

Article 10 Application

Horseshoe Solar

Case 18-F-0633

Livingston and Monroe Counties, New York

1001.20 Exhibit 20

Cultural Resources

Invenergy

Exhibit 20 Cultural Resources

20.a Impacts on Archaeological Resources

20.a.1 Summary of Archaeological Impacts and Avoidance

Potential Impacts

Facility construction could impact archaeological resources by disturbing sensitive areas during excavation for access roads, electrical collection system, construction laydown area, operations and maintenance facility and electrical yards. Because Horseshoe Solar Energy (HSS) expects to mount the Facility's panel racks on steel H-piles less than a foot wide, earth disturbance associated with the foundation of the array is limited. Grading will be necessary in some areas based on the existing topography in order to maintain required slopes for trackers and stormwater management.

Based on desktop and field surveys conducted per guidance of the State Historic Preservation Office (SHPO), the Facility Site is sensitive for pre-contact archaeological resources. HSS and Panamerican Consultants, Inc. (PCI), a cultural and historic resources consulting firm, are in consultation with SHPO to conduct the appropriate surveys and assessments of the Facility's potential to impact cultural resources. HSS and PCI will continue to consult with NYS Office of Office of Parks, Recreation and Historic Preservation (NYSORPHP)/SHPO to review results of forthcoming surveys described below and determine measures to avoid, minimize and/or mitigate potential for impacts.

20.a.2 Phase 1A Study

A Phase 1A archaeological and historic resources study conducted for the Facility by PCI is included as Appendix 20a. As part of the Phase 1A study, PCI reviewed archaeological site files maintained by the Office of Parks, Recreation and Historic Preservation (OPRHP), reviewed the OPRHP Cultural Resource Information System (CRIS), visited the Facility Site, conducted archival research at University of Buffalo's Marian E. White Anthropology Research Museum and the Rochester Museum of Science, and interviewed local historians. The report describes the Facility Site's history, cultural resources, and historic resources.

The report provides a detailed historical account of the former Canawaugus Reservation which was a two-square-mile area extended two miles from the Genesee River circumscribed in 1797 from a Seneca village by the same name that was located along the river, near the current Village of Avon. This village was the birthplace of Handsome Lake, the prophet of the Longhouse religion, and Cornplanter, the Seneca war chief. The far southwestern portion of the Facility Site intersects the western portion of the former reservation. In 2016, the Valley Sand and Gravel stone quarry was developed in the central portion of the reservation.

The Phase 1A also recounts the history of the Genesee Valley Canal, which was constructed in 1837-1840 along the western side of the Genesee River from the Erie Canal in Rochester to the Genesee River dam near Mount Morris. By 1870, the canal had proven uneconomic and was sold in 1880 to the Genesee Valley Railway Company. The railway was constructed in the former canal by 1882 primarily to

transport coal from Pennsylvania to Rochester. The rail line was operated until 1863, and the right-of-way was subsequently developed into the Genesee Valley Greenway which transects the Facility Site.

PCI's Phase 1A study identified 43 historic archaeological sites in the OPRHP's database within 500 ft of the buildable area of potential effect (APE). These include 12 burial sites, although the confidence in the reported location of these sites is poor because very little specific information is available. PCI recommended additional Phase 1B archaeological surveys be conducted to document specific resources and the potential for the Facility to impact these resources.

PCI submitted the initial Phase 1A report to the OPRHP in June 2019, an expanded report in October 2019 in order to address OPRHP comments requesting extensive additional research, and a revised report in February 2020 to assess additional lands added to the Facility Site. OPRHP has assigned the Facility consultation tracking number 18PR07941. Table 20-1 summarizes OPRHP correspondence for the Facility.

The consultation process with Native American Nations is governed at the federal level by Section 106 of the National Historic Preservation Act and at the state level by Section 14.09 of the New York State Historic Preservation Act. Under both laws, consultations are conducted on a 'nation-to-nation' or government-to-government basis between federal or state permitting authorities and Nations. OPRHP assists in the coordination of review of cultural resource studies with Native American Nations. The Phase 1A drafts and report were shared by OPRHP to the involved Nations which then provided comment and information to be incorporated into the report. The consultation process is ongoing.

