

Appendix II-M2

Visual Resources Assessment (VRA) - Onshore Facilities - Cardiff

Note:

On March 26, 2021, Atlantic Shores Offshore Wind, LLC (Atlantic Shores) submitted a Construction and Operations Plan (COP) to BOEM for the southern portion of Lease OCS-A 0499. On June 30, 2021, the New Jersey Board of Public Utilities (NJ BPU) awarded Atlantic Shores an Offshore Renewable Energy Credit (OREC) allowance to deliver 1,509.6 megawatts (MW) of offshore renewable wind energy into the State of New Jersey. In response to this award, Atlantic Shores updated Volume 1 of the COP to divide the southern portion of Lease OCS-A 0499 into two separate and electrically distinct Projects. Project 1 will deliver renewable energy under this OREC allowance and Project 2 will be developed to support future New Jersey solicitations and power purchase agreements.

As a result of the June 30, 2021 NJ BPU OREC award, Atlantic Shores updated Volume I (Project Information) of the COP in August 2021 to reflect the two Projects. COP Volume II (Affected Environment) and applicable Appendices do not currently include this update and will be updated to reflect Projects 1 and 2 as part Atlantic Shores' December 2021 COP revision.

Technical Report

Visual Resource Assessment

Atlantic Shores Offshore Wind Project Onshore Facilities – Cardiff Alternatives

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1.0 INTRODUCTION

1.1 Purpose of the Investigation

Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) was retained by Atlantic Shores Offshore Wind, LLC (Atlantic Shores) to prepare a Visual Resource Assessment (VRA) for the proposed onshore facilities associated with the Atlantic Shores Offshore Wind Project. The Atlantic Shores Offshore Wind Project is a wind-powered electric generating facility to be located in federal waters on the Outer Continental Shelf (OCS), in Bureau of Ocean Energy Management (BOEM) Renewable Energy Lease Areas OCS-A 0499. The Offshore Wind Project is composed of up to 200 WTGs and associated foundations, offshore substations (OSS), inter-array cables connecting the WTGs and the OSSs, inter-link cables connecting the OSSs together, and a submarine export cable to be located in both federal waters and New Jersey territorial waters that will connect the OSSs to the onshore facilities. The onshore facilities include the following components:

- A landfall location where the submarine export cable comes ashore. This facility will consist of underground transition vaults where the submarine cable will connect to the terrestrial transmission circuits. It will be located in a paved parking area at the eastern terminus of Sovereign Avenue adjacent to the Atlantic City Boardwalk in Atlantic City, New Jersey. The only visible feature of the landfall will be manhole covers in the pavement above the transition vaults.
- Up to four underground interconnection cables that run from the landfall location to the proposed onshore substation location. The circuits will be buried beneath public roads and will follow Sovereign Avenue northwest to the intracoastal waterway. Horizontal Directional Drilling (HDD), or other trenchless technique (i.e., jack-n-bore or pipe jacking) will be used to cross the waterway to Bader Airfield, and again to go under Turtle Gut and Great Thoroughfares to the mainland. The route will then run parallel to US Route 40 for approximately 1.5 miles, before transitioning onto a railroad right-of-way (ROW) for approximately 4.5 miles before reaching the Harbor Square Mall in Egg Harbor Township, New Jersey.
- A new onshore substation located at one of two possible sites in Egg Harbor Township; one at Shore Mall Road, the other east of U.S. Route 40 and west of the Garden State Parkway.
- An approximately 3.8-mile underground transmission line largely using existing linear infrastructure corridors to connect the new onshore substation to the existing Cardiff Substation in Egg Harbor Township, New Jersey.
- A Point of Interconnection (POI) with the existing power grid at the Cardiff Substation.

Components of the onshore facilities that are proposed to be buried underground may involve temporary visual impacts during construction, including materials delivery, excavation/backfill, construction vehicle activity, and construction personnel. However, these will be temporary, short-term impacts, and the underground components will not have any long-term visual impacts once built and operational. Therefore, these below ground components of the onshore facilities are not addressed in this VRA. In addition, necessary modifications associated with the Cardiff Substation POI are currently being assessed and are unknown at this time. Therefore, any modifications associated with the POI are also not addressed in this report. Consequently, this VRA focusses on the proposed onshore substation (also referred to herein as the Project). The regional location of the onshore substation is shown on Inset 1.1-1. This VRA is based on preliminary and conceptual siting criteria for the proposed onshore substation. At this time a site plan and design specifications have not been developed and therefore visual simulations illustrating the proposed onshore substations cannot be prepared. Consequently, a revised supplemental VRA will be completed to evaluate its potential visual contrast with the existing landscape. This supplemental analysis will include photography of the existing visual conditions, evaluation of the existing landscape character, key observation point (KOP) selection criteria, visual simulations of the proposed onshore substation from representative KOPs, evaluation of the potential visual impacts resulting from the Project, and if required, mitigation recommendations.



Prior to development of the Project design details, the purpose of this VRA is to:

- Define the visual character of the visual study area (VSA) surrounding the onshore substation sites.
- Inventory and evaluate existing visually sensitive resources (VSRs) within the VSA.
- Evaluate potential Project visibility within the VSA.
- Evaluate potential Project visibility from VSRs.
- Evaluate the potential visual compatibility of the Project with the surrounding landscape.





Inset 1.1-1. Regional Project Location

1.2 Project Location and Description

The Project is located in Egg Harbor Township, Atlantic County, New Jersey. Two sites are under consideration for construction of the onshore substation; the Shore Mall Road site (preferred site) and the Route 40 site (alternative site).

The preferred site is located within a paved parking lot west of an existing shopping center. This approximately 22acre site is part of a larger 39-acre parcel that is currently occupied by Harbor Square Mall. The site is located behind commercial retail structures to the east, and is fully bordered to the north, west, and south by forested areas (see Inset 1.2-1).

The alternative site is located approximately 0.2 mile northeast of the preferred site, and is also located within the parking area of a commercial shopping center. This site is an approximately 24-acre parcel bordered by US Route 40 and existing shopping centers to the east, Washington Avenue to the north, the Garden State Parkway to the east, and the West Jersey Avenue to the south. This site includes some existing commercial buildings that would likely require removal if the onshore substation were to be constructed in the alternate location (see Inset 1.2-1).

The onshore substation may use either an air-insulated or a gas-insulated switchgear design, pending development of the onshore substation final design. The substation design and specific equipment will depend on whether the transmission cables are high voltage alternating current (HVAC) or high voltage direct current (HVDC). If HVAC, the onshore substation will include up to four power transformers, static synchronous compensators (STATCOMs), shunt reactors, service station transformers, harmonic filter banks, and a substation control building. If HVDC, the onshore substation will include three single-phase transformers and a control building. Regardless of the specific components within the station, the onshore substation will have the exterior appearance of a typical substation, including a variety of aboveground high voltage electrical structures and cables, generally silver or gray in color, and enclosed within a chain link fence. For the purposes of this VRA, the tallest components within the onshore substation masts, which measure approximately 80 feet (24 m) in height above ground level (AGL).





