

August 3, 2022

Jessica Schreyer
Scientist, Archaeology
New York State Office of Parks, Recreation and Historic Preservation
Division for Historic Preservation

RE: Heritage Wind Project (18PR01833)
Revised Facility Layout and Phase IB Supplemental Results
Town of Barre, Orleans County, New York

Dear Ms. Schreyer:

On behalf of Heritage Wind, LLC (Applicant), Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C. (EDR) conducted Phase IA and IB archaeological surveys for the Heritage Wind Project (the Facility). Following the most recent correspondence with the New York State Historic Preservation Office (NYSHPO) regarding the Phase IB survey—November 18, 2020—the Facility's layout has been revised and the Area of Potential Effect (APE) for Direct Effects has been updated.

The purpose of this memorandum is to provide documentation to the NYSHPO of the Revised Layout and Phase IB Supplemental testing results, and request confirmation that the recommendations presented herein meet the expectations of the NYSHPO. This memorandum provides an update regarding the Facility's potential effect on archaeological resources based on the Revised Layout. The Facility's Revised Layout consists of 31 proposed wind turbines and their associated infrastructure. In comparison to the Permitted Layout, the Applicant has relocated four of the six turbines to new locations, while two turbines have been removed entirely (Figure 1). The alignment/placement of associated infrastructure has also shifted in some instances. Please note that this memorandum pertains only to the Facility's potential impact to archaeological resources.

Facility Description and 2019 Phase IB Survey Level of Effort

The proposed Facility is located in the Town of Barre, Orleans County, New York. The original Facility design (the Permitted Layout) was evaluated in the *Phase IB Archaeological Survey Report* (EDR, 2020) and submitted with the Facility's Article 10 Application to the Department of Public Service (DPS) in 2020 and then transferred to a Section 94-c application to the New York State

Office of Renewable Energy Siting in 2021 with a Final Permit issued and received in January 2022. The breakdown of the Permitted Layout's APE for Direct Effects is summarized by landscape classification in Table 1.

The Permitted Layout's APE for Direct Effects measured approximately 246.9 acres, as presented in the *Phase IB Archaeological Survey Report* (EDR, 2020). Please note that the Phase IB survey APE for Direct Effects acreage calculations exclude steep slopes (above 12 percent grade) or wetland areas, neither of which require archaeological testing per the New York Archaeological Council's 1994 *Standards for Cultural Resources Investigations and the Curation of Archaeological Collections in New York State*. In total, approximately 460 acres of Phase IB archaeological survey were conducted for the Facility, far more than the size of the Permitted Layout's APE for Direct Effects (Table 1).

Table 1. Permitted Layout - Phase IB Archaeological Survey Acreage by Landscape Classification

Landscape Classification	Total Acreage in Permitted Layout's APE for Direct Effect	Necessary Shovel Test Survey Effort in Permitted Layout's APE for Direct Effects (acres)	Necessary Pedestrian Survey Effort in Permitted Layout's APE for Direct Effects (acres)	Total Phase IB Survey (acres) conducted for the Permitted Layout's APE for Direct Effects
Upland Hills and Ridges				
No Associated Water	75.7	60.6	15.1	195.4
Near Wetland/Hydric Soil	27.9	22.3	5.6	37
Near Stream	4.4	3.5	0.9	10.2
Lake Plain				
No Associated Water	33.1	26.5	6.6	94.6
Near Wetland/Hydric Soil	77.5	62.0	15.5	84.8
Near Stream	24.3	19.4	4.9	37.6
Other ¹	4	3.2	0.8	
Total Acreage	246.9	197.5	49.4	459.6

In 2019, EDR conducted a Phase IB archaeological survey within the Permitted Layout's APE for Direct Effects and prepared a *Phase IB Archaeological Survey Report* (EDR, 2020). This was submitted to the NYSHPO on August 25, 2020. In this survey EDR identified nine archaeological sites and six isolated artifacts (EDR, 2020). Five of the identified sites were considered unevaluated for inclusion in the State/National Register of Historic Places (S/NRHP). The other four sites and

¹ Landscape classifications that are less than 2 percent of the APE for Direct Effects.

the isolates were considered ineligible for inclusion in the S/NRHP. On November 18, 2020, NYSHPO concurred with these recommendations (NYSHPO, 2020).

