

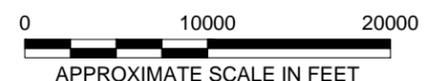
## **FIGURES**

© 2015 - GZA GeoEnvironmental of NY GZA-K:\PROJECTS\56700s\56761\_Cassadaga Wind Project Prelim Geotech\CAD files\REPORT FIGURES.dwg [FIGURE 1] December 09, 2015 - 9:29am michael.kress



**LEGEND**

-  T17 APPROXIMATE LOCATION OF PROPOSED WIND TURBINE
-  T39 APPROXIMATE LOCATION OF SOIL BORING COMPLETED AT PROPOSED TURBINE AND/OR SUBSTATION LOCATION BY EARTH DIMENSIONS, INC. BETWEEN NOVEMBER 9 AND 17, 2015, AND OBSERVED BY GZA PERSONNEL
-  STUDY AREA LIMITS



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**CASSADAGA WIND PROJECT  
PRELIMINARY GEOTECHNICAL ASSESSMENT  
CHAUTAUQUE COUNTY, NEW YORK**

**STUDY AREA**

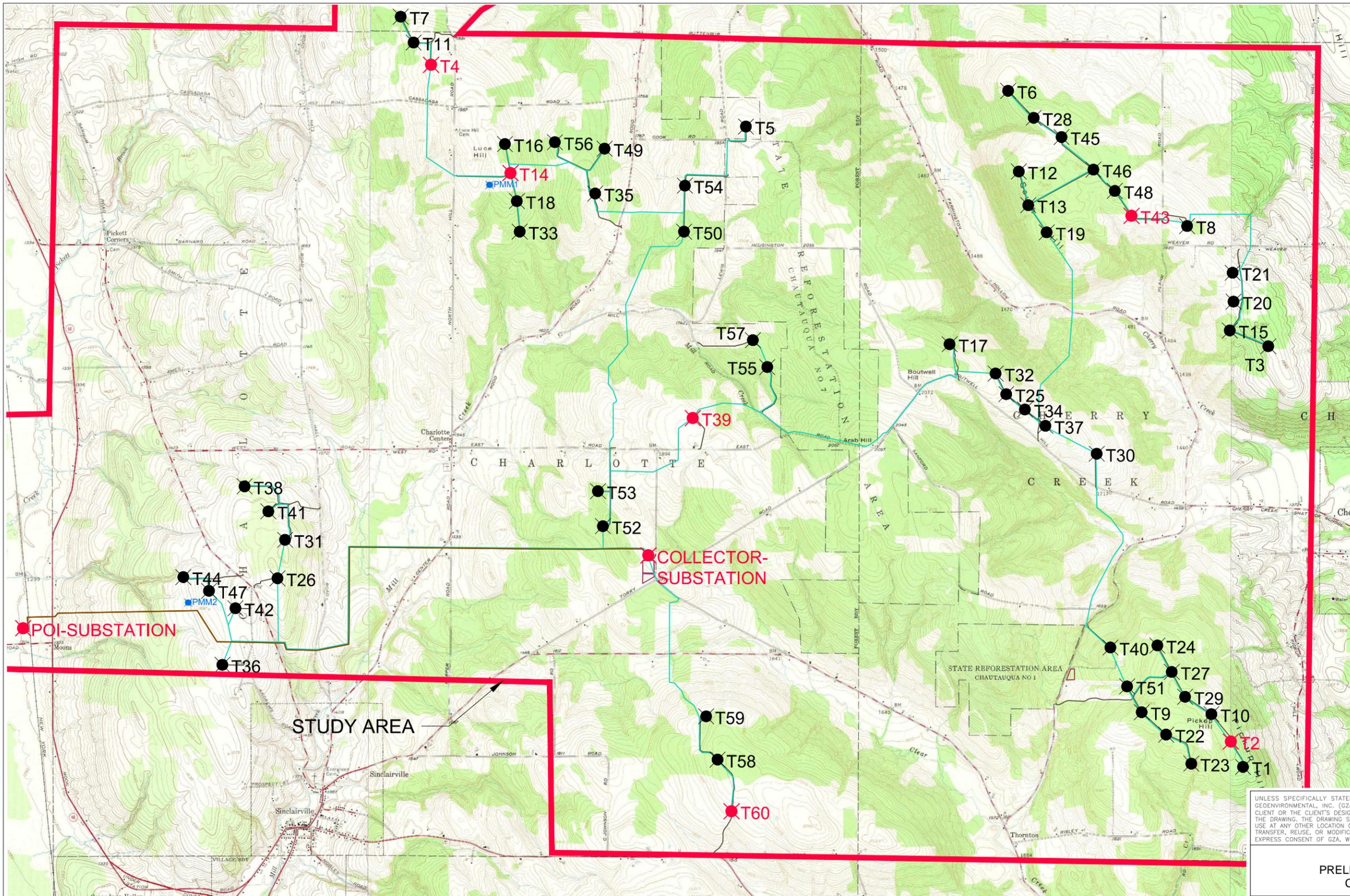
PREPARED BY:  GZA GeoEnvironmental of NY Engineers and Scientists www.gza.com		PREPARED FOR: EVERPOWER 251 WATERFRONT PLACE, 3RD FLOOR PITTSBURGH, PA 15222	
PROJ MGR: DJT	REVIEWED BY: BAK	CHECKED BY: DJT	<b>FIGURE</b>  <b>1</b>
DESIGNED BY:	DRAWN BY: MDK/DES	SCALE: AS SHOWN	
DATE: DECEMBER, 2015	PROJECT NO. 21.0056761.00	REVISION NO.	