Inset 1.2-1. Proposed Project Location

1.2.1 Visual Study Area

In order to define the maximum area of potential visual effect associated with the Project, EDR defined the VSA as the area within 3 miles of both the preferred and alternative Project Sites (see Inset 1.2-2). The 3-mile VSA is consistent with accepted visual studies completed for aboveground electrical transmission facilities in New York, Rhode Island, and New Hampshire. The 3-mile VSA is a conservative study area for facilities of this type, based on human visual acuity thresholds. Assuming a maximum resolution of the human eye is conservatively 28 seconds of an arc or 0.008 angular degrees (Deering, 1998) at 3 miles, human vision can resolve an object that is approximately 2 feet in diameter. Because the tallest portions of the onshore substation (the lightning masts) are much narrower than this, the VSA conservatively encompasses the area in which the onshore substation could potentially have an effect on visual resources. This VSA includes approximately 33.3 square miles within Egg Harbor and Galloway Townships, and portions of the Cities of Pleasantville, Linwood, Northfield, and Absecon, New Jersey. Within the VSA, EDR characterized the landscape, identified visually sensitive resources of national, regional, and statewide significance, and assessed potential Project visibility. It should be noted that the VSA represents an inventory area established for the purpose of identifying all potentially affected visual resources. Analyses of potential visual effect will focus on resources within the VSA indicated as potentially visible based on the viewshed analysis (see Section 2.1.1).





Inset 1.2-2. Visual Study Area

1.2.2 Existing Landscape Character

1.2.2.1 Landscape Types

Definition of landscape character within a given VSA provides a useful framework for the analysis of a facility's potential visual effects. Landscape types (LTs) within the VSA were categorized based on the similarity of various features, including landform, vegetation, water, and/or land use patterns, in accordance with established visual resource assessment methodologies (Smardon et al., 1988; USDA Forest Service, 1995; USDOT Federal Highway Administration, 1981; USDI Bureau of Land Management, 1980). The New Jersey Department of Environmental Protection (NJDEP) 2015 Land Use/Land Cover data set (2015 LU/LC) was used to help define the character and location of various LTs within the VSA (see Inset 1.2-3). The landscape types defined within the VSA are described below.

Forest

The Forest LT dominates the landscape within the VSA, comprising approximately 40% of the total study area. The Forest LT is mainly comprised of the New Jersey pine barrens, which is represented in the 2015 LI/LU data as



Coniferous Forest, Deciduous Forest, Atlantic White Cedar Wetlands, and Mixed Wooded Wetlands. This LT is characterized by relatively large areas of successional and mature forest. Local roads, parkland, and an occasional isolated residence may also occur within this zone, but are minor components of the larger LT. Areas of undeveloped forest land are located throughout the VSA but are most significant in the western and northern portions. Public access to most forest land within the study area is limited, and long-distance views within the zone are generally either fully or partially screened by woody vegetation. Outward views from this LT may be available when directly bordering large open areas such as commercial or industrial parking areas, and this LT often provides screening and framing of views from adjacent LTs.

Medium Density Residential

The Medium Density Residential LT occurs throughout the VSA, with higher concentrations located along the salt marsh shoreline and surrounding West Jersey Avenue and Mill Road (County Route 662). These areas are characterized by small lot residential neighborhoods that typically occur along the frontage of major roads, on secondary roads and cul-de-sacs spurring off the main roads. Structures are most commonly two-story wood-framed buildings with peaked roofs and clapboard or shingle siding, typically surrounded by well-maintained lawns and landscaped yards. Streets within these subdivisions use vegetation decoratively, although remnant forest vegetation has often been maintained at the edges of the developments to provide a buffer from major roadways or neighboring developments. Older neighborhoods tend to have more mature trees that provide greater canopy coverage and more visual screening. Typical user activities in this LT include home and yard use/maintenance, as well as local travel. Views that are available in this LT are generally limited by the adjacent structures and/or trees that occur at the edges of yards and neighborhoods.

Industrial

The Industrial LT occurs primarily in the northern portion of the VSA along Westcoat and Delilah Roads. More spotty occurrences of this LT can be found dispersed within or adjacent to other development types such as commercial development or at the edge of residential areas. Structures within this LT are most typically large warehousing and manufacturing facilities surrounded on multiple sides by paved parking areas. Additional land uses within this LT include solar power generating facilities, extractive mining, and vacant former industrial land. Views looking out of this LT are primarily directed along the roadways, and generally limited due to obstruction by adjacent commercial and industrial buildings, residential structures, or dense vegetation from the surrounding Forest LT. Open views may be available at sites with large areas of open pavement (roads and parking lots) that occur within this LT.

Commercial

The Commercial LT occurs mainly in the central portion of the VSA along Tilton Road (County Route 563) and East Black Horse Pike (US Route 40). Development in this area varies considerably with sections of older commercial strip shopping developments surrounding the Garden State Parkway, and a more dispersed development pattern traveling west on US Route 40. The businesses within this LT typically include large surface parking and monument signage, which, in combination with overhead electric lines and road signage, often results in visual clutter. Views within the LT are generally oriented along road corridors and toward the commercial buildings.

Salt Marsh

This LT Occurs exclusively on the eastern side of the VSA following the coastline and Absecon Creek. The Salt Marsh LT is identified by the 2015 LI/LU 2015 data set under various classifications including Tidal Mud Flats, Phragmites Dominated Coastal Wetlands, Saline Marsh, and Deciduous Scrub/Shrub Wetlands. It is primarily comprised of low growing woody shrub/scrub and herbaceous plants. This area is flooded regularly by ocean tides resulting in small pools or ponds at high tide and exposed mud flats at low tide. Views in this LT are rare due to limited, access but would be most common from boats navigating the water channels, or from adjacent developed LTs. To the west, the Salt Marsh LT is bordered by various developed LTs, primarily Medium Density Residential, which limit views in this direction. To the east the waters of the Inland Bay LT provide open and expansive views toward the neighboring barrier islands just beyond the VSA.



Low Density Residential

The Low Density Residential LT tends to be scattered throughout the southwestern side of the VSA with minimal clusters beyond. Development in this LT generally consists of large lot single family residential structures of the mid to late 20th century, in clusters or nestled alone in alcoves cut from the dense surrounding forest. However, portions of this LT in proximity to Mill Road include residences and small farm operations among open agricultural fields. Long-distance views in this LT are largely restricted to active agricultural settings with open fields or along roadway corridors. In such settings views are mostly contained within the LT and obstructed by the Forest LT beyond. However, occasional glimpses of neighboring LTs such as Commercial may be available between trees or structures.

