

Clearview Solar I, LLC

Clearview Solar

Exhibit X

Visual Resource Assessment

Case No. 20-1362-EL-BGN

Visual Resource Assessment

Clearview Solar Project

Adams Township, Champaign County, OH

Prepared for:

Clearview Solar I, LLC

1105 Navasota St
Austin, TX 78702

Prepared by:



Environmental Design & Research,
Landscape Architecture, Engineering & Environmental Services, D.P.C.
217 Montgomery Street, Suite 1000
Syracuse, New York 13202
P: 315.471.0688
F: 315.471.1061
www.edrdpc.com

December 2020

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Purpose of the Investigation	1
1.2	Project Location and Description	2
1.2.1	Visual Study Area.....	5
1.2.2	Landscape Character	6
1.2.3	Distance Zones	8
1.2.4	Visually Sensitive Resources.....	10
2.0	VISUAL RESOURCE ASSESSMENT	13
2.1	Viewshed Analysis	13
2.1.1	Viewshed Methodology.....	13
2.1.2	Viewshed Results	15
2.1.3	Visually Sensitive Resources Viewshed Analysis Results Summary	22
2.1.4	Field Verification Methodology	26
2.1.5	Field Verification Results	26
2.2	Visual Simulations.....	27
2.2.1	Visual Simulation Methodology.....	28
2.2.2	Visual Simulation Results	29
3.0	CONCLUSIONS	35
3.1	Visual Resource Assessment Summary.....	35
3.2	Mitigation	36
4.0	REFERENCES.....	37

List of Figures

Figure 1.1. Regional Context Map.....	1
Figure 1.2. Preliminary Project Layout Map.....	4
Figure 1.3. Visual Study Area.....	6
Figure 1.4. Landscape Types Within the Visual Study Area.....	8
Figure 1.5. Location of Visually Sensitive Resources	12
Figure 2.1 PV Panel Viewshed Analysis Results Within the VSA	17

Figure 2.3. PV Panel Viewshed Analysis Results Within the Foreground Distance Zone	18
Figure 2.3. Above-Ground Electrical Component Viewshed Analysis Results.....	20
Figure 2.5. Visual Simulation Viewpoint Location Map.....	28
Inset 2.1. Left: Existing Conditions. Right: Visual Simulation.....	29
Inset 2.2. Left: Install Mitigation. Right: Mitigation 3-5 Years	31
Inset 2.4. Left: Existing Conditions. Right: Visual Simulation.....	31
Inset 2.5. Left: Install Mitigation. Right: Mitigation 3-5 Years	32
Inset 2.6. Left: Existing Conditions. Right: Visual Simulation.....	33

List of Tables

Table 1.1. Landscape Types Within the Visual Study Area.....	7
Table 1.2. Distance Zones by Landscape Type.....	10
Table 1.3. Visually Sensitive Resources	11
Table 2.1. PV Panel Viewshed Analysis Results Summary	15
Table 2.2. Project Substation Viewshed Analysis Results	19
Table 2.3. Visually Sensitive Resources with Potential Project Visibility.....	21

List of Appendices

Appendix A.	Viewpoint Location Map
Appendix B.	Viewpoint Photolog
Appendix C.	Visual Simulations
Appendix D.	Landscape Distance Zone Analysis
Appendix E.	Visually Sensitive Resource Analysis

1.0 INTRODUCTION

1.1 Purpose of the Investigation

Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) was retained by Clearview Solar I, LLC (Applicant) to prepare a Visual Resource Assessment (VRA) for the proposed 144 MW Clearview Solar Plant Project (Project), which is proposed to be located in Adams Township in Champaign County, Ohio (see Figure 1.1).

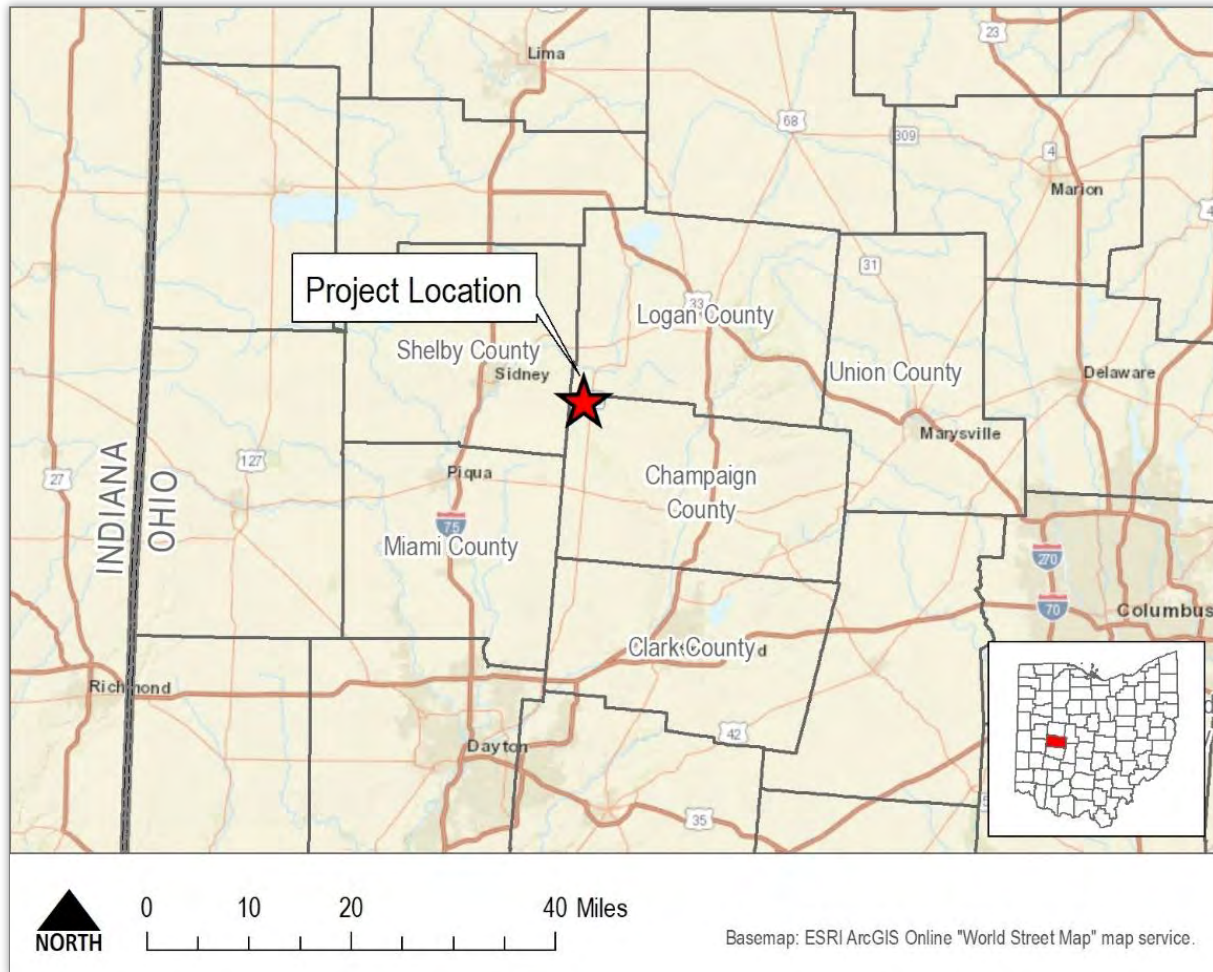


Figure 1.1. Regional Context Map

This report has been prepared to satisfy those portions of the requirements of Ohio Administrative Code 4906-4-08(D) that relate to the identification of Visually Sensitive Resources (VSRs), project visibility, and potential visual impacts resulting from construction of the proposed solar-powered electric generation facility.

Recognizing these requirements, this VRA will:

- + Describe the visible components of the proposed Project.
- + Define the visual character of the visual study area (VSA).
- + Inventory and evaluate the existing VSRs within the VSA.
- + Evaluate the potential visibility of the Project within the VSA.
- + Create photographic simulations of the proposed Project from select locations.
- + Assess the visual impacts associated with the proposal.
- + Describe proposed mitigation measures considered to reduce/minimize potential visual impacts.

This VRA was prepared by a team of experienced visual resource assessment experts in accordance with the policies, procedures, and guidelines contained in established visual resource assessment methodologies.

1.2 Project Location and Description

The Project is proposed to be located on 23 parcels of private agricultural land in Adams Township in Champaign County, Ohio. The parcels being considered for construction of the Project total approximately 1185 acres (Project Area). However, it is anticipated that only approximately 871 acres will be occupied by the operational Project.

The proposed Project is a solar-powered electric generation facility with a generating capacity of up to 144 MW. The Project will use arrays of ground-mounted photovoltaic (PV) modules, commonly known as solar panels, to provide renewable energy to the Ohio bulk power transmission system to serve the needs of electric utilities and their customers. Solar panels will be affixed to a metal racking system mounted on piles that will be driven or screwed into the ground in rows or arrays. The arrays generally will follow the existing topography of the Project Area with minimal grading or alteration of existing contours. Arrays will be grouped in separate, contiguous clusters, each of which will be fenced and gated for equipment security and public safety.

The PV arrays currently proposed for the Project will include a single-axis “tracking” style racking system. Using this system, the arrays will be oriented in a roughly north-south direction and

equipped to rotate the panels from east to west so as to continuously face the direction of sunlight. Tracking arrays will face east at sunrise, rotate throughout the day, and end up facing west at sunset. Following sunset, or under certain weather conditions, the panels will return to a stow position. The panel arrays will be connected to inverters which will convert the direct current (DC) generated by the solar panels to alternating current (AC), and then to a series of below-ground interconnection cables that will deliver the electricity to a new substation (Project Substation), which will step-up the voltage in order to allow connection to the regional electrical grid. The substation will be similar to other types of utility infrastructure found within the study area, and will be constructed within a 10-acre parcel designated for that purpose. Associated support facilities include gravel access roads and meteorological stations within the arrays. The preliminary location of proposed Project components is illustrated in Figure 1.2.

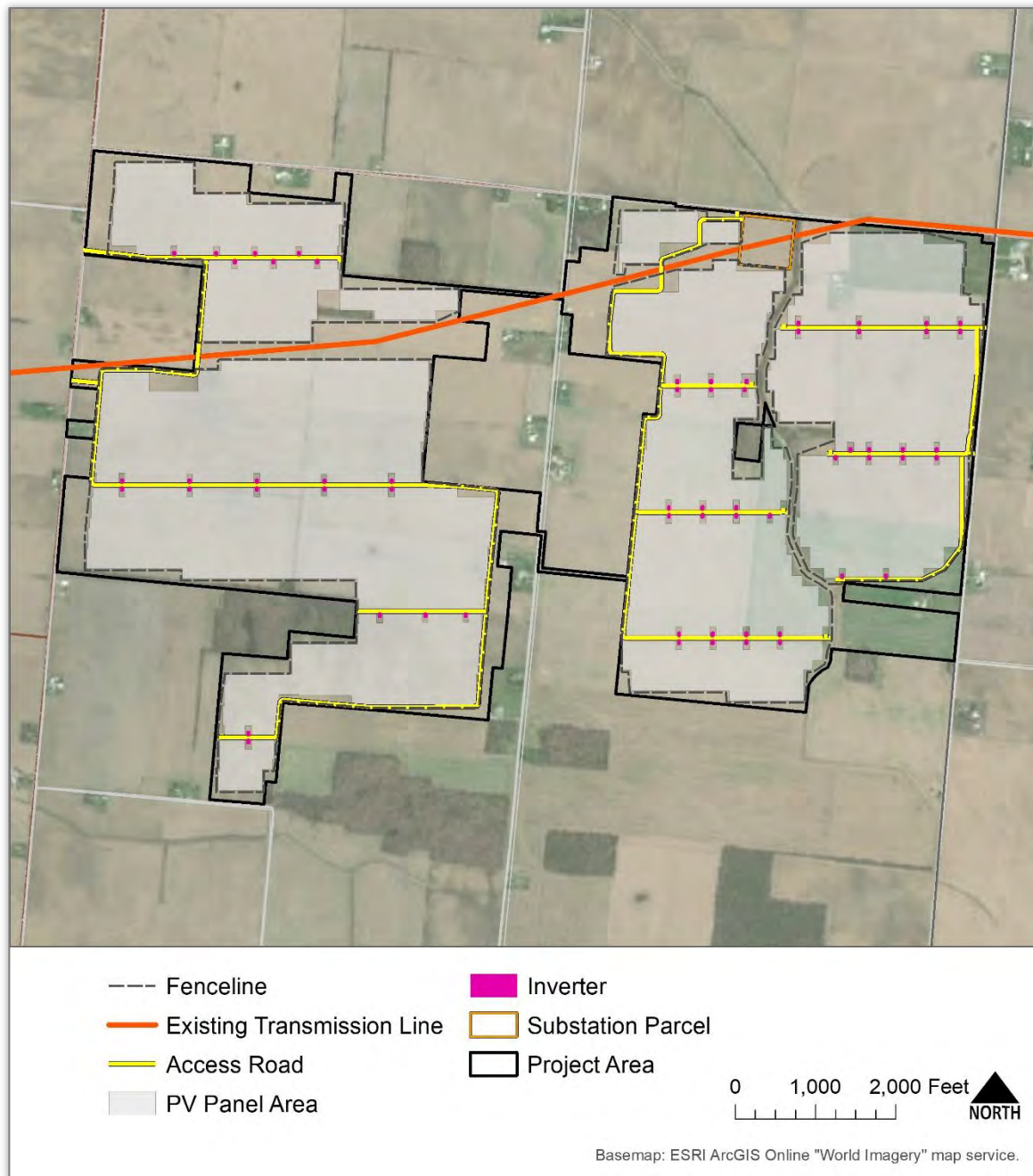


Figure 1.2. Preliminary Project Layout Map

1.2.1 Visual Study Area

OAC 4906-4-08(D) requires that visual impacts to recreational, scenic, and historic resources from a proposed generating facility be evaluated within a 10-mile radius. However, based on the low profile of the proposed equipment, and the results of the visibility analysis presented herein, it was determined that 10 miles would be an excessive VSA for this Project. To define an appropriately sized VSA, a viewshed analysis was conducted (using lidar data) to better understand the Project's area of potential effect. This viewshed analysis indicates that areas of potential Project visibility, where the greatest number of PV panels will potentially be visible, are concentrated within 0.5 mile of the Project. However, in places these areas of potential visibility extend beyond 1.5 miles, and out to 4 miles in smaller but concentrated portions of the VSA to the west toward the City of Sidney, and northwest toward the Village of Port Jefferson. Only very small corridors of potential visibility extend to 5 miles from the Project. As such it was determined that a 5-mile radius from the Project would be a sufficient VSA for the purposes of this study. The resulting VSA encompasses a total of approximately 114.1 square miles. The location and extent of the VSA area is illustrated in Figure 1.3.

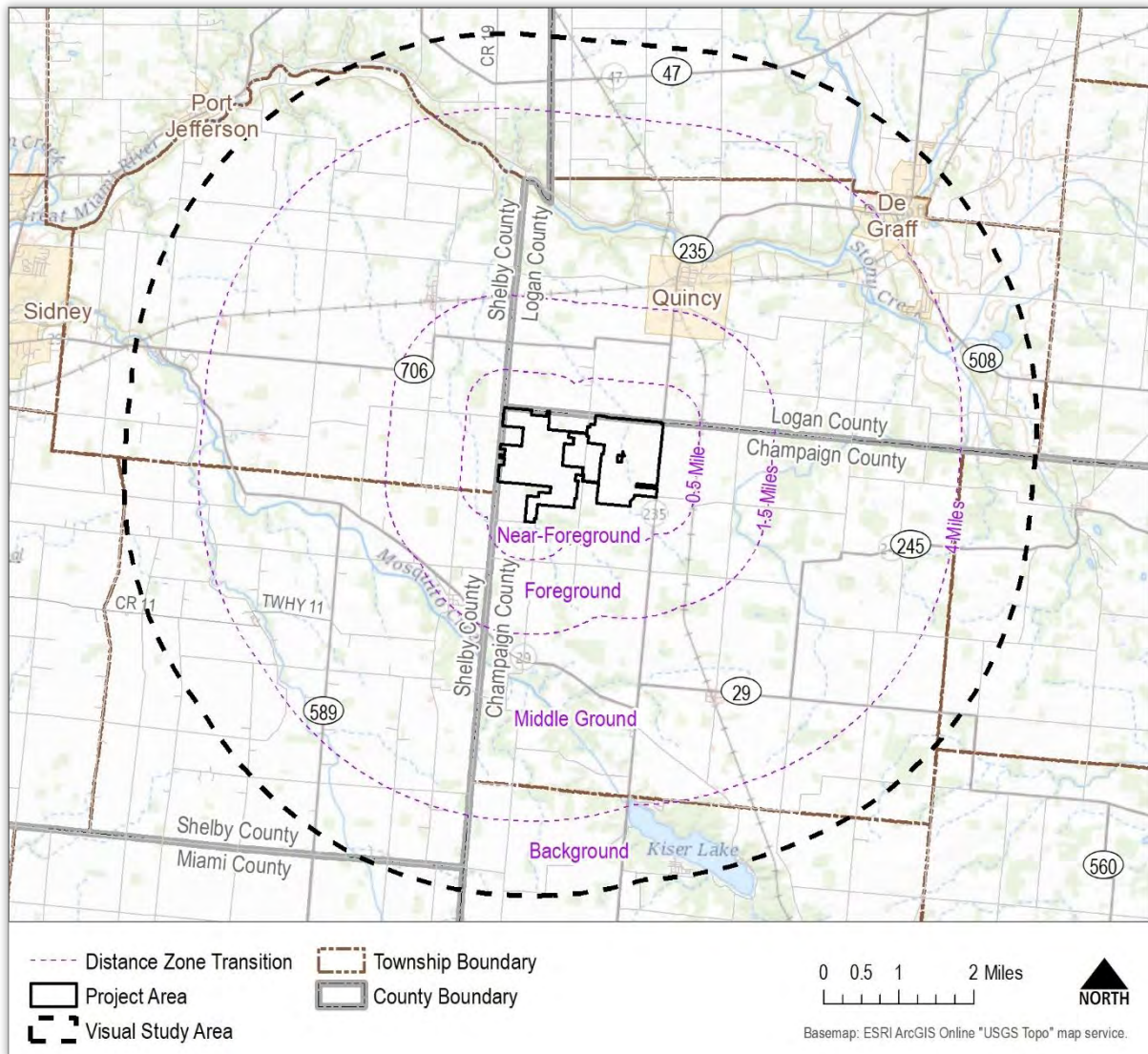


Figure 1.3. Visual Study Area

1.2.2 Landscape Character

Definition of landscape character within a given VSA provides a useful framework for the analysis of a facility's potential visual effects. Landscape types (LTs) within the VSA were categorized based on the similarity of various features, including landform, vegetation, water, and/or land use patterns, in accordance with established visual resource assessment methodologies (Smardon et al., 1988; USDA Forest Service, 1995; USDOT Federal Highway Administration, 1981; USDI Bureau of Land Management, 1980). The USGS National Land Cover Database (NLCD) was used to help define the character and location of various LTs within the VSA (see Figure 1.4). The landscape types defined within the VSA are presented in Table 1.1.

Table 1.1. Landscape Types Within the Visual Study Area

Landscape Type	Total Area of LT within the Visual Study Area (mi ²)	Percent of Total Area within Visual Study Area
Pasture and Cropland	93.3	81.8%
Forest ¹	13.7	12.0%
Developed	5.6	4.9%
Open Water/Wetland	1.0	0.9%
Grassland/Shrubland	0.6	0.5%
Total	114.1	100%

¹Includes forested wetland areas.

