Revised Archaeological Resources Assessment for the Proposed Georgia Mountain Community Wind Project, Milton, Chittenden County, Vermont

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Project Description

Georgia Mountain Community Wind, LLC, through Vermont Environmental Research Associates (VERA) is proposing the Georgia Mountain Community Wind Project, Milton, Chittenden County and Georgia, Franklin County, Vermont (Figure 1). The proposed project will provide up to 8 megawatts of electrical capacity using 3-5 wind turbines located on the top of Georgia Mountain, east of Arrowhead Mountain Lake (see Figure 1). Additional project elements include an overhead transmission line that will connect the wind turbines to an existing 24 kV overhead transmission line along North Road to the west. The final configuration of the wind turbines along the ridge has not been determined. The wind turbines will be accessed from the south along the length of a pre-existing road that will require upgrading and a new road that will need to be constructed. This document represents a revised ARA, since a new access drive alignment was proposed that differed significantly from the originally proposed alignment. In addition, GPS coordinates of this proposed access road were provided to allow for an exact field inspection. Finally, this revision contains an expanded discussion on cultural resources near the proposed project.

The University of Vermont Consulting Archaeology Program (UVM CAP) conducted an Archaeological Resources Assessment (ARA) of the proposed project under Vermont State Statute 248 and did not identify any areas as archaeologically sensitive for precontact era Native American archaeological sites.

Study Goal

The goal of an ARA (or "review") is to identify portions of a specific project's Area of Potential Effects (APE) that have the potential for containing precontact and/or historic sites. An ARA is to be accomplished through a "background search" and a "field inspection" of the project area. For this study, reference materials were reviewed following established guidelines. Resources examined included the National Register of Historic Places (NRHP) files; the Historic Sites and Structures Survey; and the USGS master archaeological maps that accompany the Vermont Archaeological Inventory (VAI). Relevant town histories and nineteenth-century maps also were consulted. Based on the background research, general contexts were derived for precontact and historic resources in the vicinity of the study area.

Prehistoric Archaeological Site Potential

A review of the state's Vermont Archaeological Inventory (VAI) indicates that no known archaeological sites exist within the proposed project area. The closest known archaeological site is VT-CH-457, located 1.5 km to the southwest of the southwest corner of the project parcel. Site VT-CH-457 was identified from four lithic flakes recovered from surface collection and

excavation. This site is located on the western slopes of Georgia Mountain, next to a mountain stream. Although the proposed transmission line area will pass down the western slopes of Georgia Mountain, it will not pass near any streams. The western slopes of Georgia Mountain are considerably steeper than the area near site VT-CH-457.

In 1980, the UVM CAP produced a report on the East Georgia Hydroelectric Project in East Georgia and Fairfax, Vermont (Thomas et al. 1980). During the Phase I field study for this project, 17 precontact period and numerous historic period sites were identified along the banks of the Lamoille River, from East Georgia upstream to Fairfax. Several of these sites (VT-FR-72, 79, 80) are located along the banks of the Lamoille River directly north of the Georgia Mountain and the proposed Georgia Wind project and are depicted in Figure 1. These three sites were all identified in the same cow pasture and contained lithic debris, fire hearth features and burned seed and bone remains. Since no Phase II evaluations were conducted at any of these sites, their size and cultural significance is not known. Nonetheless, these three sites, and numerous more identified upstream near Fairfax, attest to the use of the Lamoille River as a major thoroughfare inland from the Champlain Lowlands in the precontact period. With considerable Native American occupation in the area, it is possible that Georgia Mountain was a significant part of their cultural landscape and therefore, may have been a destination in-and-of itself.

Louis Berger and Associates, Inc. conducted a series of site inspections along the margins of the Lamoille River and Arrowhead Mountain Lake for the Central Vermont Service Corporation (Louis Berger and Associates, Inc. 1990). The work was done as part of a project to develop criteria for assessing archaeological potential of impoundment shorelines in 1990. Several stretches of the Lamoille River were inspected, including areas east of the Fairfax Falls; a section relevant to the proposed wind project that includes the shore of Arrowhead Mountain Lake; a short section immediately upstream from East Georgia, known as the Clark Falls impoundment. Only one small section was identified along the southern bank of the Lamoille River, directly north of Georgia Mountain and the proposed wind project (see Figure 1). This area, referred to as Locality B20, contains high archaeological potential, but also a high erosion potential. A photograph of Locality B20 shows a riverbank strewn with exposed boulders at the foot of a wooded area, as the soil matrix erodes into the river. This archaeologically sensitive portion of the Lamoille River is approximately 1.8 km northwest of the northern-most proposed wind turbine.

