CORDELIO POWER

FLAT CREEK SOLAR

Permit Application No. 23-00054

§ 1100-2.9 Exhibit 8

Visual Impacts

Contents

Appendices

Acronym List

3D	Three-Dimensional
AADT	Annual Average Daily Traffic
AC	Alternating Current
ASL	Above Sea Level
BLM	Bureau of Land Management
CAD	Computer-aided design
DC	Direct Current
DOE	Department of Energy
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
GIS	Geographic Information Systems
HDD	Horizontal Directional Drilling
kV	Kilovolt
LiDAR	Light Detection and Ranging
LOD	Limits of Disturbance
LOS	Line-of-Sight
LSZ	Landscape Similarity Zones
MCD	Minor Civil Division
MPH	Miles Per Hour
NESC	National Electrical Safety Code
NLCD	National Land Cover Dataset
NPS	National Park Service
NRHP	National Register of Historic Places
NY5	New York State Highway 5
NYCRR	New York Codes, Rules and Regulations
NYPA	New York Power Authority
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
O&M	Operations and Maintenance
OPRHP	Office of Parks, Recreation and Historic Preservation
ORES	Office of Renewable Energy Siting and Electric Transmission

OSHA	Occupational Safety and Health Administration
PEJA	Potential Environment Justice Area
POI	Point of Interconnection
PV	Photovoltaic
SGHAT	Solar Glare Hazard Analysis Tool
SHPO	State Historic Preservation Office
USDA	United States Department of Agriculture
USDOI	United States Department of the Interior
USGS	United States Geological Survey
VIA	Visual Impact Assessment (see Appendix 8-1)
VIMMP	Visual Impact Minimization and Mitigation Plan
VP	Viewpoint
VSA	Visual Study Area

Glossary of Terms

Applicant:	Flat Creek Solar NY LLC, a subsidiary of Cordelio Power LP, the entity seeking a siting permit for the Facility from the Office of Renewable Energy Siting and Electric Transmission (ORES) under Article VIII of the New York State Public Service Law.
Facility:	Flat Creek Solar, a 300 MW solar generating facility located in the Towns of Root and Canajoharie, NY. The proposed Facility components to be constructed for the generation, collection, and distribution of energy for Flat Creek Solar include solar panel modules, electrical collection system, collection substation, point of interconnection (POI) switchyard, access roads, laydown/staging areas, and other ancillary facilities.
Facility Site:	The participating parcels encompassing Facility components, which totals approximately 3,794 acres in the Towns of Canajoharie and Root, Montgomery County, New York (Figure 2-1).
Limits of Disturbance (LOD):	The area to which temporary construction impacts will occur, totaling approximately 1,637 acres.
Study Area:	The Study Area for the Facility includes a radius of five miles around the Facility Site boundary, unless otherwise noted for a specific resource study or Exhibit. The 5-mile Study Area encompasses approximately 108,667 acres, inclusive of the approximately 3,794-acre Facility Site.

Exhibit 8 Visual Impacts

8(a) Visual Impact Assessment

A Visual Impact Assessment (VIA; also referred to as Appendix 8-1) was prepared for the Facility to determine the extent and assess the significance of Facility visibility within a 2-mile Visual Study Area (VSA). The VIA includes but is not limited to the quantitative and qualitative identification of visually sensitive resources, viewshed mapping, confirmatory visual assessment fieldwork, photo-simulations (also known as "visual simulations", "photographic overlaps", "photographic simulations", or "simulated views"; referred to herein as "photo-simulations" or "simulations") and proposed visual mitigation. In completing the VIA, local municipalities and state agencies were consulted and applicable guidance and information was incorporated into the assessment. This exhibit provides an abbreviated version of the VIA and summarizes the results of the analysis.

(1) The Character and Visual Quality of the Existing Landscape

The Facility is to be sited within the Towns of Canajoharie and Root, within Montgomery County. Section 3.0 describes the character of the existing landscape within the VSA and Facility Site, including communities and residential areas, physiography and land use, water resources, transportation resources, energy infrastructure, and publicly known proposed land uses (other than the Facility described herein). To investigate the visual characteristics within the VSA, numerous information sources were referenced and consulted, including but not limited to aerial imagery; field assessments; publicly accessible tabular and geospatial data from local, state, and federal agencies; local and regional tourism websites; and public search engines, such as Google.

Landform

The VSA is solely within the Mohawk Valley physiographic region of New York State which contributes to the larger region of the Eastern Great Lakes Lowlands. The Mohawk Valley physiographic region is characterized as a corridor of irregular river valley that travels east to west between the Adirondack Park and the Glaciated Low Allegheny Plateau (Bryce 2010). The Mohawk Valley landform consists of upland (north and south) of the Mohawk River reaching elevations of approximately 785 feet Above Sea Level (ASL) in Cooks Corners north of the Mohawk River, and 819 feet ASL east of Old Sharon Road, south of the Mohawk River. The Mohawk River lowland is conveyed with a lesser elevation of 290 feet ASL (at the Riverfront Park) in the Village of Canajoharie. Generally, when in and around the Mohawk Valley lowlands, the opportunity to experience far reaching views of the landscape is prohibited by upland topography.

Conversely, upland areas immediately north and south of the valley may furnish elevated positions for viewing the distant landscape. Further south of the Mohawk River, terrain elevation trends generally increase attaining elevational heights of up to 960 feet ASL (east of the community of Mapletown) and 1,055 feet ASL (at the intersection of Becker Road and Mapletown Road).

Water

Water bodies can be an important aesthetic feature of a landscape and may also provide recreation and tourism opportunities. From within the Mohawk Valley Lowlands, the Mohawk River is the most prominent water feature in the VSA. This river horizontally bisects the northern section of the VSA and separates jurisdictional boundaries of the Villages of Palatine Bridge and Canajoharie. The Mohawk River originates in the valley between the western Adirondacks and the Tug Hill Plateau and flows 140 miles to the east where it joins the Hudson River (New York State Department of Environmental Conservation [NYSDEC] n.d.).

The Canajoharie Creek is a larger tributary creek to the Mohawk River and is found meandering south through the Village of Canajoharie and along Wintergreen Park and Prospect Hills Cemetery prior to exiting west of the VSA. Public access to the Canajoharie Creek and Falls is prohibited, however, an observational deck is available in the northern extension of the Wintergreen Park.

Several smaller tributary creeks identified within the VSA that contribute to the Mohawk River are known as Lasher Creek, Knauderack Creek, Yatesville Creek, and Flat Creek. Several smaller (man-made) ponds are located on rural and agricultural properties throughout the VSA and are predominantly on private land south of the Mohawk River.

Community/Residential

Population data was derived from the U.S. Census Bureau (2020 Decennial Census) to convey information pertaining to population densities in the VSA and is provided below in Table 8-1 Population of Communities within the 2-mile VSA. This population data does not account for interstate travelers nor national travelers that may visit the region or travel through to reach other destinations; information pertaining to transportation is available in Section 3.4. To provide further context and scale of the VSA population data in Table 8-1, the City of Johnstown is approximately 6.5 miles northeast of the VSA and accounts for a total estimated population of 8,204, which is

comparable to the total estimated population within the Towns of Canajoharie, Palatine, and Root (8,862). Not all involved townships are completely within the VSA, for example, the Towns of Canajoharie and Palatine are partially intersected by the VSA, and the Town of Mohawk is minorly within the VSA. The VSA extends around a majority of the Town of Root's jurisdictional boundary.

Table 8-1. Population of Communities within the 2-Mile VSA

Town/Village	Total Population (2020 Census Estimates)
Town of Canajoharie	**3,660[1]**
Village of Canajoharie	2,037
Mapletown (Minor Civil Division)	73
Town of Mohawk[2]	**3,572[1]**
Town of Palatine	**3,189[1]**
Village of Palatine Bridge	796
Mckinley[2] (Minor Civil Division)	79
Cook Corners* (Minor Civil Division)	106
Town of Root	**2,013[1]**
Rural Grove (Minor Civil Division)	135
Flat Creek (Minor Civil Division)	134
Lykers (Minor Civil Division)	116
Browns Hollow (Minor Civil Division)	113
Hamlet of Sprakers	112
Currytown (Minor Civil Division)	96
Root Center (Minor Civil Division)	78

[1]This metric accounts for total population including population in rural locations and places that are not recognized as a minor civil division or incorporated place.

[2]Denotes communities/municipalities that are minorly intersected by the 2-mile VSA.

As shown in Table 8-1, above, approximately 56% of the Town of Canajoharie's population resides within the Village of Canajoharie, and 25% of the Town of Palatine's population resides within the Village of Palatine Bridge. Therefore, villages within the VSA contain a higher concentration or potential viewers where physical obstructions consisting of tightly spaced

residential housing, commercial buildings, structures, and vegetation often constrain distance of view to objects in the foreground. The remaining percentages of population within the VSA are typically found in smaller communities (hamlets or census designated places), and a lesser extent of population is described as rural- residential where dwellings may be found punctuated between large expanses of agricultural land.

In the VSA, Rural-residential development primarily consists of one-story to two-story dwellings and farmsteads located within the vicinity of local or county roads. These dwellings are frequently positioned with ample space between each neighboring property. Conversely, the Villages of Palatine Bridge and Canajoharie contain a higher concentration of development within a small, confined area, where congregated observers are more prevalent. The character of these communities is documented as viewpoint (VP) photographs found in the Facility Photolog in Attachment 3 of the VIA. Overall, the amount of population in the VSA is less compared to other more populous regions in New York State.

Lesser populated communities in the VSA include the Hamlet of Sprakers, and several Minor Civil Divisions (MCD) are noted as, but not limited to Flat Creek, Mapletown, Root Center, Rural Grove, and Currytown. The communities of Flat Creek and Currytown are the closest MCDs to the Facility.

- *Communities that fall within 0.5 miles of Facility*: Towns of Canajoharie and Root, Village of Canajoharie and MCDs of Flat Creek and Currytown.
- *Communities that fall between 0.5 and 2.0 mile of Facility*: Towns of Palatine and Mohawk, Towns of Palatine and Mohawk, Village of Palatine Bridge, and MCDs of Mapletown, Rural Grove, Root Center, Lykers, Mckinley, Browns Hollow, and Cook Corners
- For information about the characteristics and potential effects of viewing distances, please visit Section 4.0, Distance Zones.
- One Potential Environment Justice Area (PEJA) was identified within the VSA as U.S. Census Tract 726, Block Group 1. The PEJA is bounded by the Town of Canajoharie and comprises a total of 11.18 square miles. PEJAs are administered by the NYSDEC Office of Environmental Justice for improving the environment in communities, specifically minority and low-income communities, and addressing disproportionate adverse environmental impacts that may exist in those communities. PEJAs are defined by 6 New

York Codes, Rules and Regulations (NYCRR) Section 487.3 as areas with populations that meet one or more of the following thresholds:

- 52.42 percent or more of the population in an urban area reported themselves to be members of minority groups; or
- 26.28 percent or more of the population in a rural area reported themselves to be members of minority groups; or
- 22.82 percent or more of the population in an urban or rural area had household incomes below the federal poverty level.

The Impact Study Area, including a half-mile buffer around the site, is contained within five block groups in Montgomery County (Figure 19-1). Based on the review of the minority and low-income population of these Census block groups from the most recent ACS data available (2022 vintage), the Study Area does not currently include block groups that meet the criteria for a PEJA (Figure 19-1). Please reference Exhibit 19, Environmental Justice, for more information regarding PEJAs.

Transportation

Roadways are generally publicly accessible and provide an opportunity for viewers to observe their surrounding environment and landscape. Determining the characteristics of a travel route assists with identifying the potential viewer types, frequency of view, as well as traffic volume. For example, the New York State Thruway (NY I-90) sustains thousands of vehicles daily, thereby providing a high frequency for users to discern the visual environment. Contrariwise, less traveled rural roads such as Caswell Road (less than 100 daily travelers in the VSA) do not accommodate many viewers or population, therefore, views of the landscape would be infrequent.

Annual Average Daily Traffic (AADT) was utilized to estimate the average volume of daily travelers within the VSA. AADT data was used in conjunction with population data (see Table 8-1) to estimate potential number of viewers within the VSA. Traditionally, AADT is a planning metric used primarily in transportation planning and transportation engineering. AADT data is calculated by totaling the annual volume of vehicle traffic of a road and dividing by 365 days. AADT counts are provided by the New York State Department of Transportation (NYSDOT) and are presented below in Table 8-2.

Table 8-2. Available Traffic Data of Public Roads in the 2-Mile VSA

Route/ Road Name	Town	AADT	NYSDOT Functional Class
NY I-90	Canajoharie, Root	23,637 to 25,929	Principal Arterial Interstate
New York State Highway 5 (NY5)	Palatine	3,377	Minor Arterial
New York State Highway 5S (NY5S)	Canajoharie, Root	3,450	Major Collector
New York State Highway 162 (NY162)	Root	1,665	Major Collector
New York State Highway 10 (NY10)	Canajoharie	1,494	Minor Arterial
Maple Avenue	Canajoharie	1,360	Major Collector
Lafayette Street (NY10)	Palatine	1,304	Major Collector
Old Sharon Road	Canajoharie	470	Local
Currytown Road	Root	361	Local
Flat Creek Road	Root	309	Local
Mckinley Road	Palatine	325	Local
Carlisle Road	Canajoharie, Root	306	Minor Collector
Darrow Road	Root	279	Local
Brower Road	Palatine	269	Local
Mapletown Road	Canajoharie	269	Local
Latimer Hill Road	Root	197	Minor Collector
Blaine Road	Canajoharie	166	Local
Hilltop Road	Root	137	Local
Seebers Lane	Canajoharie	109	Local

Table 8-2. Available Traffic Data of Public Roads in the 2-Mile VSA

Route/ Road Name	Town	AADT	NYSDOT Functional Class
Rappa Road	Root	108	Local
Caswell Road	Palatine	93	Local
Cunningham Road	Canajoharie	71	Local

NYSDOT functional classifications are helpful for identifying potential viewer types and frequency of use within the VSA and are defined as follows.

- Arterial Roads: Provides expedited travel for the public at higher uninterrupted speeds. Usually consisting of transportation corridors that accommodate a multitude of travelers.
- Collector Roads: Provides a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials.
- Local Roads: Consists of all roads not defined as arterials or collectors; primarily provides access to land with little or no through movement and accommodates travel over shorter distances.

Existing Energy Infrastructure

Several aboveground energy infrastructure of varying heights, materials, and configurations are noted within the VSA and are documented below:

- New York Power Authority (NYPA) Transmission Line #352 – This existing overhead transmission line is built within the Towns of Root and Canajoharie. The transmission line bisects the center of the VSA in an east-to-west formation. The Facility is proposing to interconnect into this transmission line (see Section 2.0 for more information about the interconnection).
- Nexamp Community Solar Farm at Caswell and Gray Roads - The Solar Farm is recently constructed within land north of South Gray Road and east of Caswell Road in the Town of Palatine. This existing community solar energy facility expends approximately 19 acres of land within the VSA.

Publicly Known Proposed Land Uses

To determine if other publicly known proposed land uses are proposed within the VSA, the Applicant reviewed publicly available information, including town documents, public notices, and town board meeting minutes, and consulted with the Towns of Canajoharie and Root. Additionally, visual stakeholders were solicited through the visual outreach initiative (discussed Section 6.0 and Section 7.3.2 of the VIA, Appendix 8-1) to identify potential areas of proposed non-project development. No proposed land uses were identified through the visual outreach initiative.

Subsequent of the investigation, it was determined that there are no known proposed land uses within the VSA, however, applicable proposed land uses beyond the VSA are discussed in Section 8(a)(11).

Distance Zones

Distance zones were established within the VSA for assessing and determining the Facility's visual effects over discrete distances and are required pursuant to Section 1100-2.9 (b)(1) of the Article VIII Regulations. Distance zones provide representative information about the level of detail and acuity of objects in the landscape over various distances. Distance zones also provide useful information for determining the relationship between levels of viewer sensitivity and distance. These zones have been defined in documents produced by the U.S. Forest Service or the Bureau of Land Management. However, certain procedures or guidelines may be inapplicable to the northeast and are more appropriate for western landscape applications. Therefore, discretion must be used when implementing distance zones as the effects of distance highly depend on the characteristics of the landscape. Further, the magnitude of the proposed action must also be considered when assigning distance zones. For example, solar panels exhibit a smaller profile and sit lower in the landscape as opposed to mature trees, two-story buildings, or transmission structures that assume taller heights. Therefore, distance zones for this Facility have been judiciously modified from the U.S. Forest Service Handbook to accommodate the extents of the VSA, the limitations of human vision, and the low-profile scale of the Facility components. Consequentially, two distance zones have been incorporated within the 2-mile VSA:

- Distance Zone 1: Foreground (up to 0.5 miles from the viewer to the Facility). This zone represents the nearest vantage points to the Facility. In this zone, clarity of individual details, textures, and the full spectrum of colors are typically discernable. Due to the

proximal distance of this zone in respect to the limited height of the solar panels, predicted areas of visibility are often more prevalent in this zone.

- Distance Zone 2: Middle ground to Background (0.5 to 2 miles from the viewer to the Facility). In this zone from distances up to approximately 1-mile, individual trees and building forms can still be distinguishable but textures become less apparent and ornate. When nearing the outer extents of this zone, distant objects begin to converge into homogenous shapes and colors. Often, atmospheric haze may affect color and contrast of distant landscape during certain weather conditions, resulting in the landscape inheriting a very light blue color. From this distance the solar panels merge into a single form or geometric shape. Slimmer components such as the fencing may become imperceivable at this distance. The amount of predicted visibility is usually less in this zone as screening effects of topography, trees, and buildings become more plentiful in the viewing field.

Figures 2, 3, and 4, of Appendix 8-1 in Attachment 2 illustrate the locations of Distance Zones 1 and 2. A discussion of the percentage of Facility visibility in each Distance Zone can be found in Section 8(a)(2) Viewshed Results of Solar Arrays within Distance Zones and Landscape Similarity Zones (LSZs).

Landscape Similarity Zones

Variations in the characteristics of the existing landscape can influence the ability to view the existing environment. In the VSA, discrete visual characteristics of the existing landscape that share common features are categorized and mapped into distinct zones or LSZs. Identified LSZs are typically categorized by landform, vegetation, open water, land use, and user activity zones. Further, LSZs provide additional context for evaluating the existing quality of the landscape, potential viewer types, viewer frequency, and duration of view. LSZs each contain variable environments that can encourage or discourage general landscape viewing. For example, forested landscapes with substantial foliage may confine or obstruct a perspective, whereas places comprised of open landscape, such as open water areas, may provide farther viewing opportunities.

The 2021 United States Geological Survey (USGS) National Land Cover Dataset (NLCD) was accessed to establish LSZs to categorize distinct landscape areas within the VSA. These NLCD data were further enhanced by utilizing a combination of aerial photo interpretation and ground

truthing to validate the accuracy of the NLCD data as needed. To view a map of the delineated LSZs within the VSA, please see Figure 2, of Appendix 8-1 in Attachment 2. Overall, this effort resulted in the definition of five LSZs within the VSA, presented as follows.

- Zone 1: Agricultural – The character of this LSZ consists of open land that is predominantly cultivated or used for production of crops and/or livestock, it may also contain pasture, or be left fallow. This LSZ presents variable upland terrain characterized as flat to rolling and includes less areas of shallow valley (lowland). In this LSZ, rural upland areas may furnish views of the surrounding and distant landscape, however, the number of the viewing public, as well as the frequency and duration of viewers in a rural agricultural setting is expected to be low. Typically, sparsely located farmsteads and single residential dwellings intermittently dot this open landscape. Also noted within this LSZ are minor forms of vegetation portrayed as single strand tree hedgerows, separating quadrangular shaped agricultural lands in mosaic patterns. Land use within this zone is limited to cultivation or livestock farming with a significantly less amount of habitational use. Several photographic examples of the Zone 1 Agricultural LSZ are available as VPs 2, 4, 5, 6, 7, 9, 11, 12, 16, 19, 21, 22, 30, 32, 35, 51, 56, and 73 in the Facility Photolog of Attachment 3 of Appendix 8-1.
- Zone 2: Forested – In this zone, land is comprised of mature deciduous, coniferous, and mixed tree groups. Forested areas within this LSZ can encompass large swaths of land or be an isolated strand of trees. Typically, forested lands are owned by private entities, or they may be protected and stewarded by a government agency, such as the Rural Grove State Forest and Yatesville Falls State Forest. Those forested lands owned by public entities or organizations (e.g., NYSDEC) tend to offer the public recreational activities such as hunting, nature viewing, hiking, or camping. The type of viewing opportunities in this zone are typically confined to the forest itself (seldom seen areas), however, under specific situations it may be possible to view longer distances from forested land (e.g., views from an observation tower/deck or from a forested edge abutting an open field). Several photographic examples of the Zone 2 Forested LSZ are available in the Facility Photolog as VPs 40, 41, 46, 60, 67, 69, 72, 78, and 87.
- Zone 3: Developed – This zone includes villages, towns, minor civil divisions, rural-residential abutting roadways, and the NY I-90 transportation corridor. In rural settings, dwellings are characterized by a mix of single-family residences and farmsteads intermittently spaced along the vicinity of roads. These places with concentrated

development are typically limited to foreground views of the landscape due to tightly spaced development, such as buildings, residential dwellings, or street trees that may impede distant views. Rural-residential dwellings within the near vicinity of the Facility may experience visual change if topography or dense vegetation is not present. Photographed viewpoints have been documented from Zone 3 Developed LSZ and are listed in the Facility Photolog, some examples include VPs 8, 27, 29, 44, 49, 57, 58, 59, 71, 77, and 85.

- Zone 4: Open – The Zone 4 Open LSZ includes miscellaneous other open land that may have minor development with less visually obstructive features such as minor expanses of barren land, land with short scrub-shrub vegetation, cemeteries, golf courses, paved lots, playgrounds, or small emergent wetlands. In this zone, optimal landscape viewing may be afforded due to the lessened height of vegetation or lack thereof. Photographs exemplifying the characteristics of Zone 4 Open LSZ are shown in the Facility Photolog as VPs 1, 8, 15, 17, 27, 38, 43, 47, 49, 50, 54, 55, 66, 68, 77, and 81-86.
- Zone 5: River Corridor – Zone 5 River Corridor LSZ represents the Mohawk River found within the Mohawk Valley lowlands. This zone is described as an elongated body of water that is typically bounded by wooded riparian zones and a few brief intervals of concentrated development. Generally, observers in this zone have limited distant viewing opportunities when oriented perpendicular from the river where foreground vegetation and development often intervene. Contrariwise, distant landscape viewing opportunities are conducive when aligned with the corridor's lateral length, or when facing parallel with the river. Examples of the Zone 5 River Corridor LSZ are noted as VPs 27, 61, 66, 67, 68 and 70 in the Facility Photolog of Attachment 3 of Appendix 8-1.