The Project components are proposed to be built almost entirely within the Pasture and Cropland LT, which makes up 81.8% of the VSA. Given the fact that agricultural land in this region typically offers the greatest potential for long-distance views, this landscape type is likely to have the greatest opportunities for views of the Project. The Forest LT, which makes up 12.0% of the VSA, occurs in small distinct locations throughout the VSA, as well as being concentrated along the Great Miami River corridor along the northern expanse of the study area and the Mosquito Creek corridor across the southern portion of the study area connecting to Kiser Lake. Views of the Project from within the Forest LT are typically limited by the presence of dense vegetation. The Developed LT makes up 4.9% of the VSA including the Villages of Quincy and De Graff, and the Hamlets of Pemberton and Rosewood. These areas typically find outward views across landscaped yards and planted vegetation, but may be limited due to the presence of closely situated buildings, utility poles, or other visual clutter. The Open Water/Wetland LT makes up approximately 0.9% of the VSA and is primarily concentrated in the northern and southern portion of the VSA (associated with the Great Miami River, and Kiser Lake), where long distance views are typically limited due to the presence of tree-lined banks and adjacent areas of Forest LT. The Grassland/Shrubland LT is a small component of the VSA, occupying approximately 0.5% of the land area in the form of small scattered patches, typically adjacent to Forest or Pasture and Cropland LTs.

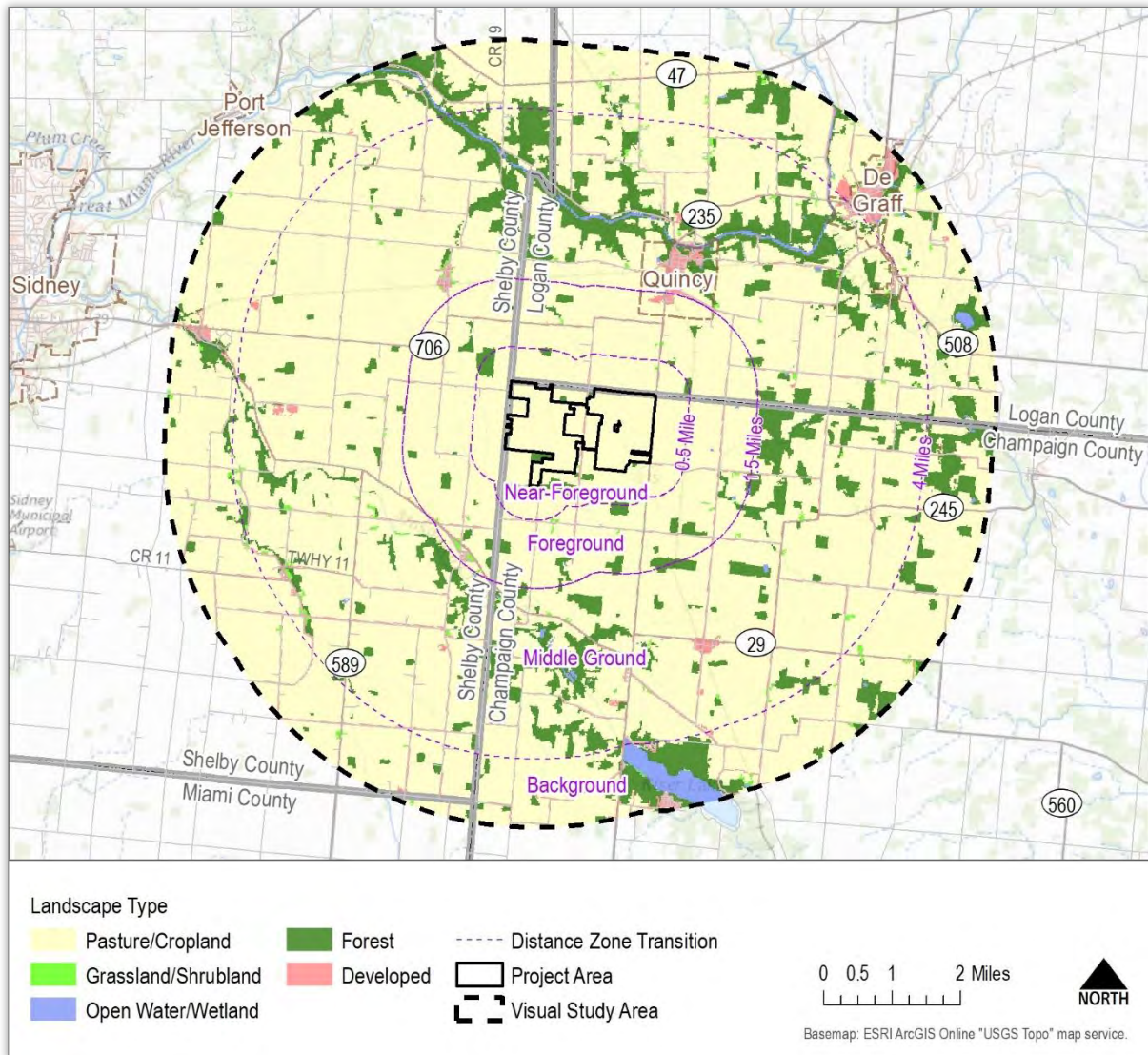


Figure 1.4. Landscape Types Within the Visual Study Area

1.2.3 Distance Zones

Distance zones are typically defined in visual studies to divide the VSA into distinct classifications based on the various levels of landscape detail that can be perceived by a viewer. Four distinct distance zones were developed for this purpose. To define these zones, EDR consulted several well-established agency protocols, including those published by the U.S. Forest Service (USFS), Bureau of Land Management (BLM), and U.S. Department of Transportation (USDOT), to determine the appropriate extent of each distance zone. It is important to note that the distance zones recommended by each of these protocols were considered in the context of this VSA. For example, the BLM recommends a combined foreground-middle ground zone extending from 0 to 5 miles.

While this may be appropriate in a western landscape with frequent, unscreened views over very long distances, it does not translate to eastern landscapes where views are often contained within 1.0 mile of the viewer. Conversely, the USFS (1995) suggests the foreground be defined as an area extending 0.5 mile from the viewer. Due to the characteristics of the specific landscape being evaluated in this VRA, EDR defined distance zones within the VSA (as measured from the proposed Project) as follows:

- + *Near-Foreground*: 0 to 0.5 mile. At this distance, a viewer is able to perceive details of an object with clarity. Surface textures, small features, and the full intensity and value of color can be seen on foreground objects.
- + *Foreground*: 0.5 to 1.5 miles. At this distance, elements in the landscape tend to retain visual prominence, but detailed textures become less distinct. Larger scale landscape elements remain as a series of recognizable and distinguishable landscape patterns, colors, and textures.
- + *Middle ground*: 1.5 to 4.0 miles. The middle ground is usually the predominant distance at which landscapes are seen. At these distances, a viewer can perceive individual structures and trees but not in great detail. This is the zone where the parts of the landscape start to join together; individual hills become a range, individual trees merge into a forest, and buildings appear as simple geometric forms. Colors will be distinguishable but subdued by a bluish cast and softer tones than those in the foreground. Contrast in texture between landscape elements will also be reduced.
- + *Background*: Over 4.0 miles. The background defines the broader regional landscape within which a view occurs. Within this distance zone, the landscape is simplified; only broad landforms are discernable, and atmospheric conditions often render the landscape an overall bluish color. Texture has generally disappeared, and color has flattened, but large patterns of vegetation are discernable. Silhouettes of one land mass set against another and/or the skyline are often the dominant visual characteristics in the background. The background contributes to scenic quality by providing a softened backdrop for foreground and middle ground features, an attractive vista, or a distant focal point.

The area of each LT falling within each distance zone in the VSA is summarized in Table 1.2. As shown in this table, the distribution of LTs within the individual distance zones is relatively uniform. The Pasture and Cropland LT makes up between 79.8% and 92.3% of each of the distance zones. Also of note, the Developed LT, where the majority of VSRs and viewers occur, makes up less than 6% of each of the distance zones within the VSA.

Table 1.2. Distance Zones by Landscape Type

Landscape Type	Total Area (square miles) of Landscape Type and Percent of Distance Zone ¹			
	Near-Foreground (0 – 0.5 mile)	Foreground (0.5 – 1.5 miles)	Middle Ground (1.5 – 4.0 miles)	Background (>4.0miles)
Pasture and Cropland	6.2 (92.3%)	11.7 (90.2%)	47.7 (79.9%)	27.8 (79.8%)
Forest	0.3 (4.3%)	0.6 (4.9%)	8.5 (14.2%)	4.3 (12.2%)
Developed	0.2 (3.3%)	0.6 (4.3%)	2.9 (4.8%)	2 (5.6%)
Open Water/Wetland		<0.1 (0.1%)	0.4 (0.6%)	0.6 (1.8%)
Grassland/Shrubland	<0.1 (0.1%)	0.1 (0.5%)	0.3 (0.5%)	0.2 (0.6%)
Total Distance Zone Area²	6.7	12.9	59.6	34.8

¹The calculations used to generate this table were based on unrounded numbers, therefore, the rounded results may not add up precisely.

²The VSA includes approximately 114.1 square miles, or approximately 73,012 acres.

1.2.4 Visually Sensitive Resources

VSRs within the VSA were identified per the requirements of OAC 4906-4-08(D). The categories of VSRs that typically would be required for consideration in a VRA include the following:

- + **Properties of Historic Significance:** National Historic Landmarks, National or State Historic Sites, Sites listed on National or State Registers of Historic Places (NRHP, SRHP); Sites Eligible for Listing on the NRHP or SRHP; National or State Historic Sites, Ohio Historic Structures, Historic Bridges, Ohio Genealogical Society (OGS) Cemeteries, and Ohio Historic State Markers.
- + **Designated Scenic Resources:** Rivers Designated as National or State Wild, Scenic, or Recreational; Sites, Areas, Lakes, Reservoirs or Highways Designated or Eligible for Designation as Scenic; Other Designated Scenic Resources.
- + **Public Lands and Recreational Resources:** National Parks, Recreation Areas, Seashores,

and/or Forests; National Natural Landmarks; National Wildlife Refuges; Heritage Areas; State Parks; State Nature Preserves or Wildlife Areas; State Forests; State Fishing/Waterway Access Sites; Other State Lands, Designated Trails; Local Parks and Recreation Areas; Publicly Accessible Conservation Lands/Easements; Rivers and Streams with Public Fishing Rights Easements; Named Lakes, Ponds, and Reservoirs.

- + **High Use Public Areas:** State, US, and Interstate Highways, Schools, Cities, and Villages.

Table 1.3 provides a cumulative list of the types of identified VSRs that occur within the VSA.

Table 1.3. Visually Sensitive Resources

Type of Visually Sensitive Resource	Number Identified within the Visual Study Area
Properties of Historic Significance	162
Designated Scenic Resources	0
Public Lands and Recreational Resources	18
High Use Public Areas	13
Total	193

The locations of mapped VSRs within the VSA are illustrated in Figure 1.5. Additional information regarding the specific VSRs included in the VSA, and potential Project visibility from these VSRs, is included in Section 2.1.3 on page 22 and Appendix E.

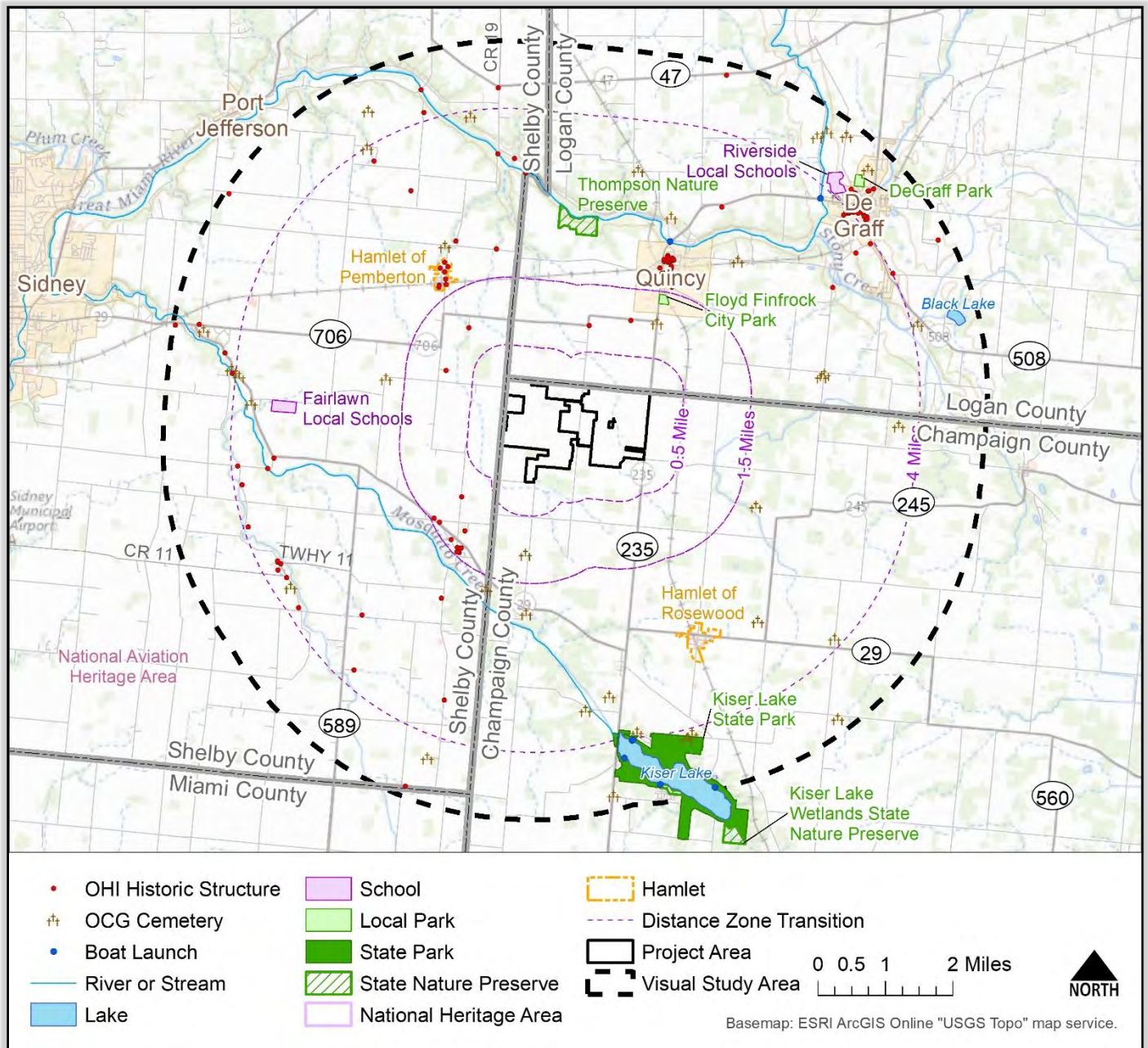


Figure 1.5. Location of Visually Sensitive Resources

2.0 VISUAL RESOURCE ASSESSMENT

The specific techniques used to assess potential Project visibility and visual effects, along with the results of those assessments are described below.

2.1 Viewshed Analysis

2.1.1 Viewshed Methodology

PV Panel Viewshed Analysis

A digital surface model (DSM) viewshed analysis for the proposed PV panels was conducted to incorporate the screening effects of topography, structures, and vegetation. The DSM viewshed analysis does not account for any proposed landscape mitigation strategies. A viewshed analysis based on topography alone is not provided because the results of such an analysis do not accurately represent conditions within the VSA. The DSM viewshed analysis for the proposed PV panels was prepared using: 1) a DSM derived from the Ohio Statewide Imagery Program's (OSIP) 2006 lidar data for Champaign, Logan, Shelby, and Miami Counties, Ohio; 2) sample points used in the analysis to represent solar panel locations are placed 300 feet apart in a grid pattern throughout all proposed PV panel areas; 3) an assumed maximum solar panel height of 15 feet; 4) an assumed viewer height of 6 feet; and 5) ESRI ArcGIS® software with the Spatial Analyst extension.

A few modifications were made to the lidar-derived DSM prior to analysis. Transmission lines and road-side utility lines that are reflected in the lidar data are mis-represented in the DSM as solid walls/screening features. In order to correct this inaccuracy, DSM elevation values within transmission line corridors and within 50 feet of road centerlines were replaced with bare earth elevation values. Additionally, all areas within the PV array fence lines were cleared of any vegetation to reflect the bare-earth elevation in these locations. This modified DSM was then used as a base layer for the viewshed analysis. Once the viewshed analysis was completed, a conditional statement was used within ArcGIS® to set solar panel visibility to zero in locations where the DSM elevation exceeded the bare earth elevation by 6 feet or more, indicating the presence of vegetation or structures that exceed viewer height. This was done for two reasons; 1) in locations where trees or structures are present in the DSM, the viewshed would reflect visibility from the vantage point of standing on the tree top or building roof, which is not the intent of this analysis, and 2) to reflect the fact that ground-level vantage points within buildings or areas of vegetation exceeding 6 feet in height generally will be screened from views of the Project.

Because it accounts for the screening provided by structures and trees, the DSM viewshed analysis is a very accurate representation of Project visibility. However, it is worth noting that because certain characteristics of the Project and the VSA that may serve to restrict visibility (e.g., color, atmospheric/weather conditions, and distance from viewer) are not taken into consideration in the viewshed analyses, being located within the DSM viewshed does not necessarily equate to actual Project visibility, nor does it indicate that adverse visual impacts will occur within these geographic locations.

In order to further clarify and define visibility characteristics based on distance from the Project, EDR conducted a comparative analysis between the post-construction visibility of a facility outside of Bowling Green, Ohio and the areas of potential visibility identified by the DSM viewshed analysis for the proposed Project (see Appendix D).¹ The Bowling Green Solar Project (BGSP) is located in Center Township, Wood County, Ohio, and is situated in a landscape with similar characteristics to the proposed Project. EDR identified specific Distance Zones (1-6) for collection of representative photographs of the actual visibility conditions from those Distance Zones at the BGSP. The Distance Zones, shown in Appendix D, range from less than 200 feet from the BGSP facility (Zone 1) to just over 1.0 mile from the BGSP facility (Zone 6). These representative conditions were then referenced to the same Distance Zones around the Project.

Project Substation Viewshed Analysis

A DSM viewshed analysis was also conducted for the Project Substation. Because precise locations of Project Substation interior components are not known at this time, the analysis was run based on five representative points within the proposed Project Substation footprint. These points were assigned a height of 70 feet to represent the height of the proposed lightning masts, which are the tallest Project Substation components (although they have a narrow profile). All other data sources and assumptions used in the Project Substation viewshed analysis are as described above for the PV panel viewshed analysis.

¹ A field visit to the Bowling Green Solar Project was conducted on September 13th 2020, and is documented in Appendix D.

2.1.2 Viewshed Results

PV Panel Viewshed Analysis

Potential visibility of the proposed solar panels, as indicated by the DSM viewshed analysis, is illustrated in Figures 2.1 and 2.2, (on pages 17 and 18) and summarized in Table 2.1. As indicated by this analysis, the Project will be screened from approximately 82.8% of the VSA by intervening topography, vegetation, and structures.

Table 2.1. PV Panel Viewshed Analysis Results Summary

Analysis	VSA (square miles)	Visibility by Distance Zone ¹ (square miles of visibility and percent of distance zone)			
		Near- Foreground 0-0.5 Mile	Foreground 0.5-1.5 Mile	Middle Ground 1.5-4.0 Mile	Background 4.0-5.0 Mile
Total Area	114.1	6.7	12.9	59.6	34.8
DSM Viewshed Visibility	19.7 (17.2%)	6.1 (92%)	8.1 (62.6%)	5.0 (8.5%)	0.4 (1.1%)

¹The calculations used to generate this table were based on unrounded numbers, therefore, the rounded results may not add up precisely.

The majority of PV panel visibility, based on percentage of area, is concentrated within the near-foreground distance zone, with 92% of the area out to 0.5 mile from the Project Area indicated as having potential views of some portion of the Project. Views from areas beyond the near-foreground and into the foreground distance zone (0.5-1.5 miles) are more well screened, with 62.6% of the foreground distance zone indicated as having the potential for views of the PV panels. The DSM viewshed analysis indicates that potential Project visibility is further reduced at distances beyond the foreground. Approximately 8.5% of the VSA may be able to view the PV panels in the middle ground (at distances between 1.5 and 4 miles) and at background distances, the viewshed analysis suggests the Project could be visible from only 1.1% of the area between 4 and 5 miles away.