Table 20-1. SHPO Correspondence

Date	SHPO Contact	Panamerican / Invenenergy / EDR Contact	Topic	Contacted via
12/12/2018	Josalyn Ferguson, Ph.D.	Marguerite Wells	Initial consultation submission	Email
4/2/2019	Josalyn Ferguson, Ph.D.	Marguerite Wells	Clarification on Project Area	Email
5/2/2019	James Finelli	Marguerite Wells	Request work plan for architectural resources	Email
5/3/2019	James Finelli	Christine M. Longiaru	Architectural survey work plan submitted	Letter
6/11/2019	Josalyn Ferguson, Ph.D.	Marguerite Wells	Request for Phase 1A Survey Report	
6/12/2019	Josalyn Ferguson, Ph.D.	Marguerite Wells	Request for Phase 1A shapefile	Email
7/9/2019	Josalyn Ferguson, Ph.D.	Robert Hanley	Phase 1A review, request for additional research and consultation	Email
7/24/2019	Josalyn Ferguson, Ph.D.	Gordon Gray	SHPO consultation and other recommendations	Letter
7/11/2019	Josalyn Ferguson, Ph.D.	Marguerite Wells	Request for USACE and PSC agency contacts	Email
8/14/2019	Josalyn Ferguson, Ph.D.	Robert Hanley	Provided USACE comments	Email
8/15/2019	Josalyn Ferguson, Ph.D.	Robert Hanley/Gordon Gray	Consultation regarding soil bore testing.	Email
8/21/2019	Josalyn Ferguson, Ph.D.	Robert Hanley	Proposed geotech and pile test locations	
8/27/2019	Josalyn Ferguson, Ph.D.	Robert Hanley	Provided THPO contact information from USACE	Email

8/28/2019	Josalyn Ferguson, Ph.D.	Gordon Gray	Feedback that geotechnical and bore-pile testing be monitored due to sensitivity of site, initiation of Indian Nation consultation.	Letter
10/2/2019	Josalyn Ferguson, Ph.D.	Gordon Gray	Submittal of expanded Phase 1A with Archaeological Literature and Sensitivity Assessment	Document
10/8/2019	Josalyn Ferguson, Ph.D.	Robert Hanley	Reported that bores completed with no disturbance	Email
10/10/2019	Josalyn Ferguson, Ph.D.	William McLaughlin	Revised PSS figures for project expansion	Letter
10/18/2019	Josalyn Ferguson, Ph.D.	Robert Hanley	Provided Figure 18 of the Revised IA report	Email
10/18/2019	Josalyn Ferguson, Ph.D.	Robert Hanley	Provided information about APE in CRIS	Email
10/29/2019	Josalyn Ferguson, Ph.D.	Gordon Gray, Robert Hanley	Request revised Phase 1A for project expansion, guidance for Phase 1B survey	Letter
11/13/2019	Josalyn Ferguson, Ph.D.	Matthew Robinson	Visual Impact Assessment outreach letter – recommended viewpoints	Letter
12/30/2019	Josalyn Ferguson, Ph.D.	Gordon Gray, Robert Hanley	Forwarded comment letter from Tonawanda Seneca Nation	Letter
3/3/2020	Josalyn Ferguson, Ph.D.	Robert Hanley	Expanded/Revised Phase 1A submitted	Document
3/4/2020	Virginia Bartos	Christine M. Longiaru	Architectural resource survey submitted	Document
3/10/2020	Josalyn Ferguson, Ph.D.	Gordon Gray, Robert Hanley	Notice that OPRHP requested comments on Addendum Phase 1A Survey for added lands from Indian Nations and will not commence its own review until March 30	Email
3/17/2020	Virginia Bartos	Christine M. Longiaru	Response to NHRP eligibility table	Document
5/5/2020	John A. Bonafide	Robert Hanley	Confirmed review of Architectural survey, provided SHPO USN numbers for NRHP properties. Indicated potential adverse effect on historic resources.	Letter
5/7/2020	Josalyn Ferguson, Ph.D.	Andrew Davis	Confirmed review of Phase 1 archaeology investigation report, provided comments, requested revisions from OPRHP. Provided comments and requested revisions from Tonawanda Seneca Nation, Tuscarora Nation, Seneca Nation. Requested conference call between PCI, DPS, Nations, and OPRHP	Letter