Table 8-3 is provided below to demonstrate the differing percentages of LSZs within the 2-Mile VSA.

Table 8-3. Percentage of LSZs within the 2-Mile VSA

LSZ	Total LSZ Square Miles	Total LSZ Percent
Zone 1 Agricultural	27.7	52.0%
Zone 2 Forested	19.6	36.8%

Table 8-3. Percentage of LSZs within the 2-Mile VSA

LSZ	Total LSZ Square Miles	Total LSZ Percent
Zone 3 Developed	4.2	8.0%
Zone 4 Open	1.1	2.1%
Zone 5 River Corridor	0.6	1.1%
Total	**53.3**	**100%**

As shown in Table 8-3, LSZ Zone 1 Agricultural constitutes 52% of total land use and is a dominant landscape character within the VSA. LSZ Zone 2 Forested comprises 36.8% of land use within the VSA and typically acts as a visual obstruction to other landscape elements. The remaining LSZs are partial contributors of the VSA and include LSZ Zone 3 Developed (8% of the VSA), LSZ Zone 4 Open (2.1% of the VSA), and LSZ Zone 5 River Corridor (1.1%) of the VSA.

(2) The Visibility of the Facility

The visibility of the Facility is objectively evaluated, documented, and discussed throughout the VIA. Several visual analyses were conducted to determine the extent of Facility visibility including viewshed maps, line-of-sight (LOS) profiles, photo-simulations, and a Glint and Glare Analysis (Appendix 8-2), as described in the VIA (Appendix 8-1). A discussion of the interconnected relationship between solar array visibility results, distance zones, and LSZs is provided as follows.

Several LSZs were identified and delineated within the VSA as Zone 1 Agricultural, Zone 2 Forested, Zone 3 Developed, Zone 4 Open, and Zone 5 River Corridor (see Figure 2 of Attachment 2 of the VIA for a map depicting the LSZs within the VSA). According to Table 8-4, LSZ Zone 1 Agricultural is prevalent within the VSA (approximately 52% of VSA), where 16.62% of a total of 18.83% of solar panel visibility is predicted to occur. Given that 7.22% of VSA visibility occurs on agricultural lands belonging to participating landowners, it is then reasonable to assume that approximately 9.4% of (16.62%) LSZ Zone 1 Agricultural visibility encounters non-participating landowner parcels. While LSZ Zone 1 is abundant within the VSA, Zone 2 Forested comprises less with approximately 36.8% of land in the VSA where only 0.75% visibility is predicted. The remaining LSZ Zone 3 Developed (8% of land in VSA), Zone 4 Open (2.1% of land in VSA), and

Zone 5 River Corridor (1.1% of land in VSA) are smaller contributors to the landscape where a small amount of visibility was predicted as noted below:

- LSZ Zone 3 Developed (0.98% solar panel visibility in VSA)
- LSZ Zone 4 Open (0.21% solar panel visibility in VSA)
- LSZ Zone 5 River Corridor (0.27% solar panel visibility in VSA)

These data for Zones 3, 4, and 5 suggest that a very insignificant amount of predicted visibility (1.46%) may occur in sensitive locations, such as developed areas (villages, residential, commercial, etc.), open areas (parks, cemeteries, greenspace, etc.) and the Mohawk River. Moreover, 7.22% of the 18.19% total visibility in the VSA occurs on lands belonging to participating landowners while 10.97% of total visibility in the VSA falls within land belonging to non-participating landowners.

The percentage of solar panel visibility was also quantified for distance zones in the VSA (see Table 8-5). As indicated in Table 8-5, Distance Zone 1 contains the highest percentage of potential solar array visibility (12.43% of the VSA), which generally correlates with LSZ Zone 1 Agricultural (16.62% of predicted visibility). A significant portion of Distance Zone 1 solar array sightings occur when in the immediate vicinity to the arrays. Therefore, rural-residential viewers that are concurrently within LSZ Zone 1 Agricultural and Distance Zone 1 may have a higher probability to view the solar arrays, however, existing topography and/or forested vegetation (LSZ Zone 2 Forested) found in between these zones, as well as proposed landscaping, may diminish views to the Facility. Photo-simulations representative of Distance Zone 1 are provided as VPs 9, 31, 48, and 83 (see Attachment 4 of the VIA). These simulations are demonstrative of variable visibility to the solar arrays, however, a there is a substantial amount of Distance Zone 1 that does not support views to the solar panels (approximately 10 square miles). To reduce the visual appearance of the Facility, vegetative landscaping is proposed around the security fencing of the Facility to minimize visibility where existing vegetation is unavailable, as a result, visibility within Distance Zone 1 and LSZ Zone 1 Agricultural will likely be reduced as the landscaping matures and attains heights comparable to the solar panels.

Contrary to Distance Zone 1, Table 8-5 shows that 5.76% of solar panel visibility was predicted within Distance Zone 2. Given that LSZ Zone 1 Agricultural contains the highest concentration of predicted solar array visibility (16.62% of a total of 18.83%), visibility conditions to the solar arrays become elevated when in LSZ Zone 1 Agricultural and Distance Zone 2. As shown in the viewshed

analysis (see Figure 3 of Attachment 2 of the VIA), the largest occurrence of solar array sightings in Distance Zone 2 and LSZ Zone 1 is found in rural upland, due north of the Mohawk River. The VP 62 photo-simulation is representative of this broad area and illustrates that even though visibility is predicted, the general character of the existing landscape remains dominant where only small forms and colors comprising the solar arrays are noticed. Consequentially, the results of these above analyses conclude that predicted visibility of solar arrays within Distance Zone 2 is anticipated to be relatively minor.

Table 8-4. Percent Visibility of Arrays within LSZs in the 2-Mile VSA

LSZ	Total LSZ Square Miles	LSZ Square Miles of Visibility	% Visibility within LSZ	% Visibility within VSA
Zone 1 Agricultural	27.7	8.54	30.8%	**16.02%**
Zone 2 Forested	19.6	0.39	2.0%	**0.74%**
Zone 3 Developed	4.2	0.51	12.1%	**0.96%**
Zone 4 Open	1.1	0.11	9.5%	**0.20%**
Zone 5 River Corridor	0.6	0.14	23.9%	**0.27%**
Total	**53.33**	**9.70**	**-**	**18.19%[1]**

[1]7.22% of the 18.19% total visibility in the VSA occurs on lands belonging to participating landowners while 10.97% of total visibility in the VSA falls within land belonging to non-participating landowners.

Table 8-5. Percent Visibility of Arrays within Distance Zones in the 2-Mile VSA

Distance Zone	Total Area Comprising Distance Zone Square Miles	Visibility Within Distance Zone Square Miles	% Visibility Within Distance Zone	% Visibility Within Full VSA
Zone 1 0-0.5 Miles	16.89	6.63	39.28%	**12.43%**

Table 8-5. Percent Visibility of Arrays within Distance Zones in the 2-Mile VSA

Distance Zone	Total Area Comprising Distance Zone Square Miles	Visibility Within Distance Zone Square Miles	% Visibility Within Distance Zone	% Visibility Within Full VSA
Zone 2 0.5-2.0 Miles	36.44	3.07	8.43%	**5.76%**
Total	**53.33**	**9.70**	**-**	**18.19%**[1]

[1]7.22% of the 18.19% total visibility in the VSA occurs on lands belonging to participating landowners while 10.97% of total visibility in the VSA falls within land belonging to non-participating landowners.

(3) The Visibility of Above-Ground Ancillary Structures, Interconnections and Roadways to be Constructed within the Facility

The Facility will require interconnection to the existing electrical grid for purposes of distributing generated renewable energy. The interconnection will necessitate a collection substation, a point of interconnection (POI) switchyard and two transmission structures (collectively referred to as "POI components"). This interconnection is located near the centroid of the Facility Site, between Rappa Road and Hilltop Road, adjacent to the existing NYPA Transmission Line #352. A second viewshed analysis (see Figure 4 of Attachment 2 of the VIA) was prepared to evaluate potential visibility of the POI components. Due to the noncontiguous form of the solar array layout and the magnitude of the VSA, the delineated solar array distance zones are inapplicable to the POI components and if used, would provide unsubstantiated visibility results. Therefore, a discrete set of distance zones were applied to the POI components using Distance Zone 1 and 2 parameters. The designated distance zones are mapped and illustrated in Figure 4 of Attachment 2 of the VIA. Associated methodology used to prepare the viewshed is further elaborated in Section 7.1 of the VIA.

The viewshed results of the POI components viewshed indicated that 10.25% of potential visibility may occur within the VSA. As shown in Table 8-4, Distance Zone 1 is responsible for 3.83% of potential sightings. As shown in the viewshed analysis if the POI components (see Figure 4 of Attachment 2 of the VIA), most pronounced views in Distance Zone 1 are limited to the immediate vicinity of the site, specifically, from a confined section of Rappa Road and Hilltop Road. LOS Profile L1 and photo-simulation VP 31 were prepared from the subject roads (see Attachment 4

of the VIA). The findings of the L1 LOS conclude that collection substation components consisting of an a-frame takeoff structure and bus equipment will be momentarily distinguishable above proposed landscaping. Under this viewing circumstance, local motorists may experience a partial fleeting view when passing by. A single resident on Rappa Road near the L1 LOS trajectory would experience this viewing condition under a longer duration, however, this resident is also a participating landowner. Two other residences found immediately south on Rappa Road may experience partial filtered views to taller POI components (a-frames, lighting masts, etc.) through a few existing tree hedgerows and proposed landscaping. As portrayed in the VP 31 simulation from Hilltop Road, views to the substations are partially filtered by an existing tree hedgerow. One residence is located 220 feet southwest of the photo location and may experience a similar perspective, however most residents in this general area will receive landscaping Type 1 coverage to moderate views to the POI components.

In Distance Zone 2, POI components were predicted to be discernible within 6.42% of the VSA. In general, the focus of the potential visibility is isolated to rural upload north of the Mohawk River, approximately 2.75 to 5 miles in distance. Given that the tallest POI components consist of two proposed transmission structures (140-foot height), lighting masts and a-frame takeoff structures (90-foot height), most visibility in Distance Zone 2 is anticipated to be a result of these structures. As mentioned, the Facility will interconnect to existing NYPA Transmission Line #352, which is adjacent to the POI components. As shown in several photographs obtained from Distance Zone 2 that face the direction of the POI components (VPs 30 and 34; see Facility Photolog of Attachment 3 of the VIA) views to the existing NYPA Transmission Line #352 are mostly abundant within the VSA, but the overall appearance of the existing structures (approximately 150 to 200-foot height) are greatly diminished. Therefore, from Distance Zone 2, sightings of the tallest POI components will be subordinate to the presence, scale, and visual dominance of the existing NYPA Transmission Line #352 and will likely be imperceivable in contrast to the dominating characteristics of the NYPA transmission line.

Table 8-6. Percent Visibility of the Collection Substation, POI Switchyard, and POI Transmission Structures within VSA

Distance Zone	Total Area Comprising Distance Zone Square Miles	Visibility Within Distance Zone Square Miles	% Visibility Within Distance Zone	% Visibility Within Full VSA
Zone 1 0-0.5 Miles	1.00	0.51	51.07%	**3.83%**
Zone 2 0.5-2.0 Miles	12.40	0.86	6.93%	**6.42%**
Total	**13.40**	**1.37**	**-**	**10.25%**

(4) Appearance of the Facility Upon Completion

Photo-simulations were prepared to accurately illustrate the anticipated appearance of the Facility upon completion. These simulations generally show as expected, limited or fuller proximal and distant views of the Facility that predominantly appear much lower than surrounding tree heights that some but not all views might interrupt the horizon line. The photo-simulations are further discussed in Section 8(a)(6) below.

The proposed aboveground components to be installed ware "visually" assessed to meet the objectives of the VIA. Each proposed Facility component evaluated in the VIA is described and defined as follows:

Solar Arrays: For the purposes of collecting solar energy, the Applicant intends to use a solar module comparable to the Tiger Neo N-type 72HL4-BDV bifacial module. This module's appearance can be described as a rectangular form that resembles a dark blue checkered texture. This module will be affixed to a tracker racking system similar to the NX Horizon Single Axis Tracker. This racking system is comprised of non-reflective grey metallic components such mounting piles, metal framing, and rails. A specification sheet for the module and racking system is included as Appendix 5-4 in Exhibit 5. The maximum height of the solar array panels used in the VIA is set at 10 feet from finished grade, inclusive of the racking system. The height specification is a conservative value that is implemented to account for future unknown manufacturer changes that may result in changes to the solar array's maximum height.

Inverters: Inverters will be located within the Facility Site. To the extent practicable, inverters will be interspersed throughout the centroid areas of the solar arrays to obscure their appearance. Their purpose is to convert direct current (DC) electricity generated by the solar modules into AC electricity. Cables from the solar modules are run to the inverters using an aboveground cabling system or underground lines. From the inverters, underground collection lines convey electricity to the Facility collection substation and ultimately to the existing electric transmission system. The Applicant intends to use a SMA Medium Voltage Power Station, or similar. A specification sheet for these inverters is included in Appendix 5-4 of Exhibit 5. The inverter will support a 10.5-foot maximum height, a 4.7-foot width, and a 19.9-foot length. As shown in the inverter specification cover, the enclosed components are compartmentalized within a metal frame. The material colors of the inverter will be predominantly gray; however, one enclosure will be surfaced in an off-white material finish.

Collection Substation: The collection substation will be located between Rappa Road and Hilltop Road, adjacent to the existing NYPA Transmission Line #352. Within the substation, a step-up transformer will increase the voltage from 34.5 kilovolts (kV) to 345 kV for interconnection. The substation utilizes 1.80 acres of rural/open land and will be located adjacent to solar panels in the center portion of the Facility. Access to the substation will be available via a new access road from Hilltop Road. A single 90-foot a-frame takeoff structure at the collection substation will facilitate a 100-foot overhead cable connection to the existing NYPA Transmission Line #352. Two 90-foot standalone lighting masts will be centrally positioned within the substation. A variety of equipment with lessor heights (ranging approximately 21 to 35 feet) will support the collection substation and include, but is not limited to switches, breakers, bus work, transformers, and a control house. In general, the color of the substation will be gray, and the control building facade will consist of “Ash Grey” interlocking wall panels. Section drawings and profiles of the collection substation can be found in Plan 7B of Attachment 7 of the VIA (Collection Substation and POI Switchyard Plan & Profile Drawings and Lighting Plan). The compete set of plans and sections of the substation are available in Appendix 5-1 of Exhibit 5).

POI Switchyard: Electricity from the collection substation will be routed immediately east to the POI switchyard, located between Rappa Road and Hilltop Road. A single access road will be available from Rappa Road. Three 90-foot h-frame takeoff structures are proposed for the switchyard: one within the western interior of the switchyard will collect

transferred electrical power from the collection substation, and two takeoff structures will route 229.5 feet of overhead conductors to the two proposed POI transmission structures (see below; Transmission POI) where the interconnection is completed immediately north of the POI switchyard. There are two standalone lighting masts located on the southern portion of the footprint, both are proposed with heights of 90 feet. Several components with lower heights between 13 and 40 feet will comprise the POI switchyard. These components are identified as breakers, switches, bus work, control building, etc. The total area of the POI switchyard is approximately 3.6 acres; sectional drawings and plans of this switchyard can be reviewed in Plan 7B of Attachment 7 of the VIA as well as in Exhibit 5. The appearance of the switchyard will be gray (galvanized steel), and the control building's facade will be comprised of "Ash Grey" interlocking wall panels.

POI Transmission Structures: Two POI transmission structures are proposed to facilitate interconnection from the Facility to the existing NYPA Transmission Line #352. The new transmission structures will comprise of two new poles, surfaced with self-weathering steel (brown), in a dead-end configuration (approximately 140 feet in height). Initiating at two POI switchyard takeoff structures, overhead cabling spanning 229.5 linear feet will be routed to the new structures where interconnection is completed. Plans and sections of the transmission structures and associated transmission lines are available in the Substation and POI Switchyard Plan & Profile Drawings and Lighting Plan (Plan 7B of Attachment 7 of the VIA and Exhibit 5).

Access Roads: New permanent access roads are proposed within the Facility Site. These access roads are predominantly gravel-surfaced and 20 feet wide, however very limited sections will be impervious and typically occur at the construction entrance by the existing roadways. When construction is completed, the access roads will provide a point of access for maintenance workers and authorized personnel.

Fencing: Security fencing for the collection substation and POI switchyard will be incorporated as required per regulatory standards. This fencing will consist of a 7-foot, galvanized chain-link fence with a one-foot-long extension arm for attachment of barbed wire, resulting in a total fence height of 8 feet (see Appendix 5-2).

Surrounding all other Facility components, fencing will consist of woven wire fencing with evenly spaced galvanized (gray) metal posts. This fencing shall measure a total height of 8 feet above ground level.

Although not considered an aboveground visual component, buried collection lines are proposed in lieu of overhead structures to avoid additional potential visual impacts, which is further defined as follows.

> **Underground Electric Collection System:** The 34.5 kV collection lines will connect the solar arrays with the Facility substation for delivery to the electric grid. All medium voltage collection lines will be installed underground. Specific installation methods, as well as collection line arrangement, are shown on the Design Drawings (Exhibit 5, Appendix 5-1).

(5) Lighting and Similar Features

For the Facility, light fixtures are proposed within the substation and POI switchyard. The Substation and POI Switchyard Plan & Profile Drawings and Lighting Plan (see Plan 7B of Attachment 7 of the VIA) illustrates the proposed positions, orientation, and tilt angle of the light fixtures. As a result, the plan indicates contour candela mapping as casted from each light source. All light fixtures at each substation are purposed for security, safety, and maintenance purposes and will remain off during regular operation. Lighting will be manually engaged for intermittent operations, maintenance, or emergencies.

Lighting has been designed to conform to the National Electrical Safety Code (NESC) to provide a minimum of 2 foot-candles around substation switches while managing and eliminating unnecessary light trespass beyond the POI switchyard and collection substation. Light fixtures will be mounted at minimum heights of 9 feet at the control house enclosures and a maximum height of 35 feet at the lightning masts and a-frame takeoff structures at the POI switchyard. Full cut-off fixtures and task lighting will be used wherever feasible, as specified in the Lighting Plan. One candela is equivalent to one lit candle. A minimal 0.1 candela occurs at the extents of the light sources. The lighting plan addresses the following, as applicable:

- As mentioned, manually activated lighting will be installed and available at the POI switchyard and collection substation for intermittent operations, maintenance, or emergencies. Lights are located on such structures as the control house enclosure, lightning masts, switches, and takeoff structures. Most light fixtures will be oriented downward to minimize potential impacts to surrounding receptors. Light fixtures with tilt angles are positioned at the control enclosure and one POI switchyard takeoff structure, however, the control enclosure's light fixtures contain full-cut off shielding and a minimal

output of 209 lumens, and the single takeoff structure's light fixture is oriented to the southeast interior of the switchyard. As shown in Plan 7B of Attachment 7 of the VIA, the lighting plan schematic demonstrate the lighting area needs, proposed lighting arrangement, and illumination levels to sufficiently provide safe working conditions at the substation and POI switchyard site.

- Should task lighting be implemented during the occurrence of nighttime maintenance, lights will be directed to the ground and/or work areas to confine the total maximum nighttime lighting output. Temporary work area lighting will be shut down at night, unless required for security purposes.
- The Lighting Plan was developed to minimize light creep and runaway light while meeting lighting standards established by the NESC. The proposed plan also complies with Occupational Safety and Health Administration (OSHA) requirements as proper illumination will be provided for all working spaces around the electrical equipment. All of which has been designed so that control points or persons making repairs will not be endangered by electrical hazards or other equipment.

(6) Representative Views (Photographic Overlays) of the Facility

To develop the photo-simulations, Autodesk 3DS MAX visualization software was used to correctly dimension a Three-Dimensional (3D) model of the Facility into a digital photograph from a select VP location. Engineering specifications, drawings, and plans of the Facility were obtained from TRC's design engineers to facilitate the preparation of a representative 3D model of the Facility. The terrain elevation data (z value) needed to place the panels correctly on the surface of the earth was derived from the Light Detection and Ranging (LiDAR) sources, as noted in Section 7.1.1 of the VIA. Proposed grading elevations were then incorporated into the 3D model. Using the engineering site plan and LiDAR terrain surface data in Geographic Information Systems (GIS), the x, y, z coordinate location of each proposed solar array was obtained and imported with the terrain surface into Autodesk 3DS MAX visualization software. A 3D model of individually proposed solar arrays was then physically constructed according to the proposed solar panel specifications, tilt angle, and proposed racking system. The proposed arrays were modeled as bifacial single-portrait trackers with a height of 10 feet above finished grade with the array axis oriented in a north-south manner. The simulation model was further developed to position the viewer at a selected vantage point. For example, at any given vantage point the visualization software is capable of providing and adjusting a camera view that matches that of

the actual photograph. From the field photography effort, the documented camera coordinate (x, y, z) positions were entered into the model along with other pertinent camera information. The model was further refined to precisely match the existing photograph by referencing LiDAR point cloud data against the existing landscape features identified within the photograph.

Subsequently, simulations with landscaping were produced from a computer-aided design (CAD) version of the proposed Landscaping Plan. The Landscape Plan CAD files were produced in Autodesk Civil 3D and obtained directly from the Facility Landscape Architect, then imported into the Autodesk 3DS MAX modeling environment. Each proposed tree and shrub species was then translated and built into the 3D environment. Facility growth rates and heights of each species were then assigned using conservative values (see Table 8-10).

Autodesk 3DS MAX is capable of depicting physically accurate shadows and highlights on the model (Preetham et al. 1999). As such, during the field visits, each photograph recorded information such as geographic position, time, and date. These data typically exist as electronic information embedded in the respective digital photograph files. Subsequently, this information can be used to calculate the sun angle within the simulation software in order to represent accurate lighting conditions for the precise time of day and year that the photograph was captured.

In a similar manner, the above methodology was implemented to build the POI components with the specified dimensions outlined in Section 7.1.1 of the VIA.

To demonstrate a range of post-construction scenarios, the following simulations are provided for each simulated VP:

- Representative Simulation with 5 Year Landscaping (Leaf Off)
- Representative Simulation with 5 Year Landscaping (Leaf On)

The photo-simulations of the Facility are provided in Attachment 4 of the VIA. Please refer to Section 7.3 (Photographic Simulations) and Section 10.2 (Photo-simulation and LOS Results and Discussion) of the VIA for detailed discussion of the photo-simulations.