**NOTES**

1. BASE MAP DEVELOPED FROM ESRI'S ONLINE WORLD IMAGERY ONLINE WEB MAP SERVICE AT [HTTP://SERVICE.ARCGISONLINE.COM/ARCGIS/REST/SERVICE](http://service.arcgisonline.com/arcgis/rest/service).
2. STUDY AREA BOUNDARY, PROPOSED TURBINE LOCATIONS PROVIDED BY EVERPOWER.

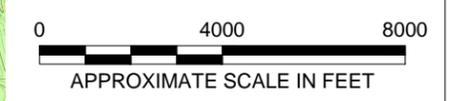


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**LEGEND**

-  T17 APPROXIMATE LOCATION OF PROPOSED WIND TURBINE
-  T39 APPROXIMATE LOCATION OF SOIL BORING COMPLETED AT PROPOSED TURBINE AND/OR SUBSTATION LOCATION BY EARTH DIMENSIONS, INC. BETWEEN NOVEMBER 9 AND 17, 2015, AND OBSERVED BY GZA PERSONNEL.
-  STUDY AREA LIMITS



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CHAUTEAU COUNTY, NEW YORK**

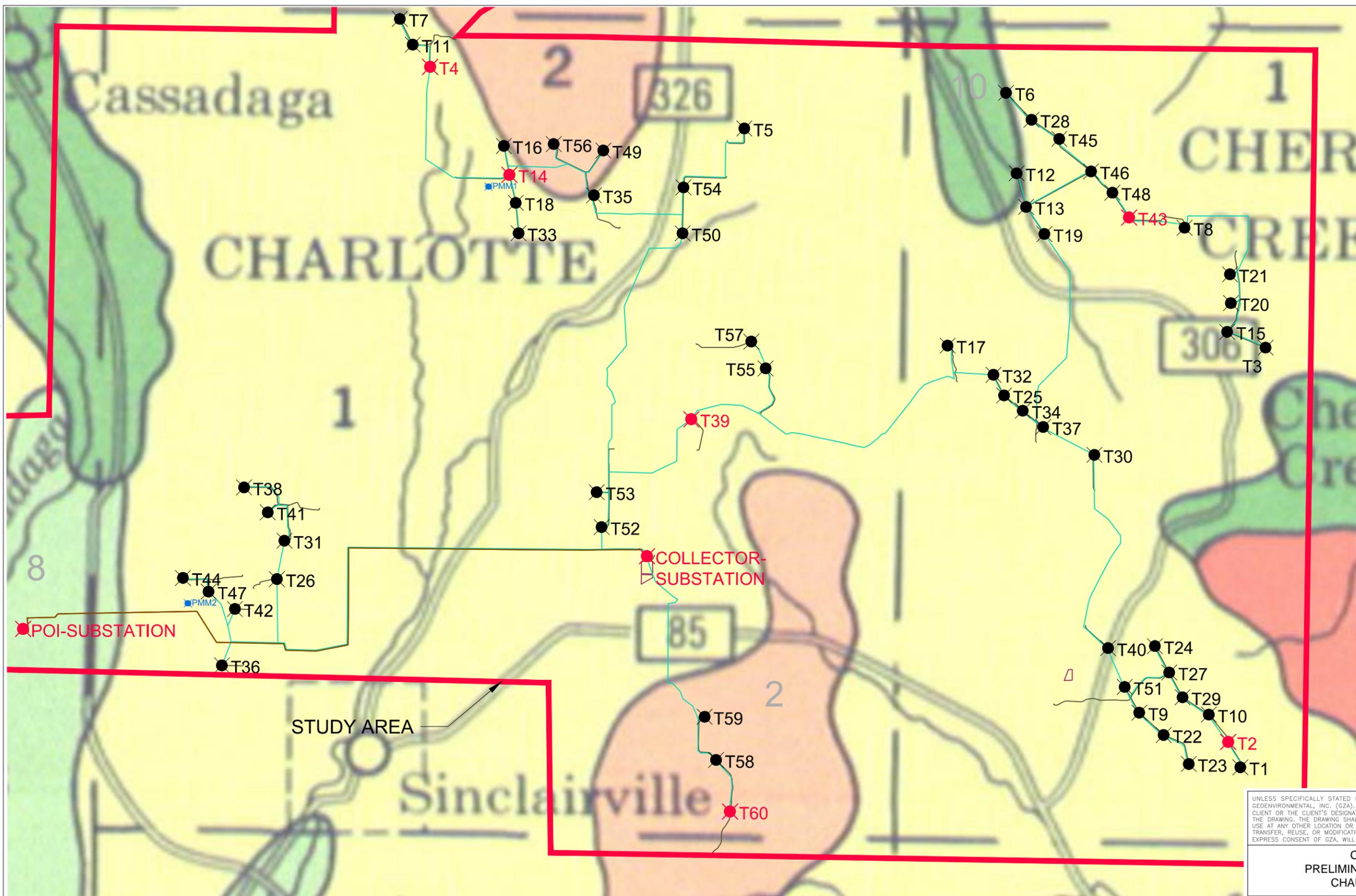
**TOPOGRAPHIC MAP OF STUDY AREA  
AND SOIL BORING LOCATION PLAN**

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PROJ MGR: DJT DESIGNED BY: DATE: DECEMBER, 2015	REVIEWED BY: BAK DRAWN BY: MDK/DEW PROJECT NO. 21.0056761.00	CHECKED BY: DJT SCALE: AS SHOWN REVISION NO.	<b>FIGURE</b>  <b>2</b>

**NOTES**

1. BASE MAP (USGS) FROM UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGIC SURVEYS, CASSADAGA, HAMLET AND CHEERY CREEK QUADRANGLES (1954).
2. STUDY AREA BOUNDARY, PROPOSED TURBINE AND SUBSTATION LOCATIONS PROVIDED BY EVERPOWER.
3. CONTOURS SHOWN ON BASE MAP ARE IN FEET ABOVE MEAN SEA LEVEL.