20.a.3 Phase 1B Archaeological Investigation

In consultation with SHPO, PCI is developing a plan for Phase 1B archaeological studies for the Facility. Per SHPO guidance, the Phase 1B study plan will involve shovel tests at locations designed to sample the range of archaeological sensitivities of areas where Facility construction is expected to disturb soils.

The Phase 1B archaeological investigation will be conducted in compliance with SHPO's *Guidelines for Wind Farm Development Cultural Resources Survey Work (2006)* and the New York Archaeological Council standards. It will identify any potential archaeological sites that would be impacted by the Facility within the Area of Potential Effect (APE).

It is anticipated that in the summer of 2020, PCI will mobilize a team to perform the shovel tests required by the plan. The tests will be performed in accordance with a study plan developed in consultation with SHPO and will be documented in a field letter report. Once complete, HSS will submit the Phase 1B report to SHPO.

20.a.4 Phase 2 Survey of Archaeology Resources

A Phase 2 cultural resources investigation is an intensive evaluation of an identified archaeological site that cannot be avoided by reasonable modification to the Facility. The goal of a Phase 2 investigation is to determine an archaeological site's cultural significance using eligibility criteria for listing in the State/National Register of Historic Places. The requirement for a Phase 2 survey will be determined at the time of the completion of the Phase 1B cultural resources investigation.

20.a.5 Statement on Handling of Recovered Archaeology Materials

PCI will conduct the Phase 1B archaeological surveys with the requirement in place that if it recovers any archaeological materials, it will clean, catalogue, inventory, and curate the materials per the New York Archaeological Council's (NYAC) *Standards for Cultural Resource Investigations and Curation of Archaeological Collections in New York State* (NYAC, 1994; the "NYAC Standards").

20.a.6 Unanticipated Discovery Plan

This section constitutes HSS's unanticipated discovery plan.

Responsibilities

Prior to construction, in the Area of Potential Effect (APE) of the Facility, HSS will identify a Site Manager who will be responsible for daily supervision of construction and who will be expected to be on-site during all phases of construction. The Site Manager will be informed that there is a potential for discovering unrecorded cultural resources in the APE. Examples of cultural resources that may be unearthed in below-surface layers of artifact-bearing sediments include but are not limited to:

- Prehistoric shell middens, lithic and ceramic artifacts
- Human and animal bone
- Historic artifacts, for example, green, aqua, or blue glass; lead, copper, and iron items; wheels; and barrels, among others.
- remnants of brick or rock walls of historical structures;
- wooden beams beneath brick walls;
- fragments of boats used as shoreline fill;
- old paved surfaces (e.g., cobble, flagstone, or wooden planking); or
- historical wharf or bulkhead cribbing.

HSS will inform the Site Manager that prehistoric and historical resources identified above are potentially important and may be protected by law.

Standard Procedure

If prehistoric or historical artifacts or features are discovered the following actions will be taken:

1. The Site Manager will immediately suspend all excavation activities in the area of the discovery, and he/she will notify HSS's Project Manager. The discovery area will be flagged or fenced in such a way to prevent continuation of work by construction personnel until resumption of construction has been authorized.