(7) The Nature and Degree of Visual Change from Construction of the Facility and Above-Ground Interconnects

Visibility of construction operation will be momentary in nature and will vary per location, however, most temporary visibility of construction activities will be focused to areas in and around the

vicinity of the Facility Site. Construction visual contrasts would vary in frequency and duration throughout the course of construction. There may be periods of intense activity followed by periods with less activity and associated visibility would vary in accordance with construction activity levels. The construction phase of the Facility is temporary and is anticipated to expend up to 12 months. Please refer to Exhibit 16, Effect on Transportation, for details regarding road usage and frequency associated with Facility construction.

The summary of major construction undertakings includes the following actions:

- Building/upgrading/repairing access roads and local roadways (as applicable),
- Constructing temporary laydown areas,
- Cut and fill grading and earthwork,
- Removing a limited amount of vegetation from areas of construction,
- Delivery and transportation of components, materials, and equipment,
- Installation of solar arrays (driving piles, installing solar racking and modules),
- Constructing other Facility components (e.g., retention basins, substation, overhead transmission facilities, security fences),
- Construction of underground collection lines (trenching and/or Horizontal Directional Drilling [HDD]).

During construction, there will be an increase in vehicular traffic, equipment, and workers seen within the Facility Site and the immediate surrounding area. Construction may result in the temporary increase of dust; however, dust control measures are proposed as referenced in the guidelines provisioned in the Civil Notes of General Environmental Restrictions, please review Appendix 5-1 of Exhibit 5, Design Drawings, of the Application for more information.

Construction of the Facility Site is expected to have a peak workforce of 88 construction workers during the estimate 12-month construction period, this equates to 88 daily trips consisting of Federal Highway Administration (FHWA) vehicle classification 1, 2, and 3 that may be arriving and/or departing the Facility Site, assuming individual travel accommodations. In addition to construction workforce trips, construction equipment and material delivery associated with constructing the Facility is estimated to comprise a total of 6,180 trips occurring throughout the 12 months of construction at an anticipated 25 trips per day. Approximately 5,228 of the 6,180

material/equipment trips are comprised of aggregate trucks transporting excavations (2,614 inbound trips and 2,614 outbound trips) to focused areas of the Facility Site due to cut and fill grading work, however, no additional fill material will be transported into the Facility Site. The discussion on construction vehicle types, number of trips, and construction activities is outlined in greater detail in Exhibit 16 Effect on Transportation.

Construction activities are proposed to be limited to 7 a.m. to 8 p.m. Monday through Saturday.

(8) The Nature and Degree of Visual Changes from Operation of the Facility and Above-Ground Interconnects

The information in the VIA provides a comprehensive visual assessment of the extent and significance of potential impacts associated with the Facility. The detailed summary below provides an overview of the VIA findings with supportive computerized analyses of the Facility and existing landscape. Section 10 of the VIA should be consulted to obtain more information about the in-depth discussions of computerized analysis results. The following provides a summary of findings and impacts related to the Facility.

1. As indicated by the solar array viewshed results (see Figure 3 of Attachment 2 of the VIA), a total of 18.83% of limited predicted visibility is found within the VSA, in contrast, 81.17% of the VSA will not discern the solar arrays. In general, predicted visibility may constitute a view of a solar array at a proximal distance, or it may only be a small fragment of the top of a solar panel that is severely screened. Therefore, the mere presence of predicted visibility should not always be indicative of adverse visual impact. No areas within the VSA are predicted to have full visibility of the Facility's solar arrays. Full visibility is defined as an unobstructed view to the full extent of the Facility.
2. As mentioned in Section 4.0 and 5.0 of the VIA, distance zones and LSZs were identified within the VSA as provisioned in 16 NYCRRR Section 1100-2.9(b)(1). Several LSZs were identified and delineated within the VSA as Zone 1 Agricultural, Zone 2 Forested, Zone 3 Developed, Zone 4 Open, and Zone 5 River Corridor (see Figure 2 of Attachment 2 for a map depicting the LSZs within the VSA). According to Table 8-4, LSZ Zone 1 Agricultural is prevalent within the VSA (approximately 52% of VSA), where 16.62% of a total of 18.83% of solar panel visibility is predicted to occur. Given that 7.22% of VSA visibility occurs on agricultural lands belonging to participating landowners, it is then reasonable to assume that approximately 9.4% of (16.62%) LSZ Zone 1 Agricultural visibility encounters

non-participating landowner parcels. While LSZ Zone 1 is abundant within the VSA, Zone 2 Forested comprises less with approximately 36.8% of land in the VSA where only 0.75% visibility is predicted. The remaining LSZ Zone 3 Developed (8% of land in VSA), Zone 4 Open (2.1% of land in VSA), and Zone 5 River Corridor (1.1% of land in VSA) are smaller contributors to the landscape where only 1.46% of solar panel visibility may occur in sensitive locations, such as developed areas (villages, residential, commercial, etc.), open areas (parks, cemeteries, greenspace, etc.) and the Mohawk River (river corridor).

3. Distance Zone 1 contains the highest percentage of potential solar array visibility (12.43% of the VSA), which generally correlates with LSZ Zone 1 Agricultural (16.62% of predicted visibility). A significant portion of Distance Zone 1 solar array sightings occur when in the immediate vicinity to the arrays (0 to 0.5-mile). Therefore, rural-residential viewers that are concurrently within LSZ Zone 1 Agricultural and Distance Zone 1 may have a higher probability to view the solar arrays, however, existing topography and/or forested vegetation (LSZ Zone 2 Forested) found in between these zones, as well as proposed landscaping, may diminish views to the Facility. Contrary to Distance Zone 1, Table 8-5 of the VIA shows that 5.76% of solar panel visibility was predicted within Distance Zone 2. Given that LSZ Zone 1 Agricultural contains the highest concentration of predicted solar array visibility (16.62% of a total of 18.83%), visibility conditions to the solar arrays become elevated when in LSZ Zone 1 Agricultural and Distance Zone 2. As shown in the viewshed analysis (see Figure 3 of Attachment 2 of the VIA), the largest occurrence of solar array sightings in Distance Zone 2 and LSZ Zone 1 is found in rural upland, due north of the Mohawk River where the VP 62 photo-simulation confirmed views would result in minimal contrast due to the diminishing effects of distance in Distance Zone 2.

4. The proposed solar arrays will not be distinguishable from the Village of Canajoharie, nor the communities of Sprakers, Rural Grove, Root Center, Browns Hollow, and Mapletown. While solar arrays were predicted in very limited and remote areas within the Village of Palatine Bridge and community of Lykers, the minimal effects of viewing a small portion of the Facility at relatively large distances results in negligible impact. The highest concentration of predicted solar array visibility predominantly occurs within the communities of Currytown, Flat Creek in Distance Zone 1 and the broader rural area of Mckinley in Distance Zone 2. As illustrated in LOS profile L2 and photo-simulation VP 62 of Attachment 4, Facility views from the broader Mckinley area in Distance Zone 2 would render a minimal visual change. While the Facility is expected to be most discernible in

the Communities of Flat Creek and Currytown, the viewing population is relatively low (2020 Census Population Estimates of 134 and 135, respectively; see Table 8-1). The Applicant has proposed a comprehensive landscaping plan, as well as other mitigation strategies to minimize Facility impact to the maximum extent practicable (See Section 8(d)(8) and Attachment 7 of the VIA). Further, not all viewers or residences of these communities will receive extensive views to the solar arrays as existing topography, tree forests, and proposed landscaping will collectively obscure or diminish direct line of sights.

5. The solar array viewshed visibility analysis presented in Figure 3 of Attachment 2 indicated that 29 out of 68 visual resources (see Table 8-7) received predicted visibility: 13 of the 29 visible resources were proposed by local or county constituents, the remainder of visible resources (16) are recognized by state and/or federal agencies, which comprise two National Register of Historic Places (NRHP) listed historic districts, two NRHP listed sites, and four NRHP eligible sites. A description of each visual resource with potential views to the Facility are provided in Section 10.1.1.2 and 10.1.1.3.

6. Overall, 23 of the 29 visual resources with potential visibility receive little, if at all, visual effect due to the Facility (see Section 10.1.1 of the VIA for a thorough discussion of each resource). The remaining six visual resources are in proximation to the Facility and may experience some degree of visual change and are identified as:

    - **NRHP Eligible Currytown Reformed Church (USN 05709.000071**): Currytown Reformed Church is found on NY162 in the community of Currytown. As indicated in the viewshed results (Figure 3 of Attachment 2 of the VIA), solar arrays to the south southwest may be distinguishable at a distance of 360 feet from limited areas of the subject property, specifically, in portions of the southwest parking lot and lawn area and northeast lawn. Visitors to the church will not discern solar arrays when facing north toward the church, however, stationary viewers facing south may have an opportunity to glance at the Facility through swaths of existing vegetation and proposed landscaping. As shown in VP 75 of Attachment 3 of the VIA, the presence of tree and scrub/shrub vegetation along Lasher Creek and within the nearby agricultural field, as well as proposed landscaping would soften the limited view of the solar arrays, especially during warmer seasons when foliage is established. The Currytown Reformed Church is eligible for listing in the NRHP under Criterion C in the area of architecture and its character defining features

include its exterior architectural elements. The setting beyond the church's tax parcel boundaries does not contribute to the property's significance.

- **Canajoharie Senior High School & Athletic Fields:** VP 83 (Canajoharie Senior High School Athletic Fields) Part 1 average visual contrast rating conveys that a weakly moderate visual change may occur, however, the panelist's consensus is that proposed 5-year landscaping contributes to a reduction the Facility's visual effect. VP 85 was prepared from greenspace adjacent to the school building and received a Part 1 average rating of weak visual contrast, this is likely a result of the reduced visual scale of the Facility due to the distance between viewer and solar arrays. The Part 2 Viewpoint Sensitivity average rating for VP 83 resulted in a weak score, indicating that fewer viewers may experience sensitivity, however, VP 85 received a Part 2 Viewpoint Sensitivity score of weakly moderate which may be contributed to the observer's location near the school building The Part 3 ratings of existing scenic quality was also rated as weakly moderate for both VPs, suggesting that the existing character of view is typical for the area. A variety of viewer types will utilize the fields during warmer seasons when leaf-on foliage is present, such as visitors and residents, consisting of recreational users, athletes, spectators, or school workers. Those athletes or recreational users conducting sport activities are not expected to focus on eastward views to the facility, but on the pursued activity by itself. Possible glimpses or brief views to the eastern solar arrays may occur, however, recreationalist and athletes may dismiss this view as full attention is supplied to the partaken activity. However, as noted by the VP 85 simulation prepared in proximity to the high school building, as viewing distance increases, the solar arrays become subordinate to larger features of the local viewing environment and therefore will not demand immediate attention of observers.

- **Carlisle Road:** Two photo-simulations were prepared and evaluated by the rating panel from Carlisle Road (AADT 306). VP 9 (Carlisle Road from the community of Flat Creek) received the second highest visual contrast Part 1 rating with an average score of 16 out of 27, indicating moderate visual contrast. While vegetative landscaping is proposed within the extents of the view, it does treat this particular vantage point due to the elevated position and setback distance of the solar array. Part 2 Viewpoint Sensitivity obtained an average rating of weakly

moderate due to potential views from adjacent dwellings or motorists in conjunction to the presence of the county scenic byway. However, the Part 3 average scenic quality rating concludes that this perspective is weak/weakly moderate, the scenic rating results suggest that some places along the scenic byway may not contain scenic attributes. Proposed conditions in VP 9 may not be apparent to all motorist due the factor of motion and the short window of opportunity to view the arrays between residential homes and structures. A few residents residing near this section of Carlisle Road may experience a longer duration of view when facing south-southwest.

- VP 48 (Intersection of Carlisle Road and Mahr Road, near the community of Flat Creek) received a Part 1 visual contrast rating of weakly moderate which is attributed to the proposed 5-year landscaping. VP 48 was rated as weakly moderate under Part 2 Viewpoint Sensitivity, which is a result of the panelists indicating the location contains a low number of potential viewers, while also recognizing the presence of the Montgomery County Scenic Byways. The Part 3 Scenic Quality evaluation of the existing conditions indicated that VP 9 contains weakly moderate scenic character. These ratings suggest that existing scenic quality of VPs 9 and 48 are not compelling in context to the Montgomery County Scenic Byways.
- The conclusions of the above summarized analyses suggests that visual contrast may be variable when traversing on Carlisle Road due to the varying effects of existing vegetation and topography that may promote or diminish visibility. The visual impact rating effort indicated that VP locations on Carlisle Road in vicinity to the Facility may not exhibit scenic characteristics, which suggests the Facility does not disturb the existing scenic integrity of the county scenic byway.
- **NRHP Eligible Rappa Road Cemetery (USN 05709.000152):** The results of LOS Profile L1 suggest that very few viewers (AADT 108; Rappa Road) visiting the NRHP eligible Rappa Road Cemetery may distinguish taller components of the POI switchyard and collection substation due to proposed landscaping with 5 years or growth, however viewers would need to face east to view the private cemetery from Rappa Road (the public right-of-way), in the opposite direction of the visible Facility (west). The Rappa Road Cemetery is eligible for listing in the NRHP under Criterion A in the area of social history and early settlement of the Town of

Canajoharie. Although the project will be visible at certain discreet locations, this will not diminish the property's ability to convey its historic significance.

- **Hilltop Road:** VP 31 (Hilltop Road, Montgomery County Scenic Byway) obtained the highest Part 1 visual contrast rating with an average score of 22.2 out of 27. This represents a moderately strong visual contrast resulting from distinct Facility characteristics consisting of unobstructed solar panels within the foreground and a partially filtered sighting of the POI substations. The average Part 2 average rating of viewpoint sensitivity was rated as weakly moderate, meaning some viewer sensitivity due to long-durational views from rural-residences in combination with the road's Montgomery County Scenic Byway status. Panelists rated the Part 3 scenic quality of the existing conditions as weakly moderate, this suggests that the route may contain segments absent in significant scenic attributes. Further, it is important to note that Type 1 landscaping is proposed to screen views from adjacent rural-residential receptors on Hilltop Road and therefore will likely receive a reduction in visual contrast, however, one residential dwelling located behind the VP 31 observer may experience a similar perspective to what is presented in the simulation. While partial views to the Facility may be available on limited sections of Hilltop Road in Distance Zone 1, the relative number of local travelers or commuters (AADT 137) passing by the Facility would be relatively low.
- **Snowmobile Trails C7P, S72, S72A, and C7H:** The C7P, S72, S72A, and C7H trails have received proposed rerouting for trail sections that directly traverse through solar array locations (see Appendix 5-1 for the rerouting). For these reasons, most visibility will occur when passing a solar array in delayed succession. In this manner, not all of the trails' extents will contain visibility, but will rather be punctuated by spans of existing landscape and brief segments of foreground views to the solar arrays. For example, between Hilltop Road and Flat Creek Road, snowmobilers may travel 1.5 miles before encountering the Facility, in other instances, viewers from the snowmobile trails may visually experience closer intervals of solar arrays (e.g., S72A near Lincoln Road and Carlisle Road; 0.12-mile of length between each passing of a solar array group). In some trail settings, such as the C7H trail, a vast portion of the trail (in Distance Zone 2) will not sustain views of the Facility but will pass two solar array groups within Distance Zone 1.

7. A professional rating panel was assembled to evaluate Facility contrast, viewpoint sensitivity, and existing scenic quality for each developed photo-simulation. In addition to the VPs 9, 16, 23, 31, 48, and 83 discussed above, the following simulated locations were also rated:

   VP 21 (Currytown Road near community of Currytown) received a Part 1 visual contrast rating of weakly moderate. The VP 21 ratings are likely a result of Facility's diminished visual effect when in Distance Zone 2. VP 21 was rated as weakly moderate under Part 2 Viewpoint Sensitivity, which is a result of the panelists indicating a low number of potential viewers travel the road, while also recognizing the presence of the Montgomery County Scenic Byway (Currytown Road). The Part 3 Scenic Quality evaluation of the existing conditions indicated weakly moderate existing scenic character. This rating suggests that existing scenic quality of VP 21 is not compelling in context to the Montgomery County Scenic Byway.

   VP 16 (Conway Road) obtained a Part 1 average visual contrast rating of 14.8 out of 27, meaning a moderate amount of visual contrast due to the Facility's appearance, however, the panelists rated the viewpoint sensitivity and scenic quality of the existing view as weak, which panelists indicate is a result of the low volume of potential viewers, absence of visual resources, and commonness of the agricultural setting as compared to the region.

   VP 23 (Latimer Hill Road) also obtained one of the lowest Part 1 average contrast rating that consists of a weak score, meaning little visual contrast. This score is associated with the Distance Zone 2 views to the Facility where the appearance of the solar arrays is naturally minimized as a consequence of distance.

   VP 62 (South Gray Road) is listed as having the lowest Part 1 average contrast rating of very weak, while the Part 3 existing scenic quality was rated as moderate. Given that Part 2 Viewpoint Sensitivity was rated as weak, and the visual contrast of the Facility is rated as very weak, this emphasizes that the Facility will likely have a negligible visual effect from locations north of the Mohawk River.

8. The viewshed results of the POI components viewshed indicated that 10.25% of potential visibility may occur within the VSA. As shown in Table 8-6, this visibility is present within Distance Zone 1 (3.83%) and Distance Zone 2 (6.42%). As shown in the viewshed analysis if the POI components (see Figure 4 of Attachment 2 of the VIA), most pronounced views

will be immediately adjacent to the site, this equates to sightings of the POI components from a confined section of Rappa Road and Hilltop Road, where LOS Profile L1 and photo-simulation VP 31 was prepared (see Attachment 4 of the VIA). The findings of the L1 LOS conclude that collection substation components consisting of an a-frame takeoff structure and bus equipment will be momentarily distinguishable above proposed landscaping when passing the site. Two other residences found immediately south on Rappa Road may contain partial filtered views to taller POI components (a-frames, lighting masts, etc.) through a few tree hedgerows and proposed landscaping. As portrayed in the VP 31 simulation from Hilltop Road, views to the substations are partially filtered by an existing tree hedgerow. One residence is located 220 feet southwest of the photo location and may experience a similar perspective, however most residents in this general area will receive landscaping Type 1 coverage to moderate views to the POI components.

In Distance Zone 2, POI components were predicted to be discernible within 6.42% of the VSA. In general, the focus of the potential visibility is isolated to rural upload north of the Mohawk River, approximately 2.75 to 5 miles in distance. Given that the tallest POI components consist of two proposed transmission structures (140-foot height), lighting masts and a-frame takeoff structures (90-foot height), most visibility in Distance Zone 2 is anticipated to be a result of these taller structures. As mentioned, the Facility will interconnect to existing NYPA Transmission Line #352, which is adjacent to the POI components. As shown in photographs obtained from Distance Zone 2 (VPs 30 and 50; see Facility Photolog of Attachment 3 of the VIA) views to the existing NYPA Transmission Line #352 are abundant within the VSA, but the overall appearance of the existing structures (approximately 150 to 200-foot height) are greatly diminished. Therefore, from Distance Zone 2, sightings of the tallest POI components will be subordinate to the presence, scale, and visual dominance of the existing NYPA Transmission Line #352 and will likely be imperceivable in contrast to the dominating characteristics of the existing NYPA transmission line.

9. A total of three LOS profiles (L1, L2, and L3) were prepared within the VSA (see Attachment 4 of VIA). Each LOS profile was performed from discrete state aesthetic resources where Facility visibility was predicted and terminates at the nearest discernible Facility component. Each LOS profiles may contain several pertinent sight lines from other state resources. The LOS profiles L2 and L3 illustrate that nearest solar panels are obstructed by existing topography and vegetation, and that a very limited section of solar

panels may be discernible from the Mohawk River Historic District, NY5 Revolutionary Scenic Byway, and NRHP eligible “House” (USN 05708.000250) due to distances over 2.46 miles; However, the sighting of the arrays would generally be underwhelming (see VP 62 photo-simulation of Attachment 4 of the VIA for a representative example of how a 1.7-mile viewing distance diminishes Facility contrast).

The results of LOS Profile L1 suggest that very few viewers visiting the NRHP eligible Rappa Road Cemetery (AADT 108; Rappa Road) may distinguish taller components of the POI switchyard and collection substation, however viewers would need to face east to view the private cemetery from Rappa Road, in the opposite direction of the visible Facility (west). LOS Profile L1 as indicates that traffickers along Hilltop Road, a Montgomery County Scenic Byway) will likely experience a brief view to a foreground solar array.

10. A cumulative effects analysis was performed to several proposed and existing renewable solar power projects per 16 NYCRR Section 1100.2.9 (a). In summary, there are no built or proposed non-Facility solar developments in vicinity to the Facility. The proposed Mohawk Solar project and existing Nexamp Community Solar Farm, located outside the VSA, may be seen with the Facility, such that the observer would be required to discretely view each development in opposite directions. Notwithstanding, the character of the potential view to the Facility from the potential cumulative areas would be insignificant due to the large viewing distances (ranging 2 to 3 miles).

11. The Facility does not have an adverse effect on a known listed scenic vista.

12. The Facility does not damage or degrade existing scenic resources.

13. In 5 years, post-construction of the Facility, the proposed landscape plantings are expected to maturate and greatly reduce the limited amount of predicted solar array visibility (18.92%). The VIA conservatively evaluates the extent and significance of Facility visibility with the assumption that solar arrays will always assume a fixed maximum height, however the Facility leverages tracker and bi-facial panel technology for the solar arrays. The maximum height of a tracker system is sustained for only a short period during daylight hours as the racking makes continuous angle adjustments to follow the sun. Therefore, the panels will not sustain a maximum height and will be less visible at certain times.

14. The Facility does not create a new source of substantial light that would adversely affect nighttime views in the area.

15. The Glint and Glare Analysis evaluated 17 existing roadways and a total of 109 unique buildings that were identified in proximity to the proposed Facility using one and/or two-story receptor heights, depending on the height of the existing building. The following receptors were predicted to receive glare, however, further investigation was applied to each of the affected receptors to determine potential effect as noted below.

    - **Conway Road:** When modeled and accounting for the proposed landscape screening, green glare is identified along a portion of Conway Road from Array 31. A targeted viewshed analysis was conducted for Array 31 accounting for the proposed landscaping vegetation. This viewshed showed that the proposed vegetation assisted in screening the roadway and residence to the north with the only potential visibility occurring at the break in the landscaping located at the entrance to Array 31 from Conway Road; however, the discrete location of visibility between the glare model and viewshed study do not overlap, which suggests that the estimated glare may not be visible from the roadway.

