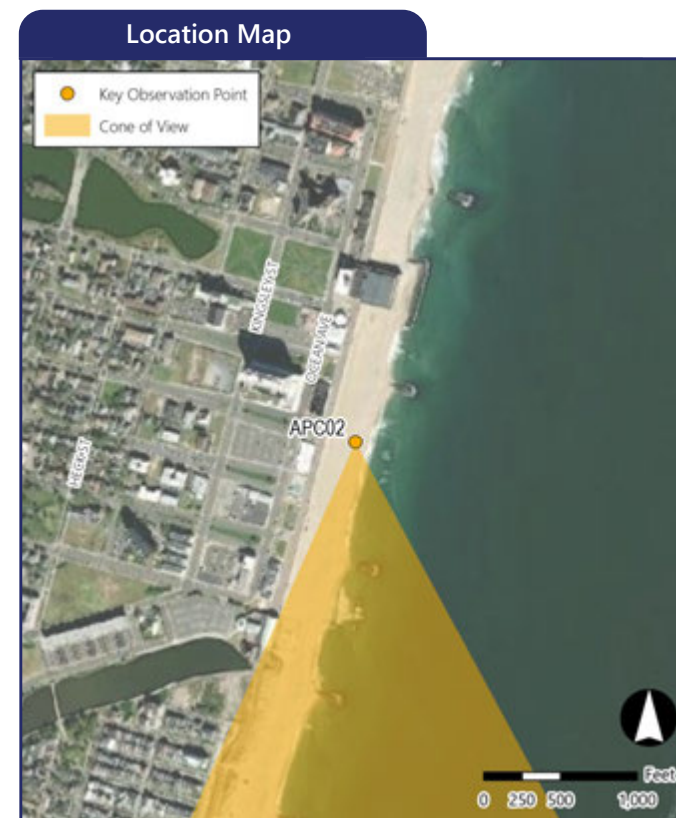
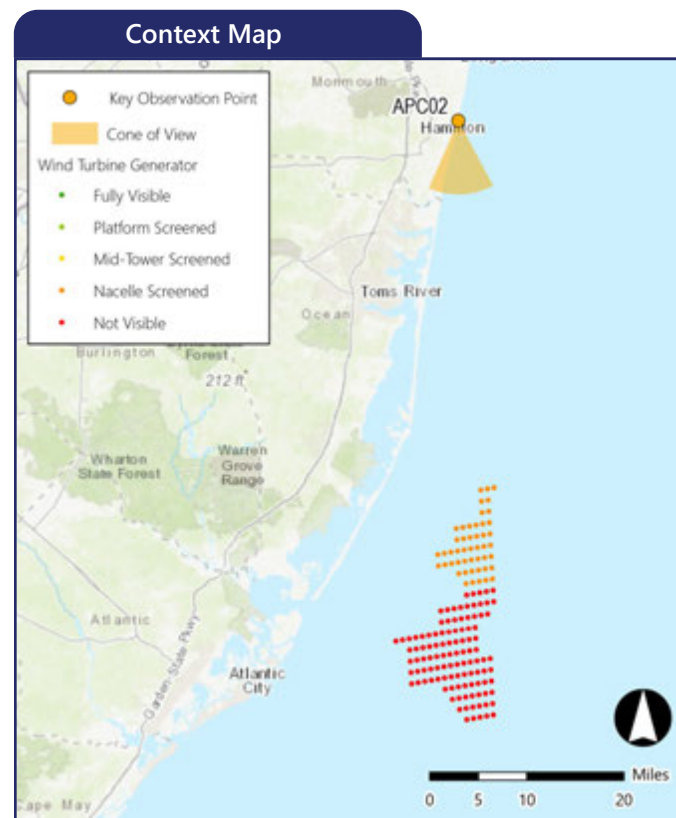


# APC02 Asbury Park Convention Center (Beach)

Asbury Park City, Monmouth County, New Jersey



The image above is a +/- 124° panorama photograph from the Asbury Park Convention Center (Beach), panning clockwise from southeast (left) to southwest (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates: 40.22099°N, 73.99873°W  
 Character Area: Commercial Beachfront, Seascape (SCA)  
 User Group: L. Residents, Tourists, S. Resident  
 Direction of View: South  
 Distance to Nearest Visible Turbine: 38.0 miles  
 Sensitive Resource: Asbury Park Convention Hall, Boardwalk and Beach, Howard Johnson's Pavilion, New Jersey Coastal Heritage Trail Area, Census Tract 8070.03, EJA

## Environmental Information

Date Taken: 03/03/2022  
 Time: 2:00 PM  
 Temperature: 43°F  
 Humidity: 31%  
 Visibility: 10 miles  
 Wind Direction: West-northwest  
 Wind Speed: 14 mph  
 Conditions Observed: Partly Cloudy

## Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 14.5 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)





# APC02 Asbury Park Convention Center (Beach)

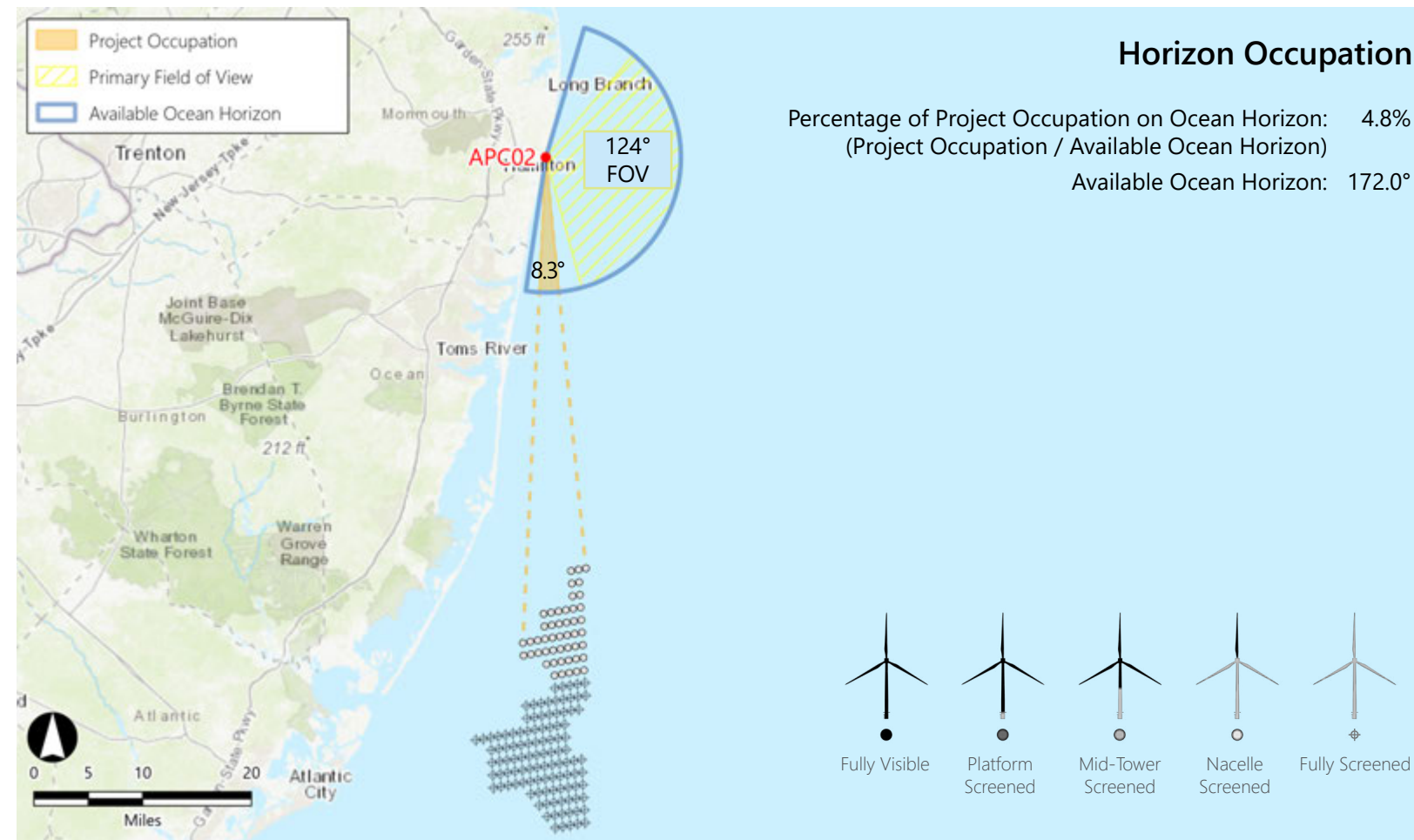
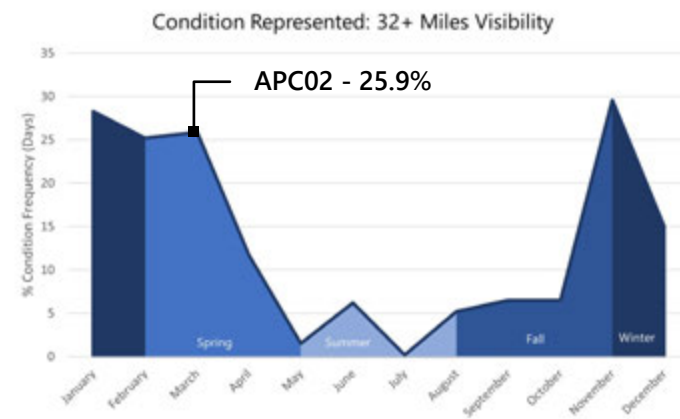
City of Asbury Park, Monmouth County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 38.0 miles  
 Camera Height: 14.5 feet  
 User Groups: L. Residents, Tourists, S.Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

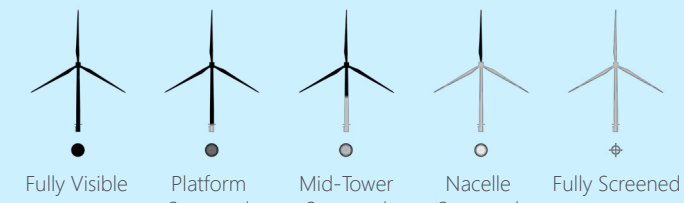
### Color Contrast Rating:



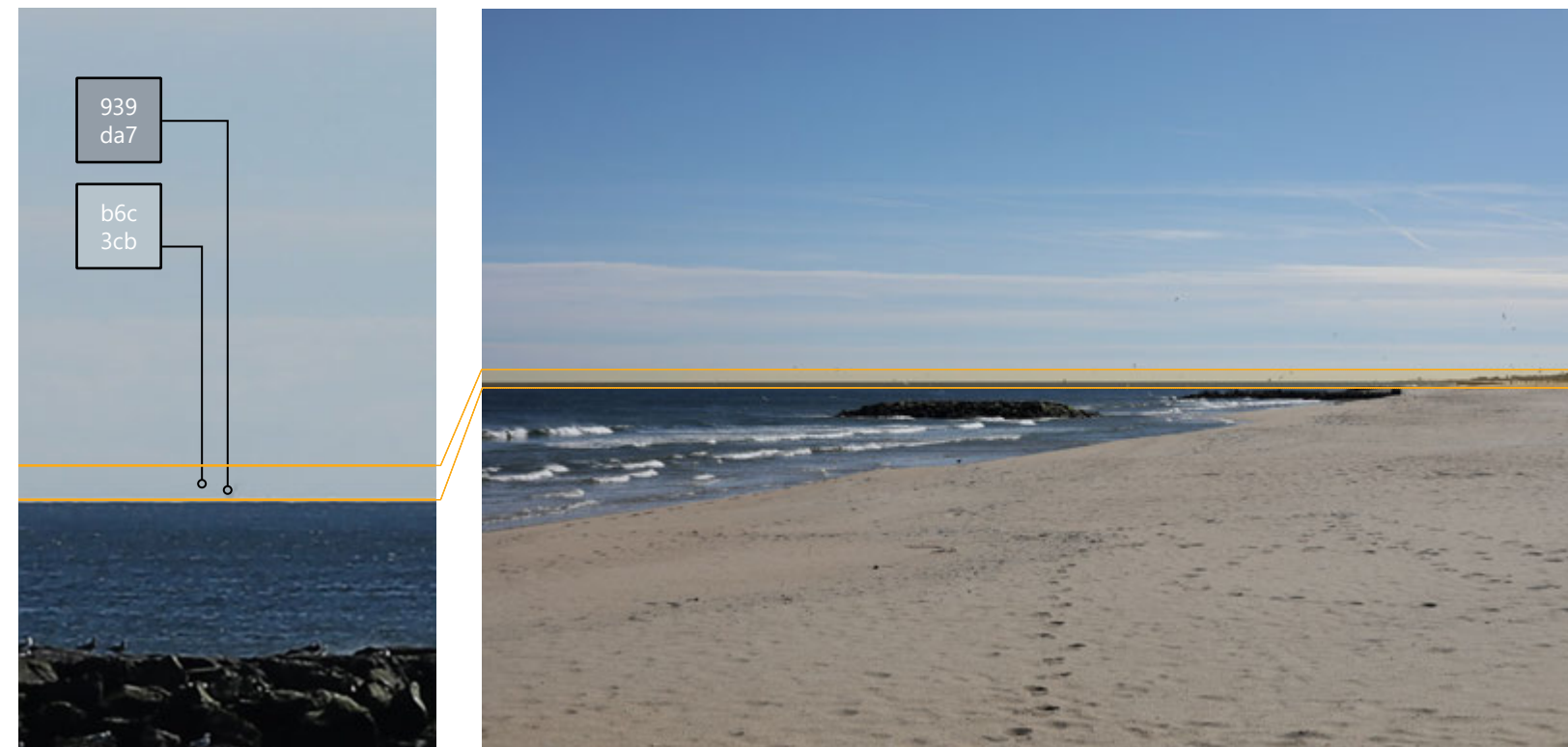
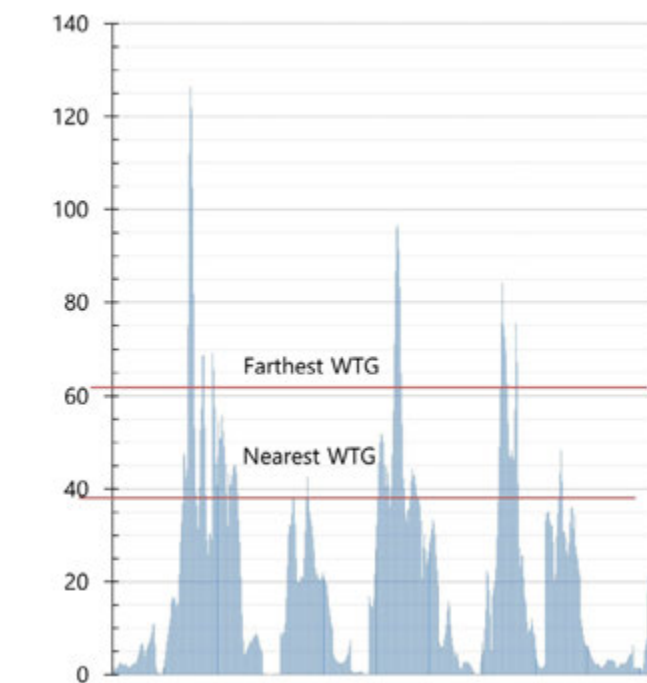
Lighting Condition: Back lit  
 Season: Winter  
 Sky Condition: Partly Cloudy  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

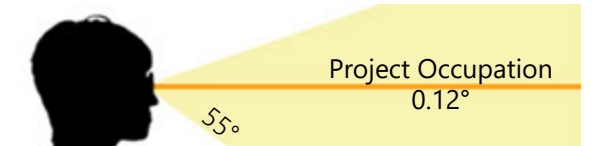
KOP SIC04 illustrates the project from 37.4 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during midday conditions.



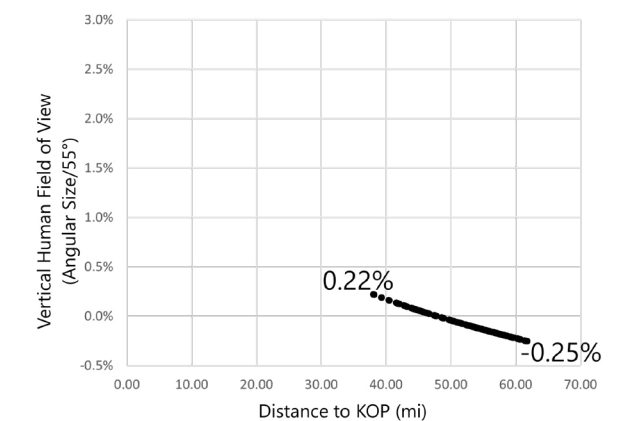
## March, 2019 - Hourly Visibility Distance



## Vertical Occupation



Percentage of Human FOV: 0.22% (0.12° / 55°)  
 (Considering the nearest visible turbine)





# APC02 Asbury Park Convention Center (Beach)

City of Asbury Park, Monmouth County, New Jersey

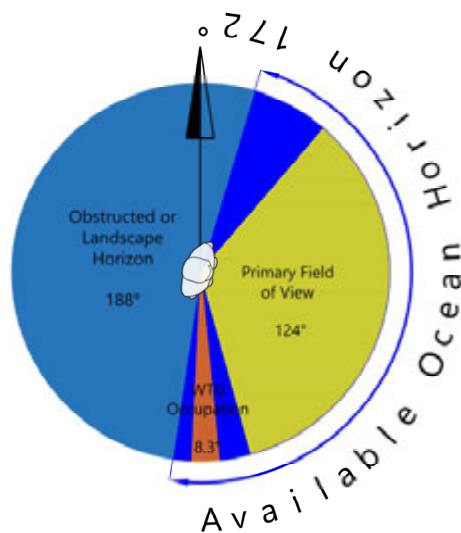
## KOP Information

Primary Field of View/Simulation Direction:	East/South
Distance to Closest WTG:	37.98 miles
Camera Height:	14.49 ft
User Groups:	Residents, Tourists
Horizon Occupation (% HFOV):	Small (8.3°, 6.7%)
Vertical Occupation:	Negligible (0.12°, 0.2%)
Character Area Type:	Seascape
Character Area:	Commercial Beachfront

## Existing View



## Field of View



## Existing Landscape/ Seascape Character

### Description:

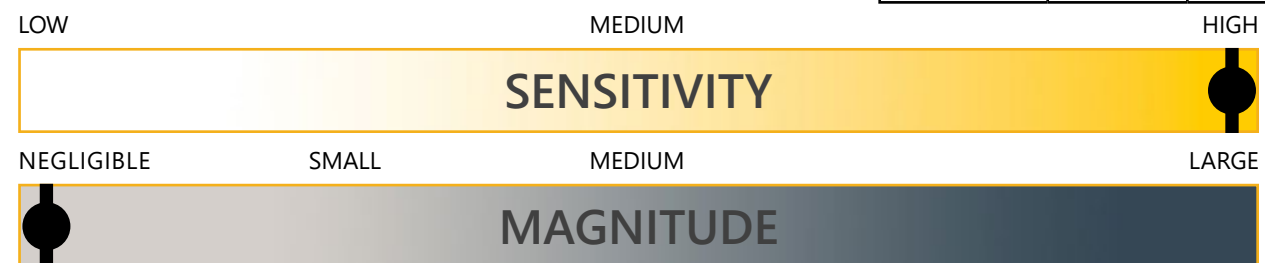
Asbury Park's Commercial Beachfront Seascape Character Area includes a deep (wide) beach that provides a buffer between the shoreline development and the natural waterfront. While the development is very visible and apparent, the wide sandy beach and slight drop in viewer elevation minimizes the perceived scale of the development. As such, views over the water feel natural, particularly given that the sound of the ocean drowns out any noise from the city. The seascape also has several buildings that are clearly re-purposed historic structures. The incorporation of modern awnings on old brick structures with exposed iron support structures gives the setting a sense of revival. New development is low profile and does not compete heavily with the historic structures. The boardwalk is wide and expansive with 1-3 story structure lining the west side. Several open lots separate the buildings along the boardwalk, so the viewer does not feel "penned in" by a continuous barrier. Ocean views from the boardwalk are typically unscreened except when looking toward two tall historic buildings that extend out onto the beach north and south of the KOP. Taller buildings west of the boardwalk mark the transition to the LCA and Village Town Center character area where views of the ocean diminish very quickly due to the dense urban development and naturalized park vegetation.

### Project Contrast:

During extremely clear viewing conditions, the WTGs present weak line, form, and color contrast with the ocean. Due to the distance and viewer orientation, there is unlikely to be a lighting or visibility scenario under which the contrast would increase. At the time and season represented in the photosimulation, the WTGs are heavily backlit, but the significant distance presents atmospheric diffusion of the light, causing the WTG blades to become extremely difficult to see.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Residents in beachfront properties, recreationalists, and resources with historic/cultural importance occur around this KOP. As such it is assumed that the view of the ocean is an important aspect of the viewer experience in this location. Despite being a heavily developed beachfront, the mix of historic and new structures and relatively low profile of the structures creates a quintessential seaside community.
Value	High	The areas receives a large number of viewers seasonally and they often come specifically for the New Jersey Shore. There is local pride in history and in Asbury Park's namesake as a culture and arts community.
Sensitivity Rating	High	Highly valued and highly susceptible seascape with historic, cultural, and view-scape importance.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Negligible	At approximately 38 miles (61 km) more than half of the WTGs and OSSs would be screened entirely by curvature of the earth and for the remaining WTGs the nacelle would also be entirely screened. This results in visibility of a few blade tips of the most distant visible WTGs and possibly two blades for the nearest visible WTGs. The visual prominence rating is a 1.
Geographic Extent	Small	The Project does not occur within the primary ocean field of view and would require the viewer to actively look south, down the beach. The WTGs and OSSs occupy only 8.3 degrees or 6.7 percent of the 124 degree field of view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Negligible	With a visual prominence rating of 1, the WTGs and OSSs will be nearly invisible to viewers at the KOP. The viewer would either need to know the location of the Project or someone would have to point out the Project. Even with this knowledge, the viewer would have to concentrate for a period of time before detecting the WTG blades.

Overall Impact  
**Negligible**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: APC02 - Asbury Park Convention Center (Beach)  
Attachment E: Photosimulations, Page 4 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: APC02 – Asbury Park Convention Center (Beach)  
Attachment E: Photosimulations; Page 5 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

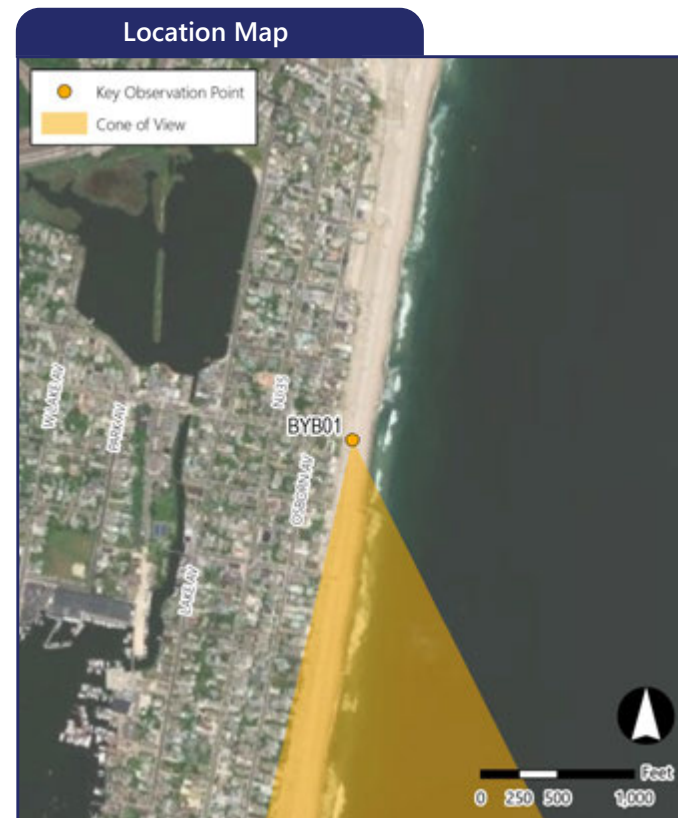
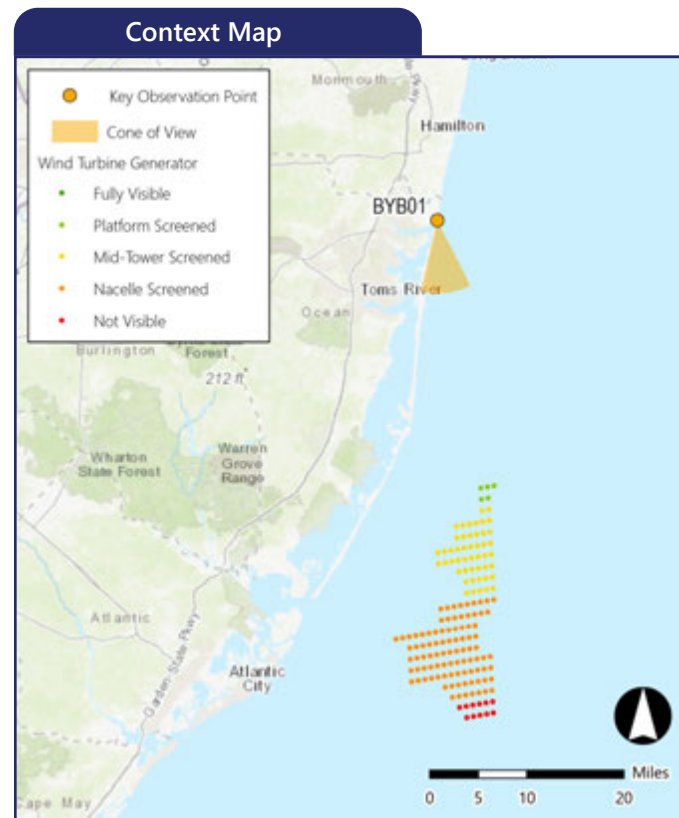


# BYB01 Bay Head Historic District

Bay Head Borough, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from Bay Head Historic District, panning clockwise from east (left) to southwest (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates:	40.06996°N, 74.04189°W
Character Area:	Residential Beachfront, Seascapes (SCA)
User Group:	L. Residents, Tourists, S. Residents
Direction of View:	South
Distance to Nearest Visible Turbine:	28.0 miles
Sensitive Resource:	New Jersey Coastal Heritage Trail Area, Bay Head Historic District

## Environmental Information

Date Taken:	08/18/2023
Time:	4:31 PM
Temperature:	81°F
Humidity:	44%
Visibility:	10 miles
Wind Direction:	West
Wind Speed:	24 mph
Conditions Observed:	Partly Cloudy

## Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	24.6 feet AMSL

**Notes**  
Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)





# BYB01 Bay Head Historic District

Bay Head Borough, Ocean County, New Jersey

## KOP Information

Primary Field of View: East

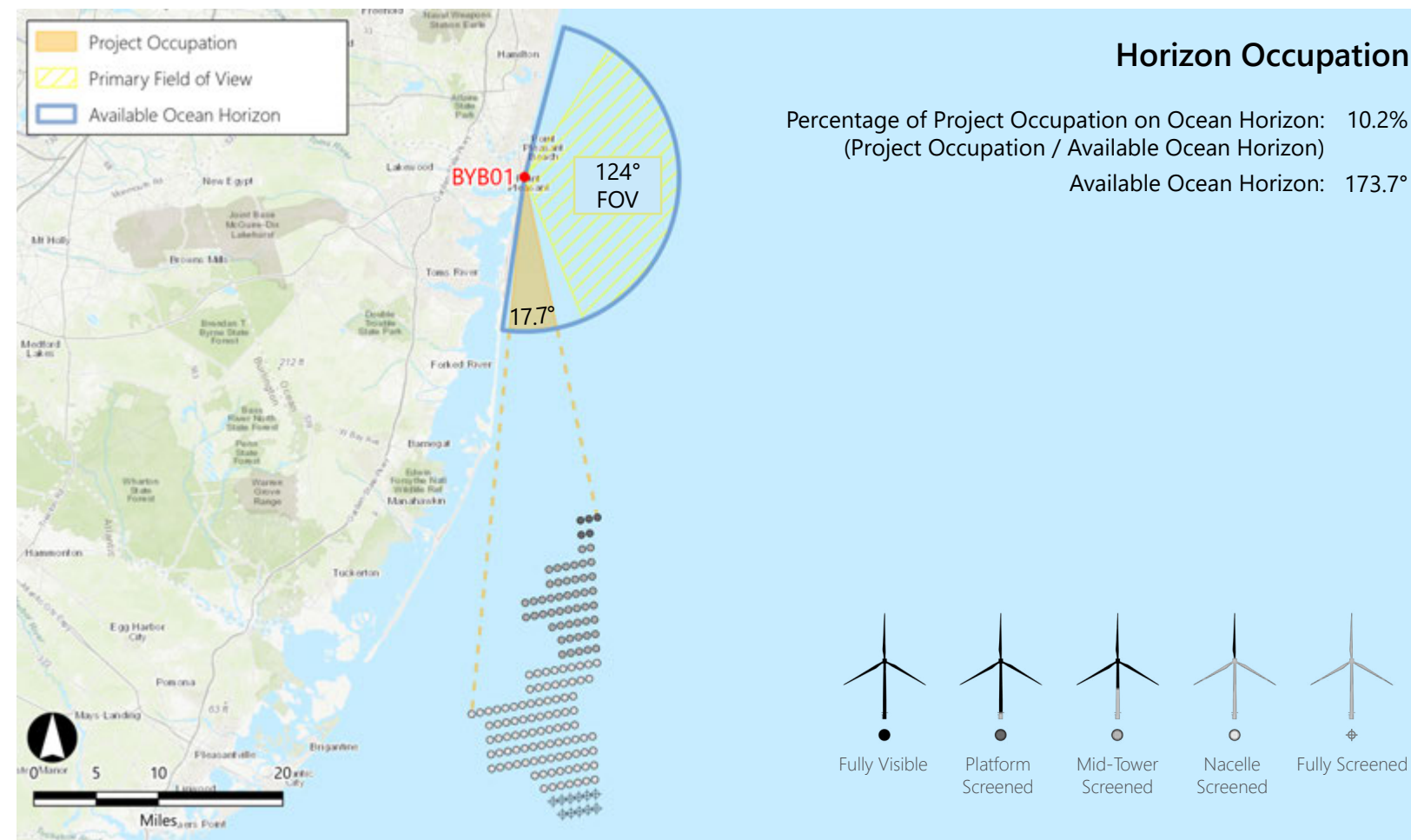
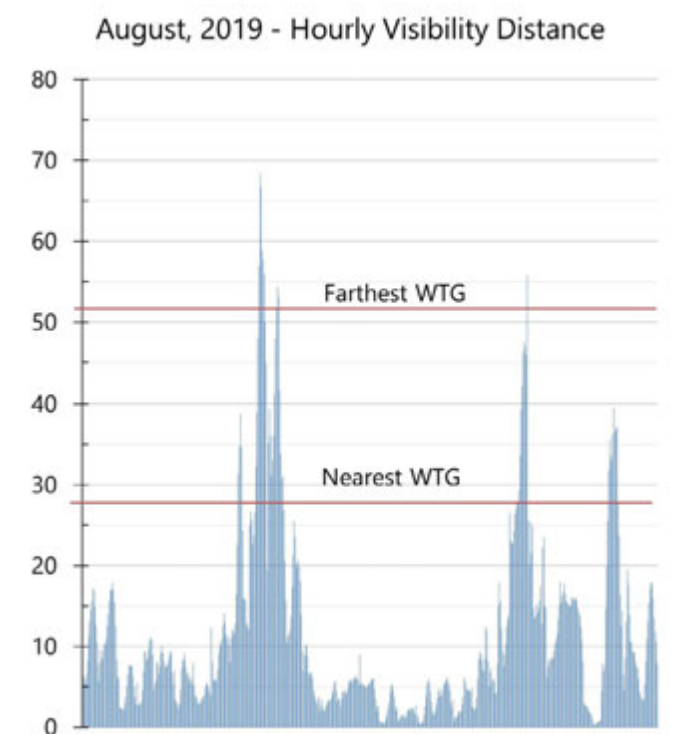
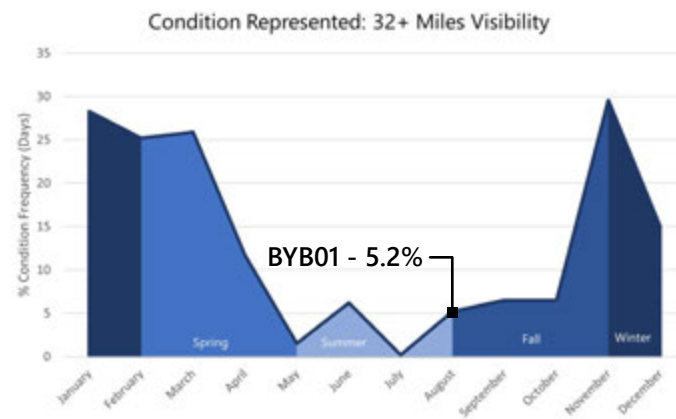
Distance to Closest WTG: 28.0 miles

Camera Height: 24.6 feet

User Groups: L. Residents, Tourists, S. Residents

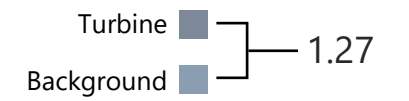
## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

Color Contrast Rating:



Lighting Condition: Side lit

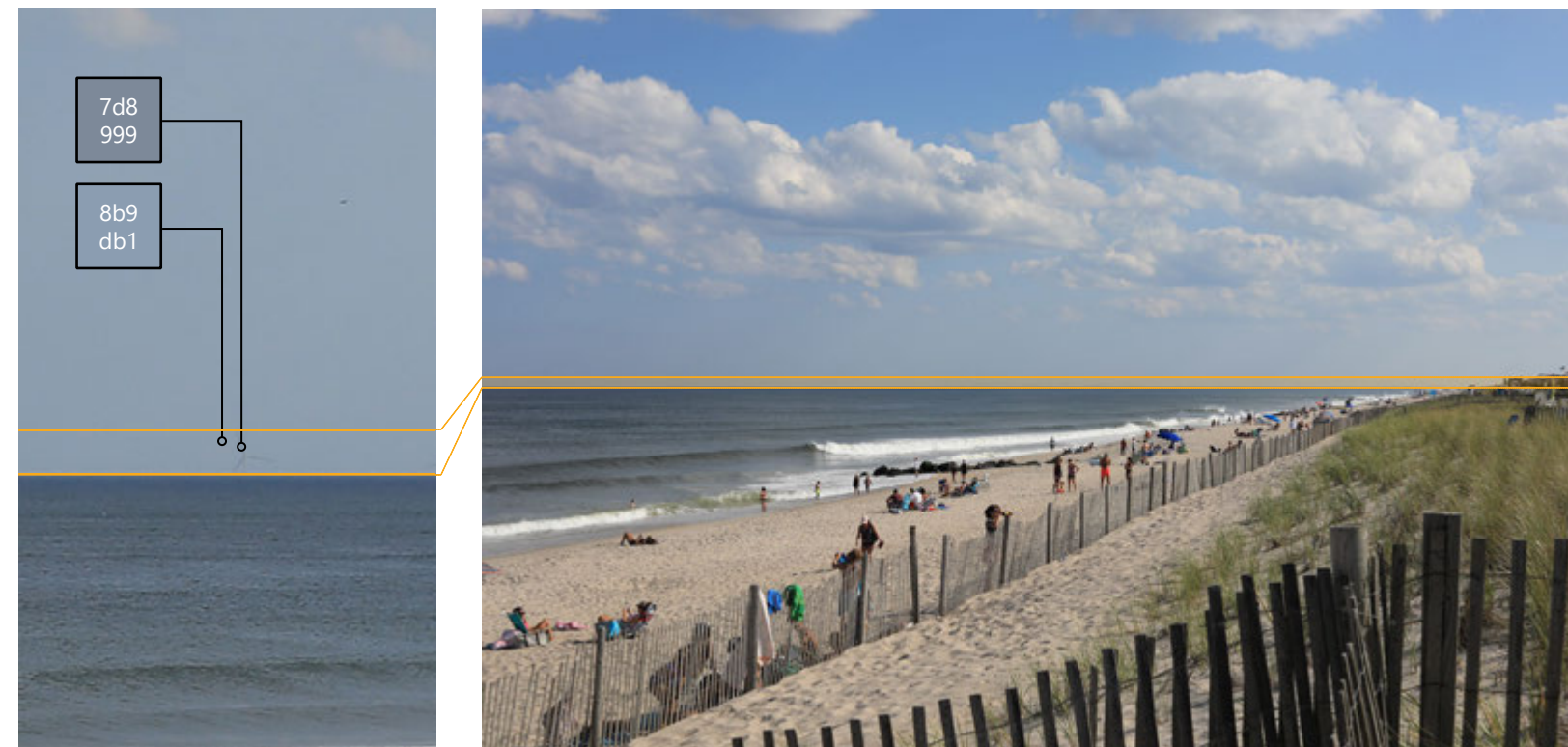
Season: Summer

Sky Condition: Partly Cloudy

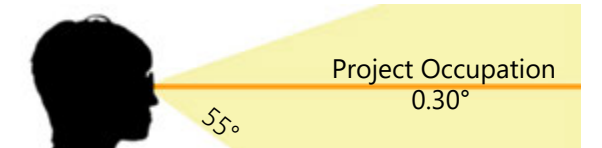
Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

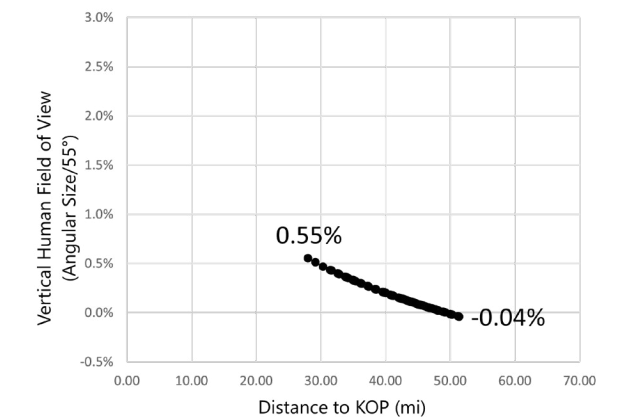
KOP OC04 illustrates the project from 26.11 miles in the back lit condition. This provides an indication of how the turbines may appear from this KOP during morning conditions.