Following the submission of the *Phase IB Archaeological Survey Report* (EDR, 2020) and the filing of the Section 94-c Application, the Facility's layout was updated. The APE for Direct Effects for this Revised Layout measures approximately 338 acres, an increase of approximately 91 acres from the Permitted Layout (see Figure 1). However, this increase remains well below the 460 acres of Phase IB survey that were conducted across the Facility.

Revised Layout Potential Impacts on Archaeological Resources

For the purposes of this memorandum, the APE is defined in terms of the limits of disturbance (LOD) and limits of grading (LOG) for the Revised Layout. These areas do not intersect any previously identified archaeological sites with undetermined S/NRHP eligibility (Figure 2; Table 2).

- The **limits of disturbance** is synonymous with the APE for Direct Effects and is defined as the area within which all proposed construction activities and any potential ground disturbance will occur.
- The **limits of grading** is defined as the area within the LOD within which grading, excavation, and/or earthmoving activities will occur.

Potential impacts from the Revised Layout and avoidance and minimization measures are summarized as follows:

- The LOD is located within 50 feet of four archaeological sites with undetermined S/NRHP eligibility: [REDACTED] (Figure 2; Table 2). These areas – within the LOD but outside the LOG – are temporarily provided for the construction crew to have adequate space for maneuvering equipment (i.e., tower erection crane), park vehicles (i.e., pick-up trucks), and move turbine components safely (i.e., blade swing during erection). It is important to note that no project components (e.g., collection line, access road, etc.) will be located in the area within the LOD and outside of the LOG. Any soil disturbance would be surficial and limited to maneuvering of equipment and vehicles. Silt fences will also be installed along the LOD edge up to a depth of 6 inches.
- The LOG is located 42 feet away from one archaeological site with undetermined S/NRHP eligibility: [REDACTED] (Figure 2; Table 2). The LOG in this area will be associated with an access road/crane walk path. The road itself will be located more than 50 feet away from this archaeological site, but the shoulder edge required to walk the crane through the area will be situated 42 feet away. Construction of the crane path and shoulder will involve

approximately 12-18 inches of compaction to the existing soil with a vibratory earth roller and, if needed for structural purposes, a 6-inch surfacing of gravel fill. This will ensure crane path stabilization and prevent rutting of the existing soil. Following turbine assembly, the crane path and shoulder will be restored to existing conditions by removing gravel and decompacting the topsoil in a manner similar to agricultural tilling.

- One archaeological site with undetermined S/NRHP eligibility – [REDACTED] – is avoided completely by the Revised Layout (Figure 2; Table 2).
- The remaining archaeological sites and isolates identified during the Phase IB survey were determined to be ineligible for inclusion in the S/NRHP (NYSHPO, 2020; Table 2). No avoidance or additional measures are recommended.

Table 2. Avoidance Measures of the 2019 Identified Archaeological Sites Relative to Revised Layout

Site Name	S/NRHP Eligibility	Potential Impacts For Revised Layout	Avoidance Measures	Figure: Sheet
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Supplemental Phase IB Archaeological Survey

The Facility's Revised Layout shifted some components into archaeologically sensitive areas that were not reviewed in the initial Phase IB archaeological survey. This resulted in the Revised Layout intersecting seven locations that are sensitive for historically map-documented structures (MDS). In addition, three turbine areas were tested that were in previously untested areas, or near potentially sensitive areas. Therefore, supplemental Phase IB survey was conducted at ten locations, totaling approximately 12.76 acres, noted in Table 3.

The results of the Phase IB supplemental survey are described in the end of field memorandum attached to this letter.

Table 3. Summary of Supplemental Phase IB Archaeological Survey

Survey Area	MDS Buffer or Turbine	Survey Area (acres)	Archaeological Sites Identified
A01	MDS	3.64	16153-J. Lumm Site
A02	Turbine	0.56	N/A – No Sites
A03	Turbine	0.56	N/A – No Sites
A04	MDS	0.46	N/A – No Sites
A05	MDS	0.23	N/A – No Sites
A06	MDS	5.31	16153 - A. J. Foster Site
A07	Turbine	0.56	N/A – No Sites
A08	MDS	0.96	16153 - M. Hyde Site
A09	MDS	0.11	16153 - Delano Steele Rd. Isolate
A10	MDS	0.37	N/A – No Sites
		12.76	

Summary and Conclusions

Changes as a result of the Revised Layout are summarized as follows:

- Since the submission of the *Phase IB Archaeological Survey Report* (EDR, 2020), the Heritage Wind Project's Facility has been revised and the APE for Direct Effects has increased from 246.9 acres to 338 acres, an increase of approximately 91 acres.
- Using the landscape classification model with respect to the Revised Layout, Phase IB survey has been completed for approximately 460 acres, well over what would be required for the Revised Layout's 338-acre APE for Direct Effects. Therefore, despite the increase in

the Facility's APE for Direct Effects, the amount of Phase IB archaeological survey significantly exceeds the level of effort necessary for survey of the Revised Layout's APE for Direct Effects.