    - **Residence OP13/OP14:** Green glare is estimated to be visible at both receptors of the two-story residence OP13/OP14 for a maximum in a day of 20 minutes from December to January between 10:00 to 11:00 am. These results account for the estimated located of proposed landscaping vegetation along the northern boundary of the Array 39 along with existing vegetation/tree lines located within the area. Following the glare study, a targeted viewshed analysis was also conducted accounting for the proposed and existing vegetation was also conducted to determine the potential visibility of the array area producing glare, as shown in **Attachment 1** of the Glint and Glare report. This targeted viewshed analysis showed that the area was not visible from receptors at the residence of OP13/OP14. This shows that the results of the glare study may be an overestimation of what would be see at the residence as the proposed landscaping and existing vegetation would assist in minimizing or mitigating the view of the array area.

    - **Residence OP21/OP22:** Green glare is estimated to be visible at both receptors of the two-story residence OP21/OP22 for a potential maximum of 95 minutes in a day from the second-floor receptor; however, based on the information presented in

Attachment 1 of the Glint and Glare report, potential daily maximums vary during the estimated glare period. The estimated glare period is from November through January from approximately 12:00 to 2:00 pm. Existing vegetation is located along the southern and eastern boundary of this residence which would assist in minimizing view of this array area from the observer. This is shown in the targeted viewshed analysis, which accounted for the existing and proposed vegetation (subject to the limitations of the viewshed analysis), which indicated a lack of full visibility of the impacting portion of the array at the residence.

- **Carlisle Road:** Green glare is estimated to be visible along a portion of Carlisle Road for a potential maximum of 30 minutes in a day; however, based on the information presented in **Attachment 1** of the Glint and Glare report, potential daily maximums vary during the estimated glare period. The estimated glare period is from November through January from approximately 10:00 to 11:00 am. Existing vegetation and proposed vegetation are located along the eastern boundary of the array area between the array and roadway which would assist in minimizing view of this array area from the observer. A targeted viewshed analysis was conducted from the impacting portion of this array (shown in Attachment 1) and Carlisle Road. Based on this targeted viewshed, the visibility of the array along the impacted section roadway was not noted.

- **Mapletown Road:** Green and yellow glare is estimated to be visible along a portion of Mapletown Road for a potential maximum of 100 minutes in a day; however, based on the information presented in Attachment 1, potential daily maximums vary during the estimated glare period. The glare was estimated to occur from October to early March from 11:00 am to 3:00 pm. However, the limitations of the model may be overestimating potential glare from this array. As noted above, the array is located on variable topography, which would cause variability in heights of panels and simplification of the array's planar footprint in the model, which may impact the glare results. In addition, the typical weather conditions apparent during this period of the year (October to March) would also impact the results in the real world.

Overall, some receptors are predicted to only receive glare during dominant cloudy months during the winter, such that glare does not occur on overcast/cloudy days and is not accounted for in the glare predictions. Other receptors may not be affected by glare due to existing

vegetation and structures, as confirmed by the focused viewshed study in the software. Please refer to the Glint and Glare report (Plan 7C of Attachment 7) for more detailed information and the results pertaining to extent and significance of predicted glare.

(9) The Related Operation Effects of the Facility

A Glint and Glare Analysis presented in Appendix 8-2 was performed to identify any potential glint/glare impacts on nearby residences and roadways. The Glint and Glare Analysis was prepared using ForgeSolar's GlareGauge software; this technology is based on the Solar Glare Hazard Analysis Tool (SGHAT) developed by the Federal Aviation Administration (FAA) in cooperation with the Department of Energy (DOE) and enhanced for glint and glare assessments outside of the aviation industry. The analysis evaluated 17 existing roadways and a total of 109 unique buildings that were identified in proximity to the proposed Facility using one and/or two-story receptor heights, depending on the height of the existing building. The summary of the analysis is briefly discussed in Section 8(a)(8), Section 8(d)(7), and Appendix 8-1. Please refer to the Glint and Glare report for more detailed information (see Appendix 8-2).

(10) Visual Resources Affected by the Facility

Aesthetic resources were compiled within the VSA according to readily and publicly available information consisting of local, county, state, and federally recognized visual resources and/or sensitive sites within the full extents of the VSA. These data were inventoried according to 16 NYCRRR Section 1100-2.9 (b)(4)(ii). Specific data sources consulted to assemble the inventory consisted of publicly available GIS data; town, county, and agency reports; and websites (see Section 8(e), References, for a complete listing of cited sources). Visual resources were also identified during several field investigations for securing VP locations and associated photography. The complete inventory is provided below in Tables 8-7a and 8-7b. Figure 3 of Attachment 2 of the VIA depicts the geographic location of the inventoried resources.

In accordance with 16 NYCRRR Section 1100-2.9 (b)(4), a VIA Survey Request (Information Request) was distributed to stakeholders in February 2024. The details of this information request are further outlined below.

Information Request to Visual Stakeholders (February 2024)

An Information Request was sent to visual stakeholders comprising local municipalities, including local planning representatives, ORES, the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP), and Montgomery County. This engagement provided an opportunity for stakeholders to append additional visual resources to a preliminary inventory of aesthetic resources and/or choose viewpoint locations or add photographs for possible preparation of Facility photo-simulations. Cartographic mapping (see Attachment 2 of the VIA) and a Facility Photolog (see Attachment 3 of the VIA) were also provisioned to facilitate the review of the extent and findings of visibility studies at that point in time. In this request, the Applicant extended an opportunity for stakeholders to discuss the proposed landscape plan (see Appendix 5-2 of Exhibit 5) prior to the submission of the Application.

On August 14, 2023, OPRHP sent a letter through the State Historic Preservation Office (SHPO) Cultural Resource Information System (CRIS) with a formal request to prepare a VIA document to review and evaluate potential impacts to a subset of historic resources outlined in a table embedded within the letter (see Attachment 5 of the VIA). The subject historic resources were appended to Table 8-7b and are denoted accordingly (see footnotes in Table 8-7b) and evaluated herein (see Section 10.1.1.2 for a discussion of each visible resource)

The Town of Canajoharie responded to the request on March 7, 2024, with an attachment outlining several design recommendations and other concerns (e.g., noise) that are unspecific to the assessment of Facility visibility. The attachment suggests that “severe impact” will occur from the Canajoharie High School Athletic Fields, Cunningham Road, Carlisle Road, and Miller Road, but it is unclear whether this impact is related to design, traffic, noise, construction, or wetland/s. The document also states, “[there is] very high visibility impact to the Canajoharie CSD athletic field”. On March 21, 2024, the Applicant convened with the Town of Canajoharie. During this on-site meeting, it was suggested that a photo-simulation be prepared from the Canajoharie Senior High School’s Athletic Fields. As a result, the Applicant prepared two photo-simulations from the school, which are available as VPs 83 and 85 of Attachment 4 of the VIA.

On March 20, 2024, the Applicant also met with the Town of Root for discussions pertaining to the proposed Facility. However, no specific visual assessment requests were made during this time. The Town of Root did not respond to the February 2024 visual survey request, however, in subsequent meetings with the town, VP 16 from Conway Road was recommended for the development of a photo-simulation. The applicant complied with the request and prepared the VP 16 simulation (see Attachment 4 of the VIA).

On February 15, 2024, The Montgomery County Department of History & Archives replied to the visual survey request acknowledging that they would not be able to respond by March 7th. A letter was later transmitted and received on May 20, 2024.

ORES responded to the visual survey request with several additional suggested locations for the potential preparation of photo-simulations. The applicant provided two of these locations as photo-simulations, see VPs 21 and 83 of Attachment 4 of the VIA. Additionally, as requested in the reply, all non-historic (local) cemeteries were appended to the inventory of aesthetic resources (see Tables 8-7a and 8-7b).

Table 8-7a. Inventory of Aesthetic Resources within the 2-Mile VSA

Map ID	Resource Name	Town/Village	Approximate Distance to Nearest Solar Array	LSZ[4]	Federal (F), State (S), County (C), or Local (L) Resource	Potential Visibility[1]
Recreation						
A1	Riverfront Park	Canajoharie	1.1 Miles	4,5	L	No
B1	DEC Boat Launch (Riverfront Park)	Canajoharie	1.17 Miles	5	S	No
C1	Canajoharie Fish and Game Club	Canajoharie	800 Feet	2,4	L	No
D1	Canajoharie Little League Field/Park	Canajoharie	0.52-Mile	3,4	L	No
E1	Wintergreen Park	Canajoharie	0.4-Mile	2,4	L	Yes (Minor)
F1	White Park (NRHP listed and included in Canajoharie Historic District)	Canajoharie	1 -Mile	3,4	F	No
G1	Rural Grove State Forest	Multiple Municipalities	1.54 Miles	2	S	No
H1	Erie Canalway Trail	Multiple Municipalities	0.2-Mile	2,3,4	S	No
I1	New York State (NYS) Bicycle Route 5 (NY5S)	Multiple Municipalities	0.23-Mile	1,2,3	S	Yes

Table 8-7a. Inventory of Aesthetic Resources within the 2-Mile VSA

Map ID	Resource Name	Town/Village	Approximate Distance to Nearest Solar Array	LSZ[4]	Federal (F), State (S), County (C), or Local (L) Resource	Potential Visibility[1]
J1	Various Snowmobile Trails (S72, S72A, S75, S75A, C7P, C7H)	Multiple Municipalities	Various Distances	1,2	S	Yes
K1	Yatesville Falls State Forest	Root	0.6-Mile	2	S	Yes (Minor)
L1	Pangaea Puddle Water Ski Site	Root	1.2 Miles	4	L	Yes (Not in vicinity to recreational areas)
M1	Canajoharie Senior High School & Athletic Fields	Canajoharie	300 Feet	3,4	L	Yes
N1	Canajoharie Middle School, Elementary School, & Athletic Fields	Canajoharie	0.38-Mile	3,4	L	Yes
Scenic Byways						
N/A	Revolutionary Trail (NY5)[3]	Mohawk, Palatine	0.57-Mile	1,2,3,	S	Yes (Minor)
Heritage Corridors						
See Figure 3 of Attachment 2 (Encompasses VSA)	Erie Canalway National Heritage Corridor	Multiple Municipalities	Study area is entirely within	1,2,3,5	F	Yes

Table 8-7a. Inventory of Aesthetic Resources within the 2-Mile VSA

Map ID	Resource Name	Town/Village	Approximate Distance to Nearest Solar Array	LSZ[4]	Federal (F), State (S), County (C), or Local (L) Resource	Potential Visibility[1]
See Figure 3 of Attachment 2 (Encompasses VSA)	Mohawk Valley State Heritage Corridor	Multiple Municipalities	Study area is entirely within	1,2,3,5	S	Yes
Conservation Easements						
O1	NRCS – Wetlands Reserve Program – Parcel 1	Canajoharie	140 Feet	1,2,4	F	Yes (Minor)
O2	NRCS – Wetlands Reserve Program – Parcel 2	Canajoharie	0.8-Mile	1,2,4	F	No
O3	NRCS – Wetlands Reserve Program – Parcel 3	Root	0.8-Mile	1,2,4	F	No
O4	NRCS – Wetlands Reserve Program – Parcel 4	Root	445 Feet	1,2,4	F	No
O5	NRCS – Wetlands Reserve Program – Parcel 5	Root	0.76-Mile	1,2,4	F	No
O6	NRCS – Wetlands Reserve Program – Parcel 6	Root	0.34-Mile	1,2,4	F	No

Table 8-7a. Inventory of Aesthetic Resources within the 2-Mile VSA

Map ID	Resource Name	Town/Village	Approximate Distance to Nearest Solar Array	LSZ[4]	Federal (F), State (S), County (C), or Local (L) Resource	Potential Visibility[1]
O7	NRCS – Wetlands Reserve Program – Parcel 7	Root	1.3 Miles	1,2,4	F	No
O8	NRCS – Wetlands Reserve Program – Parcel 8	Palatine	1.66 Miles	1,2,4	F	No
Montgomery County Scenic Byways						
MC1	Carlisle Road (CR 93)	Canajoharie, Root	In vicinity	1,2,3,4	C	Yes
MC2	Caswell Road (CR 45)	Palatine	0.85-Mile	1,2,3,4	C	Yes
MC3	Clinton Road (CR 80)	Canajoharie	1.74 Miles	1,2,3,4	C	No
MC4	Currytown Road (CR 105)	Root	0.42-Mile	1,2,3,4	C	Yes
MC5	East Lykers Road (CR 103)	Root	1.55 Miles	1,2,3,4	C	No
MC6	Hilltop Road (CR 96)	Root	In vicinity	1,2,3,4	C	Yes
MC7	Latimer Hill Road (CR 89)	Canajoharie, Root	1.56 Miles	1,2,3,4	C	Yes
MC8	Logtown Road (CR 110)	Root	1.53 Miles	1,2,3,4	C	No
MC9	McKinley Road (CR 42)	Palatine	0.77-Mile	1,2,3,4	C	Yes
MC10	Old Sharon Road (CR 94)	Canajoharie	380 Feet	1,2,3,4	C	Yes
MC11	Seebers Lane (CR 87)	Canajoharie	1.47 Miles	1,2,3,4	C	Yes
MC12	West Lykers Road (CR 102)	Root	1.3 Miles	1,2,3,4	C	Yes (Minor)

Table 8-7a. Inventory of Aesthetic Resources within the 2-Mile VSA

Map ID	Resource Name	Town/Village	Approximate Distance to Nearest Solar Array	LSZ[4]	Federal (F), State (S), County (C), or Local (L) Resource	Potential Visibility[1]
Local Cemeteries						
P1	St. Peter's & Paul's Catholic Cemetery	Canajoharie	0.93-Mile	2,4	L	No
P2	Spraker Hill Cemetery	Root	0.87-Mile	2	L	No
P3	Rural Grove Cemetery	Root	1.55 Miles	2,4	L	No
P4	Lyker Cemetery	Root	1.44 Miles	2	L	No
P5	Flanders Cemetery	Root	0.42-Mile	2	L	No
P6	Currytown Cemetery	Root	0.35-Mile	1,2,3	L	No
Potential Environmental Justice Area						
Q1	PEJA - Census Tract 726, Block Group 1	Canajoharie	Various Distances	1,2,3,4, 5	S	Yes

[1]Potential visibility is obtained from the viewshed analysis using topography, trees, and buildings only, per 19 NYCRRR Section 900.2.9(b)(1), simulations or by methods of onsite field verification.

[2]Also recognized as a National Historic Landmark per the National Park Service.

[3]Resource is also considered to be recreational.

[4]Please refer to Section 5.0 Landscape Similarity Zones for definitions of each LSZ.

Table 8-7b. Inventory of Aesthetic Resources within the 2-Mile VSA

	USN	Resource Name	Approximate Distance to Nearest Solar Array	Address	Town/Village	Federal (F), State (S), County (C), or Local (L) Resource	Potential Visibility[1]
NRHP Listed Historic District							
HR1	**14NR06559** 05702.000139 05708.000231 05749.000285 05749.000286 05749.000287 05749.000288	**New York State Barge Canal Historic District** (Mohawk River)[2, 3, 4] (contains six listed sites)	0.42-Mile	N/A	Multiple Municipalities	F	Yes (Limited section of Mohawk River. All six NRHP listed sites are unaffected)
HR2	**14NR06580**	**Canajoharie Historic District** (Contains 619 listed sites including Canajoharie Falls Cemetery)	0.44-Mile	N/A	Canajoharie	F	No
HR3	**19NR00029**	**Palatine Bridge Historic District** (Contains 156 listed sites including Palatine Bridge Cemetery)	1.03 Miles	N/A	Palatine	F	Yes (Minor; all NRHP listed sites unaffected)

Table 8-7b. Inventory of Aesthetic Resources within the 2-Mile VSA

	USN	Resource Name	Approximate Distance to Nearest Solar Array	Address	Town/Village	Federal (F), State (S), County (C), or Local (L) Resource	Potential Visibility[1]
NRHP Listed Historic Site							
HR4	**90NR01534** 05708.000091 05708.000092 05708.000234 05708.000242 05708.000243	**Montgomery County Farm**[4] (Contains five listed sites)	1.22 Miles	NY5	Palatine	F	Yes (Minor; all NRHP listed sites unaffected)
HR5	**10NR06181** 05708.000021 05708.000233	**Daniel G. Van Wie Farmstead** (Contains two listed sites)	0.78-Mile	Brower Road	Palatine	F	Yes
HR6	05749.000110	Residence	1.02 Miles	51 East Grand Street	Palatine Bridge	F	No
HR7	05749.000111	Residence	1.01 Miles	55 East Grand Street	Palatine Bridge	F	No

Table 8-7b. Inventory of Aesthetic Resources within the 2-Mile VSA

	USN	Resource Name	Approximate Distance to Nearest Solar Array	Address	Town/Village	Federal (F), State (S), County (C), or Local (L) Resource	Potential Visibility[1]
HR8	05749.000038	Residence	1-Mile	63 East Grand Street	Palatine Bridge	F	No
HR9	05749.000040	Residence	0.96-Mile	71 East Grand Street	Palatine Bridge	F	No
HR10	05749.000041	Residence	0.96-Mile	81 East Grand Street	Palatine Bridge	F	No
NRHP Eligible Historic District							
HR11	**05743.000023 (05702.000083)**	**Bowman's Creek Historic District** (Contains one eligible site in VSA)	1.42 Miles	N/A	Canajoharie	F	No
NRHP Eligible Historic Site							
HR12	05709.000151	Carr Farm Hay Barn[4]	1.07 Miles	181 Lynk Street	Root	F	No

Table 8-7b. Inventory of Aesthetic Resources within the 2-Mile VSA

	USN	Resource Name	Approximate Distance to Nearest Solar Array	Address	Town/Village	Federal (F), State (S), County (C), or Local (L) Resource	Potential Visibility[1]
HR13	05709.000150	Carr Farmhouse[4]	1.07 Miles	181 Lynk Street	Root	F	No
HR14	05708.000250	House	1.74 Miles	3651 McKinley Road	Palatine	F	Yes
HR15	05709.000152	Rappa Road Cemetery (Olmstead Cemetery)[4]	0.33-Mile	Rappa Road	Canajoharie	F	Yes
HR16	05709.000071	Currytown Reformed Church[4]	498 Feet	State Highway 162	Root	F	Yes
HR17	05709.000104	Major Andrew Mitchell House[4]	0.93-Mile	158 Monk Road	Root	F	No
HR18	05709.000167	Residence[4]	426 Feet	788 State Highway 162	Root	F	Yes
HR19	05702.000116	Van Evera House[4]	0.46-Mile	140 Jump Road	Canajoharie	F	No

Table 8-7b. Inventory of Aesthetic Resources within the 2-Mile VSA

	USN	Resource Name	Approximate Distance to Nearest Solar Array	Address	Town/Village	Federal (F), State (S), County (C), or Local (L) Resource	Potential Visibility[1]
HR20	05709.000038	Residence[4]	0.57-Mile	835 Mapletown Road	Root	F	No
HR21	05709.000092	Residence[4]	0.57-Mile	119 Fish & Game Club Road	Root	F	No
HR22	05708.000175	Residence	474 Feet	5722 NY 10	Palatine	F	No
HR23	05708.000247	Residence	2 Miles	5650 Ephratah Road	Palatine	F	No
P7	05702.000052	Mapletown Cemetery[4]	1.09 Miles	Blaine Road and Mapletown Road	Canajoharie	F	No

[1] Potential visibility is obtained from the viewshed analysis using topography, trees, and buildings only, per 19 NYCRRR Section 900.2.9(b)(1), simulations or by methods of onsite field verification.

[2] Also recognized as a National Historic Landmark by the NPS.

Table 8-7b. Inventory of Aesthetic Resources within the 2-Mile VSA

	USN	Resource Name	Approximate Distance to Nearest Solar Array	Address	Town/Village	Federal (F), State (S), County (C), or Local (L) Resource	Potential Visibility[1]
[3] Resource is also considered to be recreational.							
[4] Also identified as a listed or eligible resource of SHPO interest.							

Visibility of Solar Arrays at Identified Resources with Predicted Visibility

In summary, the following key places may have the potential to view the proposed Facility. A positive declaration of visibility does not necessarily constitute visual impact. For example, a very small distinguishable percentage of a solar panel may result in a visual resource receiving "Facility visibility". Therefore, see below for resource descriptions that elaborate on the potential visual effects of the Facility.

Federal Resources

- New York State Barge Canal Historic District: Mohawk River
- Erie Canalway National Heritage Corridor
- Palatine Bridge Historic District
- NRHP Listed Montgomery County Farm
- NRHP Listed Daniel G. Van Wie Farmstead
- NRHP Eligible "House"
- NRHP Eligible Rappa Road Cemetery
- NRHP Eligible Currytown Reformed Church
- NRHP Eligible "Residence"
- NRCS – Wetlands Reserve Program – Parcel 1

State Resources

- New York State (NYS) Bicycle Route 5 (NY5S)
- Various Snowmobile Trails (S72, S72A, S75, S75A, C7P, C7H)
- Yatesville Falls State Forest
- Revolutionary Trail Scenic Byway (NY5)
- Mohawk Valley State Heritage Corridor
- PEJA - Census Tract 726, Block Group 1

Local Resources

- Canajoharie Senior High School & Athletic Fields
- Canajoharie Middle School, Elementary School, & Athletic Fields
- Wintergreen Park
- Pangaea Puddle Water Ski Site

Montgomery County Scenic Byways

Several local roadways within the VSA are recognized in Montgomery County legislation as county scenic byways. These scenic byways are listed below and if visually affected, are discussed within Section 10.1.1.3 of the VIA, Visibility of Solar Arrays at Local Resources. As noted below, additional attention has been provided to a number of these resources through the development of LOS profiles and photo-simulations.