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**LEGEND**

- T17 APPROXIMATE LOCATION OF PROPOSED WIND TURBINE
- T39 APPROXIMATE LOCATION OF SOIL BORING COMPLETED AT PROPOSED TURBINE AND/OR SUBSTATION LOCATION BY EARTH DIMENSIONS, INC. BETWEEN NOVEMBER 9 AND 17, 2015, AND OBSERVED BY GZA PERSONNEL.
- STUDY AREA LIMITS

AREAS DOMINATED BY VERY DEEP SOILS THAT DO NOT HAVE A FRAGIPAN AND THAT FORMED IN GLACIAL TILL

- 1 Busti-Chautauqua-Chadakoin
- 2 Fremont-Schuyler

AREAS DOMINATED BY DEEP AND VERY DEEP SOILS FORMED IN GLACIAL LAKE SEDIMENTS

- 6 Niagara-Canandaigua-Minoa
- 7 Barcelona-Rhinebeck
- 8 Raynham-Canandaigua-Getzville

AREAS DOMINATED BY VERY DEEP SOILS FORMED IN GLACIAL OUTWASH, GLACIOLACUSTRINE MATERIAL, AND RECENT ALLUVIUM

- 10 Chenango-Wayland-Swarmville

0 4000 8000  
APPROXIMATE SCALE IN FEET

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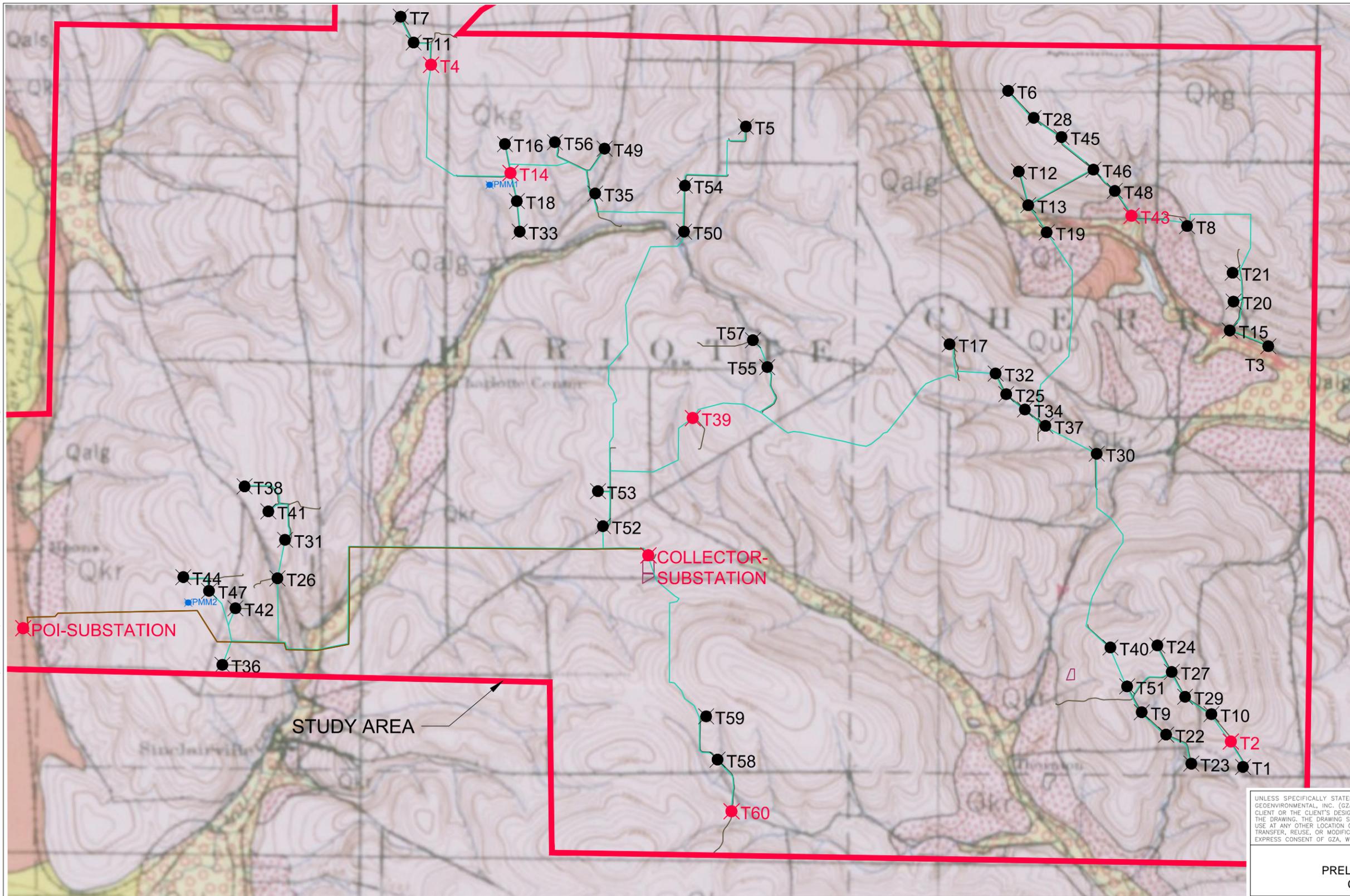
**CASSADAGA WIND PROJECT  
PRELIMINARY GEOTECHNICAL ASSESSMENT  
CHAUTAUQUA COUNTY, NEW YORK**

