



August 27, 2024

Subject: BW Monroe 3 Solar Project
175 Tobin Road, Town of Henrietta, New York 14467
Tree Survey Report

Introduction:

Tetra Tech, Inc. (Tetra Tech) performed a tree survey under contract with BW Solar, LLC (BW Solar) for a 6.05-acre “Study Area” located within a larger 114.5-acre parcel. The Study Area is located southwest of Tobin Road, within the Town of Henrietta, Monroe County, New York. The Study Area is slated for development as a photovoltaic solar power generation facility (“Project”). The Project is currently being permitted through the Town of Henrietta. The Study Area is located on a portion of a tax parcel that currently consists of mostly agricultural fields utilized for row crops, and, to a lesser extent, mixed hardwood forest areas. In the course of Project development, there will be a necessity to remove a portion of the trees currently present within the Study Area for both the installation of photovoltaic panels and to prevent shading of installed panels. It is Tetra Tech’s understanding that the Town of Henrietta may require mitigation plantings resulting from the loss of “large trees” should they need to be cleared in the course of project construction. The Town of Henrietta defines large trees as “those attaining a height of 45 feet or more” (Town of Henrietta 2024). Thus, the Study Area was investigated for large trees, the loss of which could trigger require mitigation based on current Town requirements.

In summary, Tetra Tech surveyed one-hundred fifty-five (155) trees within the Study Area. Eighty-three (83) of these trees were located inside of the 1.75-acre proposed clearing area. The species within the proposed clearing area are summarized in Table 1. The total species observed are summarized in Table 2.

Methodology

Prior to the field visit, a desktop assessment using available resources was conducted to determine the likelihood of trees larger than 6 inches diameter at breast height (DBH) occurring in the Study Area. Reviewed data included prior wetland delineation and USACE walkthrough efforts conducted in association with the currently proposed Project, as well as cursory analysis of Aerial Photography. Observed tree locations and potential areas where trimming may be required are designated as recon points are depicted in Figure 1.

Following the desktop review, a tree survey was conducted within the Study Area by Tetra Tech engineer Bob DeMilio and biologist Josh Collette on August 21 and August 22, 2024. The site visit occurred during the pre-construction phase.

Data points of observed large trees were obtained in the field using a sub-meter accurate EOS Arrow Global Positioning System (GPS) device. The DBH of each tree was measured using a DBH measuring tape and the percent slope of the tree was measured using an Abney Level. The observed angle was derived from the taking the inverse tangent of the percent slope of the observer to the top of tree given by the Abney level. The distance from tree was measured digitally with sub-meter accuracy GPS.

After conducting the field survey, the height of each tree was calculated using the formula: $\tan(\text{observed angle from observer}) * (\text{distance from tree}) + \text{eye height of observer}$.

Based on communication with the Town of Henrietta on August 22, 2024, the main concern was the clearing of “Large Trees” as defined in Town code. Given this information, every tree over 6 inches DBH was measured within portions of the Study Area where clearing for solar development is proposed. Six inches DBH was thought to provide a reasonable analog with the height definition of Large Trees. In the remaining portions of the Study Area, Tetra Tech took representative samples of the surrounding trees to characterize the general forest cover in other portions of the Study Area.

Data plots were marked, along with GPS locations, within field maps for each tree and photographs documenting observed trees were taken.

Results

Eighty-one (81) trees with DBH greater than 6 inches were observed within the proposed clearing area (Table 1). The dominant observed species were black cherry (*Prunus serotina*), pignut hickory (*Carya glabra*), and American basswood (*Tilia americana*).

Other species observed within the larger Study Area included red maple (*Acer rubrum*), white ash (*Fraxinus americana*), yellow birch (*Betula alleghaniensis*), pignut hickory, sour cherry (*Prunus cerasus*), gray birch (*Betula populifolia*), bur oak, white oak (*Quercus alba*), butternut (*Juglans cineria*), gray birch (*Betula populifolia*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoides*) and sugar maple (*Acer saccharum*). The clearing area and other portions of the Study Area were observed to contain a similar community of trees, as well as a similar distribution of “large trees”.

Observed trees varied in height from approximately 22 feet to 102 feet, with the majority of trees larger than 45 feet in height and thus meeting the definition of “large trees” per Town code.

