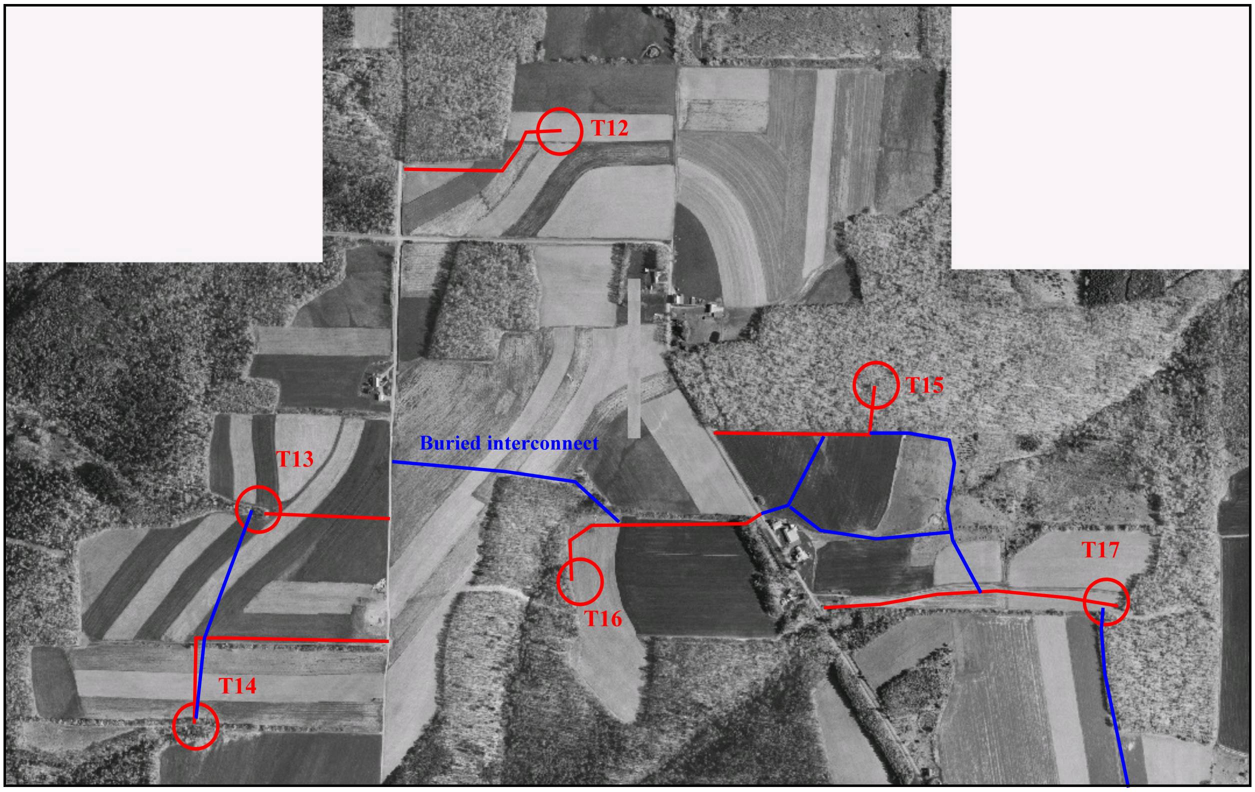

Figure 10. Aerial view of access/turbine 12-17 impact area.
(red: access and turbines; blue: buried interconnect)

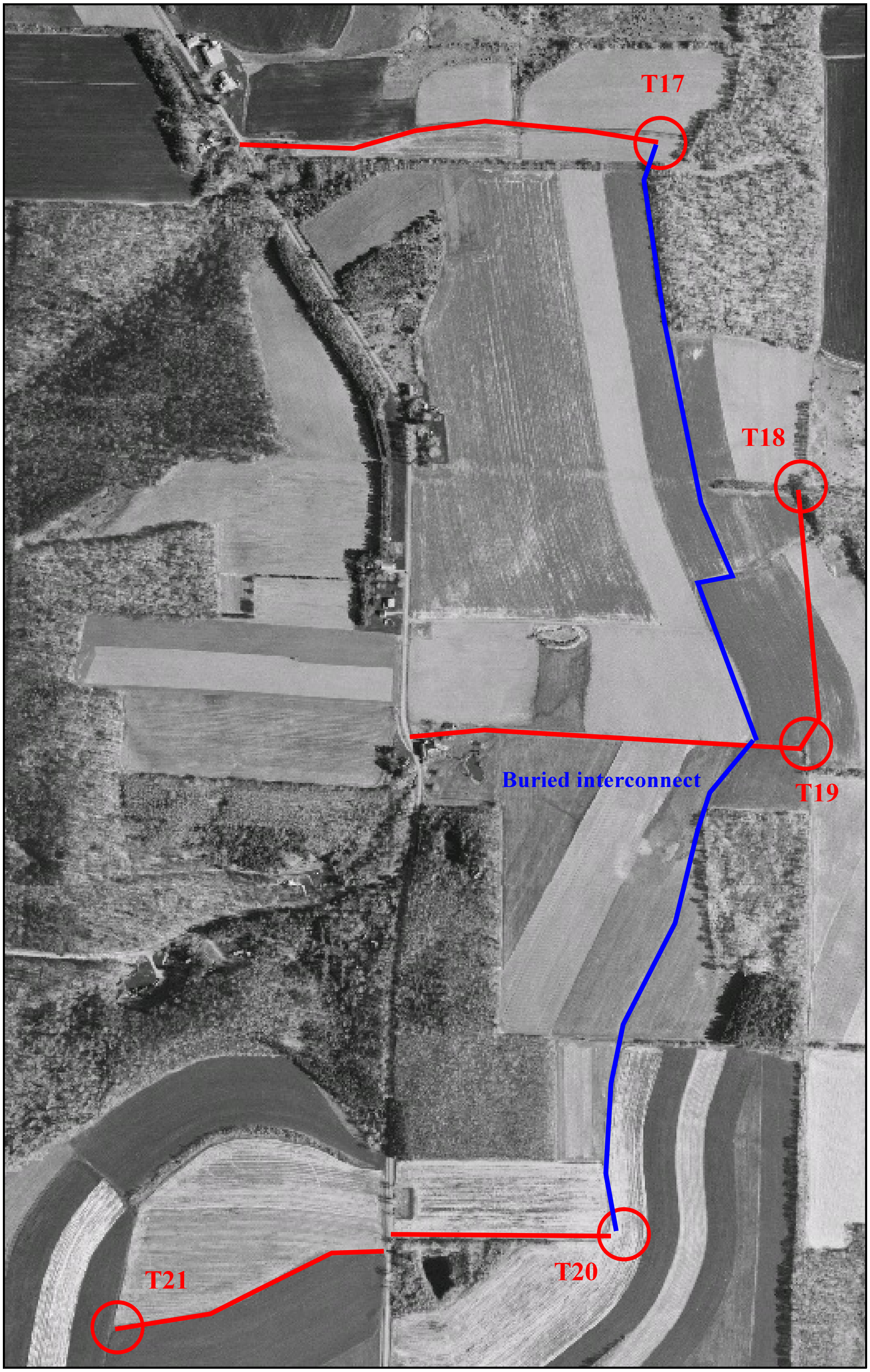

Figure 11. Aerial view of access/turbine 18-20 impact area (red: access and turbines; blue: buried interconnect).

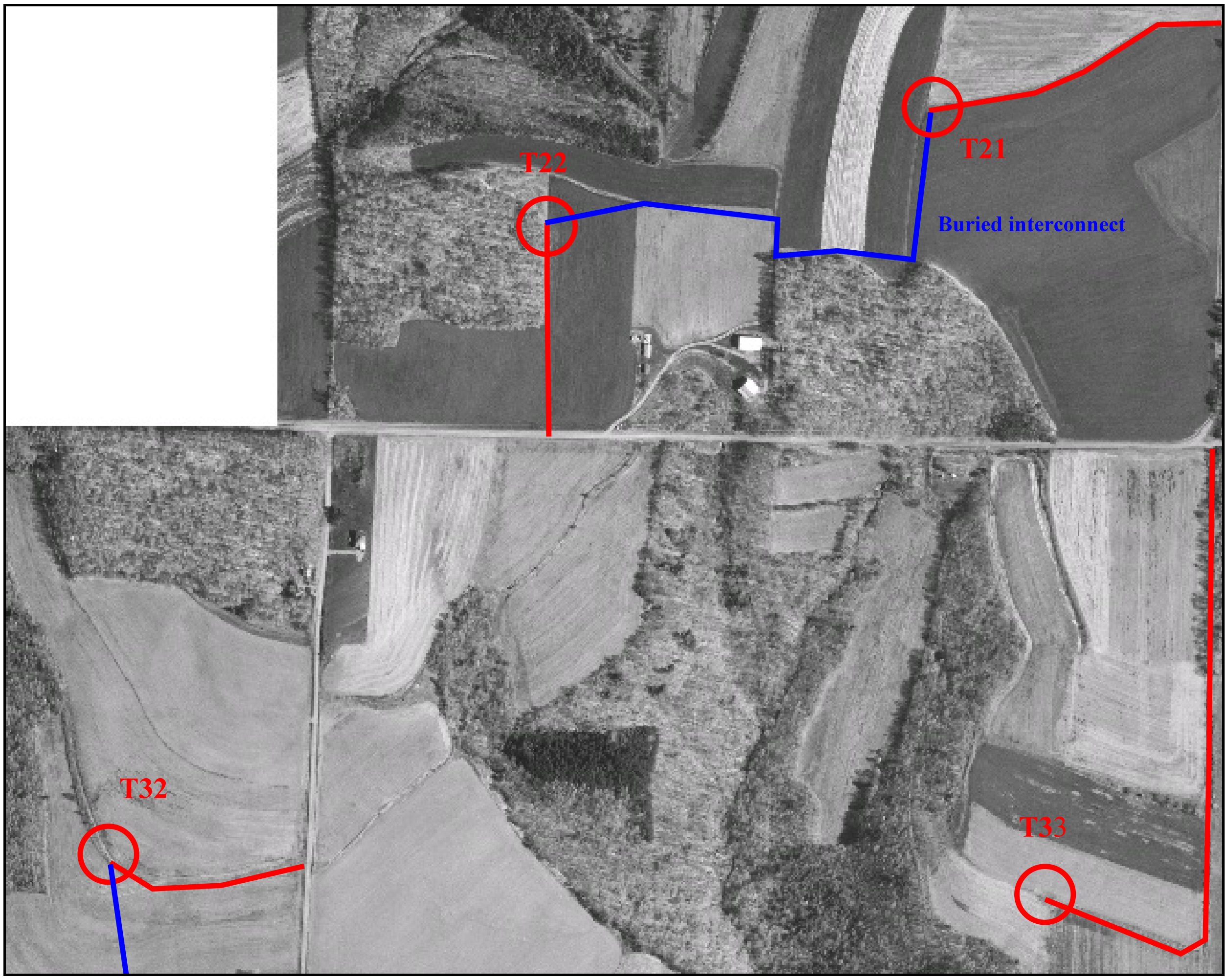

Figure 12. Aerial view of access/turbine 21-22 and 32-33 impact area.
(red: access and turbines; blue: buried interconnect)

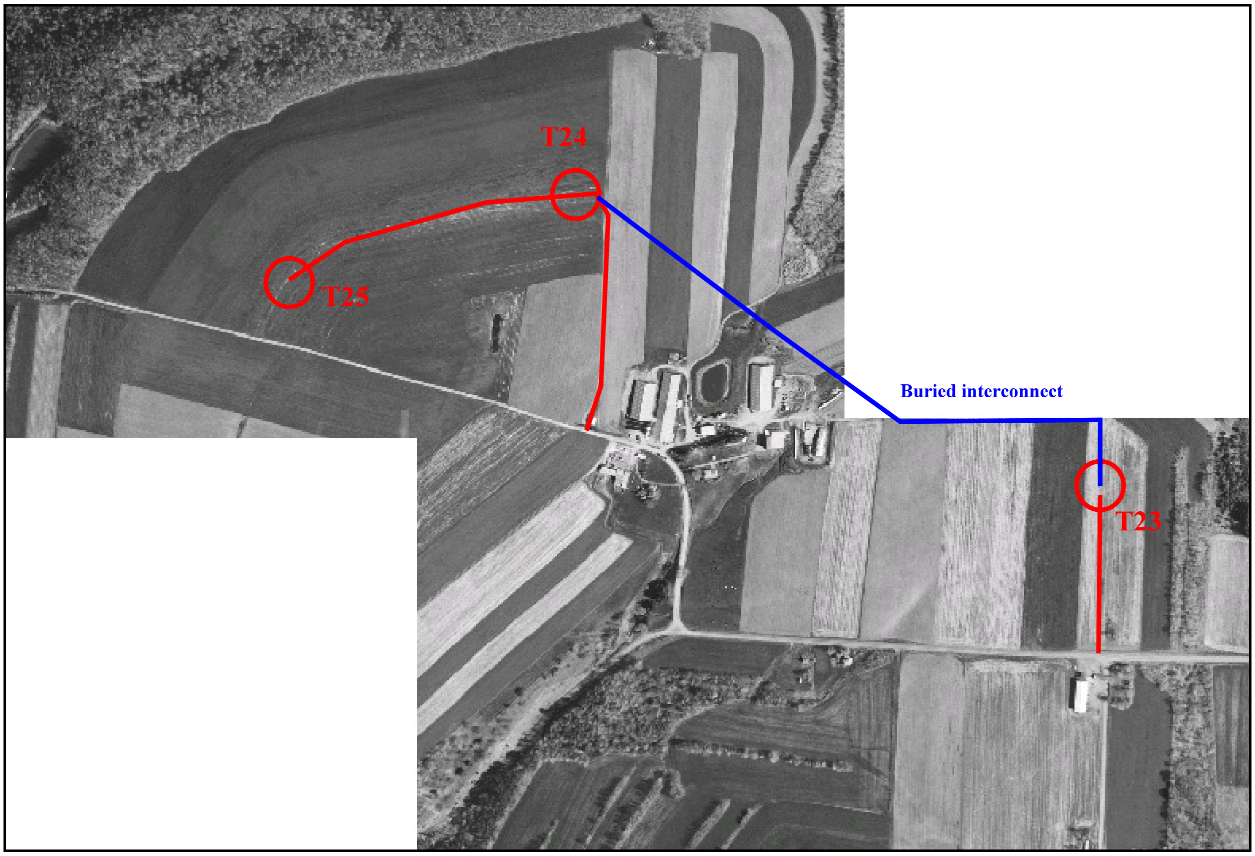

Figure 13. Aerial view of access/turbine 23-25 impact area.
(red: access and turbines; blue: buried interconnect)