**STUDY AREA SOIL MAP UNITS**

- NOTES**
1. BASE MAP IMAGE - SOIL SURVEY OF CHAUTAUQUA COUNTY (1993).
  2. STUDY AREA BOUNDARY, PROPOSED TURBINE AND SUBSTATION LOCATIONS PROVIDED BY EVERPOWER.

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PROJ MGR: DJT	REVIEWED BY: BAK	CHECKED BY: DJT	<b>FIGURE</b>
DESIGNED BY:	DRAWN BY: MDK/DEW	SCALE: AS SHOWN	<b>3</b>
DATE: DECEMBER, 2015	PROJECT NO. 21.0056761.00	REVISION NO.	

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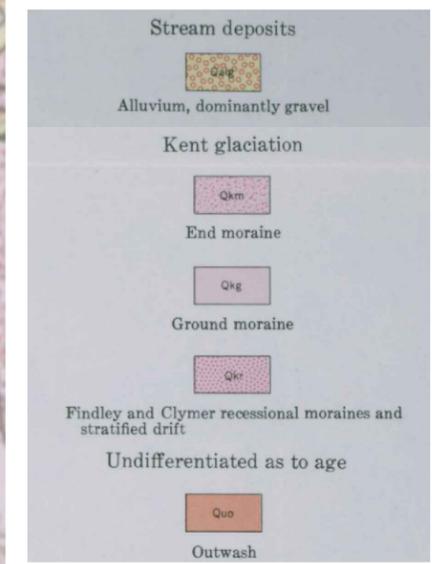


**LEGEND**

● T17 APPROXIMATE LOCATION OF PROPOSED WIND TURBINE

✱ T39 APPROXIMATE LOCATION OF SOIL BORING COMPLETED AT PROPOSED TURBINE AND/OR SUBSTATION LOCATION BY EARTH DIMENSIONS, INC. BETWEEN NOVEMBER 9 AND 17, 2015, AND OBSERVED BY GZA PERSONNEL.

▭ STUDY AREA LIMITS



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CHAUTAUQUA COUNTY, NEW YORK**