Conclusions/Recommendations

83 large trees (i.e., those with DBH greater than 6 inches and thus presumably a height of greater than 45 feet) were observed within proposed clearing areas. Based on desktop calculations using field data, most of the surveyed trees in the proposed clearing areas were in fact greater than 45 feet in height and would be considered “large” based on definitions in Chapter 251 of the Town of Henrietta Code. Tetra Tech recommends avoiding clearing mature trees if feasible. If impacts are anticipated to large trees during construction of the Project, consultation with the Town of Henrietta is recommended to determine any additional requirements, such as replanting or reclamation.

Table 1. Monroe 3 Tree Species Present in Clearing Areas

Tree Species	Scientific Name	# of Individuals Present
American Basswood	<i>Tilia americana</i>	46
Black Cherry	<i>Prunus serotina</i>	7
Bur Oak	<i>Quercus macrocarpa</i>	3
Gray Birch	<i>Betula populifolia</i>	1
Pignut Hickory	<i>Carya glabra</i>	7
Sour Cherry	<i>Prunus cerasus</i>	6
Sugar Maple	<i>Acer saccharum</i>	2
Sweet Cherry	<i>Prunus avium</i>	1
White Ash	<i>Fraxinus americana</i>	6
White Oak	<i>Quercus alba</i>	1
Yellow Birch	<i>Betula alleghaniensis</i>	3

Table 2. Monroe 3 Tree Species Present in Study Area

Tree Species	Scientific Name	# of Individuals Present
American Basswood	<i>Tilia americana</i>	74
American Elm	<i>Ulmus americana</i>	1
Black Cherry	<i>Prunus serotina</i>	7
Bur Oak	<i>Quercus macrocarpa</i>	15
Butternut	<i>Juglans cineria</i>	1
Eastern Cottonwood	<i>Populus deltoides</i>	1
Gray Birch	<i>Betula populifolia</i>	2
Pignut Hickory	<i>Carya glabra</i>	16
Red Maple	<i>Acer rubrum</i>	2
Red Oak	<i>Quercus rubra</i>	1
Sour Cherry	<i>Prunus cerasus</i>	10
Sugar Maple	<i>Acer saccharum</i>	11
Sweet Cherry	<i>Prunus avium</i>	1
White Ash	<i>Fraxinus americana</i>	8
White Oak	<i>Quercus alba</i>	2
Yellow Birch	<i>Betula alleghaniensis</i>	3

BW Monroe 3 Solar Project
Tree Survey





REFERENCES

Town of Henrietta, NY Code. <https://ecode360.com/8224750>. Accessed 25 August 2024.

Figures



Legend

-  Study Area
-  Recon Point
-  Observed Trees
-  Property Line



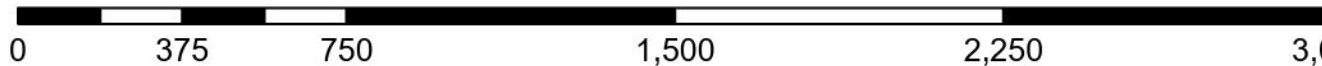
BW Solar Monroe 3
Observed Tree Locations
Town of Henrietta, NY



Date:
8/27/2024

Figure 1
Observed Trees

Approximate Scale:



US Feet

Service Layer Credits: World Topographic Map: Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS
 World Imagery: New York State, Maxar
 World Transportation: Esri, HERE, Garmin, (c) OpenStreetMap contributors
 Hybrid Reference Layer: Esri Community Maps Contributors, County of Ontario, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

- LEGEND**
- SUBJECT PROPERTY LINE
 - - - ADJOINING PROPERTY LINES
 - ▨ DELINEATED WETLANDS (NON-JURISDICTIONAL)
 - ▤ DELINEATED WETLAND (NYSDEC)
 - PROPOSED CHAIN LINK FENCE
 - ▬ PROPOSED ACCESS ROAD
 - ▧ PROPOSED SOLAR ARRAYS
 - ✂ PROPOSED TREE CLEARING AND GRUBBING
 - ⚡ POTENTIAL TREE TRIMMING AREAS