## Vertical Occupation



Percentage of Human FOV: 0.55% (0.30° / 55°)  
(Considering the nearest visible turbine)





# BYB01 Bay Head Historic District

Bay Head Borough, Ocean County, New Jersey

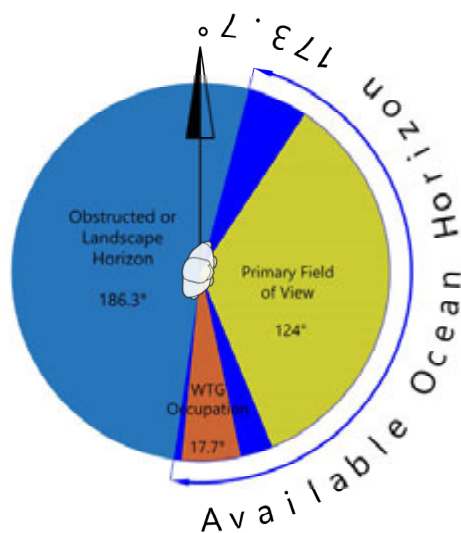
## KOP Information

Primary Field of View/Simulation Direction:	East/South
Distance to Closest WTG:	28.0 miles
Camera Height:	24.6 ft
User Groups:	L. Residents, Tourists, S. Residents
Horizon Occupation (% HFOV):	Small (17.7°, 14%)
Vertical Occupation:	Medium (0.30°, 0.55%)
Character Area Type:	Seascape
Character Area:	Residential Beachfront, Seascape (SCA)

## Existing View



## Field of View



## Existing Landscape/ Seascape Character Description:

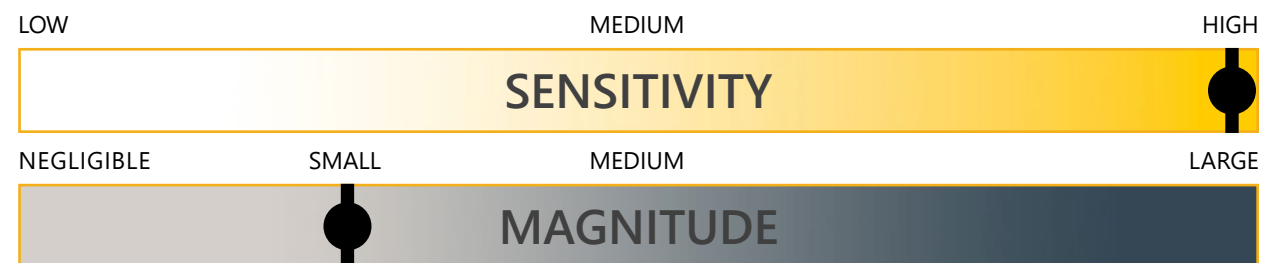
The KOP characterizes a typical view of a residential/beach vacation destination and the Residential Beachfront SCA. The closely positioned beachfront homes foreshorten inland views and the mix of heights and architectural styles form a highly variable horizon line with the sky. West of the dunes and a few houses inland, views of the ocean are typically eliminated and therefore, just the first row of homes has uninterrupted views of the ocean. The dunes were engineered, but have been influenced by natural forces, which is apparent in the vegetation patterns and wear near the base of the dunes. Wooden slat fencing and split rail mark the boundaries of the dune paths designed for beach access. The SCA begins to feel more natural and undisturbed once the viewer is on the beach and below the large dunes. The beach access path is unique in this location because the properties to the west are nearly at grade with the tops of the dunes. As such, the dune paths approach head on, rather than at an angle. Bridge Avenue has a small staircase at the terminus of the road which allows access to the beach. There is some access to parking on the road, but the majority of users tend to access this area from nearby vacation homes or residences. The homes are a mix of modern colonial and Victorian styles and range from 2-4 stories.

## Project Contrast:

During very clear viewing conditions, the WTGs and OSS present weak to moderate line, form, and color contrast with the landform and simple ocean horizon line. Because the horizontal and vertical scale is relatively small and out of the primary field of view, under certain conditions (noon back lighting), the WTG motion may attract viewer attention, presenting minor contrast with the ocean and landform. However, the WTGs remain secondary to structures and vegetation, which have a much greater presence in the view. Under conservative viewing conditions the project will be visible when scanning in the general direction of the project facilities.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	View is representative of Residential Beachfront viewing conditions. Ocean viewing is important to these users as well as beach goers and recreationalists. Despite the high susceptibility rating, viewers engage in a range of activities that are not always focused on the ocean. When focused on the Ocean, the primary view is not in the direction of the Project.
Value	High	This is a major vacation destination and receives some publicity to that effect. Much effort is put into maintaining the beach after winter storms. Dune and beach restoration are required regularly to maintain usability.
Sensitivity Rating	High	Highly valued and highly susceptible seascape with and view-scape importance.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Medium	At approximately 28 miles (45 km) the nacelles of more than half of the WTGs would be completely screened by curvature of the earth. The WTGs would occupy a maximum of 0.30 degrees or 0.55% of the vertical field of view. Full rotors would be detectable in five of the nearest turbines. The visual prominence rating is a 2.
Geographic Extent	Small	The Project does not occur within the primary ocean field of view and would require the viewer to actively look south, down the beach. The WTGs and OSSs occupy only 17.7 degrees or 14 percent of the 124 degree field of view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Small	With a visual prominence rating of 2, viewers will be able to detect rotors, nacelles, and towers of the WTGs when scanning or actively looking at the horizon. However, the WTGs are outside the primary field of view and the primary view would remain unaffected by the Project.

Overall Impact  
**Minor**



Existing Conditions



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BYB01 Bay Head Historic District  
Attachment E: Photosimulations; Page 10 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

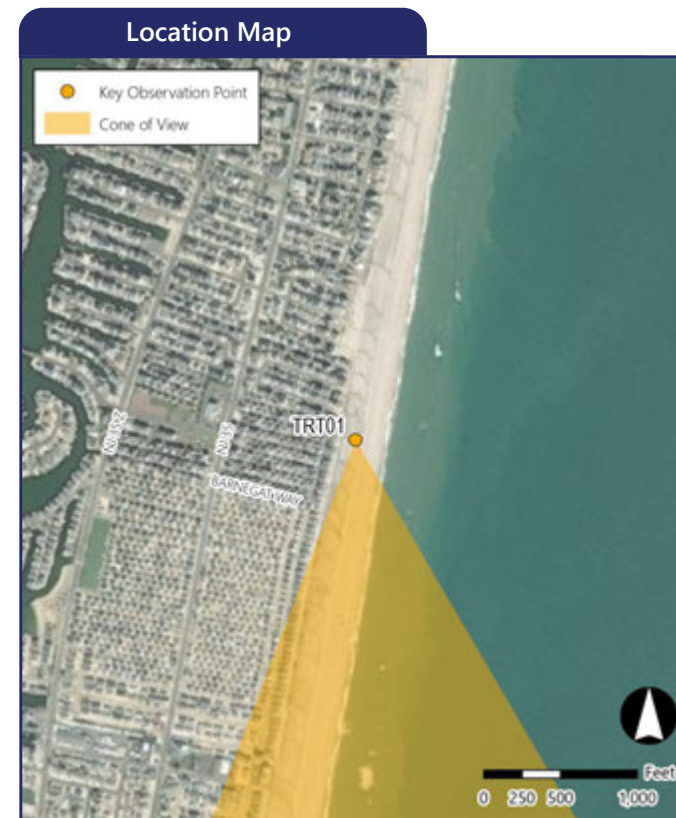
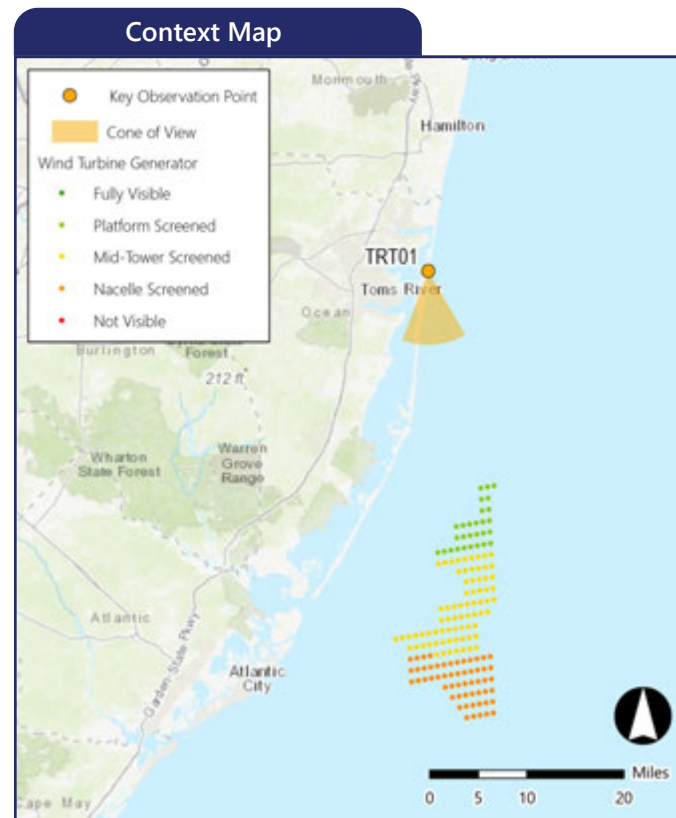


# TRT01 Ocean Beach Historic District

Toms River Township, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from the Ocean Beach Historic District clockwise from southeast (left) to southwest (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



### Simulation Information

Coordinates: 39.99382°N, 74.06042°W  
 Character Area: Residential Beachfront, Seascape (SCA)  
 User Group: L. Residents, Tourists, S. Resident  
 Direction of View: South  
 Distance to Nearest Visible Turbine: 23.0 miles  
 Sensitive Resource: Ocean Beach Historic District (Units 1, 2, and 3), New Jersey Coastal Heritage Trail Area

### Environmental Information

Date Taken: 03/02/2022  
 Time: 2:15 PM  
 Temperature: 49°F  
 Humidity: 35%  
 Visibility: 10 miles  
 Wind Direction: West-northwest  
 Wind Speed: 7 mph  
 Conditions Observed: Partly Cloudy

### Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 27.0 feet AMSL

### Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

### Simulated Photograph(s)





# TRT01 Ocean Beach Historic District

Toms River Township, Ocean County, New Jersey

## KOP Information

Primary Field of View: East

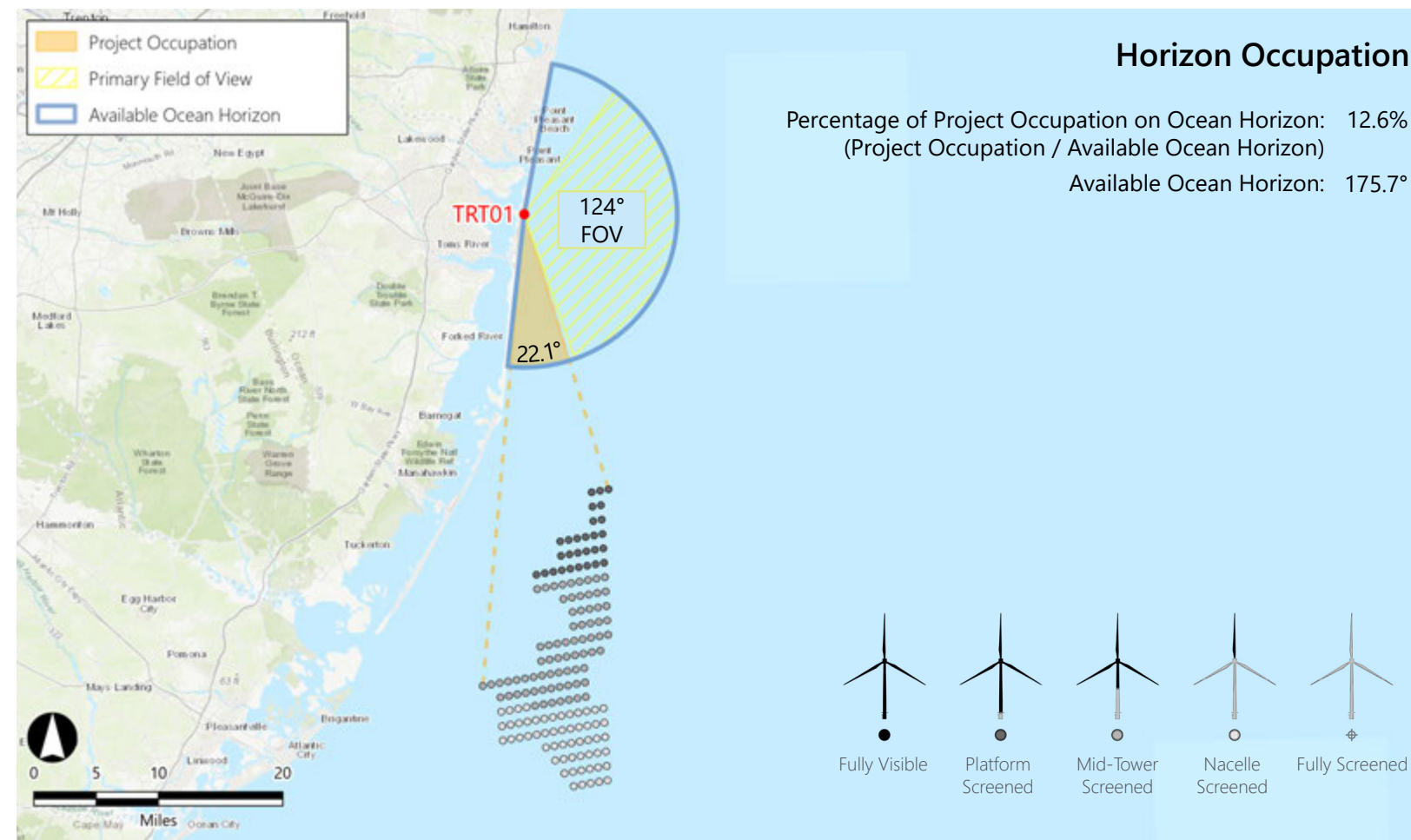
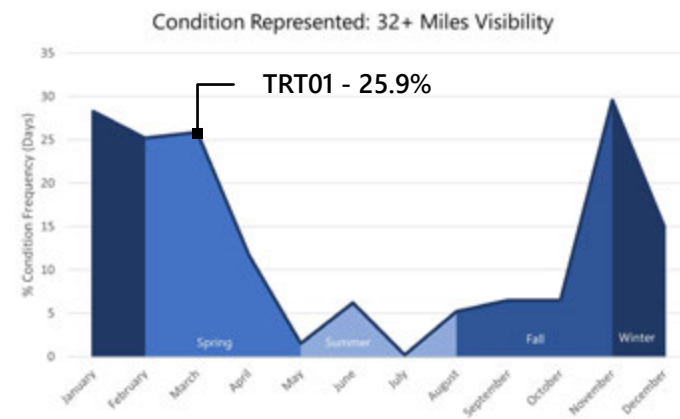
Distance to Closest WTG: 23.0 miles

Camera Height: 27.0 feet

User Groups: L. Residents, Tourists, Fishing Comm., S. Residents

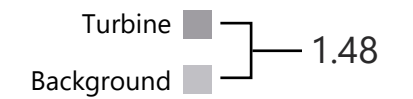
## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

Color Contrast Rating:



Lighting Condition: Side lit

Season: Winter

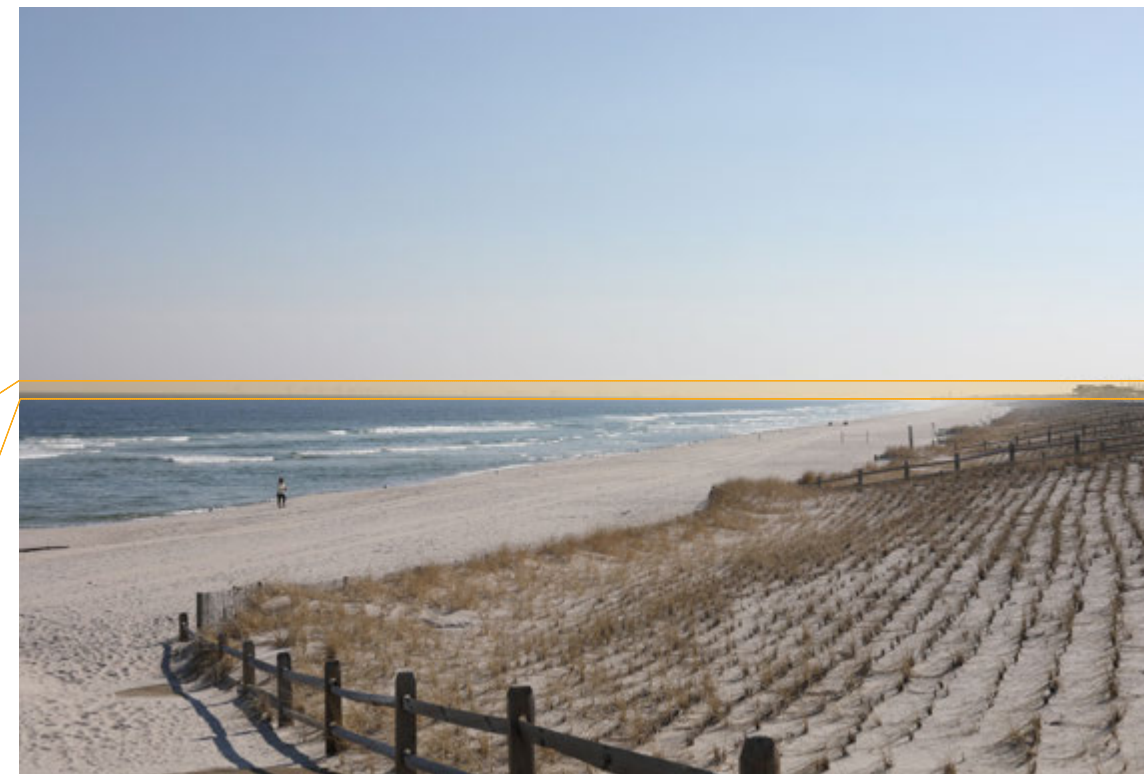
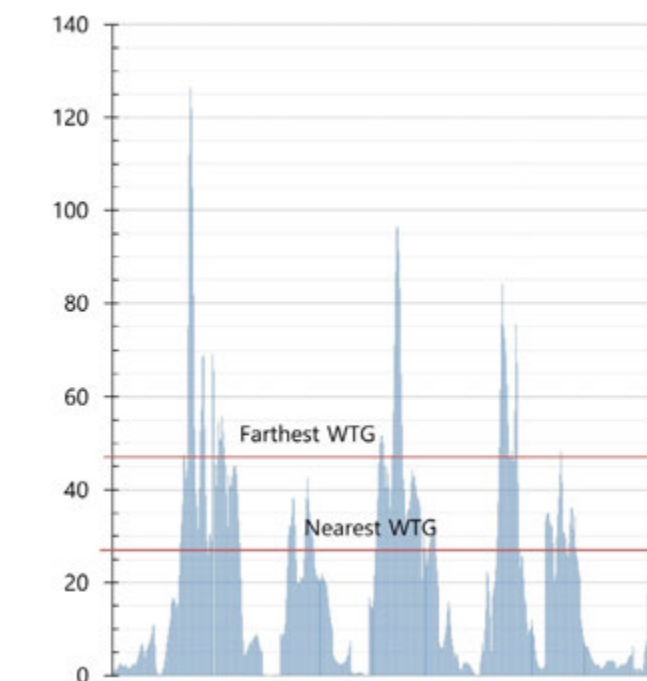
Sky Condition: Partly Cloudy

Atmospheric Condition: > 10 Miles

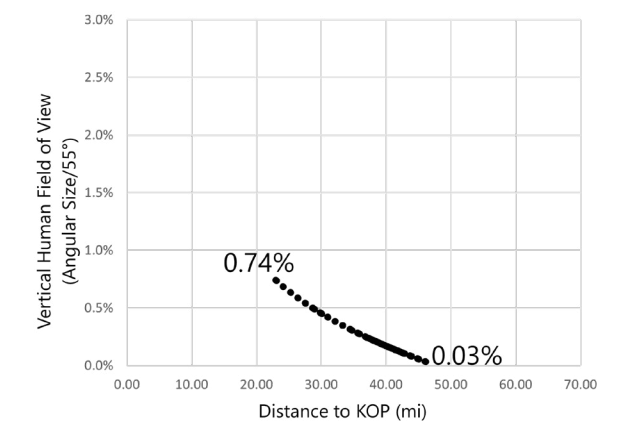
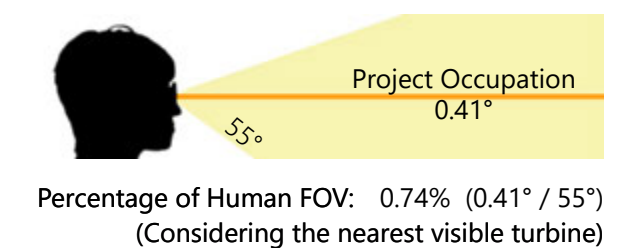
## SIMILAR VIEWING PARAMETERS:

KOP SPB01 Illustrates the project from 19.25 miles in the side lit condition. This provides an indication of how the turbines may appear from this KOP during evening conditions.

March, 2019 - Hourly Visibility Distance



## Vertical Occupation





# TRT01 Ocean Beach Historic District

Toms River Township, Ocean County, New Jersey

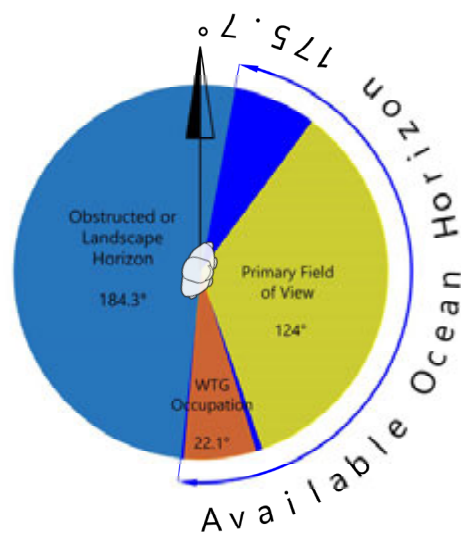
## KOP Information

Primary Field of View/Simulation Direction:	East/South
Distance to Closest WTG:	23 miles
Camera Height:	27 ft
User Groups:	L. Residents, Tourists, S. Resident
Horizon Occupation (% HFOV):	Medium (22.1°, 18%)
Vertical Occupation:	Medium (0.41°, 0.74%)
Character Area Type:	Seascape
Character Area:	Residential Beachfront

## Existing View



## Field of View



## Existing Landscape/ Seascape Character Description:

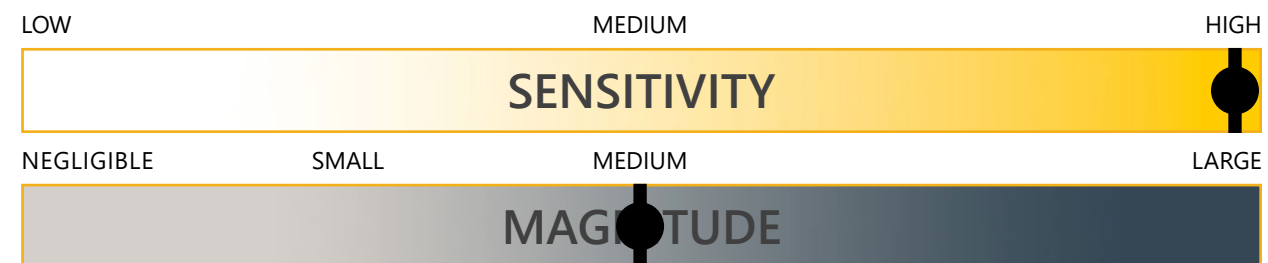
Ocean Beach Historic District is typical of a residential/beach vacation destination and the Residential Beachfront SCA. The closely positioned beachfront homes foreshorten inland views and the mix of heights and architectural styles form a highly variable horizon that can result in a degree of visual clutter. West of the dunes and a few houses inland, views of the ocean are typically eliminated and therefore, just the first row of homes has uninterrupted views of the ocean. The dunes are very tall and geometric giving the obvious impression of human intervention in a natural process. Wooden slat fencing and split rail mark the boundaries of the dune paths designed for beach access. The SCA begins to feel more natural and undisturbed once the viewer is on the beach and below the large dunes. People would experience this view while traversing the dunes on their way to the beach. While a brief view for most, some people stop and take in the view or take a photograph. The access points often have alcoves with benches. The dune paths orient the viewer directly toward the Project, but the primary view is still east facing toward the open ocean.

## Project Contrast:

On clear days the Project will be visible to casual observers after a brief glance. Motion of the rotors may attract viewer attention. At times the Project may result in moderate contrast with the ocean and landforms in the view. Line and form contrast with landform is weak, due to the viewer position and direction. Moderate line and form contrasts occur with the ocean, due to the vertical line on the horizon and WTG rotors.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Views from residences and experienced by local/seasonal residents, tourist, and recreational users. Seascape and Ocean views are important to the users.
Value	Medium	Unlike many other beaches along the NJ coast, this area is intended exclusively for homeowners and vacationers who rent beach houses. Due to the exclusivity factor, the beach may not have the same value to the majority of users to whom it is inaccessible.
Sensitivity Rating	High	Highly susceptible and moderate value seascape results in high sensitivity. However, views of the Project are general outside the primary field of view and high sensitivity does not warrant elevation to major overall impacts.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Medium	The vertical scale occupies a moderate portion of the human vertical field of view (approximately 0.41°, 0.74%). The visual prominence rating is a 3.
Geographic Extent	Medium	The Project occupies approximately 18% (22 degrees) of the human horizontal field of view and 12.6% of the available ocean horizon.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Medium	Medium geographic extent and medium scale contrast result in medium magnitude.

Overall Impact  
**Moderate**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: TRT01 - Ocean Beach Historic District  
Attachment E: Photosimulations; Page 14 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: TRT01 - Ocean Beach Historic District  
Attachment E: Photosimulations; Page 15 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

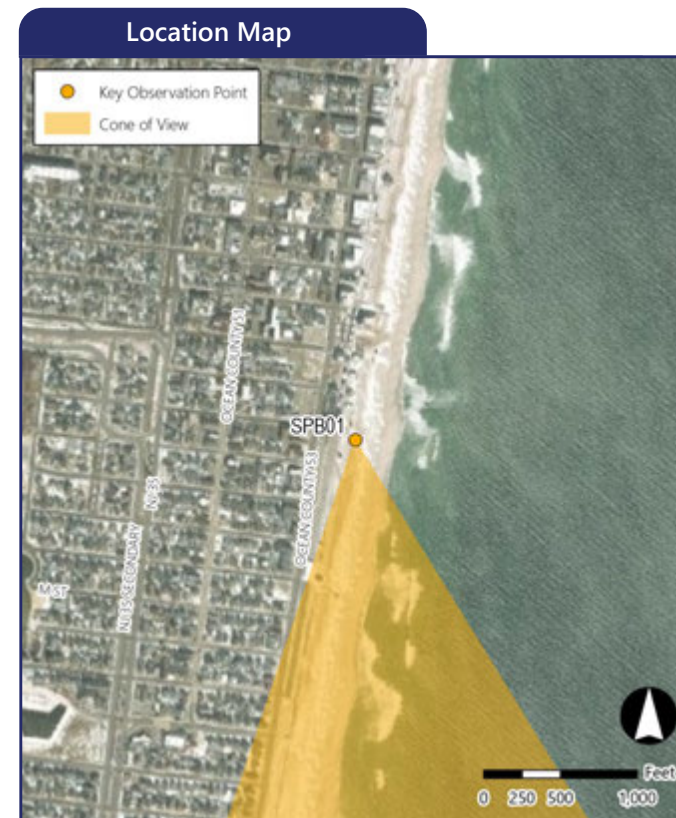
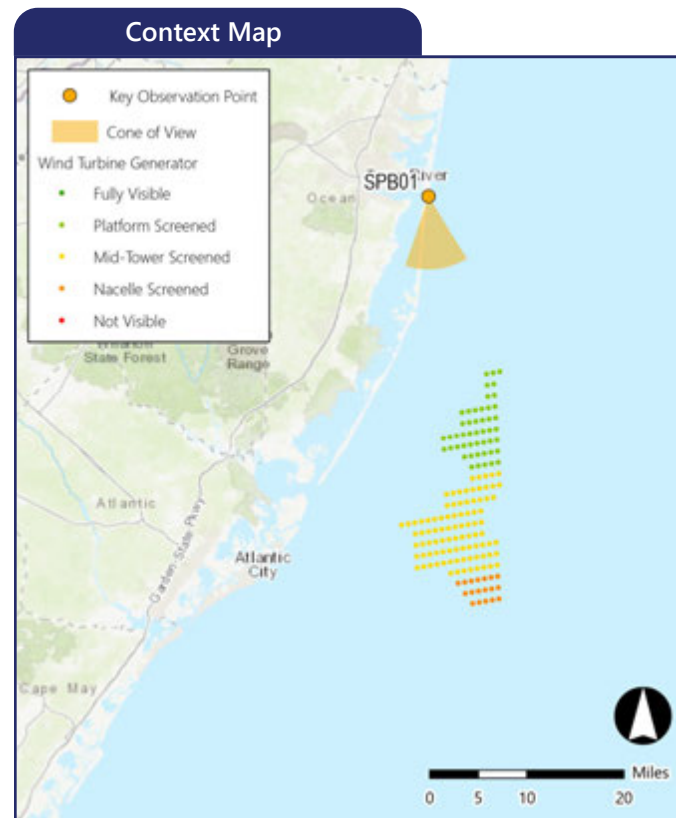


# SPB01 Seaside Park Beach

Seaside Park Borough, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from Seaside Park Beach, panning clockwise from east (left) to south-southwest (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



### Simulation Information

Coordinates: 39.93536°N, 74.07165°W  
 Character Area: Commercial Beachfront, Seascape (SCA)  
 User Group: L. Residents, Tourists, Fishing Comm., S. Resident  
 Direction of View: South  
 Distance to Nearest Visible Turbine: 19.3 miles  
 Sensitive Resource: Seaside Park Beach and Boardwalk, U.S. Life Saving Station No. 13, New Jersey Coastal Heritage Trail Area, EJA

### Environmental Information

Date Taken: 09/23/2020  
 Time: 5:35 PM  
 Temperature: 74°F  
 Humidity: 52%  
 Visibility: 10 miles  
 Wind Direction: West-northwest  
 Wind Speed: 7 mph  
 Conditions Observed: Fair

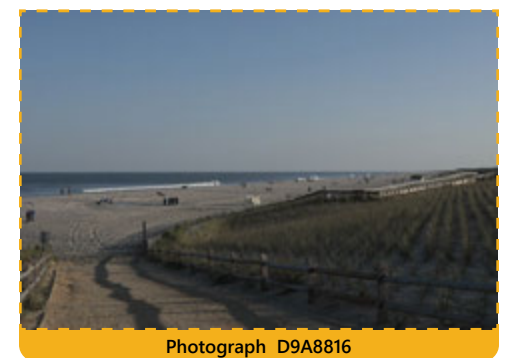
### Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 23.2 feet AMSL

### Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

### Simulated Photograph(s)





# SPB01 Seaside Park Beach

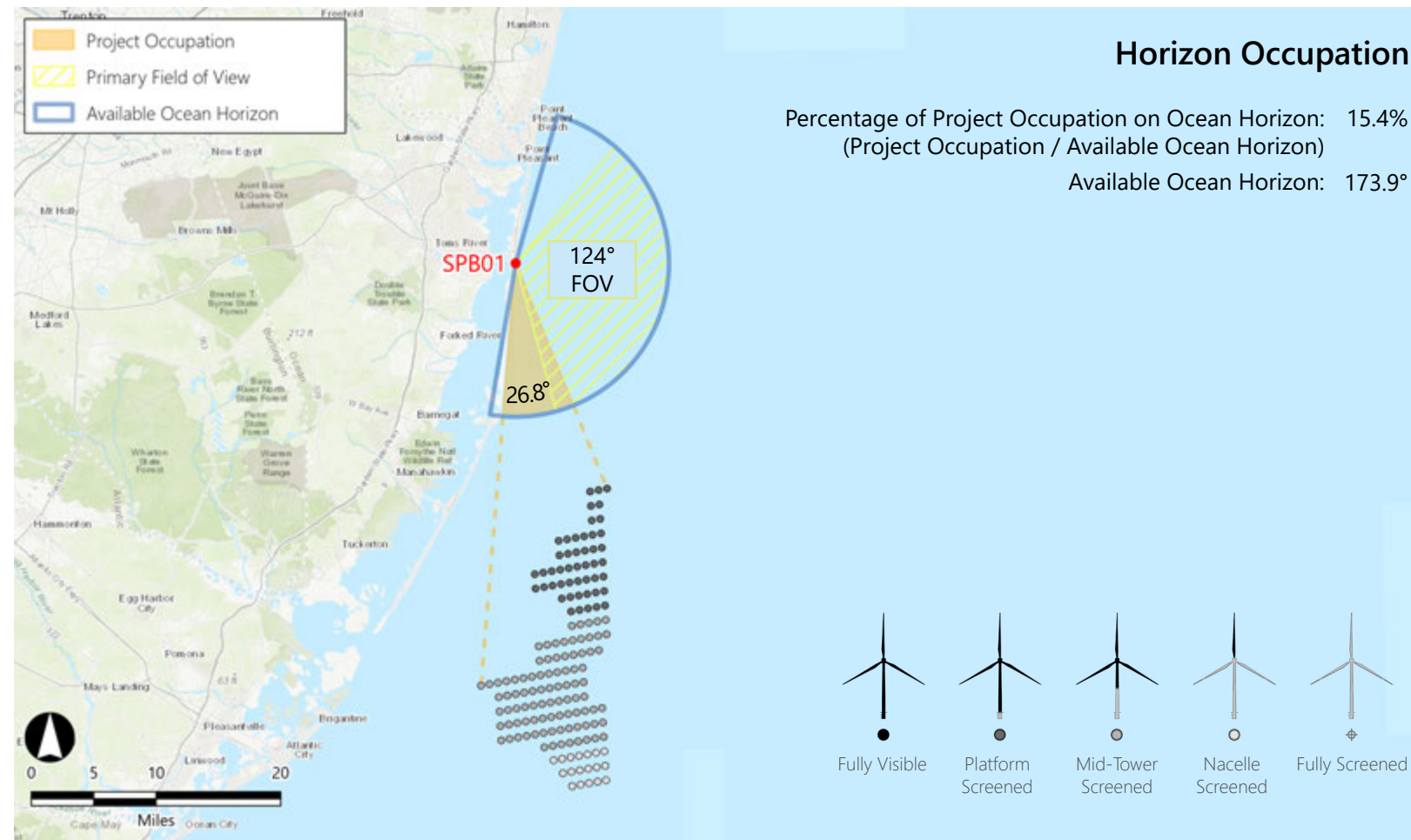
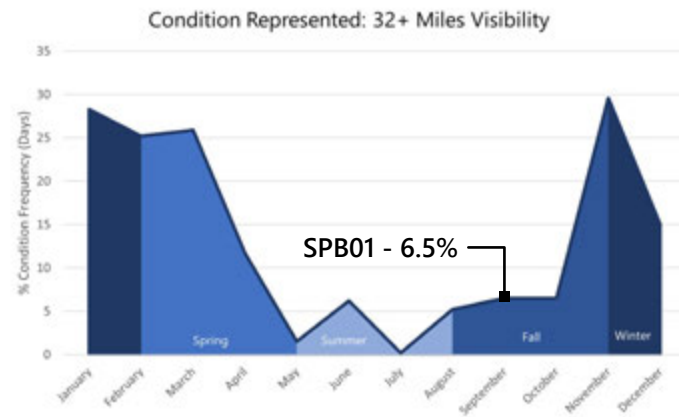
Seaside Park Borough, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 19.3 miles  
 Camera Height: 23.2 feet  
 User Groups: L. Residents, Tourists, Fishing Comm., S.Residents

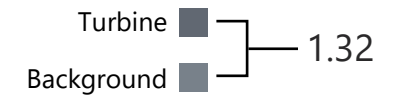
## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

Color Contrast Rating:

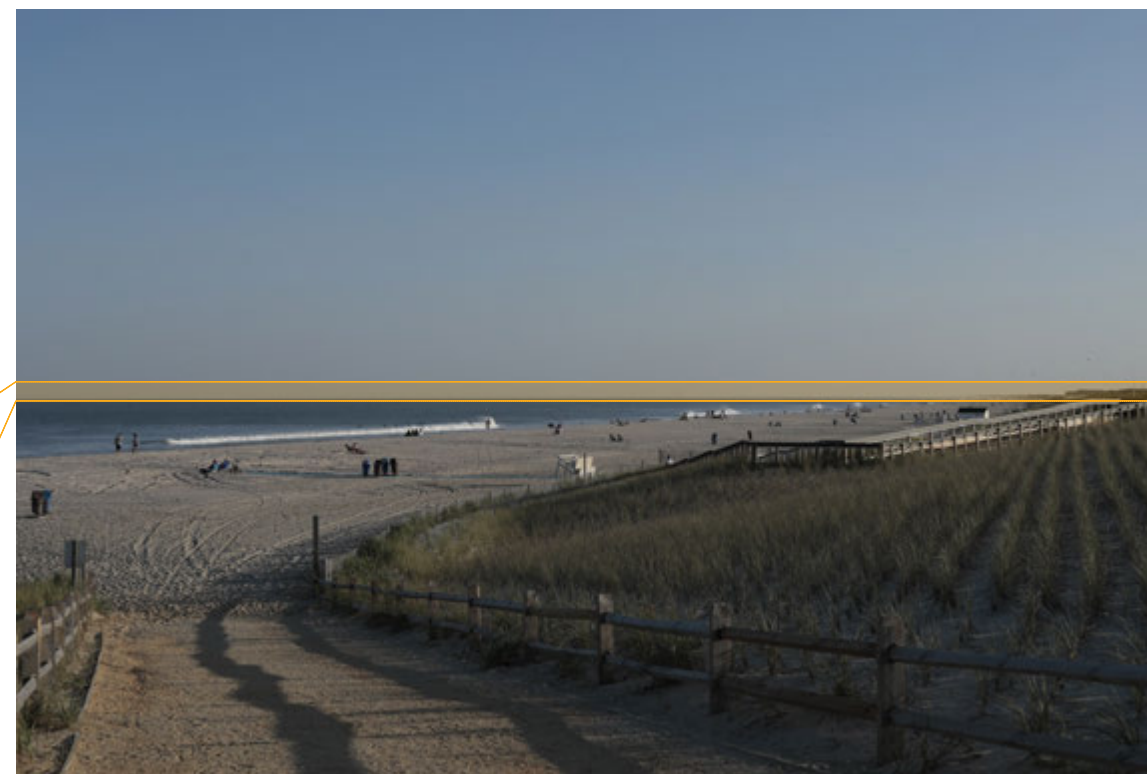
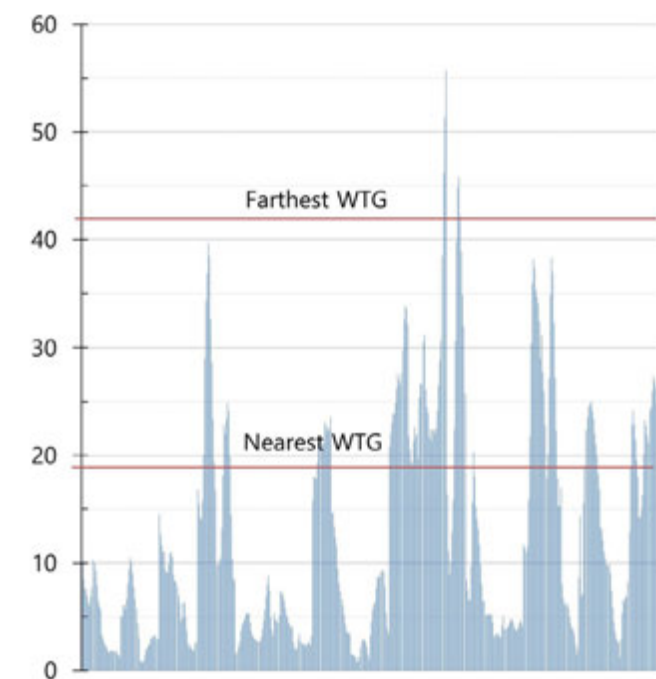


Lighting Condition: Side lit  
 Season: Fall  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

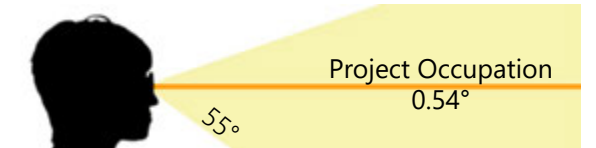
## SIMILAR VIEWING PARAMETERS:

KOP TRT01 Illustrates the project from 22.99 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during afternoon conditions.

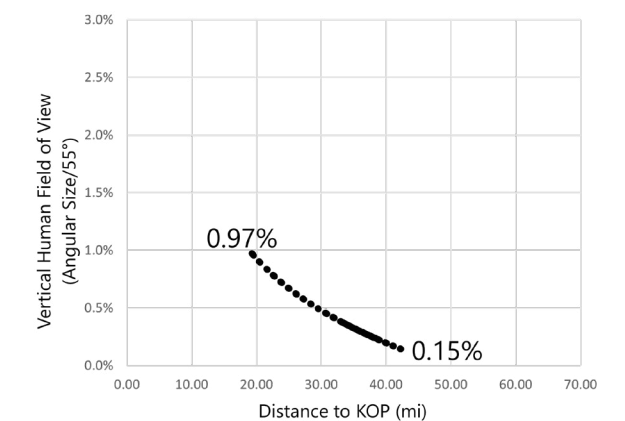
September, 2019 - Hourly Visibility Distance



## Vertical Occupation



Percentage of Human FOV: 0.97% (0.54° / 55°)  
 (Considering the nearest visible turbine)





# SPB01 Seaside Park Beach

Seaside Park Borough, Ocean County, New Jersey

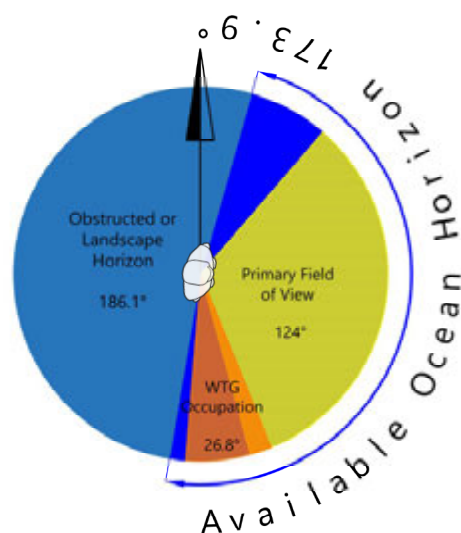
## KOP Information

Primary Field of View/Simulation Direction:	East/South
Distance to Closest WTG:	19.25 miles
Camera Height:	23.18 ft
User Groups:	Residents, Tourists, Fishing Comm.
Horizon Occupation (% HFOV):	Medium (26.8°, 21.6%)
Vertical Occupation:	Medium (0.54°, 0.97%)
Character Area Type:	Seascape
Character Area:	Commercial Beachfront

## Existing View



## Field of View



## Existing Landscape/ Seascape Character Description:

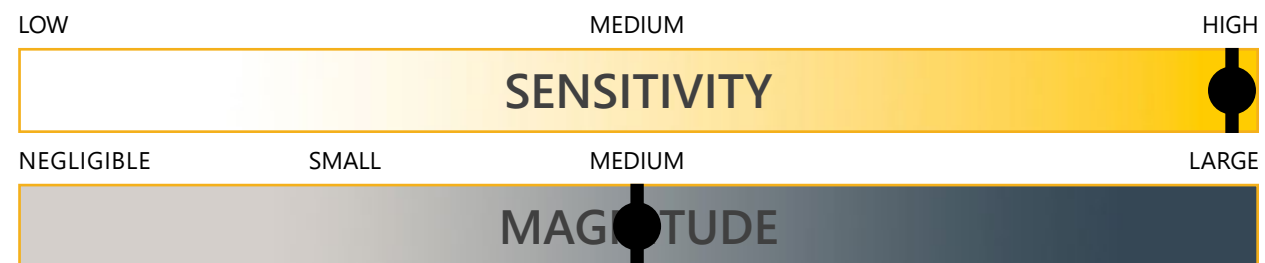
Seaside Park Beach is in the Borough of Seaside Park, located on the Barnegat Barrier Island in Ocean County, New Jersey. Seaside Park has almost two miles of shoreline on the Atlantic Ocean, the borough's main industry is summer tourism. The beach is a popular swimming and sunbathing destination, and in-season access requires a beach badge. Lifeguard and beach patrol services are provided, and a variety of shops, accommodations, and restaurants, plus a boardwalk offering rides and games, are available nearby. This KOP is at the start of the Seaside Beach Boardwalk and is situated near a large public parking area along with several restaurants and bars. Inland and oceanfront development are readily apparent features in this location as the businesses along the boardwalk often have seating and event spaces that spill out onto the beach. The engineered dunes are massive and have the tell-tale signs of recent installation, such as a geometric form, new grass plugs evenly spaced, and new split-rail fencing defining the beach access paths with traverse the dunes at an angle. The inland development consists of closely situated residential and commercial buildings which are typically a maximum of three story and typically one to two story. Water towers, utility poles, and streetlights add a small degree of visual clutter when viewing inland.

## Project Contrast:

On clear days the Project will be visible to casual observers after a brief glance. Motion of the rotors may attract viewer attention and may result in strong contrasts with the ocean when strongly lit. At times the Project may result in moderate contrast with the ocean and landforms in the view. Line and form contrast with landform range from weak moderate. Moderate line and form contrasts occur with the ocean, due to the vertical line on the horizon and rotors.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	Medium	Historic and cultural sites are inland of the dunes and therefore do not have open ocean views in this location. Residences are set back from the commercial district, and ocean views are somewhat restricted. Views are important to user experience, but the users are engaged in a very wide array of activities, not many of which are reliant on ocean views for the experience.
Value	High	Value is high due to the large crowds that come to this location in the summer. It is highly advertised on social media and a repeat destination for many families.
Sensitivity Rating	High	Moderately susceptible and high value seascape results in high sensitivity.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Medium	The vertical scale occupies a moderate portion of the human vertical field of view (approximately 0.54°, 0.97%). The visual prominence rating is a 3.
Geographic Extent	Medium	The Project only occupies approximately 21.6% (26.8 degrees) of the human horizontal field of view and 15.4% of the available ocean horizon.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Medium	Medium size and scale and medium geographic extent results in medium magnitude.

Overall Impact  
**Moderate**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SPB01 - Seaside Park Beach  
Attachment E: Photosimulations: Page 19 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SPB01 - Seaside Park Beach  
Attachment E: Photosimulations: Page 20 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

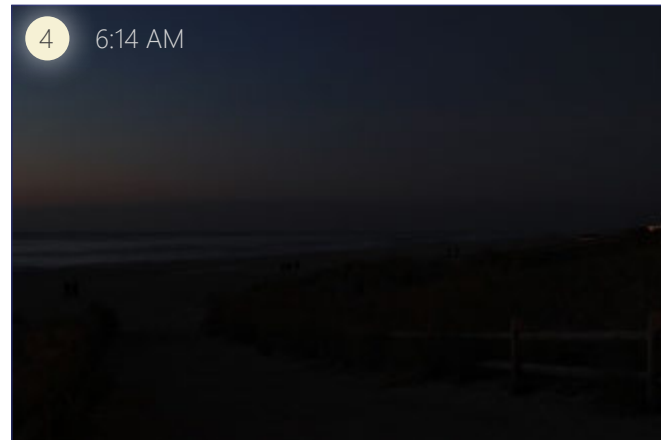
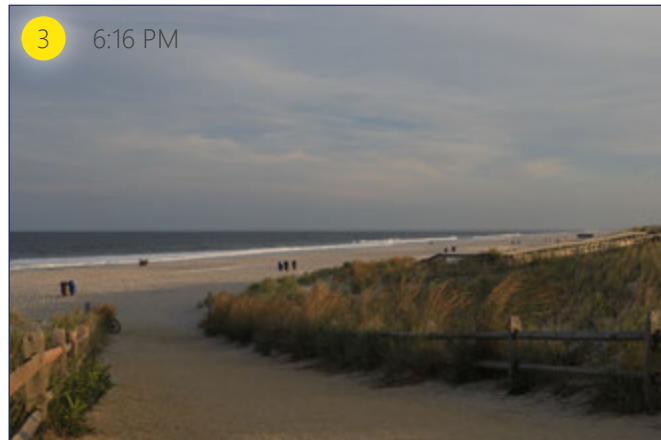
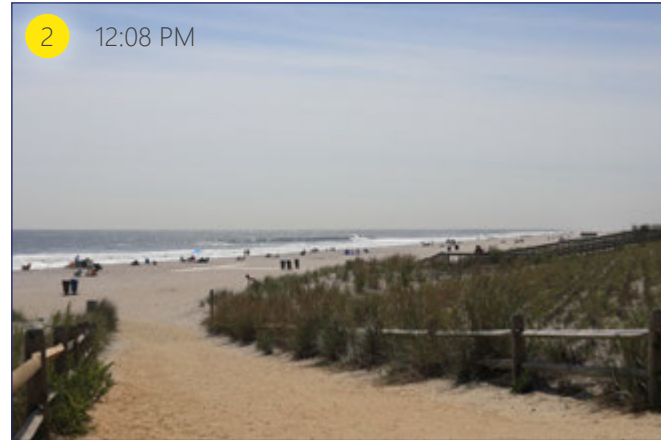
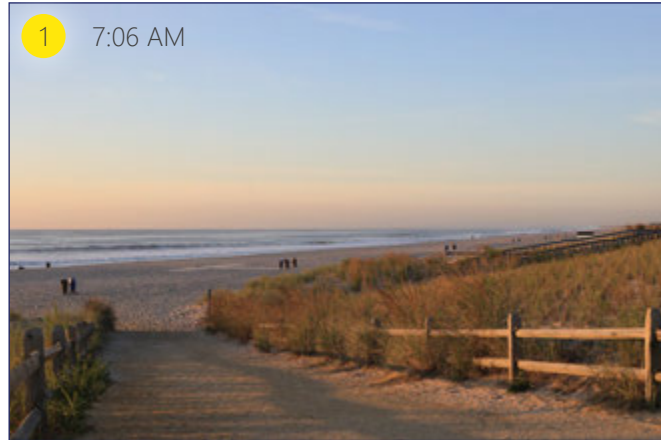


This scale is designed to insure the simulation images are printed at the intended size.

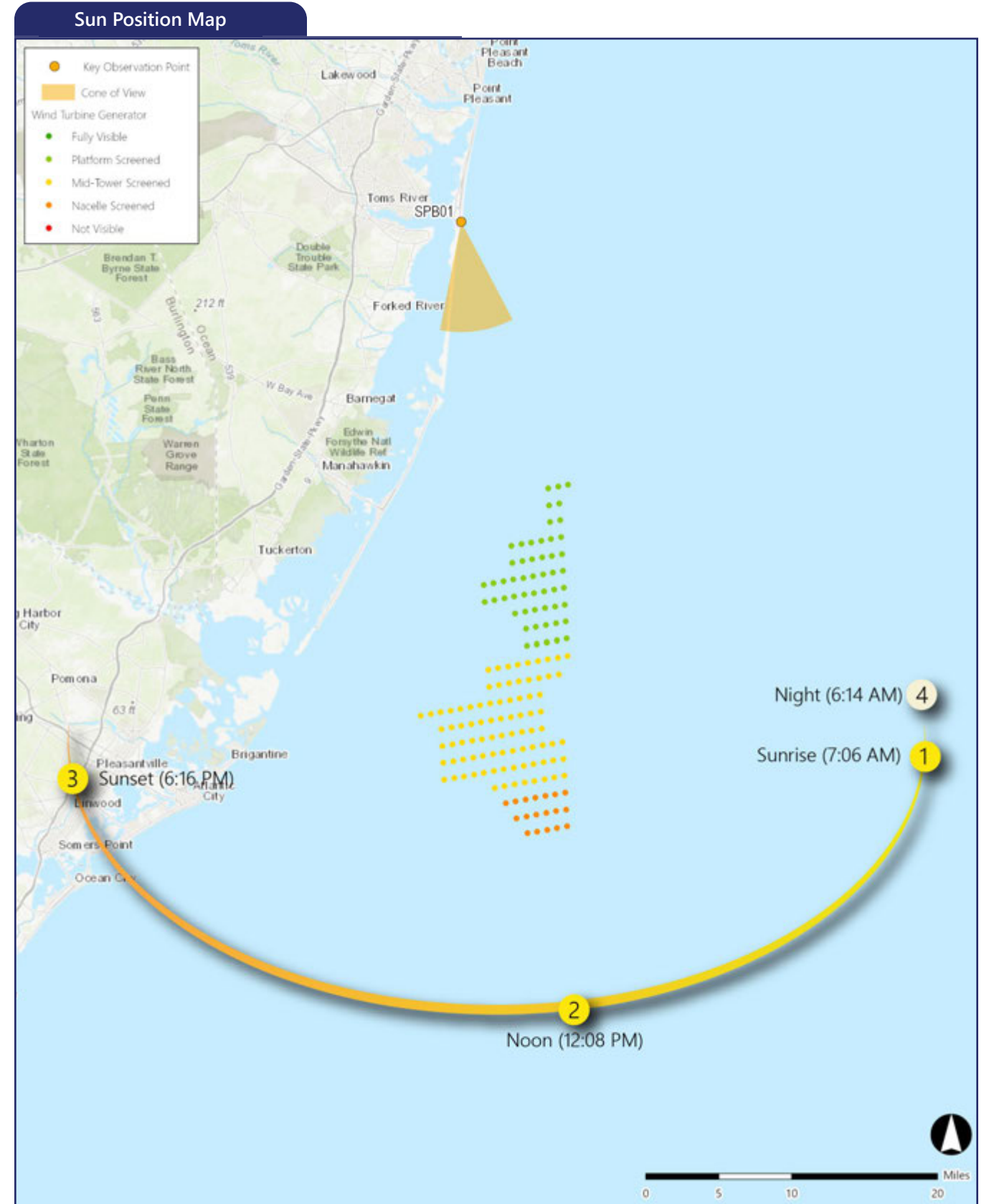


# SPB01 Seaside Park Beach

Seaside Park Borough, Ocean County, New Jersey



QR Code for Timelapse Video  
[Timelapse Video Link](#)



## Simulation Information

Coordinates:	39.93537°N, 74.07165°W
Character Area:	Commercial Beachfront, Seascape (SCA)
User Group:	L. Residents, Tourists, Fishing Comm., S. Resident
Direction of View:	South
Distance to Nearest Visible Turbine:	19.3 miles
Sensitive Resource:	Seaside Park Beach and Boardwalk, U.S. Life Saving Station No. 13, New Jersey Coastal Heritage Trail Area, EJA

## Environmental Information

Date Taken:	09/21/2023
Time:	Various
Temperature:	72°F
Humidity:	67%
Visibility:	10 miles
Wind Direction:	Northeast
Wind Speed:	6 mph
Conditions Observed:	Fair

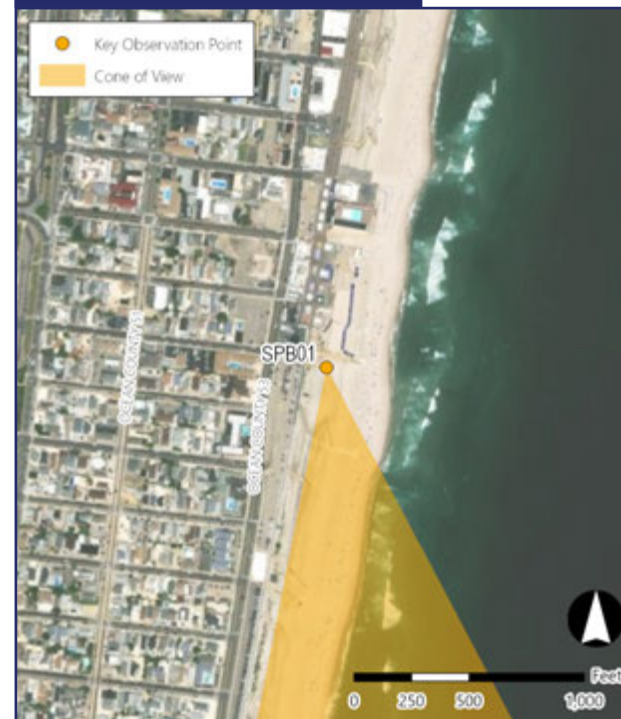
## Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	23.2 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Context Map





Existing Conditions (Sunrise)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SPB01 - Seaside Park Beach  
Attachment E: Photosimulations: Page 22 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Sunrise) (OCS-A 0549)



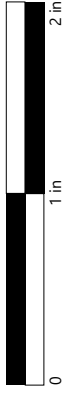
Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549

Key Observation Point: SPB01 - Seaside Park Beach

Attachment E: Photosimulations: Page 23 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Noon)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SPB01 - Seaside Park Beach  
Attachment E: Photosimulations: Page 24 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Noon) (OCS-A 0549)



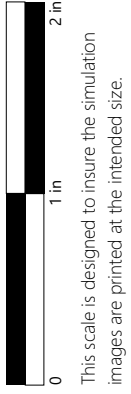
Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549

Key Observation Point: SPB01 - Seaside Park Beach

Attachment E: Photosimulations: Page 25 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions (Sunset)



Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549

Key Observation Point: SPB01 - Seaside Park Beach

Attachment E: Photosimulations; Page 26 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Sunset) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SPB01 - Seaside Park Beach  
Attachment E: Photosimulations: Page 27 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





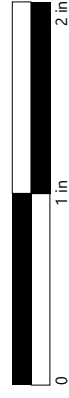
Existing Conditions (Night)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SPB01 - Seaside Park Beach  
Attachment E: Photosimulations: Page 28 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Night) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SPB01 - Seaside Park Beach  
Attachment E: Photosimulations: Page 29 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

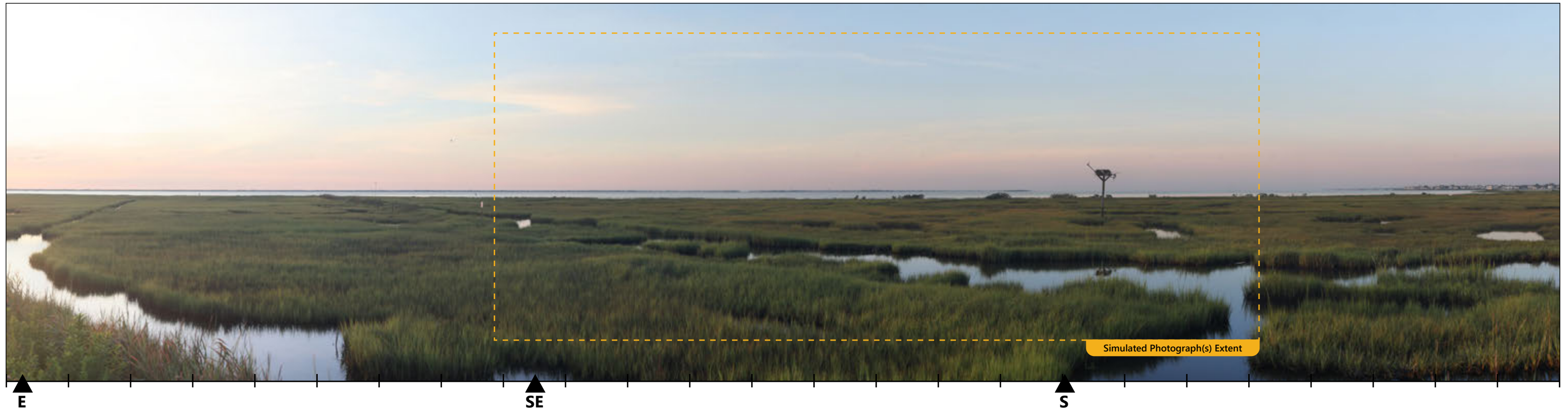


This scale is designed to insure the simulation images are printed at the intended size.

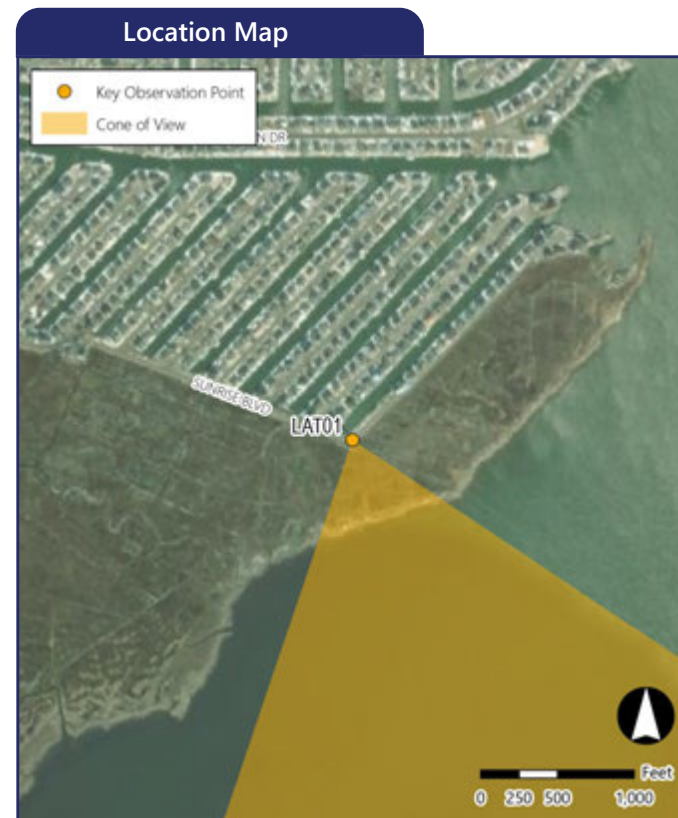
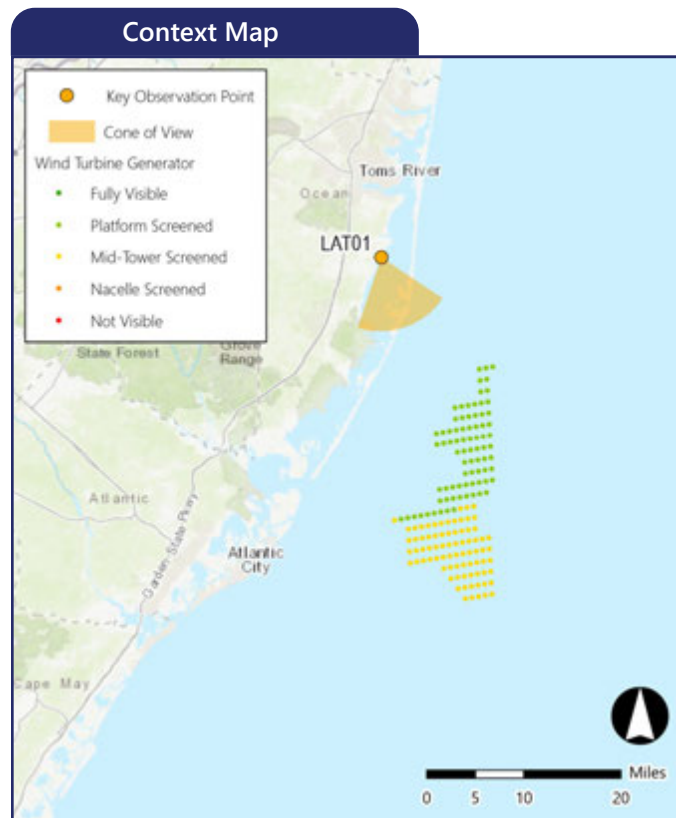


# LAT01 Edwin B. Forsythe NWR at the Woodmansee Estate

Lacey Township, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from the Edwin B. Forsythe National Wildlife Refuge (NWR) at the Woodmansee Estate, panning clockwise from east (left) to southwest (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates: 39.83711°N, 74.15082°W  
 Character Area: Dredged Lagoon (LCA)  
 User Group: L. Residents, S. Resident  
 Direction of View: South-southeast  
 Distance to Nearest Visible Turbine: 15.3 miles  
 Sensitive Resource: Edwin B. Forsythe National Wildlife Refuge, New Jersey Coastal Heritage Trail Area

## Environmental Information

Date Taken: 08/21/2020  
 Time: 6:24 AM  
 Temperature: 70°F  
 Humidity: 87%  
 Visibility: 10 miles  
 Wind Direction: Calm  
 Wind Speed: 0 mph  
 Conditions Observed: Fair

## Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 9.8 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)





# LAT01 Edwin B. Forsythe NWR at the Woodmansee Estate

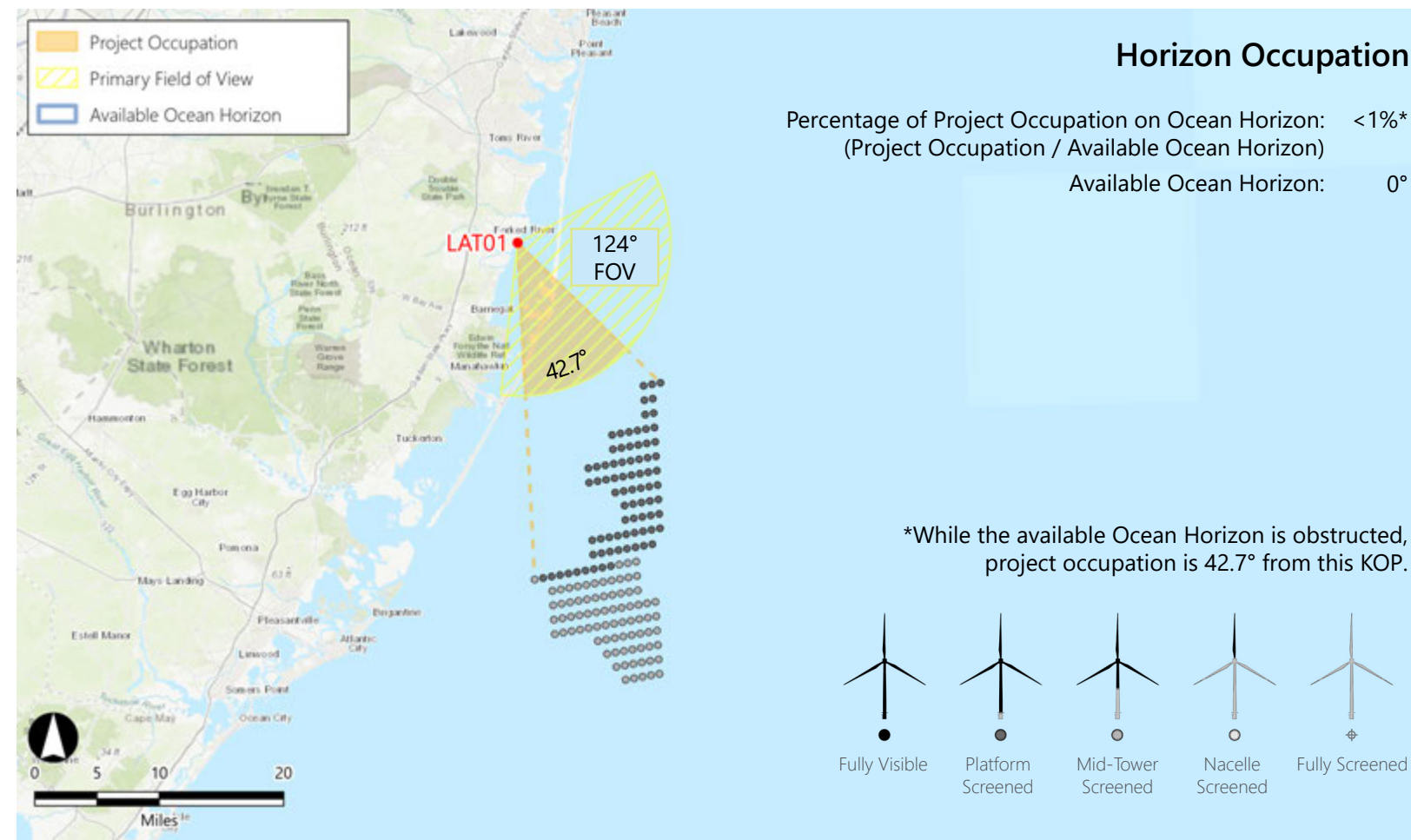
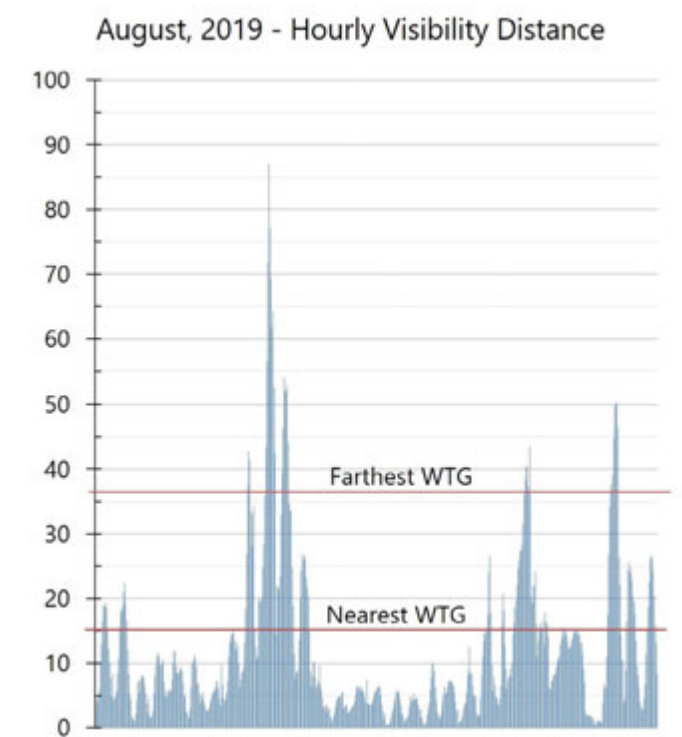
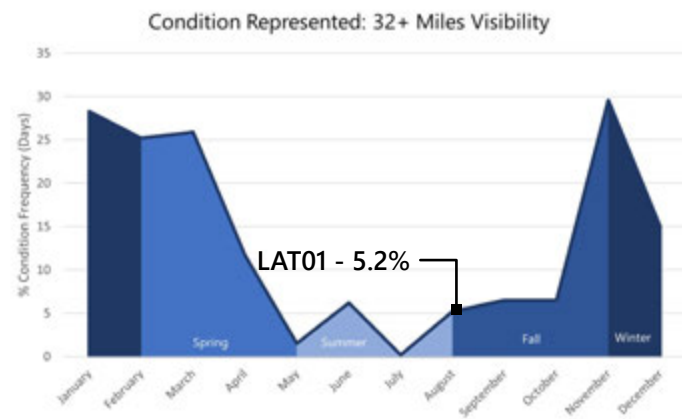
Lacey Township, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 15.3 miles  
 Camera Height: 9.8 feet  
 User Groups: L. Residents, S. Resident

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

**Color Contrast Rating:**

Turbine: 1.25  
 Background: 1.25

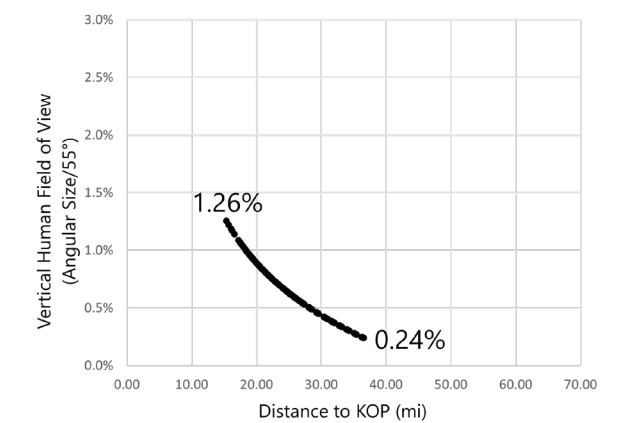
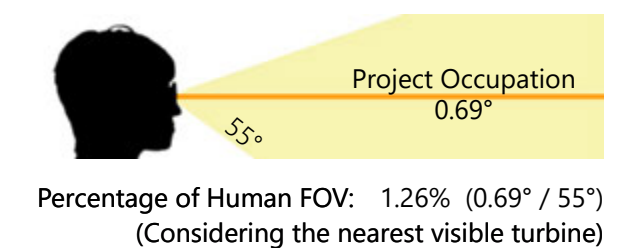
Lighting Condition: Back lit  
 Season: Summer  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

KOP TB02 Illustrates the project from 14.03 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during Evening conditions.