Within the VSA, the topography and vegetation associated with the Great Miami River, Mosquito Creek, and Lee Creek, play a significant role in limiting potential PV panel visibility from the southwest, north, and east beyond 1.5 miles from the Project. Similarly, scattered large woodlots located within the foreground to the northwest of the Project preclude potential PV panel visibility along the North Powell Creek corridor. The structures and vegetation associated with the Village of Quincy also significantly limit views from the northeast beyond 1.5 miles. Limited corridors of potential visibility extend to the northwest between the Great Miami River and Mosquito Creek

corridors out to 4 miles. There is also limited potential visibility that extends toward Leatherwood Creek to the southwest of the Project due to breaks in vegetative cover along Mosquito Creek. Only a few small corridors of visibility extend beyond 4 miles within the VSA. The combination of structures and vegetated areas, combined with the relatively low panel height, would prohibit visibility from further distances.

It should be noted that the viewshed analysis treats all structures and vegetation as if they were opaque, and therefore, small woodlots and hedgerows are assumed to fully block views of the Project. In leaf-on conditions, this likely will be the case, but during leaf-off conditions, narrow or sparsely vegetated hedgerows and woodlots may not provide enough screening to fully obscure views of the Project. However, partial screening will still be provided by tree trunks and branches in these locations, even under leaf-off conditions, so any views of the PV panels would be significantly obstructed. It is also important to note that the lidar data used in this analysis are from 2006, and therefore the analysis, does not reflect any changes that have occurred since that time. However, based on review of recent aerial photography and in-field analysis, the lidar data appear to accurately reflect current vegetative screening conditions within the VSA.

Figures 2.1 and 2.2 illustrate the results of the DSM viewshed analysis for a 5-mile radius and a 1.5-mile focused radius, respectively. As these figures illustrate, visibility beyond a 2-mile radius primarily will be limited to the broad plain between the Great Miami River and Mosquito Creek to the west, northwest, and north of the Project. The viewshed maps also illustrate how potential views of the Project will include a smaller portion of the proposed PV panel arrays as one moves further away from the Project.

Additionally, the comparative analysis presented in Appendix D demonstrates that actual visibility diminishes rapidly beyond 500 feet (Zone 3). In the BGSP example project, visibility quickly transitions from being a major focus of visual attention where it occupies most of the visual field and interferes with views of nearby landscape elements in Zone 2 (200 feet to 500 feet), to having sufficient size and contrast to compete with other landscape elements but not strongly attract visual attention or occupy most of the field of view in Zone 3 (500 feet to 1,000 feet). By Zone 4 (1,000 feet to 0.5 mile) the BGSP example visibility demonstrates that the Project can be detected by most observers but does not attract visual attention, compete with other landscape elements, or occupy most of the field of view. By Zones 5 (0.5 mile to 1.0 mile) and 6 (greater than 1.0 mile),

the BGSP example transitions from being very small or faint in view and not easily detected by most observers that are not actively looking for it, to appearing so small that it is nearly imperceptible to most viewers and only detected after looking closely for an extended period of time.

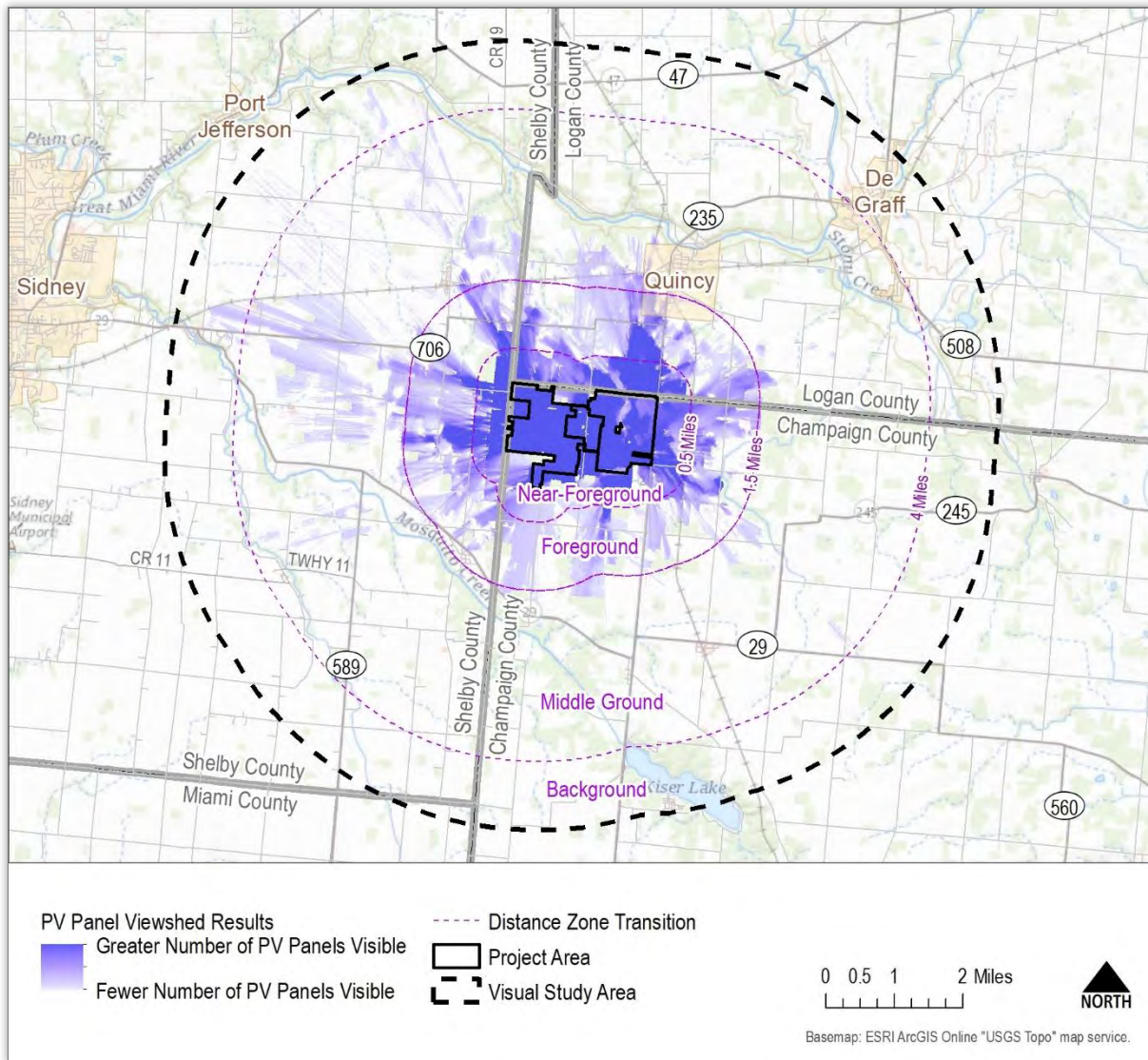


Figure 2.1 PV Panel Viewshed Analysis Results Within the VSA

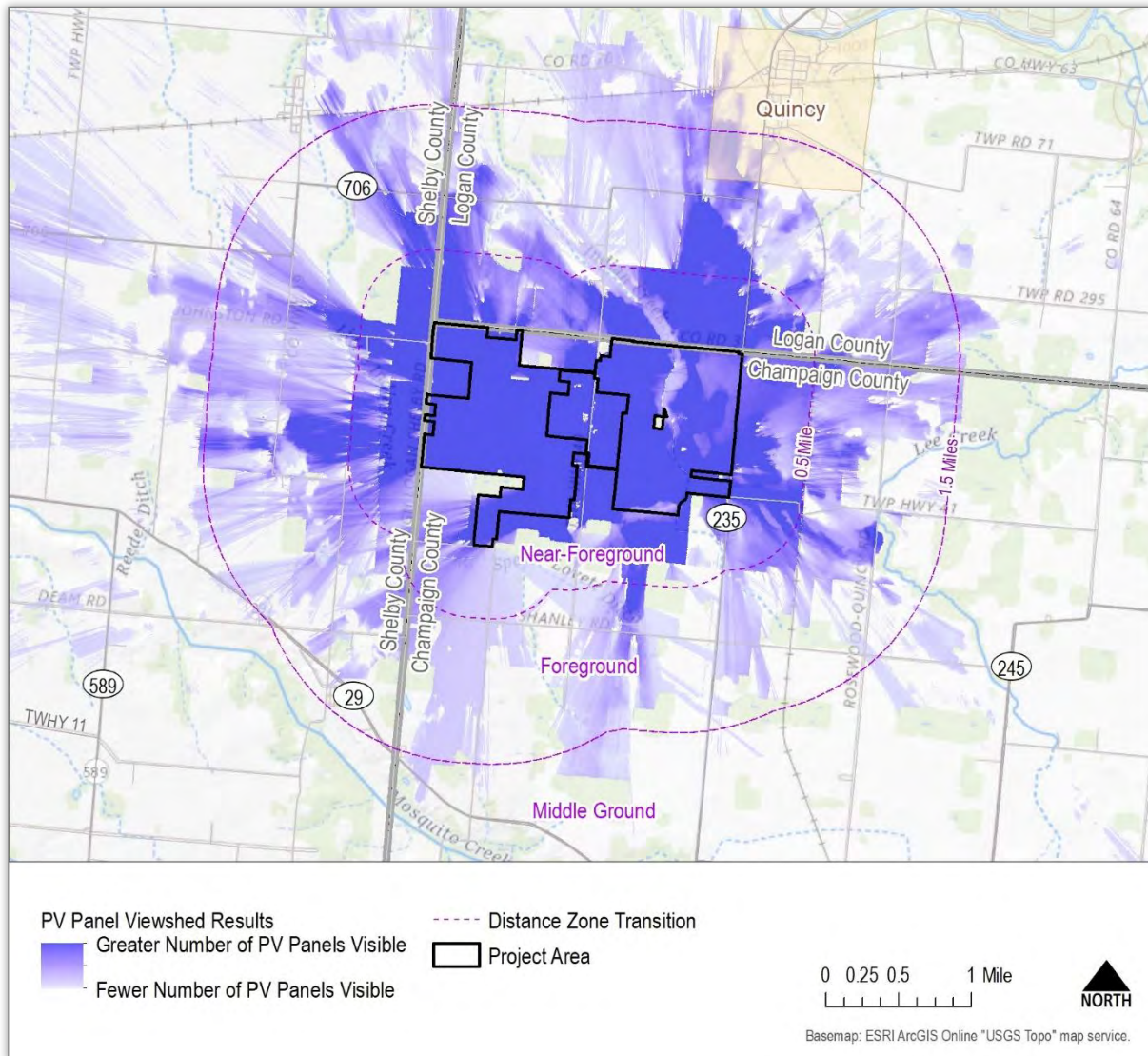


Figure 2.2. PV Panel Viewshed Analysis Results Within the Foreground Distance Zone

Project Substation Viewshed Analysis

Potential visibility of the Project Substation, as indicated by the viewshed analysis, is illustrated in Figure 2.3 and summarized in Table 2.2 below. As indicated by this analysis, these Project components will be screened from approximately 89.8% of the VSA by intervening landforms, vegetation, and structures.

Table 2.2. Project Substation Viewshed Analysis Results

Analysis	VSA (square miles)	Visibility by Distance Zone (square miles of visibility and percent of distance zone)			
		Near- Foreground 0-0.5 Mile	Foreground 0.5-1.5 Miles	Middle Ground 1.5-4.0 Miles	Background 4.0-5.0 Miles
Total Area	114.1	6.7	12.9	59.6	34.8
DSM Viewshed Visibility	11.7 (10.2%)	4.5 (67.8%)	4.3 (33.5%)	2.5 (4.2%)	0.3 (0.9%)

¹The calculations used to generate this table were based on unrounded numbers, therefore, the rounded results may not add up precisely.

Potential Project Substation visibility is indicated in areas similar to what was described for the PV panels. The Great Miami River, Mosquito Creek, and Lee Creek corridors limit panel visibility beyond 1.5 miles. However, there is a new corridor of potential visibility extending out beyond 4 miles to the southeast following Lee Creek. Potential visibility from the west and north west between the Great Miami River and Mosquito Creek corridors is more concentrated into narrow bands with visibility extending out to 5 miles.

It is important to keep in mind that the Project Substation viewshed analysis presents theoretical visibility. It ignores the narrow profile and neutral color of the masts. These features will likely make these structures difficult to discern at distances beyond the foreground.

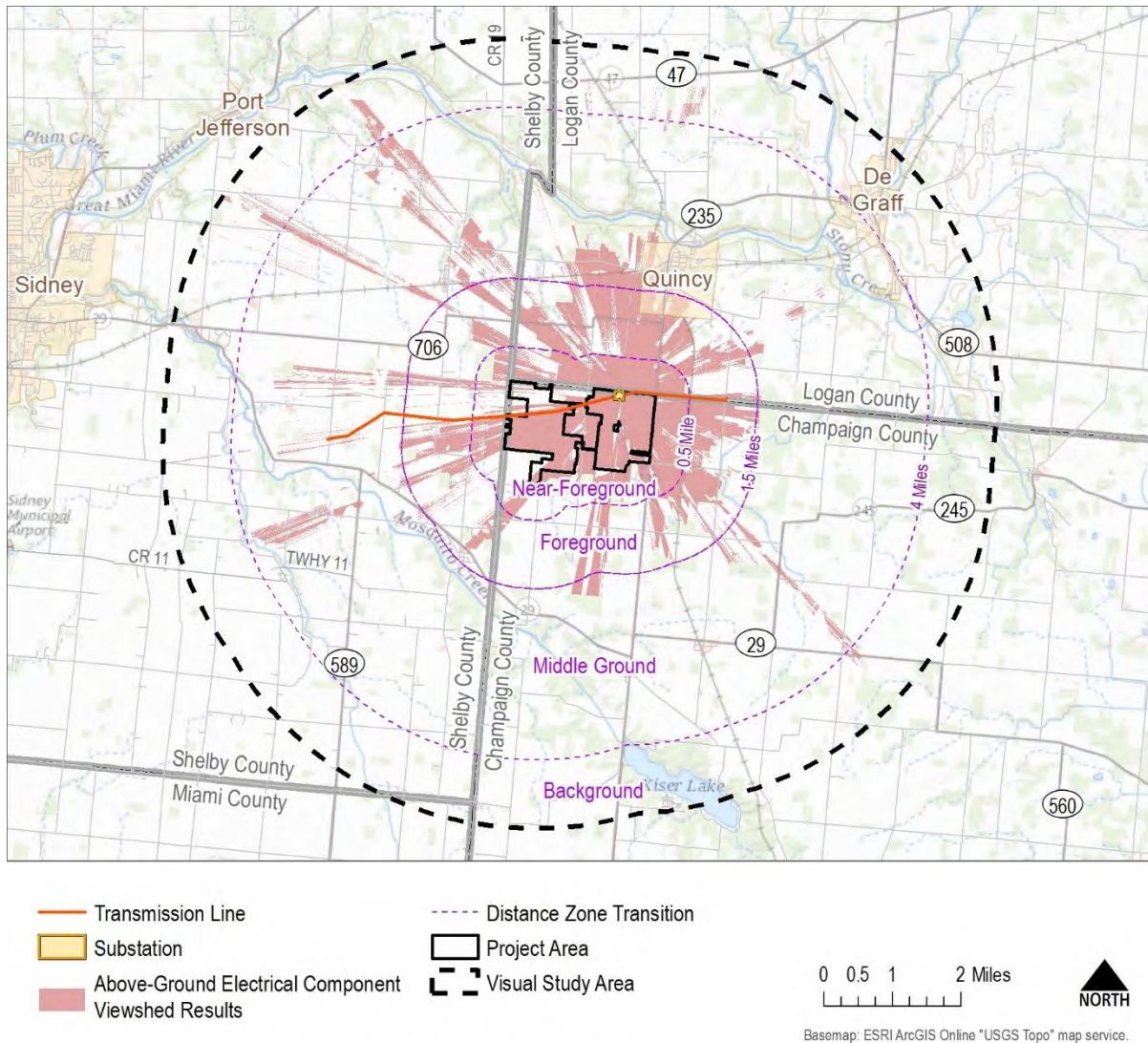


Figure 2.3. Above-Ground Electrical Component Viewshed Analysis Results

Visibility Results from Visually Sensitive Resources

The DSM viewshed analysis suggests that 38 of the 193 VSRs identified within the VSA (20%) may have some level of PV panel visibility, while an additional 4 VSRs (2%) may have some level of Project Substation visibility (see Table 2.4).

Table 2.3. Visually Sensitive Resources with Potential Project Visibility

Visually Sensitive Resources	Total Number of Resources within the Visual Study Area	Total Number of Resources with Visibility
Properties of Historic Significance	Total 162	Total 29
National/ State Historic Landmarks	0	0
National/ State Historic Sites	0	0
Sites Listed on National or State Registers of Historic Places (NRHP/SRHP)	0	0
Sites Eligible for Listing on NRHP or SRHP	0	0
Ohio Historic Structures	125	23 ¹
Historic Bridges	0	0
OGS Cemeteries	37	6
Ohio Historic State Markers	0	0
Designated Scenic Resources	Total 0	Total 0
Rivers Designated as National or State Wild, Scenic or Recreational	0	0
Sites, Areas, Lakes, Reservoirs or Highways Designated or Eligible for Designation as Scenic	0	0
Other Designated Scenic Resources (Easements, Roads, Districts, and Overlooks)	0	0
Public Lands and Recreational Resources	Total 18	Total 3
National Parks, Recreation Areas, Seashores, and/or Forests	0	0
National Natural Landmarks	0	0
National Wildlife Refuges	0	0
Heritage Areas	1	1
State Parks	1	0
State Nature Preserves	2	1
Wildlife Areas	0	0
State Forests	0	0
State Fishing/Waterway Access	7	0
Other State Lands	0	0
Trails	0	0
Local Parks and Recreation Areas	2	1
Publicly Accessible Conservation Lands/Easements	0	0
Rivers and Streams with Public Fishing Access	3	0
Named Lakes, Ponds, and Reservoirs	2	0
High-Use Public Areas	Total 13	Total 10
State, US, and Interstate Highways	7	6 ¹
Schools	2	1
Cities, Villages, Unincorporated Areas	4	3 ¹

Visually Sensitive Resources	Total Number of Resources within the Visual Study Area	Total Number of Resources with Visibility
Total Number of Visually Sensitive Resources	193	42

¹Four of the 42 VSRs with potential Project visibility are indicated as having views of the substation only (PV panels are not anticipated to be visible from these resources). These resources include two OHI Historic Structures, one state highway, and one village. See Appendix E for additional detail on VSR visibility.

The section below describes the individual VSRs with potential PV panel visibility that occur within the VSA, their distance from the Project, and potential views of the proposed PV panels based on the DSM viewshed results. VSRs demonstrated as having views of the Project Substation are marked with an asterisk (*).