2. The Project Manager will notify the Project Archaeologist or Archaeological Consultant by phone or email.
3. The Project Archaeologist, Project Manager, and Site Manager will discuss a course of action. During this discussion, the Project Archaeologist will gather information as to the significance of the discovered resource. If the Project Archaeologist determines that the resource merits a professional examination, he/ she will go to the Project site as promptly as possible and evaluate the discovery.
4. The Project Archaeologist will assess the discovered resource by personal examination. During this examination the Project Archaeologist may request the Site Manager to use available on-site machinery (e.g., backhoe) to expose a larger section of the resource. This additional exposure will be of limited scope. If, at this point, the Project Archaeologist determines the resource to be insignificant, construction may resume immediately. If the Project Archaeologist judges the resource is potentially significant, construction will remain suspended, the Project Archaeologist will notify the New York State Historic Preservation Office (SHPO), and a determination will be made of the need for additional examination.
5. Depending on what New York SHPO decides, resumption of construction may be allowed, with continued monitoring during construction activities. In such case, the Project Archaeologist will remain on site for the duration of any operations that may expose or damage cultural resources. The Project Archaeologist will have the opportunity to collect further information during construction by means of photographs and various measurements, staying in contact with the New York SHPO throughout the evaluation process. If, at the end of such monitoring, and in consultation with the New York SHPO, the resource is determined to be ineligible for National Register of Historic Places (NRHP) listing, the Project Archaeologist will submit to HSS and New York SHPO a letter documenting the results of the monitoring, descriptions of the investigated resources, and the photographic record.

If, after initial consultations, the New York SHPO determines that the resource requires an archaeological investigation (whether a Phase I survey or Phase II evaluation), the scope, methods, and reporting requirements of this investigation will be determined based on circumstances. If the archaeological resource is pre-contact or Native American in origin the Project Archaeologist will coordinate with SHPO and U.S. Army Corps of Engineers (USACE) regarding Tribal Historic Preservation Officer (THPO) notification and Nation to Nation dialogue.

HSS will have an archaeologist identified who will be available to evaluate any potentially State/National Register-eligible resources inadvertently discovered during the construction process (the Project Archaeologist or Archaeological Consultant).

Unanticipated Human Remains

The probability of encountering human remains within the Facility site is low. However, if such remains are encountered, the SHPO Human Remains Discovery Protocol, provided below, will be followed:

In the event that human remains are encountered during construction or archaeological investigations, the SHPO requires that the following protocol is implemented:

- At all times human remains must be treated with the utmost dignity and respect. Should human remains be encountered work in the general area of the discovery will stop

immediately and the location will be immediately secured and protected from damage and disturbance.

- Human remains or associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.
- The county coroner and local law enforcement as well as the SHPO and the involved agency will be notified immediately. The coroner and local law enforcement will make the official ruling on the nature of the remains, being either forensic or archaeological. If the remains are archaeological in nature, a bioarchaeologist will confirm the identification as human.
- If human remains are determined to be Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. The involved agency will consult SHPO and appropriate Native American groups to develop a plan of action that is consistent with the Native American Graves Protection and Repatriation Act (NAGPRA) guidance.
- If human remains are determined to be Euro-American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Consultation with the SHPO and other appropriate parties will be required to determine a plan of action.

20.b Historic Resources and Potential Impacts

The Facility could have a visual impact on historic resources in the Study Area. To assess these potential impacts, HSS hired PCI to conduct a Phase 1A evaluation and an architectural resources survey of potential historic resources that could be impacted by the Facility. These surveys were conducted by qualified architectural historians who meet the Secretary of Interior's Standards for Historic Preservation Projects (36 CFR Part 61).

20.b.1 Phase 1A Cultural Resources Investigation

The Phase 1A cultural resources investigation conducted by PCI, summarized in Section 20a.2, and included as Appendix 20a, also included the identification of historic-architectural resources that could be affected by the Facility, including review of historic maps, review of the OPRHP databases for previously-identified sites, a site visit, and interviews with local historians.

The Phase 1A study identified 8 New York State Museum areas and one Rochester Museum of Science area within 500 ft of the APE. The study also identified 92 map-documented structures within 500 ft of the APE, primarily associated with historic farmsteads and mills, although the majority of those are no longer extant.

20.b.2 Two-Mile Visual APE Architectural Resource Survey

PCI performed a survey of historic architectural resources in the two-mile Visual APE in consultation with the NYSOPHRP (included as Appendix 20b) and according to a work plan approved by NYSOPHRP.