## Vertical Occupation





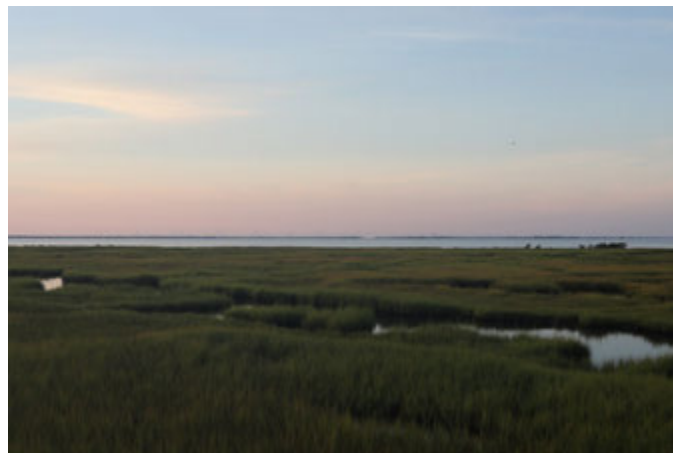
# LAT01 Edwin B. Forsythe NWR at the Woodmansee Estate

Lacey Township, Ocean County, New Jersey

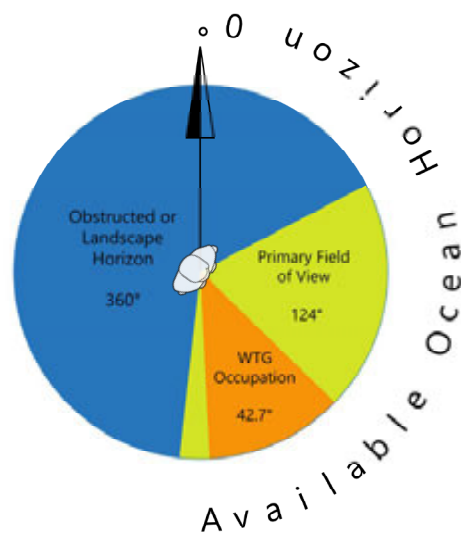
## KOP Information

Primary Field of View/Simulation Direction:	S-SE
Distance to Closest WTG:	15.3 miles
Camera Height:	9.8 ft
User Groups:	L. Residents, S. Resident
Horizon Occupation (% HFOV):	Medium (42.7°, 34.4%)
Vertical Occupation:	Medium (0.69°, 1.26%)
Character Area Type:	Landscape
Character Area:	Dredged Lagoon

## Existing View



## Field of View



## Existing Landscape/ Seascape Character Description:

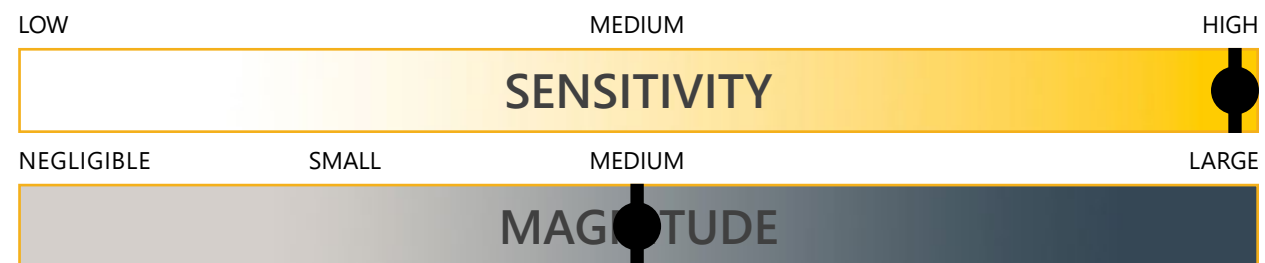
The Dredged Lagoon LCA, adjacent to this KOP and adjacent to the Salt Marsh is characterized by residential neighborhoods with seasonal and year-round homes situated along an artificial dredged waterway. Depending on a residence's position within the zone, outward views across open expanses of water may be available, but in general views from this character area are screened or tightly framed by nearby residences and moored boats. This KOP is taken from the edge of a curbed road that serves the residential development. The development occurs on fingers of land (fill material) separated by water dredged water channels for boat access. This development is surrounded on three sides by vast salt marshes and on the east side by the open waters of Barnegat Bay. The view looks out over the Edwin B. Forsythe NWR which includes more than 47,000 acres of southern New Jersey coastal habitats and is actively managed for migratory birds. The view of the bay and NWR is visually striking due to the mix of color, reflection, and open water. However, this KOP is taken from a private residential neighborhood with limited public access and very few homes within this modified landscape have a view of the NWR. While the NWR itself could be considered highly sensitive, this would not warrant the elevation of the impacts to major due to the viewing circumstances.

## Project Contrast:

The WTG result in strong form contrast with the barrier island and structures as they appear to jut out from the land mass and rise above the distant structures such as water towers and buildings. The vertical scale of the WTGs also contrast strongly with these existing features. This strong contrasts with landform, structures, and the inland bay will be reinforced by the WTG motion, which will draw viewer attention. The WTGs would result in moderate contrasts with the existing vegetation. The salt marsh is still a very strong focal point, but again WTG motion is likely to draw the eye, when visible. It is anticipated that lighting would have moderate contrasts due to the incremental increase in lights on the horizon. This site already experiences lights from the development on the barrier island.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	Medium	Residential recreational viewers for whom the bay is an important part of the viewer experience. However, the views of the barrier island have multiple vertical intrusions resulting from the barrier island development and the housing development itself is in contrast with the greater NWR and therefore, already compromised.
Value	High	This location is exclusive to a few residential properties that value their visual environment, but this is not indicative of the greater public experience of scenic landscapes. However, the national level protections warrant high value.
Sensitivity Rating	High	The Dredged Lagoon Character Area is constructed in an environmentally sensitive and scenic environment. The NWR itself exhibits visual sensitivity, the KOP represents a very small opportunity for this type of undeveloped view of the bay.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Medium	The vertical scale occupies a moderate portion of the human vertical field of view (approximately 0.69°, 1.26%). The visual prominence rating is a 4.
Geographic Extent	Medium	The Project only occupies approximately 42.7% of the human horizontal field of view and 34.4% of the human field of view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Medium	Medium size, scale, and geographic extent.

Overall Impact  
**Moderate**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LAT01 - Edwin B. Forsythe National Wildlife Refuge at the Woodmansee Estate  
Attachment E: Photosimulations; Page 33 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



**Atlantic Shores Offshore Wind: North (OCS-A 0549)**

**Outer Continental Shelf – OCS-A 0549**

Key Observation Point: LAT01 - Edwin B. Forsythe National Wildlife Refuge at the Woodmansee Estate

Attachment E: Photosimulations; Page 34 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LAT01 - Edwin B. Forsythe National Wildlife Refuge at the Woodmansee Estate  
Attachment E: Photosimulations: Page 35 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LAT01 - Edwin B. Forsythe National Wildlife Refuge at the Woodmansee Estate  
Attachment E: Photosimulations; Page 36 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



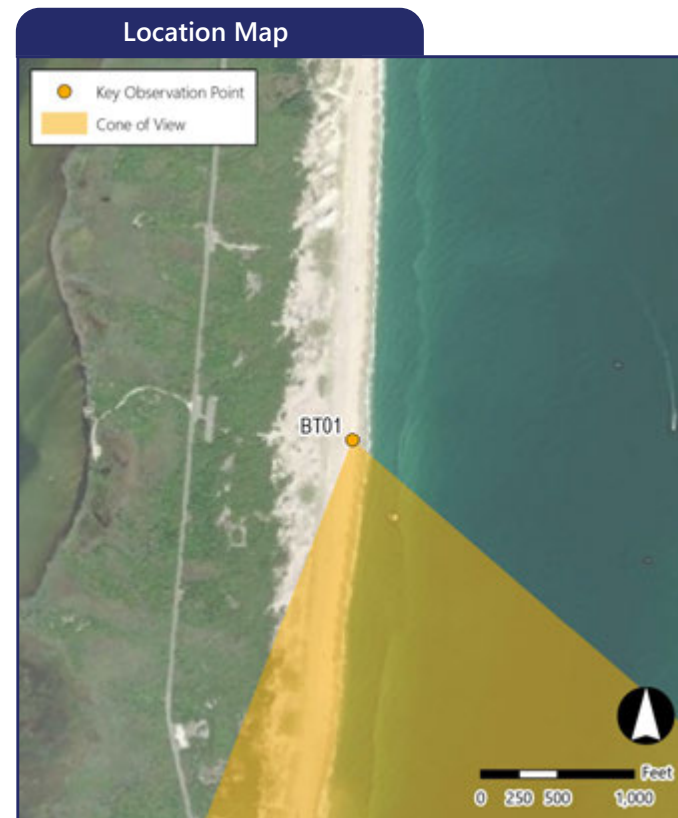
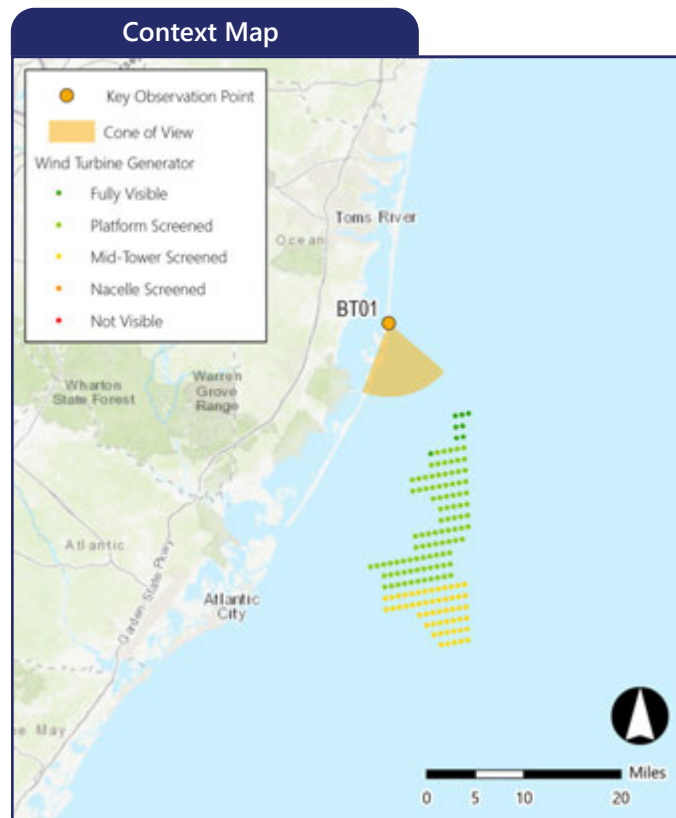


# BT01 Island Beach State Park

Berkeley Township, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from the Island Beach State Park, panning clockwise from east-southeast (left) to southwest (right). The yellow rectangle represents the extent of the simulated photograph(s).



Simulation Information	
Coordinates:	39.80805°N, 74.08997°W
Character Area:	Undeveloped Beach, Seascape (SCA)
User Group:	L. Residents, Tourists, Fishing Comm., S. Resident
Direction of View:	South
Distance to Nearest Visible Turbine:	11.7 miles
Sensitive Resource:	Island Beach State Park, New Jersey Coastal Heritage Trail Area
Environmental Information	
Date Taken:	08/21/2020
Time:	9:35 AM
Temperature:	79°F
Humidity:	62%
Visibility:	10 miles
Wind Direction:	South-southeast
Wind Speed:	6 mph
Conditions Observed:	Partly Cloudy
Photograph Information	
Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	10.5 feet AMSL
Notes	
Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.	





# BT01 Island Beach State Park

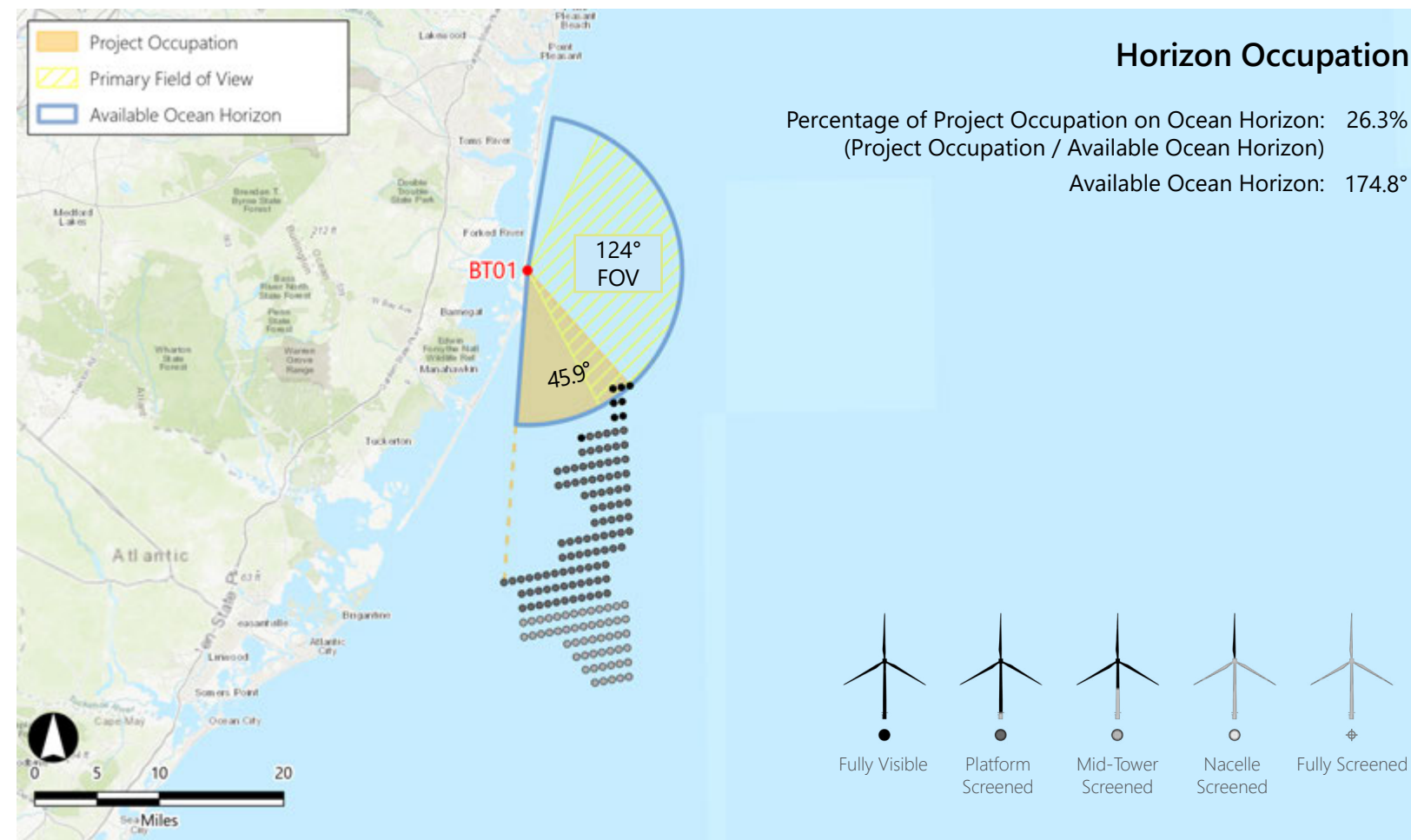
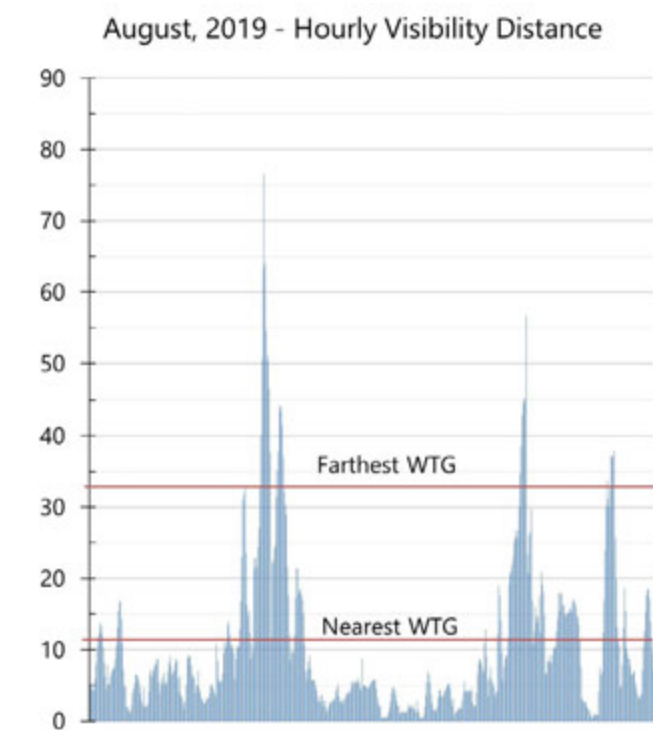
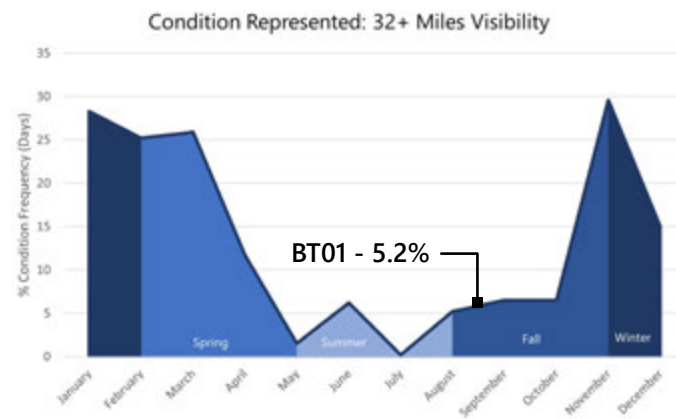
Berkeley Township, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 11.7 miles  
 Camera Height: 10.5 feet  
 User Groups: L. Residents, Tourists, Fishing Comm., S.Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

**Color Contrast Rating:**

Turbine: 2.47  
 Background

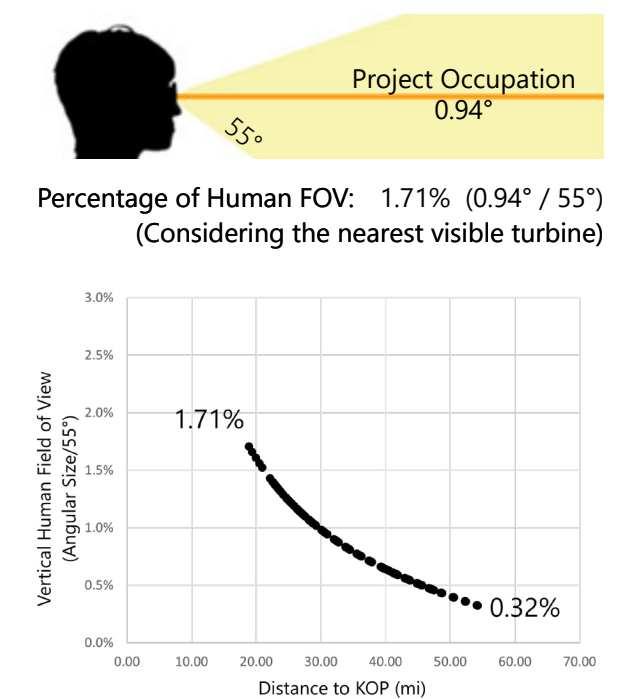
Lighting Condition: Side lit  
 Season: Summer  
 Sky Condition: Partly Cloudy  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

KOP BHB01 Illustrates the project from 9.85 miles in the back lit condition. This provides an indication of how the turbines may appear from this KOP during morning conditions.



## Vertical Occupation





# BT01 Island Beach State Park

Berkeley Township, Ocean County, New Jersey

## KOP Information

Primary Field of View/Simulation Direction: East/South-SE

Distance to Closest WTG: 11.7 miles

Camera Height: 10.5 ft

User Groups: Residents, Tourists, Fishing Comm.

Horizon Occupation (% HFOV): Medium (45.9°, 37%)

Vertical Occupation: Large (0.94°, 1.71%)

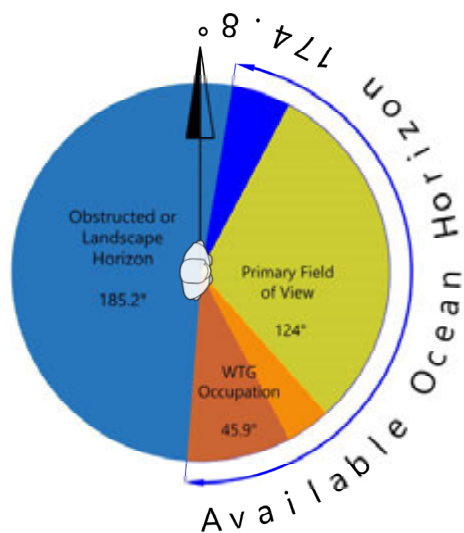
Character Area Type: Seascape

Character Area: Undeveloped Beach

## Existing View



## Field of View

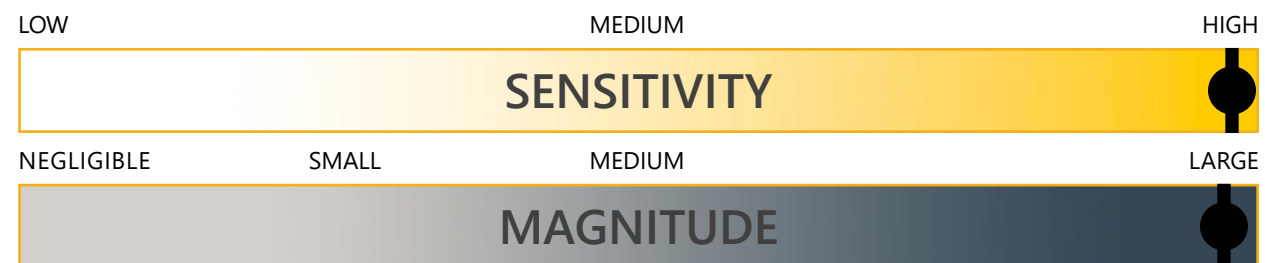


## Existing Landscape/ Seascape Character Description:

Island Beach State Park is a preserved barrier island with the Undeveloped Beach SCA that protects a variety of natural shoreline and near-shore habitats. The park contains close to 10 miles of sandy beach, an extensive shoreline along Barnegat Bay, dense maritime forests, rolling sand dunes, and tidal marshes. The views from this location are largely intact and show the signs of the relentless ocean environment. Natural dunes appear weather beaten, but reasonably healthy dune grasses are holding strong. This location is indicative of a natural shoreline without immediate or apparent development pressures. The views from this location are largely intact and show the signs of the relentless ocean environment. Natural dunes appear weather beaten, but reasonably healthy dune grasses are holding strong. This location is indicative of a natural shoreline without immediate or apparent development pressures.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Recreational viewers for whom the bay is an important part of the viewer experience. This location is tranquil, undeveloped, and exhibits a natural seascape which is a rare commodity on the NJ coast.
Value	High	Despite relatively low visitation and lack of amenities for visitors, this State Park has inherent protections for the natural environment, which in this case are the same protections that make this stretch of beach scenic.
Sensitivity Rating	High	The SCA is highly susceptible and has high value to the users and the state, therefore the sensitivity is high.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	The vertical scale occupies a moderate portion of the human vertical field of view (approximately 0.94°, 1.71%). The visual prominence rating is a 5.
Geographic Extent	Medium	The Project occupies approximately 37% of the human horizontal field of view and 12.6% of the available ocean horizon.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	Large size and scale and medium geographic extent results in large magnitude.

## Project Contrast:

During clear viewing conditions, the WTGs present strong contrast with the Ocean in terms of line, form, color, and scale. The motion, lighting, and vertical scale begins to compete strongly with the landform, but due to the viewing circumstances, moderate contrasts result from the horizontal scale. The visual prominence rating is a 5.

Overall Impact  
**Major**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549

Key Observation Point: BT01 – Island Beach State Park

Attachment E: Photosimulations; Page 40 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549

Key Observation Point: BT01 – Island Beach State Park

Attachment E: Photosimulations; Page 41 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549

Key Observation Point: BT01 – Island Beach State Park

Attachment E: Photosimulations; Page 42 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549

Key Observation Point: BT01 – Island Beach State Park

Attachment E: Photosimulations; Page 43 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

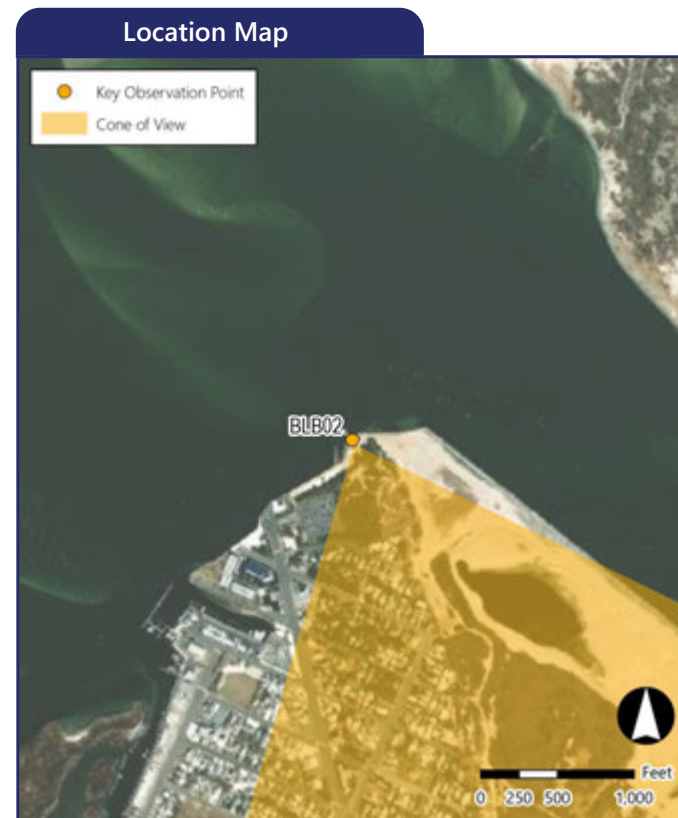
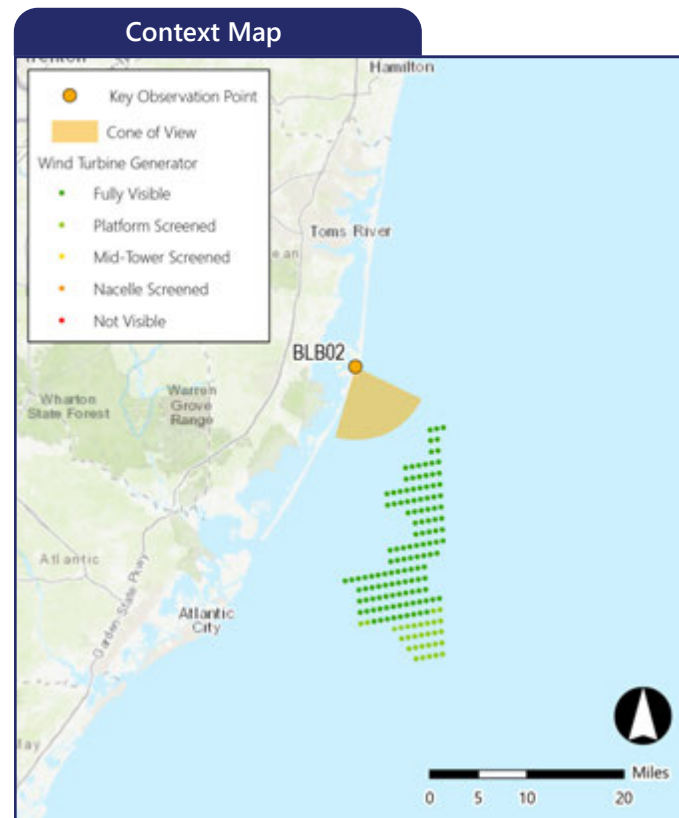


# BLB02 Barnegat Lighthouse State Park

Barnegat Light Borough, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from Barnegat Lighthouse State Park, panning clockwise from southeast (left) to southwest (right). The yellow rectangle represents the extent of the simulated photograph(s).



Simulation Information	
Coordinates:	39.76433°N, 74.10621°W
Character Area:	Recreation, Seascape (SCA)
User Group:	L. Residents, Tourists, Fishing Comm. S. Residents
Direction of View:	South-southeast
Distance to Nearest Visible Turbine:	10.1 miles
Sensitive Resource:	Barnegat Lighthouse State Park, Barnegat Lighthouse State Park - Fishing Access, New Jersey Coastal Heritage Trail Area
Environmental Information	
Date Taken:	09/20/2018
Time:	11:35 AM
Temperature:	73°F
Humidity:	68%
Visibility:	10 miles
Wind Direction:	East
Wind Speed:	7 mph
Conditions Observed:	Cloudy
Photograph Information	
Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	155.7 feet AMSL
Notes	
Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.	
Viewshed Analysis indicates no ground-level visibility from this resource.	