- Carlisle Road (CR 93) (see VPs 9 and 48 photo-simulation in Attachment 4 of the VIA; VPs 10, 11, 34, 44, 49, 54, 89, and 90 of Facility Photolog in Attachment 3 of the VIA)
- Caswell Road (CR 45) (see representative VP 62 photo-simulation in Attachment 4 of the VIA)
- Clinton Road (CR 80) (no visibility)
- Currytown Road (CR 105) (see VP 21 photo-simulation in Attachment 4 of the VIA)
- East Lykers Road (CR 103) (no visibility)
- Hilltop Road (CR 96) (see L1 LOS and photo-simulation VP 31 in Attachment 4 of the VIA)
- Latimer Hill Road (CR 89) (see VP 23 photo-simulation of Attachment 4 of the VIA)
- Logtown Road (CR 110) (see VP 20 of Facility Photolog in Attachment 3 of the VIA)
- McKinley Road (CR 42) (see L2 LOS and representative VP 62 photo-simulation in Attachment 4 of the VIA)
- Old Sharon Road (CR 94) (see VPs 55 and 88 of Facility Photolog in Attachment 3 of the VIA)
- Seebers Lane (CR 87) (see VP 92 of Facility Photolog in Attachment 3 of the VIA)
- West Lykers Road (CR 102) (see VPs 45 and 46 of Facility Photolog in Attachment 3 of the VIA)

39 out of 68 visual resources listed in Tables 8-7a and 8-7b are not predicted to view the Facility. Of the 29 visual resources that may discern some degree of the Facility, 13 resources were proposed by local or county constituents. The remainder of visible resources (16) are recognized by state and federal agencies. From the 16 state and federal resources, there are two NRHP listed historic districts, two NRHP listed sites, and four NRHP eligible sites. In accordance with 19

NYCRRR Section 900-2.9(a)(10), the following resources with predicted visibility as listed in Tables 8-7a and 8-7b are further described below:

Federal Resources:

New York State Barge Canal Historic District: Mohawk River (14NR06559)

In 2014, The New York State Barge Canal was listed on the National Register of Historical Places. This historical district encompasses 450-miles of waterway and includes four branches of the state's canal system: Erie, Champlain, Oswego, and Cayuga-Seneca canals. The extensive canal system is recognized for its significant work of twentieth century engineering and construction that shaped transportation and commerce for nearly half a century.

The New York Barge Canal Historic District meanders through the VSA along the Mohawk Valley lowlands in an east-to-west direction. The concentration of potential Facility visibility is found approximately east of the Hamlet of Sprakers, within the (Mohawk) River Corridor LSZ. A LOS profile (L3; see Attachment 4 of the VIA) was prepared to further evaluate the degree at which the Facility may been seen from this visual resource. As illustrated by the LOS L3 profile, a minor number of solar arrays may be discernible from elevated terrain found almost 3.5 miles away. Most of the Facility is indistinguishable due to the intervening effects of a large forest (located 2.5 miles from the observer). With an appreciable viewing distance of 3.5 miles from the viewer to the Facility, the scale of the solar arrays would be dwarfed by the full extent of the visible landscape. It is anticipated that very few viewers may even perceive the Facility at this distance due to vision limitations (acuity). Potential viewers will consist of recreational boaters or non-motorized boats that have physical access to the river, however, due to motion of pursued activities, it is highly unlikely the Facility would be recognized at a substantial distance (3.5 miles). Even though viewshed software predicted solar array visibility, the software does not consider the limitations of human vision to perceive 10-foot objects (solar panels) within the landscape at such distances. Therefore, visibility from the Mohawk River is considered negligible.

Erie Canalway National Heritage Corridor

The Erie Canalway National Heritage Corridor expands 524-miles and encompasses 4,834 square feet of land in over 23 counties. Enacted by Congress in 2000 as an official designated National Heritage Corridor, the Erie Canalway National Heritage Corridor includes the Erie, Cayuga-Seneca, Oswego, and Champlain Canals and their historic alignments. The Corridor is

recognized as shaping New York as a premier commercial and financial center, as well as having contributed to the state's culture, history, and commerce.

The Erie Canalway National Heritage Corridor encompasses and extends beyond the VSA. Several photo-simulations and LOS profiles have been prepared to demonstrate visual effects from within the corridor. Please see Attachment 4 of the VIA to review the results of the photo-simulations and LOS profiles, as well as Section 14.0 the VIA for the summary conclusions of visibility within the Erie Canalway National Heritage Corridor.

Palatine Bridge Historic District (19NR00029 – Contains 156 individual historic resources)

The Palatine Bridge Historic District is a NRHP listed district positioned north of the Mohawk River and Village of Canajoharie and is northwest of the Facility at a 1-mile distance. A small, isolated area of potential solar array visibility is found within vacant fields, north of Tilton Road. Due to the remote nature of the visibility, the private status of the undeveloped land, and the absence of amenities, the general public will not be affected.

NRHP Listed Montgomery County Farm (90NR01534)

The Montgomery County Farm is a NRHP listed historic resource found off NY5 by the eastern VSA border. Solar array visibility was predicted to occur south of NY5 within undeveloped lands that are absent in amenities and access accommodations. Due to the remote nature of the visibility, little to no viewers will distinguish the Facility. The physical Montgomery County Farm building found north of NY5 will not discern the Facility.

NRHP Listed Daniel G. Van Wie Farmstead (10NR06181)

The Daniel G. Van Wie Farmstead site is positioned in Distance Zone 2, within the Town of Palatine. The physical farmstead is adjacently north of Brower Road and is approximately 1-mile north of the nearest solar arrays. From the site, solar arrays are predicted to be distinguished from a large area of the northern property but are focused to the northern agricultural fields where very few observers would congregate. While the Facility may be discernible from the site, no such visibility occurs at the physical buildings. VP 65 was documented from a visible portion of Brower Road, in vicinity to the Daniel G. Van Wie Farmstead site (see VP 65 photograph in Attachment 3 of the VIA). This photograph demonstrates a distant view to several beige fields located approximately 1-mile away, in conjunction with the viewshed results, the Facility may appear within a portion of the far beige fields. As mentioned, no solar array visibility was predicted at the

physical historic buildings on site, therefore, it is assumed that most viewers will be visiting to enjoy the historical character of the structures, and less viewers would be traversing the large agricultural fields where solar array visibility is predicted.

NRHP Eligible “House” (USN 05708.000250) (Map ID# HR14)

The NRHP Eligible “House” is located immediately north of McKinley Road, near the community of McKinley. According to visibility results of the solar arrays, views are not expected at the physical NRHP eligible house but are predicted immediately west of the dwelling where LOS L2 was prepared. As demonstrated in LOS L2 (see Attachment 4 of the VIA), a small portion of solar arrays are potentially discerned at a substantial viewing distance of 2.46 miles. Therefore, private individuals with access to this part of the property may be able to search for the Facility, but the actual discernment of the limited section of the Facility at this distance would be difficult to achieve due to the diminishing effects of distance (acuity of vision, atmospheric haze, reduction in color contrast and variation, and lack of distinct detail) as well as the relatively small scale of the Facility in context to the larger viewable landscape.

NRHP Eligible Rappa Road Cemetery (USN 05709.000152)

Rappa Road Cemetery is a NRHP eligible historic resource on Rappa Road, adjacent to the existing NYPA Transmission Line #352. Viewshed visibility results suggest that the solar arrays, collection substation, and POI switchyard may be discernible from this resource. Due to the proximity of the proposed substation and switchyard, a LOS profile (L1) was performed to review the potential visual effects. As shown in the L1 LOS, the viewer is standing within the cemetery at an elevation of approximately 805 feet ASL. As indicated by the visible cone of view, portions of the upper components (a-frame and bus equipment) attributed to the switchyard and collection substation are distinguishable, however, proposed 5-year landscaping will moderate views to lower substation components as well as the sighting of the solar arrays found adjacent to Hilltop Road. Rappa Cemetery is located on private property, public access is prohibited, therefore viewers will be confined to the public right-of-way (Rappa Road) and would need to face east to view the cemetery, in the opposite direction of the Facility. Further, according to AADT data, 108 daily drivers travel on Rappa Road. Therefore, it is anticipated that a relatively small number of visitors would experience visual change at the cemetery. The Rappa Road Cemetery is eligible for listing in the NRHP under Criterion A in the area of social history and early settlement of the Town of Canajoharie. Although the project will be visible at certain discreet locations, this will not diminish the property’s ability to convey its historic significance.

NRHP Eligible Currytown Reformed Church (USN 05709.000071)

Currytown Reformed Church is a NRHP eligible resource found on NY162 in the community of Currytown. As indicated in the viewshed results (Figure 3 of Attachment 2 of the VIA), solar arrays to the south southwest may be distinguishable at a distance of 360 feet from limited areas of the church property, specifically, in portions of the southwest parking lot and lawn area and northeast lawn. Visitors to the church will not discern solar arrays when facing north toward the church, however, stationary viewers facing south may have an opportunity to glance at the Facility through swaths of existing vegetation and proposed landscaping. As shown in the VP 75 photograph of Attachment 3 of the VIA, the presence of tree and scrub/shrub vegetation along Lasher Creek and within the nearby agricultural field, as well as proposed landscaping would soften the limited view of the solar arrays, especially during warmer seasons when foliage is established. The Currytown Reformed Church is eligible for listing in the NRHP under Criterion C in the area of architecture and its character defining features include its exterior architectural elements. The setting beyond the church's tax parcel boundaries does not contribute to the property's significance.

NRHP Eligible "Residence" (USN 05709.000167)

The NHRP eligible "residence" is located on NY162 in the Community of Currytown. This subject property received a very small fragment of potential solar array visibility within the backyard, south of the residence. Much of this property is encompassed by mixed deciduous and evergreen tree species (see VP 76 of Facility Photolog in Attachment 3 of the VIA). Further, two dense tree hedgerows are also positioned between the potential viewer and solar arrays, thus, heavy-filtered views to a small portion of the southern solar arrays may exist. During warmer conditions when leaf foliage is available, views are not expected to be obtainable. Since public access to the property is not permitted, public viewers must discern the subject property from a small section of NY162 where no views of the solar arrays are obtainable.

NRCS – Wetlands Reserve Program – Parcel 1

The Natural Resources Conservation Service is a 28-acre wetland reserve easement located east of Blaine Road. Solar panels were predicted to be discerned in two minor isolated areas within the easement, however, upon review of aerial photography, the abundance of vegetation between the solar panels and the subject areas suggest that views would be heavily screened. Potential viewer types mostly consist of workers maintaining the site. Given the extent of existing vegetative screening (tree hedgerows, shrubbery, and isolated trees) the Facility is only expected to be

slightly perceived through trees. During warmer seasons when wetland activities are prevalent, views are expected to be precluded by foliage.

State Resources:

Revolutionary Trail Scenic Byway (NY5)

Encompassing six counties in New York, the Revolutionary Trail is a scenic transportation route connecting the Port of Ontario to Capital Region at a length of 158 miles. The route offers scenic valleys, woodlands, as well as museums, historical sites, hiking, picnicking, and cycling. It also features and is known for containing a significant collection of scenic, natural, recreational, cultural, and historic resources. These features underscore many of New York State's major contributions toward building the American Nation.

In the VSA, the Revolutionary Trail travels east-to-west along the Mohawk River for a length of approximately 5.36 miles. A total of 0.51-mile, or 9.5% of the road is predicted to receive variable and intermittent visibility of the solar arrays. The occurrence of potential visibility is found between east of the Village of Palatine and west of fringe of the VSA. The solar arrays are variable in distance to NY5 (approximately 0.5 to 5 miles), when considering factors that affect viewing conditions, such that most viewers from NY5 will be traversing at relatively high speeds (55 Miles Per Hour [MPH] Federal Highway Administration), the presence of existing tree vegetation that shields most of the route (see LOS L2 of Attachment 4 of the VIA), as well as the limited shoulder widths that prohibit a safe pull-off location and/or walking/biking path, it is therefore expected that the frequency and view of the solar arrays from NY5 will to be minimal to none. Consequentially, a negative visual change is not anticipated at this resource.

NYS Bicycle Route 5 (NY5S)

NYS Bicycle Route 5, also known as State Bike Route 5, is a designated on-road bicycle route that traverses 365 miles, spanning from Niagara Falls to the Massachusetts state line. This bicycle route parallels the Erie Canal and Erie Canalway Trail.

In the VSA, Bicycle Route 5 (also referred to as NY5S) travels east-to-west for approximately 6 miles, of which, a total of 0.72-mile was predicted with intermittent visibility of the solar arrays. The focus of potential visibility occurs over a dispersed section of roadway, roughly between the Hamlet of Sprakers and Lasher Creek. The L3 LOS profile (see Attachment 4 of the VIA) travels through this visible section of NY5S and terminates at the nearest solar arrays, approximately 2

to 3 miles to the southwest, however, the LOS results determined potential vantage points from NY5S are obstructed by several existing tree groups.

While it is recognized that there are solar arrays at an approximate 2-mile distance to the south from this subject area of NY5S, views are infeasible due to the preclusion of steep, foreground terrain (elevation differential of roughly 300 feet from NY5S to the apex of the nearest terrain; see VPs 28 and 68 photographs in Attachment 3 of the VIA which illustrates the terrain obstruction from NY5).

Together, these results suggest that viewshed visibility from this confined section of NY5S is projected from solar arrays (to the west) beyond a 3-mile distance. When considering the extensive 365-mile length of NYS Bicycle Route 5 that extends well beyond the VSA, a total of 0.2% of roadway would contain a substantial 3-mile viewing distance to the solar arrays. At this distance, there are several factors that may diminish solar panel visibility, such as acuity of human vision, atmospheric haze, and visual obstructions of topography, vegetation, structures, and dwellings. Therefore, because most activities on NYS Bicycle Route 5 will be partaken in motion (e.g., bicycling, driving, etc.), viewers would need to become stationary and meticulously search the landscape to potentially discern the visible solar arrays, most viewers however would experience great difficulty in identifying solar arrays at a 3-mile distance due to limitations of human vision, atmospheric haze, and physical obstructions (vegetation and topography).

Various Snowmobile Trails (S72, S72A, S75, S75A, C7P, C7H)

Six NYS snowmobile trails within the VSA may experience variable and transient visibility of the Facility. Seasonal limitations affecting viewer accessibility to these trails should be considered when reviewing visibility results, such that snowmobiling activities are confined to the winter seasons when a reasonable snow accumulation is available.

Snowmobile trail S72 initiates between Carlisle and Conway Road within the Facility interior and heads north past a few solar arrays before abruptly advancing east by Rappa Road. The S72 trails meanders westerly through several additional arrays before existing the VSA to the west near the community of Rural Grove. As indicated by the solar array viewshed analysis, a bulk of the S72 travels in Distance Zone 1 and abuts several array areas. Additionally, the S72 trail briefly passes by the proposed substations, which is conveyed in LOS L1 Profile of Attachment 4 of the VIA. As shown in the L1 LOS, a dense tree hedgerow parallels the trail and may provide partial screening to the solar arrays and substations. The viewshed results also indicate that scattered

visibility occurs throughout the trail within Distance Zone 1, but mainly focused to areas adjacent the solar arrays. For these reasons, most visibility will be punctuated when passing by each solar array, there may also be periods where views to very distant solar arrays are possible, but because the observer's focus will be directed forward to ensure safe means of transportation, potential glimpses to distant arrays will be infrequent. However, not all the S72 trail will encounter the Facility, such as most portions of trail south of Mapletown and Flat Creek, and east of Currytown.

Snowmobile trail S72A meanders through the VSA in a general north-to-south pattern within the Town of Canajoharie. The S72A trail received proposed rerouting for sections that travel through proposed solar array groups. According to solar array visibility results, intermittent and variable views from S72A are prevalent in Distance Zone 1. Since the trail traverses by several arrays, it is expected that snowmobilers will encounter fleeting foreground views of the arrays in delayed intervals, however, intervening tree hedgerows and proposed landscaping interfaced between the trail and Facility will reduce what can be discerned. Some portions of the trail will not discern the Facility, such as lengths north and west of Mapletown, and intermittent areas within Distance Zone 1.

Snowmobile Trail S75 is identified within the Village of Palatine and trend northeast before intersecting the VSA by Caswell Road. The S75 trail is fully encompassed in Distance Zone 2. While predicted solar array visibility is dispersed in small intervals throughout the trail, the collective viewing experience of the Facility will be underwhelming due to viewing distances of approximately 1.35 to 7 miles as well as the abundance of tree forest and hedgerows interfacing most areas around the trail.

Snowmobile Trail S75A initiates north from the junction of S75 before immediately exiting the VSA for a span of 0.34-mile. The S75A trail is exclusively within Distance Zone 2 where nearest solar arrays are approximately 1.84 to 7.27 miles away. Due to the substantial distance to the solar arrays, most would not be discernible. Considering viewers will be sustaining motion when on the trail, it is therefore expected that the Facility would be difficult to perceive and would result in minimal to no effect.

Snowmobile Trail C7P enters the VSA near McEwan Road to the west and winds eastward to the Hamlet of Sprakers where path trajectory continues along part of the Erie Canalway Trail. The C7P trail runs adjacent to two solar arrays in the VSA, north of Carlisle Road and west of Canyon Road. Visibility to the solar arrays with be variable when traveling on C7P in Distance Zone 1,

however, most visual change experienced by snowmobilers will consist of an ephemeral and short duration view of foreground solar arrays when traversing on C7P near Carlisle and Canyon Road.

Snowmobile Trail C7H juts into the VSA from the southwest and travels north of Mapletown then quickly exits the VSA to the south. The C7H trail has received proposed rerouting for sections of trail that directly traverse through solar array locations (see Appendix 5-1 for the rerouting). According to the new routing, the C7H trail will abut the Facility by Lincoln Road and north and south of Conway Road where the trail meanders between two solar array groups. In total, the trail will pass by four solar array groups where most solar array sighting will be fleeting in nature due to travel speeds. While the trail will traverse by solar arrays in Distance Zone 1, a vast portion of the trail that extends into Distance Zone 2 and beyond the VSA will not experience Facility visibility.

Yatesville Falls State Forest

Yatesville Falls is a state forest found immediately northeast of the community of Currytown. From Currytown Road, an access drive (Yatesville Creek Road) functions to route traffic to the interior of the forest where Yatesville Falls (Buttermilk Falls) can be observed. Results of the solar panel viewshed detected potential sightings from a small section of the forest's southwest boundary. Viewers that infrequently navigate to the subject forest boundary will also be presented with a different landscape character (rural-residential and agricultural land) than the character of the forest itself. In general, viewers seek visitation to the state forest for purposes of enjoying the encompassing characteristics of nature and pertinent outdoor activities and are not expected to visit the forest's edge where woodland characteristics are diminished. As such, viewer concentration will be focused on interior locations, such as the Yatesville waterfall, where natural features exist.

Mohawk Valley State Heritage Corridor

The Mohawk Valley State Heritage Corridor is part of the collective Heritage Area System and is used to form a local and state partnership for establishing the preservation and development of areas that have special significance. These areas often include natural, historic, and cultural resources.

The Mohawk Valley State Heritage Corridor encompasses the entire VSA where all photo-simulations and LOS profiles have been prepared for the assessment of Facility visibility. The

results of the visual analyses are documented throughout Section 10.0 to Section 10.3 of the VIA. The summary of conclusions (See Section 14.0 of the VIA) contains an overview of potential visibility within this extensive corridor that travels through the VSA.

Potential Environmental Justice Area (PEJA) - Census Tract 726, Block Group 1

The PEJA – Census Tract 726, Block Group 1 covers approximately 26% of total land in and around the Town of Canajoharie. Several representative photo-simulations and LOS profiles have been prepared from within the PEJA to aid the assessment of Facility visibility. The results of the visual analyses are documented in Section 10.2 of the VIA, Photo-simulation and LOS Results and Discussion, as well as Attachment 4, Photo-Simulations and Lines of Sight. The VIA conclusions in Section 14.0 should be referenced when reviewing and understanding potential visibility from the subject PEJA. The Impact Study Area, including a half-mile buffer around the site, is contained within five block groups in Montgomery County (Figure 19-1). Based on the review of the minority and low-income population of these Census block groups from the most recent ACS data available (2022 vintage), the Study Area does not currently include block groups that meet the criteria for a PEJA (Figure 19-1). Please reference Exhibit 19, Environmental Justice, for more information regarding PEJAs.

(11) Cumulative Effects

A cumulative effects analysis must be performed according to 16 NYCRR Section 1100.2.9 (a). Cumulative effects are discussed in this section based on available data related to large scale utility development within the VSA. An overview map is provided as Figure 5 of Attachment 2 of the VIA to depict the approximate geographic locations of each development in relation to the Facility. Aside from the proposed Facility, there is one existing and one proposed utility development facility within the VSA. The non-Facility proposed and existing developments are described below and evaluated, as practicable, for cumulative effects in conjunction with the Facility.

Nexamp Community Solar Farm at Caswell and Gray Roads

The Nexamp Community Solar Farm is constructed within land north of South Gray Road and east of Caswell Road in the Town of Palatine. This existing community solar energy facility expends approximately 19 acres of land within the VSA.

The Facility solar array viewshed analysis indicated visibility potential along South Gray Road where existing views to the Nexamp solar farm are obtainable when facing north. While a simultaneous view of both existing and proposed facilities is not possible, a successional view of the Nexamp solar farm to the north, and then to the proposed Facility to the south, could be possible in a stationary position. As shown in the VP62 photo-simulation that was prepared adjacent to the Nexamp solar farm on South Gray Road, solar arrays are distinguishable within a distant beige field. Due to the distance between the viewer and the Facility (approximately 2 miles), and the speed of vehicles traveling along the road, a viewer would need to be halted along South Gray Road to discern both existing and proposed facilities. Although there are no amenities or places that promote fixed viewing conditions, residents residing along South Gray Road that are adjacent to the Nexamp Community Solar Farm may experience a successional view to each facility. It is important to mention that views of the landscape without solar development will still be available from this location and the Facility will not encompass the entire landscape, but a small fraction of the view when facing south.

Mill Point Solar II

The Mill Point Solar II Project is proposed by ConnectGen Montgomery County LLC. This proposed utility solar energy facility is expected to generate 100 MW of renewable energy within the Town of Glen in Montgomery County and would be approximately 3.5 miles east of the eastern most Facility solar array, outside of the Facility VSA. Land acquisition and lease agreements are ongoing and therefore a proposed design is unavailable.

Several unknowns regarding design and location of a proposed action can profoundly affect where predicted visibility may occur. A cumulative assessment of the Mill Point Solar II Project and the proposed Facility would likely result in a misrepresentation of potential cumulative visibility. Therefore, a cumulative visual impact analysis was not practicable to perform. However, based on the approximate location of the Mill Point Solar II Project (see Figure 5 of Attachment 2 of the VIA) to the Facility, and the significant 3.5-mile distance between each proposed project, it is assumed that cumulative visibility may occur in delayed succession, depending on route of travel, but as mentioned, the exact location of cumulative visibility is unknown and a cumulative assessment of the Mill Point Solar II Project and the proposed Facility would consist of unsubstantiated results.

Mohawk Solar

Mohawk Solar LLC has proposed a 90.5 MW-AC solar project located in the Towns of Canajoharie and Minden in Montgomery County, NY. Spatially, Mohawk Solar is approximately 2.35 miles west of the Facility's westernmost solar array (near Carlisle Road), beyond the Facility VSA. In general, Mohawk solar will be sited on 900 non-contiguous acres primarily consisting of rural-agricultural land. According to the Mohawk Solar Matter Master 17-00668/17-F-0182 of the Article 10 proceeding, the last DPS communication occurred on April 28, 2022. At this time, there is no public information pertaining to the anticipated date of construction.