2.1.3 Visually Sensitive Resources Viewshed Analysis Results Summary

Properties of Historic Significance

Ohio Historic Structures

Of the 125 Ohio Historic Structures within the VSA 23 are indicated as having potential Project visibility, primarily within the foreground, midground, and background distance zones. Much of the area within these zones consists of open agricultural fields, and proposed mitigation screen plantings are not taken into consideration in the viewshed analysis. Nine Ohio Historic Structures are located in the foreground distance zone, which consists of open agricultural fields, and the majority of these sites are historic homes or farms that are associated with current or past agricultural practices. Resources in the middle ground distance zone with potential for the highest area of Project visibility are located to the north, northwest, and west of the Project. There are 12 resources located in this zone that are shown to have potential visibility; of those the Samuel Robinson Homestead is only shown to have potential visibility of the Project Substation. However, at this distance the effects of visibility will be softened, and vegetation on the horizon will make distinguishing individual components of the Project more difficult. Also, the slender nature and colors of the electrical components at the Project Substation will make them difficult to distinguish at these distances. Only one Ohio Historic Structure located in the background distance zone has potential visibility of the PV panels. Views are possible along narrow corridors across open agriculture fields. However, at this distance from the Project, the effects of visibility will be softened and vegetation on the horizon will make distinguishing individual components of the Project difficult. Resources anticipated to have Project visibility, along with their distance from the Project,

are listed below:

Foreground Distance Zone:

- + House, 12331 SR 706; 0.9 mile
- + Kenneth vanSkiver Farm, 5778 Tawawa-Maplewood Rd; 0.9 mile
- + Jacob Kerns Farm, RT 706; 0.9 mile
- + Nicholas Dormire Farm, Tawawa-Maplewood Rd; 0.9 mile
- + House, SR 708; 1.0 mile
- + Christian Dormire Farm, 21648 Deam Rd; 1.1 miles
- + Christian Church, Cor N St & Cross St; 1.3 miles
- + Eagle Hall, Cor N & Tawawa-Maplewood S; 1.4 miles
- + Daniel Brautigam Farm, 4010 SR 29 SE; 1.4 miles

Middle Ground Distance Zone:

- + Daniel Vandemark House, Palestine St; 2.9 miles
- + Ferd Pemberton United Methodist Church, Cor Main St & Leonard St; 2.9 miles
- + Vacant, SR 235 (Carlisle); 1.8 miles
- + Quincy Depot, Yost St; 1.8 miles
- + Morgan Tower, Carlisle St; 1.8 miles
- + Pemberton Elementary School, Palestine St; 1.9 miles
- + Jerry Cron H Farm, Dingman-Slagel Rd; 1.9 miles
- + Thomas Wilkenson Jr Farm, Tawawa-Maplewood Rd; 2.2 miles
- + Lowell R Deweese Farm, Baker Rd; 3.2 miles
- + William Shaw Farm, Cor Rt 29 McCloskey-School; 3.4 miles
- + Lawrence Barhorst Farm, Elton Rd; 3.8 miles
- + Samuel Robinson Homestead, 3696 Leatherwood Creek Rd; 4.0 miles*

Background Distance Zone:

- + Virgil Herring Farm, Baker Rd; 4.2 miles
- + Line Farm, Deweese Rd SE of Pasco-Montra; 5.0 miles*

OGS Cemeteries

Of the 37 OGS Cemeteries within the VSA, six are indicated as having potential Project visibility. Resources located within the foreground distance zone (>0.5 mile and <1.5 miles) will have open views of the Project across open agricultural fields, with limited existing screening. However, in

areas where visibility of the Project is anticipated, proposed mitigation plantings will be relied upon to provide screening and soften the visible effects of the PV arrays. Sturms Cemetery, located in the middle ground distance zone (>1.5 miles and <4 miles), will have limited pockets of visibility softened by intervening vegetation and visual distractions. Actual Project visibility at these locations is likely to require concentrated attention at specific locations on site. Cemeteries located in the background distance zone will have extremely limited pockets of visibility. Visibility is softened at this distance and vegetation on the horizon will make distinguishing individual components of the Project difficult. Cemeteries anticipated to have visibility along with their distance from the Project are listed below:

Foreground Distance Zone:

- + Cost Cemetery; 1.0 mile
- + Johnson Cemetery; 1.1 miles

Middle Ground Distance Zone:

- + Sturms Cemetery; 1.8 miles

Background Distance Zone:

- + Russell Cemetery; 4.0 mile
- + Thompson Cemetery; 4.5 miles
- + Unidentified #2 Cemetery; 4.8 miles

Public Lands and Recreational Resources

Heritage Areas

The Project is located within the National Aviation Heritage Area, which encompasses an eight-county area in Ohio. Portions of the heritage area will have visibility of the Project. There are 11 designated heritage sites within the heritage area, none of which are located within the VSA or will have views of the Project.

State Nature Preserves

The Thompson Nature Preserve is a 90-acre state nature preserve located approximately 2.3 miles north from the nearest PV panel component. The Project is anticipated to be visible along portions of the southern periphery of the nature preserve, where there are open views across active agricultural land and roadways. Visibility within the nature preserve is not anticipated due to densely forested conditions that will block views of the Project.

Local Parks and Recreation Areas

The Floyd Finrock City Park is located approximately 1.3 miles north of the Project, on the south side of the Village of Quincy. Portions of the City Park will have limited pockets of visibility across open agricultural land and roadways. Existing vegetation and residences will block views of the Project in portions of the park. Full views of the Project are limited by existing vegetative screening. However, in areas where visibility of the Project is anticipated, proposed mitigation plantings will be relied upon to provide screening and soften the visible effects of the PV arrays.

High-Use Public Areas

State, US, and Interstate Highways

Visibility at roadways throughout the VSA varies considerably based on proximity to the Project, elevation, and roadway orientation. State and US Highways indicated as having potential Project visibility are listed below, along with the distance they travel through the VSA, and their daily usage.

Road	Total Length within the VSA (miles)	Average Vehicles/Day Range on Segments within the VSA
SR 29	13.3	1,211 – 4,160
SR 47*	4.8	1,857 – 2,148
SR 235	12.6	2,052 – 3,350
SR 245	4.9	335
SR 589	4.4	495
SR 706	7.5	329 – 1,300

¹Source: Ohio Department of Transportation, 2018

Cities, Villages, and Unincorporated Areas

Quincy, a village in Logan County, is located approximately 1.2 miles north of the Project. Visibility is anticipated to be limited to areas along the western and south western edges of the Village where there are open views across active agricultural land, local park, roadways, and other cleared areas. Visibility of the Project is not anticipated within the business district or more densely populated portions of the Village. The unincorporated community of Pemberton (1.7 miles) is located in the middle ground distance zone. Visibility of the Project is anticipated to be limited to small pockets

on the southern, eastern, and southeastern edges of the community that have open views across active agricultural land, roadways, and other cleared areas. Degraff (3.9 miles), another village in Logan County, is demonstrated as having visibility of the above-ground electrical components only. At this distance, due to the slender nature and color of these components it will be difficult to distinguish between existing landscape features.

Schools

Fairlawn Local Schools are located in the middle ground distance zone approximately 3.1 miles from the Project. Due to intervening vegetation and structures, as well as distance, visibility will be extremely limited.

2.1.4 Field Verification Methodology

EDR conducted a site visit to the VSA on August 28, 2020. The purpose of this field review was to verify potential visibility of the Project (as suggested by the viewshed analysis), to document the visual character of the various LTs within the VSA, identify the type and extent of existing visual screening, and obtain photographs for subsequent use in the development of visual simulations.

During the site visit, EDR staff members drove public roads and visited public vantage points within the VSA, and obtained photographs from 20 individual viewpoints utilizing a digital SLR camera with lens settings of 29 and 35 mm (equivalent to 45 and 55 mm on a standard 35 mm full frame camera). Viewpoint locations were recorded using hand-held global positioning system (GPS) units, and all field notes, GPS points, focal length parameters, times, and dates were documented electronically. Those viewpoint locations are shown in Appendix A. A photolog, including a representative photograph (toward the Project Area) from each viewpoint, is included in Appendix B.

2.1.5 Field Verification Results

Field verification generally confirmed the results of the DSM viewshed analysis. Open views toward the Project are largely restricted to areas adjacent to the Project Area where public roads are bordered by open agricultural fields which is consistent with the analysis that was completed of the BGSP facility where visibility diminished rapidly beyond 500 feet. These roads include State Route 235, State Route 109, Township Road 3 (Champaign-Logan Road), Township Road 4

(Champaign-Logan-Shelby Road), Snapptown Road, and North Elm Tree Road. State Route 235 runs along the eastern edge of the Project Area from north to south for approximately 1 mile. The Project fence is proposed to be set back a minimum of 25 feet from the edge of the public right-of-way associated with this roadway. Field review confirmed that views of the Project from more distant portions of the VSA (beyond 1 mile) will largely be screened by the mature vegetation associated with the Great Miami River, Mosquito Creek, and Lee Creek. Increased opportunities for views of portions of the Project are available from the west and northwest between the Great Miami River and Mosquito Creek corridors due to the lack of topographical change and limited intervening forest vegetation. Field review of the isolated areas of more distant visibility confirmed that discerning the proposed Project will be a much greater challenge than suggested by the viewshed analysis due to vegetative screening and the effects of distance. During the growing season, visibility of the Project from residences and roadways may also be limited by crop (corn) growth in the foreground agricultural fields. The combination of relatively low panel height, along with existing streamside vegetation, hedgerows, and the atmospheric effects of distance, will limit visibility of the Project from the majority of the VSA, confirming the results of the viewshed analysis.

2.2 Visual Simulations

Visual simulations from four representative locations were produced in order to illustrate the appearance of the Project and to evaluate its potential visual impact on the existing landscape and viewers within the VSA. The selected viewpoints depict typical conditions from public roadways that are adjacent to the Project. Viewpoints 24 and 29 are illustrative of typical views for those traveling by vehicle along the adjacent roadway, while viewpoints 17 and 28 represent views that would be typical to an adjacent residence or a stationary viewer perpendicular to the roadways. The locations of the viewpoints selected for the production of visual simulations are illustrated in Figure 2.4.

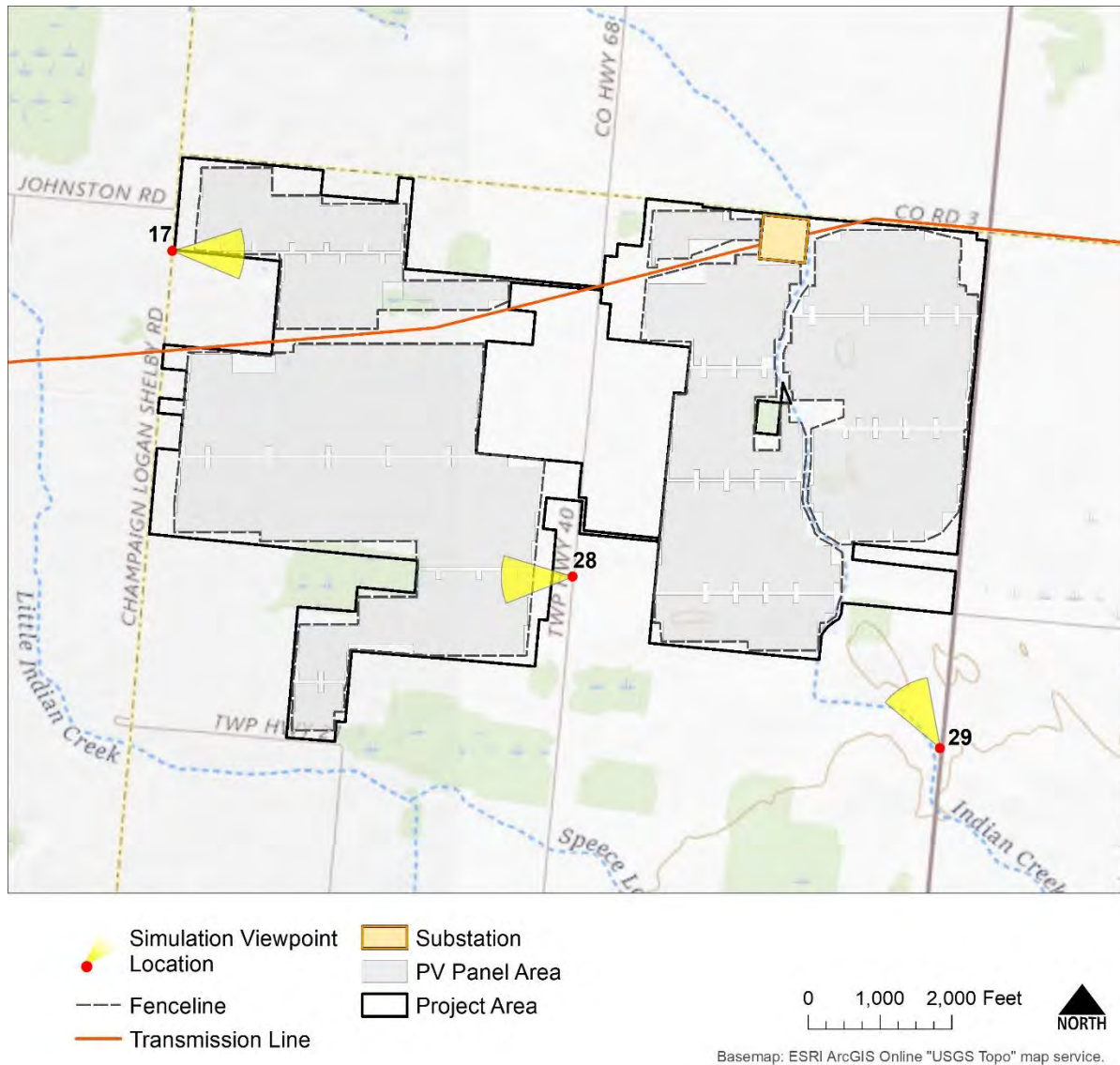


Figure 2.4. Visual Simulation Viewpoint Location Map

2.2.1 Visual Simulation Methodology

Visual simulations of the proposed Project were developed by constructing a three-dimensional (3D) computer model of the proposed PV arrays and full Project layout based on specifications, dimensions, and locations provided by the Applicant. Next, the camera specifications used to take the selected photograph in the field were replicated in the 3D model. This was accomplished by positioning the 3D camera in the same real-world coordinate system as the Project model using GPS coordinates collected at each photo location. The camera was then aligned and the camera's target position (view direction) and adjusted until the modeled 3D elements aligned exactly with the

elements in the photograph. Once this step was complete, the Project was included in the photograph at the correct location, perspective, and scale. At this point, the appropriate sun angle was simulated based on the specific date, time, and location (latitude and longitude) at which the photograph was taken. This information allowed the program to realistically illustrate highlights, shading, and shadows for all Project components shown in the view. All PV panel simulations include single-axis tracker racking oriented on north-south aligned arrays. The PV panels rotate from the east to the west throughout the day following the arc of the sun.

At viewpoints where mitigation plantings are proposed (see Appendix C), vegetative screening consistent with the preliminary landscaping plans for the Project is included in the simulations and represented at a height that would be achieved approximately 3-5 years after installation.

2.2.2 Visual Simulation Results

The visual simulations and a discussion of the potential visual effects associated with the Project are summarized below. Full-sized images are presented in Appendix C.

Viewpoint 17 | County Route 4 (Champaign-Logan-Shelby Road)



Inset 2.1. Left: Existing Conditions. Right: Visual Simulation

Existing Conditions

Viewpoint 17 is located on County Route 4 in the Adams Township, Champaign County, 304.7 feet from the nearest proposed PV panel, in the near-foreground distance. The existing view to the east from this location is dominated by flat, expansive agricultural fields. Within the foreground, the most distinctive feature is the seam where the yellow-green, spiked corn crop meets the softer

foliage of the low-growing soy. Two breaks in the soybean cover within the immediate foreground present a noticeable interruption in the continuity of the agricultural fields. A large deciduous tree marks the center of the field of view, with a few smaller deciduous trees and shrubs scattered nearby. This cluster of trees defines the middle ground, and appears to serve as a juncture point between crop fields; slightly visible to the right of the large tree is a uniform line of corn, which is situated behind the soybean field and extends beyond the frame of view. Manmade structures are visible to the right of the middle ground, including the roofs of several farm structures, high tunnels, and utility lines. A series of deciduous woodlots define the background in this view and some variability of the horizon line. The landscape has a strong rural/working agricultural character. Though lacking in topographic and vegetative variability, the view results in moderate to high scenic quality.

Proposed Project

With the proposed Project in place, the PV array is highly visible in the near foreground. The corn field is now occupied by an array of solar panels bounded by a gravel access drive and enclosed by a perimeter chain link fence and gate. The grounds are further surrounded by a mowed lawn. The deciduous tree cluster in the middle ground and the deciduous woodlots in the background remain visible, which lend some depth to the field of view. The PV array is neat and orderly, and compatible in line, color, and land use connotation with the large transmission line already present in this view. However, the PV panels and the access drive become the dominant focal point and alter the existing character and scenic quality of the view. Exchanging the PV panels for the corn crop replaces the variation in color and foliage texture with a dark, dense crease along the middle ground and reduces the sense of openness in the existing view. While not totally out of place in a working production landscape, the presence of the Project changes the perceived land use focus from agriculture to solar energy production.

Proposed Mitigation



Inset 2.2. Left: Install Mitigation. Right: Mitigation 3-5 Years

Plantings around the perimeter of the array in this view consist of deciduous shrubs and native pollinator species along the groundplane that help to integrate the panels into the landscape. Following 3 to 5 years of growth, the view of the Project is softened by the presence of the mitigation plantings where the continuous line of the PV panel arrays is broken up by the deciduous shrubs along the perimeter. Its working production character is transitioning to a landscape dominated by more natural successional vegetation. The variety of colors and forms provided by the mitigation plantings enhance scenic quality and, along with windows of Project visibility, add elements of interest to the view.

Viewpoint 28 | County Route 40 (Snapptown Road)

Inset 2.4. Left: Existing Conditions. Right: Visual Simulation

Existing Conditions

Viewpoint 28 is located on County Route 40 in Adams Township, Champaign County, approximately 0.1 mile from the nearest proposed PV panel. The existing view to the west features

a flat agricultural field, which proceeds directly away from the viewer toward a large mass of deciduous trees centered within the middle ground. The background features several smaller deciduous trees which break up the view along the horizon line. Only one or two rooflines are visible in the far left of this field of view and are partially screened by vegetation. Other than the bottlebrush-like florets of the roadside vegetation within the immediate foreground, the view is largely comprised of the soft textured foliage of the soybean crop. This view has an open feel and a strong rural/working agricultural character, and the mix of land uses, colors, and textures result in a pleasing composition and moderate to high scenic quality.

Proposed Project

With the proposed Project in place, the PV panels are arranged in a prominent band extending across the middle ground. The panels face away from the viewer, allowing visibility to the ground plane and PV panel supports. A gravel access road bifurcates the expanse of panels toward the right of the frame, and extends in both directions around the perimeter. The PV array is secured by a perimeter chain-link fence. The PV array is neat and orderly, and compatible in line, color, and land use connotation with the existing utility infrastructure already present in this view. However, the PV panels become the dominant focal point, and alter the existing character and scenic quality of the view. Due to their proximity to the viewer, the panels block views of more distant landscape features and reduce the sense of openness in the existing view. While not totally out of place in a working production landscape, the presence of the Project changes the perceived land use focus from agriculture to solar energy production.

Proposed Mitigation



Inset 2.5. Left: Install Mitigation. Right: Mitigation 3-5 Years

Upon installation, perimeter mitigation planting will start to suggest a band of volunteer vegetation along the foreground of the PV panels that creates periodic breaks in the horizontal line of the fencing and panels. After 3 to 5 years of growth, portions of the array are still visible, but now appear to be integrated into the vegetation that occurs in front of them. The view has lost some of its openness, although the portion of the mitigation planting that is located directly in front of the large mass of deciduous trees centered within the middle ground helps this portion of the array to appear to blend into the background. Its working production character is transitioning to a landscape dominated by more natural successional vegetation. The variety of colors and forms provided by the mitigation plantings enhance scenic quality and, along with windows of Project visibility, add elements of interest to the view.