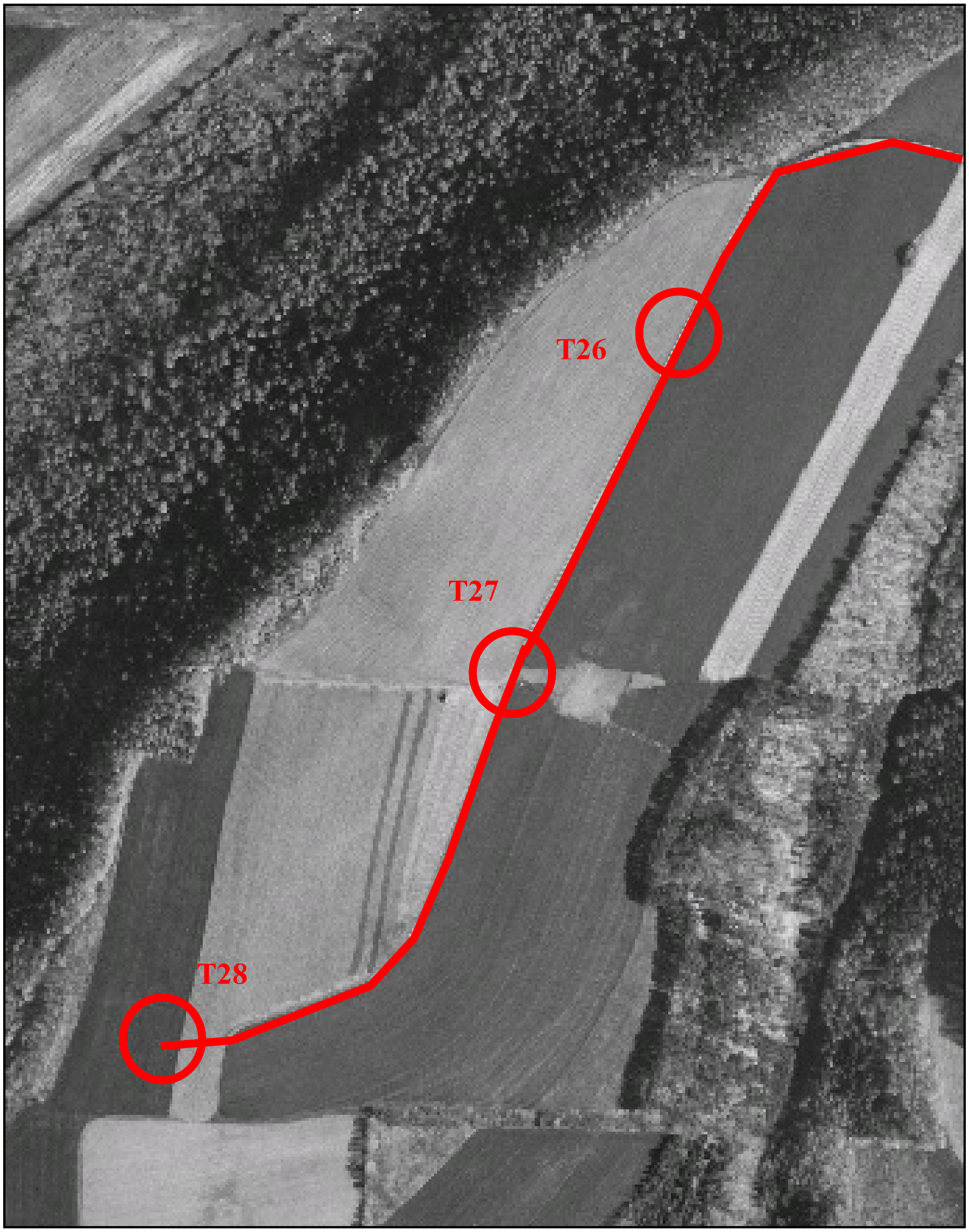

Figure 14. Aerial view of access/turbine 26-28 impact area.
(red: access and turbines; blue: buried interconnect)

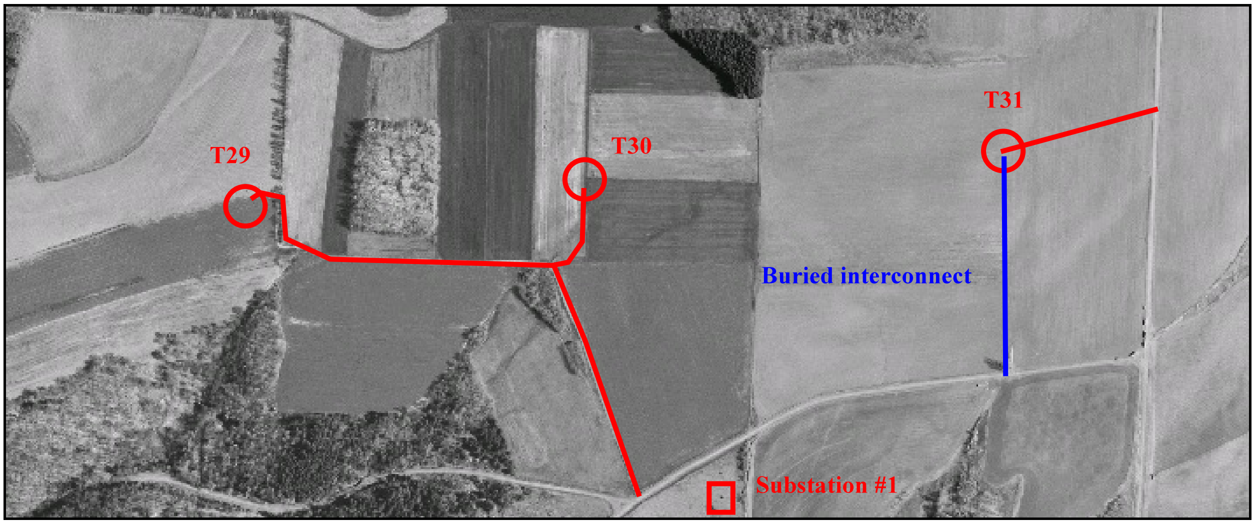

Figure 15. Aerial view of access/turbine 29-31 impact area.
(red: access and turbines; blue: buried interconnect)

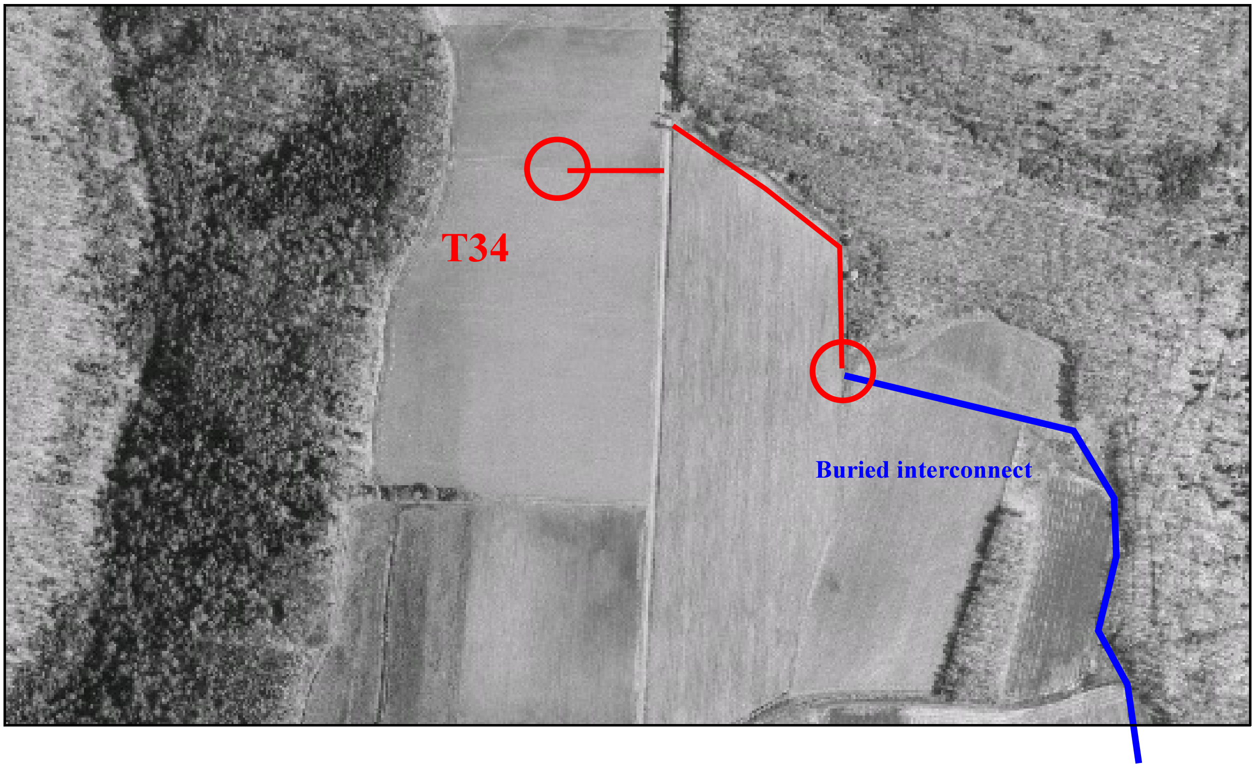

Figure 16. Aerial view of access/turbine 34-35 impact area.
(red: access and turbines; blue: buried interconnect)