Notwithstanding, due to the (nearest) substantial distance between the Mohawk Solar project and the Facility (2.35 miles), potential cumulative impacts would be severely limited. A cursory review regarding potential cumulative impacts for both developments was undertaken through the examination of viewsheds. This included the Facility solar array viewshed (see Figure 3 of Attachment 2 of the VIA) and the Mohawk Solar Appendix 24-A "Appendix A" Composite Overlay Map, submitted to the DMM in February 2020. From thereof, only one potential cumulative view was identified on Seebers Lane in proximity to VP 92, within a 200-foot stretch of roadway. At this location the Facility and Mohawk Solar project would not be cohesively viewed. In this instance, a viewer would need to face southeast to attempt to discern the Facility at a 3-mile distance, and then orient oneself west to view the Mohawk Solar panels (approximately 0.5-mile away). While viewshed visibility results suggest potential cumulative visibility of each development, the software does not consider the observer's travel speed, the small 200 section of visible roadway, and the depreciating effects (i.e., atmospheric haze, fog, image acuity, air particles, etc.) of viewing a 10-foot object (solar panel) at a significant 3-mile distance. Therefore, while the Mohawk Solar project may be discernible from Seebers Lane (0.5-mile viewing distance to Mohawk solar arrays), the Facility would be nearly imperceivable.

East Point Solar

East Point Solar is a recently constructed 50 MW solar project located in the Town of Sharon, Schoharie County, NY. Geographically, this existing utility development is 4.1 miles south southwest of the Facility. Potential cumulative effects of each development would not coexist but could be experienced in delayed order during interregional travel, depending on a viewer's travel objective, destination, and selected route. According to the NYSDOT functional class viewer, there are no major routes or thoroughfares that traverse and/or connect the Facility and East Point Solar, consequentially, travel between each development would only be feasible through a series of interconnected local roadways. Consequentially, it is then reasonable to assume that a very

limited number of local travelers or commuters may infrequently pass by or through the Facility and East Point Solar, however, as mentioned, the likelihood is low as no major or direct route connects each development.

8(b) Viewshed Analysis

(1) Viewshed Mapping, Line of Sight Profiles, Distance Zones, and Landscape Similarity Zones

Viewshed mapping was completed in conformance with Section 900-2.9 (b)(1). The viewshed maps were prepared using recent edition topographic base mapping and are presented on a recent edition 1:24,000 scale map. See Section 8(b)(2) of this Exhibit below for the viewshed analysis methodology which leveraged LiDAR data and included surface information such as vegetation and topography. As described previously, two discrete viewshed analyses were completed: one to assess predicted visibility of the solar arrays, and one to assess predicted visibility of the collection substation, POI switchyard, and associated (two) transmission tap structures. A complete summary of viewshed mapping methodology is provided in Section 7.1, Viewshed Analysis, of the VIA. The viewshed maps are presented in Figure 3 (Potential Visibility and Visual Resources for Solar Arrays) and Figure 4 (Potential Visibility and Visual Resources for the collection substation, POI switchyard, and POI transmission structures) of the VIA (Appendix 8-1). These figures depict visibility within two miles of the Facility Site, existing topography, LSZs, distance zones, visually sensitive resources including public vantage points and cultural and historical resources, existing vegetation and associated screening effects, LOS profiles, and representative viewpoints that were used in the simulation process. A discussion of viewshed mapping results is provided in Section 10.1, Viewshed Results and Discussion, of the VIA (Appendix 8-1).

The 2021 USGS National Land Cover Dataset (NLCD) was accessed to establish LSZs to categorize distinct landscape areas within the VSA. These NLCD data were further enhanced by utilizing a combination of aerial photo interpretation and ground truthing to validate the accuracy of the NLCD data as needed. To view a map of the delineated LSZs within the VSA, please see Figure 2, of Attachment 2 of the VIA. Overall, this effort resulted in the definition of five LSZs within the VSA which are identified as Zone 1 Agricultural, Zone 2 Forested, Zone 3 Developed, Zone 4 Open, and Zone 5 River Corridor. The definition and description of each LSZ is available in Section 5.0 of the VIA, and viewshed results for solar arrays within LSZs are discussed in Section 10.1.1.1 of the VIA.

In addition to LSZs, Distance Zones were also established and are presented on the viewshed maps. Distance zones were established within the VSA for assessing and determining visual effects over discrete distances and are required as cited in Section 1100-2.9 (b)(1) of the Article VIII regulations. These zones have been defined in documents produced by the U.S. Forest Service or the Bureau of Land Management (BLM). However, certain procedures or guidelines may be inapplicable to the northeast and are more appropriate for western landscape applications. Therefore, discretion must be used when selecting distance zones as the effects of distance highly depend on the characteristics of the landscape. Furthermore, the magnitude of the proposed action must also be considered when assigning distance zones. For example, solar panels exhibit a smaller profile and sit lower in the landscape as opposed to mature trees, two-story buildings, or transmission structures that assume taller heights. Therefore, distance zones for this Facility have been judiciously modified from the U.S. Forest Service Handbook to accommodate the extents of the VSA, the limitations of human vision, and the low-profile scale of the Facility components. Two distance zones were established within the VSA and are identified as Distance Zone 1 and Distance Zone 2. A description of each distance zone is provided in Section 4.0 of the VIA and viewshed results for solar arrays within distance zones are detailed in Section 10.1.1.1 of the VIA.

In addition to the viewshed mapping described above, LOS profiles were performed to address state aesthetic resources, fulfilling Section 1100-2.9 (b)(1). According to Table 8-7 above, these LOS profiles have been conducted from state resources and traverse through several additional state resources. See Section 8(b)(2) of this Exhibit below for the LOS profile methodology. The LOS profiles are presented in Attachment 4, Photo-Simulations and Line of Sight Profiles, of the VIA. A summary of LOS profile results is provided in the paragraphs below.

The six state resources with predicted visibility are outlined below received a LOS profile to meet this regulatory requirement.

- NYS Bicycle Route 5 (See LOS profile L2 and L3)
- Revolutionary Trail Scenic Byway (NY5) (See LOS profile L2 and L3)
- Various Snowmobile Trails (S72, S72A, S75, S75A, C7P, C7H) (See LOS profile L1, L2, and L3)
- Potential Environmental Justice Area (PEJA) - Census Tract 726, Block Group 1 (See LOS profile L2 and L3)

- Mohawk Valley State Heritage Corridor (See LOS profile L1, L2, and L3)
- Yatesville Falls State Forest (See VP 21 simulation which provides a direct line-of-sight to the Facility)

A total of three LOS profiles were prepared within the VSA. Each LOS profile was performed from discrete state aesthetic resources where Facility visibility was predicted and terminates at the nearest discernible Facility component. Each LOS profiles may contain several pertinent sight lines from other state resources. The following paragraphs discuss the results of each LOS profile.

L1 – NRHP Eligible Rappa Road Cemetery (also known as Olmstead Cemetery) (USN 05709.000152), View Northwest (LSZ 1,3; Distance 0.53-mile, Distance Zone 1)

The L1 LOS profile was selected to demonstrate the potential degree of visibility to the collection substation from the Rappa Road Cemetery within the Town of Root. The LOS L1 faces a northwest direction and spans a total of 0.53-mile where it intersects the NYS Snowmobile Trail (S72) and terminates near Hill Top Road, a Montgomery County Scenic Byway.

When reviewing the LOS, the elevated position of Rappa Road Cemetery facilitates a partial sighting over existing low scrub/shrub vegetation to a section of the collection substation. The discernible components are identified as an a-frame takeoff structure (90-foot height) and bus equipment (40-foot height). Rappa Road Cemetery is located on private property, therefore a very small number of viewers from the cemetery may experience static views to the substation. Proposed landscaping shown within the LOS profile offers some moderation of contrast to lower components, such as the security fencing. While the number of potential views is anticipated to be minimal (108 AADT), the existing characteristics of an open agricultural field will be replaced with utility, however, this landscape change would be compatible with the existing NYPA Transmission Line #352, found immediately north of the substations (see also; VP 31 in Attachment 4 of the VIA for a representative simulation of the collection substation and POI switchyard from Hilltop Road). The Rappa Road Cemetery is eligible for listing in the NRHP under Criterion A in the area of social history and early settlement of the Town of Canajoharie. Although the project will be visible at certain discreet locations, this will not diminish the property's ability to convey its historic significance.

L2 – NRHP Eligible "House" (USN 05708.000250), View South Southwest (LSZ 1, 2, 3, 4, 5; Distance 2.46 miles; Distance Zone 2)

The L2 LOS profile was prepared from the NRHP eligible resource “house” located on McKinley Road in the Town of Palatine. The LOS detected potential visibility from a series of proposed solar arrays on a crest of a hill, at 2.46 miles in distance. Several additional state resources are intersected by the L2 LOS profile.

As shown in the L2 LOS profile, the NRHP eligible “house” contains an unobstructed view to solar arrays across the Mohawk Valley. When considering the slim vertical scale of the solar arrays at a substantial viewing distance of 2.46 miles, as well as the potential diminishing effects of atmospheric haze, it is very unlikely that stationary observers would perceive the solar arrays from the subject dwelling. Further, the NRHP eligible “house” is located on private land, therefore, the public must view the dwelling from Mckinley Road in the opposite direction of the solar arrays (north). Overall, visual implications from this resource are considered negligible.

L3 – Revolutionary Trail Scenic Byway, View West Southwest (LSZ 1, 2, 3, 4, 5; Distance 3.62 miles; Distance Zone 2)

The L3 LOS profile originates from the Revolutionary Trail Scenic Byway (NY5) near the contiguous border shared by the Towns of Palatine and Mohawk. The LOS identified a partial view of solar arrays located on the peak of a slope, due east of Carlisle Road at a substantial 3.62 miles in distance from the observer. Several additional state resources of interest are intersected and identified on the L3 LOS profile.

As mentioned, the Revolutionary Trail Scenic Byway contains a limited view to solar arrays on the crest of a slope at a substantial distance of 3.62 miles. Solar arrays are proposed at closer distances to the observer (near 3-mile marker) but are precluded by several tree forest groups and topography. The typical viewer types that use the scenic byway are known to be travelers/commuters, recreationalists/visitors, and local residents who will be traveling at high speeds (55-MPH) where landscape viewing will be experienced in brief spans. The general focus of the viewer will be emphasized in the direction of the traveled road (east-to-west), as opposed to the direction to the subject solar arrays, which are located south of the viewer. Further, at substantial viewing distances of 3.62 miles, solar arrays have the propensity to form dark masses that mimic patterns of existing vegetation and the ability to discern solar arrays at this great distance becomes extremely challenging, even at a stationary position. As a conclusion, the limited potential solar array visibility on Revolutionary Trail Scenic Byway is expected to be visually negligible due to the extensive viewing distance to the solar arrays, the screening effects

of topography and vegetation, and the viewer activities (vehicular travel) that will prohibit stagnant views of the subject solar arrays.

(2) Viewshed Analysis and Line of Sight Profile Methodology

To accurately assess visual impacts of the Facility, two discrete viewshed analyses were completed: one to assess predicted visibility of the solar arrays, and one to assess predicted visibility of the collection substation, POI switchyard, and associated (two) transmission tap structures. The viewshed analyses were developed to evaluate the potential visibility of the Facility infrastructure within the VSA and are further defined as follows.

Solar Array Viewshed: This analysis accounted for the tallest possible configuration of the solar arrays. The VIA herein evaluated a tracker racking system with solar array panel height conservatively set to a value of 10 feet above finished grade at maximum tilt. Additional Facility components including inverters and perimeter fencing are represented in this viewshed model. The final resulting output identifies geographic areas from which viewers would potentially see all or some part of the proposed solar panels, fencing, and inverters.

Collection Substation, POI Switchyard, and POI Transmission Structure Viewshed: This analysis collectively evaluated visibility from the collection substation, POI switchyard, and associated transmission structures, which are herein referred to as “POI Components”. As mentioned in the material analysis of Section 2.0, the collection substation will gather and transfer electricity to the adjacently located POI switchyard, and two new transmission structures will facilitate interconnection from the POI switchyard to the existing NYPA Transmission Line #352. The proposed height (140 feet) and geographic position of the two proposed transmission structures were included in the viewshed model. The tallest heights of the respective substations are identified as 90-foot lightning masts and a-frame takeoff structures (which simultaneously serve as lightning masts). A variety of substation components with lower heights ranging from 13 to 40 feet were also incorporated into the viewshed model, such as breakers, bus work, switches, and a control building. Plans and sections of the POI Components are available in Attachment 7 of the VIA and Exhibit 5.

Assumptions and Limitations of the Viewshed Model

- The viewshed analysis identifies cells (image pixels) that contain elevation information and computes the differences along the terrain surface between an observer in the

landscape and a target (e.g., a solar panel). This analysis assumes a viewer has telescopic vision, and that atmospheric effects do not exist (e.g., rain, haze, fog, snow, etc.). Therefore, certain factors in the interpretation of results need to be considered:

- The computer model assumes the observer can visually differentiate objects at great distances. For example, the computer assumes the observer can identify any object, such as a mailbox, over several miles away. This would be unachievable for a human to identify without some form of magnification (e.g., binoculars or a telescope). Therefore, a certain amount of reasonable interpretation needs to be considered because of the limitations of human vision at greater distances or those atmospheric/meteorological conditions that may cause imperfect vision, such as haze or inclement weather.
- Because an area may show visibility, it does not mean the entirety of the Facility will be visible from that area. The viewshed analysis depicts areas of visibility over a regional area. It can only predict geographically on a map, areas where some part of the solar panels might be seen. It cannot determine if the entirety, or a portion of, the Facility is visible. Additionally, if visibility is occurring in an area, it may sometimes only be a result of glimpsing a portion of the Facility over undulating treetops, between gaps of trees, or visibility of the tops of panels and not a full view. Likewise, there may be understory tree gaps where there may be visibility of the Facility.
- The model was developed with the assumption that a viewer would not see the panels if standing among trees in forested areas as it is assumed the tree canopy would preclude outward-looking views.

A complete summary of viewshed mapping methodology is provided in Section 7.1, Viewshed Analysis, of the VIA. The viewshed maps are presented in Figure 3 (Potential Visibility and Visual Resources for Solar Arrays) and Figure 4 (Potential Visibility and Visual Resources for the collection substation, POI switchyard, and POI transmission structures) of the VIA. A discussion of viewshed mapping results is provided in Section 10.1 and 10.1.2 of the VIA.

As described in Section 8(b)(1) above, LOS profiles were also completed to address state aesthetic resources, fulfilling 16 NYCRRR Section 1100.2.9 (b)(1). This regulation states specifically that LOS be completed for statewide resources of concern. There are five state resources predicted to distinguish the Facility within the VSA, four were incorporated in the LOS analyses and the fifth direct line-of-sight to the Facility was prepared as a photo-simulation (see

VP 21 of Attachment 4 of the VIA). Also, several local and county resources were additionally evaluated within the LOS profiles.

To develop the LOS profiles, elevation (LiDAR) data obtained for the Facility noted in Section 7.1.1 was used for the data source. ArcGIS Pro 3.0.2 and Global Mapper 23.0 were used to produce linear elevation profiles sampled across select sight lines for bare earth topography and for vegetation. The final LOS profiles were enhanced and embellished in Adobe Illustrator 2023. Section 8(b)(1) provides a discussion of results and Attachment 4 of the VIA contains the LOS profiles.

(3) Viewer Group Overview

The characteristics of potential viewers must bet understood to determine the relative importance and effect of visual change. There are a several factors that may influence an observer's visual attentiveness of the environment and is dependent on the viewers elevation, the types of activities pursued, the frequency of the viewing action, and the duration of view. The result of evaluating viewer characteristics provides useful information about the public's anticipated level of sensitivities to a proposed action.

Overall, higher degrees of visual sensitivity are correlated with areas where people live and with people who are engaged in outdoor recreation or participate in scenic driving. Conversely, areas of industrial or commercial use are considered to have low to moderate visual sensitivity because the activities conducted are not significantly affected by the quality of the environment. Views and viewer groups are discussed throughout the VIA in the context of aesthetic resources, viewshed visibility results, and Facility simulations. In addition to viewer characteristics, distance zones are established within the VSA to estimate levels of viewer sensitivity as it relates to viewing distance, or the distance from a viewer to the Facility (see Section 4.0 of the VIA).

Collectively, these concepts are applied when evaluating the visual landscape and assessing the importance of a particular VP location. Consequentially, the identification of viewer groups is established and defined as follows.

Identification of Viewer Groups

Types of viewers will vary by geographic region, as well as by travel route, destination, or use areas. For example, local roads are often used by residents to reach an objective or to return to a place of residence, whereas recreational resource sites may contain mixed users consisting of

local and visitor constituencies. The types of viewer groups that were identified within the VSA are listed and described below as follows.

- **Local Residents**: This group represents residents inhabiting and expending a significant amount of time in the local area and/or surrounding communities. This group may include local residents and members of groups to which the local area is important in different ways. Also included are those who may occupy a camp or summer home in the area during the warmer seasons.
- **Commuter/Area Traveler Constituency**: This group represents individuals who use or are generally restricted to travel corridors that are destination oriented toward places of employment. This group generally has transient short duration view and includes area travelers which are people strictly engaged in inter-regional or out of state travel for business, leisure, vacation, or other purposes.
- **Visitor or Recreational Constituency:** This group represents individuals who visit the area to experience its natural appearance, cultural landscape qualities, recreational opportunities, or for commercial/business activities. Visitors may be of local, regional, or of national origin.

The following additional viewer characteristics are applicable to each defined viewer group:

Viewer Sensitivity – Viewer sensitivity may be variable from individual to individual and is highly dependent on the observer's location, objectives, and expectations within the existing landscape. Generally, viewer sensitivity is expected to be higher when in proximity to visual change, and less when distanced from the change. A reduction in viewer sensitivity can be achieved through the use of visual mitigatory strategies, please refer to Section 11.0 of the VIA for more information regarding visual mitigation implemented for the Facility.

Number of viewers – The degree of sensitivity is typically correlated to the number of viewers affected by a change. Information about precise number of viewers is not always readily available, however it can be reasonably assumed based on presence of development, recreational space, accessibility to public spaces, and through other data sources as follows.

- Table 8-1. Population of Communities within VSA (see Section 8(a)(1))
- Table 8-2. Available Traffic Data of Public Roads in the 2-Mile VSA (see Section (8(a)(1))

It is reasonable to estimate if a particular location is a high public use area or if it is a location that is less frequently visited, or more inaccessible where the public is not expected to be present (such as swamps or places absent in amenities). Generally, a village or city typically contains a higher concentration of viewers than suburban or rural places.

Duration of view – Duration of view is the amount of time a viewer would actually be looking at a particular landscape feature. Depending on the viewer activity (see below), the duration of view may be extended (static or stationary view), or it may be momentary (fleeting or transient view). Typically, a momentary duration of view involves mobilization of a viewer.

Viewer activities – Viewers within the VSA will experience different viewing times of the Facility depending on the priorities and objectives of an individual's activity. Distinct viewing durations of the Facility can be estimated by the types of viewer groups identified within a particular location. For example, fleeting views or those traveling by vehicle are expected to have views endured for a lesser amount of time whereas those who may be in a fixed position (e.g., fishing, camping, resting on a park bench) may experience a longer duration of view.

Context of Viewer – The scenic integrity of an observer's visual environment may influence or diminish the impression of a visual change. Typically, a visual change may not be as compelling if the change is harmonious with the character of the existing environment. Whereas existing human-made alterations within a landscape may have the propensity to absorb or visually distract a viewer's attention to visual change.

(4) Important and Representative Viewpoints

VP selection criteria are determined in 16 NYCRRR Section 1100-2.9(b)(4) under (i), (ii), (iii), (iv), and (v). As mentioned, TRC conducted four site visits (on March and April 2021, April 2022, and February 2024) to capture representative VP locations compatible with the VP selection criteria set forth in the Article VIII regulations. Specialized field crew strategically obtained photographs from discrete locations in the VSA in accordance with following regulatory requirements:

- (i) Unobstructed views or direct line-of-sight. Prior to each conducted site visit, viewshed maps illustrating predicted Facility visibility within the VSA were prepared to facilitate the identification of vantage points containing direct line-of-sights to the Facility. To the maximum extent practicable, field staff also physically investigated unobstructed locations to photograph. This process involves identifying distinct and existing landmarks features

(e.g., barn silos, buildings, clearing cuts, or transmission structures) on land within the Facility Site, to which is subsequently used as a visual reference to orient oneself to the Facility. Representative VP locations were judiciously selected for the preparation of photo-simulations from the most unobstructed views to the Facility. Examples of unobstructed views that were simulated include VPs 9, 16, 23, 21, 31, 48, 62, 83, and 85 (see Attachment 4 of the VIA).

- (ii) Significance of viewpoints, designated scenic resources, areas or features. Sensitive resources were identified within the VSA and tabulated (see Tables 8-7a and Table 8-7b). This process involved a meticulous review of federal, state, and local places of interest that are accessible to the public, may experience high volume of public use, and exhibit aesthetic characteristics or qualities. Additional resources were incorporated into the table subsequent of an information request sent to stakeholders in February 2024. Further, several municipal websites were consulted to review planning documents for potential locally designated resources that may occur in the VSA. The results of the resource inventory were cross referenced with the viewshed results to quantify VPs near resources that may experience predicted visibility of the Facility. This criterion was then applied to the VP selection process, resulting in photo-simulations from VPs 9, 21, 23, 31, 48, 83, and 85 (see Attachment 4 of the VIA).
- (iii) Level of viewer exposure. To the extent the Facility is discernible from a location, VP locations were identified from populated places where viewers may congregate and/or travel routes that may experience an increased number of public travelers (viewers). Publicly available AADT data provisioned by the NYSDOT was consulted to identify roadways experiencing high volumes of daily traffic (refer to Section 8(a)(1) Transportation and Table 8-2). The U.S. Census Bureau 2020 Decennial Census was also referenced to select VPs from populated places (see Table 8-1). Further information regarding population metrics within the VSA can be found in Section 8(a)(1) Community/Residential. All nine photo-simulations demonstrate a varying levels of viewer exposure (see Attachment 4 of the VIA). Although not considered highly populated areas, simulations were also prepared from minor census designated communities as VPs 9 and 21, or in vicinity to rural residential dwellings (VPs 31, 48, and 62), as well as the Canajoharie Senior High School Athletic Fields (VPs 83 and 85).
- (iv) Proposed Land Uses. Proposed non-Facility development information was investigated and identified within the VSA. These data were extracted from municipal

meeting minutes filed online from various town, village, and county websites. Information pertaining to proposed non-Facility land use can be found in Section 8(a)(1), Publicly Known Proposed Land Uses, as well as in Exhibit 3. An applicable cumulative view of the proposed Facility and development unrelated to the Facility is depicted in VP 21, 31, and 62 (see Attachment 4 of the VIA). Further discussions of cumulative effects are provided in Section 8(a)(11).