Viewpoint 29 | State Route 235



Inset 2.6. Left: Existing Conditions. Right: Visual Simulation

Existing Conditions

Viewpoint 29 is located on State Route 235 in Adams Township, Champaign County, approximately 0.4 miles from the nearest proposed PV panel. The existing view to the north-northwest features a generally flat agricultural field, which rises slightly upward as the field extends away from the viewer toward a large mass of deciduous trees centered within the middle ground. The middle ground gently undulates as it extends into the background, which is nearly imperceptible through the low, soft-textured soy fields. The background features several small deciduous trees which provide a small degree of variation in the horizon line. Manmade structures such as silos and utility lines are visible on the outermost edges of the frame, and contrast against the backdrop of dark deciduous trees. The view is largely comprised of the soft textured foliage of the soybean crop,

except where interrupted by florets of roadside vegetation and a glimpse of an adjacent cornfield at the left of the foreground. This view has an open feel and a strong rural/working agricultural character, and the mix of land uses, colors, and textures result in a pleasing composition and moderate to high scenic quality.

Proposed Project

With the proposed Project in place, a portion of the background plane segmenting the agricultural fields from the deciduous tree line in the background is now occupied by PV panels. The panels are minimally visible in this placement, although the gently undulating landform is more discernible through the layout of the structures. Towards the left of the frame, the structures form a narrow band along the midline and obscure the visible silos. The existing view is largely unaffected by the presence and layout of the panels, and the gently rolling field and large mass in the center of the frame remain characteristic of this view.

Summary

In summary, in locations where panels are directly adjacent to roads and residences, it is likely that the proposed PV arrays could have an adverse effect on the scenic quality or existing landscape character. However, as demonstrated in the simulations, installation of mitigation plantings along the perimeter of the PV arrays lessens the visual impact of the Project in these near-foreground views. Upon 3-5 years the plantings begin to provide significant screening and break up the horizontal lines created by the PV arrays and fence line. This helps the Project blend with the new and existing vegetation rather than stand out as a discordant element in the landscape.

3.0 CONCLUSIONS

3.1 Visual Resource Assessment Summary

Based on the analyses described above, the following conclusions can be drawn regarding the visibility and visual effect of the proposed Clearview Solar Project.

The PV panel viewshed analysis indicates that the proposed solar arrays will be screened from view in approximately 82.8% of the 5-mile radius VSA. Visibility of significant portions of the Project is concentrated within the Project Area itself and the open fields located immediately adjacent to the Project. PV panel visibility is highest within the near-foreground (up to 0.5 mile) and foreground (up to 1.5 miles) distance zones. At middle ground distances, potential visibility extends out to 4 miles in a limited fashion to the west and northwest (between the Great Miami River and Mosquito Creek corridors). There are limited corridors where potential visibility extends out to the 5 mile VSA limit.

PV panel viewshed analysis of the 193 identified VSRs within the VSA indicates that 38 (20%) have potential PV panel visibility. Of the 38 resources with potential PV panel visibility, 37 (97%) are located beyond of the near-foreground (i.e., >0.5 mile). PV panel viewshed results suggest that areas of potential visibility from VSRs in the middle ground and background will generally be small and/or include only a limited number of PV panel arrays.

The Project Substation viewshed analysis indicates that the tallest structures associated with these Project components will have potential visibility from 10.2% of the VSA. Actual visibility of these components from middle ground and background locations will be diminished due to the narrow profile and neutral color of these components, which will blend with the background vegetation and sky.

Field review generally confirmed the results of the viewshed analysis and further suggests that visibility of the Project will be largely restricted to areas within the near-foreground distance zone. Beyond 0.5 mile, screening provided by wooded stream corridors, structures, and woodlots, in combination with the low height of the solar panels, will significantly limit Project visibility.

As illustrated in the visual simulations, the Project will result in varying levels of visual impact when viewed from adjacent roads. This impact may be somewhat mitigated by the presence of seasonal

crops in actively farmed fields, but during the rest of the year, the Project will introduce substantial areas of utilitarian structures that will alter the scenic quality and/or existing agricultural character of the landscape. However, as demonstrated in Viewpoint 29 (to the right and left of the image), this visibility and potential visual impact diminishes rapidly as the Project is viewed from greater distances. Consequently, it is anticipated that impacts will be largely limited to areas directly adjacent to the Project.

As discussed in Section 2.2.2 of this VRA, the introduction of mitigation plantings along the perimeter of the PV arrays lessens the visual impact of the Project when viewed at near-foreground distances. The plantings provide significant screening and serve to break up the horizontal lines created by the PV panels and fence line. This helps the Project blend with the new and existing vegetation rather than stand out as a discordant element of the landscape. Vegetative mitigation will minimize the visual impact on adjacent roadways and residences, and will provide aesthetic benefits.

3.2 Mitigation

It is our understanding that the Applicant has developed a preliminary landscaping plan that envisions perimeter plantings intended to screen or soften views of the solar arrays. This preliminary plan is based on the philosophy that 100% opaque screening is not necessary or practicable, and that introduction of native materials in appropriate mixes and quantities will better mimic the existing screening found on and around the Project Area. The basic approach adopted in this preliminary landscape plan was used to create the mitigation depicted in the above visual simulations. The preliminary landscaping plan will soften the horizontal line created by the installation of the PV panels and aid in blending the Project into the surrounding landscape. Although the mitigation represented in the visual simulations is conceptual at this time, the design approach and goals for the visual mitigation will not change, even if the preliminary landscaping plan evolves and regardless of whether the specific plant material in certain locations is adjusted.

4.0 REFERENCES

Editorial Staff, State History Publications, LLC. *Ohio Historic Places Dictionary*. Vol. 2, North American Book Dist LLC, 2008.

Esri. 2008. *StreetMap 2008 North America [shapefile]*. (Accessed April 2020).

Esri. 2013. *World Topographic Map [server]*. Updated July 2020. (Accessed April 2020).

Fulton County Auditor's Office. 2019. *Parcels [shapefile]*. (Accessed July 2019).

Ohio Department of Natural Resources (ODNR). 2014. *ODNR Points of Interest [shapefile]*. Available at: <https://apps.ohiodnr.gov/gims/response.asp?county=Statewide&category=Select> (Accessed April 2020).

ODNR. 2015. *Urbanized Areas of Ohio [shapefile]*. Division of Oil and Gas Resources Management. Available at: <https://apps.ohiodnr.gov/gims/response.asp?county=Statewide&category=Select> (Accessed April 2020).

ODNR. 2016. *ODNR Lands 2016 [shapefile]*. Office of Information Technology. Available at: <https://apps.ohiodnr.gov/gims/response.asp?county=Statewide&category=Select> (Accessed April 2020).

Ohio Department of Transportation. N.d. *Road Inventory [shapefile]*. Available at: <https://gis.dot.state.oh.us/tims/Data/Download> (Accessed December 2019).

Ohio Department of Transportation. 2018. *Traffic Count Stations [shapefile]*. Available at: <https://gis.dot.state.oh.us/tims/Data/Download> (Accessed September 13, 2020).

Ohio Geographically Referenced Information Program (OGRIP). *Fulton County OSIP III 2018, 6-inch Imagery "ful_2018_6in" [server]*. Available at <https://geo1.oit.ohio.gov/arcgis/services>. (Accessed April 2020).

Ohio History Connection. 2020. *Online Mapping System*. Available at: <https://www.ohiohistory.org/preserve/state-historic-preservation-office/mapping> (Accessed April 2020, 2018).

Smardon, R.C., J.F. Palmer, A. Knopf, K. Grinde, J.E. Henderson, and L.D. Peyman-Dove. 1988. *Visual Resources Assessment Procedure for U.S. Army Corps of Engineers*. Instruction Report EL-88-1. Department of the Army, U.S. Army Corps of Engineers. Washington, D.C.

United States Department of Agricultural (USDA), National Forest Service. 1995. *Landscape Aesthetics, A Handbook for Scenery Management*. Agricultural Handbook 701. Washington D.C.

United States Department of the Interior, Bureau of Land Management. 1980. *Visual Resource Management Program*. U.S. Government Printing Office. 1980. 0-302-993. Washington, D.C.

United States Department of Transportation, Federal Highway Administration. 1981. *Visual Impact Assessment for Highway Projects*. Office of Environmental Policy. Washington, D.C.

Appendix A

Viewpoint Location Map

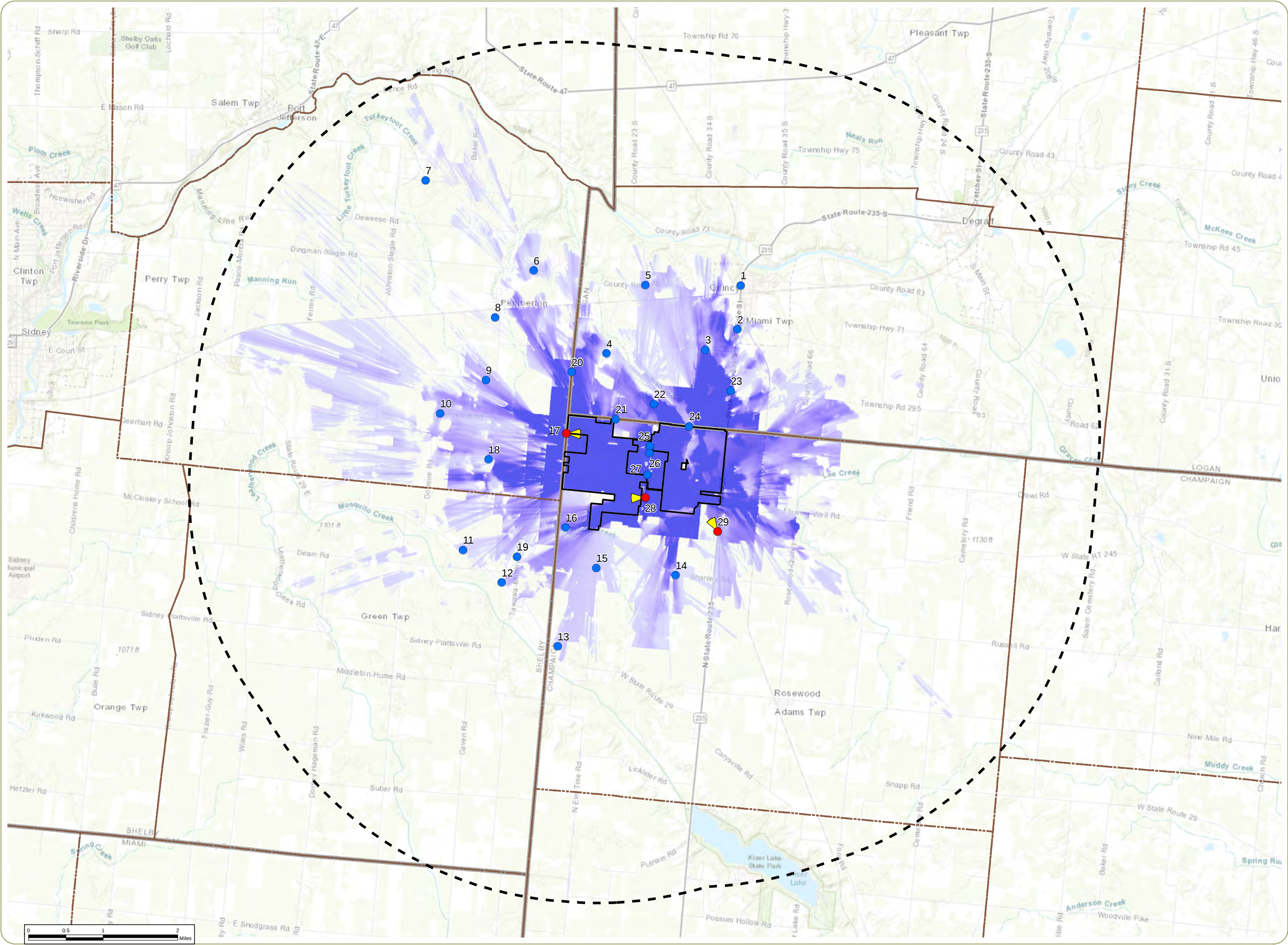
Clearview Solar Project

Adams Township,
Champaign County,
Ohio

Visual Resource Assessment Appendix A: Viewpoint Locations

- Selected Viewpoint Location
- Viewpoint Location
- Viewpoint COV
- PV Panel Viewshed Results
 - Greater Number of PV Panels Visible
 - Fewer Number of PV Panels Visible
- Project Area
- Visual Study Area
- Township Boundary
- County Boundary

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. 2. This map was generated in ArcMap on December 10, 2020. 3. This is a color graphic. Reproduction in grayscale



Appendix B

Viewpoint Photolog



Viewpoint 1

40.29906260° N, 83.97152025° W

VP 1 | View looking south from State Route 235 (Carlisle Street) in the Township of Miami, Logan County. Located in the Village of Quincy VSR, 2 miles from the nearest proposed PV panel, in the middle ground distance zone.



Viewpoint 2

40.29053902° N, 83.97218627° W

VP 2 | View looking southwest from the intersection of State Route 235 (Carlisle Street) and Don Hann Drive in the Township of Miami, Logan County. Located in the Floyd Finrock Park VSR, 1.4 miles from the nearest proposed PV panel, in the foreground distance zone.



Viewpoint 3

40.28646857° N, 83.98024268° W

VP 3 | View looking south-southwest from State Route 706 in the Township of Miami, Logan County. Located in the House on SR 706 VSR, 1.1 miles from the nearest proposed PV panel, in the foreground distance zone.



Viewpoint 4

40.28542976° N, 84.00532462° W

VP 4 | View looking south from State Route 706 in the Township of Miami, Logan County. Located in the SR 706 VSR, 0.9 miles from the nearest proposed PV panel, in the foreround distance zone.



Viewpoint 5

40.29882674° N, 83.99572279° W

VP 5 | View looking south from County Route 70 in the Township of Miami, Logan County. Located in the Thompson Nature Preserve VSR, 1.9 miles from the nearest proposed PV panel, in the middle ground distance zone.



Viewpoint 6

40.30129157° N, 84.02410360° W

VP 6 | View looking southeast from County Route 18 in the Township of Perry, Shelby County. Located in the CR 18 VSR, 2 miles from the nearest proposed PV panel, in the middle ground distance zone.

Clearview Solar Project

Adams Township, Champaign County, Ohio

Appendix B - Viewpoint Photolog

Sheet 1 of 5



Viewpoint 7

40.31843612° N, 84.05193367° W

VP 7 | View looking southeast from State Route 146 (Thompson Road) in the Township of Perry, Shelby County. Located in the Lawrence Barhorst Farm; Elton Rd VSR,

3.7 miles from the nearest proposed PV panel, in the middle ground distance zone.



Viewpoint 8

40.29204533° N, 84.03369908° W

VP 8 | View looking southeast from corner of Main St and Leonard St in the Township of Perry, Shelby County. Located in the Pemberton United Methodist Church; Cor Main St & Leonard St VSR,

1.7 miles from the nearest proposed PV panel, in the middle ground distance zone.



Viewpoint 9

40.27986553° N, 84.03577383° W

VP 9 | View looking southeast from State Route 706 in the Township of Perry, Shelby County. Located in the SR 706 VSR,

1.3 miles from the nearest proposed PV panel, in the foreground distance zone.



Viewpoint 10

40.27320126° N, 84.04717833° W

VP 10 | View looking east from County Route 145 in the Township of Perry, Shelby County. Located in the Sturms Cemetery VSR,

1.8 miles from the nearest proposed PV panel, in the middle ground distance zone.



Viewpoint 11

40.24677432° N, 84.04079400° W

VP 11 | View looking northeast from State Route 29 in the Township of Green, Shelby County. Located in the SR 29 VSR,

1.7 miles from the nearest proposed PV panel, in the middle ground distance zone.



Viewpoint 12

40.24057375° N, 84.03085110° W

VP 12 | View looking northeast from State Route 29 in the Township of Green, Shelby County. Located in the Tawawa VSR,

1.4 miles from the nearest proposed PV panel, in the foreground distance zone.

Clearview Solar Project

Adams Township, Champaign County, Ohio

Appendix B - Viewpoint Photolog

Sheet 2 of 5



Viewpoint 13

40.22838767° N, 84.01639311° W

VP 13 | View looking north-northeast from State Route 29 in the Township of Adams, Champaign County. Located in the SR 29 VSR, 1.7 miles from the nearest proposed PV panel, in the middle ground distance zone.



Viewpoint 14

40.24257557° N, 83.98678900° W

VP 14 | View looking north-northwest from County Route 32 (Shanley Road) in the Township of Adams, Champaign County. Located in the CR 32 VSR, 0.9 miles from the nearest proposed PV panel, in the foreground distance zone.



Viewpoint 15

40.24372562° N, 84.00692851° W

VP 15 | View looking north-northwest from the intersection of County Route 32 (Shanley Street) and County Route 21 (Elm Tree Road North) in the Township of Adams, Champaign County. Located in the Shanley & N Elm Tree VSR, 0.5 miles from the nearest proposed PV panel, in the near-foreground distance zone.



Viewpoint 16

40.25144780° N, 84.01487769° W

VP 16 | View looking east-northeast from County Route 21 (N Elm Tree Road) in the Township of Adams, Champaign County. Located in the National Aviation Heritage Area VSR, 0.3 miles from the nearest proposed PV panel, in the near-foreground distance zone.



Viewpoint 17

40.26829840° N, 84.01527235° W

VP 17 | View looking east from County Route 4 (Champaign Logan-Shelby Road) in the Township of Perry, Shelby County. Located in the National Aviation Heritage Area VSR, 1.3 miles from the nearest proposed PV panel, in the near-foreground distance zone.



Viewpoint 18

40.26444681° N, 84.03473248° W

VP 18 | View looking east from County Route 19 (Tawawa Maplewood Road) in the Township of Perry, Shelby County. Located in the National Aviation Heritage Area VSR, 1.1 miles from the nearest proposed PV panel, in the foreground distance zone.

Clearview Solar Project

Adams Township, Champaign County, Ohio

Appendix B - Viewpoint Photolog

Sheet 3 of 5



Viewpoint 19

40.24560812° N, 84.02708585° W

VP 19 | View looking northeast from County Route 19 (Tawawa Maplewood Road) in the Township of Green, Shelby County. Located in the Nicholas Dormire Farm; Tawawa-Maplewood Rd VSR, 1.1 miles from the nearest proposed PV panel, in the foreground distance zone.



Viewpoint 20

40.28170303° N, 84.01403859° W

VP 20 | View looking southeast from County Route 4 (Logan Shelby Road) in the Township of Perry, Shelby County. Located in the CR 4 VSR, 0.6 miles from the nearest proposed PV panel, in the foreground distance zone.



Viewpoint 21

40.27269028° N, 84.00267489° W

VP 21 | View looking southwest from County Route 3 (Champaign Logan Road) in the Township of Adams, Champaign County. Located in the Champaign-Logan Rd VSR, 446.5 feet from the nearest proposed PV panel, in the near-foreround distance zone.



Viewpoint 22

40.27571611° N, 83.99298888° W

VP 22 | View looking southeast from County Route 68 (C 68) in the Township of Miami, Logan County. Located in the CR 68 VSR, 0.3 miles from the nearest proposed PV panel, in the near-foreround distance zone.



Viewpoint 23

40.27856953° N, 83.97357850° W

VP 23 | View looking south-southwest from State Route 235 in the Township of Miami, Logan County. Located in the SR 235 VSR, 0.6 miles from the nearest proposed PV panel, in the foreground distance zone.



Viewpoint 24

40.27156533° N, 83.99407136° W

VP 24 | View looking southwest from County Route 3 (Champaign Logan Road) in the Township of Miami, Logan County. Located in the CR 3 VSR, 27.1 feet from the nearest proposed substation, in the near-foreround distance zone.

Clearview Solar Project

Adams Township, Champaign County, Ohio

Appendix B - Viewpoint Photolog

Sheet 4 of 5



40.26759210° N, 83.99383926° W

VP 25 | View looking east from County Route 40 (Snapptown Road) in the Township of Adams, Champaign County. Located in the National Aviation Heritage Area VSR, 0.1 miles from the nearest proposed PV panel, in the near-foreround distance zone.



40.26623898° N, 83.99396536° W

VP 26 | View looking northeast from County Route 40 (Snapptown Road) in the Township of Adams, Champaign County. Located in the National Aviation Heritage Area VSR, 0.1 miles from the nearest proposed PV panel, in the near-foreround distance zone.