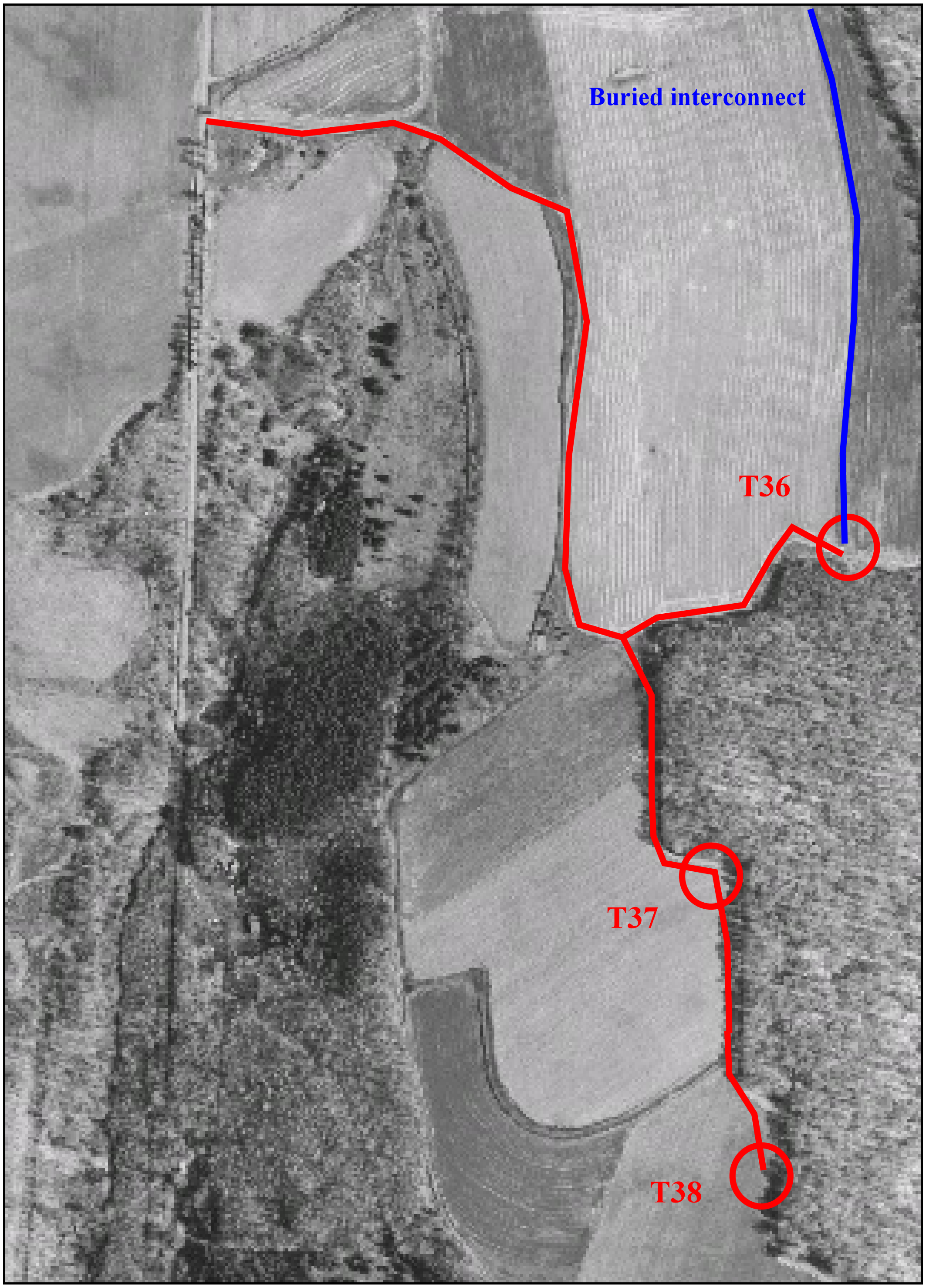

Figure 17. Aerial view of access/turbine 36-38 impact area.
(red: access and turbines; blue: buried interconnect)

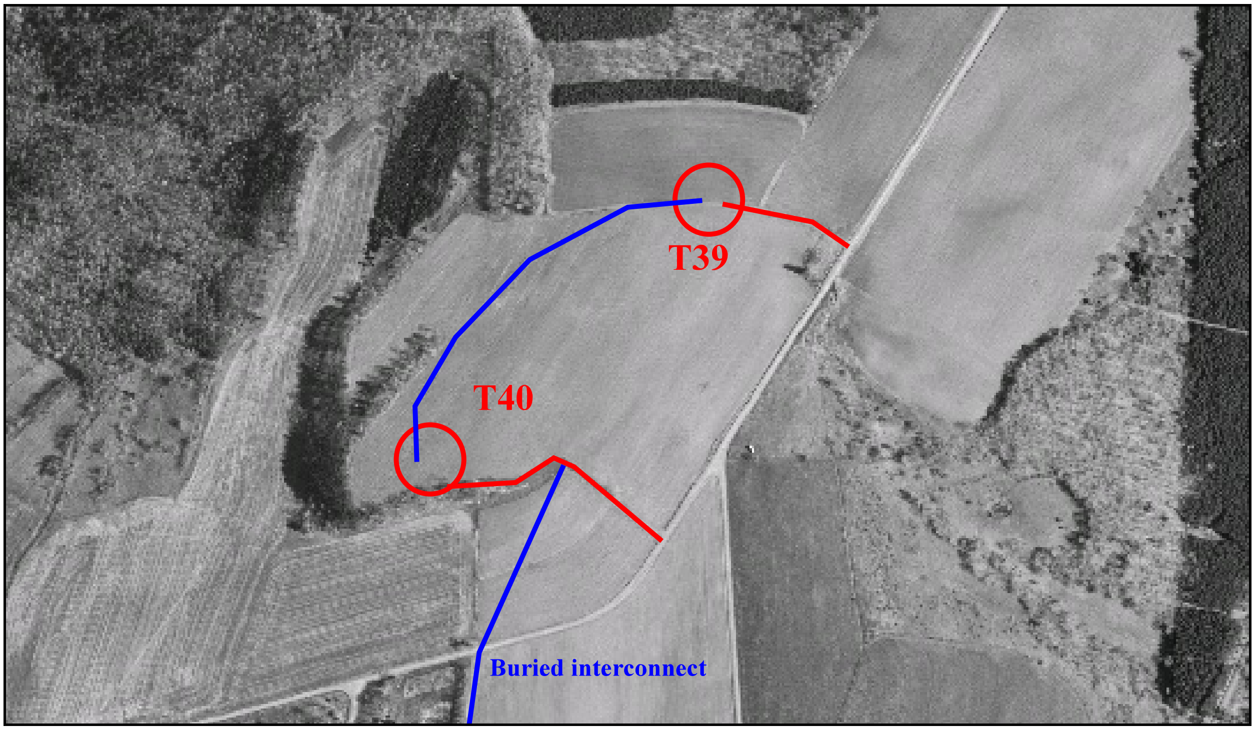

Figure 18. Aerial view of access/turbine 39-40 impact area.
(red: access and turbines; blue: buried interconnect)

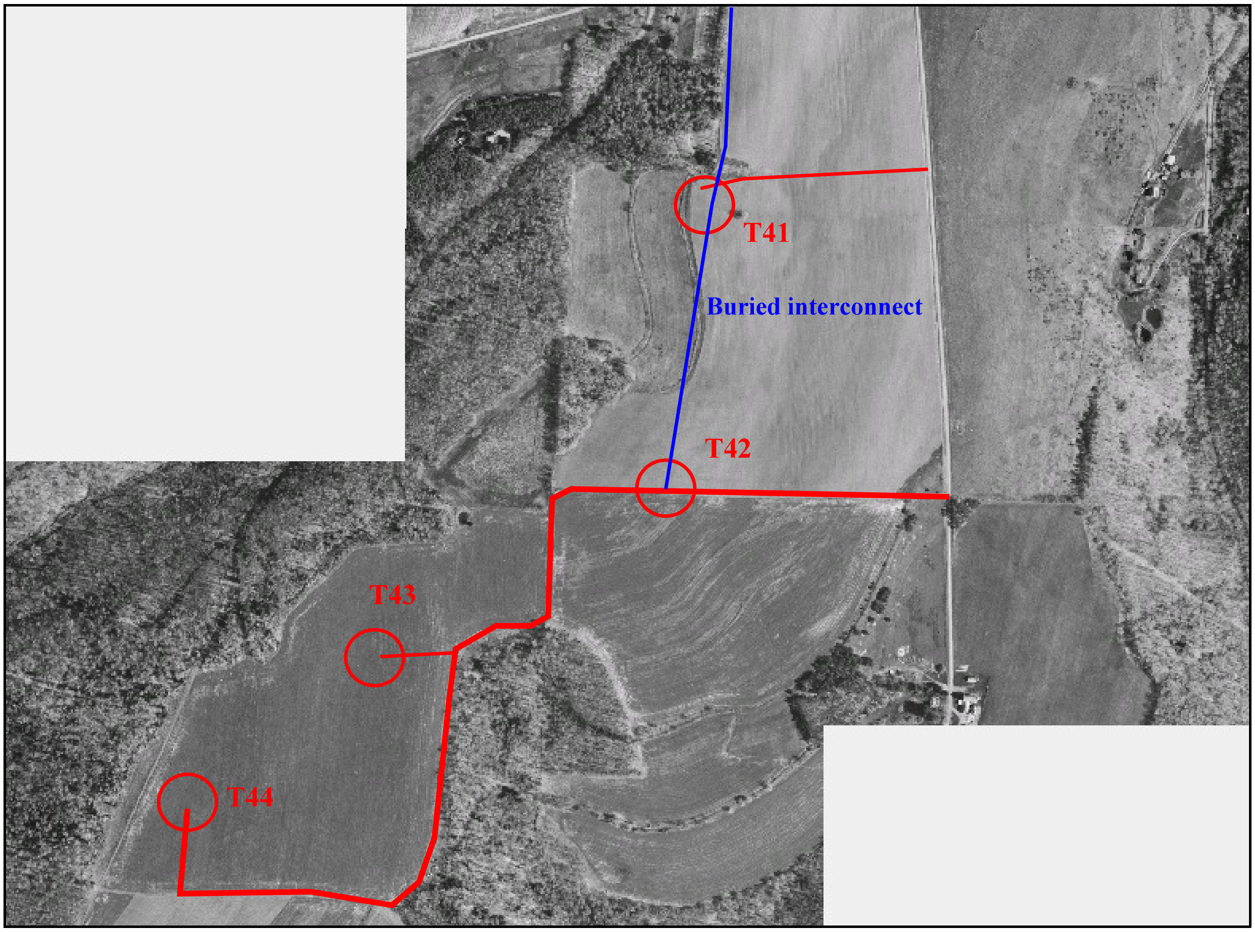

Figure 19. Aerial view of access/turbine 41-44 impact area.
(red: access and turbines; blue: buried interconnect)

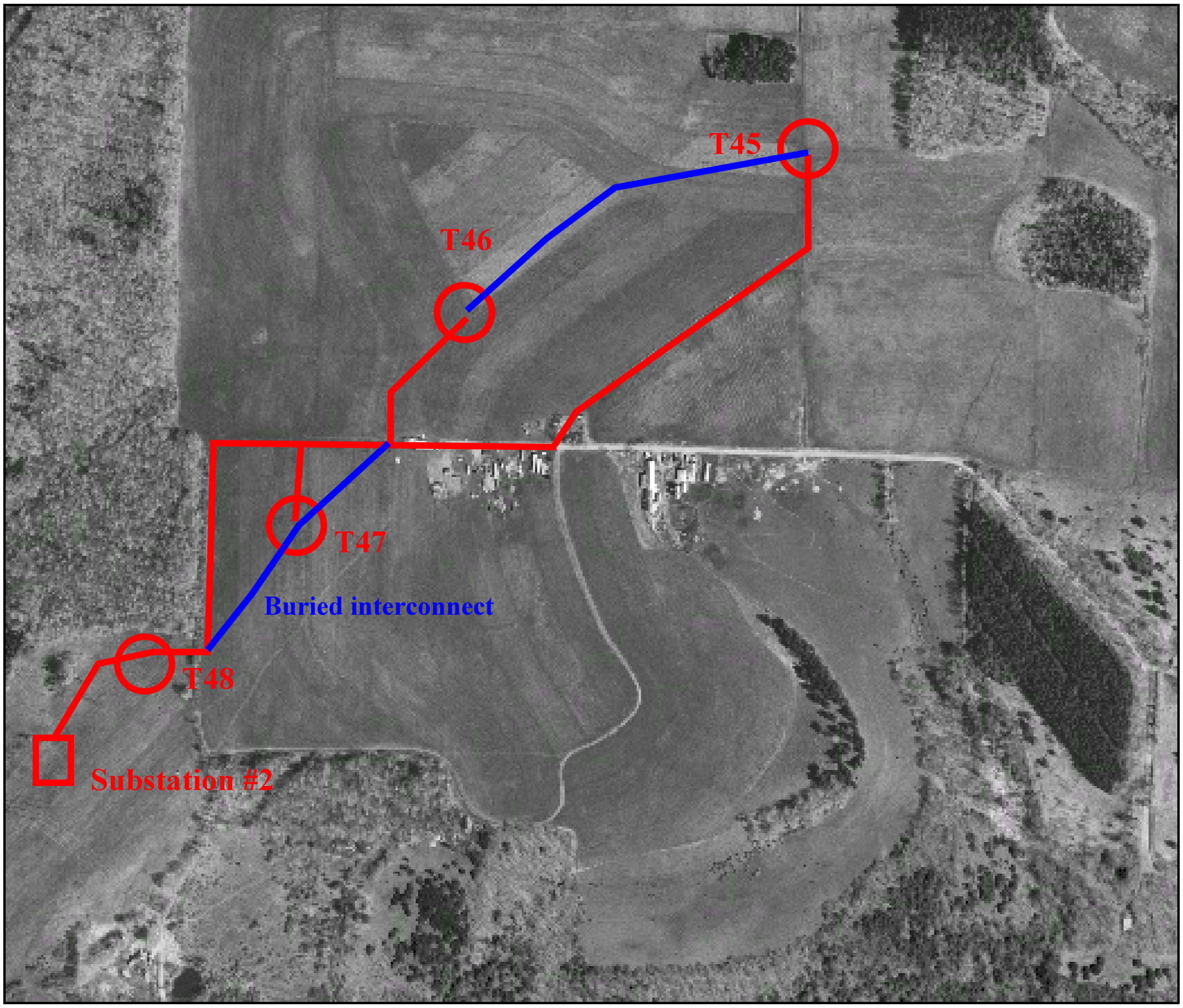

Figure 20. Aerial view of access/turbine 45-48 impact area.
(red: access and turbines; blue: buried interconnect)

VI. ASSESSMENT RECOMMENDATIONS

The archaeological assessment has shown that the Cohocton Wind Power Project is situated in an area with varying potentials for cultural resources. The background research has produced sensitivity assessments for prehistoric and historic settlement for the area. The following testing recommendations are based on this background research and recently written NYS OPRHP guidelines for testing windfarm projects.