Historic Archaeological Site Potential

No properties within the limits of the proposed Georgia Mountain Community Wind Project have been listed on either the National or State Register of Historic Places. The historic 1869 Beers Atlas (Figure 2) and the 1925 USGS map (Figure 3) do not depict any structures within the proposed project parcel. Several historic period properties are located along the northern bank of the Lamoille River, immediately east of East Georgia, including the Spencer hotel, the house of Silas Smith, and the Green Mountain Renovator manufacturing concern,

which is depicted on the 1915 USGS map (see Figure 3). In general, the steep slope throughout much of the proposed project parcel makes it unlikely that any historic properties exist there.

Field Inspection

A field inspection of the proposed project's APE was undertaken on September 15 and 23, 2008, and again on March 8, 2009 by Dr. Charles Knight, Assistant Director of the UVM CAP. Two discrete areas within the proposed Georgia Mountain Community Wind Project contained five overlapping sensitivity factors, according to the "Environmental Predictive Model for Locating Precontact Archaeological Sites," developed by the Vermont Division for Historic Preservation (Figure 4). These sensitivity factors are: drainage, head-of-draw, paleosols, wetland, and stream confluence. One of the discrete sensitivity locations will not be disturbed by the proposed project. The other discrete sensitive area is bisected by the existing access road to the cell tower and weather station that is located on the peak of Georgia Mountain (Figure 4).

Two areas of archaeological sensitivity were identified on the southwestern slopes of Georgia Mountain, but appear not be disturbed by the proposed project (see Figure 4). Sensitive Area 1 consists of a level terrace adjacent to a small north trending stream. The proposed transmission line appears to cross this small stream and archaeologically sensitive area. It is possible that the transmission line will not impact this area, depending on the location of the transmission line poles and the width of the transmission lien corridor that will require tree clearing. However, if a transmission line pole, pole staging area, or tree clearing occurs in the location of Sensitive Area 1, additional archaeological testing may be required. Sensitive Area 2 is a terrace overlooking a drainage that trends to the southwest, and may be associated with the large sensitive area identified by the VDHP predictive model, as illustrated in Figure 4. These two archaeologically sensitive areas were identified on either side of an existing VASA trail that was accessed from the west along North Road, just east of Milton. No archaeologically sensitive areas were identified anywhere within the proposed project area. The ridge tops of Georgia Mountain, where the wind turbines will be erected, already contain a cell tower and weather station. This ridge is relatively level, but hummocky throughout with large bedrock exposures. The northern turbine extension will be located on a relatively level landform, but one that is almost completely exposed bedrock. The access road that connects the two turbine locations cuts through the saddle of Georgia Mountain, but is an area that is not archaeologically sensitive. The proposed overhead transmission line will descend the western slopes of Georgia Mountain, possibly along a portion of an existing VASA trail. Finally, a revised access road alignment and wind turbine area was submitted after the original field inspection was carried out. The newly proposed access road will follow an existing road for a portion of the ascent, then veers northwest slightly following an existing VASA trail to the summit (Figure 5). The VASA trail has already created significant disturbances to the landform and therefore, is not archaeologically sensitive. The turbine extension location is on a neighboring peak that is surrounded by exposed bedrock and hummocky terrain. This extension area is not archaeologically sensitive.

Conclusions

Georgia Mountain Community Wind, LLC, through Vermont Environmental Research Associates (VERA) is proposing the Georgia Mountain Community Wind Project, Milton, Chittenden County and Georgia, Franklin, Vermont. The UVM CAP carried out an ARA of the proposed project's Area of Potential Effects under Vermont State Statute 248. A revised project plan, including a turbine extension area and a new access drive alignment, was submitted after the original field inspection. After the area was re-inspected twice, two small areas were identified as archaeologically sensitive. The northern of the two sensitive areas, Sensitive Area 1, may be impacted by the proposed transmission line, depending on the location of transmission line poles, pole staging areas and tree clearing. At the same time, this discrete archaeologically sensitive area may fall outside of the Area of Potential Effect. If the transmission line follows the existing VASA trail in the immediate vicinity of Sensitive Area 1, then the proposed project will have no impact on archaeologically sensitive areas. If the transmission line alignment lies approximately 40 m north of the existing VASA trail in the vicinity of Sensitive Area 1, then it is possible that this archaeologically sensitive area will be disturbed. It is recommended that the transmission line stay within the existing VASA trail corridor to avoid this archaeologically sensitive area.