High Density Residential

The High Density Residential LT occurs primarily in small clusters roughly following the Transportation LT, or bordering the Medium Density Residential LT along the shoreline. Buildings are relatively new multi-family houses and apartment complexes, or dense, small lot single-family neighborhoods. The structures in this LT are typically in close proximity of one another and surrounded by manicured lawns and landscaped yards. The streets are well organized in layout and appearance and are often curvilinear in form. Views available within this LT are generally limited by the adjacent structures, and/or trees that occur at the edges of the yards, however, views out of this LT may be available across open parking areas or roadways and into other surrounding LTs, typically Medium Density Residential or Forest.

Inland Water

This LT includes areas of open water such as reservoirs, ponds and streams within the VSA, including Abescon Creek, tributaries of Patcong Creek, the Atlantic City Reservoir, and Bargaintown Pond. Several of these water bodies have publicly accessible areas for water-based recreational activities, including boating and fishing. The character-defining component of this LT is the presence of open water as a dominant foreground element in the view. The open water also provides opportunities for unobstructed views of more distant features in the surrounding landscape when shorelines are not tightly enclosed by dense vegetation. Views from the shorelines are typically oriented toward the water, while views from the surface of these waterbodies typically include dense shoreline vegetation and occasional residential/industrial development.

Transportation

The Transportation LT includes the Garden State Parkway and the Atlantic City Expressway. The Garden State Parkway generally runs north-south through the center of the VSA, and the Atlantic City Expressway traverses the VSA from northwest to east, through the Salt Marsh LT. These highways are divided, limited access roads dominated by utilitarian, transportation-oriented features including automobiles, large expanses of pavement, guardrails, overpasses, and directional signs. Views within the Transportation LT are generally focused along the orientation of the highway. Viewer perspective is generally at ground level, although the LT is occasionally elevated and offers some more distant peripheral views from overpass bridges. However, adjacent forest vegetation and/or roadside development generally limits these outward views.

Recreation

The Recreation LT is scattered throughout the VSA in small areas typically surrounded by developed lands. These areas occur most frequently in association with the Medium Density Residential LT along the shoreline. Areas within the Recreation LT include sports fields, public parks, basketball and tennis courts, as well as the Atlantic City Country Club golf course. Views within this LT are typically available from open lawn areas, but become quickly obstructed by surrounding vegetation, and/or structures and buildings. The typical viewer activity in this LT includes leisure and active recreation ranging from enjoyment of walking trails to sporting events.

Inland Bay



The Inland Bay LT occurs on the eastern edge of the VSA. This LT is primarily surrounded by the Salt Marsh LT and developed land. The character-defining component of this LT is the presence of open water as a dominant foreground element when viewing eastward, and low growing herbaceous salt marsh vegetation backed by residential development in views to the west. The open water provides opportunities for unobstructed views of more distant features in the surrounding landscape including views out of the VSA. Views from the shoreline are typically oriented toward the water. Views from the surface of the Bay typically include dense residential development or expansive salt marsh ecosystems backed by residential development.

1.2.2.2 Environmental Justice Areas

In addition to the identified landscape types within the VSA, Environmental Justice Areas (EJAs) were identified and mapped (see Inset 1.2.3). Implemented in 1994, Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," directs attention to a project's environmental and human health effects on minority and low-income populations. While this order addresses actions undertaken by federal agencies, states have additionally identified parameters to define EJAs at the state level to mitigate the potential for disproportionately high and adverse human health of environmental impacts on minority, low-income, and/or Indian tribes and indigenous communities and populations from state actions. The parameters for identifying these areas is further described in Section 7.2 of the Construction and Operation Plan (COP). While EJAs are not defining characteristics of the landscape, these areas, designated by census tracts and/or block groups, cover a broad landscape area. As such, EJAs are identified as a landscape type overlay to ensure the visibility and potential visual impacts can be adequately addressed.

1.2.3 Distance Zones

Distance zones are typically defined in visual studies to divide the VSA into distinct sub-areas based on the various levels of landscape detail that can be perceived by a viewer. Three distinct distance zones were developed for this purpose. To define these zones, EDR consulted several well-established agency protocols, including those published by the U.S. Forest Service (USFS), Bureau of Land Management (BLM), and U.S. Department of Transportation (USDOT), to determine the appropriate extent of each distance zone. Based on the characteristics of the specific landscape being evaluated in this VRA, EDR defined distance zones within the VSA (as measured from the proposed Project) as follows:

- Near-Foreground: 0 to 0.5 mile. At this distance, a viewer is able to perceive details of an object with clarity. Surface textures, small features, and the full intensity and value of color can be seen on foreground objects.
- Foreground: 0.5 to 1.5 miles. At this distance, elements in the landscape tend to retain visual prominence, but detailed textures become less distinct. Larger scale landscape elements remain as a series of recognizable and distinguishable landscape patterns, colors, and textures.
- Middle Ground: 1.5 to 3.0 miles. The middle ground is usually the predominant distance at which landscapes are seen. At these distances, a viewer can perceive individual structures and trees but not in great detail. This is the zone where the parts of the landscape start to join together; individual hills become a range, individual trees merge into a forest, and buildings appear as simple geometric forms. Colors will be distinguishable but subdued by a bluish cast and softer tones than those in the foreground. Contrast in texture between landscape elements will also be reduced.

1.2.3.1 Landscape Type Occurrence by Distance Zone

The area of each LT within each distance zone in the VSA is summarized in Table 1.2-2. As shown in this table, the distribution of LTs within the individual distance zones is relatively consistent. The Forest LT makes up approximately 49% of both the near foreground and foreground zones, and 36% in the middle ground. The Commercial LT makes up the next highest percentage of the Near Foreground zone, at 23%. This is largely due to the presence of the existing shopping centers located on the proposed Project sites. While residential land uses

are the next most prevalent uses within the Near Foreground zone, their prevalence becomes much greater in the Foreground and Middle Ground zones while other land uses tend to decrease in those zones. Conversely, the Transportation LT is most prominent in the Near Foreground (6%) due to the crossing of the Atlantic City Expressway and the Garden State Parkway within 0.5 mile of the Project sites. The Transportation LT then decreases to 3% and 1% in the Foreground and Middle Ground zones, respectively.