Please note that testing recommendations are estimates only. Turbine locations, access roads, buried interconnects, and substations have yet to be marked in the field, and in some cases it was difficult to determine the specific location within or adjacent to a plowable agricultural field. Therefore the proposed testing strategies may need to be altered prior the actual field testing.

6.1 Prehistoric Sensitivity Assessment

Prehistoric sites have been found in upland environments on the Allegheny Plateau, and it is highly probable that hunter-gatherer groups in the region used the uplands throughout the Town of Cohocton for short-term activities. Based on the background research, the expected site types for this upland environment include small, seasonal camps and resource processing stations. These site types would not have been equally distributed throughout uplands contexts. Rather, it is likely that groups targeted specific landforms based on favorable conditions, such as the accessibility of potable water, good drainage, and gentle land slope. Larger base-camp and village settlements are likely to be encountered on valley bottom landforms (e.g., glacial outwash terraces and floodplains), particularly near the confluences of river tributaries.

6.2 Historic Sensitivity Assessment

The historic assessment is basically a negative assessment. Historic structures are absent from all impact areas on the historic maps, and it appears that most of the Cohocton uplands were (and continue to be) used as agricultural fields. Therefore, subsurface testing is unlikely to yield any historic site remains. Any historic artifacts found in the impact areas are likely to be random refuse typically found in agricultural fields or along rural roads. No unique historic testing recommendations are proposed for the future Phase 1B reconnaissance.

6.3 Testing Strategies

Current layouts for the Cohocton Wind Power Project are preliminary and subject to change throughout the testing process. Changes to the current layout will alter the number and extent of archaeological testing, but will not alter the basic testing strategy (based on new NYS SHPO guidelines).

The above sensitivity assessments for cultural resources in the region will be used to structure the testing recommendations for the different impact areas of the Cohocton Wind Power Project area. The proposed strategy is based on the sampling (both subsurface and/or surface testing) of archaeologically sensitive landforms. Areas with low archaeological potential (landforms with >15% slope) will be excluded from the testing strategies. In addition, any stretches of land with visible ground modification or adjacent to utility disturbances will be exempted from the testing proposals.

In general, archaeological testing (subsurface and/or surface) is recommended for a samples of turbine pads, each measuring roughly 120 m (400 ft) in diameter, and some portions of the access road and buried interconnection locations. In terms of the prehistoric sensitivity model, many of these locations correspond roughly to the highly-valued headwater and upland knoll environments mentioned in Section 6.1. Therefore, encountering prehistoric sites is possible in these areas. Testing is not recommended for portions of the project area exhibiting extreme (15% or greater) land slope. These portions of the project area are confined exclusively to the valley walls flanking the Cohocton River valley.

Although archaeological testing is possible across most portions of the Cohocton Wind Power Project area, landform sensitivity varies considerably across the upland environment. As noted above, upland prehistoric sites are likely to be clustered near water sources (e.g., headwaters, streams, and wetlands) or unique topography (e.g., elevated knolls offering good views) and less likely to be encountered on broad and homogenous upland plateaus. Therefore, the recommended methodology for upland projects should be geared toward the identification of sites on or adjacent to high sensitivity landforms.

The newly updated NYS SHPO guidelines for upland projects encourage such a testing method, focusing on the strategic placement of close-interval (no greater than 5 m) shovel test pits (STPs) on archaeologically sensitive parcels, rather than an equal distribution of pits across all landforms using the traditional 15 m (50 ft) interval. For the Cohocton Wind Power Project, the 5 m (16 ft) testing interval for sensitive parcels would greatly increase the probability of identifying the small lithic scatters most commonly encountered within upland contexts.

Using the new SHPO sampling method it is possible some portions of the entire project area would be exempt from testing (e.g., undifferentiated plateau), while archaeologically sensitive landforms (e.g., headwaters and stream/wetland fringes) would receive the bulk of the close-interval STPs. For the current study, landform sensitivity was categorized using Funk's 1993 study of the eastern Upper Susquehanna drainage. Although Funk's study documented only a small number of identified upland sites and components, the spatial distribution appears to be strongly tied to environmental variables such as proximity to water, slope, resource availability, site accessibility, and shelter (1993). Sensitivity classifications are summarized as follows.

- **High sensitivity landforms:** Parcels immediately adjacent to or overlooking upland headwaters and/or swamps/bogs. Of Funk's small samples of documented upland sites, over 50% (n=8) were identified near upland headwaters or on lands overlooking upland stream valleys (1993). Swamp/bog locations produced an additional two sites (14% of the total).

- **Moderate sensitivity landforms:** Upland headwaters on plateau summits and rock-shelters. Funk's (1993) study identified only one site and one prehistoric components at summits headwaters. No rock-shelters are known for the Upper Susquehanna, but several found in the Catskill uplands and Hudson Valley attest to the importance of rock outcrops and overhangs for short-term prehistoric occupation.

- **Low sensitivity landforms:** Undifferentiated, broad upland summits. These landforms often lack available water and provide little shelter from prevailing winds. Funk's analysis documents only one plateau site among the upland sample (1993).

Using Funk's classification for the Upper Susquehanna, Figures 21-23 highlight areas of high archaeological sensitivity for the Cohocton Wind Power Project on the USGS 7.5' topographic quadrangles (Naples, Avoca, and Haskinsville), and summarizes the data Table 5. For each figure "red squares" are used to mark moderate-high sensitivity landforms. As presented in the figures many of the hypothesized sensitive landforms are confined to turbine pad locations (many of which overlook upland streams and headwaters) and smaller sections of proposed access roads. Segments of the buried interconnect and Substation #1 also located on high sensitivity landforms, particularly areas near plateau edges overlooking upland headwaters and streams.

Lower site potential exists for large portions of access roads and buried interconnects on undifferentiated plateaus, and the substation atop Brown Hill. These preliminary classifications will need to be supplemented by field observations to identify small "micro-topographic" features (such as seasonal wetlands and elevational changes) note included on the USGS quadrangles.

Only small portions of the Cohocton Wind Power Project above-ground transmission line will impact landforms (floodplains and outwash terraces) within the valley floor (see Figures 22). Unlike for the rugged uplands, site sensitivity is very high for these landforms, and large prehistoric village and base-camps sites may be encountered within and adjacent to the above-ground transmission line. Although impact areas will be limited to above-ground utility poles, testing should be conducted at each pole location to determine if buried sites are present. Testing is not a priority for utility pole locations or small junction box loci within the uplands.

Table 5. Archaeological landform sensitivity for access roads/turbines in the Cohocton Wind Power Project Area

LOCATION	LANDFORM TYPE	PROXIMITY TO WATER (approx. distance to nearest)	SENSITIVITY POTENTIAL
Turbines 1-3	upland ridge	330 m (1000 ft) east of upland headwaters/stream	High for T3 pad: headwaters
Turbine 7	upland plateau	660 m (2000 ft) north and west of upland headwaters/stream	Low potential: undifferentiated plateau
Turbines 4-6,8	upland ridge and plateau	200-400 m (650-1400 ft) north of upland headwaters/stream	High: T5, T6, and T8 overlook upland headwaters
Turbines 9-10	upland plateau and edge	150-500 m (500-1650 ft) north of upland headwaters/stream	High: middle access and T10 overlook headwaters
Turbine 11	upland plateau	244 m (800 ft) west of upland headwaters/stream	Moderate to high potential for T11 pad
Turbine 12	upland plateau edge	370 m (1200 ft) south and east of upland headwaters/stream	Moderate to high for T12 pad

LOCATION	LANDFORM TYPE	PROXIMITY TO WATER (approx. distance to nearest)	SENSITIVITY POTENTIAL
Turbine 13	upland plateau	330 m (1000 ft) east of upland headwaters/stream	High for T13 pad
Turbine 14	upland plateau and ridge	370 m (1200 ft) south and west of upland headwaters/stream	High for T14 pad and terminal access
Turbine 15	upland plateau edge	213 m (700 ft) west of upland headwaters/stream	High for T15 pad
Turbine 16	upland plateau edge	213-275 m (700-900 ft) north and west of upland headwaters/stream	High for T16 pad and some access route
Turbine 17	upland plateau edge	370 m (1200 ft) south of upland headwaters/stream	Moderate for T17 pad
Turbines 18-19	upland plateau	initial access 60-90 m (200-300 ft) east of upland headwaters/stream	High for initial access road
Turbine 20	upland plateau	460 m (1500 ft) east of upland headwaters/stream	Low potential: undifferentiated plateau
Turbine 21	upland plateau	550 m (1800 ft) south of upland headwaters/stream; near wetland	High potential for access road (wetland)
Turbine 22	upland plateau	366 m (1200 ft) south of upland headwaters/stream	Moderate potential for T22 pad
Turbine 23	upland plateau	370 m (1200 ft) north and west of upland headwaters/stream	Low to moderate potential
Turbines 24-25	upland plateau	400-760 m (1300-2500 ft) west and south of upland headwaters/stream	Low potential: undifferentiated plateau
Turbines 26-28	upland plateau	660-1320 m (2000-4000 ft) south of upland headwaters/stream	Low potential: undifferentiated plateau
Turbines 29-20	upland plateau and edge	244-400 m (800-1400 ft) north and west of upland headwaters/stream	High for T29-T30 pad
Turbine 31	upland plateau	550 m (1800 ft) east of upland headwaters/stream	Moderate potential for T30 pad
Turbine 32	upland plateau	579 m (1900 ft) west and north of upland headwaters and stream	Moderate potential for T32 pad
Turbine 33	upland plateau	396 m (1300 ft) east of upland headwaters/stream	Moderate potential for T33 pad
Turbine 34	upland plateau	427 m (1400 ft) west of upland headwaters/stream	Moderate potential for T34 pad
Turbine 35	upland plateau	244-330 m (800-1000 ft) west of upland headwaters/stream	High potential for T35 pad and access
Turbines 36-38	upland plateau	330-550 m (1000-1800 ft) east of upland headwaters/stream	High for T36-37 pads and some access
Turbine 39	upland plateau	330 m (1000 ft) south of upland headwaters/stream	Low to moderate potential
Turbine 40	upland plateau	550 m (1800 ft) east of upland headwaters/stream	Low potential: undifferentiated plateau
Turbine 41	upland plateau	330 m (1000 ft) east of upland headwaters/stream	Low to moderate potential
Turbines 42-44	upland plateau and edge	330-460 (1000-1500 ft) east of upland headwaters stream	High for T43-44 pads and terminal access
Turbine 45	upland plateau	854 m (2800 ft) south of upland headwaters/stream	Low potential: undifferentiated plateau
Turbines 46-48	upland plateau	1070 m (3500 ft) south of upland headwaters/stream	Low potential: undifferentiated plateau
Above-ground transmission line*	valley bottom	close proximity to Cohocton River and tributaries	High potential for large sites

***above ground poles placed every 300 feet across valley bottom landforms**

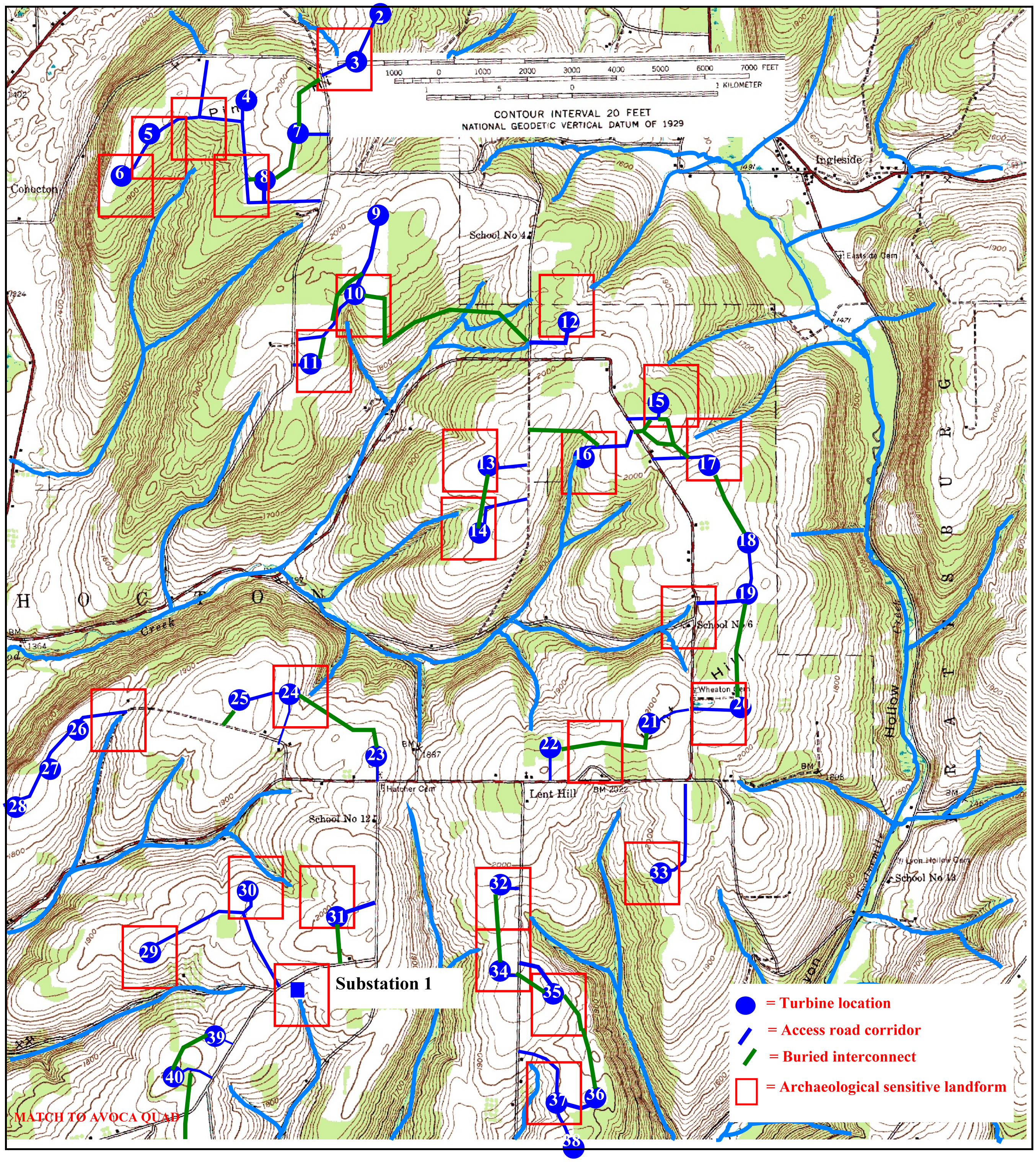

Figure 21. Archaeological landform sensitivity for turbines/access road/buried interconnect on the USGS Naples quad. (drainage system is highlighted in light blue)