No historic period archaeological sites were identified during the site inspection or through historic background research. The proposed parcel contains large areas of steep slope. The proposed access road, wind turbines, and transmission line alignment all occur in areas that either have been disturbed by historic period activities, or are located along non-sensitive slope. However, areas to the immediate south of the proposed transmission lines area archaeologically sensitive and if the proposed transmission alignment changes, it may affect archaeologically sensitive areas. Although a portion of the existing access road bisects an area identified as archaeologically sensitive by the VDHP's predictive model, this portion of the access road already is constructed and therefore, its use will not disturb these sensitive areas. Nonetheless, any future changes to the transmission line alignment or access road alignment should be inspected for archaeological sensitivity. In sum, the proposed project will have no effect on significant cultural resources provided it stays clear of the identified archaeologically sensitive areas. If these areas can be avoided then no additional work is recommended. If they cannot be avoided then a Phase I site identification survey is recommended to ensure that no archaeological sites are being disturbed.

Charles Knight, Ph.D.
Assistant Director

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Thomas, Peter A., William A. Bayreither, Gina Campoli, and Prudence Doherty
1980 *Phase I Archaeological Assessment of the East Georgia Hydroelectric Project*. University of Vermont Consulting Archaeology Program, Report No. 29. Burlington, Vermont.