# BLB02 Barnegat Lighthouse State Park

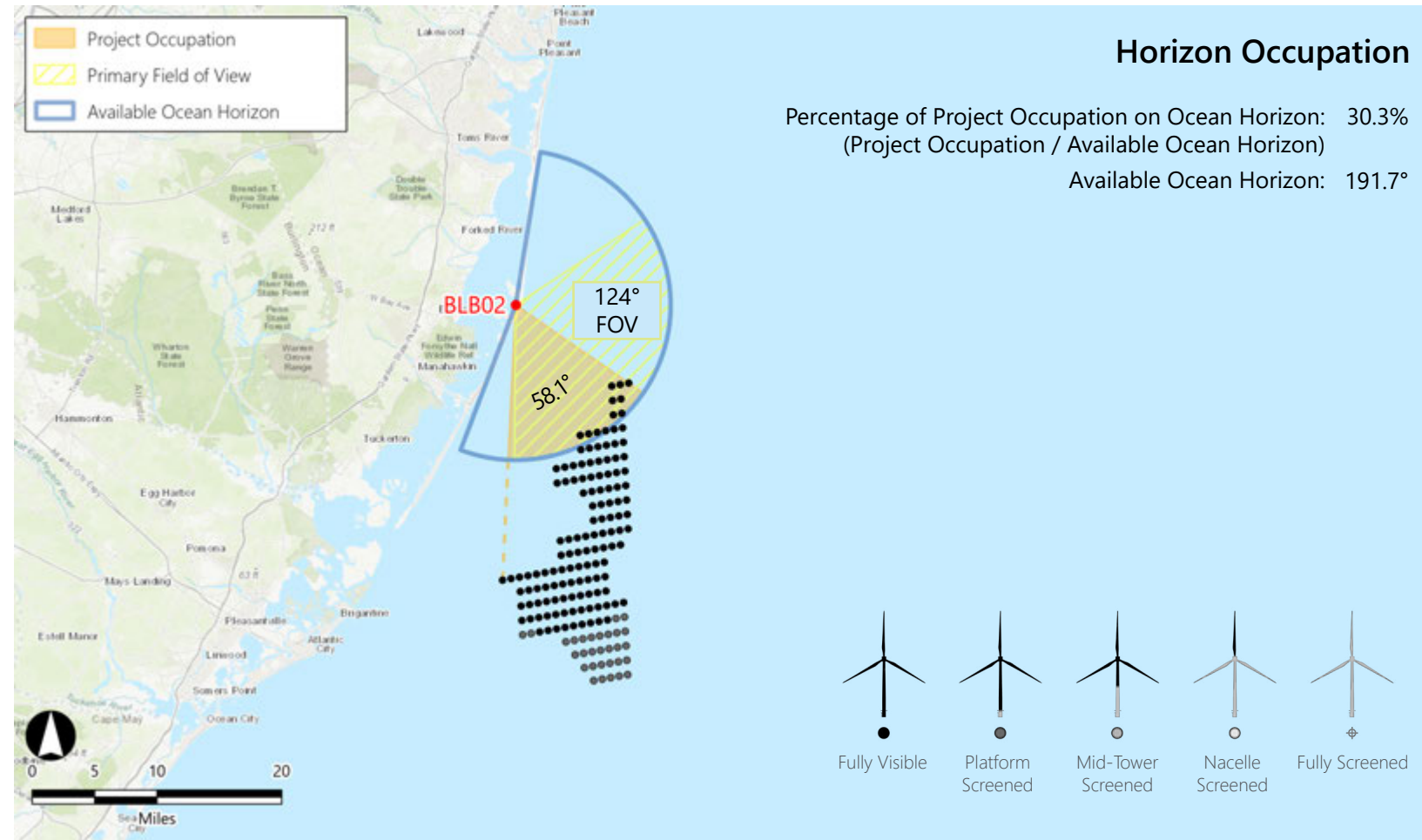
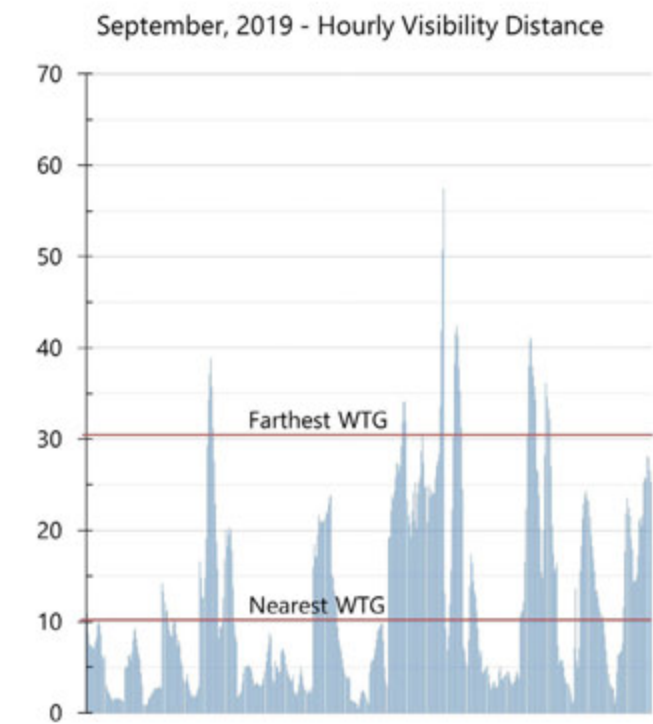
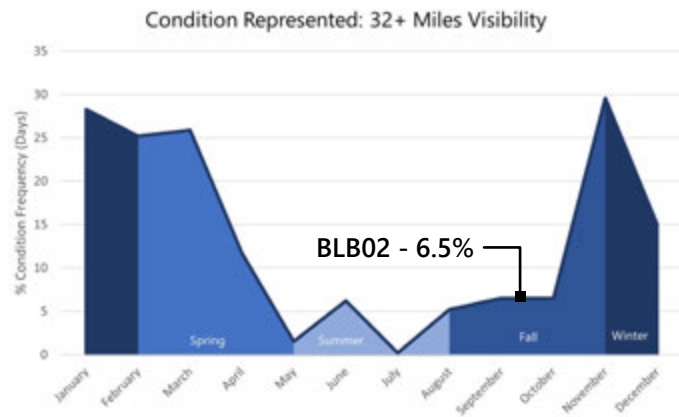
Barnegat Light Borough, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 10.1 miles  
 Camera Height: 155.7 feet  
 User Groups: L. Residents, Tourists, Fishing Comm., S.Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

**Color Contrast Rating:**

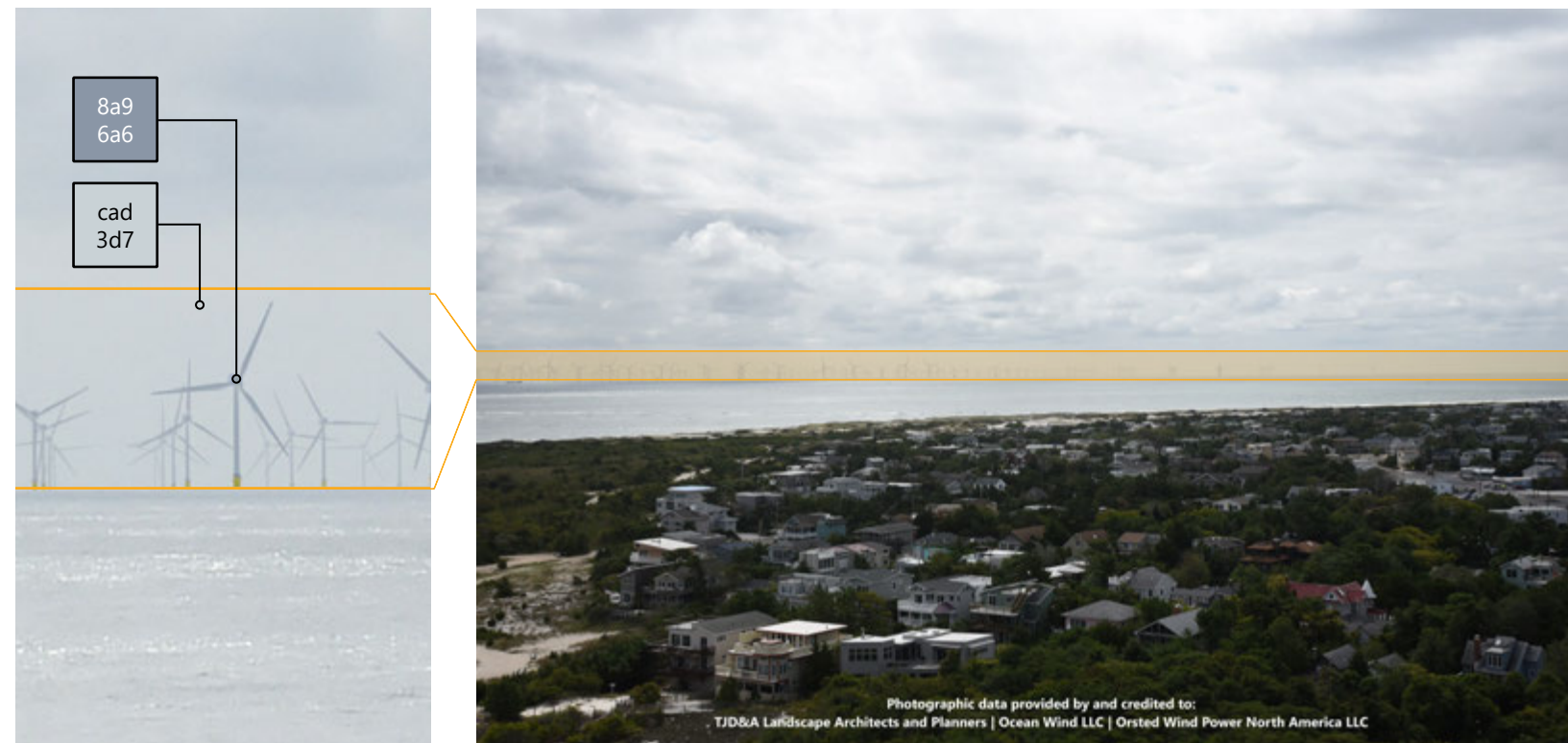
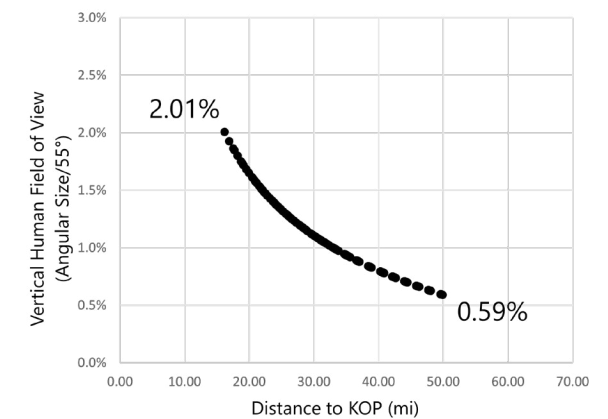
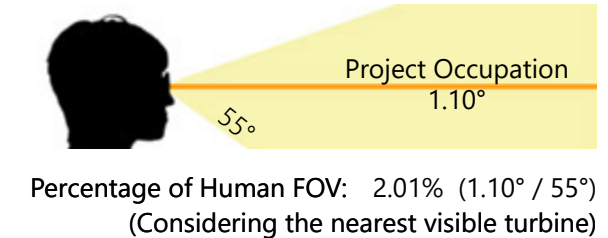
Turbine: 1.97  
 Background

Lighting Condition: Back lit  
 Season: Winter  
 Sky Condition: Cloudy  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

KOP BC02 Illustrates the project from 11.26 miles in the side lit condition. This provides an indication of how the turbines may appear from this KOP during midday conditions.

## Vertical Occupation





# BLB02 Barnegat Lighthouse State Park

Barnegat Light Borough, Ocean County, New Jersey

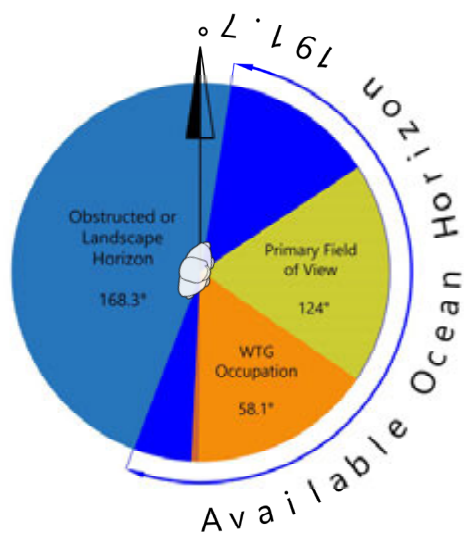
## KOP Information

Primary Field of View/Simulation Direction:	East/South-SE
Distance to Closest WTG:	10.1 miles
Camera Height:	155.7 ft
User Groups:	Residents, Tourists, Fishing Comm.
Horizon Occupation (% HFOV):	Large (58.1°, 47%)
Vertical Occupation:	Large ( 1.1°, 2.01%)
Character Area Type:	Seascape
Character Area:	Recreation

## Existing View



## Field of View



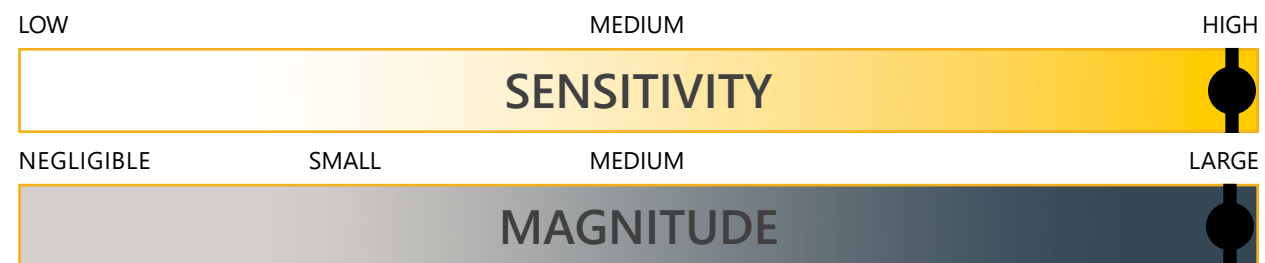
## Existing Landscape/ Seascape Character

### Description:

This is an elevated view of the village of Barnegat Light, Inlet, and the State Park. The foreground is composed of a mix of modern and traditional residential structures of modest scale. The residences are setback from the ocean and intermittent pockets of low scrub/shrub vegetation leads up to the dunes. These vegetated areas are bisected by beach trails to accommodate vehicle and pedestrian beach access. The middle ground is composed of higher density homes and businesses lining the main road (Ocean County Route 607) which presents as more of a village town center feel with larger multi-story buildings. The Inland Bay makes up a portion of the middle ground and is interspersed with islands and peninsulas, some of which are developed and others are salt marsh remnants. Built in 1859, Barnegat Lighthouse is the central feature of the park, and from the observation deck offers a panoramic view of Barnegat Bay, Island Beach, and Long Beach Island. The park also offers opportunities for picnicking, bird watching, and fishing access to Barnegat Inlet. No swimming is allowed at the park. Barnegat Lighthouse State Park is part of the New Jersey Coastal Heritage Trail.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	The ocean and seascape are important components of the view from this location. Additionally, the lighthouse is a historic structure and feature of the NJCHT. The state park offers comfort amenities for visitors and people come here for the history, recreation, and views.
Value	High	Relatively low viewership due to the climb to the top, but this is a rare elevated view with state protection. Therefore, for those that can experience the view, it is recognized as a highly valued resource.
Sensitivity Rating	High	Due to high susceptibility and value, this resource has high sensitivity.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	The vertical scale occupies a large portion of the human vertical field of view (approximately 1.1°, 2.01%). The visual prominence rating is a 6.
Geographic Extent	Large	The Project occupies approximately 47% of the human horizontal field of view and 12.6% of the available ocean horizon.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	Large size and scale and large geographic extent results in large magnitude.

## Project Contrast:

During clear viewing conditions, the WTGs present strong line, form, and color contrast with the ocean due to the vertical intrusion on the clean horizon line. The WTGs have moderate line and form contrast with landform due to the degree of separation in the vertical viewing plane between the ocean and the landform offered by this elevated vantage point. In all instances, strong contrast is expected to result from the motion and lighting associated with the WTGs. However, this view is not available at night. The views of the Bay from this KOP will generally be unaffected by the presence of the WTGs due to the fact the two are not coincident.

Overall Impact  
**Major**



Existing Conditions



Photographic data provided by and credited to:  
TJD&A Landscape Architects and Planners | Ocean Wind LLC | Orsted Wind Power North America LLC

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Photographic data provided by and credited to:  
TJD&A Landscape Architects and Planners | Ocean Wind LLC | Orsted Wind Power North America LLC

Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BLB02 - Barnegat Lighthouse State Park  
Attachment E: Photosimulations: Page 48 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions



Photographic data provided by and credited to:  
TJD&A Landscape Architects and Planners | Ocean Wind LLC | Orsted Wind Power North America LLC

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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Photosimulation (OCS-A 0549)

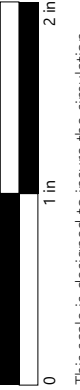


Photographic data provided by and credited to:  
TJD&A Landscape Architects and Planners | Ocean Wind LLC | Orsted Wind Power North America LLC

Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BLB02 - Barnegat Lighthouse State Park  
Attachment E: Photosimulations; Page 50 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

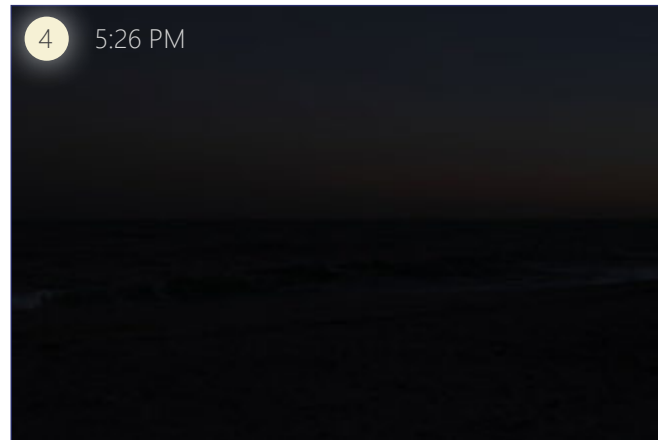
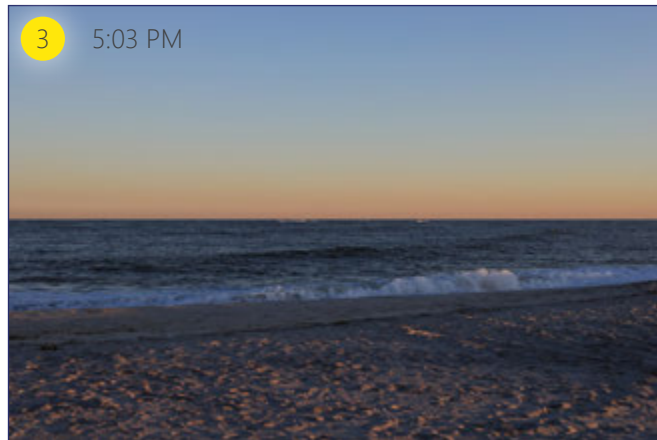
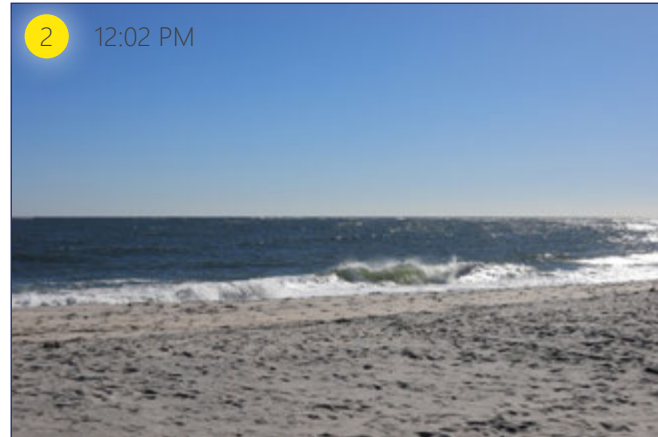
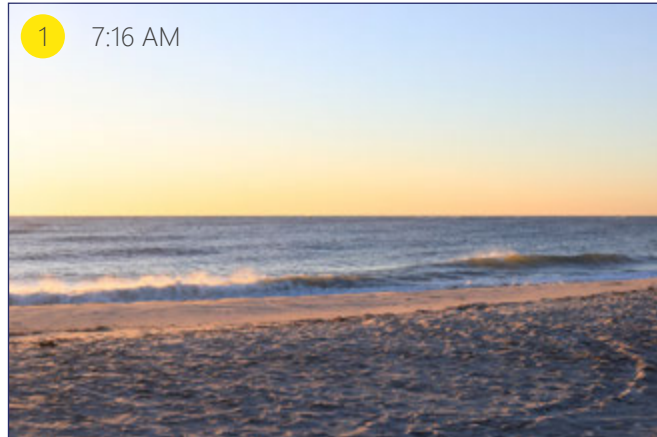


This scale is designed to insure the simulation images are printed at the intended size.

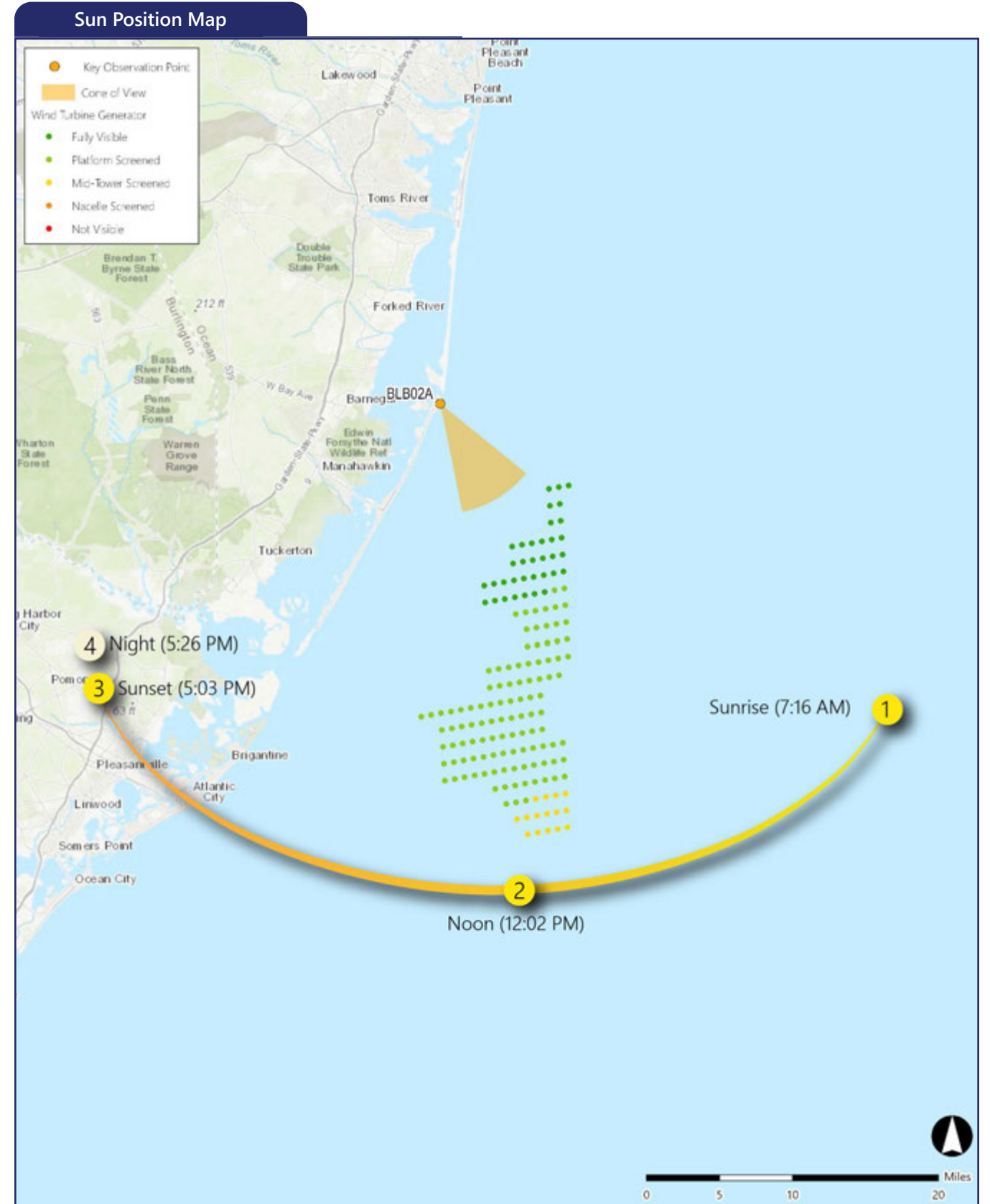


# BLB02A Atlantic Ocean Beachfront

Barneget Light Borough, Ocean County, New Jersey



QR Code for Timelapse Video  
[Timelapse Video Link](#)



## Simulation Information

Coordinates:	39.75498°N, 74.10148°W
Character Area:	Residential Beachfront, Seascape (SCA)
User Group:	L. Residents, Tourists, Fishing Comm., S. Resident
Direction of View:	South-southeast
Distance to Nearest Visible Turbine:	9.5 miles
Sensitive Resource:	Atlantic Ocean Beachfront Park

## Environmental Information

Date Taken:	02/05/2024
Time:	Various
Temperature:	43°F
Humidity:	42%
Visibility:	10 miles
Wind Direction:	East-northeast
Wind Speed:	6 mph
Conditions Observed:	Fair

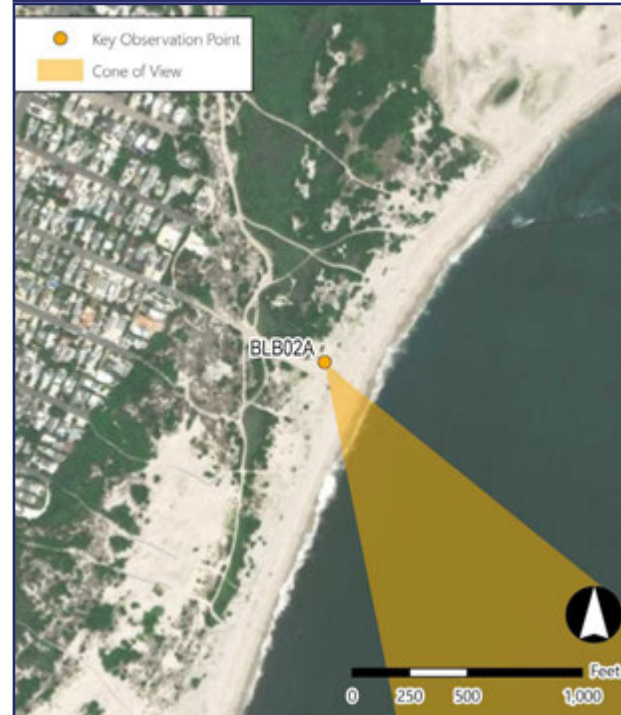
## Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	13.7 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Context Map





Existing Conditions (Sunrise)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BLB02A - Atlantic Ocean Beachfront  
Attachment E: Photosimulations; Page 52 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Sunrise) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BLB02A - Atlantic Ocean Beachfront  
Attachment E: Photosimulations; Page 53 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Noon)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BLB02A - Atlantic Ocean Beachfront  
Attachment E: Photosimulations; Page 54 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Noon) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BLB02A - Atlantic Ocean Beachfront  
Attachment E: Photosimulations; Page 55 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Sunset)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BLB02A - Atlantic Ocean Beachfront  
Attachment E: Photosimulations; Page 56 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Sunset) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BLB02A - Atlantic Ocean Beachfront  
Attachment E: Photosimulations: Page 57 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions (Night)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Night) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BLB02A - Atlantic Ocean Beachfront  
Attachment E: Photosimulations: Page 59 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

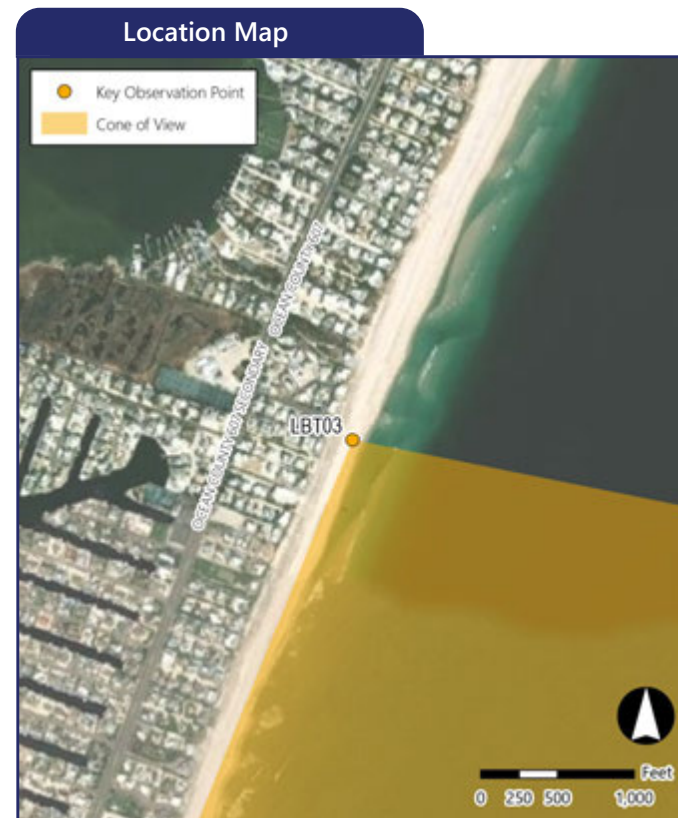
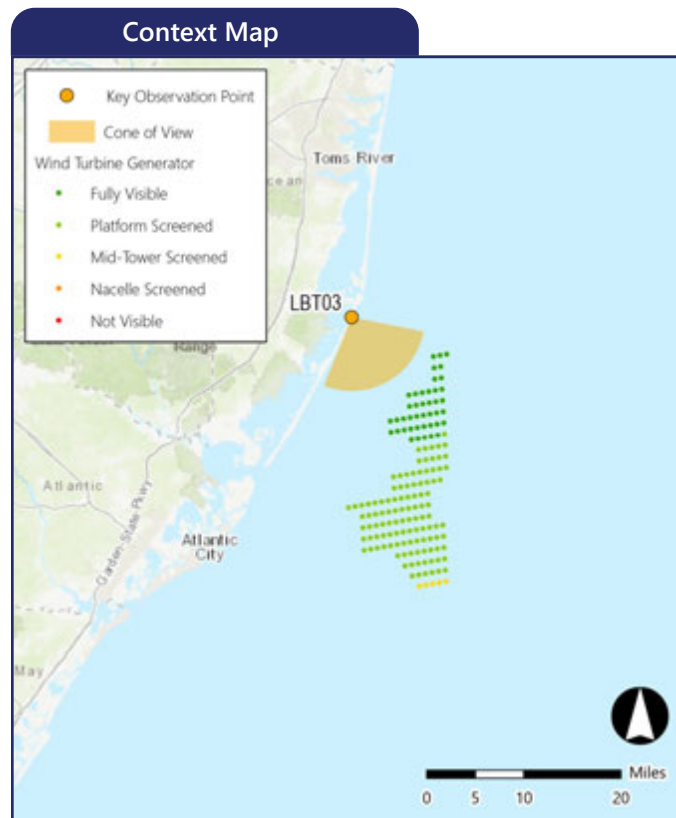


# LBT03 Beach at Long Beach Island Foundation for the Arts and Sciences

Long Beach Township, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from the Beach at Long Beach Island Foundation for the Arts and Sciences NRI, panning clockwise from east (left) to south-southwest (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates: 39.72895°N, 74.12058°W  
 Character Area: Residential Beachfront, Seascape (SCA)  
 User Group: L. Residents, Tourists, Fishing Comm. S. Residents  
 Direction of View: South-southeast  
 Distance to Nearest Visible Turbine: 9.4 miles  
 Sensitive Resource: New Jersey Coastal Heritage Trail Area

## Environmental Information

Date Taken: 09/22/2020  
 Time: 5:17 PM  
 Temperature: 69°F  
 Humidity: 38%  
 Visibility: 10 miles  
 Wind Direction: West  
 Wind Speed: 10 mph  
 Conditions Observed: Fair

## Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 16.6 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)





# LBT03 Beach at Long Beach Island Foundation for the Arts and Sciences

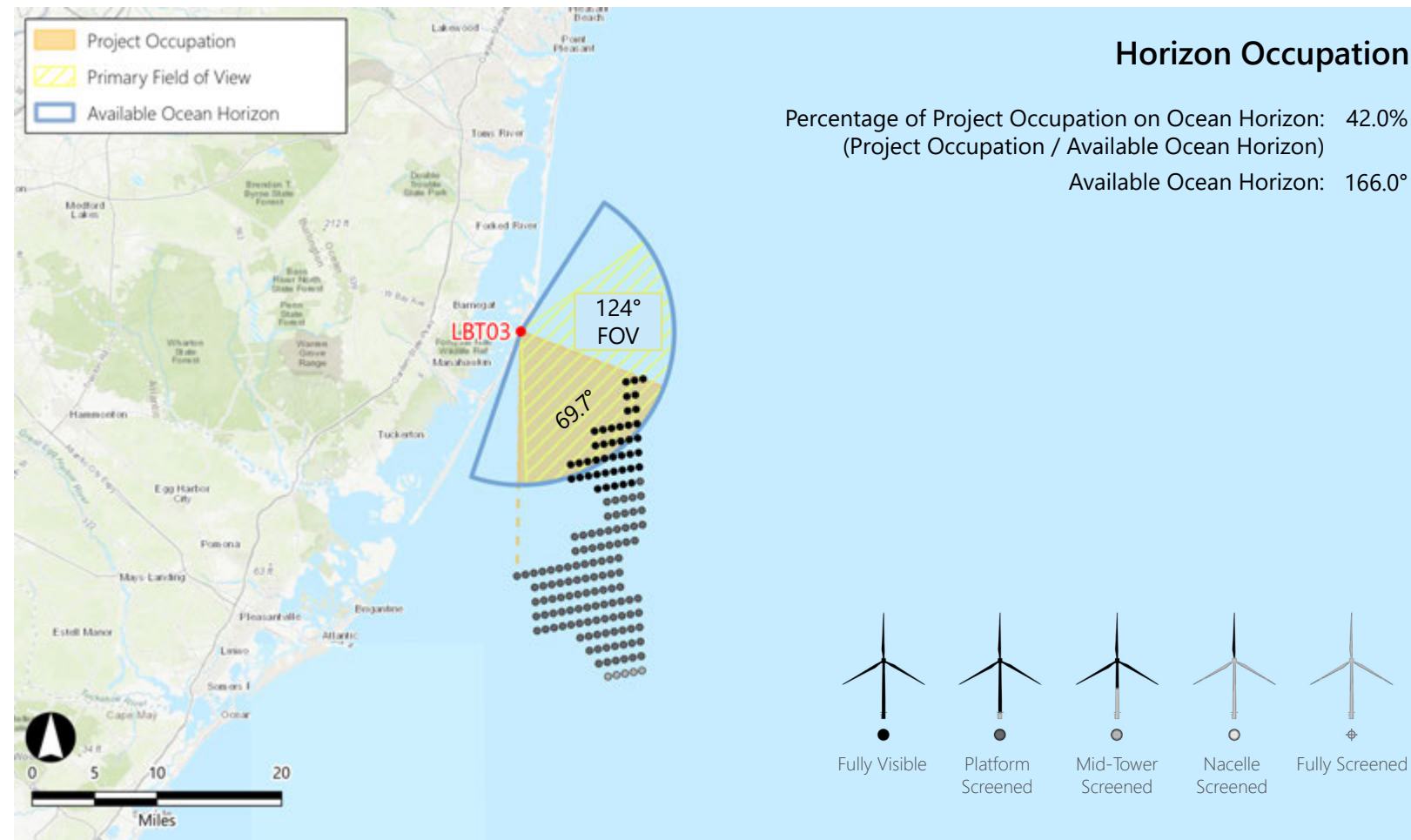
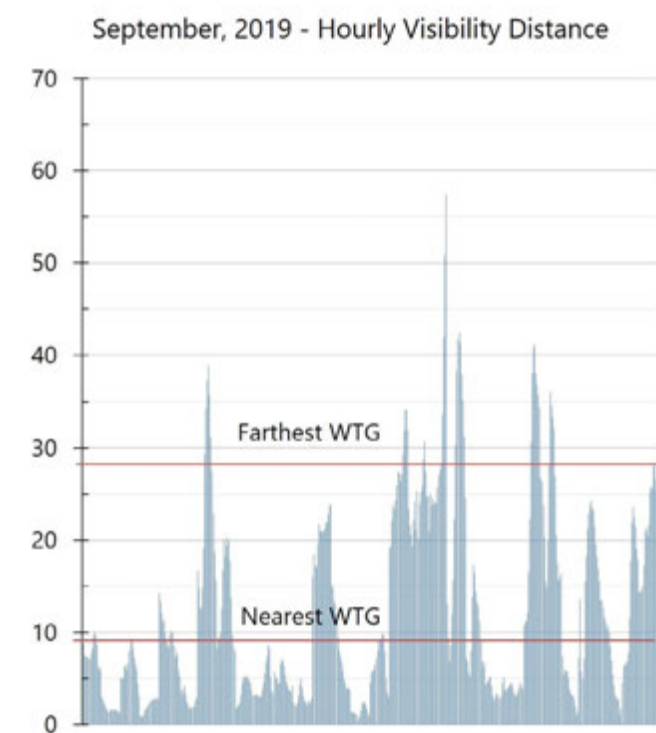
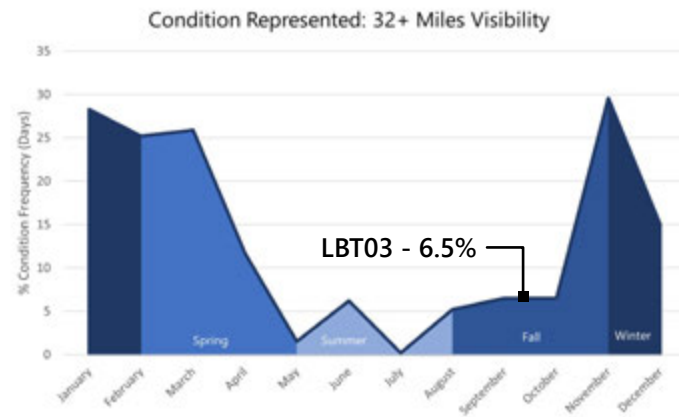
Long Beach Township, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 9.4 miles  
 Camera Height: 16.6 feet  
 User Groups: L. Residents, Tourists, Fishing Comm., S.Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

**Color Contrast Rating:**

Turbine: 1.44  
 Background

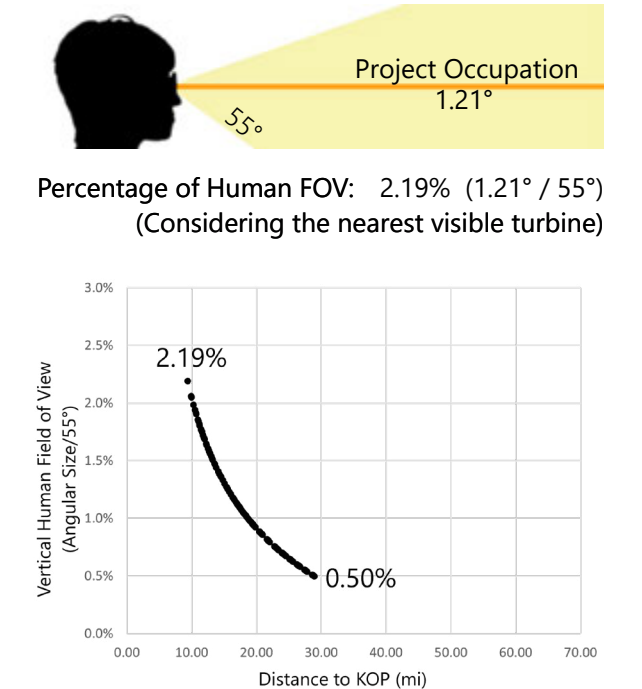
Lighting Condition: Side lit  
 Season: Fall  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

KOP BHB03 Illustrates the project from 9.62 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during Evening conditions.