40.26197010° N, 83.99437946° W

VP 27 | View looking west-southwest from County Route 40 (Snapptown Road) in the Township of Adams, Champaign County. Located in the National Aviation Heritage Area VSR, 0.1 miles from the nearest proposed PV panel, in the near-foreround distance zone.



40.25753693° N, 83.99482209° W

VP 28 | View looking west from County Route 40 (Snapptown Road) in the Township of Adams, Champaign County. Located in the National Aviation Heritage Area VSR, 0.1 miles from the nearest proposed PV panel, in the near-foreround distance zone.



40.25123591° N, 83.97634507° W

VP 29 | View looking north-northwest from State Route 235 in the Township of Adams, Champaign County. Located in the SR 235 VSR, 0.4 miles from the nearest proposed PV panel, in the near-foreround distance zone.

Clearview Solar Project

Adams Township, Champaign County, Ohio

Appendix B - Viewpoint Photolog

Sheet 5 of 5

Appendix C

Visual Simulations

Viewpoint 17

Viewpoint Information

County: Shelby
Town: Perry
Location: County Route 4 (Champaign Logan-Shelby Road)
Latitude, Longitude: 40.26830° N 84.01527° W
Direction of View: East
Distance to Project: 304.7 feet
Distance Zone: Near-Foreround

Environmental Data

Date Taken: 08/27/2020
Time: 11:06 AM
Temperature: 79 °F
Humidity: 82%
Visibility: >10 miles
Conditions Observed: Cloudy

Camera Information

Camera: NIKON D7200
Resolution: 300dpi
Lens Focal Length: 32 mm
Camera Elevation: 1083.0 feet

Visual Resources

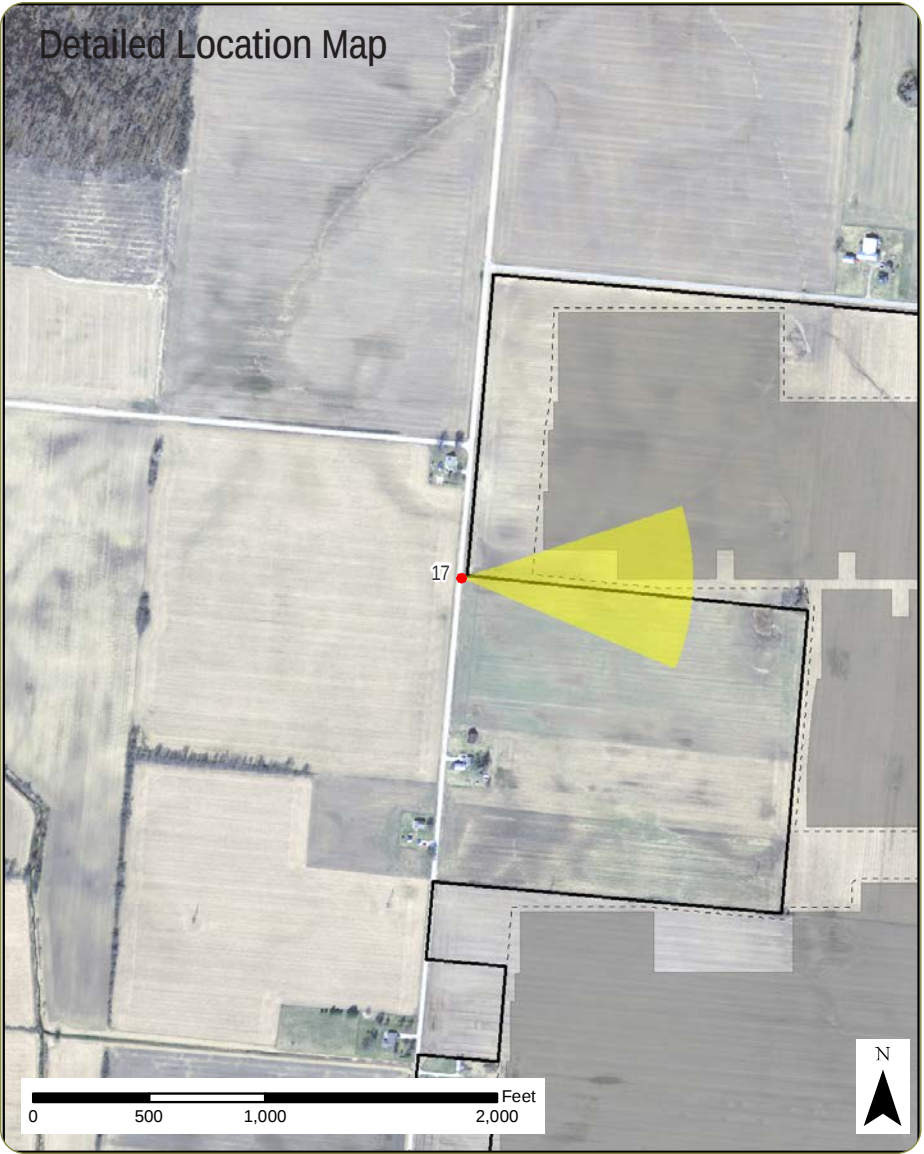
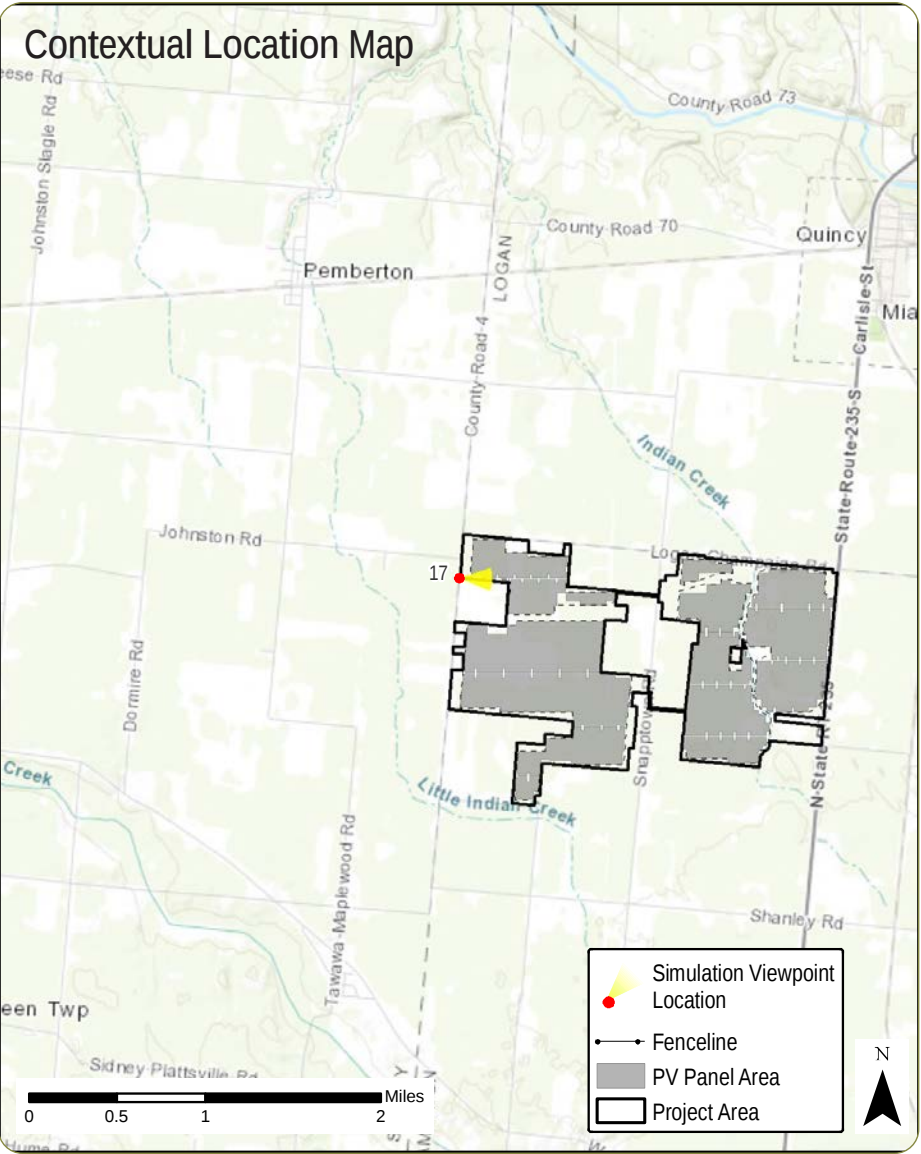
User Group: Local Residents
Aesthetic Resource: National Aviation Heritage Area

Project Information:

Racking Type: Single-Axis "Tracking"
Max Panel Height From Ground: 15 feet

Viewing Instructions:

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance 23 inches.



Context Photo: View to the North



Context Photo: View to the Northeast



Simulation Photo: View to the East



Context Photo: View to the Southeast

Clearview Solar Project

Adams Township, Champaign County, Ohio

Viewpoint 17 | Context Sheet - County Route 4 (Champaign Logan-Shelby Road) in the Town of Perry, Shelby County

Appendix C: Sheet 1 of 13

Existing Conditions



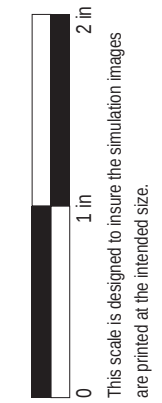
Simulation



Install Mitigation



5-7 Year Mitigation



Viewpoint 28

Viewpoint Information

County: Champaign
Town: Adams
Location: County Route 40 (Snapptown Road)
Latitude, Longitude: 40.25754° N, 83.99482° W
Direction of View: West
Distance to Project: 0.1 miles
Distance Zone: Near-Foreround

Environmental Data

Date Taken: 08/27/2020
Time: 2:15 PM
Temperature: 86°F
Humidity: 67%
Visibility: >10 miles
Conditions Observed: Thunder in the Vicinity

Visual Resources

User Group: Local Residents
Aesthetic Resource: National Aviation Heritage Area

Camera Information

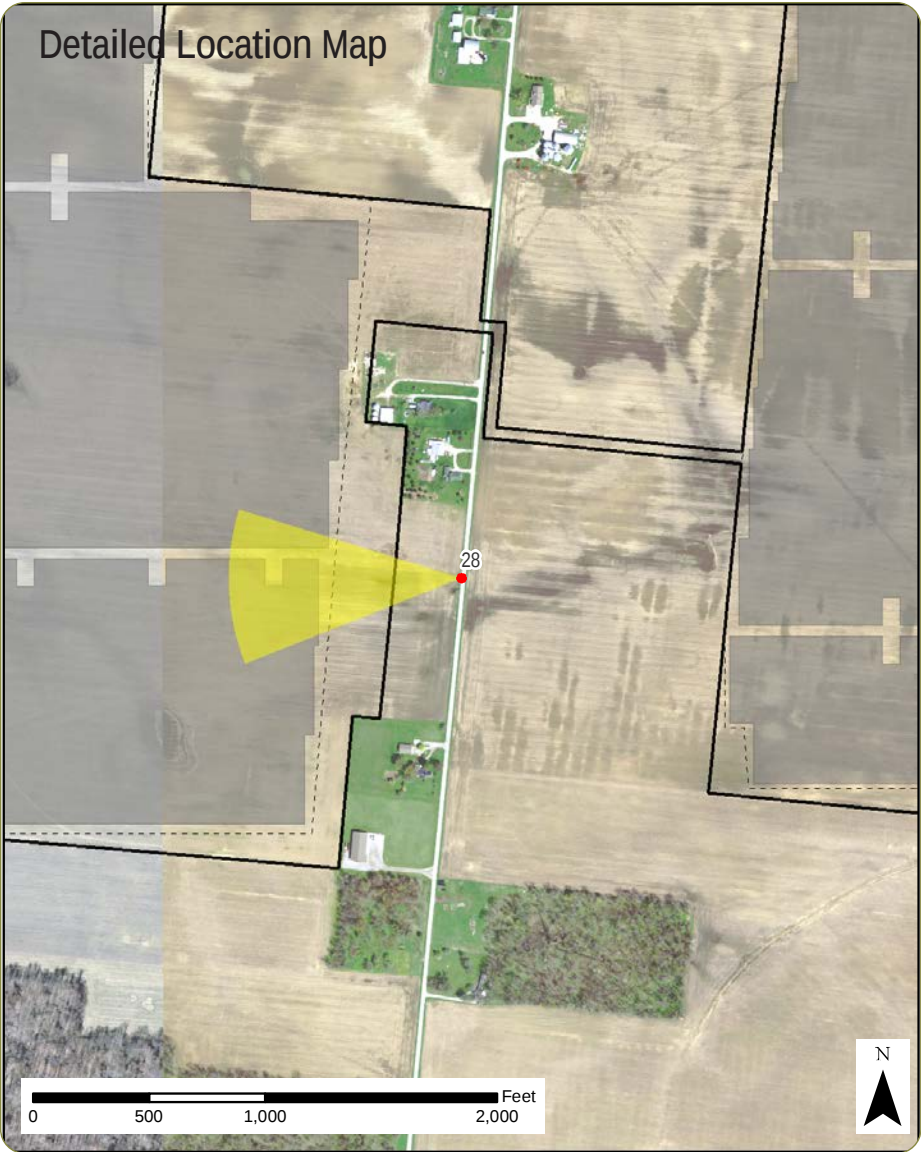
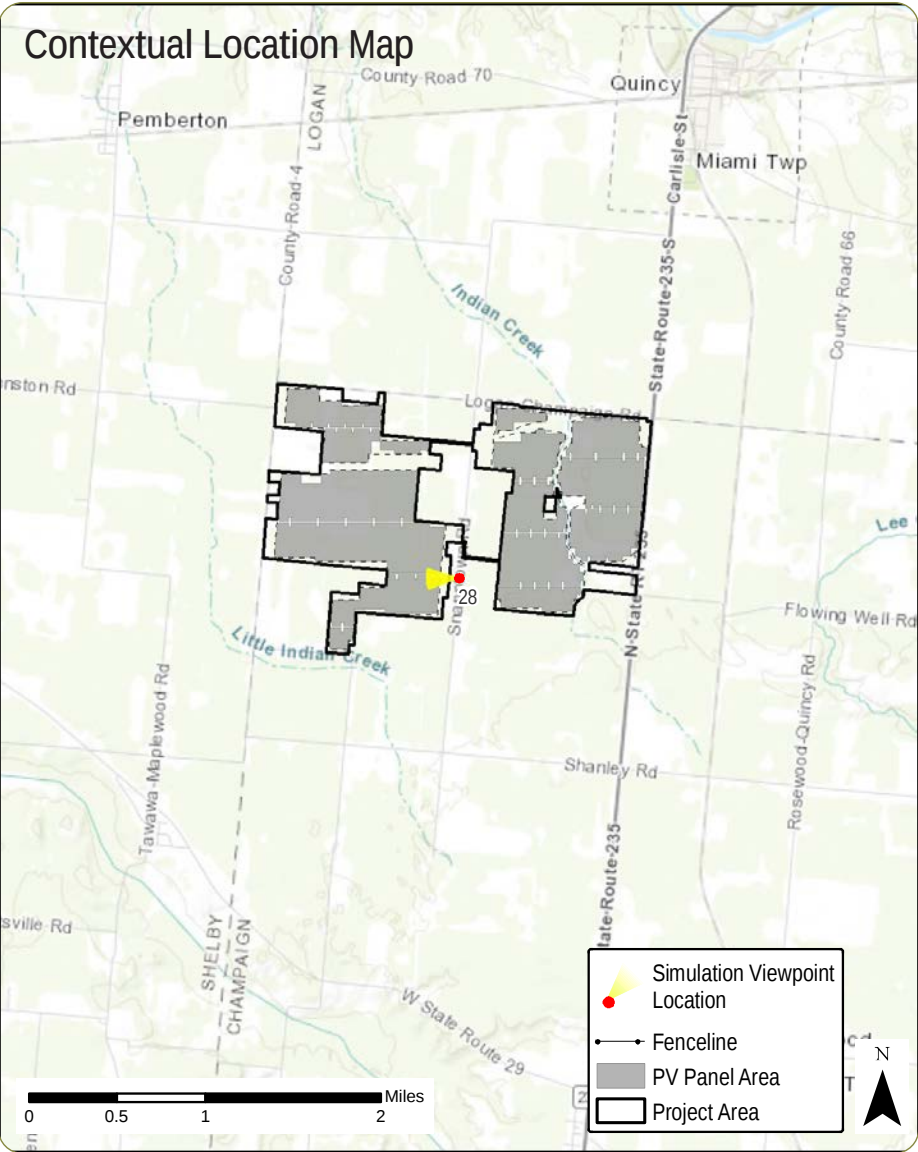
Camera: NIKON D7200
Resolution: 300dpi
Lens Focal Length: 34 mm
Camera Elevation: 1091.9 feet

Project Information:

Racking Type: Single-Axis "Tracking"
Max Panel Height From Ground: 15 feet

Viewing Instructions:

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance 23 inches.



Context Photo: View to the South



Context Photo: View to the Southwest



Simulation Photo: View to the West



Context Photo: View to the Northwest

Clearview Solar Project

Adams Township, Champaign County, Ohio

Viewpoint 28 | Cointext Sheet - County Route 40 (Snapptown Road) in the Town of Adams, Champaign County

Appendix C: Sheet 6 of 13

Existing Conditions



0 1 in 2 in
This scale is designed to insure the simulation images
are printed at the intended size.

Simulation



Install Mitigation



5-7 Year Mitigation



Viewpoint 29

Viewpoint Information

County: Champaign
Town: Adams
Location: State Route 235
Latitude, Longitude: 40.25124° N, 83.97635° W
Direction of View: North-Northwest
Distance to Project: 0.4 miles
Distance Zone: Near-Foreround

Visual Resources

User Group: Local Residents, Through Traveler/Commuter
Aesthetic Resource: SR 235

Environmental Data

Date Taken: 08/27/2020
Time: 2:25 PM
Temperature: 86°F
Humidity: 67%
Visibility: > 10 miles
Conditions Observed: Mostly Cloudy

Camera Information

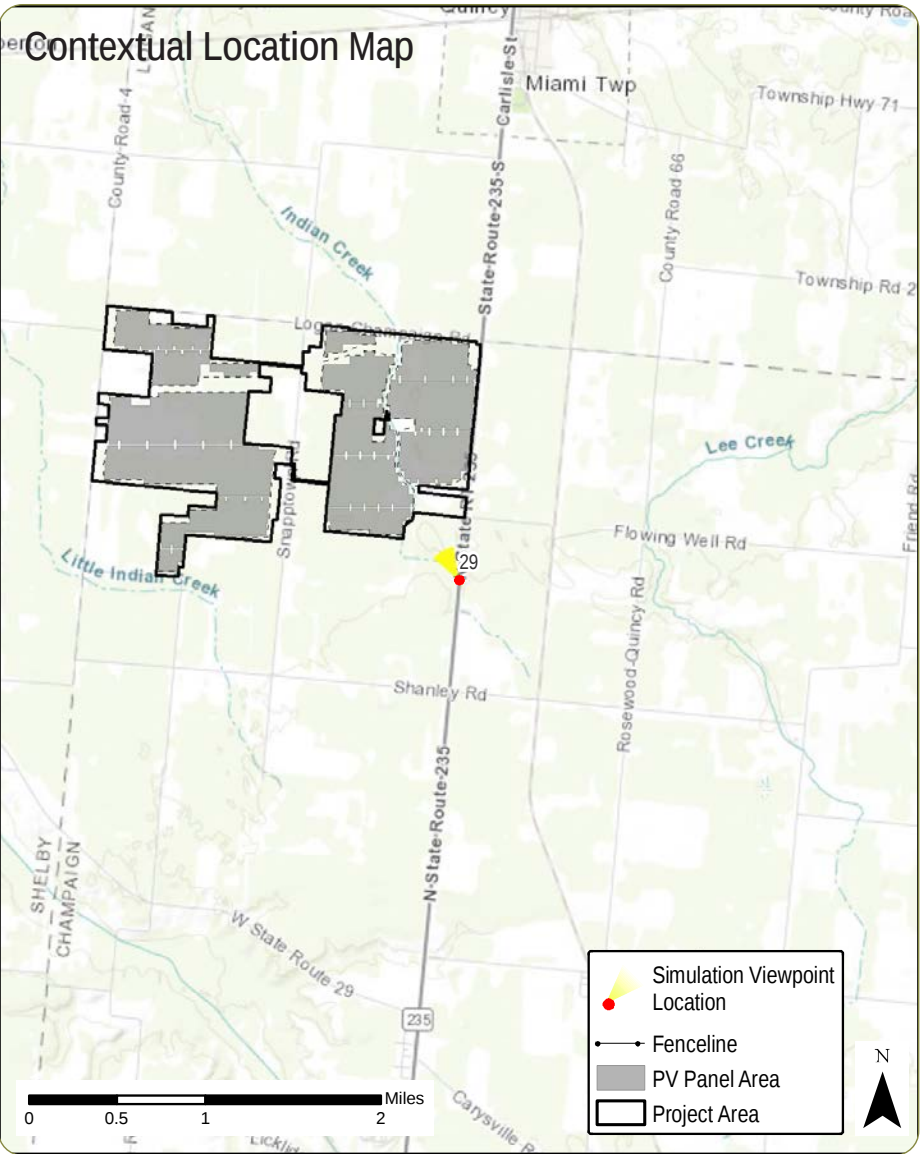
Camera: NIKON D7200
Resolution: 300dpi
Lens Focal Length: 32 mm
Camera Elevation: 1103.5 feet

Project Information:

Racking Type: Single-Axis "Tracking" Max
Panel Height From Ground: 15 feet

Viewing Instructions:

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance 23 inches.