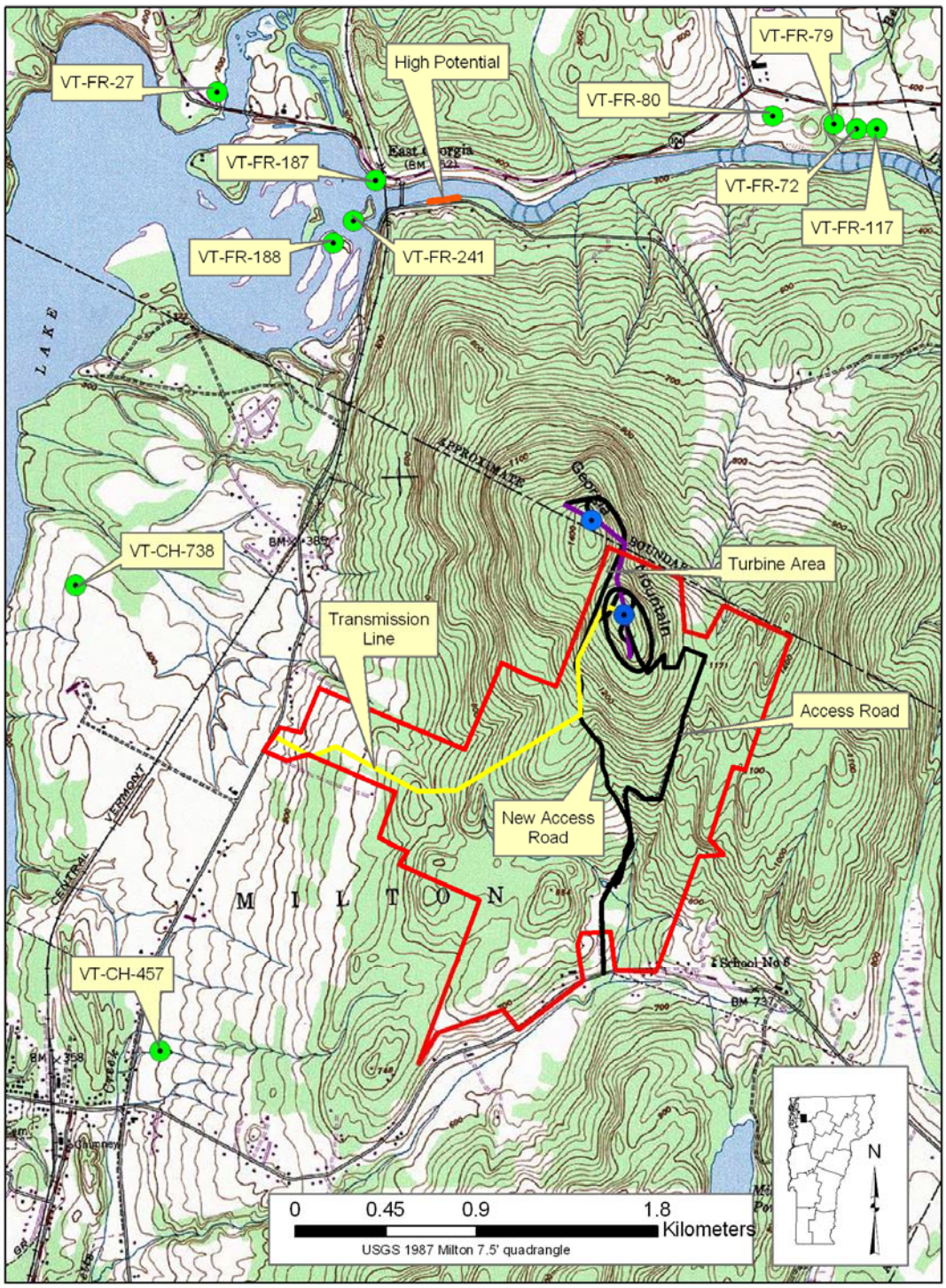
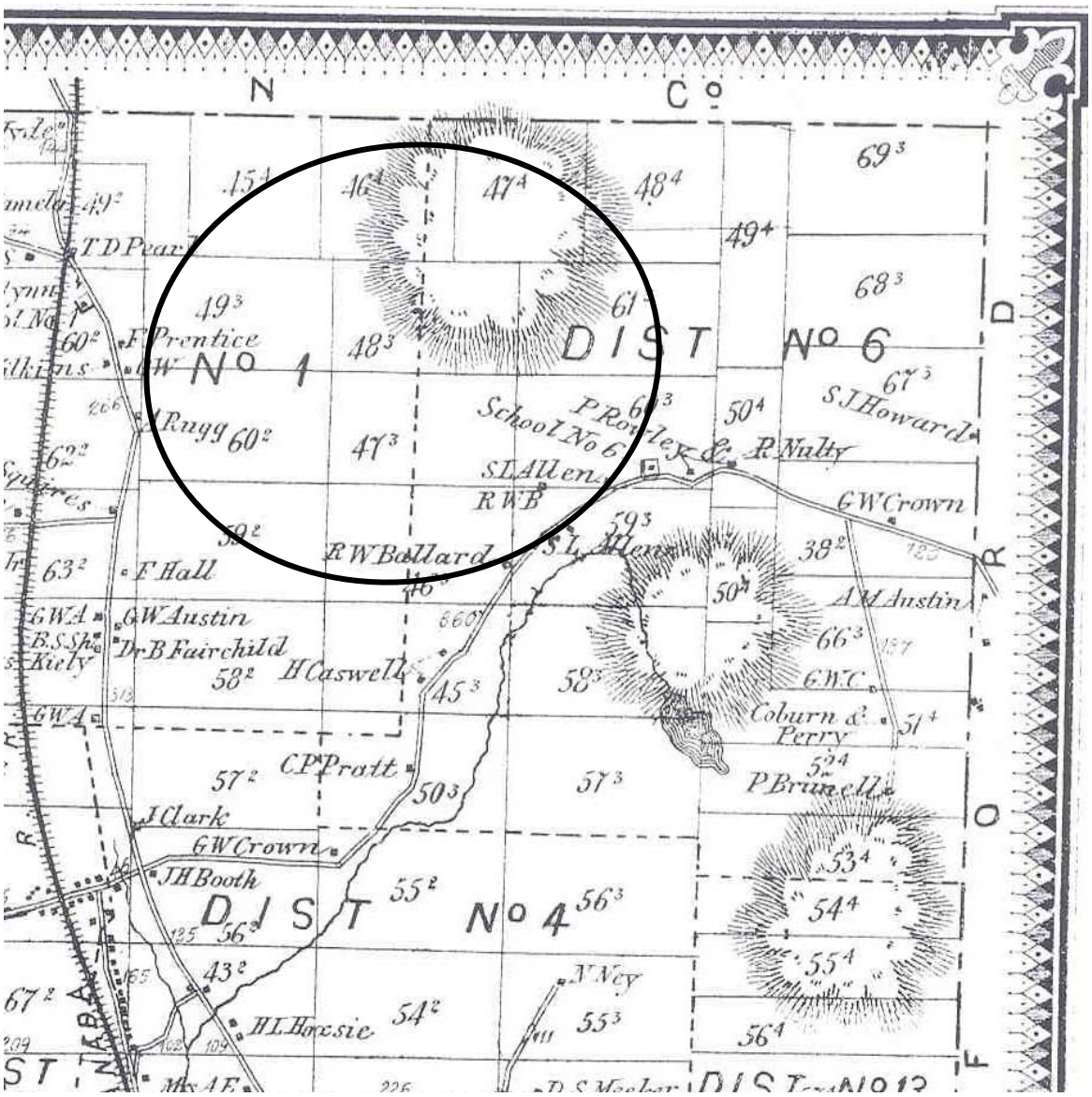