Table 1.2-2 Landscape 1	Types Occurring	in Each Distance Zone
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Landscape Type	Percent of LT within the Near Foreground	Percent of LT within the Foreground	Percent of LT within the Middle Ground
Forest	48.7	49.2	36.3
Medium Density Residential	13.0	15.0	28.2
Industrial	3.6	9.9	8.3
Commercial	23.0	12.8	5.5
Salt Marsh	0.0	0.0	6.6
Low Density Residential	1.7	5.3	4.0
High Density Residential	2.0	3.5	3.1
Inland Water	0.0	0.6	2.6
Transportation	6.1	2.7	1.1
Recreation	1.9	0.8	2.0
Inland Bay	0.0	0.0	2.2
Total	100	100	100





Inset 1.2-3. Landscape Types and Environmental Justice Areas within the Visual Study Area

1.2.4 Visually Sensitive Resources

The identification of visually sensitive resources is an important step in determining locations which may be particularly sensitive to visual change. These resources have generally been identified by national, state, or local governments, organizations, and/or Native American tribes as important sites which are afforded some level of recognition or protection. Avoiding or minimizing impacts to these resources is an important consideration in the planning stages of a project. For this VRA, an inventory of visually sensitive resources within the VSA was prepared. This inventory determined that the VSA includes 69 visually sensitive resources (VSRs), which are listed by category in Table 1.2-2 and depicted in Inset 1.2-4, below. Attachment A includes a complete list of individual resources.

Table 1.2-2 Visually Sensitive Resources within the VSA

Visually Sensitive Resources	Total VSRs within the VSA	VSRs within the Preferred ZVI	VSRs within the Alternative ZVI
Properties of Historic Significance	Total: 6	Total: 2	Total: 2
National Historic Landmarks (NHL)	0	0	0
National/State Historic Sites	0	0	0
Properties Listed on National or State Registers of Historic Places (NRHP/SRHP)	1	0	0
Properties Eligible for Listing on NRHP or SRHP	5	2	2
Designated Scenic Resources	Total: 0	Total: 0	Total: 0
Rivers Designated as National or State Wild, Scenic or Recreational	0	0	0
Sites, Areas, Lakes, Reservoirs or Highways Designated or Eligible for Designation as Scenic	0	0	0
Other Designated Scenic Resources (Easements, Roads, Districts, and Overlooks)	0	0	0
Public Lands and Recreational Resources	Total: 44	Total: 2	Total: 1
National Parks, Recreation Areas, Seashores, and/or Forests [16 U.S.C. 1c]	0	0	0
National Natural Landmarks [36 CFR Part 62]	0	0	0
National Wildlife Refuges [16 U.S.C. 668dd]	0	0	0
State Parks	0	0	0
State Nature and Historic Preserve Areas	1	0	0



Visually Sensitive Resources	Total VSRs within the VSA	VSRs within the Preferred ZVI	VSRs within the Alternative ZVI
State Forest Preserves	0	0	0
Other State Lands	0	0	0
Wildlife Management Areas & Game Refuges	1	0	0
State Natural Areas	0	0	0
State Forests	0	0	0
State Boat Launches/Waterway Access Sites	0	0	0
Designated Trails	2	2	1
Local Parks and Recreation Areas	28	0	0
Publicly Accessible Conservation Lands/Easements	1	0	0
Rivers and Streams with Public Fishing Rights Easements	0	0	0
Named Lakes, Ponds, and Reservoirs	11	0	0
High-Use Public Areas	Total: 19	Total: 4	Total: 5
State, US, and Interstate Highways	4	3	4
Schools	15	1	1
Total Number of Visually Sensitive Resources in the VSA	69	8	7





Inset 1.2-4. Visually Sensitive Resources Within the Visual Study Area

2.0 VISUAL RESOURCE ASSESSMENT

Viewshed analysis was used to assess potential Project visibility within the VSA. Viewshed methodology and results are described below.

2.1 Viewshed Analysis

2.1.1 Viewshed Analysis Methodology

To determine the geographic areas of potential Project visibility, EDR conducted a lidar-based viewshed analysis. This analysis considers the height of the tallest proposed above-ground Project components, along with a digital surface model (DSM) representing ground level elevations, vegetation, and structures present in the VSA. The DSM was derived from 2018 United States Geological Survey (USGS) lidar data with a horizontal resolution of one meter. A geographic information systems (GIS) analysis of these data was conducted to determine whether a direct line of sight would be available from ground level vantage points to the tallest proposed Project components. If a direct line of sight is available, the position is coded as visible. The viewshed calculations for both the preferred and alternate onshore substation sites were based on 72 sample points, each with an assigned height of 80 feet to represent lightning masts (the tallest proposed structures). These sample points were placed throughout the onshore substation footprint at each site as the precise location of these structures has not yet been determined. The resulting geographic areas of potential Project visibility are referred to as the Project Zone of Visual Influence (ZVI).

To assure an accurate assessment of potential Project visibility, a few modifications were made to the lidar-derived DSM prior to analysis. Transmission lines and road-side utility lines that are included in the lidar data are misrepresented in the DSM as solid walls/screening features. In order to correct this inaccuracy, DSM elevation values within such utility corridors were replaced with bare earth elevation values. Additionally, all areas within the Project limits of disturbance were modeled with bare earth elevation to reflect potential Project-related clearing/demolition in these locations. This modified DSM was then used as a base layer for the viewshed analysis. Once the viewshed analysis was completed, a conditional statement was used within ArcGIS® to set Project visibility to zero in locations where the DSM elevation exceeded the bare earth elevation by 6 feet or more, indicating the presence of vegetation or structures that exceed viewer height. This was done for two reasons; 1) in locations where trees or structures are present in the DSM, the viewshed would reflect visibility from the vantage point of standing on the tree top or building roof, which is not the intent of this analysis, and 2) to reflect the fact that ground-level vantage points within buildings or areas of vegetation exceeding 6 feet in height generally will be screened from views of the Project.

2.1.2 Viewshed Analysis Results

The viewshed analysis results suggest that approximately 0.7% of the VSA could have some level of Project visibility if the preferred site is selected, and 1.1% if the alternative site is selected. In other words, either 99.3% or 98.9% of the VSA will be completely screened from view of the proposed Project, depending on which onshore substation site is selected. The greatest potential for Project visibility within the VSA, for either the preferred or alternative site, occurs on the parcels containing the onshore substation sites and properties directly adjacent to those sites within the near-foreground distance zone. This visibility is primarily concentrated in areas west of the Garden State Parkway, and is largely the result of open parking lots with minimal screening from vegetation or structures. Less concentrated areas of potential visibility are indicated at parking areas east of the Garden State Parkway within the near-foreground zone and extending into the foreground zone. The viewshed analysis also indicates potential visibility from open transportation corridors either bordering or oriented toward the onshore substation sites. The Garden State Parkway has potential views of the onshore substation on either site within the near-foreground zone, as does East Black Horse Pike (State Route 40), and the West Jersey and Atlantic Railroad as they run between the sites. Potential visibility of the onshore substation on the alternative site extends into the foreground distance zone along the Garden State Parkway, Tilton Road, and Washington Avenue. Foreground zone. Potential visibility of the

onshore substation on the preferred site extends into the foreground along the eastern end of State Route 40, and continues along West Decatur Avenue after State Route 40 jogs northward. Within the middle ground distance zone the viewshed analysis indicates potential visibility of the onshore substation on either site at the Atlantic County Utilities landfill site in the northeast portion of the VSA See Inset 2.1-1).