## Vertical Occupation





# LBT03 Beach at Long Beach Island Foundation for the Arts and Sciences

Long Beach Township, Ocean County, New Jersey

## KOP Information

Primary Field of View/Simulation Direction: East/South-SE

Distance to Closest WTG: 9.4 miles

Camera Height: 16.6 ft

User Groups: Residents, Tourists, Fishing Comm.

Horizon Occupation (% HFOV): Large (69.7°, 56%)

Vertical Occupation: Large (1.21°, 2.19%)

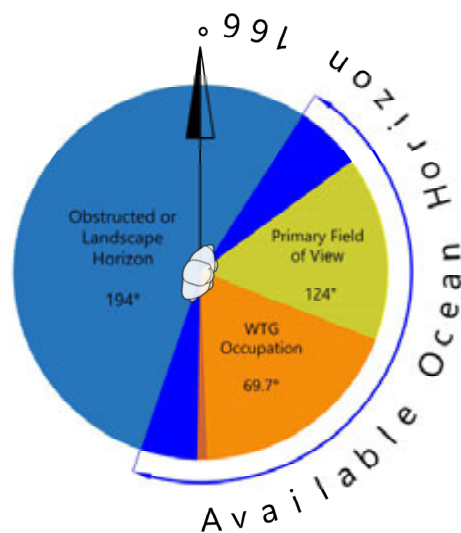
Character Area Type: Seascape

Character Area: Residential Beachfront, Seascape

## Existing View



## Field of View

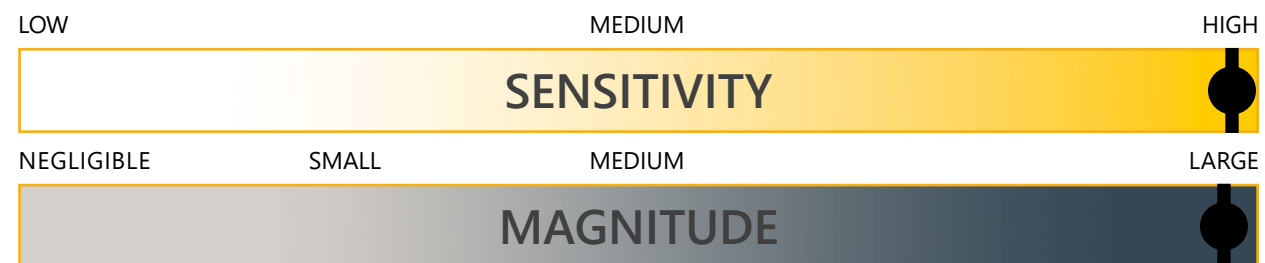


## Existing Landscape/ Seascape Character Description:

This view is from the beach accessed via East Coast Avenue off Long Beach Boulevard on Long Beach Island in the township of Long Beach. The KOP occurs along a narrow ocean shoreline which low and even up to the dunes which rise abruptly from the beach substantially screening residential area beyond when viewing west and directing views along the beach or over the ocean, to the east. The dune grasses are visible and appear to be well established compared to other locations within this GAA. Sand fencing, wooden posts, and access points are visible intermittently. Groups of beach goers are also present. Although outside the field of view in the selected photograph, the area immediately inland from the beach is developed and representative of the Residential Beachfront Character Area. While the visual qualities of the wide-open beach are common along the eastern seaboard, this view has an especially tranquil quality that is minimally interrupted by built amenities or visual clutter.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	This KOP is representative of residents, tourists, and recreationalists for whom the scenic quality of the seascape and ocean is an important part of their experience.
Value	Medium	Unlike many other beaches along the NJ coast, this area is intended exclusively for homeowners and vacationers who rent beach houses. While they individually place value on the view of the ocean to varying degrees, there are no formal scenic protections in place.
Sensitivity Rating	High	Due to the high susceptibility and medium value, this view is highly sensitive.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	The vertical scale occupies 2.19% of the vertical field of view which is approximately 1.21°.
Geographic Extent	Large	The geographic extent occupies 69.7° which is 56% of the human field of view and 42% of the total visible ocean horizon. As such, the viewer could not easily avoid a view of the Project when viewing the ocean.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	The magnitude is large due to the large vertical scale and horizon occupation.

## Project Contrast:

During clear viewing conditions, the WTGs present strong line, form, and color contrast with the ocean and noticeability will increase with the WTG rotor movement and lighting which would also present strong contrast with landform. The contrast with vegetation is relatively weak due to the viewing direction, however the rotor motion could also detract from this feature. Generally, the contrast with structures is also weak due to the viewing direction and circumstance.

Overall Impact  
**Major**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT03 - Beach at Long Beach Island Foundation for the Arts and Sciences  
Attachment E: Photosimulations; Page 63 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT03 - Beach at Long Beach Island Foundation for the Arts and Sciences  
Attachment E: Photosimulations; Page 64 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT03 - Beach at Long Beach Island Foundation for the Arts and Sciences  
Attachment E: Photosimulations; Page 65 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT03 - Beach at Long Beach Island Foundation for the Arts and Sciences  
Attachment E: Photosimulations; Page 66 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT03 - Beach at Long Beach Island Foundation for the Arts and Sciences  
Attachment E: Photosimulations; Page 67 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT03 - Beach at Long Beach Island Foundation for the Arts and Sciences  
Attachment E: Photosimulations; Page 68 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

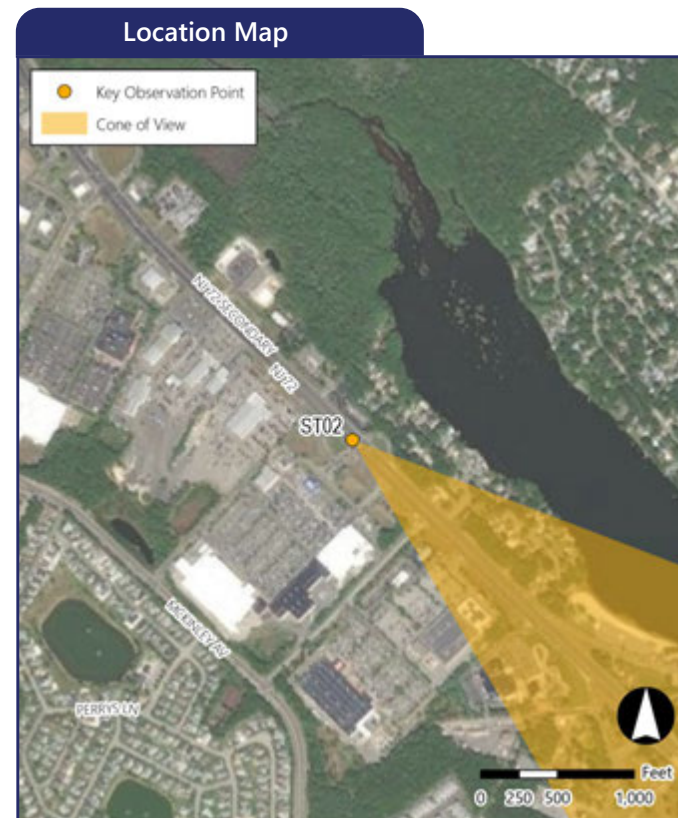
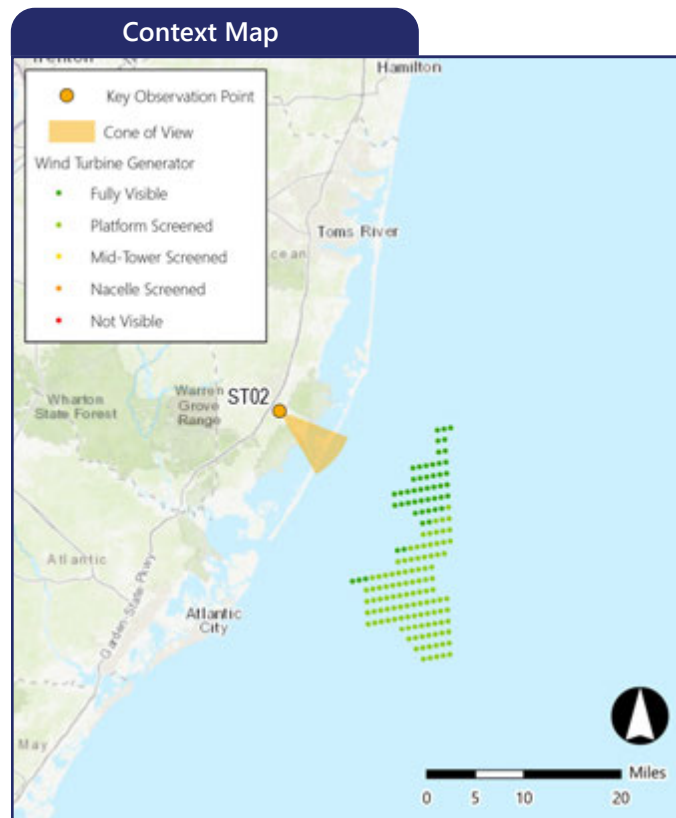


# ST02 Barnegat Road

Stafford Township, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from Barnegat Road, panning clockwise from east (left) to southwest (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



Simulation Information	
Coordinates:	39.69998°N, 74.26803°W
Character Area:	Commercial Strip Development
User Group:	Through Travelers, L. Residents
Direction of View:	Southeast
Distance to Nearest Visible Turbine:	14.6 miles
Sensitive Resource:	New Jersey Coastal Heritage Trail Area, Census Tract 7351.01, Edwin B. Forsythe NWR

Environmental Information		Photograph Information	
Date Taken:	08/18/2023	Camera:	Canon EOS 5D Mark IV
Time:	3:25 PM	Resolution:	30.4 Megapixels
Temperature:	83°F	Focal Length:	50mm
Humidity:	44%	Camera Height:	52.8 feet AMSL
Visibility:	10 miles	<b>Notes</b>	
Wind Direction:	West	Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.	
Wind Speed:	15 mph		
Conditions Observed:	Fair		





# ST02 Barnegat Road

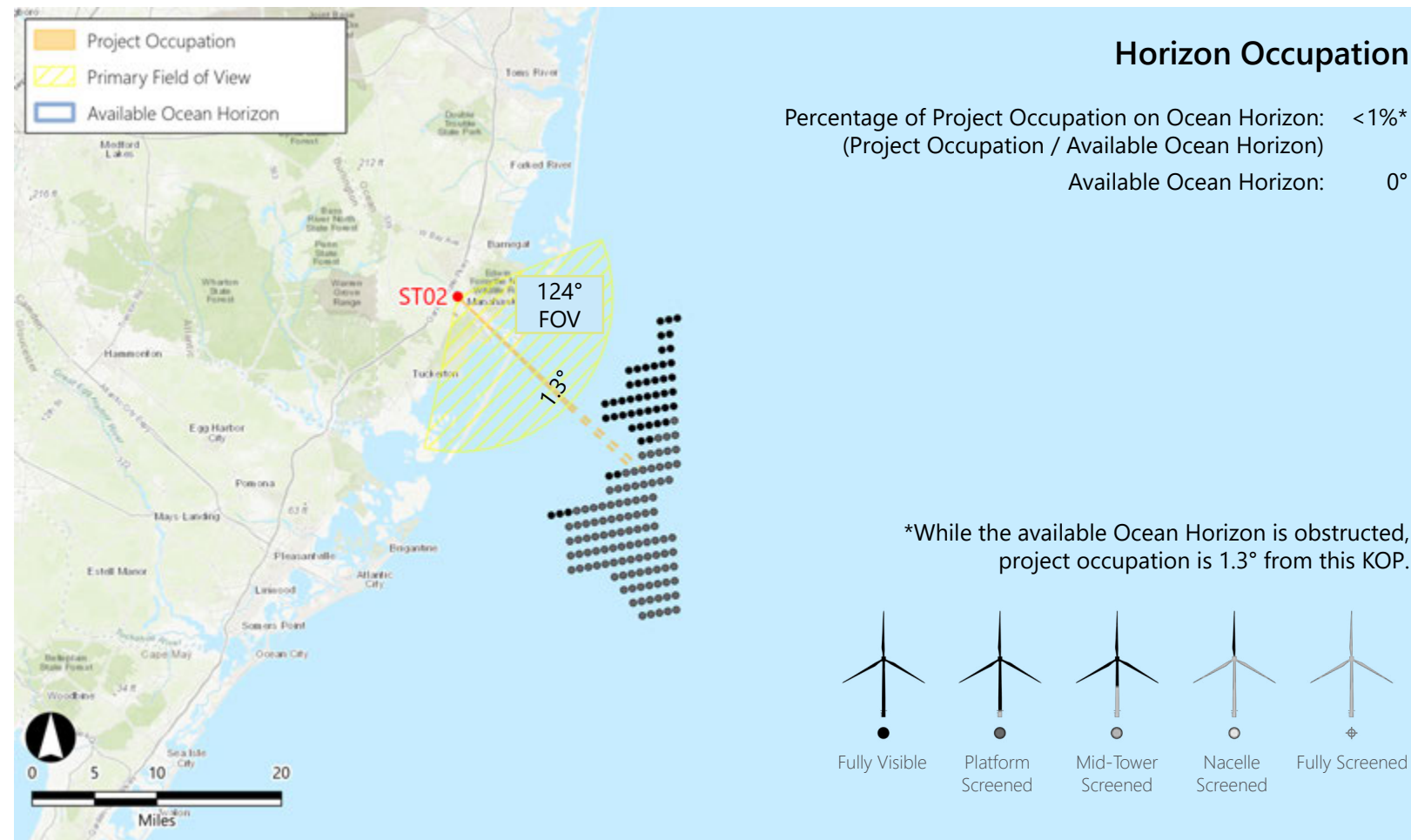
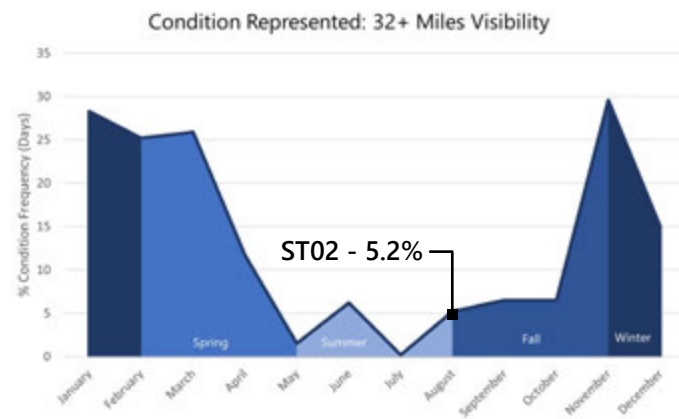
Stafford Township, Ocean County, New Jersey

## KOP Information

Primary Field of View: Southeast  
 Distance to Closest WTG: 14.6 miles  
 Camera Height: 52.8 feet  
 User Groups: Through Travelers, L. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

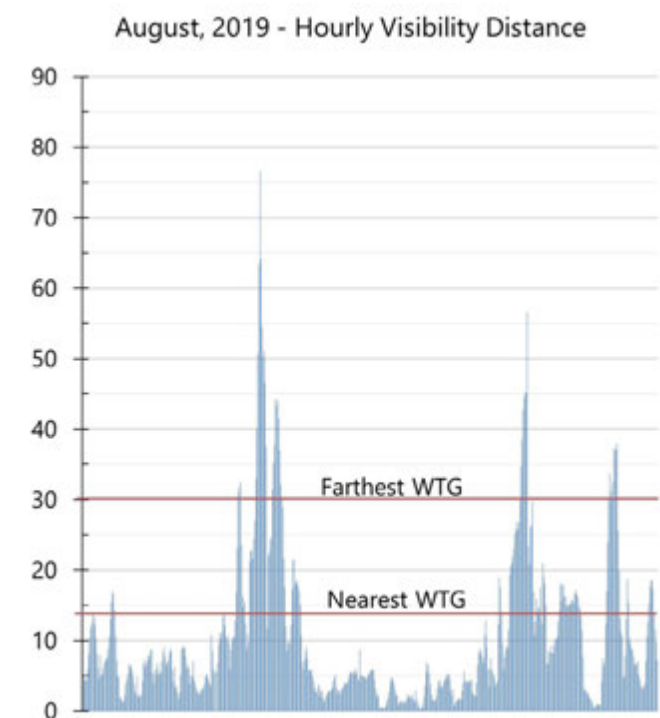
### Color Contrast Rating:

Turbine  $\square$  } 1.31  
 Background  $\square$  }

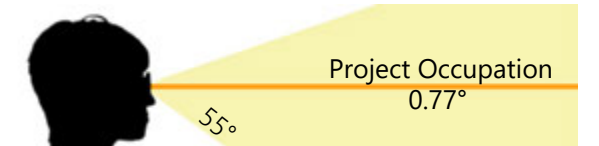
Lighting Condition: Front lit  
 Season: Summer  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

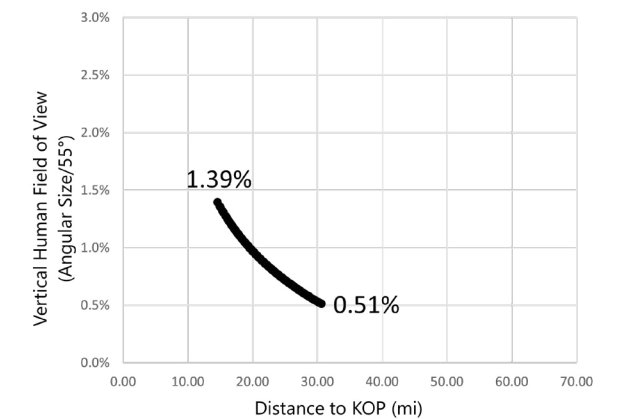
KOP TB02 Illustrates the project from 14.03 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during afternoon conditions.



## Vertical Occupation



Percentage of Human FOV:  $1.39\%$  ( $0.77^\circ / 55^\circ$ )  
 (Considering the nearest visible turbine)





# ST02 Barnegat Road

Stafford Township, Ocean County, New Jersey

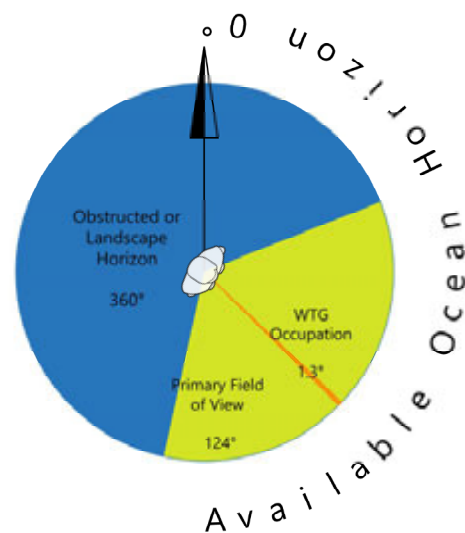
## KOP Information

Primary Field of View/Simulation Direction:	Southeast/SE
Distance to Closest WTG:	14.6 miles
Camera Height:	52.8 ft
User Groups:	Through Travelers, L. Residents
Horizon Occupation (% HFOV):	Small (1.3°, 1.0%)
Vertical Occupation:	Small ( 0.77°, 1.39%) Theoretical
Character Area Type:	Landscape
Character Area:	Commercial Strip Development

## Existing View



## Field of View

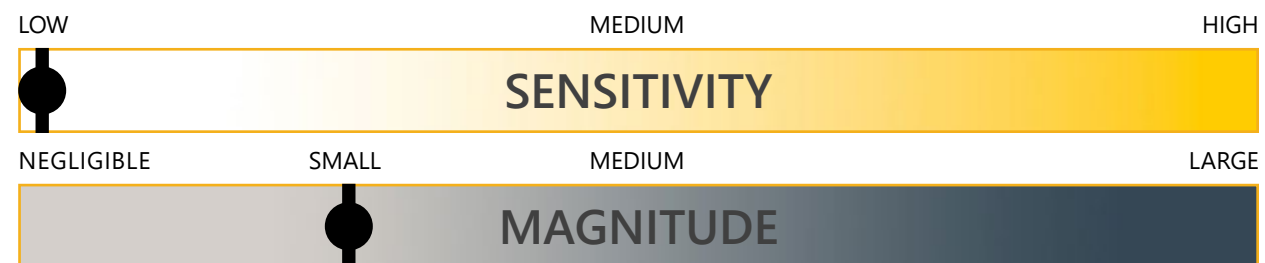


## Existing Landscape/ Seascape Character Description:

The Commercial Strip Development character area includes commercial development located along Barnegat Road which is a very wide boulevard. The commercial development is bordered on all sides by dense residential development. The architecture is defined by modern, unadorned strip or stand-alone big-box building stock, on-site parking, and circulation patterns favoring vehicular modes of transportation. Businesses include retail, restaurants, convenience stores, automobile dealerships, shopping centers, malls, and office buildings. The foreground and middle ground views appear cluttered with large, colorful signage and utility corridors along the road. The KOP is surrounded by a vehicular-centric landscape and is surrounded by asphalt, grass median, detention basins, overhead utilities, and large buildings, parking lots, and signage. The Commercial Strip Development corridor is typical of most and includes large, big-box stores setback from the main road with large sweeping entrances designed to funnel cars into the large asphalt parking areas. Large stands of forested, undeveloped land occur sporadically and separate the nearby residential neighborhoods. Landscape vegetation here is fairly well established, providing some softening of the overwhelming visual clutter.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	Low	Commercial strip developments are subject to constant change and evolution. With big-box stores becoming out of fashion in communities across the US. While they may be susceptible to change, the change is likely to be an improvement.
Value	Low	While the representative viewers are likely to be local residents, this utilitarian corridor is a means to have minimal engagement with the visual environment in favor of the retail experience.
Sensitivity Rating	Low	The area does not have scenic integrity and little thought is given to the visual environment.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Small	The size and scale contrast is minimal due to the conflicting focal points across the entire view. Due to the presence of vegetation, the turbine nacelle is partially obscured, leaving a portion of the rotor visible above the treetops.
Geographic Extent	Small	The Project would occupy approximately 1.0 percent or 1.3 degrees of the 124 degree human field of view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Small	Given the minimal visibility and the numerous visual distractions, the magnitude is small. Casual observers may notice the WTGs, but the scale, line, form, and color contrast will not draw viewer attention.

## Project Contrast:

Only three (summer) or four (winter) WTGs would be visible from this location during clear viewing conditions, as viewed down this cluttered strip of road. The most likely contrast will result from motion of the WTG rotors which may result in moderate contrast with the vegetation and landform. However, line, form, and color contrasts will not compete with the multitude of visual distractions that exist in this view.

**Overall Impact**  
**Minor**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: ST02 Barnegat Road  
Attachment E: Photosimulations: Page 72 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



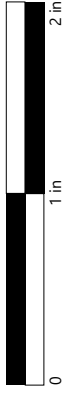
Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549

Key Observation Point: ST02 Barnegat Road

Attachment E: Photosimulations: Page 73 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

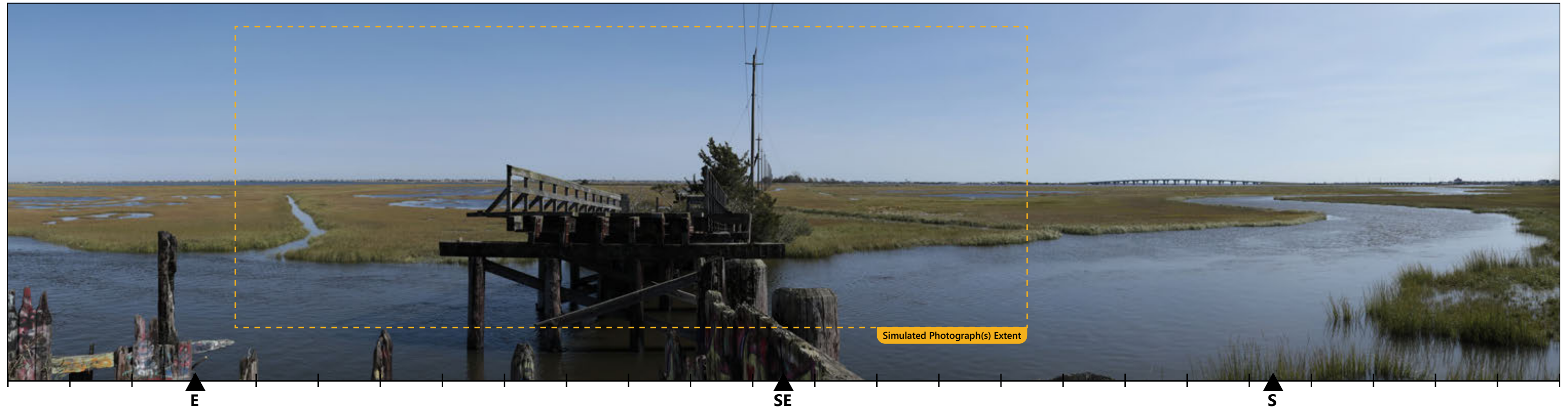


This scale is designed to insure the simulation images are printed at the intended size.

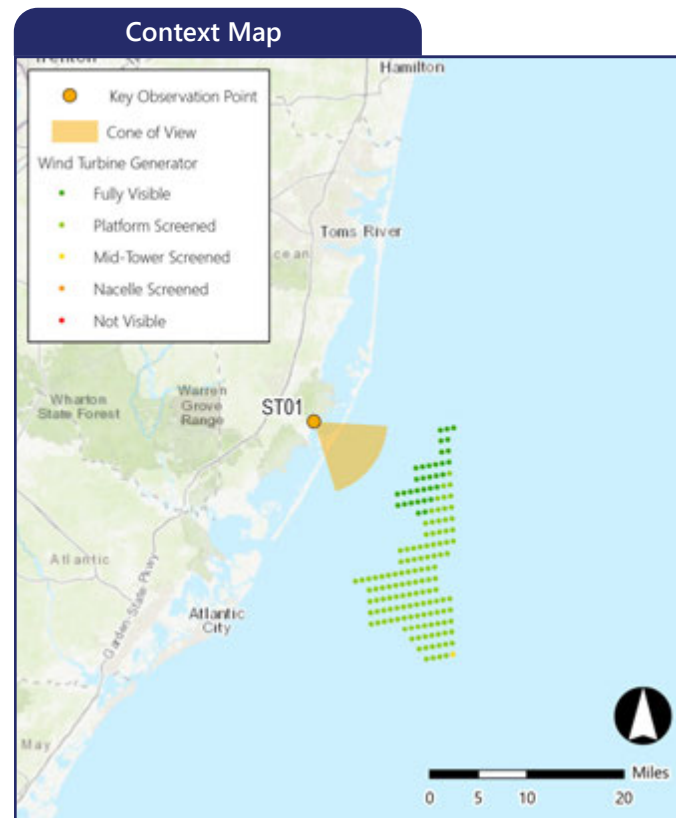


# ST01 Manahawkin Wildlife Management Area

Stafford Township, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from Manahawkin Wildlife Management Area, panning clockwise from east (left) to south (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates:	39.68394° N, 74.20768° W
Character Area:	Salt Marsh (LCA)
User Group:	L. Residents
Direction of View:	Southeast
Distance to Nearest Visible Turbine:	11.4 miles
Sensitive Resource:	Edwin B. Forsythe NWR, New Jersey Coastal Heritage Trail Area, Manahawkin Bottomland Hardwood Forest, Manahawkin Wildlife Management Area

## Environmental Information

Date Taken:	09/22/2020
Time:	2:43 PM
Temperature:	71°F
Humidity:	30%
Visibility:	10 miles
Wind Direction:	West-northwest
Wind Speed:	15 mph
Conditions Observed:	Fair

## Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	14.1 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)





# ST01 Manahawkin Wildlife Management Area

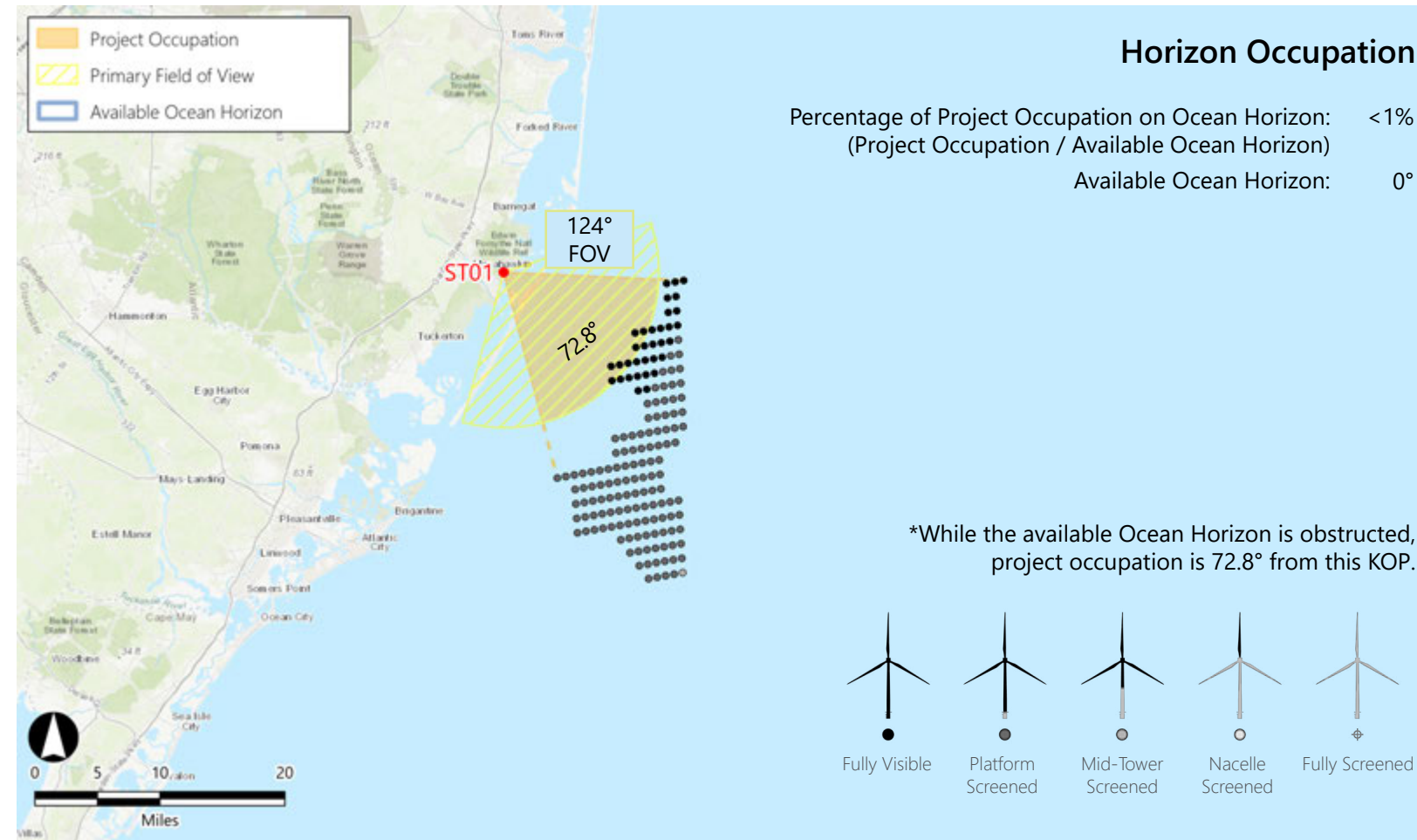
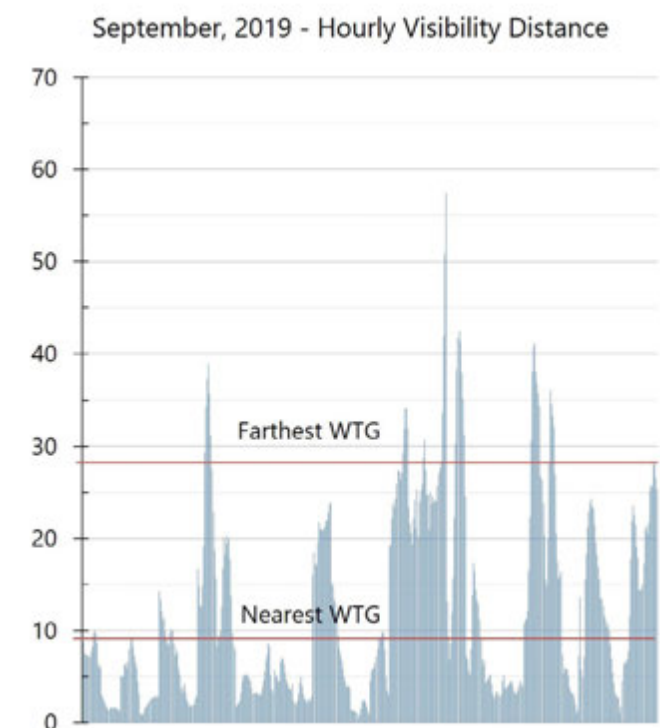
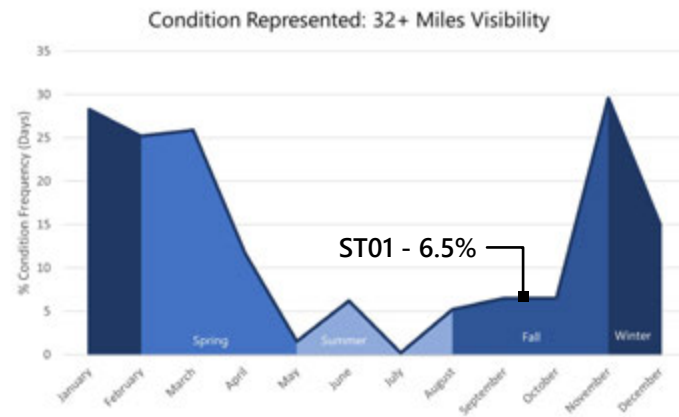
Stafford Township, Ocean County, New Jersey

## KOP Information

Primary Field of View:	Southeast
Distance to Closest WTG:	11.4 miles
Camera Height:	14.1 feet
User Groups:	L. Residents, Tourists, S.Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

### Color Contrast Rating:

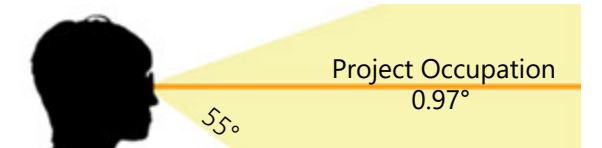


Lighting Condition:	Side lit
Season:	Fall
Sky Condition:	Fair
Atmospheric Condition:	> 10 Miles

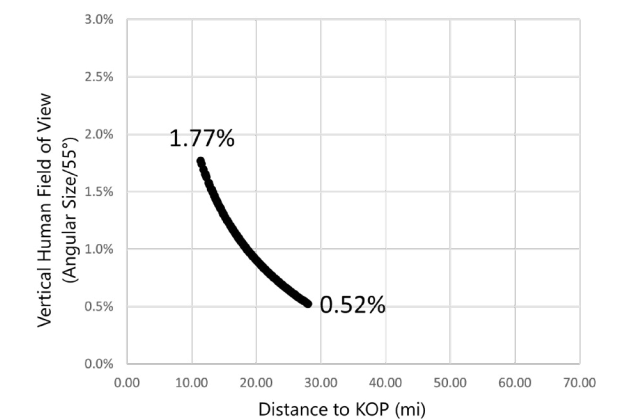
## SIMILAR VIEWING PARAMETERS:

KOP TB02 Illustrates the project from 14.03 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during afternoon conditions.