- An additional 12.76 acres of supplemental Phase IB survey was conducted at ten locations, three turbine locations and seven locations where MDSs are now located within 200 feet of the Revised Layout, to assess these areas for the presence/absence of archaeological materials. The results are summarized in Table 3 above and detailed in the attached memorandum.
- The LOD and LOG for the Revised Layout do not intersect any previously identified archaeological sites with undetermined S/NRHP eligibility. However, the LOD is located within 50 feet of four of these archaeological sites [REDACTED] and the LOG is located within 50 feet of one of these archaeological sites [REDACTED]

If you have any questions/concerns or would like to discuss the revised Facility layout described herein, please contact me at dpippin@edrdpc.com or 585-752-6147, or Pat Heaton at pheaton@edrdpc.com or 315-391-3021

Sincerely,



Douglas J Pippin, PhD, RPA
EDR Senior Project Manager, Archaeology
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Attachments

Figure 1. Revised Facility Layout

Figure 2. Archaeological Site Impact Avoidance Measures

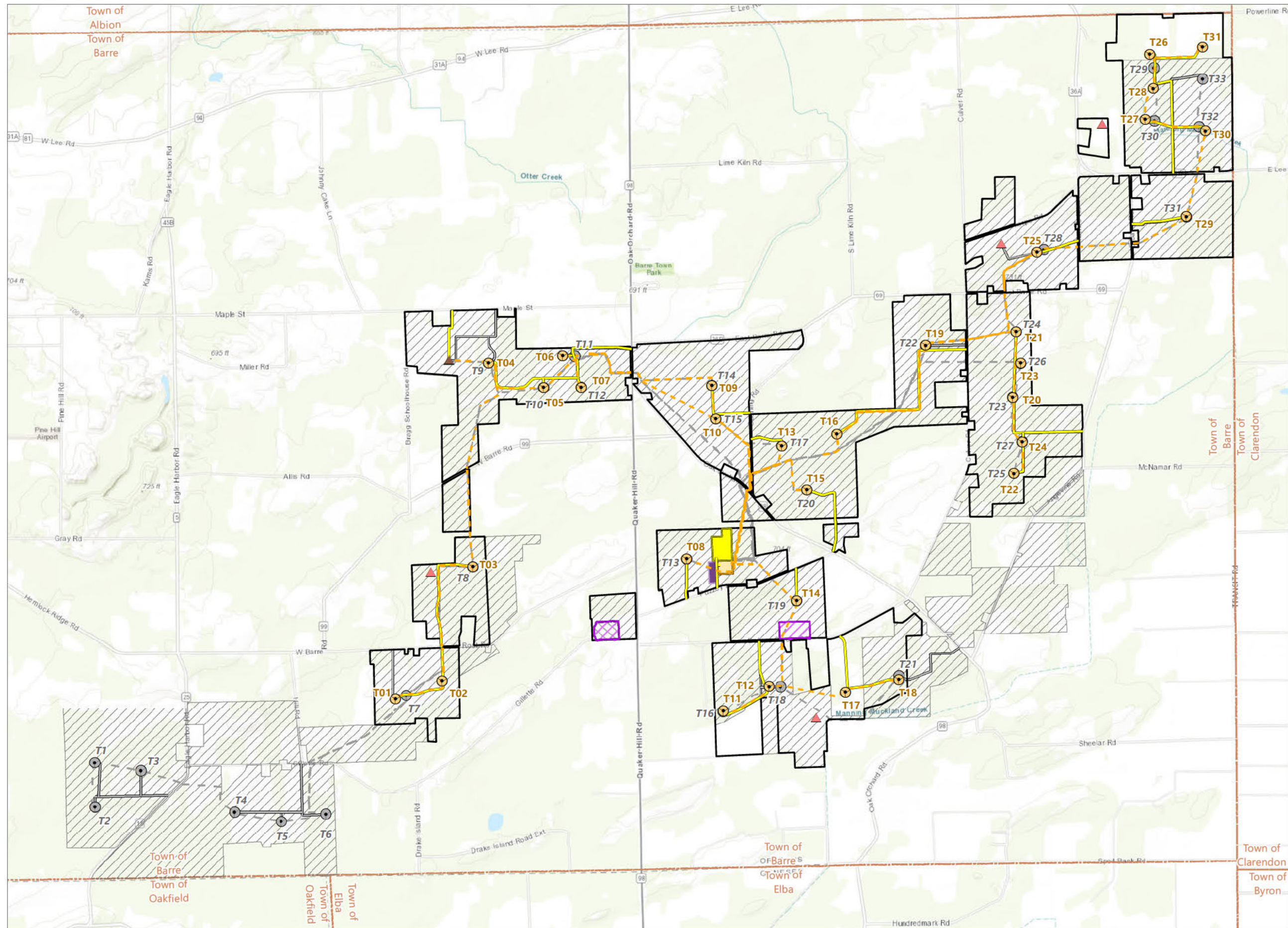
References Cited

EDR. 2020. *Phase IB Archaeological Survey, Heritage Wind Project, Albion, Barre and Shelby, Orleans County, NY*. Prepared for Heritage Wind, LLC by Environmental Design & Research Landscape Architecture, Engineering & Environmental Services, D.P.C., Syracuse, NY. August 2020.

NYSHPO. 2018. Re: Heritage Wind Project Albion, Barre and Shelby, Orleans County, NY, Case No. 16-F-0546, 18PR01833. Review correspondence from Dr. Josalyn Ferguson (NYSHPO) to Laura Bomyea (Young/Sommer LLC). New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), Waterford, NY. April 6, 2018.