Table 2.1-1 presents the viewshed results, broken down by LT within the VSA. As indicated in this table, The vast majority (96.2%) of Project visibility will occur within the Commercial, Industrial, and Transportation LTs. No other LTs within the VSA account for more than 2% of the ZVI. Of the 0.7 or 1.1% of the total VSA that falls within the ZVI for the two potential project sites, the Commercial LT accounts for 0.5% and 0.7%, respectively.

Landscape Type	Acres Within VSA	Percent of VSA ¹	Percent of Visible Area within each LT – Preferred Site ²	Percent of Visible Area within VSA Preferred	Percent of Visible Area within each LT – Alternative Site ³	Percent of Visible Area within VSA Alternative
Forest	8,519.6	40.0	1.3	<0.1	5.4	0.1
Medium Density Residential	5,170.8	24.3	0.3	<0.1	3.4	<0.1
Industrial	1,799.9	8.5	11.5	0.1	9.1	0.1
Commercial	1,740.9	8.2	73.5	0.5	64.7	0.7
Salt Marsh	998.6	4.7	0.0	0.0	0.0	
Low Density Residential	894.2	4.2	2.0	<0.1	2.9	<0.1
High Density Residential	665.0	3.1	0.2	<0.1	0.7	<0.1
Inland Water	419.8	2.0	0.0	0.0	0.0	0.0
Transportation	372.8	1.8	11.2	0.1	13.6	0.2
Recreation	372.4	1.7	0.0	0.0	0.1	<0.1
Inland Bay	336.3	1.6	0.0	0.0	0.0	0.0
Total	21,290.4	100	100	0.7	100	1.1

	Table 2.1-1	Landscape	Types	Within	the	VSA
--	-------------	-----------	-------	--------	-----	-----

¹ The VSA includes approximately 33.3 square miles (88.2 sq. km.)

²The preferred ZVI includes approximately 0.2 square miles (0.7 sq. km.)

³The alternative ZVI includes approximately 0.4 square miles (1.1 sq. km.)





Inset 2.1-1. Viewshed Analysis Results

2.1.3 Viewshed Analysis Results from Environmental Justice Areas

A total of 23 EJAs were identified within the VSA. Based on the viewshed analysis results, 9 of these EJAs may have visibility of some portion of the Project. Visibility is primarily concentrated in EJA Numbers 340010117011, 340010117022, and 340010117021(See Table 2.1-2 and Inset 2.1-2). The viewshed analysis results suggest that visibility would occur from a range of 0.7% to 3.8% of the EJA area if the preferred site is selected, and from a range of 1.7% to 5.1% of the EJA area if the alternative site is selected. Visibility of the preferred site within the EJAs is generally limited to the adjacent parking lots and open land and the US Route 40 and Garden State Parkway roadway corridors. There is an additional area of discrete visibility located within the middle ground distance zone of the Atlantic County landfill site. Visibility of the alternative site within the EJAs is generally limited to adjacent parking lots Route 40, Black Horse Pike, Jersey Avenue, Roosevelt Avenue, Tilton Road, and Old Egg Harbor Road roadway corridors.

Table 2.1-2 Viewshed Analysis Results by	r Environmental Justice Areas Census Tracts
--	---

Environmental Justice Area	Acres Within VSA	Percent of VSA ¹	Percent of Visible Area within each EJA Preferred Site ²	Percent of Visible Area within each EJA Alternative Site ³
340010117022	3,348.9	15.7	0.7	1.7
340010117021	2,081.0	9.8	1.0	1.7
340010117012	1253.3	5.8	-	1.4
340010117011	973.7	4.6	1.6	5.1
340010123022	634.3	3.0	<0.1	<0.1
340010118031	620.8	2.9	<0.1	0.1
340010118032	381.9	1.8	3.8	5.1
340010122003	326.1	1.5	1.6	-
340010122001	243.7	1.1	1.3	-
Total:	13,553.3			

¹ The VSA includes approximately 33.3 square miles (88.2 sq. km.)

²The preferred ZVI includes approximately 0.2 square miles (0.7 sq. km.)

³The alternative ZVI includes approximately 0.4 square miles (1.1 sq. km.)





Inset 2.1-2. Viewshed Analysis Results by Environmental Justice Areas

2.1.4 Visibility Results from Visually Sensitive Resources

Only eight (11.6%) of the 69 VSRs occurring within the 3-mile radius VSA were indicated as having potential visibility of the Project if either site is selected. One additional VSR (for a total of nine or 13%) was indicated as having potential visibility if the alternative site is selected. A description of these resources, their distance from the Project, and the nature and degree of potential Project visibility as indicated by the viewshed analysis for each site, is provided in Table 2.1-3 and Inset 2.1-3, below. Attachment A contains a full list of VSRs keyed to Inset 2.1-2, and potential Project visibility.

Resource Type	Resource Name	Distance from the Project (preferred/ alternative mi.)	Description of Potential Visibility
			The West Jersey and Atlantic Railroad Historic District, and the Garden State Parkway Historic District (Atlantic) are historically significant transportation corridors that are adjacent to both the preferred and alternate onshore substation sites.
Eligible for Listing S/NRHP	West Jersey and Atlantic Railroad Historic District	0.1/0.0	The West Jersey and Atlantic Railroad Historic District passes between the preferred and alternative sites in an approximately northwest to southeast orientation through the VSA. From this resource potential visibility of the Project on the preferred site is partially screened by intervening vegetation and structures. This screening concentrates potential views within a 0.25-mile area closest to the site. The alternative site has minimal screening and visibility is indicated directly in front of the facility site and extending approximately 0.7 mile to the west of the Garden State Parkway and approximately 0.7 mile to the east.
	Garden State Parkway Historic District (Atlantic)	0.2/0.0	The Garden State Parkway Historic District (Atlantic), crosses the VSA roughly north to south, and passes the proposed onshore substation sites to the east. Potential visibility of the onshore substation on the preferred site is concentrated in a 0.6 mile stretch from the Tilton Road (County Route 563) overpass to north of the Washington Avenue (County Route 608) overpass. Potential visibility of the onshore substation on the alternative site is primarily indicated from the Tilton Road south bound on-ramp to the Atlantic City Expressway overpass, with a thin corridor of visibility additionally found along the northbound travel lane where the Parkway crosses over Delilah Road.
	Atlantic County Bikeway	0.1/0.0	Potential Project visibility from the Atlantic County Bikeway occurs exclusively within the near-foreground distance zone. The Atlantic County Bikeway, following the Railroad Historic District corridor described above, enters the VSA on the western border and terminates at the Garden State Parkway overpass. As such, potential visibility of the onshore substation on either site from this resource matches that described for the Railroad Historic District west of the Garden State Parkway.
Trails	Linwood Bike Path	1.4/1.1	The Linwood Bike Path follows the Railroad Historic District eastward from Devins Lane before turning south-southwest along a dedicated bikeway. Potential visibility of the onshore substation is limited to the preferred site and is represented by a discrete corridor of visibility along US Route 40 and extending along West Decatur Avenue as it crosses the Bike Path. This limited visibility would likely require viewing from a distinct location and in a specific direction. In addition, at this middle-ground distance, it will be difficult to distinguish facility components from other intervening elements on the skyline such as signage, structures, and overhead electric utilities.