## Vertical Occupation



Percentage of Human FOV: 1.77% (0.97° / 55°)  
 (Considering the nearest visible turbine)





# ST01 Manahawkin Wildlife Management Area

Stafford Township, Ocean County, New Jersey

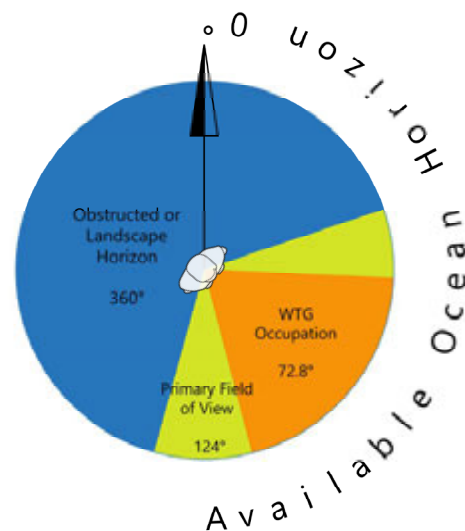
## KOP Information

Primary Field of View/Simulation Direction:	Southeast/SE
Distance to Closest WTG:	14.1 miles
Camera Height:	11.4 ft
User Groups:	L. Residents
Horizon Occupation (% HFOV):	Large (72.8°, 59%)
Vertical Occupation:	Small Med Large (0.97°, 1.77%)
Character Area Type:	Landscape
Character Area:	Salt Marsh

## Existing View



Field of View



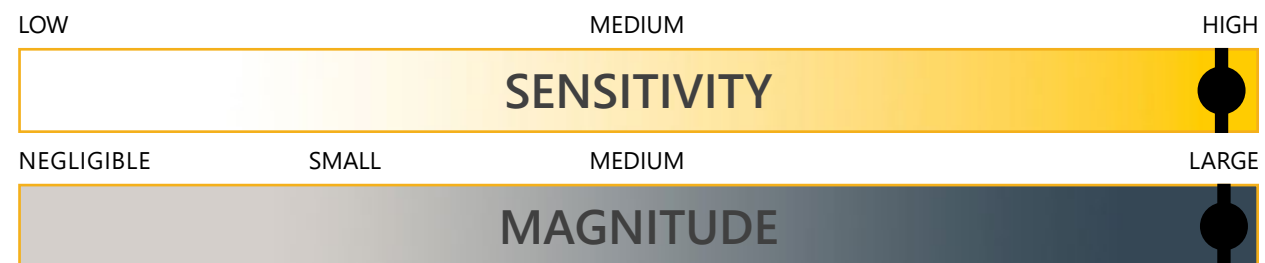
## Existing Landscape/ Seascape Character Description:

The Manahawkin WMA is representative of the Salt Marsh LCA. The site is accessed via a long, forested road that opens to the massive salt marsh which the road traverses for about a mile. The area can be characterized by an open, spacious landscape with intermittent areas of open water and salt marsh grasses which give the landscape a greenish yellow hue. While the viewers are surrounded by this large landscape with extensive views, the inland residential development and barrier island development are very visible and apparent features. Nonetheless, the sheer size of this landscape makes those features a distinct, but distant part of the background.

The combination of built and natural features in this view provides an interesting glimpse of a historic (and first) thoroughfare through the marsh and over the bay to Long Beach Island. The patchwork of Salt Marsh and open water makes for interesting patterns followed by a vast expanse of open water. A new elevated bridge is also visible to the south and the bay appears to extend out to the horizon beyond the new elevated bridge.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	Medium	Although not within the seascape, the inland bay is an important aspect of the viewing experience. Susceptibility is medium due to the potential for significant visual changes in the landscape due to development pressure, infrastructure corridors, and light pollution from the intensely developed barrier island.
Value	High	Not a well-known location or destination, but representative of the larger WMA which has conservation and preservation protection laws. The protection of natural habitat and ecology, while not specifically a scenic protection, scenic integrity will likely remain the outcome.
Sensitivity Rating	High	Despite low visitation, lack of amenities and media coverage, the sensitivity is high due to state and national designations.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	With 1.77% or 0.97 degrees of the vertical horizon theoretically occupied, the size and scale of the WTGS will be large. The Visual Prominence Rating is a 5 which suggests the WTGS "Strongly attract[s] visual attention. Prominent."
Geographic Extent	Large	Although the WTGS are not completely visible across the full 72.8 degree of horizon, portions of them would still occupy approximately 59% of the human field of view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	The large scale and geographic extent results in a large magnitude rating.

## Project Contrast:

During clear viewing conditions, the Project presents strong form and color contrast with landform, inland water, and structures. Line contrast is also strong against the inland water component. Motion is also likely to produce a degree of strong contrast, particularly when the rotor are bisected by build element on the barrier island. Generally, during clear viewing conditions, the Project will result in strong contrast with the existing landscape element. However, it is not anticipated that the night lighting will result in a strong contrast. From this location, the degree of existing light pollution will be excessive and because of the relative position of the WTG lights, other land based lights will be difficult to distinguish from the WTG lights.

Overall Impact  
**Major**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: ST01 Manahawkin Wildlife Management Area  
Attachment E: Photosimulations; Page 77 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: ST01 Manahawkin Wildlife Management Area  
Attachment E: Photosimulations; Page 78 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: ST01 Manahawkin Wildlife Management Area  
Attachment E: Photosimulations: Page 80 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

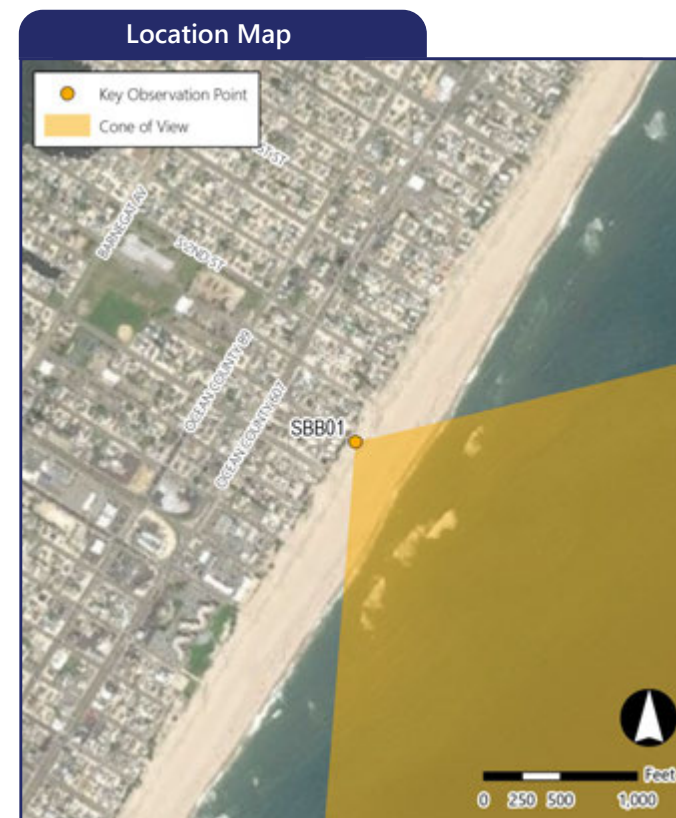
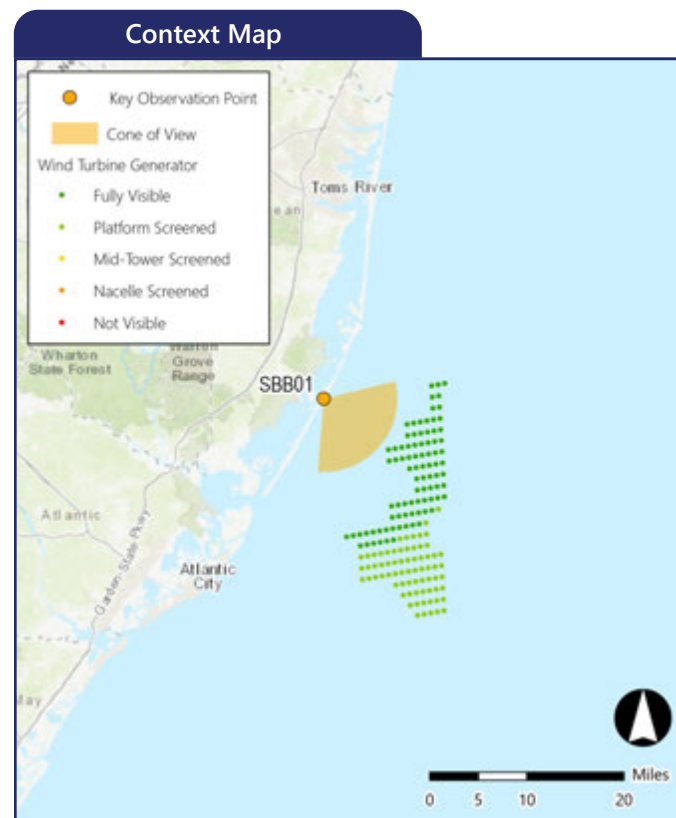


# SBB01 Ship Bottom Borough Municipal Beach

Ship Bottom Borough, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from the Ship Bottom Borough Municipal Beach, panning clockwise from northeast (left) to south (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates: 39.65152°N, 74.17169°W  
 Character Area: Residential Beachfront, Seascape (SCA)  
 User Group: L. Residents, Tourists, S. Residents  
 Direction of View: Southeast  
 Distance to Nearest Visible Turbine: 8.5 miles  
 Sensitive Resource: Ship Bottom Borough Municipal Beach, New Jersey Coastal Heritage Trail Area

## Environmental Information

Date Taken: 09/22/2020  
 Time: 3:45 PM  
 Temperature: 72°F  
 Humidity: 33%  
 Visibility: 10 miles  
 Wind Direction: West-northwest  
 Wind Speed: 12 mph  
 Conditions Observed: Clear

## Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 24.0 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)





# SBB01 Ship Bottom Borough Municipal Beach

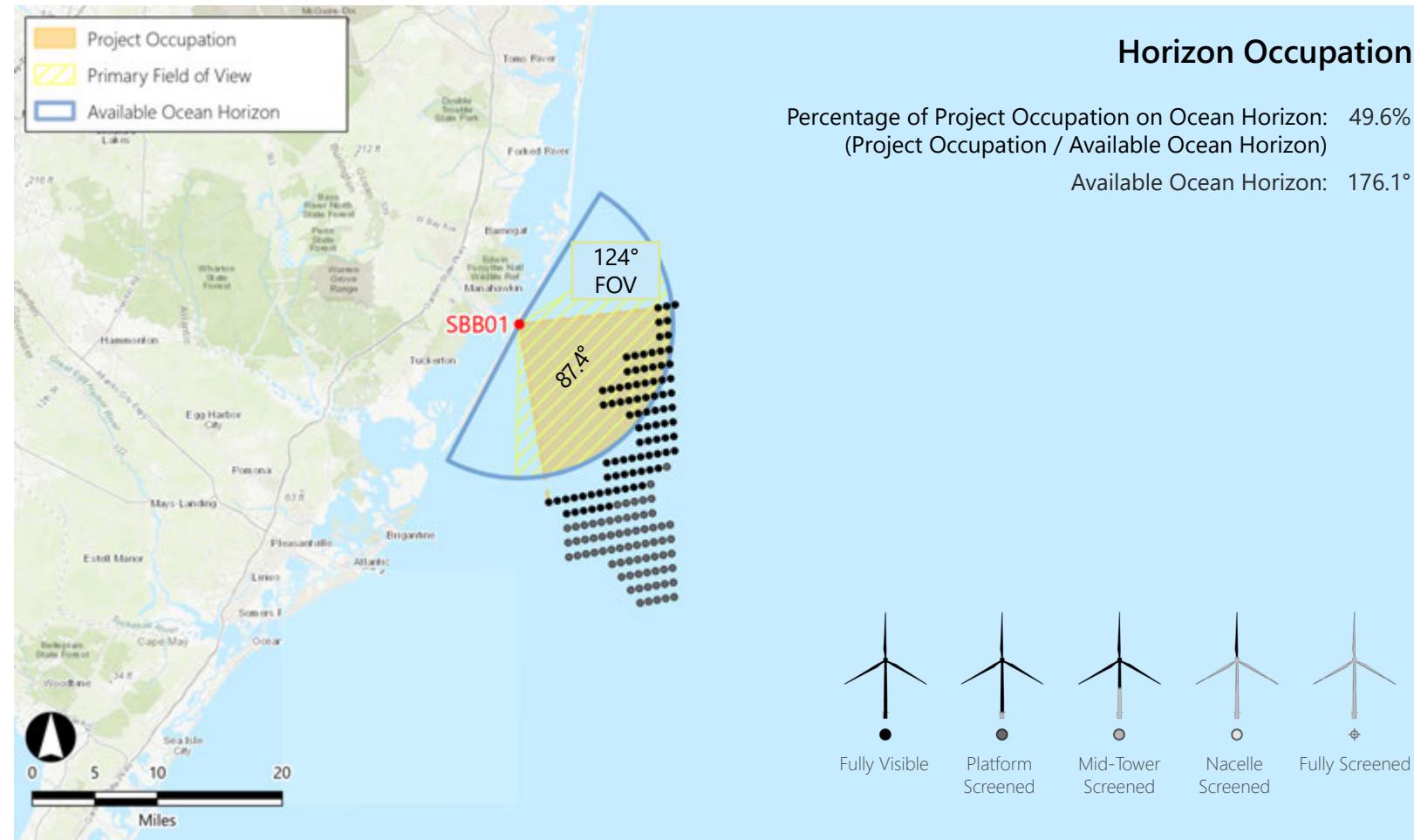
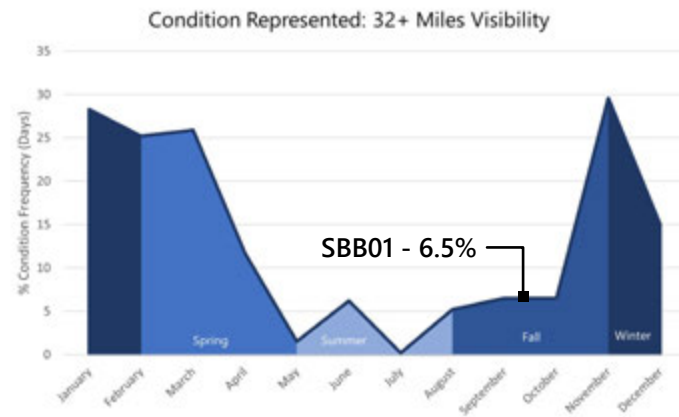
Ship Bottom Borough, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 8.5 miles  
 Camera Height: 24.0 feet  
 User Groups: L. Residents, Tourists, S.Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

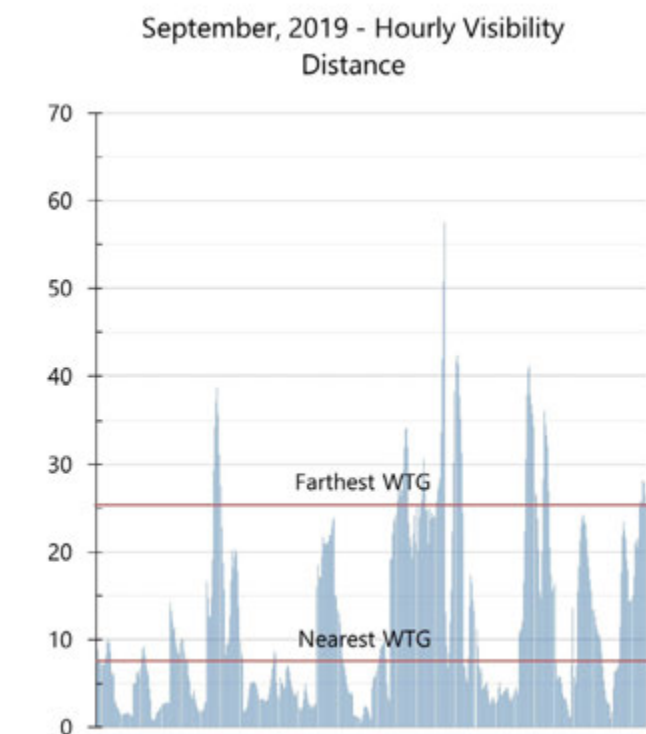
Color Contrast Rating:

Turbine: 1.49  
 Background

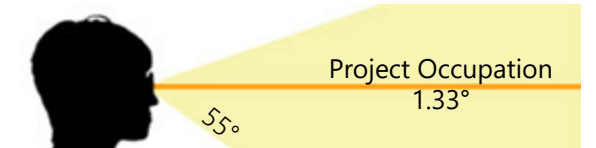
Lighting Condition: Side lit  
 Season: Fall  
 Sky Condition: Clear  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

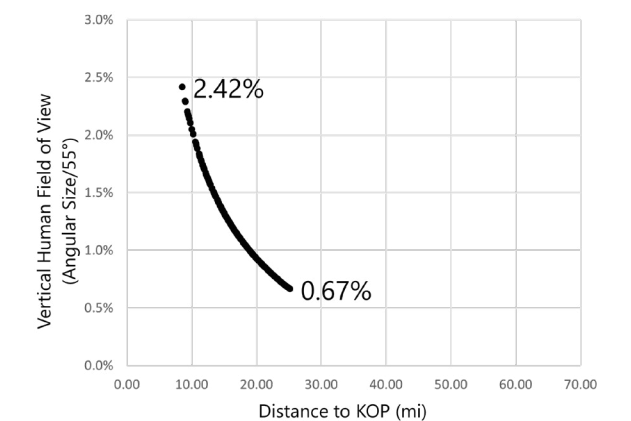
KOP LBT03 illustrates the project from 9.35 miles in the side lit condition. This provides an indication of how the turbines may appear from this KOP during evening conditions.



## Vertical Occupation



Percentage of Human FOV: 2.42% (1.33° / 55°)  
 (Considering the nearest visible turbine)





# SBB01 Ship Bottom Borough Municipal Beach

Ship Bottom Borough, Ocean County, New Jersey

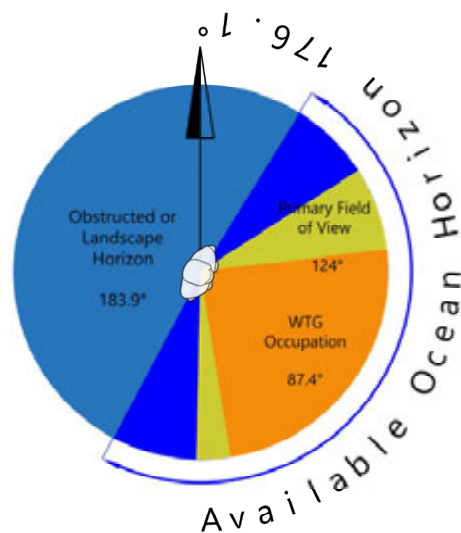
## KOP Information

Primary Field of View/Simulation Direction: Southeast/SE  
 Distance to Closest WTG: 8.5 miles  
 Camera Height: 24 ft  
 User Groups: L. Residents, Tourists, S.Residents  
 Horizon Occupation (% HFOV): Large (87.4°, 70.5%)  
 Vertical Occupation: Large (1.33°, 2.42%)  
 Character Area Type: Seascape  
 Character Area: Residential Beachfront

## Existing View



Field of View

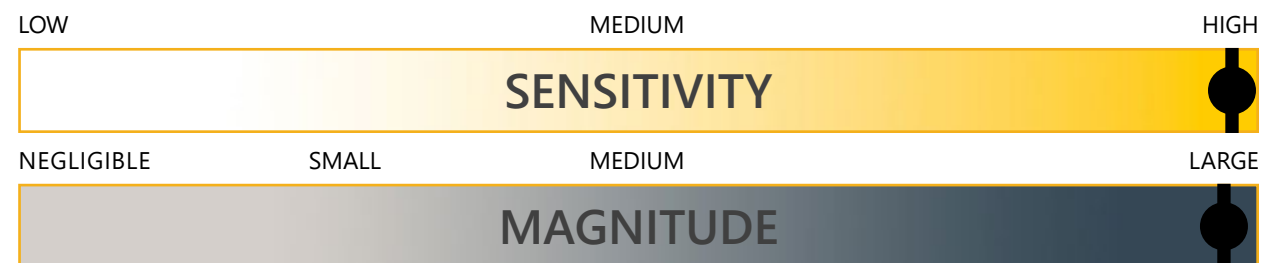


## Existing Landscape/ Seascape Character Description:

This view is from Ship Bottom Borough Municipal Beach in Borough of Ship Bottom, New Jersey. The beach is representative of the Residential Beachfront seascape character area and is a popular swimming and sunbathing destination on Long Beach Island. In-season access requires a beach badge, and lifeguard and beach patrol services are provided. A continuous line of seasonal and year-round residences lines the beach on its landward side. This KOP represents one of many beach access paths that extend from streets dead ending at the shoreline. Residential homes and vacation rentals are tightly situated on the west side of the dunes. Further inland, a mix of residential and small commercial business flank both sides of Long Beach Boulevard. Large, engineered dunes separate the residences from the beach. The dunes were constructed some time ago because they show signs of established grass growth and wear from the surf and wind. The beach is wide and imperceptibly slopes down toward the surf line. Homes are partially obscured by the dunes, but some are very tall and modern, which contrasts with the natural environment. This area presents a dynamic coastal environment.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Representative of views experienced by full time and seasonal residents/business owners, tourists, and recreationalists. Views of the ocean are important to these visitors.
Value	High	Despite the lack of accommodation for the visiting public, this location is highly valued as a vacation destination and for those that own nearby homes.
Sensitivity Rating	High	Highly valued and susceptible landscape, resulting in high sensitivity.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	The WTGs occupy a maximum of 1.33 degrees which accounts for 2.42 percent of the vertical human field of view. The visual prominence rating is 6.
Geographic Extent	Large	The horizon occupation of the WTGs in within the primary viewing direction and would occupy 87.4 degrees or 70.5% of the 124 degree human field of view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	The size, scale, geographic extent, duration, and reversibility result in a large magnitude rating.

## Project Contrast:

During clear viewing conditions, the Project presents strong line and form contrasts with the ocean. At times, particularly during the morning, color contrast will also be strong. Motion and lighting will draw viewer attention strongly during high visibility conditions. The WTGs will not contrast significantly with the existing homes in the view because they are on separate viewing planes, but motion could attract attention away from the structures.

Overall Impact  
**Major**



Existing Conditions



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SBB01 - Ship Bottom Borough Municipal Beach  
Attachment E: Photosimulations: Page 85 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SBB01 - Ship Bottom Borough Municipal Beach  
Attachment E: Photosimulations; Page 86 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SBB01 - Ship Bottom Borough Municipal Beach  
Attachment E: Photosimulations; Page 87 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SBB01 - Ship Bottom Borough Municipal Beach  
Attachment E: Photosimulations; Page 88 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SBB01 - Ship Bottom Borough Municipal Beach  
Attachment E: Photosimulations: Page 89 of 289

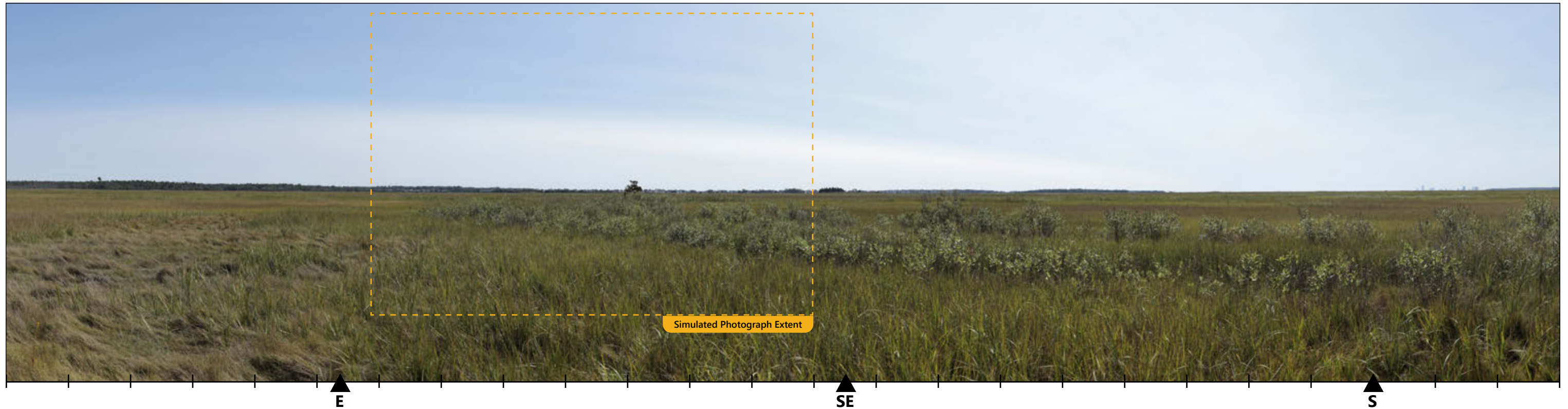
Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



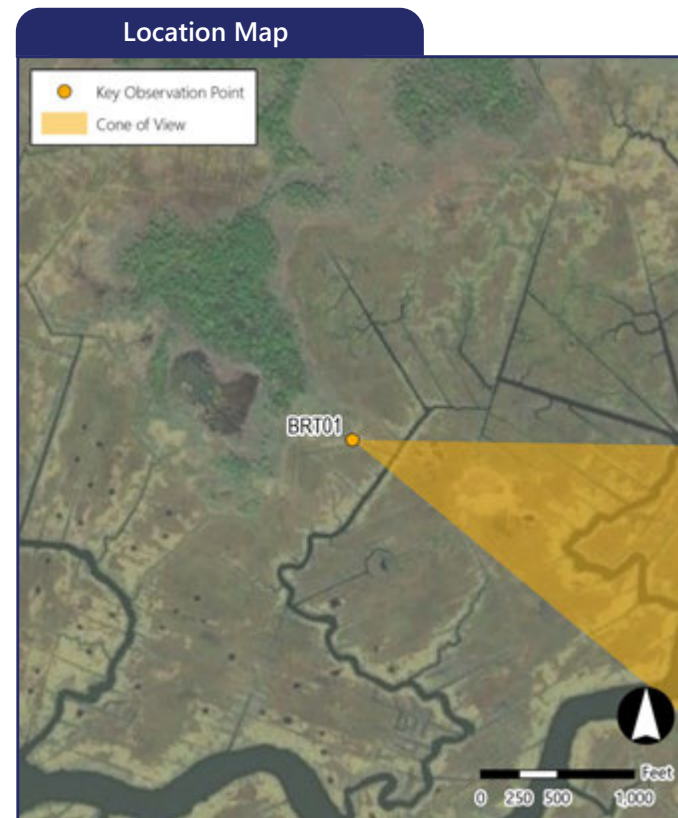
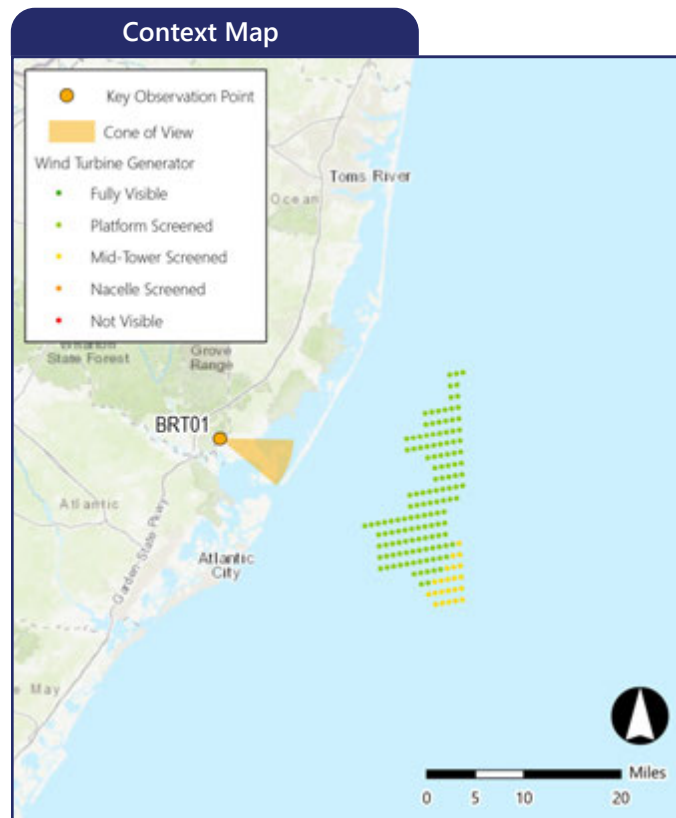


# BRT01 Bass River State Forest

Bass River Township, Burlington County, New Jersey



The image above is a +/- 124° panorama photograph from Bass River State Forest, panning clockwise from northeast (left) to south (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



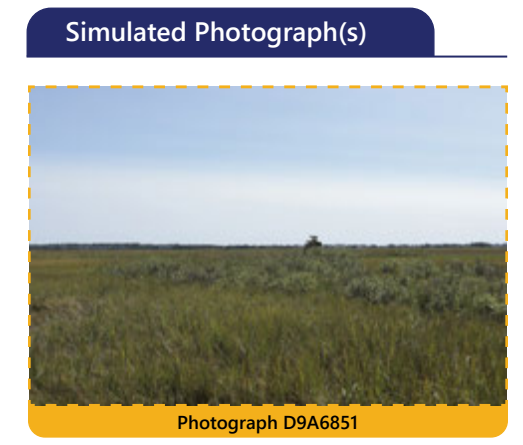
Simulation Information	
Coordinates:	39.57672°N, 74.40830°W
Character Area:	Salt Marsh (LCA)
User Group:	L. Residents, Tourists, S. Residents
Direction of View:	East-Southeast
Distance to Nearest Visible Turbine:	17.4 miles
Sensitive Resource:	Edwin B. Forsythe NWR, Bass River State Forest, Bass River State Forest Historic District

Environmental Information	
Date Taken:	09/22/2020
Time:	11:37 AM
Temperature:	68°F
Humidity:	32%
Visibility:	10 miles
Wind Direction:	North-Northwest
Wind Speed:	13 mph
Conditions Observed:	Fair

Photograph Information	
Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	6.9 feet AMSL



**Notes**  
Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.



# BRT01 Bass River State Forest

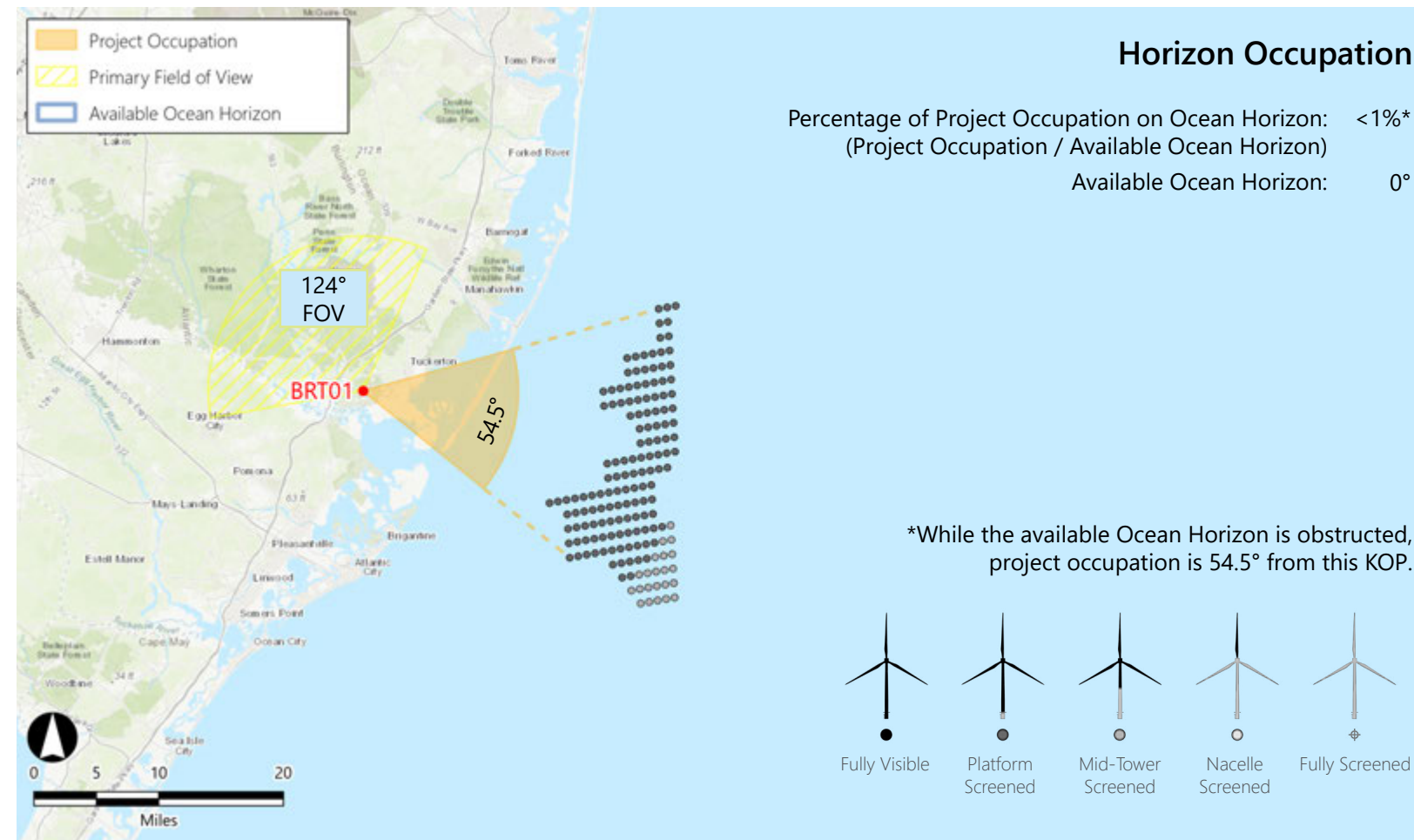
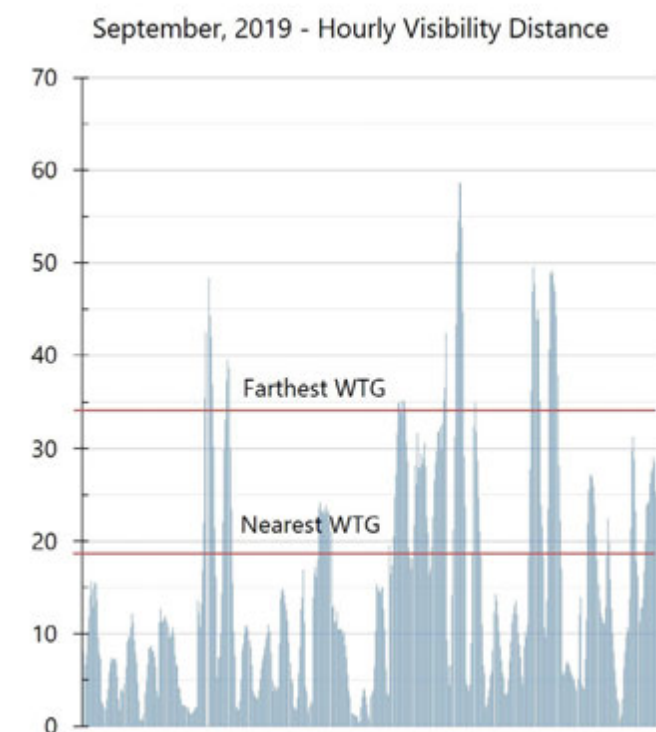
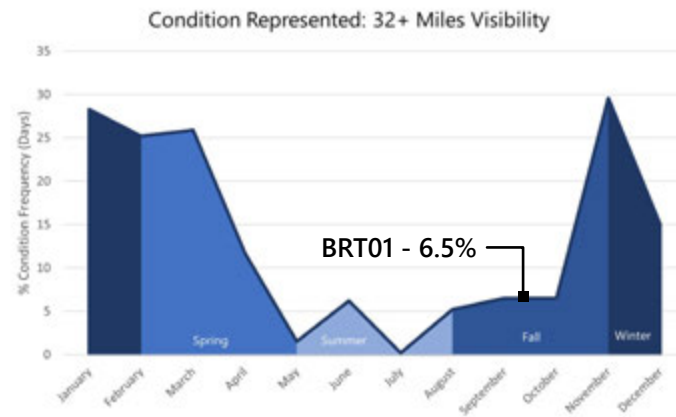
Bass River Township, Burlington County, New Jersey

## KOP Information

Primary Field of View: Northwest  
 Distance to Closest WTG: 17.4 miles  
 Camera Height: 6.9 feet  
 User Groups: L. Residents, Tourists, S.Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

**Color Contrast Rating:**

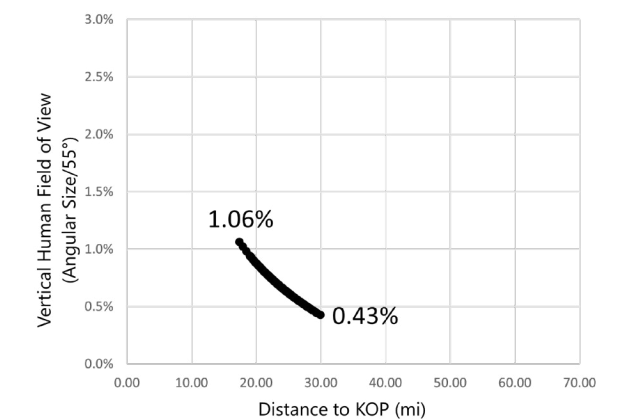
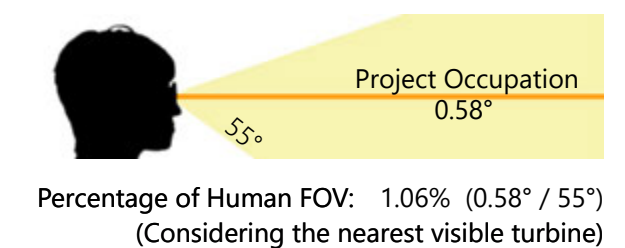
Turbine: 1.66  
 Background

Lighting Condition: Side lit  
 Season: Fall  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

KOP AC02 Illustrates the project from 17.67 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during noon conditions.