Figure 1. Map showing the location of the proposed Georgia Mountain Community Wind Project, Milton, Chittenden County, Vermont.



USGS 1925

Figure 2. Historic 1869 Beers Atlas showing the location of the proposed Georgia Mountain Community Wind Project, Milton, Chittenden County, Vermont.

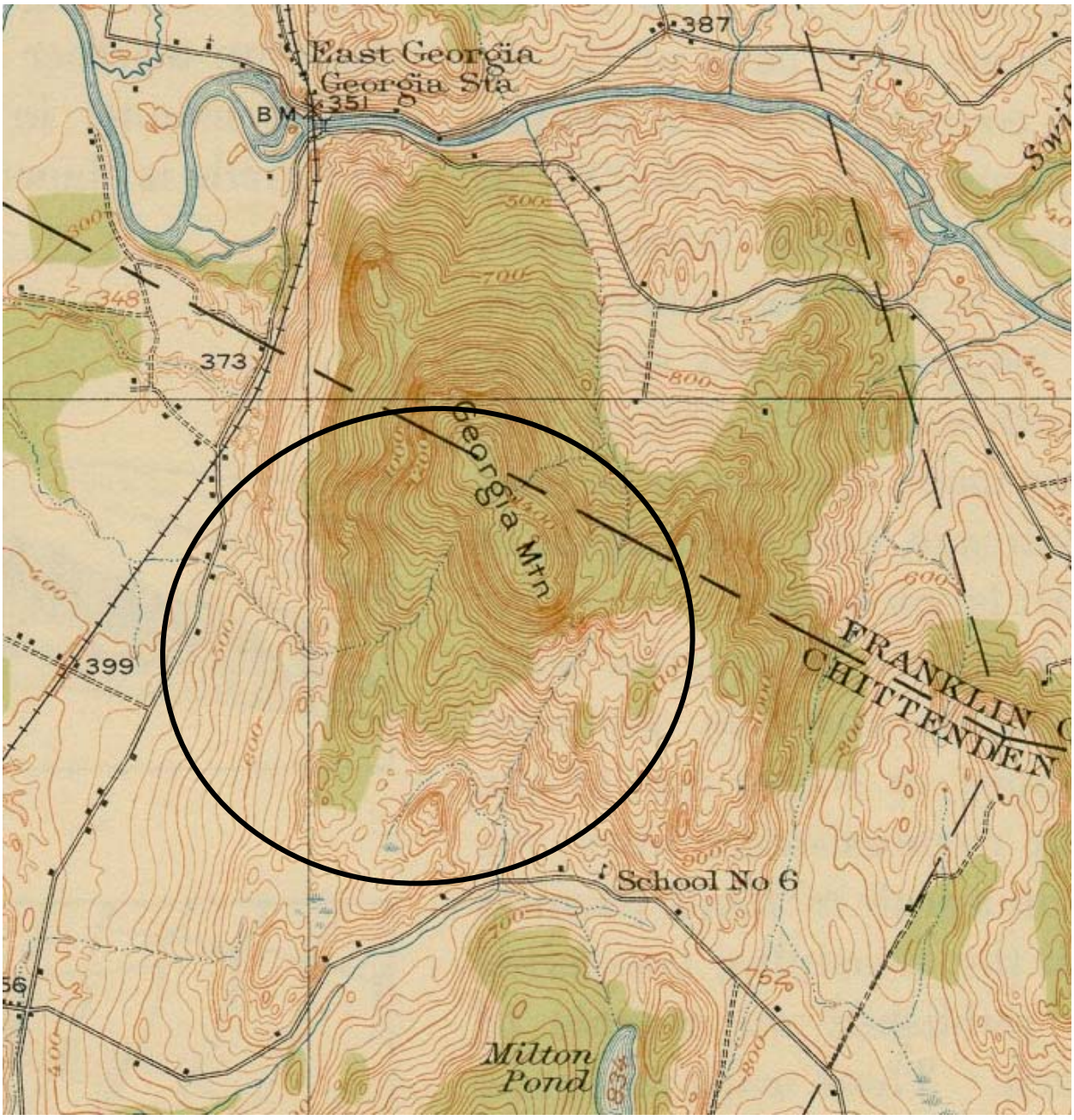


Figure 3. Historic 1915 USGS map showing the location of the proposed Georgia Mountain Community Wind Project, Milton, Chittenden County, Vermont.