Table 2.1-3 Visually Sensitive Resources with Project Visibility



Resource Type	Resource Name	Distance from the Project (preferred/ alternative mi.)	Description of Potential Visibility
State, US, and Interstate Highways	US Route 40	0.2/0.0	US Route 40 traverses the VSA on an east and west orientation, and passes diagonally between the preferred and alternative sites from Lincoln Avenue to the Garden State Parkway overpass. Portions of this roadway west of Lincoln Avenue are oriented toward the alternative site and portions of the roadway east of the Parkway overpass are oriented toward the preferred site. Therefore, the diagonal path between the sites has visibility of both sites, but is limited to visibility of the alternative site only west of Lincoln Avenue. East of the Garden State Parkway overpass potential onshore substation visibility is primarily limited to the preferred site with intermittent visibility of the onshore substation on the alternative site limited to the near-foreground zone. At the US Route 40 junction with New Road (US Route 9), US Route 40 jogs north and would no longer have views of the Project at either site. As this road is oriented toward the Project. Although viewshed analysis indicates that potential visibility is available in all distance zones, beyond the near foreground, distinguishing facility components from intervening elements on the horizon will be difficult from Route 40.
	Garden State Parkway (NJ 444)	0.3/0.0	The Garden State Parkway is contiguous with The Garden State Parkway Historic District (Atlantic), and potential visibility is as described above for that resource.
	Atlantic City Expressway (NJ 446)	1.0/0.6	The Atlantic City Expressway crosses the VSA roughly northeast to southwest and is indicated as having potential views of the onshore substation only if located on the alternative site. At its closest point this highway is located within the foreground distance zone, and potential views are indicated at discrete locations crossing the Garden State Parkway and Tilton Road. However, actual visibility of the onshore substation from the Expressway at the Tilton Road overpass is unlikely as Tilton Road will screen views as it passes over the expressway.
	US 9	1.7/1.5	US Route 9 crosses the VSA roughly north to south and is entirely within the middle ground distance zone. Potential visibility of the onshore substation from the preferred site is limited to small corridors of visibility that extend from US Route 40. At this distance actual visibility of the onshore substation is not considered likely. No visibility of the onshore substation is indicated if the alternative site is selected.
Schools	Principle Academy Charter	0.3/0.0	The Principle Academy Charter School is located on the proposed alternative facility site and therefore has full visibility of the onshore substation on this site. Potential visibility of the onshore substation on the preferred facility site from this resource is limited to portions along the western edge of the building due to screening from vegetation and intervening structures associated with the Harbor Square Shopping Center.





Inset 2.1-3. Visibility from Visually Sensitive Resources

2.2 Visibility and Potential Visual Effects

Based on results of the viewshed analysis, the Project will be screened from view in 99.3% of the VSA, and from 61 (88.4%) of the 69 identified VSRs within the VSA, if the preferred onshore substation site is selected. If the alternative site is selected viewshed results predict the Project will be fully screened from approximately 98.9% of the VSA and 60 of the 69 (87.0%) identified VSRs. Thus, almost the entire VSA and most of the VSRs within that area will not have views of the proposed Project. In addition, presence of visually sensitive resources within the Project ZVI does not necessarily indicate that the Project will result in adverse visual impacts to that resource. In fact, for areas outside the near foreground distance zone, Project visibility will likely be limited to the upper portions of the proposed lightning masts due to screening provided by adjacent structures and vegetation. In addition, these structures are likely to be lost amongst the existing commercial, industrial, and roadside utility structures that characterize the LTs in and around the Project sites. As indicated by the results, areas where the Project may be visible are largely within the Commercial, Industrial, and Transportation LTs. These areas are generally not considered to have high scenic quality and are often characterized by an eclectic mix of structure types and a high degree of visual interference.

Viewers in these LTs are typically travelers on major highways and local roads, as well as employees and shoppers at the commercial and industrial enterprises in the area. The users present in the Commercial, Industrial, and Transportation LTs are likely to have a relatively low sensitivity to visual change in the surrounding environment and the addition of the onshore facilities would be unlikely to change their perception of the landscape. In addition, these viewers are typically focused on other activities (e.g., driving) or involved in indoor activities (e.g., work, shopping) that divert their attention or prevent them from viewing the surrounding landscape.

3.0 RECOMMENDATIONS

As discussed previously, the visibility of the proposed onshore substation will be limited to discrete areas within the VSA and most concentrated in the near-foreground zone. The viewshed analysis results suggest with a reasonably high degree of confidence that visibility could occur over an area measuring approximately 0.2 square miles (0.7 sq. km.) for the preferred site and approximately 0.4 square miles (1.1 sq. km.) for the alternative site.

In order to determine the potential visual effects within the very limited areas of visibility, a supplemental analysis will be completed to evaluate the following.

- complete a refined viewshed analysis using the location and height of Project components,
- field verify the result of the viewshed analysis,
- identify and photographically document potential KOPs,
- generate visual simulation(s) and characterize the degree of Project visibility,
- evaluate the potential visual impacts resulting from the proposed onshore substation, and
- provide recommendations for mitigation, if required.

4.0 MITIGATION

Pending the results of the supplemental visual analysis, several mitigation measures will be considered during the design phase of the onshore substation. The list below provides a broad overview of typical mitigation measures either already included in Project siting or that will be considered in Project design. The supplemental analysis described in Section 3.0 will include a more detailed proposal of potential mitigation measures if it is determined that potential visual impacts could be minimized through the application of specific mitigation strategies.