In the summer of 2019, PCI researched portions of the Study Area where the Facility Site is likely to be visible to (i) identify all buildings 50 years old or older, (ii) determine potential eligibility of resources for

State or National Register listing, (iii) identify previously identified S/NRE or “undetermined” resources that may have been lacking GIS data, and (iv) provide updated photographs of existing S/NRE resources.

PCI investigated an area that has been studied previously for other NYS developments. These survey reports and additional records in the NYSOPRHP’s CRIS database provided PCI useful background in performing the architectural survey. The report describes the area’s past economy, notable historic resources, and trends, including:

- Haudenosaunee and Seneca peoples inhabited the land and traded furs with pioneers to support growing demand in Europe in the 17th and 18th centuries
- Several Haudenosaunee tribes assisted the British in the Revolutionary War, resulting in the loss of commercial crops and villages by both American and Haudenosaunee communities.
- The Treaty of Big Tree was signed in Geneseo, NY in 1797 and is resulted in a loss of Native American land in present-day western New York, and established several reservations.
- Lands of what is now western New York were sold by the Commonwealth of Massachusetts to several investors seeking to settle the region after the Revolution.
- Flourmills and sawmills, factories and stores existed in the surrounding Towns and Villages, providing goods and services to farmers and loggers in the area throughout the 1800s. A network of canals and railways were constructed in the area as well.
- The Canawaugus village, originally located east of the Genesee River, was relocated around 1788 and became a 2 square mile reservation on the west bank of the river. This was eventually sold to generate funds to build a grist and sawmill.
- Agriculture was the primary driver of economic activity well into the 20th century. Other industries include rock salt mining and quarrying and cement manufacture.

The two-mile Visual APE Architectural Resource Survey identified 3 S/NRL and 9 S/NRE resources, 2 S/NRE historic districts, and 22 newly-recommended S/NRE resources from which the Facility might be visible. The S/NRL resources include the Barber-Mulligan Farm in Avon, and the Romanta T. Miller House and a cobblestone house and farm in Scottsdale. The 9 S/NRE resources include: the Erie-Attica Railroad Bridge, the Genesee Valley Canal/Greenway, Elm Place, Genesee Valley Railroad Museum, and four Industry Secure Center buildings.

PCI also documented 9 “undetermined” S/NRE resources, and 3 not eligible for listing within the two-mile visual APE.

20.b.3 Potential Impacts to Historic Resources

PCI’s Two-Mile Visual APE Architectural Resource Survey discusses the Facility’s potential impacts on historic resources located within the Two-Mile Visual APE. It points out the difficulty in defining adversity regarding visual impacts to historic properties. Modern-day infrastructure also exists within the proximity of nearly all these historic resources (e.g. electric transmission lines, telephone poles, and water towers).

From surveyed properties, total project visibility ranges from 1-97%, but the mean project portion visibility is 5.87%. The average distance of an NRL or NRE property to the project is 1.45 miles. The architectural

resource survey report notes it is difficult to determine a solar facility's significant or insignificant levels of contrast that may impact historic resources; as a result, the overall visibility of the APE is assessed. In general, the visual impact of the panels would be most apparent in areas immediately adjacent to the Facility and may be mitigated or diminished by the existence of existing electrical distribution lines, water towers, and other modern visual intrusions that may compromise historical settings. In addition, the report notes that Section 106 of the National Historic Preservation Act requires that HSS mitigate adverse visual impacts and recommends several mitigation methods, including monetary contributions, surveys, maintenance, heritage tourism, and educational activities. A complete summary of potential visual impacts to historic architectural resources and proposed mitigation options is included in Appendix 20b.

The report has been submitted to the NYSOPHRP and review is ongoing. HSS will continue to consult with the NYSOPHRP to assess, and if necessary, mitigate visual impacts of the facility.

For more information on the potential visual impacts on S/NRL and S/NRE resources, please see Exhibit 24.