- (v) Assessment of visual impacts pursuant to the requirements of adopted local laws or ordinances. As mentioned in Section 8(a)(10), visual stakeholders consisting of local planning representatives and applicable state agencies were provided the opportunity to append additional VP locations and/or recommend existing VPs as candidates locations for developing photo-simulations. Further, on two separate accounts, the Applicant convened with the Towns of Canajoharie and Root to discuss the topic of Facility visibility. As a result of the visual stakeholder engagement and town consultations, VPs 16, 31, 83, and 85 were prepared as simulations. Further, a consistency review of adopted local laws as they relate to the assessment of visual impacts was completed and is available in Section 1.2 of the VIA. In summary, §7.1(F)(13) of the Town of Root Solar Facilities Law requires simulations to be developed but does not prescribe criterion or qualifications for viewpoint selection and is therefore unspecific. Notwithstanding, the Applicant convened with the Towns of Root and Canajoharie and prepared simulations in accordance with constituent recommendations.

8(c) Visual Contrast Evaluation

(1) Facility Simulations

The following subsections describe the results of each photo-simulation which consist of discussions associated with potential changes to the character of the view, the identification of discernible Facility components, categorization of viewer constituency, and frequency of use. Simulations are presented as sets of existing and proposed conditions based on VP number and can be found in Attachment 4. Also included in Attachment 4 is the illustration of proposed landscaping mitigation at approximately 5 years subsequent of construction. Each photo-simulation depicts the proposed position of each planting according to the proposed Landscape Plan (see Appendix 5-2 of Exhibit 5 Design Drawings and Plan 7A of Attachment 7). To depict the seasonal changes of vegetation that affect viewer perception of the Facility, both leaf-on and

leaf-off representations are illustrated in each photo-simulation VP location. The methodology used to develop and select photographs for the simulations is described in Section 7.3 of the VIA

(i) VP 9, Carlisle Road (Montgomery County Scenic Byway), Community of Flat Creek, View South Southwest – Root (LSZ 1,3; Distance Zone 1)

VP 9 was performed as a photo-simulation to evaluate potential visibility from Carlisle Road, a Montgomery County Scenic Byway. VP 9 also demonstrates a representative view from a residential dwelling in the Community of Flat Creek, near the interior of the Facility. VP 9 may also serve to understand the spatial relationship between Mapletown Road (identified as distant road bisecting fields within the existing conditions photograph) and the Facility.

Existing Conditions

VP 9 is oriented south southwest from Carlisle Road and is in the immediate vicinity of few residential dwellings. This observation point is also approximately 300 feet east of the Root Town Hall building. From this perspective, the foreground consists of a residential dwelling and ancillary building framing a mostly unobstructed view to a rising agricultural field within the midground. A single tree hedgerow and lower shrub vegetation lays at the bottom of the field. A rural roadway (Mapletown Road) is seen bisecting the distant beige fields. A successive formation of local distribution structures parallels the road. One rural-residential dwelling encompassed by single deciduous trees is distinguishable near the crest of the hill, adjacent to the distant visible road.

Proposed Conditions

In the proposed condition with 5-year landscaping, a framed view between two residential structures is available to solar arrays on the side of a rising agricultural field. Due to the orientation of the solar arrays (north-to-south) and the angle of observation (south southwest), line forms between each array contrast with the beige colors of the existing field. A single inverter assembly is found within the centroid of the solar array. On the outskirt of the solar array's western fence perimeter, landscaping is proposed for viewers traveling on Mapletown Road, however the current view is dependent on the presence of existing vegetation to soften views to the arrays. Given that the solar arrays are following the rising topography of the hill, the treatment of landscaping within this perspective would not fully shield the solar arrays. Most viewers at this viewing location (Carlisle Road) will

be comprised of a small number of local residents (AADT 306), however, this view may not be apparent to all motorist due the factor of motion and the short window of opportunity to view the arrays between residential homes and structures. A few residents residing near this section of Carlisle Road may experience a longer duration of view when facing south-southwest.

(ii) VP 16, Conway Road, View South – Root (LSZ 1,2,3; Distance Zone 1)

VP 16 was selected by the Town of Root during a meeting with the Applicant. This location demonstrates a view from a non-participating, rural-residential dwelling on Conway Road, a local and rural road. This vantage point illustrates the appearance of the Facility from a foreground position within Distance Zone 1.

Existing Conditions

In the existing condition photograph, the view is mostly comprised of open agricultural land where a multitude of cleared corn row crops are seen within the foreground and middle ground. A mature deciduous forest forms in the middle ground and coexists with the receding agricultural field. In the background, deciduous forest forms a wall of vegetation on the top of a slope and precludes further views of the distant landscape. The visible horizon of the background sky is intersected by the distant forest. Behind the observer lies a farmstead consisting of livestock farming, a single residential dwelling, and agricultural land used for cultivation purposes.

Proposed Conditions

In the proposed condition, 5-year landscaping softens the appearance of what would have been an unobstructed view to the solar arrays. A section of tree forest is removed as noted in the left side of the photograph. During warmer seasons, views will be restricted to gaps above the plantings where distant solar arrays are receding up the sloped terrain. As shown in Table 8-10 of Section 8(d)(8), the proposed shrubs will attain additional growth heights subsequent of 5-years and is expected to screen more of the Facility from this perspective. Given that Conway Road is a local rural road with few rural-residential dwellings, it is assumed this view would be limited to those residents traveling to their property. Residents driving past this section of Conway Road may perceive a limited portion of solar arrays when facing south but the view would be experienced under a short duration due to travel speed. One farmstead located behind the observer would sustain a

longer duration of view when facing south, but as mentioned, landscaping lessens the view of closer contrasting panels and is expected to gain additional growth heights subsequent of 5 years.

(iii) VP 21, Currytown Road (Montgomery County Scenic Byway), View Southwest – Root (LSZ 1,2,3; Distance Zone 2)

VP 21 was prepared as a photo-simulation to portray potential Facility visibility from Currytown Road, which is recognized as a Montgomery County Scenic Byway. VP 21 is also near the periphery of the Yatesville Falls State Forest (located behind the observer).

Existing Conditions

The existing condition photograph generally depicts a predominantly rural landscape. The viewer is facing southwest toward the Community of Currytown, however, due to existing topography, many dwelling are not sighted in the photograph. The vast foreground area of the photo is comprised of harvested hayfields with minor undulating topography. The midground introduces several tree hedgerows and small forest groups, the slight appearance of buildings and a dwelling appear through the vegetation. From thereto, the background conveys a sweeping view to a predominantly forested terrain with a few cascading hills that recede into the horizon.

Proposed Conditions

With the Facility in view, a low-lying, distant agricultural field is populated by dark geometric forms consisting of solar panels. Intermittent tree groups partially obscure part of the Facility as they protrude above the mass form of panels. While the Facility is interpreted, most of the solar array's dark hues are subsumed by colors of the distance forest canopy, which diminishes the perceived visual contrast. From this vantage point, one resident approximately 420 feet southeast may experience a static view to the Facility, however, the greater landscape a distant hills and foreground field still dominate the view. Of the limited residents traversing on Currytown Road (AADT 361), views would only be obtainable when heading southbound and would be brief in nature. It is anticipated that potential viewer focus from this location will be fixed on the distant background landscape, where contrasting values of the existing sky and organic forms of hills draw immediate attention.

(iv) VP 23, Latimer Hill Road (Montgomery County Scenic Byway), View Northeast – Root (LSZ 1,3; Distance Zone 2)

VP 23 was prepared as a photo-simulation to demonstrate the visual effect of the Facility from limited areas of visibility found south of the Facility. This vantage point also illustrates distant viewing characteristics of the Facility from Distance Zone 2 and represents the limited sections of Facility sighting from Latimer Hill Road, a Montgomery County Scenic Byway.

Existing Conditions

As shown in the existing photograph, an unobstructed view to the broad landscape is displayed. This view is furnished through a 720-foot clearing along Latimer Hill Road. Within the foreground, an open agricultural field can be discerned with a single line of deciduous shrub/scrub plants. The midground consists of a single residence surrounded by agricultural fields, large swaths of mixed forest, and isolated areas of residential development. The background is identified by a sloping hill with a commercial building and open land comprising agricultural uses. This is followed by an expanse of forested vegetation and the sighting of rolling, distant hills resembling the Adirondack Foothills.

Proposed Conditions

As shown in the photo-simulation, a distant tan field is replaced by a dark rectangular form. Because the observer is viewing the Facility at a 2.65 distance, the acuity of individual components are absent and only simple shapes and colors are perceived. Under these conditions, most local travelers and commuters (AADT of 197) are unlikely to perceive a change when considering factors such as the character of visibility (brief segments) and traveling speed. However, approximately nine rural-residential dwellings within this subject area of Latimer Road received solar array visibility, therefore stationary viewing opportunities may occur but is dictated by the viewer's activity and ability to intently focus and discern the Facility at such a substantial distance.

(v) VP 31, Hilltop Road (Montgomery County Scenic Byway), View East – Root (LSZ 1,3; Distance Zone 1)

VP 31 was photographed from Hilltop Road, a Montgomery County Scenic Byway. VP 31 was selected for developing a photo-simulation as it is the nearest public representation to the collection substation, POI switchyard and POI transmission structures. As alluded within left side of the existing photograph, the observer is adjacent to the NYPA Transmission Line #352 where the Facility is proposed to interconnect.

Existing Conditions

In the existing conditions photograph, the character of the landscape is principally rural-agriculture but is shared with a land use consisting of transmission utility. The entire foreground of the photograph contains mown hay grasses, absent of any visual obstruction. The field continues into the midground where tree hedgerows are juxtaposed with a distant field and transmission right-of-way. The background initiates where distant intervals of cleared land and forests areas are discerned.

Proposed Conditions

In the proposed condition simulation with 5-year landscaping, a coexisting land-use of utility and agriculture transitions into a dominant utility land-use with introduction of foreground solar arrays and an access road. In the midground, the collection substation and POI switchyard are juxtaposed behind a single tree hedgerow where taller components consisting of a-frame takeoff structures stand in prominence with the existing

NYPA Transmission Line #352, however, shorter substation components, such as breaks, switches, and bus equipment are partially obstructed by the foreground solar arrays. A segment of proposed landscaping in the photograph runs parallel to the viewer and provides minor screening to part of the substations, however, it is generally purposed to screen potential viewers north of this location. One residence is located 220 feet southwest of the photo location and may experience a similar perspective to what is presented in the simulation. Several other dwellings in the vicinity receive full coverage of the Type A landscaping to moderate views to the Facility from Hilltop Road (see Appendix 5-2 of Exhibit 5 for the complete landscape plan). While partial views to the Facility may be available on limited sections of Hilltop Road in Distance Zone 1, the relative number of local travelers or commuters (AADT 137) passing by the Facility would be minor. Further, a vast portion of the solar arrays adjacent to Hilltop Road are treated with Type 1 landscaping, which will provide a level of screening to those viewers.

(vi) VP 48, Mahr Road and Carlisle Road (Montgomery County Scenic Byway), View Northeast – Root (LSZ 1,2,3; Distance Zone 1)

The VP 48 photograph was obtained from the intersection of Mahr and Carlisle Road. Carlisle Road is a Montgomery County Scenic Byway. This photo was developed as a photo-simulation to demonstrate predicted visibility from Carlisle Road, Mahr Road, as well as a few residential dwellings in the proximal area. The viewer faces a northeast direction toward the Facility Site.

Existing Conditions

The VP 48 photo of the existing conditions is characterized as an almost wholly agricultural landscape, with minor developed and forested features. In the foreground, paved roads form a crossing lined with two local distribution poles and mown grass shoulders. Beyond the road intersection where the midground begins, topography retreats but quickly increases. Two sizable fields are divided by a dense, deciduous, tree hedgerow. The background is found at the top of the hill where a mixed-developed area is found encompassed by forested vegetation. The developed area consists of a distribution center, residential dwellings, buildings, and agricultural land.

Proposed Conditions

As illustrated the VP 48 photo-simulation with 5-year landscaping, the solar panels are placed within the foreground field and midground field. The foreground solar panels are treated with proposed Type 1 landscaping. As depicted by the landscaping, the segmented formation of plantings provides a screening effect that obscures most of the foreground solar arrays, while minor gaps between vegetation offer partial glimpses to the panels. In the distance, solar arrays in the midground field are partially filtered by intervening deciduous forest. While the simulation portrays leaf-on conditions of the proposed landscaping, such screening is not depicted on the deciduous forest. During seasons that support leaf-on conditions, the subject forest would develop a dense canopy capable of greatly diminishing or precluding views to the midground solar arrays. Given that most viewers will consist of local residents or commuters passing through at moderate speeds, the visual effect of viewing staggered landscaping while in motion will cause the plantings to appear as a solid mass of screening to the foreground arrays. A few residences are located approximated 300 to 500 feet southeast of the viewer's position, these viewers will have the opportunity to view the solar arrays, over a longer period of time, depending on the pursued objectives, however, as shown in the simulation, proposed landscaping in 5 years will mostly impede views to the closest solar array.

(vii) VP 62, South Gray Road, Community of McKinley, View South – Palatine (LSZ 1,3; Distance Zone 2)

This vantage point was secured from South Gray Road, near the Community of McKinley. A photo-simulation was selected from this location to demonstrate a view north of the Mohawk Valley. The VP 62 location also serves as an evaluation of a representative Distance Zone 2 view, as well as the potential cumulative effect from the existing Nexamp Community Solar Farm and the proposed Facility.

Existing Conditions

In the existing VP 62 photograph, the landscape is described as abundantly rural-agricultural with intermittent forested areas. From the foreground, an enclosed pasture with spares low-lying shrubs is seen. Topography generally undulates from the foreground to the far background. The midground consists of several farmsteads with a mosaic of fields intersected by single tree hedgerows and moderately-sized forests, a lessor number

of dwelling dot the hillside. Existing infrastructure is primarily distinguished as local distribution structures, however, a partial sighting to a single cell tower is noted toward the center of the photo. In the background, a light blue vegetated hill with few scattered fields is discerned on the left side of the photo, the right side of the photo depicts distant rolling hills resembling a solid blue form that is absent in detail.

Proposed Conditions

In the proposed condition simulation, darker colors fill in small portions of fields within the distant rising hill and reinforce existing dark colors of forested vegetation and tree hedgerows. Due to the viewing distance from observer to the Facility (1.7 miles to nearest visible solar array), the scale of the Facility, as well as existing vegetation and topography, collectively reduces the physical appearance of the solar arrays. In addition to these visual implications, the agricultural and forested character of the existing landscape furnishes the absorption of newly introduced, lateral forms, such as the solar arrays. Consequentially, viewers, whether traversing this area or residing, are not expected to discern any noticeable change due to the Facility.

(viii) VP 83, Canajoharie Senior High School & Athletic Fields, View Southeast – Canajoharie (LSZ 3,4; Distance Zone 1)

As discussed in Section 1.2 of the VIA, the visual stakeholder engagement resulted in the Town of Canajoharie and ORES expressing interest in a photo-simulation evaluation from the Canajoharie Senior High School Athletic Fields. VP 83 faces east and was developed as a photo-simulation from the senior soccer field, which is the nearest sport field to the Facility from the school grounds.

Existing Conditions

The existing photograph conveys a mixed land use consisting of recreational and agricultural uses. As illustrated in the photo, the foreground is dominated by greenspace. Recreational equipment is found on the right side of the photo (soccer goal and chain link fencing topped with a yellow vinyl guard). The midground is comprised of an agricultural field bounded by a deciduous tree hedgerow. The impression of a forest and part of a green colored field exists behind the hedgerow. The background, although indistinct, is on the far-left side of the photo and conveys a distant forest.

Proposed Conditions

As illustrated in the VP 83 simulation, the Facility's lateral form is disrupted by staggered placement of landscape plantings where small gaps elicit a slight impression of the solar arrays. Beyond the midground solar arrays, vegetative clearing occurs in the distant tree line, however, a single tree hedgerow remains and provides a visual softening to the further, partially seen solar panels. A variety of viewer types will utilize the fields during warmer seasons when leaf-on foliage is present. These viewers are anticipated to be visitors and residents, consisting of recreational users, athletes, spectators, or school workers. Those athletes or recreational users conducting sport activities are not expected to focus on eastward views to the facility, but on the pursued activity by itself. Possible glimpses to the eastern solar arrays may occur, however, recreationalist and athletes may dismiss this view as hyperfocus is supplied to the partaken activity. Spectators observing recreational players or athletes in the sport fields will have the propensity to focus on the recreational sport players, however, outward views beyond the activity to the eastern solar arrays may also occur, depending on the position on the viewer (e.g., spectators facing sporting events in a west direction are unlikely to view the solar arrays to the east). Overall, viewers are not expected to sustain relentless views to the Facility from the athletic fields, while views may be occasional to the nearby solar arrays, they will likely be brief in nature and will be moderated by landscaping.

(ix) VP 85, Canajoharie Senior High School & Athletic Fields, View Northeast – Canajoharie (LSZ 3,4; Distance Zone 1)

As mentioned above, the visual stakeholder engagement resulted in the Town of Canajoharie and ORES expressing interest in a photo-simulation evaluation from the Canajoharie Senior High School Athletic Fields. While recognizing that VP 83 was prepared as a photo-simulation from the school's athletic field (closest view to Facility from school), VP 85 illustrates a further view from the vicinity of the school building where the solar arrays are placed within the midground.

Existing Conditions

The VP 85 existing condition view depicts a mixed-use environment containing community institution development, open land, and agricultural uses. Within the photograph, the foreground is identified by open greenspace that is segmented by several isolated trees and the façade of a building. The middle ground consists of a distant agricultural field framed by tree hedgerows and

a single farmstead. The background is perceived as a solid blue mass of hillside that is interfaced with an intervening tree hedgerow.

Proposed Conditions

As shown in the proposed conditions, the appearance of solar arrays and proposed landscaping are partially distinguished within the distant agricultural field. The solar arrays are perceived by dark blue and grey lateral patterns that parallel the organic form of the existing terrain. A limited area of vegetative clearing is noticed within a tree hedgerow within the distant field. Viewers that may experience this vantage point are identified as students, athletes, or workers, however, there are no known amenities within the greenspace that would promote a stationary view. Notwithstanding, while viewers may wander by, gather, or walk in this general area during warmer seasons, the Facility is not expected to become a major focal point due to viewing distance and the subordinate scale of the solar arrays in comparison to the landscape. Further, as illustrated in the photograph, mature deciduous trees within the distant foreground are displayed in leaf-off conditions. As such, during suitable seasons that support proliferation of foliage, a supplemental screening effect will be available to further reduce Facility visibility, in addition to the 5-year proposed landscaping around the Facility's perimeter fencing.

(2) Simulations Illustrating Mitigation

As noted in Section 8(c)(1) above, photo-simulations have been prepared for select VP locations and are provided in Attachment 4 of the VIA (Appendix 8-1). As landscape screening is proposed to provide mitigation of potential visual impacts of the Facility, simulations have been prepared illustrating proposed landscaping mitigation in accordance with Section 1100-2.9(c)(2). Included in the suite of simulations are those illustrating proposed leaf-off and leaf-on vegetative mitigation at 5 years subsequent of construction which are listed as follows:

- Representative Simulation with 5 Year Landscaping (Leaf Off)
- Representative Simulation with 5 Year Landscaping (Leaf On)

The locations and visual representation of proposed landscaping within the simulations have been modeled according to the Facility Landscape Plan presented in Appendix 5-2 and abbreviated in Plan 7A, Attachment 7 of the VIA. Section 8(d)(8), Planting Plan, of this Exhibit summarizes proposed Facility landscaping for visual impact mitigation.

(3) Simulation Contrast Ratings

Section 9.0 of the VIA briefly describes the concepts and methodology applied to rating Facility contrast through the process of evaluating photo-simulations. Because a landscape plan is proposed for the Facility (see Plan 7A Attachment 7 of the VIA for the abbreviated landscape plan and Appendix 5-2 for the full landscape plan), simulations illustrating representative views of the Facility with 5-year vegetative landscaping were rated against the existing condition photograph (see Attachment 4 of the VIA). The evaluation is completed to examine the potential screening effects of proposed vegetation under a reasonable timeframe of 5 years post-construction when suitable time is provided for tree and plant maturation. Please refer to Section 11.0 of the VIA for more information regarding visual impact minimization and mitigation strategies for the Facility.

To complete the visual impact ratings, three professional panelists with landscape architectural experience evaluated and rated the simulations against the existing condition photograph using the visual impact rating methodology described in Section 9.0 of the VIA. Panelist 1 have been trained in the field of landscape architecture, and Panelists 2 and 3 are a landscape designer. All three individuals are experienced evaluators and have completed ratings on previous solar facility applications.

Instructions on how to use the visual forms were provisioned and the intention of each rating category was explained to the panelists. Detailed information to facilitate the rating evaluation was supplied to each panelist, this included the Facility location information and the respective location of each simulated view. The terrain and street view features available on the Google Earth platform also provided panelists the ability to discern if other residences or vegetation are present or in the vicinity while also allowing them to view different angles. The panelists then applied the contrast ratings singularly and independently without consultation with or from any other party. A full description of the methodology used in the rating process is available in Attachment 6 of the VIA, as well as panelist qualifications, and the completed evaluation forms for each simulated VP.

Table 8-8 below summarizes and averages the final rating scores completed by the rating panelists for Part 1 Visual Contrast, Part 2 Viewpoint Sensitivity, and Part 3 Existing Scenic Quality. For example, as illustrated in Table 8-8, VP 16 was identified as having a moderate visual contrast rating, a weak viewer sensitivity rating, and a weak scenic quality rating.