- Siting. The Project will be located within existing parking areas behind commercial plazas to limit available visibility and perceived changes in land use and scenic quality. The area is zoned for large-scale commercial development and is currently characterized by an abundance of discordant manmade features. Additionally, the Project onshore facilities are sited away from more sensitive land uses such as undeveloped natural areas and residential development.
- Screening. The preferred site is effectively screened by forest vegetation to the north, west, and south, and a large commercial structure to the east. The need for screening will be evaluated once the final Project design is complete for the alternate site.
- Camouflage. While camouflage is not an appropriate or realistic mitigation option, careful consideration of the color of materials used for buildings, fences, and other non-operational features of the Project can help minimize the potential visual contrast presented by these features.
- Low Profile. The height of the lightning masts and other electrical equipment within the onshore substation cannot be reduced due to reliability and safety considerations. Other major components of the onshore facilities are being installed underground to avoid long-term visual impact.
- Downsizing. The Project design responds to the electrical and safety requirements of the Project, and the space available at the proposed sites. As such, the onshore substation will occupy the smallest facility footprint, and limit the horizontal and vertical extent of the proposed equipment, to the extent practicable.
- Alternate Technologies. The onshore facilities will utilize buried electrical cables rather than overhead conductors to minimize visual impacts. Alternate technologies for the onshore substation are not available.

- Non-specular Materials. The Project will likely utilize non-specular conductors and galvanized materials that, although shiny at the time of installation, become dull over time. If determined beneficial, alternative fencing materials will be considered to minimize visual contrast and specular reflection.
- Lighting at the onshore substation will be kept to a minimum, and turned on only as needed, either by switch or timer. Where possible lights will be directed downward and will utilize full cut-off fixtures to minimize off-site light trespass.
- Maintenance. The Project components and site will be maintained to ensure a clean and orderly appearance.



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5.0 REFERENCES

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Attachment A: Visibility from Visually Sensitive Resources

	Location		Distance ¹		Project Visibility (Viewshed Results)		
					+Visible - Not Vi	isible +/- Partially	
Vieually Sonsitivo Posourco	City or Town	County	Miles from OnSS Prefered Site	Miles from OnSS Alternative Site	DSM Viewshed Prefered (Topography, Structures, and Vegetation)	DSM Viewshed Alternative (Topography, Structures, and Vegetation)	
	only of Form	county	ono	ono	vogotationy	rogotationy	
Properties of Historic Significance							
National/State Historic Lanomarks							
Notie III Study Area							
None in Study Area							
Sites Listed on National or State Registers of Historia Plac							
	City of						
1. Risley Homestead	Northfield	Atlantic	2.2	2.1	-	-	
Sites Eligible for Listing on NRHP or SRHP							
	City of				_	_	
	Pleasantville,	A.() ('	0.4		+/-	+/-	
2. West Jersey and Atlantic Railroad Historic District	Town of Egg	Atlantic	0.1	0.0			
3 Garden State Parkway Historic District (Atlantic)	Galloway	Atlantic	0.2	0.0	+/-	+/-	
	City of	Allahlio	0.2	0.0			
4. 1715 Tilton Road	Northfield	Atlantic	2.4	2.5	-	-	
E. Cannon Court Boodaida Cabina	Town of Egg	Atlantia	07	2.0	_	_	
	TOWIT OF Egg	Allantic	Z.1	2.9			
6. Studebaker Showroom	Town of Egg	Atlantic	2.7	2.5	-	-	
Designated Scenic Resources							
Rivers Designated as National or State Wild, Scenic or Re None in Study Area	ecreational						
Sites, Areas, Lakes, Reservoirs or Highways Designated o	or Eligible for Desig	gnation as Scer	nic				
Other Designated Scenic Resources (Essements, Reads	Districts and Ovo	rlooks)					
None in Study Area		1100K3/					
Public Lands and Recreational Resources							
National Parks Recreation Areas Seashores and Forest	e						
None in Study Area	5						
National Natural Landmarks							
None in Study Area							
National Wildlife Refuges							
None in Study Area							
State Parks							
None in Study Area							
State Nature and Historic Preserve Areas	1					1	
7. Heathercroft Preserve	Town of Egg	Atlantic	0.9	1.1	-	-	
State Forest Preserve						1	
None in Study Area							
Other State Lands							
Wildlife Management Areas & Game Refuges							
	Cities of Absecon,						
	Pleasantville,				-	-	
8 Absecon Wildlife Management Area	Calloway	Atlantia	20	28			
Natural Areas	Galloway	Audituo	5.2	2.0			
None in Study Area							
State Forests							
None in Study Area							
State Fishing/Waterway Access Sites	n		I	ı			
None in Study Area							
Trails							
State and Federal Trails							
No stand-alone state/federal trails were identified.							
However, state trails occur within (and are evaluated as part of) state lands identified elsewhere in this table.							
Bike Trails/Routes				T			
9. Atlantic County Bikeway	Town of Egg	Atlantic	0.1	0.0	+/-	+/-	

Atlantic Shores Offshore Wind Onshore Facilities Cardiff Alternatives Egg Harbor Township, New Jersey Attachment A: Visibility from Visually Sensitive Resources Page 1 of 4