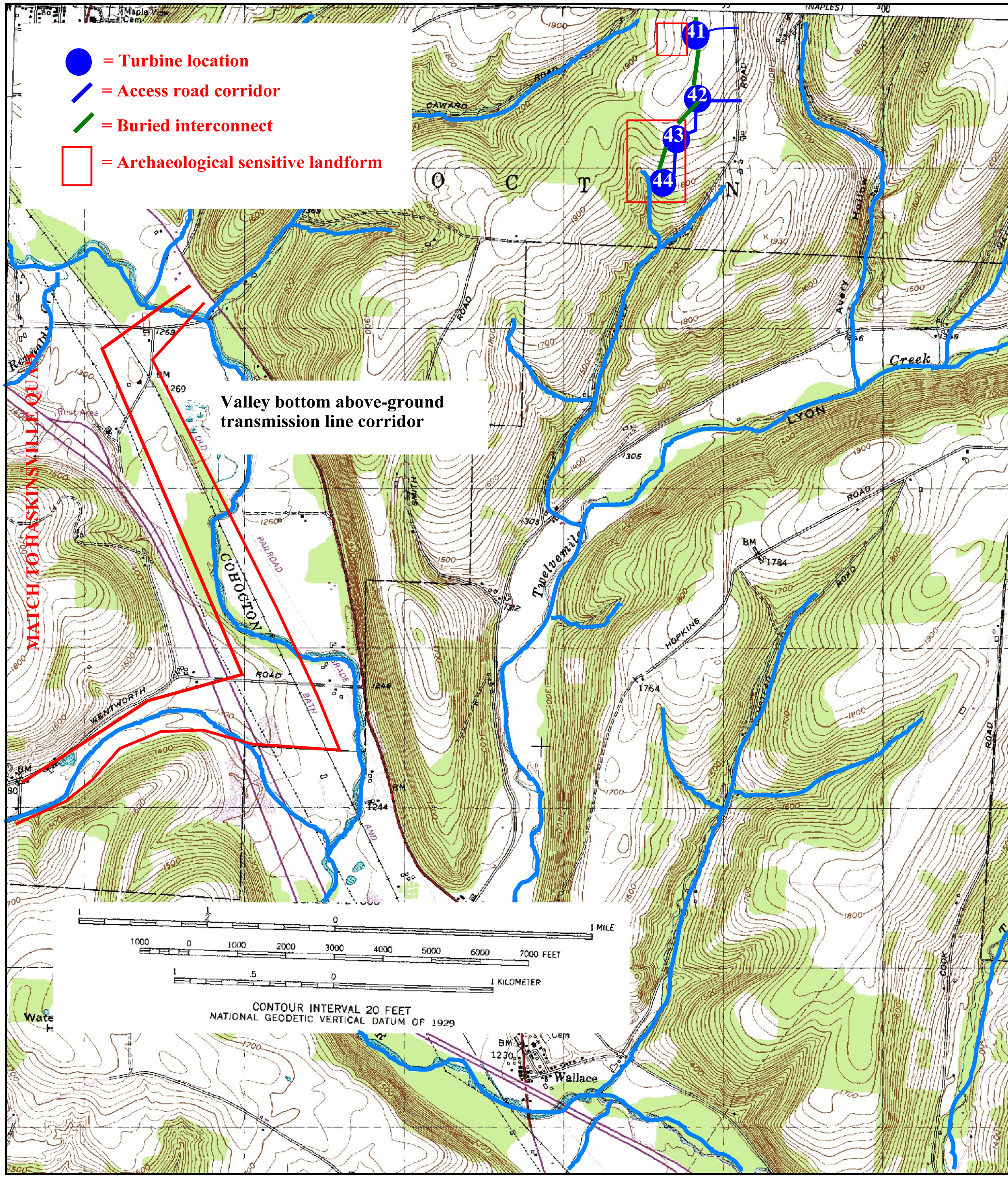

Figure 22. Archaeological landform sensitivity for turbines/access road/buried interconnect on the USGS Avoca quad. (drainage system is highlighted in light blue)

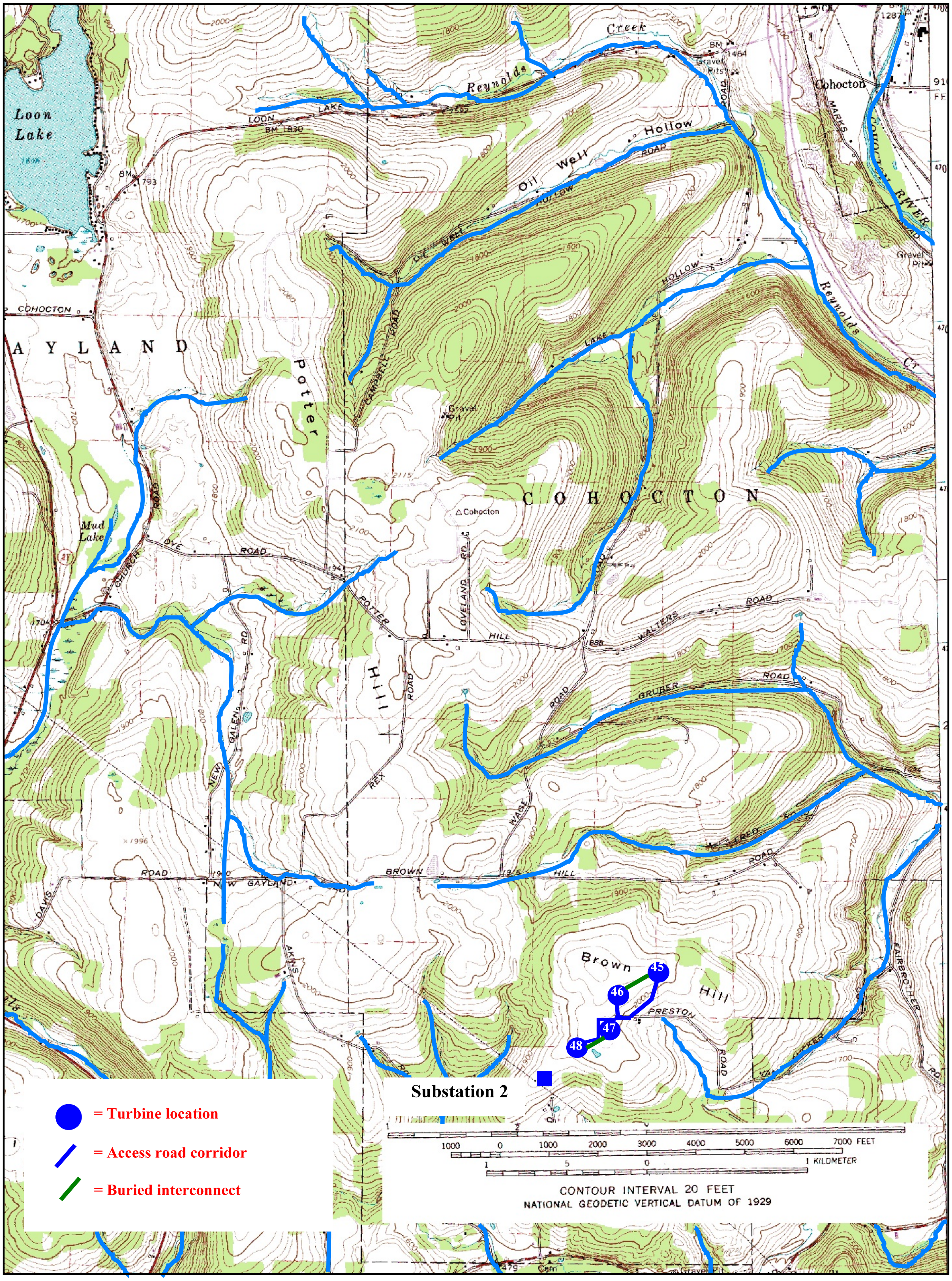

Figure 23. Archaeological landform sensitivity for turbines/access road/buried interconnect on the USGS Haskinsville quad. (drainage system is highlighted in light blue)

6.3.1 Subsurface Sampling Strategy

Subsurface testing (shovel test pits) estimates for the Cohocton Wind Power Project area are presented in Table 6. Total target shovel test pits for the project area was calculated by combining the length and width of each impact area and dividing by 4047 meters to determine the impacted acreage. Impacted acreage is then multiplied by 16 (the average number of test pits per acre using a 15 m interval) to reach the target number of STPs for the entire project impact area. The target number of STPs would then be used for close-interval testing on or near high sensitivity parcels; low sensitivity parcels would be excluded from the sampling or contain a very small number of test pits. Testing at new utility poles for the above-ground transmission line planned for valley bottom landforms (floodplains and outwash terraces) would require one STP for each pole location. At present the current target estimate for shovel test pits is roughly 3019-3069 (see Table 6).

Table 6. Subsurface testing estimates for the Cohocton Wind Power Project Area

Location	Access length	Access Width	Access Acreage	Turbine Area (acre)	No. of STPs (15 m int.)
Turbines 1-3	1038 m (3400 ft)	7.5 m (25 ft)	1.9 acres	8.7 acres	10.6 acres = 170 STPs
Turbine 7	186 m (610 ft)	7.5 m (25 ft)	0.3 acres	2.9 acres	3.2 acres = 51 STPs
Turbines 4-6,8	2715 m (8900 ft)	7.5 m (25 ft)	5.0 acres	11.6 acres	16.6 acres = 266 STPs
Turbines 9-10	948 m (3119 ft)	7.5 m (25 ft)	1.75 acres	5.8 acres	7.55 acres = 121 STPs
Turbine 11	171 m (560 ft)	7.5 m (25 ft)	0.3 acres	2.9 acres	3.2 acres = 51 STPs
Turbine 12	427 m (1400 ft)	7.5 m (25 ft)	0.8 acres	2.9 acres	3.7 acres = 59 STPs
Turbine 13	311 m (1020 ft)	7.5 m (25 ft)	0.6 acres	2.9 acres	3.5 acres = 56 STPs
Turbine 14	607 m (1990 ft)	7.5 m (25 ft)	1.3 acres	2.9 acres	4.2 acres = 67 STPs
Turbine 15	397 m (1300 ft)	7.5 m (25 ft)	0.73 acres	2.9 acres	3.63 acres = 58 STPs
Turbine 16	366 m (1200 ft)	7.5 m (25 ft)	0.68 acres	2.9 acres	3.58 acres = 57 STPs
Turbine 17	787 m (2580 ft)	7.5 m (25 ft)	1.46 acres	2.9 acres	4.36 acres = 70 STPs
Turbines 18-19	885 m (2900 ft)	7.5 m (25 ft)	1.6 acres	5.8 acres	7.4 acres = 118 STPs
Turbine 20	409 m (1340 ft)	7.5 m (25 ft)	0.75 acres	2.9 acres	3.65 acres = 58 STPs
Turbine 21	416 m (1365 ft)	7.5 m (25 ft)	0.77 acres	2.9 acres	3.67 acres = 59 STPs
Turbine 22	275 m (900 ft)	7.5 m (25 ft)	0.51 acres	2.9 acres	3.41 acres = 55 STPs
Turbine 23	200 m (660 ft)	7.5 m (25 ft)	0.37 acres	2.9 acres	3.27 acres = 52 STPs
Turbines 24-25	763 m (2500 ft)	7.5 m (25 ft)	1.41 acres	5.8 acres	7.21 acres = 115 STPs
Turbines 26-28	1253 m (4110 ft)	7.5 m (25 ft)	2.3 acres	8.7 acres	11.0 acres = 176 STPs
Turbines 29-30	1125 m (3690 ft)	7.5 m (25 ft)	2.08 acres	5.8 acres	7.88 acres = 126 STPs
Turbine 31	168 m (550 ft)	7.5 m (25 ft)	0.3 acres	2.9 acres	3.2 acres = 51 STPs
Turbine 32	207 m (680 ft)	7.5 m (25 ft)	0.38 acres	2.9 acres	3.28 acres = 52 STPs
Turbine 33	631 m (2070 ft)	7.5 m (25 ft)	1.17 acres	2.9 acres	4.07 acres = 65 STPs
Turbine 34	153 m (500 ft)	7.5 m (25 ft)	0.28 acres	2.9 acres	3.18 acres = 51 STPs
Turbine 35	262 m (860 ft)	7.5 m (25 ft)	0.48 acres	2.9 acres	3.38 acres = 54 STPs
Turbines 36-38	1370 m (4490 ft)	7.5 m (25 ft)	2.54 acres	8.7 acres	11.24 acres = 180 STPs
Turbine 39	174 m (570 ft)	7.5 m (25 ft)	0.32 acres	2.9 acres	3.22 acres = 51 STPs
Turbine 40	381 m (1250 ft)	7.5 m (25 ft)	0.71 acres	2.9 acres	3.61 acres = 58 STPs
Turbine 41	313 m (1025 ft)	7.5 m (25 ft)	0.58 acres	2.9 acres	3.48 acres = 56 STPs
Turbines 42-44	1772 m (5810 ft)	7.5 m (25 ft)	3.28 acres	8.7 acres	11.98 acres = 192 STPs
Turbine 45	384 m (1260 ft)	7.5 m (25 ft)	0.71 acres	2.9 acres	3.61 acres = 58 STPs