Table 8-8. Visual Impact Rating Results

VP	Location	Rating Panelist 1 AB			Rating Panelist 2 GT			Rating Panelist 3 AL			Average Ratings		
		Part 1[A]	Part 2[B]	Part 3[C]	Part 1[A]	Part 2[B]	Part 3[C]	Part 1[A]	Part 2[B]	Part 3[C]	Avg Part 1[A]	Avg Part 2[B]	Avg Part 3[C]
9	Carlisle Road from the community of Flat Creek	15.5	11	1	17	8.5	1	15.5	13	1	**16 M**	**10.8 WM**	**1 W/WM**
16	Conway Road	15	4	1	15	4.5	1	14.5	4.5	1	**14.8 M**	**4.3 W**	**1 W**
21	Currytown Road near community of Currytown	11	10	1	8	11.5	2.5	11.5	12	1	**10.2 WM**	**11.2 WM**	**1.5 WM**
23	Latimer Hill Road	4	10.5	2	8.5	11	2.5	7	11.5	1	**6.5 W**	**11 WM**	**1.8 M**
31	Hilltop Road	21.5	10	1	22.5	10	1.5	22.5	11.5	1	**22.2 MS**	**10.5 WM**	**1.2 WM**
48	Intersection of Carlisle Road and Mahr Road, near the community of Flat Creek	12.5	10	1	7	10	1.5	12.5	13	1	**10.7 WM**	**11 WM**	**1.2 WM**

Table 8-8. Visual Impact Rating Results

VP	Location	Rating Panelist 1 AB			Rating Panelist 2 GT			Rating Panelist 3 AL			Average Ratings		
		Part 1[A]	Part 2[B]	Part 3[C]	Part 1[A]	Part 2[B]	Part 3[C]	Part 1[A]	Part 2[B]	Part 3[C]	Avg Part 1[A]	Avg Part 2[B]	Avg Part 3[C]
62	South Gray Road	3	7.5	2	4	4	2	6	6	1.5	**4.3 VW**	**5.8 W**	**1.8 M**
83	Canajoharie Senior High School Athletic Fields	12.5	8	1	11	6	1.5	13	8.5	1	**12.2 WM**	**7.5 W**	**1.2 WM**
85	Canajoharie Senior High School Athletic Fields	8.5	11	1.5	9.5	9	1	8.5	11.5	1	**8.8 W**	**10.5 WM**	**1.2 WM**

VW=very weak, W=weak, WM= weakly moderate, M=moderate, MS=moderately strong, S=strong

[A]Part 1: Visual Contrast Rating (5 Years Post-Construction); [B]Part 2: Viewpoint Sensitivity Rating; [C]Part 3: Existing Scenic Quality Rating

In summary of the visual impact rating results, VP 31 (Hilltop Road, Montgomery County Scenic Byway) obtained the highest Part 1 visual contrast rating with an average score of 22.2 out of 27. This represents a moderately strong visual contrast resulting from distinct Facility characteristics consisting of unobstructed solar panels within the foreground and a partially filtered sighting of the POI substations. The average Part 2 average rating of viewpoint sensitivity was rated as weakly moderate, meaning some viewer sensitivity due to long-durational views from rural-residences in combination with the road's Montgomery County Scenic Byway status. Panelists rated the Part 3 scenic quality of the existing conditions as weakly moderate, this suggests that the route may contain segments absent in significant scenic attributes. Further, it is important to note that Type 1 landscaping is proposed to screen views from adjacent rural-residential receptors and therefore will likely receive a reduction in visual contrast, however, one residential dwelling located behind the VP 31 observer may experience a similar perspective to what is presented in the simulation.

VP 9 (Carlisle Road from the community of Flat Creek) received the second highest visual contrast Part 1 rating with an average score of 16 out of 27, indicating moderate visual contrast. While vegetative landscaping is proposed within the extents of the view, it does treat this particular vantage point due to the elevated position and setback distance of the solar array. Part 2 Viewpoint Sensitivity obtained an average rating of weakly moderate due to potential views from adjacent dwellings or motorists in conjunction to the presence of the county scenic byway. However, the Part 3 average scenic quality rating concludes that this perspective is weak/weakly moderate, as similarly discussed for VP 31 above, the scenic rating results suggest that some places along the scenic byway may not contain scenic attributes.

VP 16 (Conway Road) obtained a Part 1 average visual contrast rating of 14.8 out of 27, meaning a moderate amount of visual contrast due to the Facility's appearance, however, the panelists rated the viewpoint sensitivity and scenic quality of the existing view as weak, which panelists indicate is a result of the low volume of potential viewers, absence of visual resources, and commonness of the agricultural setting as compared to the region.

The VP 83 (Canajoharie Senior High School Athletic Fields) photo-simulation demonstrates a proximal view to the Facility from the Senior Soccer Field. VP 83 Part 1 average visual contrast rating conveys that a weakly moderate visual change may occur, however, the panelist's consensus is that proposed 5-year landscaping contributes to a reduction the Facility's visual effect. VP 85 was prepared from greenspace adjacent to the school building and received a Part

1 average rating of weak visual contrast, this is likely a result of the reduced visual scale of the Facility due to the distance between viewer and solar arrays. The Part 2 Viewpoint Sensitivity average rating for VP 83 resulted in a weak score, indicating that fewer viewers may experience sensitivity, however, VP 85 received a Part 2 Viewpoint Sensitivity score of weakly moderate which may be contributed to the observer's location near the school building The Part 3 ratings of existing scenic quality was also rated as weakly moderate for both VPs, suggesting that the existing character of view is typical for the area.

VP 21 (Currytown Road near community of Currytown) and VP 48 (Intersection of Carlisle Road and Mahr Road, near the community of Flat Creek) received a Part 1 visual contrast rating of weakly moderate. The VP 21 ratings are likely a result of Facility's diminished visual effect when in Distance Zone 2, whereas VP 48, a Distance Zone 1 view, is treated with Type 1 landscape screening and therefore benefits in a reduction of contrast. Both VPs were rated as weakly moderate under Part 2 Viewpoint Sensitivity, which is a result of the panelists indicating that each VP contains a low number of potential viewers, while also recognizing the presence of the Montgomery County Scenic Byways (Currytown Road and Carlisle Road). The Part 3 Scenic Quality evaluation of the existing conditions indicated that both VPs contain weakly moderate scenic character. These ratings suggest that existing scenic quality of VPs 21 and 48 are not compelling within context to the Montgomery County Scenic Byways.

VP 23 (Latimer Hill Road) also obtained one of the lowest Part 1 average contrast rating that consists of a weak score, meaning little visual contrast. This score is associated with the Distance Zone 2 views to the Facility where the appearance of the solar arrays is naturally minimized as a consequence of distance.

VP 62 (South Gray Road) is listed as having the lowest Part 1 average contrast rating of very weak, while the Part 3 existing scenic quality was rated as moderate. Given that Part 2 Viewpoint Sensitivity was rated as weak, and the visual contrast of the Facility is rated as very weak, this emphasizes that the Facility has a negligible visual effect from VP 62 within Distance Zone 2.

8(d) Visual Impacts Minimization and Mitigation Plan

Section 1100-2.9 (d) requires a Visual Impact Minimization and Mitigation Plan (VIMMP) that includes proposed minimization and mitigation alternatives to mitigate and minimize visual impacts to the maximum extent practicable. The VIMMP outlines proposed measures the Applicant has implemented or will implement to reduce visibility of the proposed Facility including

minimization and mitigation measures such as screening (landscaping), distance and property offsets, relocation or rearranging Facility components, and design lighting options for work areas and safety requirements. Please refer to Section 11.0 and Attachment 7 of the VIA to review the full VIMMP.

(1) Advertisements, Conspicuous Lettering, or Logos

Other than warning and safety signs, no advertisements, conspicuous lettering, or logos will be permitted on Facility components.

(2) Buried Electrical Collection System

The collection system is proposed underground by either trenching or HDD.

(3) Transmission Structures

Transmission structures facilitating the POI shall have a non-glare finish. Use of a dark brown or green weathered steel dead-end structure shall be considered in the development of final engineered design.

(4) Non-Specular Conductors

Non-specular conductors shall be used for the transmission line, electric collection system, as well as the electrical substation equipment to reduce light reflectance.

(5) FAA Wind Turbine Color Requirements

Section 900-2.9 (a)(9) is not applicable to the Facility because it is a solar facility.

(6) Shadow Flicker for Wind Facilities

Section 1100-2.9 (a)(2) is not applicable to the Facility because it is a solar project. However, the applicable glare assessment (not associated to shadow flicker) was conducted for the Facility (see above Section 8(a)(9) of this Exhibit).

(7) Glare for Solar Facilities

A Glint and Glare Analysis was performed using ForgeSolar to identify any potential glint and glare impacts on nearby residences and roadways. The Glint and Glare Analysis Report is included herein as Appendix 8-2. This analysis used methodology established by Sandia National

Laboratories for SGHAT. This technology was developed by the FAA in cooperation with the DOE, subsequently, ForgeSolar was then developed to supplement glint and glare assessments outside of the aviation industry.

The SGHAT analyzes the potential for glare over the entire calendar year from when the sun rises above the horizon until the sun sets below the horizon. The magnitude of glint and glare depends on several factors such as the sun's position, the location of the observer, and characteristics of the Photovoltaic (PV) array including location, orientation, tilt, and optical properties (coatings) of the modules. Glare visibility from an observer's location is analyzed once array characteristics described above are determined. Ocular hazard potential is estimated based on the retinal irradiance and subtended angle (size/distance) of the predicted glare (Ho 2011). Potential ocular hazards associated with the phenomenon known as "glare" generally range from temporary after-image to retinal burn in extreme cases depending on the retinal irradiance and subtended angle. In order to capture these glare types, the SGHAT classifies solar glare into three distinct categories, denoted as "green," "yellow," or "red" glare.

- Green Glare is the mildest of the classifications and has low potential to cause after-image and no potential to cause retinal burn.
- Yellow Glare is a moderate level of glare and has some potential for temporary after-image and no potential to cause retinal burn.
- Red Glare is a serious and significant form of glare with potential to cause retinal burn and/or permanent eye damage. Typically red glare is not associated with solar projects, and the glare analysis finds no potential for red glare from the project.

The Glint and Glare Analysis evaluated 17 existing roadways and a total of 109 unique buildings that were identified in proximity to the proposed Facility using one and/or two-story receptor heights, depending on the height of the existing building. The following receptors were predicted to perceive some glare effect, however, given the conservatism in the model, further investigation was applied to each of the affected receptors to determine potential effect as noted below.

- **Conway Road:** When modeled and accounting for the proposed landscape screening, green glare is identified along a portion of Conway Road from Array 31. A targeted viewshed analysis was conducted for Array 31 accounting for the proposed landscaping vegetation. This viewshed showed that the proposed vegetation assisted in screening the roadway and residence to the north with the only potential visibility occurring at the break

in the landscaping located at the entrance to Array 31 from Conway Road; however, the discrete location of visibility between the glare model and viewshed study do not overlap, which suggests that the estimated glare may not be visible from the roadway.

- **Residence OP13/OP14:** Green glare is estimated to be visible at both receptors of the two-story residence OP13/OP14 for a maximum in a day of 20 minutes from December to January between 10:00 to 11:00 am. These results account for the estimated location of proposed landscaping vegetation along the northern boundary of the Array 39 along with existing vegetation/tree lines located within the area. Following the glare study, a targeted viewshed analysis was also conducted accounting for the proposed and existing vegetation was also conducted to determine the potential visibility of the array area producing glare, as shown in Attachment 1 of the Glint and Glare report. This targeted viewshed analysis showed that the area was not visible from receptors at the residence of OP13/OP14. This shows that the results of the glare study may be an overestimation of what would be seen at the residence as the proposed landscaping and existing vegetation would assist in minimizing or mitigating the view of the array area.

- **Residence OP21/OP22:** Green glare is estimated to be visible at both receptors of the two-story residence OP21/OP22 for a potential maximum of 95 minutes in a day from the second-floor receptor; however, based on the information presented in Attachment 1 of the Glint and Glare report, potential daily maximums vary during the estimated glare period. The estimated glare period is from November through January from approximately 12:00 to 2:00 pm. Existing vegetation is located along the southern and eastern boundary of this residence which would assist in minimizing view of this array area from the observer. This shown in the targeted viewshed analysis, which accounted for the existing and proposed vegetation (subject to the limitations of the viewshed analysis), which indicated a lack of full visibility of the impacting portion of the array at the residence.

- **Carlisle Road:** Green glare is estimated to be visible along a portion of Carlisle Road for a potential maximum of 30 minutes in a day; however, based on the information presented in Attachment 1 of the Glint and Glare report, potential daily maximums vary during the estimated glare period. The estimated glare period is from November through January from approximately 10:00 to 11:00 am. Existing vegetation and proposed vegetation are located along the eastern boundary of the array area between the array and roadway which would assist in minimizing view of this array area from the observer. A targeted

viewshed analysis was conducted from the impacting portion of this array (shown in Attachment 1) and Carlisle Road. Based on this targeted viewshed, the array along the impacted section of the roadway was not visible.

- **Mapletown Road:** Green and yellow glare is estimated to be visible along a portion of Mapletown Road for a potential maximum of 100 minutes in a day; however, based on the information presented in Attachment 1, potential daily maximums vary during the estimated glare period. The glare was estimated to occur from October to early March from 11:00 am to 3:00 pm. However, the limitations of the model may be overestimating potential glare from this array. As noted above, the array is located on variable topography, which would cause variability in heights of panels and simplification of the array's planar footprint in the model, which may impact the glare results. In addition, the typical weather conditions are less ideal than the inputs and assumptions of the model during this period of the year (October to March) which would result in less glare and a reduction in the potential impact.

Overall, some receptors are predicted to only receive glare during dominant cloudy months during the winter, such that glare does not occur on overcast/cloudy days and is not accounted for in the glare predictions. Other receptors may not be affected by glare due to existing vegetation and structures, as confirmed by the focused viewshed study in the software. Please refer to the Glint and Glare report (Plan 7C of Attachment 7 of the VIA) for more detailed information and the results pertaining to extent and significance of predicted glare.

(8) Planting Plan

The Applicant is proposing a landscaping plan to minimize and mitigate visual impact to the surrounding environment. Landscaping, or vegetative screening, is generally the most optimal and effective mitigatory option for reducing visual change for solar development. Solar arrays are often low-profile, smaller than a single-story home, and have the propensity to be visually absorbed or screened by vegetative screening. Therefore, the proposed vegetative landscaping will reasonably minimize visual impacts in conformance with 16 NYCRRR Section 1100.2.9 (d). It is important to consider that seasonality of vegetation (leaf-on foliage), maturation of plantings, and availability of existing vegetation may significantly improve the effects of screening. Further, attention has also been dedicated to the incorporation of evergreens in the landscape plan, which provide indefinite leaf-on foliage, regardless of the season.

The entire perimeter of the Facility was evaluated to identify adjacent receptors and observation angles. The arrangement of templates is based on the presence of adjacent receptors, area sensitivity, viewshed, and existing vegetation and topography. For example, areas that contain visual impediments between the Facility and a viewing location may not necessarily require landscaping due to the natural screening effects of existing topography and vegetation. Seldom seen areas without the characteristics of scenic integrity, where viewers are absent and/or the landscape is rarely viewed would also be inapplicable for a landscaping treatment. In certain locations, the installation of landscaping may be prohibited such as at utility crossings (overhead or underground) or at driveway entrances due to safety or access concerns.

There are two planting templates proposed for the Facility: Template A contains the most comprehensive screening with a predominant arrangement of deciduous and evergreen trees and is treated in places where existing vegetation is absent. Template B may be screen locations with an existing visual buffer consisting of existing vegetative hedgerows or a sparse placement of existing trees or rural roadways that are absent in development. Plant species will be procured from local suppliers where possible. For both templates, installation of young and native species (heights range from 2 to 6 feet) is preferred to foster vitality, adaptability, and the minimization of potential die-off and replacement, however, in approximately 5-years post-construction, the plants may reach an average height of 7 to 17 feet (see Table 8-10). Overall, the site selection of plantings and associated templates were prioritized according to the degree sensitivity at a given location. This was completed to ensure that open and unobstructed views to the Facility were moderated.

To naturalize the appearance of the installed landscaping, ornamental, pollinator-friendly, and small trees and shrubs have been incorporated into the plan and are placed in front of larger species. An abbreviated version of the landscaping plan can be found as Plan 7A in Attachment 7. The full plan can be obtained in Appendix 5-2 of Exhibit 5 Design Drawings. The following items and concepts were applied to the plan:

- Planted vegetation will need suitable time to establish a meaningful height and breadth to provide appropriate visual screening while also maintaining minimum mature heights that will not shade Facility components, reducing power generation. See Table 8-10 below for an outline of the planting schedule for the Landscape Plan.
- Planting templates are proposed to parallel the Facility's fence perimeter as noted on the Landscaping Plan. Landscape templates A and B are proposed for an approximate total

of 30,750 linear feet (approximately 5.82 miles comprising 419 deciduous trees, 2,001 evergreen trees, and 1,966 deciduous shrubs). The proposed planting templates are outlined below:

- Landscape Module Template Type A - Typical Screening: This planting scheme provides a high density of plantings and is intended for a maximum screening effect. This template is emphasized at sensitive receptors and non-participating residences. Approximately 1,705 evergreens trees, 325 deciduous trees, and 1,380 deciduous shrubs will comprise the Type A landscape template and will be implemented along 24,355 linear feet of the Facility's fence perimeter, approximately 79% of the overall proposed installed landscaping length. Please refer to Attachment 7 Plan 7A for an illustrative representation of this planting template.
- Landscape Module Template Type B – Supplemental Screening: This planting scheme provides a medium density of plantings proposed for use mostly along roads that traverse the Facility or as a buffer for places that do not contain a sensitive receptor or an adjacent resident. A total of approximately 1,055 evergreens trees, 243 deciduous trees, and 2,273 deciduous shrubs will comprise the Type B landscape template and will be implemented along 6,395 linear feet of the Facility's fence perimeter, approximately 21% of the overall proposed installed landscaping length. See Attachment 7 Plan 7A for an illustrative representation of this planting template.

As mentioned, the proposed plantings will sustain various growth rates (depending on the specific tree or shrub species) and are expected to realize heights between 7 to 15 feet in approximately 5 years after installation. Growth rates of plantings may continue unless a given plant has reached maturity. Table 8-10 provides the details regarding specie installation height, average projected 5-year average height, and mature height potential.

Table 8-10. Plant Species Heights and Growth Rates of Proposed Landscape Plan

Plant Species Common Name (Scientific Name)	Install Height Post Construction	Average Projected 5-Year Height Post Construction*	Mature Height
Deciduous and Evergreen Trees			

Table 8-10. Plant Species Heights and Growth Rates of Proposed Landscape Plan

Plant Species Common Name (Scientific Name)	Install Height Post Construction	Average Projected 5-Year Height Post Construction*	Mature Height
Downy Shadbush (*Amelanchier Arborea*)	6 Feet	12 Feet	15 to 20 Feet
River Birch (Betula Nigra "Heritage")	6 Feet	17 Feet	25 to 30 Feet
Eastern Red Cedar (Juniperus Virginiana)	5 to 6 Feet	13 Feet	40 to 50 Feet
White Spruce (*Picea Glauca*)	5 to 6 Feet	13 Feet	40 to 60 Feet
Red Spruce (Picea Rubens)	5 to 6 Feet	12 Feet	50 to 70 Feet
Shrubs			
Red Chokeberry (*Aronia Arbutifolia*)	24 to 30 Inches	7 Feet	7 to 10 Feet
Red Twig Dogwood (*Cornus Sericea*)	24 to 30 Inches	7 Feet	7 to 9 Feet
Common Witch Hazel (*Hamamelis Virginiana*)	3 to 4 Feet	11 Feet	15 to 25 Feet
Common Winterberry (*Ilex Verticillata*)	24 to 30 Inches	7 Feet	8 to 12 Feet
Highbush Blueberry (*Vaccinium Corymbosum*)	24 to 30 Inches	8 Feet	6 to 12 Feet
American Cranberry (*Viburnum Trilobal*)	24 to 30 Inches	9 Feet	8 to 10 Feet
*Source: https://www.arborday.org/trees/			

It is important to note that an annual Operations and Maintenance (O&M) effort will be provided to ensure that proper care and attention is given to the proposed plantings once installed. Annual O&M efforts will include, but are not limited to, selective pruning, mowing, and monitoring of

invasive species. Additionally, notes in the Landscaping Plan (Appendix 5-2 of Exhibit 5; see Abbreviated Landscaping Plan in Attachment 7, Plan 7A) provide further direction, recommendations, insight, and guidelines to ensure healthy, viable, and sustainable plantings throughout the life of the Facility.

(9) Lighting Plan

For the Facility, light fixtures are proposed within the substation and POI switchyard. The Substation and POI Switchyard Plan & Profile Drawings and Lighting Plan (see Plan 7B of Attachment 7 of the VIA) illustrates the proposed positions, orientation, and tilt angle of the light fixtures. As a result, the plan indicates contour candela mapping as casted from each light source. All light fixtures at each substation are purposed for security, safety, and maintenance purposes and will remain off during regular operation. Lighting will be manually engaged for intermittent operations, maintenance, or emergencies.

Lighting has been designed to conform to the National Electrical Safety Code (NESC) to provide a minimum of 2 foot-candles around substation switches while managing and eliminating unnecessary light trespass beyond the POI switchyard and collection substation. Light fixtures will be mounted at minimum heights of 9 feet at the control house enclosures and a maximum height of 35 feet at the lightning masts and a-frame takeoff structures at the POI switchyard. Full cut-off fixtures and task lighting will be used wherever feasible, as specified in the Lighting Plan. One candela is equivalent to one lit candle. A minimal 0.1 candela occurs at the extents of the light sources. The lighting plan addresses the following, as applicable:

- As mentioned, manually activated lighting will be installed and available at the POI switchyard and collection substation for intermittent operations, maintenance, or emergencies. Lights are located on such structures as the control house enclosure, lightning masts, switches, and takeoff structures. Most light fixtures will be oriented downward to minimize potential impacts to surrounding receptors. Light fixtures with tilt angles are positioned at the control enclosure and one POI switchyard takeoff structure, however, the control enclosure's light fixtures contain full-cut off shielding and a minimal output of 209 lumens, and the single takeoff structure's light fixture is oriented to the southeast interior of the switchyard. As shown in Plan 7B of Attachment 7, the lighting plan schematic demonstrate the lighting area needs, proposed lighting arrangement, and illumination levels to sufficiently provide safe working conditions at the substation and POI switchyard site.

- Should task lighting be implemented during the occurrence of nighttime maintenance, lights will be directed to the ground and/or work areas to confine the total maximum nighttime lighting output. Temporary work area lighting will be shut down at night, unless required for security purposes.
- The Lighting Plan was developed to minimize light creep and runaway light while meeting lighting standards established by the NESC. The proposed plan also complies with Occupational Safety and Health Administration (OSHA) requirements as proper illumination will be provided for all working spaces around the electrical equipment. All of which has been designed so that control points or persons making repairs will not be endangered by electrical hazards or other equipment.

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