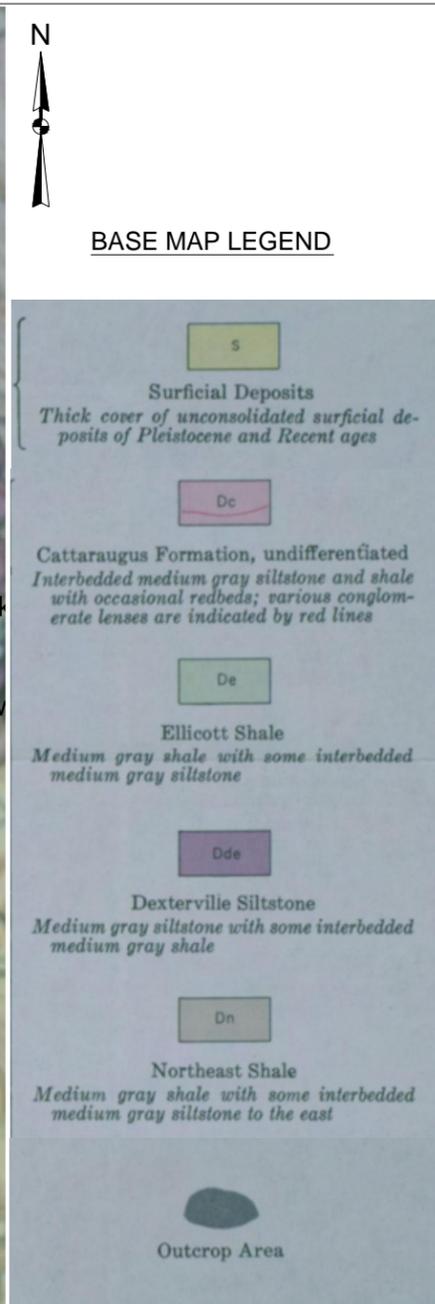
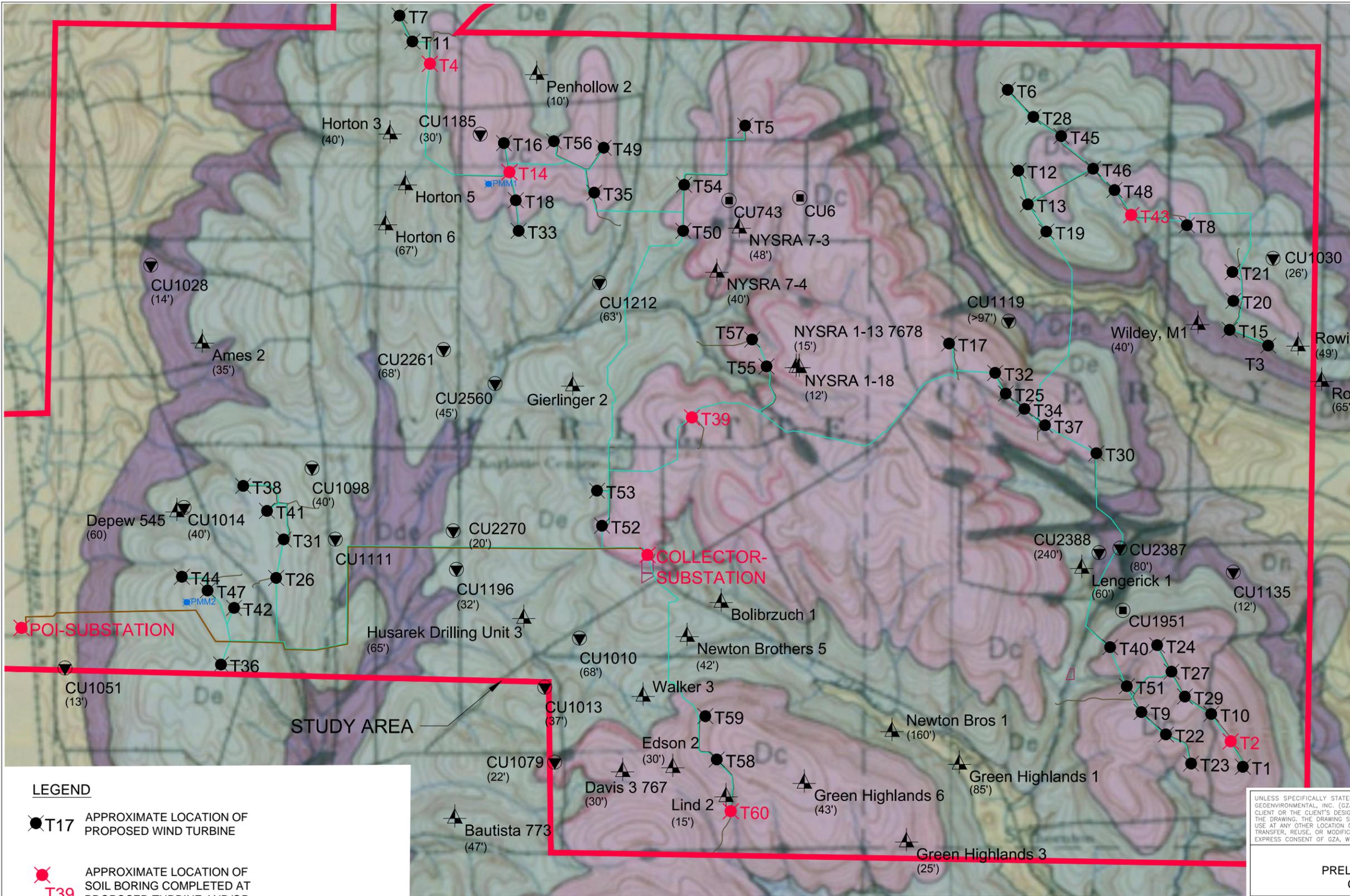
**SURFICIAL DEPOSITS IN STUDY AREA**