Context Photo: View to the Southwest



Context Photo: View to the West-Northwest



Simulation Photo: View to the North-Northwest



Context Photo: View to the North

Clearview Solar Project

Adams Township, Champaign County, Ohio

Viewpoint 29 | Context Sheet - State Route 235 in the Town of Adams, Champaign County

Appendix C: Sheet 11 of 13

Existing Conditions



This scale is designed to insure the simulation images are printed at the intended size.

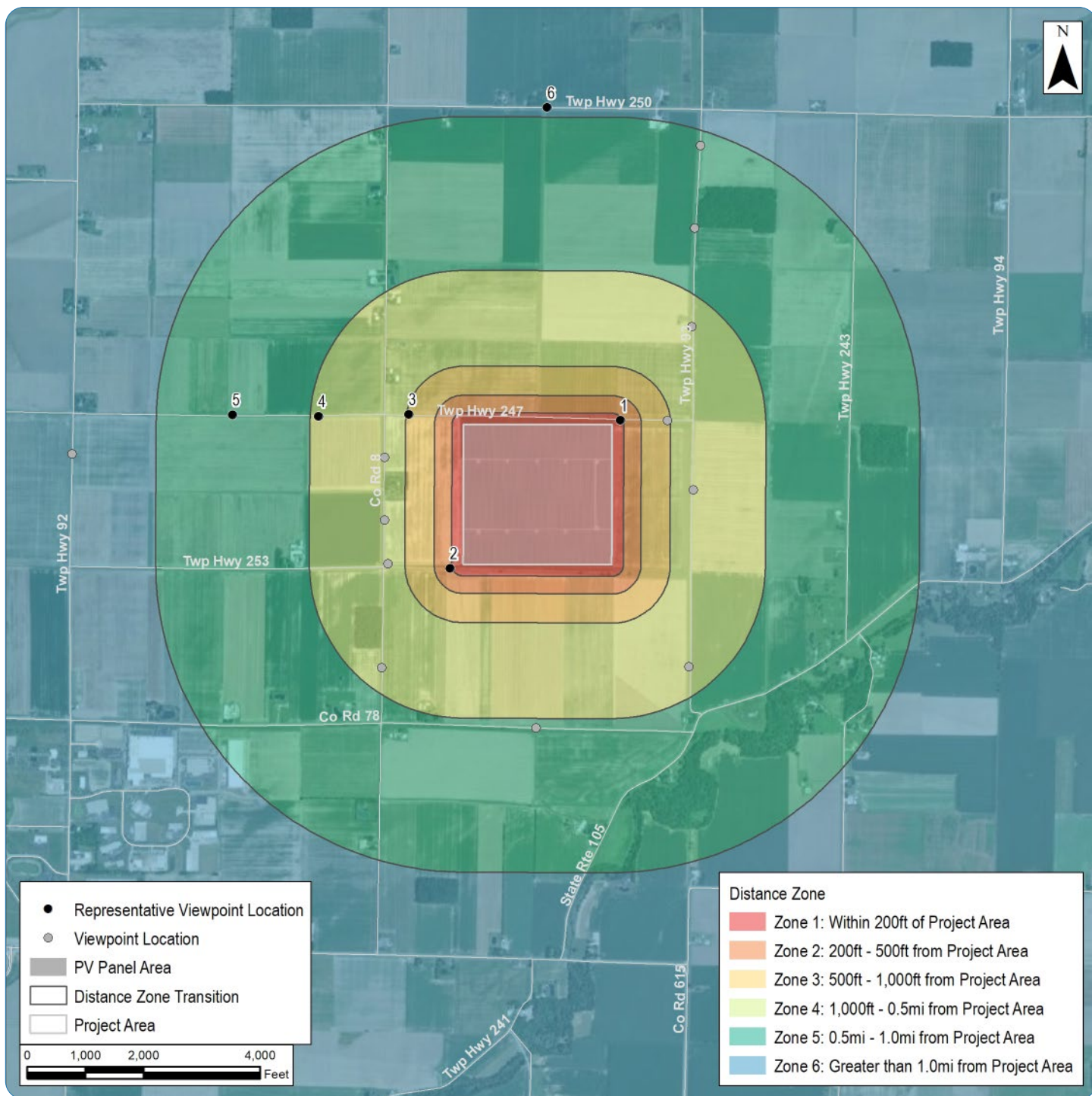
Simulation



This scale is designed to insure the simulation images are printed at the intended size.

Appendix D

Landscape Distance Zone Analysis



Bowling Green - Landscape Distance Zone Map

The map above illustrates Visual Effect Distance Zones for the Bowling Green Solar Project, located in Center Township, OH. The Visual Effect Distance Zones represent areas where a similar visual effect is likely to occur based upon field observation.



Zone 1 | Photographed 155 feet from the Project

Project is the primary focus of visual attention due to its size/form, occupies most of the visual field, and may strongly effect views of other landscape elements.



Zone 2 | Photographed 255 feet from the Project

Project (including above ground connection line) is a major focus of visual attention, potentially occupies most of the visual field, and may interfere with views of nearby landscape elements.

Clearview Solar Project

Adams Township, Champaign County, Ohio

Appendix D - Landscape Distance Zone Analysis | Bowling Green

Sheet 2 of 8



Zone 3 | Photographed 960 feet from the Project

Project has sufficient size and contrast to compete with other landscape elements but does not strongly attract visual attention or occupy most of the field of view.



Zone 4 | Photographed 0.48 miles from the Project

Project can be detected by most observers but does not attract visual attention, compete with other landscape elements, or occupy most of the field of view.

Clearview Solar Project

Adams Township, Champaign County, Ohio

Appendix D - Landscape Distance Zone Analysis | Bowling Green

Sheet 3 of 8



Zone 5 | Photographed 0.75 miles from the Project

Project is very small or faint in views and may not be detected by most observers without actively looking for the Project.



Zone 6 | Photographed 1.04 miles from the Project

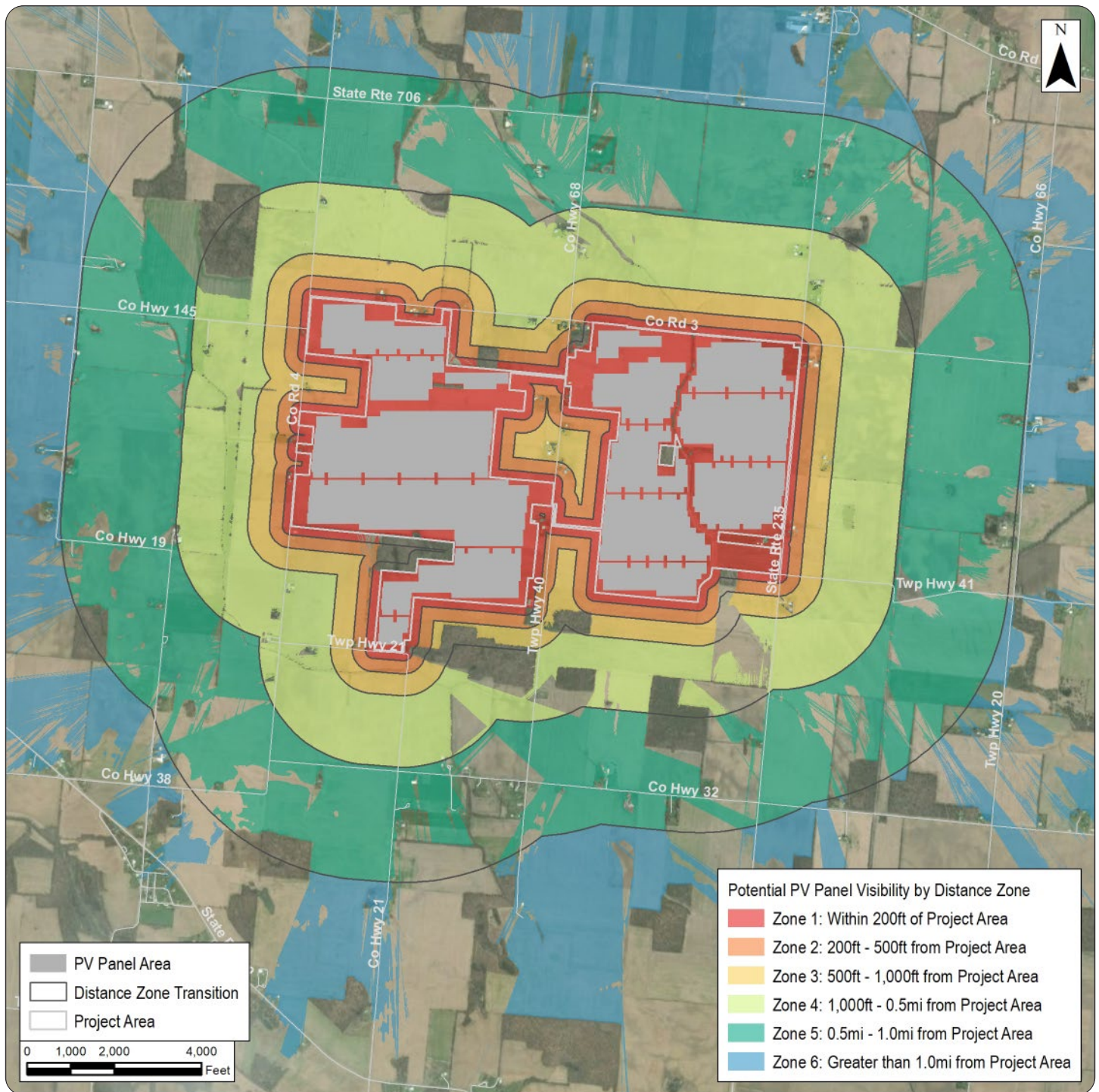
Project appears so small that it is nearly imperceptible to most viewers, and can only be detected after looking closely for an extended period of time. Agricultural crop and even low heights (soy bean) screen view of the Project.

Clearview Solar Project

Adams Township, Champaign County, Ohio

Appendix D - Landscape Distance Zone Analysis | Bowling Green

Sheet 4 of 8



Clearview - Landscape Distance Zone Map

The map above illustrates Visual Effect Distance Zones in areas of potential PV panel visibility for the Clearview Solar Project. The Visual Effect Distance Zones represent areas where a similar visual effect is likely to occur based upon field observation of the Bowling Green Solar Project. The selected photographs of the Bowling Green Project to the right provide a representation of the potential visual effect that will occur as a result of the Clearview Solar Project from each of the Distance Zones.

Clearview Solar Project

Adams Township, Champaign County, Ohio

Appendix D - Landscape Distance Zone Analysis | Clearview

Sheet 5 of 8



Zone 1 | Representative Photographed 155 feet from the Project

Project is the primary focus of visual attention due to its size/form, occupies most of the visual field, and may strongly effect views of other landscape elements.



Zone 2 | Representative Photographed 255 feet from the Project

Project (including above ground connection line) is a major focus of visual attention, potentially occupies most of the visual field, and may interfere with views of nearby landscape elements.

Clearview Solar Project

Adams Township, Champaign County, Ohio

Appendix D - Landscape Distance Zone Analysis | Clearview

Sheet 6 of 8



Zone 3 | Representative Photographed 960 feet from the Project

Project has sufficient size and contrast to compete with other landscape elements but does not strongly attract visual attention or occupy most of the field of view.



Zone 4 | Representative Photographed 0.48 miles from the Project

Project can be detected by most observers but does not attract visual attention, compete with other landscape elements, or occupy most of the field of view.

Clearview Solar Project

Adams Township, Champaign County, Ohio

Appendix D - Landscape Distance Zone Analysis | Clearview

Sheet 7 of 8



Zone 5 | Representative Photographed 0.75 miles from the Project

Project is very small or faint in views and may not be detected by most observers without actively looking for the Project.



Zone 6 | Representative Photographed 1.04 miles from the Project

Project appears so small that it is nearly imperceptible to most viewers, and can only be detected after looking closely for an extended period of time. Agricultural crop and even low heights (soy bean) screen view of the Project.

Clearview Solar Project

Adams Township, Champaign County, Ohio

Appendix D - Landscape Distance Zone Analysis | Clearview

Sheet 8 of 8

Appendix E

Visually Sensitive Resources Analysis

Visually Sensitive Resource	Location		VP Number ¹	Distance ²		Distance Zone	Project Visibility (Viewshed Results)		
	Town	County		Miles from Nearest PV Panel Area	Substation	Near-Foreground Foreground Midground Background	+Visible	- Not Visible	+/- Partially Visible
							PV Panel DEM Viewshed (Topography Only)	PV Panel DSM Viewshed (Topography, Structures, and Vegetation)	Substation DSM Viewshed (Topography, Structures, and Vegetation)
Properties of Historic Significance									
National/State Historic Landmarks									
National/State Historic Sites									
Sites Listed on National or State Registers of Historic Places (NRHP/SRHP)									
Sites Eligible for Listing on NRHP or SRHP									
OHI Historic Structures									
House, 12331 SR 706	Miami	Logan		0.91	0.96	●	+	+/-	-
Kenneth vanSkiver Farm, 5778 Tawawa-Maplewood Rd	Perry	Shelby		0.94	2.42	●	+	+/-	-
Nicholas Dormire Farm, Tawawa-Maplewood Rd	Green	Shelby		0.97	2.63	●	+	+/-	-
Jacob Kerns Farm, RT 706	Perry	Shelby		0.97	2.26	●	+	+/-	+/-
House, SR 708	Miami	Logan	3	1.03	1.01	●	+	+/-	+/-
Christian Dormire Farm, 21648 Deam Rd	Green	Shelby		1.16	2.90	●	+/-	+/-	+/-
Christian Church, Cor N St & Cross St	Green	Shelby		1.37	3.12	●	+	+/-	-
Doctor John C Leedom Farm, 21421 Tawawa St	Green	Shelby		1.40	3.14	●	+/-	-	-
Palestine Dist School, 21230 Deam Rd	Green	Shelby		1.41	3.16	●	-	-	-
Eagle Hall, Cor N & Tawawa-Maplewood S	Green	Shelby		1.41	3.11	●	+	+/-	+/-
Wayside Inn, Main St	Green	Shelby		1.43	3.18	●	+/-	-	-
Tawawa Hotel, Main St	Green	Shelby		1.44	3.19	●	+/-	-	-
Tawawa Store, Main St	Green	Shelby		1.45	3.19	●	+/-	-	-
Joshua Develvis, Main St	Green	Shelby		1.45	3.20	●	+/-	-	-
Hageman Grocery, Cor Main & Tawawa-Maplewood St	Green	Shelby		1.46	3.14	●	+/-	-	-
Daniel Brautigam Farm, 4010 SR 29 SE	Green	Shelby		1.46	3.21	●	+/-	+/-	-
House, S Main St	Miami	Logan		1.60	1.68	●	-	-	-
Daniel Vandemark House, Palestine St	Perry	Shelby		1.68	2.85	●	+	+/-	-
Pemberton United Methodist Church, Cor Main St & Leonard St	Perry	Shelby		1.72	2.92	●	+	+/-	+/-
House, 310 S Main St	Miami	Logan		1.74	1.81	●	+/-	-	-
Quincy Lumber Company, Yost St	Miami	Logan		1.74	1.80	●	+	-	-
Clarence Piper House, Cor Main St & Leonard St	Perry	Shelby		1.74	2.93	●	+	-	-
Perry Twp Hall, Palestine St	Perry	Shelby		1.76	2.90	●	-	-	-
Vacant, SR 235 (Carlisle)	Miami	Logan		1.77	1.81	●	+/-	+/-	-
Quincy Depot, Yost St	Miami	Logan		1.77	1.82	●	+	+/-	-
Morgan Tower, Carlisle St	Miami	Logan		1.84	1.88	●	+/-	+/-	+/-

Visually Sensitive Resource	Location		VP Number ¹	Distance ²		Distance Zone	Project Visibility (Viewshed Results)		
							+Visible	- Not Visible	+/- Partially Visible
	Town	County		Miles from Nearest PV Panel Area	Substation	● Near-Foreground ● Foreground ● Midground ● Background	PV Panel DEM Viewshed (Topography Only)	PV Panel DSM Viewshed (Topography, Structures, and Vegetation)	Substation DSM Viewshed (Topography, Structures, and Vegetation)
Pemberton Regular Baptist Church, Palestine St	Perry	Shelby		1.86	2.97	●	+/-	-	-
Vacant, Miami St S of RailRoad	Miami	Logan		1.86	1.92	●	+/-	-	-
Quincy Elevator, W of Miami St N of RailRoad	Miami	Logan		1.89	1.95	●	+/-	-	-
Vacant, 202 S Main St	Miami	Logan		1.90	2.98	●	+/-	-	-
Pemberton Elementary School, Palestine St	Perry	Shelby		1.90	1.96	●	+	+/-	+/-
Unity Grange #2105, Cor HiL St & Main St	Perry	Shelby		1.94	2.64	●	+/-	-	-
House, W South St	Miami	Logan	1	1.94	1.99	●	+	-	-
Jerry Cron H Farm, Dingman-Slagel Rd	Perry	Shelby		1.94	3.06	●	+/-	+/-	-
Reeder Rigger-Madden Funeral Home, South St	Miami	Logan		1.95	2.01	●	+	-	-
House, 112 South St	Miami	Logan		1.95	2.00	●	+	-	-
Vacant, South St	Miami	Logan		1.95	2.00	●	+	-	-
House, 105 N Main St	Miami	Logan		1.98	2.04	●	+/-	-	-
Uri M Stiles House, Palestine St	Perry	Shelby		1.98	3.06	●	+	-	-
Riverside Elementary, NWC South & Canby	Miami	Logan	1	1.98	2.02	●	+	-	-
United Methodist Church, South St	Miami	Logan		1.98	2.03	●	+	-	-
Thacker Realty, N Miami St	Miami	Logan		1.99	2.05	●	+/-	-	-
Stotters Carryout, N Miami	Miami	Logan		2.00	2.06	●	+/-	-	-
Quincy Trading Post, 115 N Main St	Miami	Logan		2.01	2.07	●	+/-	-	-
House, 106 W Main St	Miami	Logan		2.02	2.06	●	+	-	-
Storage, 109 W Main St	Miami	Logan		2.04	2.09	●	+	-	-
Justus Hunt Farm, 1st house SW of Sidney-Plattsvll	Green	Shelby		2.14	3.87	●	+	-	-
Thomas Wilkenson Jr Farm, Tawawa-Maplewood Rd	Perry	Shelby		2.19	3.13	●	+/-	+/-	-
A Purtee Log House, S side SR 69, E of CR 35	Miami	Logan		2.96	3.08	●	+	-	-
Logan Shelby Road Bridge, Logan Shelby Rd over Great Miami River	Miami, Perry, Salem	Logan, Shelby		3.05	3.40	●	-	-	-
Gerald Iams House, 20243 Middletown-Hume Rd	Green	Shelby		3.13	4.87	●	+/-	-	-
Lowell R Deweese Farm, Baker Rd	Perry	Shelby		3.15	4.13	●	+	+/-	+/-
Vacant, 3929 CR 64	Miami	Logan		3.17	3.49	●	-	-	-
Peters Road Bridge, Peters Rd over LeFevere Creek	Salem	Shelby		3.27	3.66	●	-	-	-
Tawana-Maplewood Road Bridge, Tawana Maplewood Rd over Miami River	Perry, Salem	Shelby		3.34	3.83	●	-	-	-
William Shaw Farm, Cor Rt 29 McCloskey-School	Green	Shelby		3.41	5.03	●	+/-	+/-	-