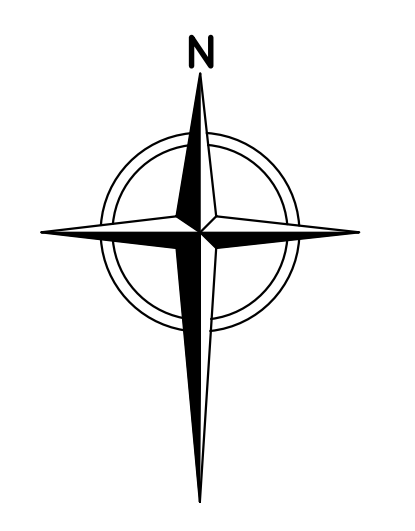
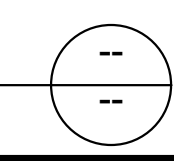


- TREE CLEARING SCHEMATIC NOTES:**
- THE FOLLOWING PARAMETERS SHALL APPLY FOR CLEARING DURING CONSTRUCTION. THIS IS FOR DEMONSTRATION ONLY, REFER TO THE CIVIL DESIGN DOCUMENTS FOR SEQUENCING :
1. CLEARING AND GRUBBING - TREES, UNDERSTORY, AND STUMPS SHALL BE REMOVED.
 2. TREE TRIMMING - OVERHANGING BRANCHES OF TREES AND BRUSH THAT WILL INTERFERE WITH PROPOSED FEATURES SHALL BE CUT ENOUGH TO CONSTRUCT. AVOID OVER TRIMMING. DO NOT DISTURB OR REMOVE UNDERSTORY OR BRUSH.

TREE CLEARING SCHEMATIC

SECTION

SCALE: N.T.S.



SCALE: 1" = 150'

NY CDG MONROE 3 LLC
 175 TOBIN ROAD
 HENRIETTA, NY 14467

TREE CLEARING & TRIMMING AREAS

DATE:
 08/28/2024
 SHEET

1



3136 SOUTH WINTON RD SUITE 303
 ROCHESTER, NY 14623

Appendix A

Photo Log

PHOTOGRAPHIC DOCUMENTATION			
Client:	BW Solar	Project No:	194-1264-0006
Site Name:	Monroe 3 Tree Survey	Location:	175 Tobin Road, Henrietta, NY



Description:	Overview of American basswood tree (<i>Tilia americana</i>). Tree was labeled 126.
---------------------	--



PHOTOGRAPHIC DOCUMENTATION			
Client:	BW Solar	Project No:	194-1264-0006
Site Name:	Monroe 3 Tree Survey	Location:	175 Tobin Road, Henrietta, NY



Description:	Overview of bark from White Ash (<i>Fraxinus americana</i>). Tree was labeled 124.
---------------------	--



PHOTOGRAPHIC DOCUMENTATION			
Client:	BW Solar	Project No:	194-1264-0006
Site Name:	Monroe 3 Tree Survey	Location:	175 Tobin Road, Henrietta, NY



Description:	Overview of pignut hickory (<i>Carya glabra</i>) bark. Tree was labeled 57.
---------------------	---



PHOTOGRAPHIC DOCUMENTATION			
Client:	BW Solar	Project No:	194-1264-0006
Site Name:	Monroe 3 Tree Survey	Location:	175 Tobin Road, Henrietta, NY



Description:	Overview of leaves from Pignut hickory. Tree was labeled 49.
---------------------	--



PHOTOGRAPHIC DOCUMENTATION			
Client:	BW Solar	Project No:	194-1264-0006
Site Name:	Monroe 3 Tree Survey	Location:	175 Tobin Road, Henrietta, NY



Description:	Overview of red maple (<i>Acer rubrum</i>) leaves. Tree was labeled 39.
---------------------	---



PHOTOGRAPHIC DOCUMENTATION			
Client:	BW Solar	Project No:	194-1264-0006
Site Name:	Monroe 3 Tree Survey	Location:	175 Tobin Road, Henrietta, NY



Description:	Overview of red maple bark. Tree was labeled 39.
---------------------	--



PHOTOGRAPHIC DOCUMENTATION			
Client:	BW Solar	Project No:	194-1264-0006
Site Name:	Monroe 3 Tree Survey	Location:	175 Tobin Road, Henrietta, NY



Description:	Overview of Black Cherry (<i>Prunus serotina</i>). Tree was labeled 128.
---------------------	--