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PROJ MGR: DJT	REVIEWED BY: BAK	CHECKED BY: DJT	FIGURE <b>4</b>
DESIGNED BY:	DRAWN BY: MDK/DEW	SCALE: AS SHOWN	
DATE: DECEMBER, 2015	PROJECT NO. 21.0056761.00	REVISION NO.	

**NOTES**

1. BASE MAP IMAGE - SURFICIAL DEPOSITS OF NEW YORK STATE (MUELLER 1963).
2. STUDY AREA BOUNDARY, PROPOSED TURBINE AND SUBSTATION LOCATIONS PROVIDED BY EVERPOWER.

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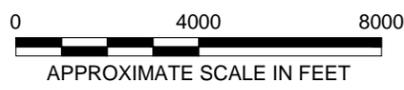
**LEGEND**

- T17 APPROXIMATE LOCATION OF PROPOSED WIND TURBINE
- T39 APPROXIMATE LOCATION OF SOIL BORING COMPLETED AT PROPOSED TURBINE AND/OR SUBSTATION LOCATION BY EARTH DIMENSIONS, INC. BETWEEN NOVEMBER 9 AND 17, 2015, AND OBSERVED BY GZA PERSONNEL.
- STUDY AREA LIMITS

- Newton Bros 1 (160') APPROXIMATE LOCATION OF EXISTING GAS/OIL WELLS
- CU1013 (37') APPROXIMATE LOCATION OF EXISTING WATER WELLS (DEPTH TO BEDROCK NOTED WHERE INFORMATION AVAILABLE)

**NOTES**

1. BASE MAP IMAGE - BEDROCK GEOLOGY OF CHAUTAUQUE COUNTY, NEW YORK (TESMER 1964)
2. STUDY AREA BOUNDARY, PROPOSED TURBINE AND SUBSTATION LOCATIONS PROVIDED BY EVERPOWER.
3. GAS/OIL AND WATER WELL INFORMATION COLLECTED FROM NYSDEC AND USGS DATABASES.



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CHAUTAUQUE COUNTY, NEW YORK**

**BEDROCK AND WELLS IN STUDY AREA**

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PROJ MGR: DJT	REVIEWED BY: BAK	CHECKED BY: DJT	FIGURE <b>5</b>
DESIGNED BY:	DRAWN BY: MDK/DEW	SCALE: AS SHOWN	
DATE: DECEMBER, 2015	PROJECT NO. 21.0056761.00	REVISION NO.	