Visually Sensitive Resource	Location		VP Number ¹	Distance ²		Distance Zone ● Near-Foreground ● Foreground ● Midground ● Background	Project Visibility (Viewshed Results)		
							+Visible	- Not Visible	+/- Partially Visible
	Town	County		Miles from Nearest PV Panel Area	Substation		PV Panel DEM Viewshed (Topography Only)	PV Panel DSM Viewshed (Topography, Structures, and Vegetation)	Substation DSM Viewshed (Topography, Structures, and Vegetation)
John W Dorsey Farm, Tawawa-Maplewood Rd	Green	Shelby		3.46	5.10	●	+	-	-
Leatherwood Creek	Green	Shelby		3.52	5.15	●	-	-	-
Vacant, 3503 CR 63	Miami	Logan		3.73	4.03	●	-	-	-
Green Twp Hall, NWC LO2 2	Green	Shelby		3.74	5.44	●	-	-	-
Edward Ashmore Farm, Lot 5	Green	Shelby		3.77	5.47	●	-	-	-
Plattsville Butcher Shop, 3265 Leatherwood Creek Rd	Green	Shelby		3.77	5.46	●	-	-	-
Joseph H Crouse Farm, 2971 Leatherwood Creek Rd	Green	Shelby		3.77	5.46	●	+/-	-	-
Verdier Farm, 1724 SR 589	Green	Shelby		3.78	5.52	●	-	-	-
Lawrence Barhorst Farm, Elton Rd	Perry	Shelby		3.80	4.83	●	+/-	+/-	+/-
Fraziers Store, W Lane St	Green	Shelby		3.83	5.52	●	+	-	-
Fairlawn Middletown Hume School, Cor Middletown-Hume & Leatherw	Green	Shelby		3.85	5.55	●	+	-	-
William Maloney Farm, 1st house NE of Deam Rd	Green	Shelby		3.92	5.57	●	-	-	-
House, 407 Race St	Miami	Logan		3.93	4.19	●	-	-	-
McCloskey School Road Bridge, McCloskey School Rd over Mosquito Creek	Green	Shelby		3.96	5.58	●	+/-	-	-
House, 402 Race St	Miami	Logan		3.97	4.24	●	-	-	-
House, 540 S Main St	Miami	Logan		3.98	4.29	●	+/-	-	-
Samuel Robinson Homestead, 3696 Leatherwood Creek Rd	Green	Shelby		3.98	5.67	●	-	-	+/-
House, NEC Church & Race	Miami	Logan		3.99	4.26	●	-	-	-
House, 308 Race St	Miami	Logan		4.01	4.28	●	-	-	-
House, 420 S Main St	Miami	Logan		4.05	4.35	●	-	-	-
Doan House, 7776 TR 30 (McIntosh Rd)	Miami	Logan		4.05	4.39	●	-	-	-
Degraff Lumber Co, 380 S Main St	Miami	Logan		4.07	4.36	●	-	-	-
Rexer Riggins Madden Funeral Home, 210 W Hayes St	Miami	Logan		4.07	4.34	●	-	-	-
Fraizer Guy Bridge, TR 140 over Tawawa Creek	Perry	Shelby		4.09	5.58	●	-	-	-
House, 201 W Hayes St	Miami	Logan		4.11	4.38	●	-	-	-
House, 103 N Boggs St	Miami	Logan		4.12	4.39	●	-	-	-
House, 113 N Boggs St	Miami	Logan		4.13	4.39	●	-	-	-
House, 111 N Boggs St	Miami	Logan		4.13	4.40	●	-	-	-
House, 117 N Boggs St	Miami	Logan		4.14	4.40	●	-	-	-
House, 206 S Main St	Miami	Logan		4.14	4.42	●	-	-	-

Visually Sensitive Resource	Location		VP Number ¹	Distance ²		Distance Zone ● Near-Foreground ● Foreground ● Midground ● Background	Project Visibility (Viewshed Results)		
	Town	County		Miles from Nearest PV Panel Area	Substation		+Visible - Not Visible +/- Partially Visible		
						PV Panel DEM Viewshed (Topography Only)	PV Panel DSM Viewshed (Topography, Structures, and Vegetation)	Substation DSM Viewshed (Topography, Structures, and Vegetation)	
Degraff's Gasoline Station, abt 140 S Main St	Miami	Logan		4.15	4.91	•	-	-	-
Virgil Herring Farm, Baker Rd	Perry	Shelby		4.15	4.43	•	+/-	+/-	-
House, 112 N Boggs St	Miami	Logan		4.16	4.42	•	-	-	-
Degraff Hardware, 124 S Main St	Miami	Logan		4.16	4.44	•	-	-	-
House, 203 S Main St	Miami	Logan		4.16	4.44	•	-	-	-
Barn, 117 N Main St (rear)	Miami	Logan		4.17	4.44	•	-	-	-
Malzee's Home Cooked Meals, 110 S Main St	Miami	Logan		4.17	4.44	•	-	-	-
The Citizens Bank, 102 S Main St	Miami	Logan		4.17	4.44	•	-	-	-
Double House, 113-115 N Main St	Miami	Logan		4.18	4.45	•	-	-	-
Bonar Feed Mill, abt 145 S Main St	Miami	Logan		4.18	4.46	•	-	-	-
First United Presbyterian Church, 127 N Main St	Miami	Logan		4.19	4.45	•	-	-	-
City Hall, 109? S Main St	Miami	Logan		4.19	4.46	•	-	-	-
Commercial, 104 N Main St	Miami	Logan		4.20	4.47	•	-	-	-
Thrift Shop, 122 N Main St	Miami	Logan		4.21	4.48	•	-	-	-
United Methodist Church, 118 N Main St	Miami	Logan		4.22	4.48	•	-	-	-
David Henry Homestead, 1st house NW of Frazier Guy Rd	Perry	Shelby		4.22	5.70	•	-	-	-
Storage, NEC Miami & Main	Miami	Logan		4.23	4.50	•	-	-	-
House, 107 Koke St	Miami	Logan		4.24	4.51	•	-	-	-
House, 212 N Main St	Miami	Logan		4.24	4.50	•	-	-	-
House, 210 N Main St	Miami	Logan		4.24	4.50	•	-	-	-
House, 216 N Main St	Miami	Logan		4.25	4.51	•	-	-	-
House, 309 N Main St	Miami	Logan		4.26	4.51	•	-	-	-
Riverside Schools Farmhouse, 323 N Main St	Miami	Logan		4.27	4.52	•	-	-	-
House, 302 N Main St	Miami	Logan		4.27	4.52	•	-	-	-
House, 308 N Main St	Miami	Logan		4.28	4.53	•	-	-	-
House, 205 Cretcher St	Miami	Logan		4.28	4.55	•	-	-	-
Baptist Church, abt 201 E Miami St	Miami	Logan		4.29	4.56	•	-	-	-
House, 207 E Miami St	Miami	Logan		4.31	4.58	•	-	-	-
Beehive United Baptist Church, Cor Tawana-Maplewood & SR 47	Salem	Shelby		4.32	4.73	•	+/-	-	-
House, 225 Ellis St	Miami	Logan		4.44	4.70	•	-	-	-

Visually Sensitive Resource	Location		VP Number ¹	Distance ²		Distance Zone ● Near-Foreground ● Foreground ● Midground ● Background	Project Visibility (Viewshed Results)		
	Town	County		Miles from Nearest PV Panel Area	Substation		+Visible - Not Visible +/- Partially Visible		
						PV Panel DEM Viewshed (Topography Only)	PV Panel DSM Viewshed (Topography, Structures, and Vegetation)	Substation DSM Viewshed (Topography, Structures, and Vegetation)	
House, 227 Ellis St	Miami	Logan		4.45	4.71	•	-	-	-
Pence Road Bridge, Baker Rd over Great Miami River	Perry, Salem	Shelby		4.48	5.21	•	-	-	-
House, 355 N Cretcher St	Miami, Pleasant	Logan		4.52	4.78	•	-	-	-
Pasco United Methodist Church, Cor SR 706 & Pasco-Montra	Perry	Shelby		4.66	6.14	•	-	-	-
House, SR 47	Pleasant	Logan		4.84	4.90	•	-	-	-
Moore Farm, 21071 Miami-Shelby East Rd	Green	Shelby		4.86	6.50	•	-	-	-
Schlumbohm Big Valley Farm, 3691 TR 205	Miami	Logan		4.88	5.20	•	+/-	-	-
Line Farm, Deweese Rd SE of Pasco-Montra	Perry	Shelby		4.98	6.32	•	+/-	-	+/-
John Greiwe Farm, RT 29	Perry	Shelby		5.01	6.49	•	-	-	-
Historic Bridges									
OGS Cemeteries									
Cost Cemetery	Miami	Logan		1.03	1.11	●	+	+	+
Johnson Cemetery	Adams	Champaign		1.09	2.64	●	+	+/-	-
Sturm-Sargent Farm Cemetery	Green	Shelby		1.72	3.38	●	-	-	-
Sturms Cemetery	Perry	Shelby		1.81	3.29	●	+	+	+/-
Wilkinson Cemetery	Adams	Champaign		1.90	2.59	●	+/-	-	-
Neal Cemetery	Adams	Champaign		1.97	3.43	●	-	-	-
Pemberton-Indian Creek Cemetery	Perry	Shelby		2.18	3.19	●	+/-	-	-
Custinborder Cemetery	Miami	Logan		2.36	2.56	●	+/-	-	-
Newman Cemetery	Miami	Logan		2.58	2.99	●	+/-	-	-
Quincy Cemetery	Miami	Logan		2.59	2.63	●	+/-	-	-
Olive Chapel Cemetery	Miami	Logan		2.63	3.04	●	+	-	-
Halterman Cemetery	Adams	Champaign		3.07	3.90	●	-	-	-
Armstrong-Carpenter Cemetery	Miami, Pleasant	Logan		3.23	3.22	●	+/-	-	-
Rosedale Cemetery	Adams	Champaign		3.38	4.42	●	-	-	-
Eicher Cemetery	Adams	Champaign		3.49	4.66	●	-	-	-
Hearst Cemetery	Adams	Champaign		3.71	4.16	●	-	-	-
Tawawa United Brethren Cemetery	Perry	Shelby		3.77	5.28	●	-	-	-
Plattsville Cemetery	Green	Shelby		3.80	5.48	●	+/-	-	-
Pioneer-Green Township Pioneer-Old Pioneer-Plattsville Cemetery	Green	Shelby		3.80	5.48	●	+/-	-	-

Visually Sensitive Resource	Location		VP Number ¹	Distance ²		Distance Zone ● Near-Foreground ● Foreground ● Midground ● Background	Project Visibility (Viewshed Results)		
							+Visible	- Not Visible	+/- Partially Visible
	Town	County		Miles from Nearest PV Panel Area	Substation		PV Panel DEM Viewshed (Topography Only)	PV Panel DSM Viewshed (Topography, Structures, and Vegetation)	Substation DSM Viewshed (Topography, Structures, and Vegetation)
Deppe Cemetery	Salem	Shelby		3.93	4.50	●	+/-	-	-
Rusk-Rush Cemetery	Adams, Johnson	Champaign		3.94	4.96	●	-	-	-
Pepper Cemetery	Perry	Shelby		3.98	5.46	●	-	-	-
Ward Cemetery, Perry	Perry	Shelby		4.01	5.03	●	-	-	-
Russell Cemetery	Adams	Champaign		4.04	4.79	●	+/-	+/-	+/-
Old Dunkard Cemetery	Perry	Shelby		4.10	5.58	●	-	-	-
Alexander Cemetery	Adams	Champaign		4.10	5.09	●	-	-	-
Hamer Cemetery	Miami	Logan		4.14	4.51	●	-	-	-
Ward Cemetery, Johnson	Johnson	Champaign		4.15	5.15	●	-	-	-
Dorsey-Charity Chapel Cemetery	Green	Shelby		4.35	5.98	●	+	-	-
Thompson Cemetery	Perry	Shelby		4.48	5.42	●	+	+/-	+/-
Means Cemetery	Pleasant	Logan		4.55	4.73	●	-	-	-
Cedar Point Cemetery	Perry	Shelby		4.57	6.05	●	-	-	-
De Graff-Greenlawn-(Greenwood) Cemetery	Pleasant	Logan		4.65	4.90	●	+	-	-
Makemson Cemetery	Pleasant	Logan		4.69	4.88	●	-	-	-
Unidentified #2 Cemetery	Johnson	Champaign		4.81	5.89	●	+/-	+/-	-
Fairview Cemetery	Pleasant	Logan		4.82	5.02	●	+	-	-
Connor Cemetery	Adams	Champaign		4.94	5.76	●	+/-	-	-
Ohio Historic State Marker									
Designated Scenic Resources									
Rivers Designated as National or State Wild, Scenic or Recreational									
Sites, Areas, Lakes, Reservoirs or Highways Designated or Eligible for Designation as Scenic									
Other Designated Scenic Resources (Easements, Roads, Districts, and Overlooks)									
Public Lands and Recreational Resources									
National Parks, Recreation Areas, Seashores, and Forests									
National Natural Landmarks									
National Wildlife Refuges									

Visually Sensitive Resource	Location		VP Number ¹	Distance ²		Distance Zone Near-Foreground Foreground Midground Background	Project Visibility (Viewshed Results)		
	Town	County		Miles from Nearest PV Panel Area	Substation		+Visible	- Not Visible	+/- Partially Visible
						PV Panel DEM Viewshed (Topography Only)	PV Panel DSM Viewshed (Topography, Structures, and Vegetation)	Substation DSM Viewshed (Topography, Structures, and Vegetation)	
Heritage Areas									
National Aviation Heritage Area	Adams, Harrison, Johnson, Miami, Pleasant, Brown, Green, Orange, Perry, Salem	Champaign, Logan, Shelby, Miami	6-21, 24-29	0.00	0.00		+/-	+/-	+/-
State Parks									
Kiser Lake State Park	Adams, Johnson	Champaign		3.91	4.93		+/-	-	-
State Nature Preserves									
Thompson Nature Preserve	Miami	Logan		2.26	2.27		+/-	+/-	+/-
Kiser Lake Wetlands State Nature Preserve	Johnson	Champaign		4.75	5.76		-	-	-
Wildlife Areas									
State Forests									
State Fishing/Waterway Access									
Great Miami River Canoe Launch 1	Miami	Logan		2.25	2.30		-	-	-
Great Miami River Canoe Launch 2	Miami	Logan		3.86	4.09		-	-	-
Kiser Lake State Park Courtesy Boat Dock	Johnson	Champaign		4.05	5.07		-	-	-
Kiser Lake State Park Boat Ramp	Johnson	Champaign		4.05	5.07		-	-	-
Kiser Lake State Park Smal Boat Launch 1	Johnson	Champaign		4.31	5.33		-	-	-
Kiser Lake State Park Smal Boat Launch 2	Johnson	Champaign		4.74	5.75		-	-	-
Kiser Lake State Park Smal Boat Launch 3	Johnson	Champaign		4.95	5.93		-	-	-
Other State Lands									
Designated Trails									
State and Federal Trails									
No stand-alone state/federal trails were identified. However, state trails occur within (and are evaluated as part of) state lands identified elsewhere in this table.									
Snowmobile/ATV Trails									
Bike Trails/Routes									
Other Trails									
Local Parks and Recreation Areas									
Floyd Finrock City Park	Miami	Logan	2	1.33	1.40		+	+/-	+/-
DeGraff Park	Pleasant	Logan		4.36	4.61		+/-	-	-
Publicly Accessible Conservation Lands/Easements									

Visually Sensitive Resource	Location		VP Number ¹	Distance ²		Distance Zone ● Near-Foreground ● Foreground ● Midground ● Background	Project Visibility (Viewshed Results)		
							+Visible	- Not Visible	+/- Partially Visible
	Town	County		Miles from Nearest PV Panel Area	Substation		PV Panel DEM Viewshed (Topography Only)	PV Panel DSM Viewshed (Topography, Structures, and Vegetation)	Substation DSM Viewshed (Topography, Structures, and Vegetation)
Rivers and Streams with Public Fishing Access									
Mosquito Creek	Adams, Johnson, Green, Perry	Champaign, Shelby		1.63	3.36	●	+/-	-	-
Great Miami River	Miami, Pleasant, Orange, Perry, Salem	Logan, Shelby		2.23	2.28	●	-	-	-
Tawawa Creek	Perry	Shelby		3.85	5.35	●	+/-	-	-
Named Lakes, Ponds, and Reservoirs									
Kiser Lake	Johnson	Champaign		3.95	4.97	●	-	-	-
Black Lake	Miami	Logan		4.61	4.98	●	-	-	-
High-Use Public Areas									
State, US, and Interstate Highways									
State Route 235	Adams, Johnson, Miami, Pleasant	Champaign, Logan	1, 2, 23, 29	0.00	0.45	●	+/-	+/-	+/-
State Route 706	Miami, Perry	Logan, Shelby	3, 4, 9	0.86	0.97	●	+/-	+/-	+/-
State Route 29	Adams, Harrison, Green, Perry	Champaign, Shelby	11-13	1.31	3.06	●	+/-	+/-	+/-
State Route 589	Brown, Green	Shelby, Miami		2.16	3.82	●	+/-	+/-	+/-
State Route 245	Adams, Harrison	Champaign, Logan		2.25	2.93	●	+/-	+/-	+/-
State Route 508	Miami	Logan		3.98	4.31	●	+/-	-	-
State Route 47	Pleasant, Salem	Logan, Shelby		4.35	4.54	●	+/-	-	+/-
Schools									
Fairlawn Local Schools	Perry	Shelby		3.13	4.64	●	+/-	+/-	-
Riverside Local Schools	Miami, Pleasant	Logan		4.06	4.30	●	-	-	-
Cities, Villages									
Cities and Villages									
Village of Quincy	Miami	Logan	1, 2	1.18	1.17	●	+/-	+/-	+/-
Village of Degraff	Miami, Pleasant	Logan		3.63	3.88	●	+/-	-	+/-
Hamlets									
Hamlets									
Hamlet of Pemberton	Perry	Shelby	8	1.65	2.76	●	+/-	+/-	+/-
Hamlet of Rosewood	Adams	Champaign		2.57	3.52	●	+/-	-	-

¹ If no viewpoint (VP) number is indicated, no photo was obtained during fieldwork.

² For large areas and linear sites, approximate distance to the PV Panel Area and Substation was measured from the respective area's closest point.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

12/17/2020 6:31:48 PM

in

Case No(s). 20-1362-EL-BGN

Summary: Application - Part 29 of 31 Ex. X Visual Resources Assessment electronically filed by Christine M.T. Pirik on behalf of Clearview Solar I, LLC