PHOTOGRAPHIC DOCUMENTATION			
Client:	BW Solar	Project No:	194-1264-0006
Site Name:	Monroe 3 Tree Survey	Location:	175 Tobin Road, Henrietta, NY



Description:	Overview of sugar maple (<i>Acer saccharum</i>). Tree was labeled 152.
---------------------	--

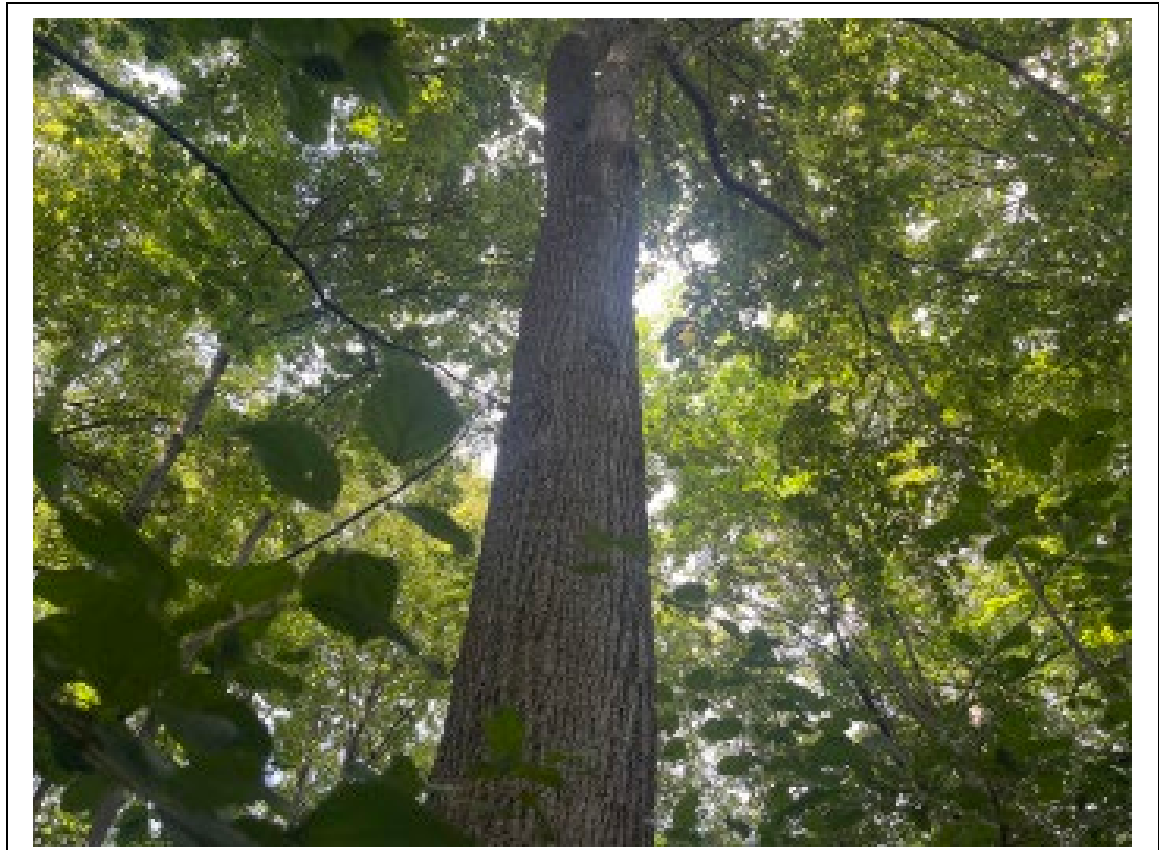


PHOTOGRAPHIC DOCUMENTATION			
Client:	BW Solar	Project No:	194-1264-0006
Site Name:	Monroe 3 Tree Survey	Location:	175 Tobin Road, Henrietta, NY

	
Description:	Overview of bur oak (<i>Quercus macrocarpa</i>). Tree was labeled 153.



PHOTOGRAPHIC DOCUMENTATION			
Client:	BW Solar	Project No:	194-1264-0006
Site Name:	Monroe 3 Tree Survey	Location:	175 Tobin Road, Henrietta, NY



Description:	Additional photo of American basswood to represent the frequency of basswood during the field survey. Tree was labeled number 126.
---------------------	--