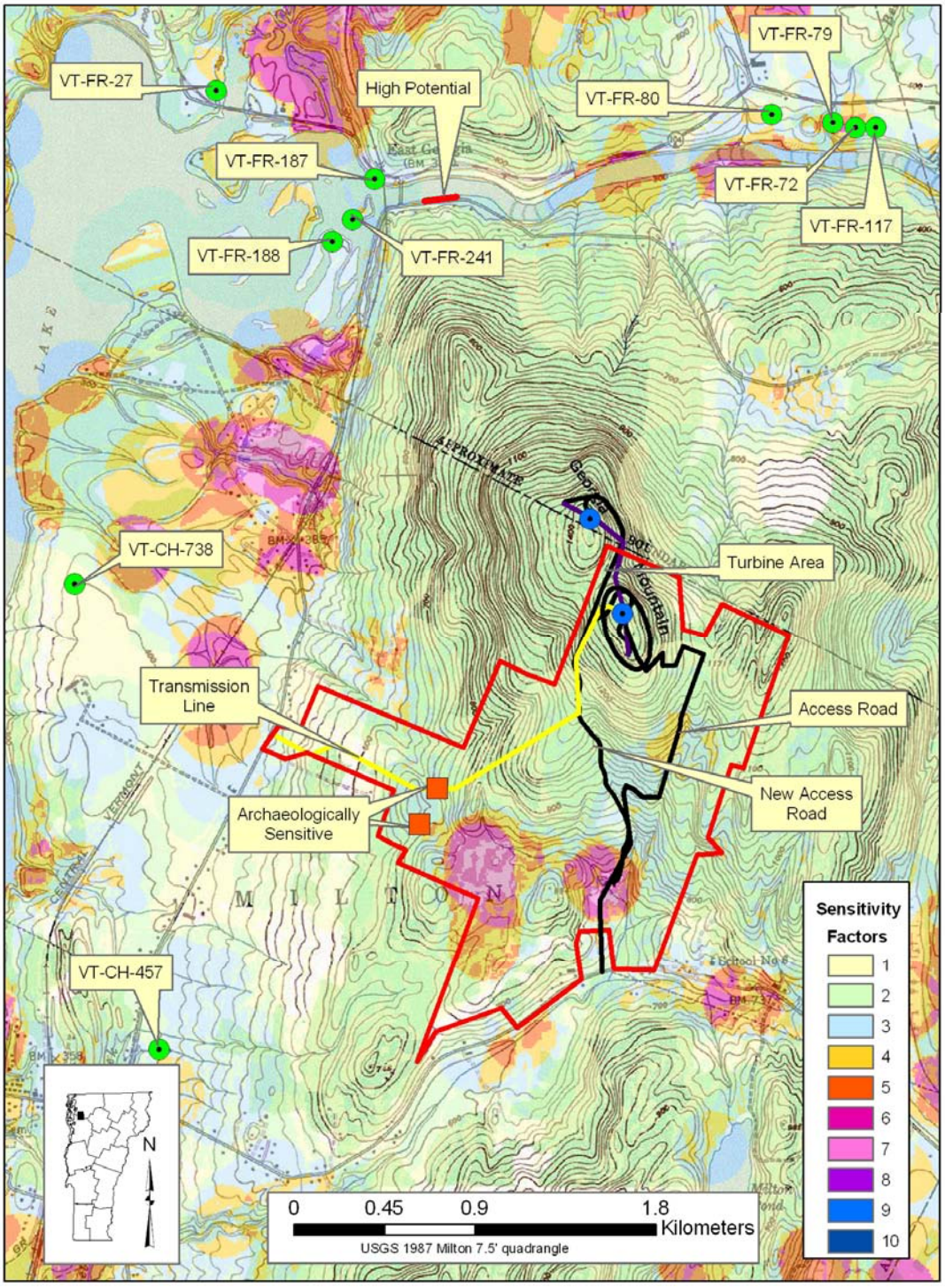


Figure 4. Map showing the location of the proposed Georgia Mountain Community Wind Project and overlapping sensitivity factors, Milton, Chittenden County, Vermont.