Location	Access length	Access Width	Access Acreage	Turbine Area (acre)	No. of STPs (15 m int.)
Turbine 46-48	903 m (2960 ft)	7.5 m (25 ft)	1.67 acres	8.7 acres	10.37 acres = 166 STPs
Above-ground transmission line*	8052 m (26400 ft)				40-90 STPs (1 at each pole)
Buried Interconnect**	14.5 km (9 mi)	2 m (6.6 ft)	7.2 acres		7.2 acres = 115 STPs
Substation 1-2			2.8 acres		2.8 acres = 45 STPs
TOTAL					**3019-3069 STPs**

***above-ground cable route with poles every 300 feet (valley bottom landforms only) / ** only portion outside of existing ROW and proposed access roads**

6.3.2 Combined Surface/Subsurface Strategy

Much of the Cohocton Wind Power Project area will impact existing agricultural fields or land immediately adjacent to agricultural fields. Many of these fields are currently plowed or are plowable, thereby allowing systematic surface surveys and artifact collection. Similarly, plowed lands immediately adjacent to proposed access road and buried interconnections can be walked to provide a sample of potential artifact scatters. Any artifact scatters would be collected and mapped with hand-held GPS units. Surface surveys of plowed fields would be combined with a limited amount of subsurface testing to identify soil horizon variations. A sufficient number would be one STPs for every 100 m (330 ft) and two pits for every turbine location. This limited number of STPs should be used for close interval testing (5 meter) at any high sensitivity areas or to help further define any sites identified during surface survey.

Plowable areas were defined as fields used for any crops (such as corn) that are seasonally turned after harvesting and hay/grass fields (these fields are usually not plowed which would negate a surface survey). Non-plowable areas for the assessment were identified as heavily wooded parcels. **Surface surveys would not be possible if crops (or hay/grass) are standing or visible, and any areas would also need to be freshly plowed and disked. Plowing is not an option for any project area landforms (e.g. forest or light-brush) that have never been previously plowed or cultivated.**

Some sections of the project area included a varying combination of plowed fields and plowable hay/grass fields. These fields are usually aligned in alternating strips (e.g., corn, hay/grass, corn, etc.). Surface surveys are possible on any plowable fields, but given the current project layouts it was difficult to determine linear extent (e.g., % of the total proposed road) of existing plowed fields along access roads crossing both unplowed hay/grass and plowed fields. Therefore testing estimates should be considered as minimum counts, and would likely change during field work.

Implementing a combined surface and subsurface testing strategy would decrease the target number of shovel test pits to approximately 600-700. **Please note that this estimate is based on complete surface surveys for all plowed or plowable impact areas. Unplowed or wooded parcels would require the subsurface testing estimate noted in Section 6.3.1.**

VII. ARCHITECTURAL ASSESSMENT RESULTS

An architectural assessment was undertaken for the proposed Cohocton Wind Power Project. Architectural assessments locate and identify historic properties eligible for inclusion in the National Register of Historic places so that their protection can be considered during the design and planning of new projects. A review of the State Historic Preservation Office's (SHPO) survey files was completed to identify previously surveyed National Register listed or eligible properties and inventoried properties in the project area. A field assessment was then conducted to identify all buildings and structures greater than 50 years old within the project area. Each property not previously evaluated was evaluated for National Register eligibility. Evaluations were based on National Register Criteria as defined in *National Register Bulletin 15: "*How to Apply the National Register Criteria for Evaluation" (National Park Service 1990). All work was conducted in accordance with the State Education Department's (SED) 1998 CRSP Work Scope Specifications. The results of the research performed for this report do not apply to any territory outside the project area visual study area described in Section 7.1.

7.1 Visual Study Area Description

The proposed visual study area for the Cohocton Wind Power Project area encompasses a 5-mile radius around each of the proposed wind farm sites. To determine the extent of the visual study area, a 5-mile radius was drawn around the northernmost, southernmost, easternmost and westernmost wind turbine sites and the overlapping circles formed the outline of the visual study area. The area spans portions of nine towns (Cohocton, Naples, Italy, Prattsburg, Avoca, Fremont, Dansville, Wayland, and Wheeler) in three counties (Ontario, Yates, and Steuben).

7.2 Architectural Assessment Methodology

For investigative purposes, the architectural assessment was divided up by town. Using the map as the basis for the survey, those roads that fell within the visual study area were driven to locate National Register eligible properties. Roads that were clearly marked as private roads were not investigated. Private roads are usually newly developed and the houses along private roads are generally less than 50 years old. Long private driveways were also eliminated from the survey. Traditionally, farmhouses in New York State were constructed adjacent to the road; it is unlikely that an historic house will be found at the end of a long and winding drive.

Most of the town roads were dirt, and many were seasonally maintained. In a few instances, roads that appeared on a current road map had actually been abandoned and came to a dead end. In many cases the collapsed remains of abandoned houses were found where the a road came to a dead end. If there had been additional houses on these roads, as was indicated in a couple of cases on historic maps, it was assumed that the house was no longer occupied and probably no longer standing.

The 5-mile radius around the proposed windfarm project encompassed two villages (Cohocton and Naples), seven hamlets, and miles of rural roads and agricultural land. The Village of Naples has three properties already listed on the National Register and there is a potential historic district at the north end of Main Street, as well as a number of individually eligible properties scattered throughout the village. It appears that a number of properties in the Village of Cohocton would qualify for listing on the National Register, as would a few in the hamlets. There is at least one, and possibly three or four, working farms that are individually eligible. Few other eligible properties, based on architectural significance, were found within the project boundaries.

As is so often the case in rural areas, the houses that were most unaltered were also the ones that were unoccupied and deteriorating. In many cases, historic farmhouses had been re-sided and the windows had been replaced. The alteration of the fenestration to incorporate picture windows was pervasive and most farmhouses had numerous additions. On many farms the original farmhouse had been razed and replaced with a modern, often prefabricated, structure. Although there were many wonderful barns in the project area, barns are rarely National Register eligible on their own. None in the project area appeared to be individually significant enough to warrant a National Register nomination.

Churches are another common architectural feature in the rural landscape, and there were nearly a dozen in the project area. Most of these also had been altered with replacement siding, ungainly additions and, in some cases, the loss of their steeples. The memorial windows seemed to be the one feature that remained unaltered.

Cemeteries are the other common historic resource in the project area and range from small family plots to large community facilities. Cemeteries are individually eligible for the National Register if they contain the graves of persons of transcendent importance (who have had a great impact upon the history of their community, state or nation) or if they have achieved historic significance for their relative great age in a particular geographic or cultural context. Cemeteries can also be listed based on landscape design, or exceptional funerary art. Of the small sample of cemeteries within the visual study area, none appear to meet these eligibility requirements.

7.3 Architectural Assessment Results

The architectural assessment documented at least 80 National Register Listed and/or Eligible historic structures/properties and one potential "historic district" within the Cohocton Wind Power Project visual study area (see Table 7 for summaries by township and village; locational maps in Appendix II).

This total includes four National Register Listed structures (three for the Village of Naples and one for the Village of Cohocton). The potential historic architectural district spans North Main Street in the Village of Naples from CR 33 to the intersection with Mt. Pleasant Street. The extent of turbine visibility for each structure/property has yet to be determined.

A more detailed architectural reconnaissance will be completed for the Phase 1B testing. This reconnaissance survey will include descriptions and photographs of all structures/properties, as well as any specific recommendations, such as landscaping measures to block visual impacts.

Table 7. National Register Listed or Eligible Properties within the Cohocton Wind Power Project Visual Study Area

TOWN / COUNTY (MCD)	SITE DESCRIPTION	NATIONAL REGISTER STATUS
Naples, Ontario Co. (06910)	7959 NY CR 36	NR Eligible
	8862 NY 53	NR Eligible
	8945 NY 53	NR Eligible
Village of Naples, Ontario Co. (06946)	**Ephraim Cleveland House** **201 North Main St.**	**Listed - NR94000047**
	Naples Memorial Town Hall **North Main at Monier St.**	**Listed - NR96000482**
	Morgan Hook and Ladder Company **18-20 Mill St.**	**Listed - NR95000668**
	111 South Main St.	NR Eligible
	120 South Main St.	NR Eligible
	128 South Main St.	NR Eligible
	10 Cohocton St.	NR Eligible
	11 Cohocton St.	NR Eligible
	46 East Ave.	NR Eligible
	21 East Ave.	NR Eligible
	28 East Ave.	NR Eligible
	2 Elizabeth St	NR Eligible
	34 Elizabeth St.	NR Eligible
	36 Elizabeth St.	NR Eligible
	134 South Main St.	NR Eligible
	132 South Main St.	NR Eligible
	129 South Main St. - First Baptist Church	NR Eligible
	Potential "historic district" along North Main Street from CR 33 to Mt. Pleasant Street	
Italy, Yates Co. (12303)	Prattsburgh Rd. at the junction of Pompliono Rd.	NR Eligible
Wayland, Steuben Co. (10128)	125 Loon Lake Rd.	NR Eligible
Howard, Steuben Co. (10118)	2714 Rte 70A - Baptist Church	NR Eligible
	CR 70A at Miller Rd. - Union Church	NR Eligible
	3617 CR 70A	NR Eligible
	3929 Smith Pond Rd.	NR Eligible
	4144 Smith Pond Rd.	NR Eligible
Prattsburg, Steuben Co. (10121)	5684 NY 53	NR Eligible
	6538 CR 7	NR Eligible
	5579 Horn Rd.	NR Eligible
	5302 Blodgett Rd.	NR Eligible
	6341 Block School Rd.	NR Eligible
Wheeler, Steuben Co. (10131)	5404 Welch Rd.	NR Eligible
Fremont, Steuben Co. (10113)	3611 Conderman Rd.	NR Eligible
	8999 CR 21, Haskinville	NR Eligible