NYSHPO. 2020. Re: USACE Heritage Wind Project/34 Turbines/655 Feet/185MW Albion, Barre and Shelby, Orleans County, NY 18PR01833 Case No. 16-F-0546. Review correspondence from Dr. Josalyn Ferguson (NYSHPO) to Dr. Doug Pippin (EDR). New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), Waterford, NY. November 2020.

Figure 1. Revised Facility Layout



Heritage Wind Project

Town of Barre, Orleans County,
New York

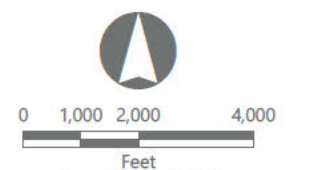
Revised Facility Layout Memo

Revised Layout

- ▲ Permanent Met Tower
- ▲ Performance Tower
- Wind Turbine
- Collection Line
- Access Road
- POI Substation
- Collection Substation
- Laydown Yard
- O&M Facility
- Facility Site

Permitted Layout

- ▲ Permanent Met Tower
- Wind Turbine
- Collection Line
- Access Road
- POI Substation
- Collection Substation
- Laydown Yard
- O&M Facility
- Facility Site



Prepared August 1, 2022
Basemap Esri ArcGIS Online "World Topographic Map" map service.



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Figure 2. Archaeological Site Impact Avoidance Measures

Heritage Wind Project

Town of Barre, Orleans County,
New York

Revised Facility Layout Memo

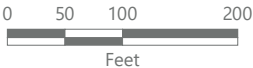
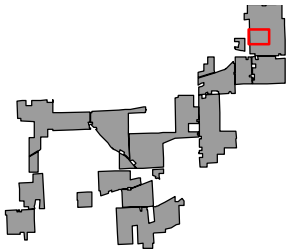
- Archaeological Site Boundary
- Archaeological Site - 50-Foot Buffer
- Phase IB Pedestrian Survey
- Limit of Disturbance
- Limit of Grading

Revised Layout

- Wind Turbine
- Collection Line
- Access Road
- Facility Site

Permitted Layout

- Wind Turbine
- Collection Line
- Access Road
- Facility Site



Prepared August 2, 2022
Basemap: Esri ArcGIS Online "World Topographic Map" map service.



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Figure 2. Archaeological Site Impact Avoidance Measures

Heritage Wind Project

Town of Barre, Orleans County,
New York

Revised Facility Layout Memo

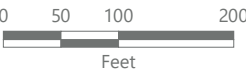
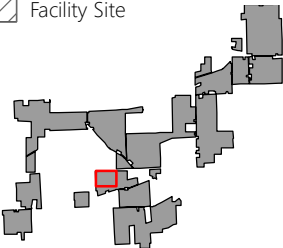
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Basemap: Esri ArcGIS Online "World Topographic Map" map service.