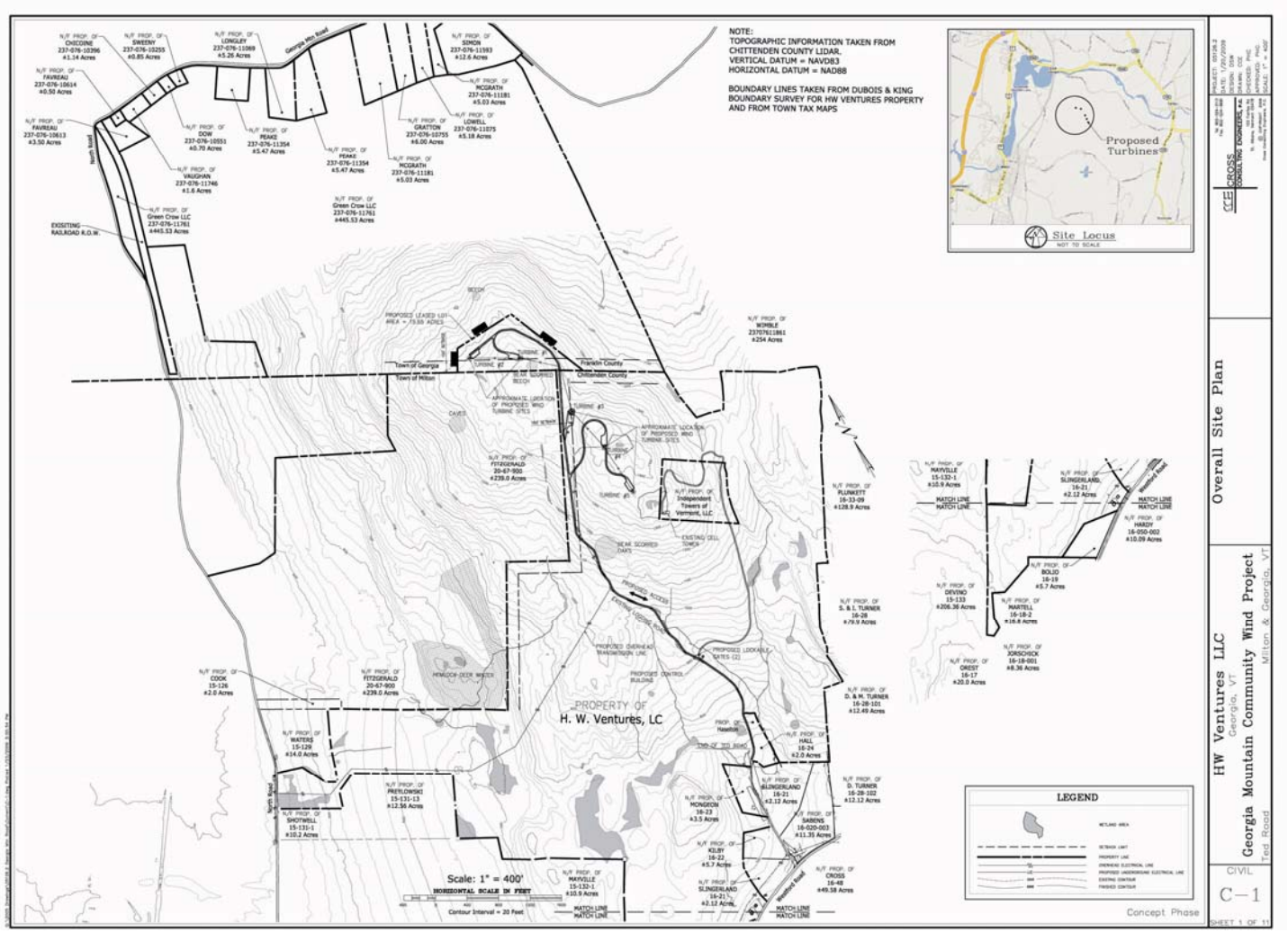


Figure 5. Map showing the location of the most recently proposed access road alignment for the proposed Georgia Mountain Community Wind Project, Milton, Chittenden County, Vermont.