TOWN / COUNTY (MCD)	SITE DESCRIPTION	NATIONAL REGISTER STATUS
	8997 (?) CR 21Haskinville	NR Eligible
Avoca, Steuben Co. (10102)	61140 NY 415, Hamlet of Wallace	NR Eligible
	61122 NY 415, Hamlet of Wallace	NR Eligible
	61118 NY 415, Hamlet of Wallace	NR Eligible
	61126 NY 415, Hamlet of Wallace	NR Eligible
	61157 NY 415, Hamlet of Wallace	NR Eligible
	9070 NY 415, Hamlet of Wallace	NR Eligible
	Corner Reynolds Rd and Church St., Hamlet of Wallace	NR Eligible
	60819 NY 415	NR Eligible
Cohocton, Steuben Co. (10109)	10849 NY 371	NR Eligible
	4079 Wentworth Rd.	NR Eligible
	3939 Atlanta-E. Wayland Rd.	NR Eligible
	10433 Rte 317	NR Eligible
	11190 NY 317	NR Eligible
	10926 NY 317	NR Eligible
	3991 CR 21	NR Eligible
	9980 NY 415	NR Eligible
	11763 Rowe Road	NR Eligible
Village of Cohocton, Steuben Co. (10149)	**Larrowe House - 15 S. Main St.**	**Listed - NR 89002088**
	Cohocton RR station	NR Eligible
	Birkett Mill, Mill St.	NR Eligible
	10 S. Main St.	NR Eligible
	14 S. Main St.	NR Eligible
	? Maple St. (no visible address)	NR Eligible
	58 Maple St.	NR Eligible
	N. Main St. corner of Warner Ave.	NR Eligible
	8 Warner Ave.	NR Eligible
	Wayland-Cohocton Central School, Park St.	NR Eligible
	Holy Family Church, - Maple St.	NR Eligible
	Commercial Bldg., - Maple St.	NR Eligible
	Commercial Bldg., - Maple St.	NR Eligible
	9 Larrowe St.	NR Eligible
	? Church St. (no visible address)	NR Eligible
	? Church St. (no visible address)	NR Eligible
	St. Paul's Lutheran, Maple St.	NR Eligible
	3 Shults St.	NR Eligible
Hamlet of Atlanta, Steuben Co.	Atlanta RR station	NR Eligible
	Presbyterian Church	NR Eligible
	38 University Ave.	NR Eligible

TOWN / COUNTY (MCD)	SITE DESCRIPTION	NATIONAL REGISTER STATUS
	59 River St.	NR Eligible
	5 River St.	NR Eligible
Hamlet of North Cohocton, Steuben Co.	7 University Ave. - N. Cohocton	NR Eligible
	4 University Ave.	NR Eligible
	?? University Ave. (no visible address)	NR Eligible
	Clearview Cemetery	NR Eligible

APPENDIX I: SOURCE LIST

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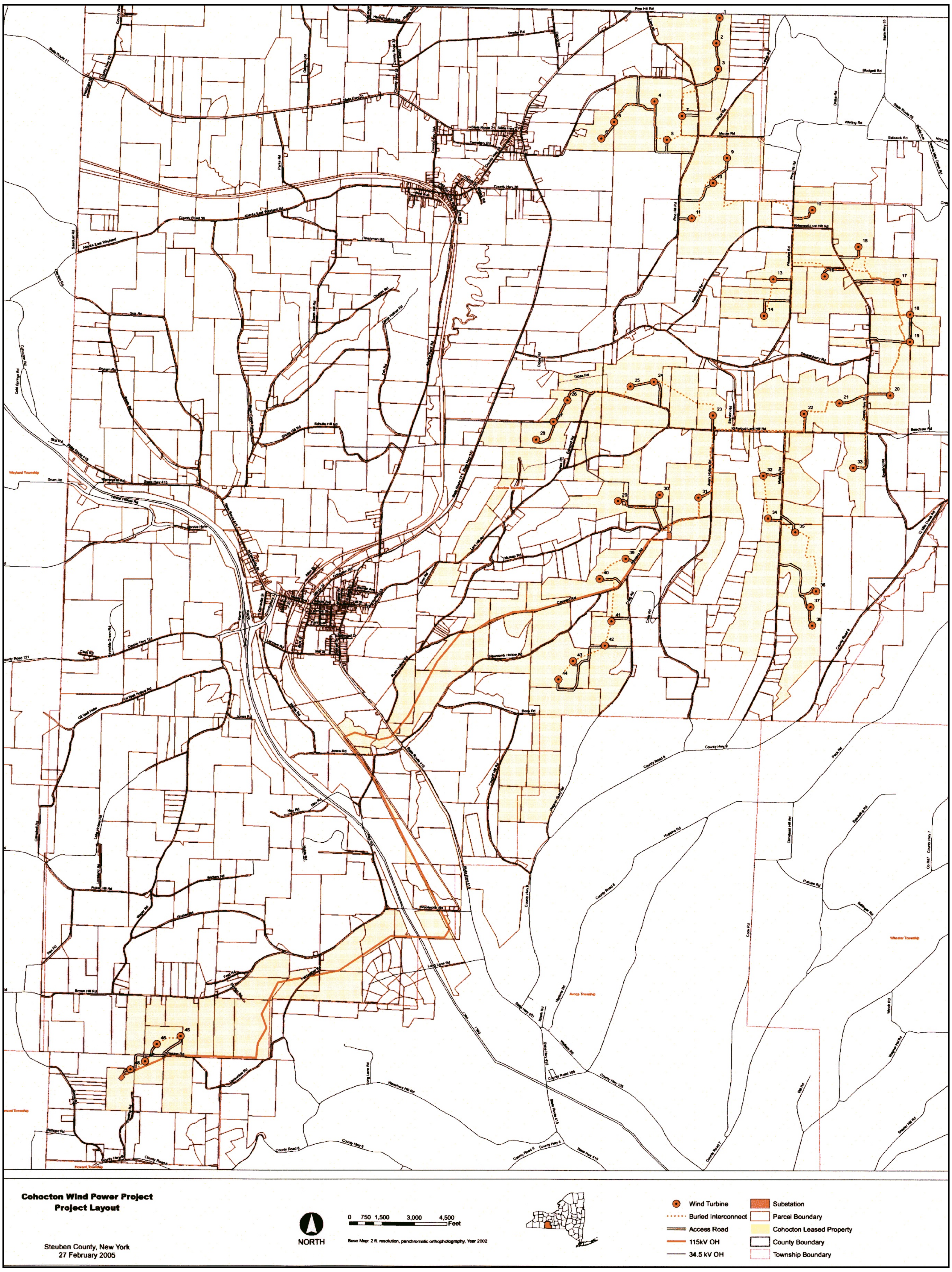
2001 *Adding Complexity to Late Archaic Research in the Northeastern Appalachians*. In Archaeology of the Appalachian Highlands, L.P. Sullivan and S.C. Prezzano (ed.), pp. 121-137. University of Tennessee Press: Knoxville.

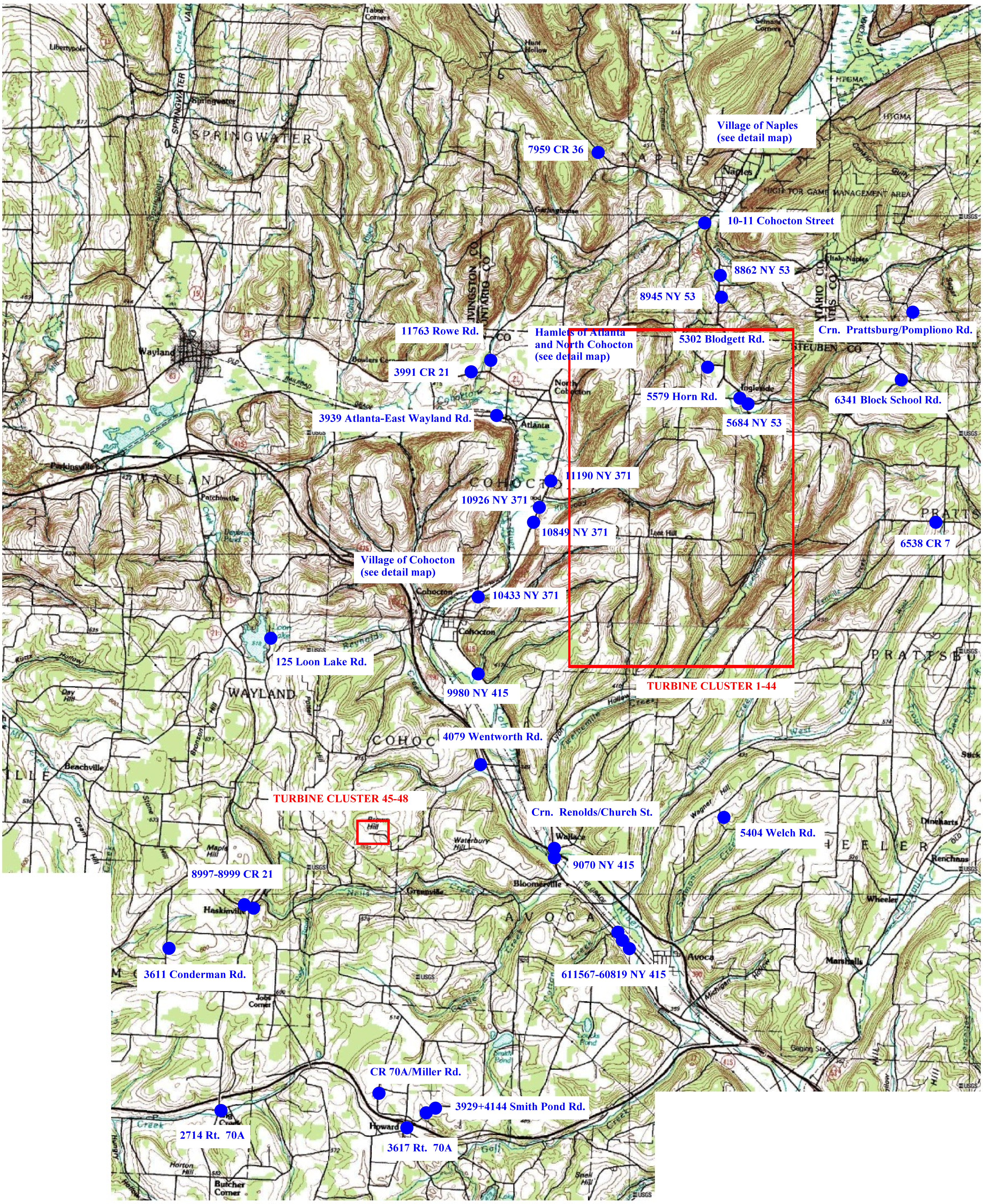
Versaggi, Nina M. and Christopher Hohman
2006 Small Lithic Sites: Linking Significance with Context. paper presented at the Symposium: Current Approaches to the Analysis and Interpretation of Small Lithic Sites in the Northeast (November 2003). New York State Museum.

APPENDIX II: PROJECT AREA MAPS

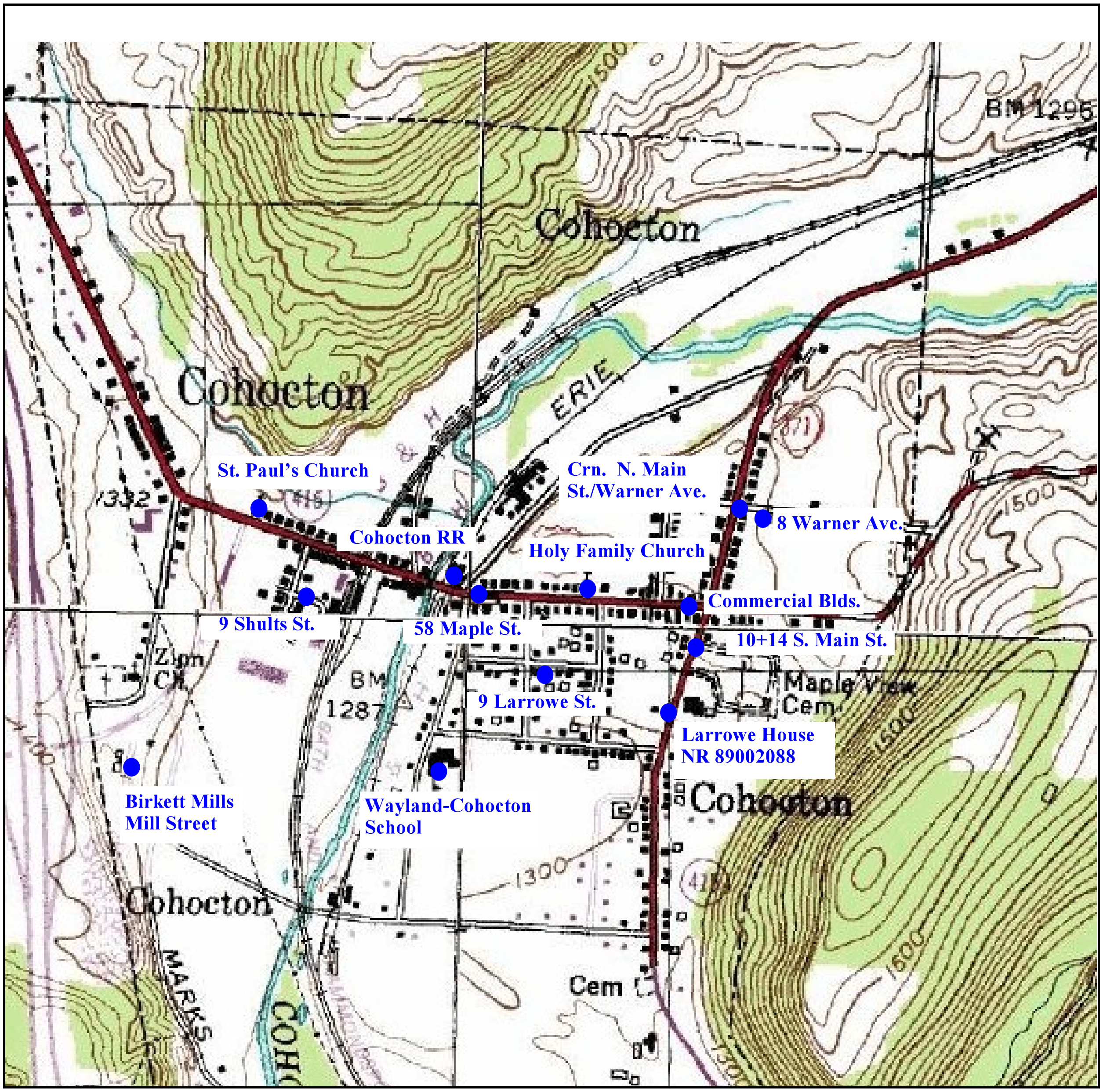
Map 1. Cohocton Wind Power Project with location of proposed developments