	Location		Distance ¹		Project Visibility (Viewshed Results) +Visible - Not Visible +/- Partially	
Visually Sensitive Resource	City or Town	County	Miles from OnSS Prefered Site	Miles from OnSS Alternative Site	DSM Viewshed Prefered (Topography, Structures, and Vegetation)	DSM Viewshed Alternative (Topography, Structures, and Vegetation)
	Cities of					
	Linwood,				+/-	-
10. Linwood Bike Path	Pleasantville	Atlantic	1.4	1.1		
Other Trails						1
None in Study Area						
11. Broadway Park	I own of Egg	Atlantic	0.1	0.4	-	-
12. Childs Kirk Park	Town of Egg	Atlantic	0.5	0.1	-	-
13. Elm Avenue Park	Town of Egg	Atlantic	0.8	0.8	-	-
	Northfield,;				-	-
14. Birch Grove Park ²	Town of Egg	Atlantic	0.9	1.0		
15. Abraham Lincoln Park	Pleasantville	Atlantic	1.3	1.2	-	-
	City of				_	_
16. Green Park	Pleasantville City of	Atlantic	1.4	1.3		
17. Max Manning Complex	Pleasantville	Atlantic	1.5	1.3	-	-
18 Northfield City Playaround	City of	Atlantic	1 0	1.8	-	-
	City of	Allahliu	1.5	1.0		
19. South Pleasantville Little League	Pleasantville	Atlantic	2.0	1.8	-	-
20. Tilton Avenue Park	Pleasantville	Atlantic	2.0	1.8	-	-
21. Delilah Oaks Park	Town of Fag	Atlantic	2.0	2.1	-	-
	City of					_
22. J B Smith Playground	Pleasantville City of	Atlantic	2.1	2.0		
23. Woodland Avenue Park	Pleasantville	Atlantic	2.2	1.8	-	-
	Cities of Northfield					
	Pleasantville;				-	-
24. Stillwater Park	Town of Egg	Atlantic	2.2	2.1		
25. Atlantic City Golf Club	Northfield	Atlantic	2.3	2.2	-	-
	City of				_	_
26. Bright Avenue Recreation Center	Pleasantville City of	Atlantic	2.3	1.9		
27. Clematis Avenue Park	Pleasantville	Atlantic	2.4	2.2	-	-
28 North Main Street School Playaround	City of Pleasantville	Atlantic	2.5	22	-	-
	City of	Additio	2.0	2.2		
29. Ty Hellrich Field	Pleasantville	Atlantic	2.6	2.4	-	-
30. Delaware Avenue Park	Town of Egg	Atlantic	2.7	3.1	-	-
31. John Couchoud Community Center	Town of Egg	Atlantic	2.7	2.9	-	-
32 Bavview Waterfront Park	City of Pleasantville	Atlantic	2.7	2.5	-	-
	City of				_	_
33. Tacht Basin	Pleasantville City of	Atlantic	2.8	2.5	_	_
34. Glencove Park	Northfield	Atlantic	2.8	2.9	-	-
35. Bay Avenue Park	City of	Atlantic	2.0	20	-	-
	City of	Allantit	2.3	2.3		
36. Leeds Avenue Watershed	Pleasantville	Atlantic	2.9	2.4	-	-
37. Walnut Avenue Recreational Complex	Pleasantville	Atlantic	2.9	2.5	-	-
	City of	A (1 - 11			_	-
Jo. Leeds Avenue Park	Pleasantville	Atlantic	3.3	2.8		

Atlantic Shores Offshore Wind Onshore Facilities Cardiff Alternatives Egg Harbor Township, New Jersey Attachment A: Visibility from Visually Sensitive Resources Page 2 of 4



					Project Visibility (Viewshed Results)	
	Location		Distance ¹		+Visible - Not Visible +/- Partially	
	o" -		Miles from OnSS Prefered	Miles from OnSS Alternative	DSM Viewshed Prefered (Topography, Structures, and	DSM Viewshed Alternative (Topography, Structures, and
Visually Sensitive Resource	City or Town	County	Site	Site	Vegetation)	Vegetation)
Publicly Accessible Conservation Lands/Easements						1
39. Nature Preservation Council Wildlife Refuge	Town of Egg	Atlantic	0.9	1.2	-	-
Rivers and Streams with Public Fishing						1
None in Study Area						
	City of					
40. Birch Grove Park Pond	Northfield; Town of Egg	Atlantic	1.1	1.3	-	-
41. Patcong Lake	Town of Egg	Atlantic	1.2	1.6	-	-
	City of					
42. Dog Lake	Northfield City of	Atlantic	1.4	1.6		
43. Crystal Lake	Northfield City of	Atlantic	1.4	1.7	-	-
44. Raccoon Lake	Northfield City of	Atlantic	1.4	1.7	-	-
45. Silver/Deer Lake	Northfield	Atlantic	1.4	1.7	-	-
46. Bog Hollow	Northfield	Atlantic	1.5	1.8	-	-
47. Golden Pond	Northfield Cities of	Atlantic	1.5	1.7	-	-
	Northfield; Town				-	-
48. Bargaintown Pond	of Egg	Atlantic	2.2	2.5		
49. Lake Harvey	Town of Egg	Atlantic	2.3	2.0	-	-
	City of Absecon;				-	_
50. Atlantic City Reservoir	Galloway	Atlantic	2.5	2.2		
High-Use Public Areas						
State, US, and Interstate Highways						
	City of				. /	. /
51. US 40	Town of Egg	Atlantic	0.2	0.0	+/-	+/-
	Towns of Egg,				+/_	+/_
52. Garden State Parkway (NJ 444)	Galloway	Atlantic	0.3	0.0	• 7 -	• 7 -
	Pleasantville;				-	+/-
53. Atlantic City Expressway (NJ 446)	Town of Egg	Atlantic	1.0	0.6		-
	Linwood, Northfield, Absecon,				+/-	+/-
54. US 9	Towns of Egg, Galloway	Atlantic	1.7	1.5		
Schools			1	1		
55. Principle Academy Charter	Town of Egg City of	Atlantic	0.3	0.0	+/-	+
56. Life Point Academy	Pleasantville	Atlantic	1.5	1.2		
57. Fernwood Avenue Middle School	Town of Egg	Atlantic	1.6	1.9	-	-
58. Clayton J. Davenport Elementary School	Town of Egg City of	Atlantic	1.6	1.6	-	-
59. Pleasantville High School	Pleasantville; Town of Egg City of	Atlantic	1.8	1.3	-	-
60. Pleasantville Middle School	Pleasantville	Atlantic	2.1	1.6	-	-
61. Northfield Community School	City of Northfield	Atlantic	2.1	2.3	-	-

Atlantic Shores Offshore Wind Onshore Facilities Cardiff Alternatives Egg Harbor Township, New Jersey Attachment A: Visibility from Visually Sensitive Resources Page 3 of 4



		Location			Project Visibility (Viewshed Results) +Visible - Not Visible +/- Partially	
	Loca			ance ¹		
Visually Sensitive Resource	City or Town	County	Miles from OnSS Prefered Site	Miles from OnSS Alternative Site	DSM Viewshed Prefered (Topography, Structures, and Vegetation)	DSM Viewshed Alternative (Topography, Structures, and Vegetation)
62 South Main Street Elementary School	City of	Atlantia	2.1	1.0	_	-
	City of	Allantic	Z.1	1.9		
63. Washington Avenue Elementary School	Pleasantville	Atlantic	2.1	1.8	-	-
64. Trinity Learning Center	Town of Egg	Atlantic	2.3	2.8	-	-
65. North Main Street Elementary School	City of Pleasantville	Atlantic	2.5	2.1	-	-
66. Islamic Academy of South Jersey	Town of Egg	Atlantic	2.9	3.1	-	-
67. Egg Harbor Township High School	Town of Egg	Atlantic	3.0	3.4	-	-
68. Leeds Avenue Elementary School	City of Pleasantville	Atlantic	3.0	2.5	-	-
	Cities of Absecon,				_	-
69. Holy Spirit High School	Pleasantville	Atlantic	3.0	2.5		

¹ For large areas and linear sites, approximate distance to the substation was measured from the respective area's closest point.

² Evaluation of Birch Grove Park includes internally located waterbodies.