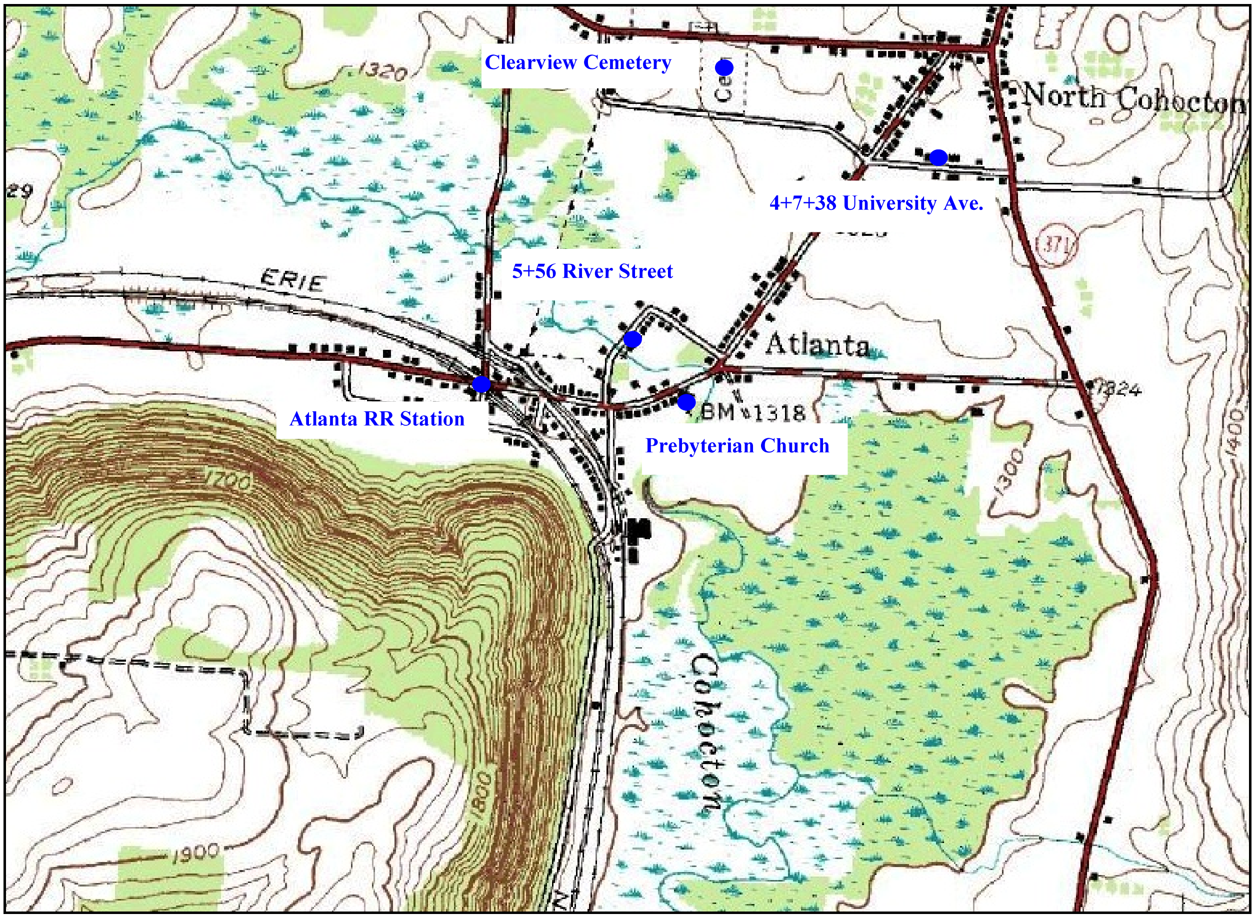
Map 2. Cohocton Wind Power Project visual study area with location of NR listed and eligible structures/properties



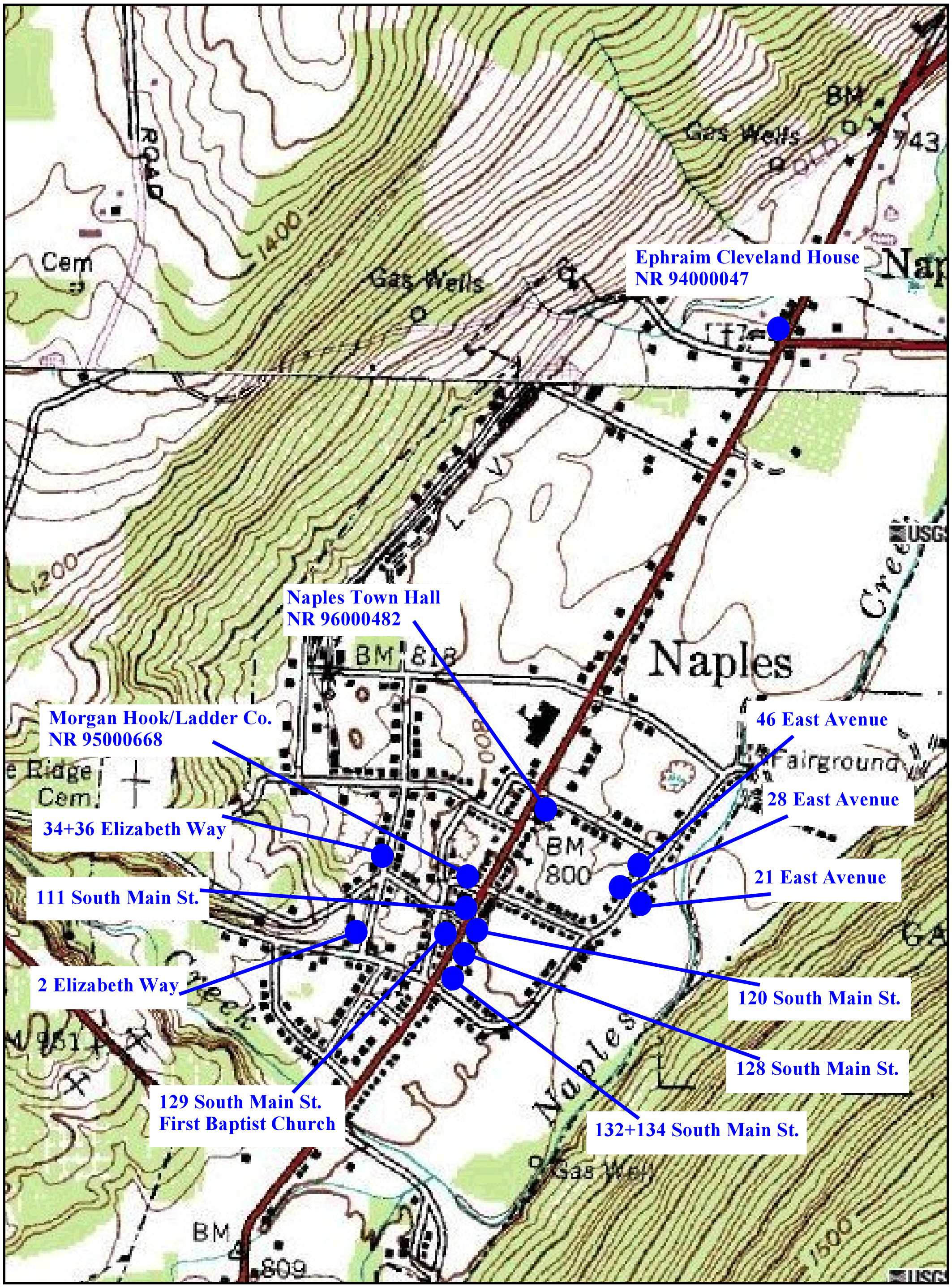
Map 3. Visual study area (detail of the Village of Cohocton)



Map 4. Visual study area (detail of the Hamlets of North Cohocton and Atlanta)



Map 5. Visual study area (detail of the Village of Naples)



APPENDIX III: NYS SHPO WINDFARM CRM GUIDELINES

New York State Historic Preservation Office
Guidelines for Wind Farm Development Cultural Resources Survey Work

The New York State Historic Preservation Office has established the following guidelines for the assessment of historic and cultural resources associated with the development of wind farm projects in New York State.

Survey for Historic Buildings

1) Establish a five-mile Area of Potential Effect (APE) around the project site.

2) Establish boundary of APE using topographic survey to determine where project may be visible from.

3) Conduct field survey within the positive visual APE as defined by topographic study.

4) Using NY SHPO data, the survey will initially identify all buildings/sites within the study area that were previously determined eligible for inclusion in or are already listed in the New York State and National Registers of Historic Places.

5) The survey will assess all buildings 50 years old or older within the study area. Surveyors will determine potential State and National Register eligibility of each resource using the National Register Criteria for Evaluation.

6) Surveyor will schedule a meeting with NYSHPO staff prior to undertaking survey work to verify the APE.

7) Surveyor will schedule a meeting with NYSHPO staff after completion of survey of mile-1 “ring” of study area to verify eligibility determination methodology. Meeting will review properties determined eligible and will provide a sampling of resources determined not-eligible.

8) After evaluation methodology is verified by the NYSHPO, survey of remaining APE area will be completed. All properties previously listed in the State and/or National Registers in addition to all properties determined eligible prior to the survey and as part of the project survey are to be marked using a single GPS point. The single point should be taken at the edge of the property generally at the mid-point of the property’s street frontage.

9) The GPS data will be linked to the street address and/or SHPO Unique Site Number (if one already exists).

10) All survey data will be provided to the NYSHPO in a standardized format that will be discussed at the initial pre-survey meeting.

Archaeological Survey

Phase I Archaeological Survey is recommended for all wind farm project areas. The goal of this work is to augment the state’s understanding of upland locations and small site types.

Archaeological Survey will be limited to the *Archaeological* Area of Potential Effect (APE) associated with the construction of the project. This smaller core of the project APE is composed of areas that will experience ground disturbing activity during the construction phase of the project. These areas include but are not limited to:

Turbine sites
Construction staging areas
Borrow pits
New/Access Roads
Utility corridors
New building locations
Other areas where the current ground surface may be modified as a result of the project.

Phase IB survey will be conducted by sampling Environmental Zones. Necessary steps in this process include:

1) Determining the total acreage of the *Archaeological* APE.

2) Determining the total number of shovel tests recommended for the *Archaeological* APE by multiplying the acreage by 16 shovel tests per acre.

3) Identifying the various environmental zones within the *Archaeological* APE following Robert E. Funk's 1993 work, *Archaeological Investigations in the Upper Susquehanna Valley, New York State* (Chapter 5).

4) Once the zones are defined, the archaeological consultant will divide up the total number of shovel tests previously determined and apply an equal percentage of tests to each defined environmental zone. Any previously identified archaeological site(s) or map documented structure (MDS) must be included in the Phase IB testing.

5) Within each zone shovel testing will be conducted using a five meter interval or other acceptable methods such as plowing/disking for previously plowed farm land.

6) Prior to implementing a proposed testing methodology the project consultant will schedule a meeting with SHPO staff to consult on the proposed plan. A copy of the plan will be provided for SHPO staff review in advance of the meeting.

7) Sites, identified as part of the survey process will be documented using standard practices (such as site forms or approved data bases) and will all be located using a single GPS point.

8) Once the Phase I survey is completed a report will be provided to the SHPO using the established New York SHPO Phase I Archaeological Report Format Requirements and the Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State.

Electronic Survey Data

Project sponsors will provide the following data sets to the SHPO as part of their submission. Sponsors or their consultants should contact the SHPO staff to verify specific data requirements.

1) GIS data coverage defining the five-mile survey area.
2) GIS data locating (as best as practical) each of the proposed tower locations.
3) GPS data locating by singe point each building, structure, object or site identified as being eligible for or listed in the New York State and/or National Registers of Historic Places.
4) GIS data locating the boundary of all archaeologically tested areas.
5) Final archaeological reports should be provided in bound format (see New York SHPO Phase I Archaeological Report Format Requirements) as well as in PDF format on CD.
6) Project's consultant should contact SHPO staff to determine exact format of data to be submitted.

For more information about the New York State Historic Preservation Office, please call us at 518-237-8643 or visit our web site at **http://nysparks.state.ny.us** then select **HISTORIC PRESERVATION.** Select the **On Line Resources** option to find specific information regarding historic and cultural resources in any community in the state.

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    vi. New building locations
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