## Vertical Occupation





# BRT01 Bass River State Forest

Bass River Township, Burlington County, New Jersey

## KOP Information

Primary Field of View/Simulation Direction: Northwest/ESE

Distance to Closest WTG: 17.4 miles

Camera Height: 6.9 ft

User Groups: L. Residents, Tourists, S. Residents

Horizon Occupation (% HFOV): Medium (54.5° 44.0%)

Vertical Occupation: Medium (0.58°, 1.06%)

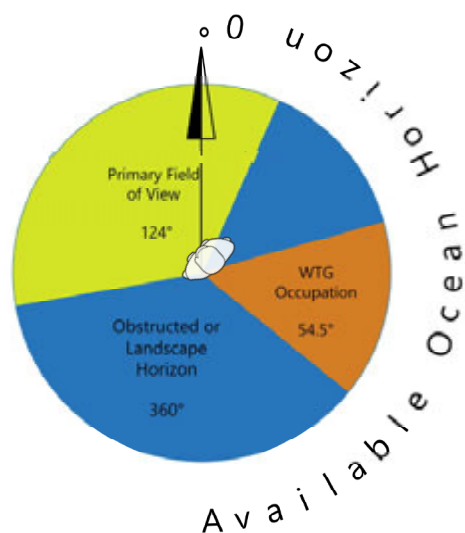
Character Area Type: Landscape

Character Area: Salt Marsh

## Existing View



## Field of View

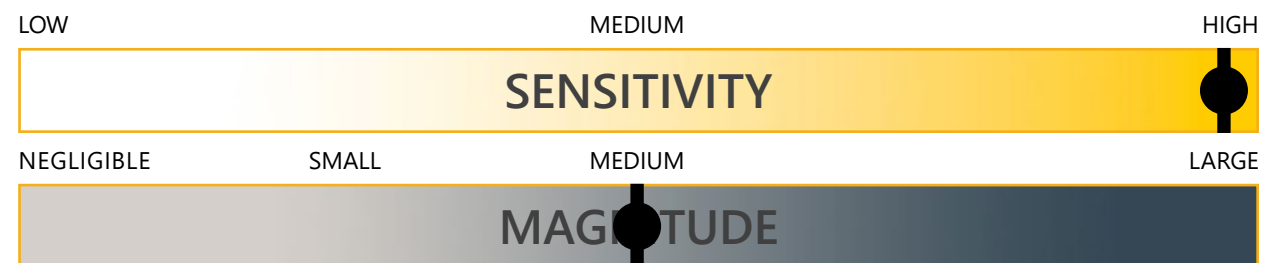


## Existing Landscape/ Seascap Character Description:

The Bass River State Forest in Bass River Township, Burlington County, New Jersey is highly representative of a healthy, well-established salt marsh which is void of development or apparent intervention. Despite being advertised in local and DEP publications, the amenities are scant and the trails are not well maintained. At the time of the field visit, the woodland trails were overgrown with blow down blocking the barely visible trail. Signage was non-existent and the parking areas were in a state of disrepair. Aside from that, the forest and salt marsh landscape appears pristine and the pockets of open water, forest canopy, and then open, expansive salt marsh make for a dynamic and interesting landscape. Once out of the forest canopy, the view opens up to a dramatic sight of the dense residential development on the barrier island. While this detracts minimally from the LCA, the landscape is large and can absorb the presence of a conflicting land use.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	This area hosts recreationalists that place a high importance on the natural scenery as a part of their experience.
Value	High	The area receives moderate visitation and the Bass River State Forest is advertised in social media, local publications and on the NJDEP guide material.
Sensitivity Rating	High	Highly valued and susceptible landscape, resulting in high sensitivity.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Medium	While the theoretical vertical occupation is 0.58 degrees and 1.06%, the majority of WTGs are heavily screened by structures and vegetation. As such, only about 6-8 WTG nacelles would be exposed. The visual prominence rating is 3.
Geographic Extent	Medium	Again, the theoretical horizon occupation is 54.5 degrees, which is 44% of the human field of view, suggesting a medium geographic extent. However, a number of WTGs are screened from view by vegetation, thus reducing the perceived horizon occupation to small.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Small	Given the visual prominence rating and the small number of hubs, rotors and widest portions of the blades visible, the overall magnitude is small.

## Project Contrast:

During clear viewing conditions, blade rotation will result in the strongest contrasts with structures and vegetation. However, moderate line and form contrasts are likely with these same features as well as landform. Because the Project is not in the primary field of view, it is unlikely that a significant number of people would experience this particular view, but from the trail, motion of the rotors may attract viewer attention.

Overall Impact  
**Moderate**



Existing Conditions



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BRT01 Bass River State Forest  
Attachment E: Photosimulations: Page 94 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

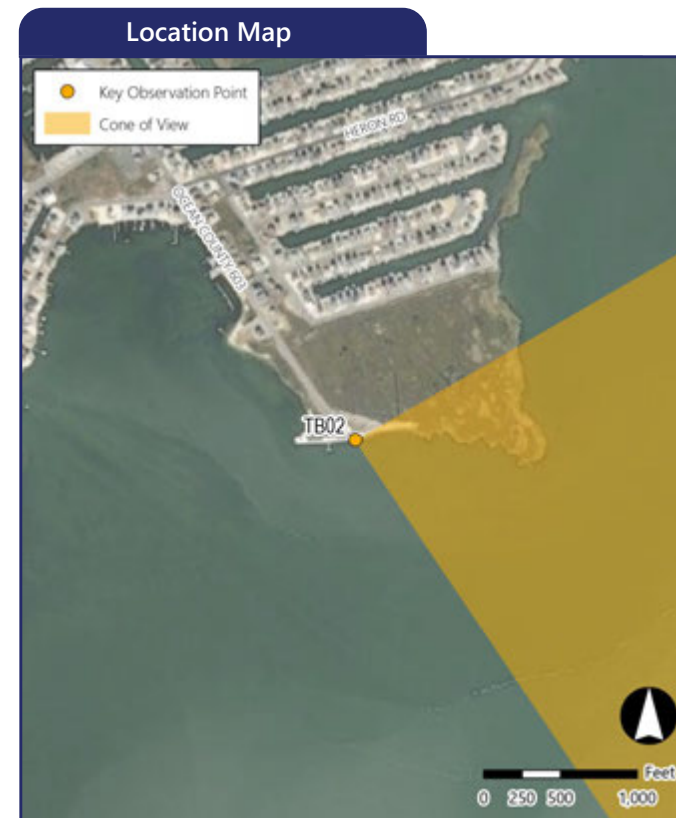
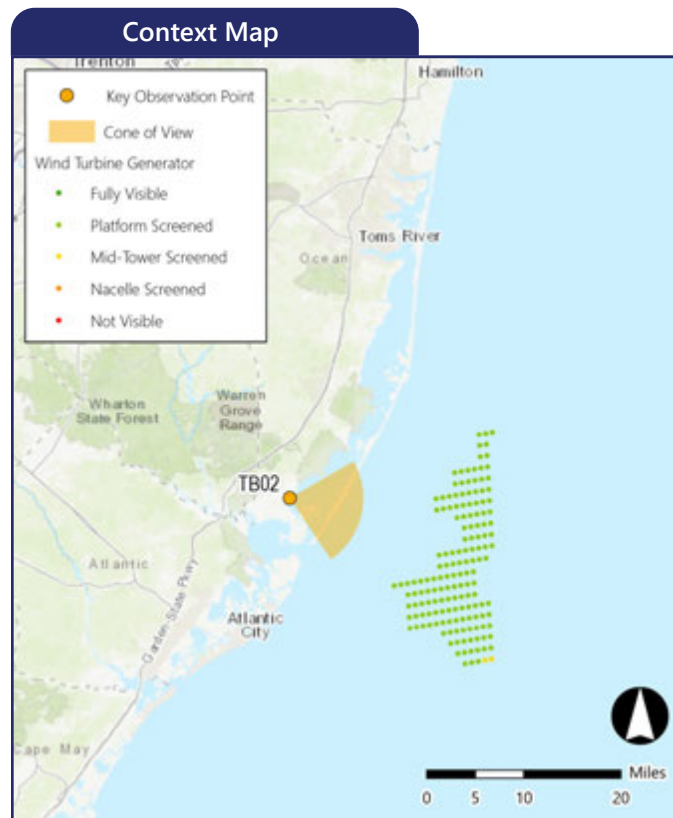


# TB02 South Green Street Park

Tuckerton Borough, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from the South Green Street Park, panning clockwise from northeast-east (left) to south (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



### Simulation Information

Coordinates: 39.57661°N, 74.33016°W  
 Character Area: Recreation, Seascape (LCA)  
 User Group: L. Residents, Tourists, Fishing Comm., S. Residents  
 Direction of View: East-southeast  
 Distance to Nearest Visible Turbine: 14.0 miles  
 Sensitive Resource: Tuckerton Green Street Beach, New Jersey Coastal Heritage Trail Area

### Environmental Information

Date Taken: 08/18/2020  
 Time: 5:34 PM  
 Temperature: 83°F  
 Humidity: 49%  
 Visibility: 10 miles  
 Wind Direction: West-northwest  
 Wind Speed: 7 mph  
 Conditions Observed: Partly Cloudy

### Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 5.5 feet AMSL

### Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

### Simulated Photograph(s)





# TB02 South Green Street Park

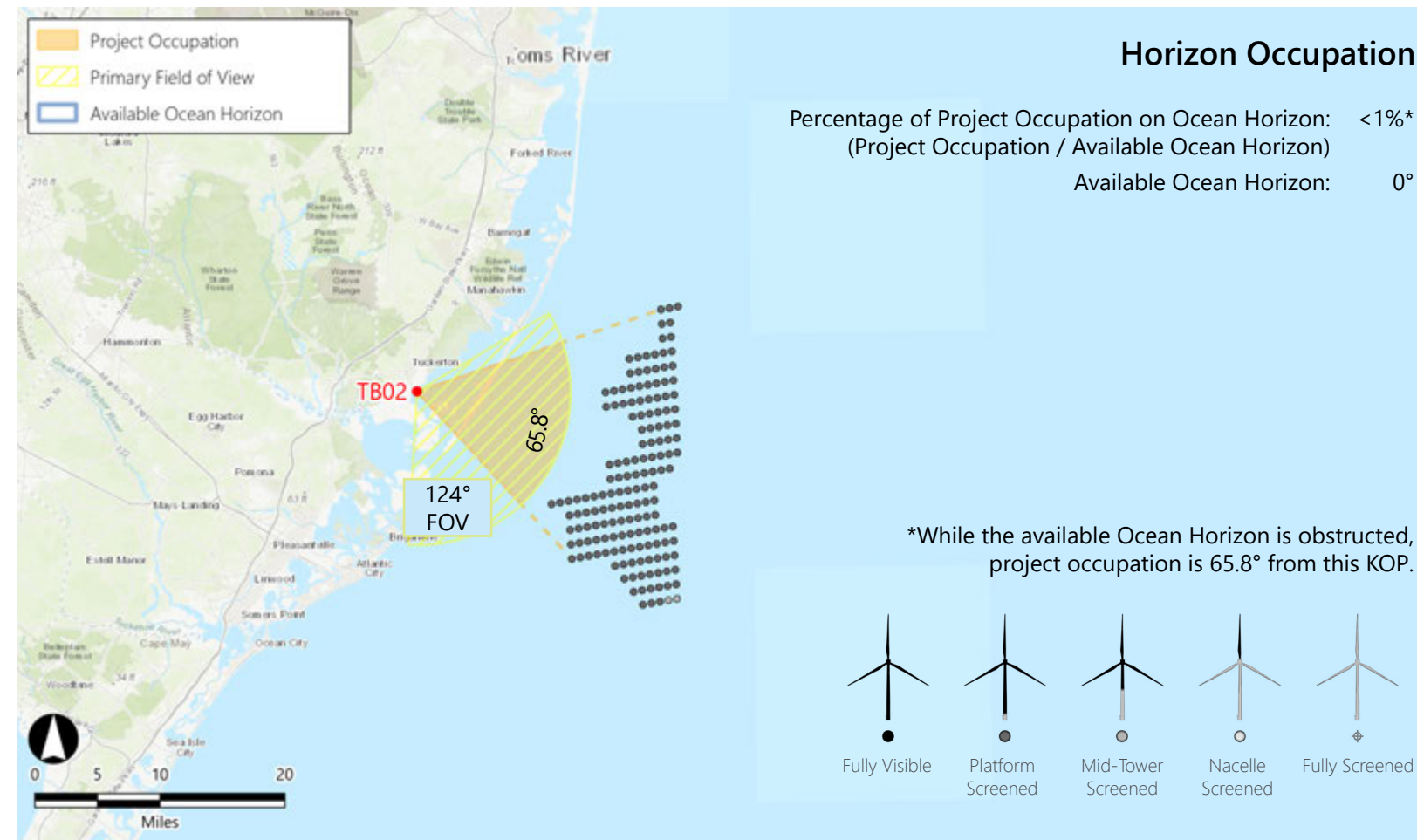
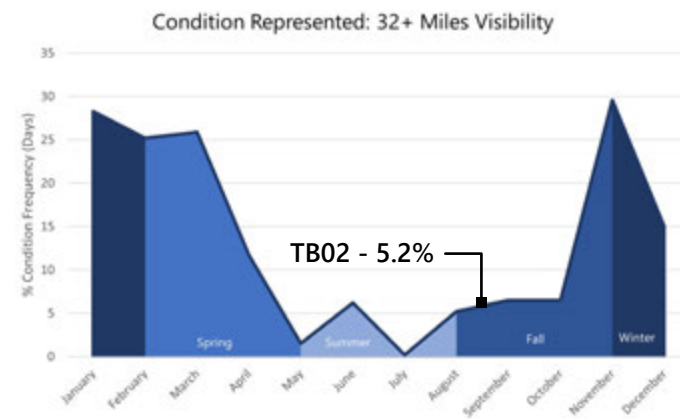
Tuckerton Borough, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 14.0 miles  
 Camera Height: 5.5 feet  
 User Groups: L. Residents, Tourists, Fishing Comm., S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

### Color Contrast Rating:

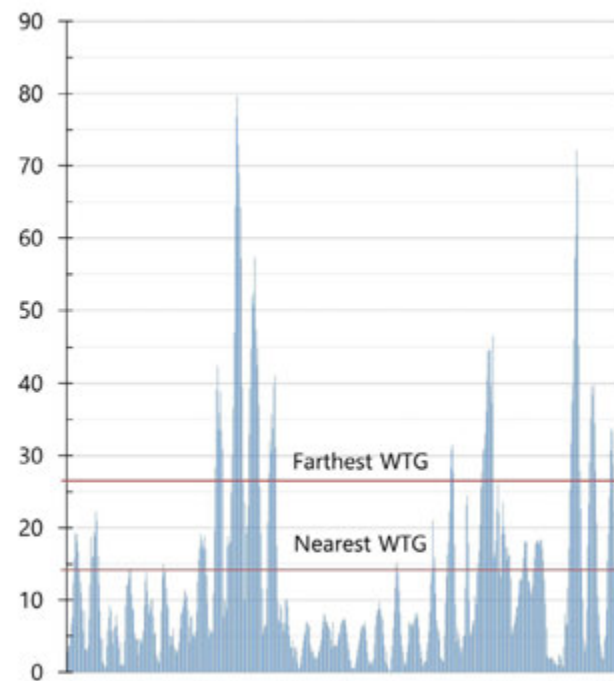


Lighting Condition: Front lit  
 Season: Summer  
 Sky Condition: Partly Cloudy  
 Atmospheric Condition: > 10 Miles

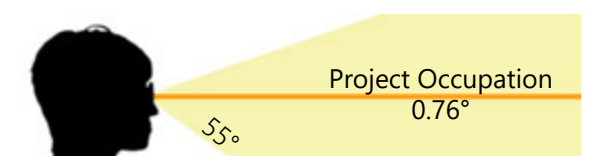
## SIMILAR VIEWING PARAMETERS:

KOP LEHT02 illustrates the project from 11.1 miles in the back lit condition. This provides an indication of how the turbines may appear from this KOP during morning conditions.

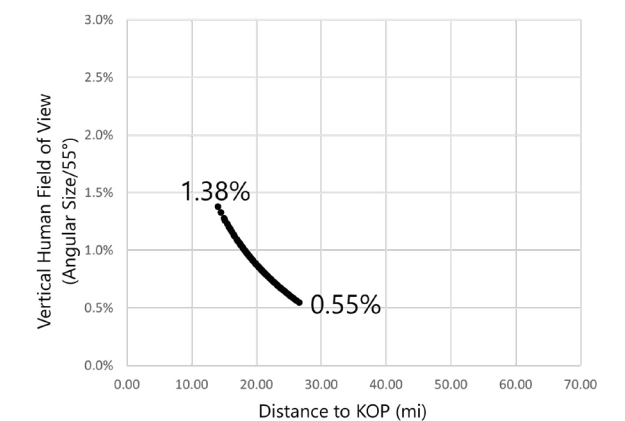
## August, 2019 - Hourly Visibility Distance



## Vertical Occupation



Percentage of Human FOV: 1.38% (0.76° / 55°)  
 (Considering the nearest visible turbine)





# TB02 South Green Street Park

Tuckerton Borough, Ocean County, New Jersey

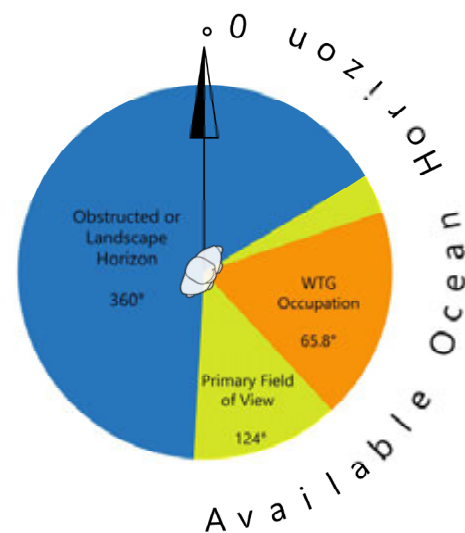
## KOP Information

Primary Field of View/Simulation Direction:	ESE/ESE
Distance to Closest WTG:	14 miles
Camera Height:	5.5 ft
User Groups:	L/S Residents, Tourists, Fishing Comm.
Horizon Occupation (% HFOV):	Large (65.8°, 53%)
Vertical Occupation:	Medium (0.76°, 1.38%)
Character Area Type:	Landscape
Character Area:	Recreation

## Existing View



## Field of View

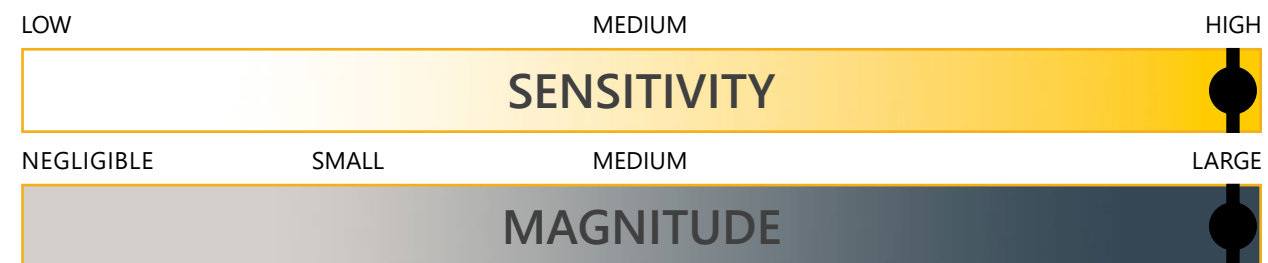


## Existing Landscape/ Seascape Character Description:

This KOP is in the Recreation LCA and adjacent to the Dredged Lagoon LCA. The park is accessed via a long road (South Green Street) that extend from a small residential and commercial area, across the salt marsh and then opens to a large paved and gravel (shell) area with parking, a pavilion, bulkhead, playground, and seating areas. Inland views include a large swath of salt marsh backed by dense residential development. To the east, the view includes Little Egg Harbor Bay separated from the ocean by the barrier island of Long Beach Island. The shoreline leading up to the park is covered in detritus from former piers and docks have fallen into disrepair due to abandonment. The view across Little Egg Harbor Bay includes vast open water backed by intense barrier island development occasionally interrupted by forested areas. Water and communication towers along with derelict piles in the bay are the most notable vertical elements in the view. Given the presence of the derelict structures and messy appearance, the views integrity is somewhat compromised. However, open bay and adjoining salt marsh exhibit high scenic quality and integrity.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	While there are not any specific historic or cultural aspects to this viewing location, views maybe an important part of the user experience.
Value	Medium	Despite low attendance, no designation at the local, state, or federal level, this location is highly valued by the very small number of local residents that use the boat ramp.
Sensitivity Rating	High	The sensitivity is high based on susceptibility and value factors.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Medium	The vertical scale is medium, with the nearest WTGs occupying approximately 0.76 degrees or 1.38% of the vertical field of view, resulting in a visual prominence factor of 5.
Geographic Extent	Large	The Project would occupy approximately 53 percent or 65.8 degrees of the 124 degree human field of view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	With a large geographic extent and medium (bordering on large) vertical scale, the overall magnitude rating is large.

## Project Contrast:

During clear viewing conditions, the WTG present strong line, form, color, and horizontal scale contrast with the inland bay. Strong color contrast reinforced by rotor motion with the structures on the barrier island. Motion and lighting will also result in strong contrast with landform and vegetation. Generally, the line, form, and color will have moderate contrast with the distant vegetation on the barrier island.

Overall Impact  
**Major**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: TB02 - South Green Street Park  
Attachment E: Photosimulations; Page 98 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: TB02 - South Green Street Park  
Attachment E: Photosimulations; Page 99 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: TB02 - South Green Street Park  
Attachment E: Photosimulations; Page 100 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: TB02 - South Green Street Park  
Attachment E: Photosimulations; Page 101 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

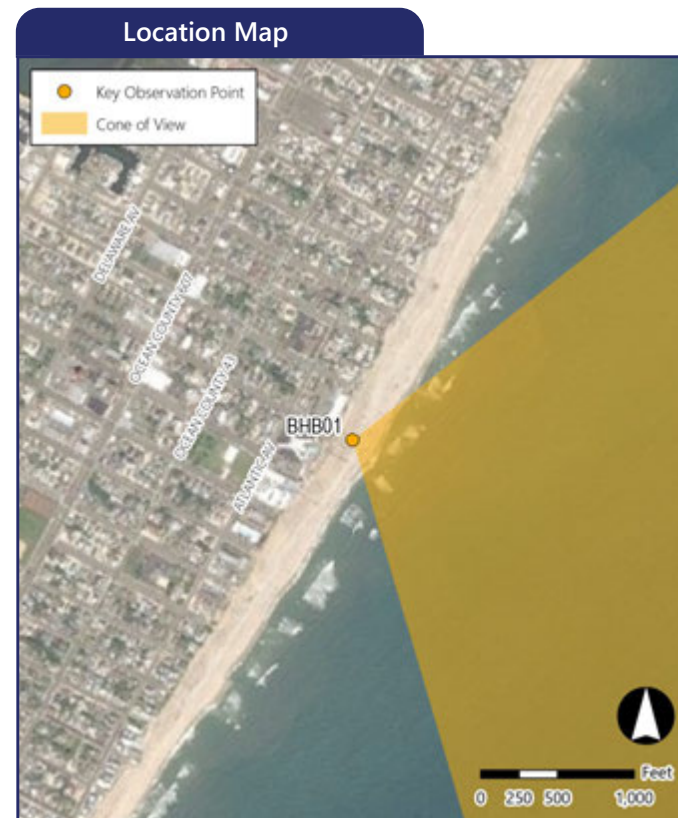
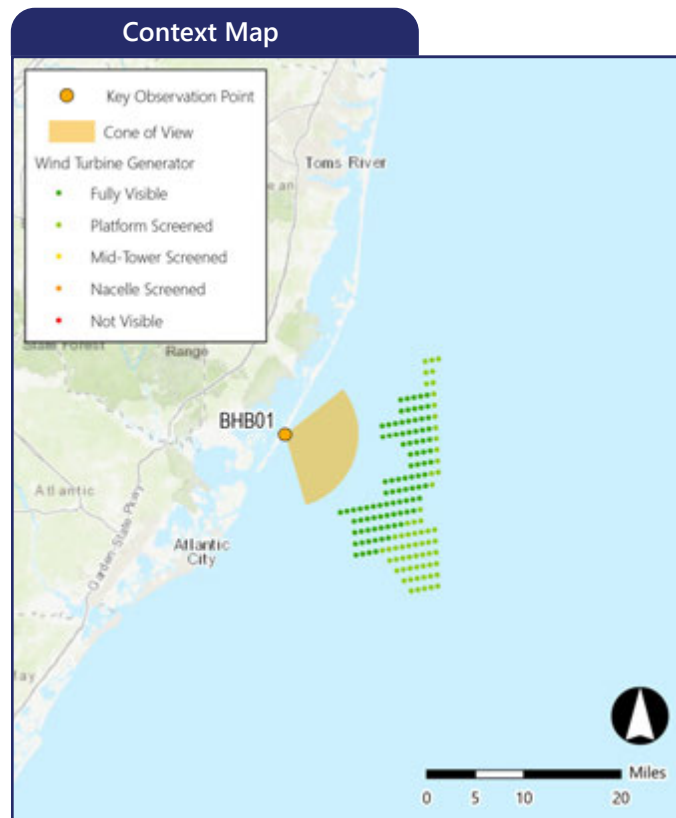


# BHB01 Beach Haven Historic District

Beach Haven Borough, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from the Beach Haven Historic District, panning clockwise from northeast (left) to southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates: 39.56188°N, 74.23545°W  
 Character Area: Residential Beachfront, Seascape (SCA)  
 User Group: L. Residents, Tourists, Fishing Comm., S. Residents  
 Direction of View: East-southeast  
 Distance to Nearest Visible Turbine: 9.9 miles  
 Sensitive Resource: Beach Haven Borough Public Beach, Beach Haven Historic District, New Jersey Coastal Heritage Trail Area

## Environmental Information

Date Taken: 08/19/2020  
 Time: 7:19 AM  
 Temperature: 73°F  
 Humidity: 87%  
 Visibility: 10 miles  
 Wind Direction: Calm  
 Wind Speed: 0 mph  
 Conditions Observed: Cloudy

## Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 17.7 feet AMSL

**Notes**  
 Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

Night time simulations are digitally adjusted from daytime photographs.

## Simulated Photograph(s)





# BHB01 Beach Haven Historic District

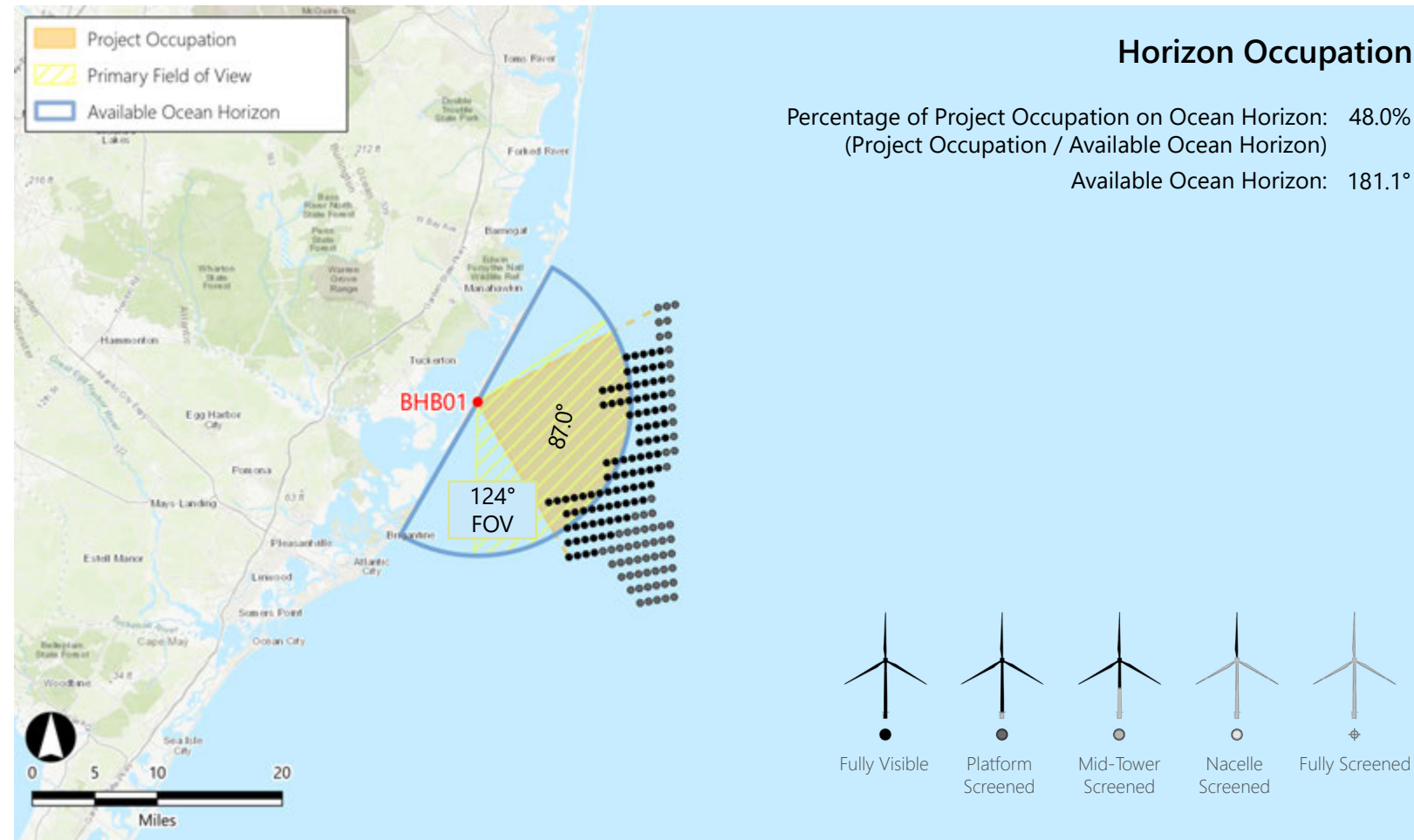
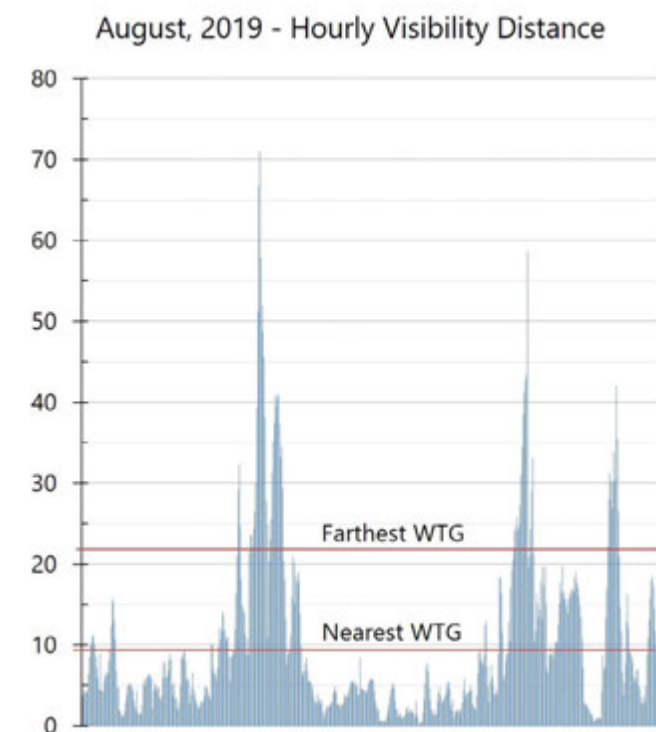
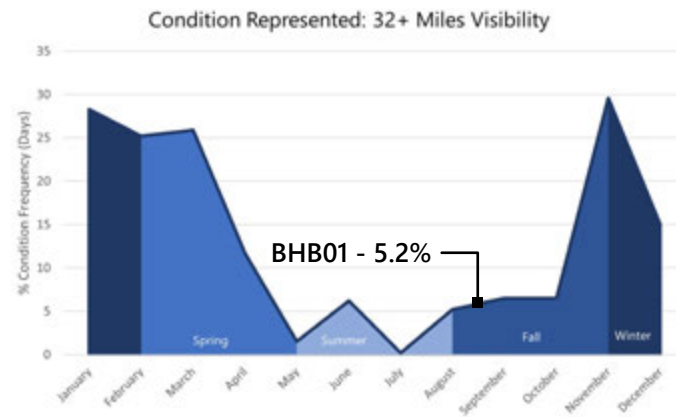
Beach Haven Borough, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 9.9 miles  
 Camera Height: 17.7 feet  
 User Groups: L. Residents, Tourists, Fishing Comm., S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

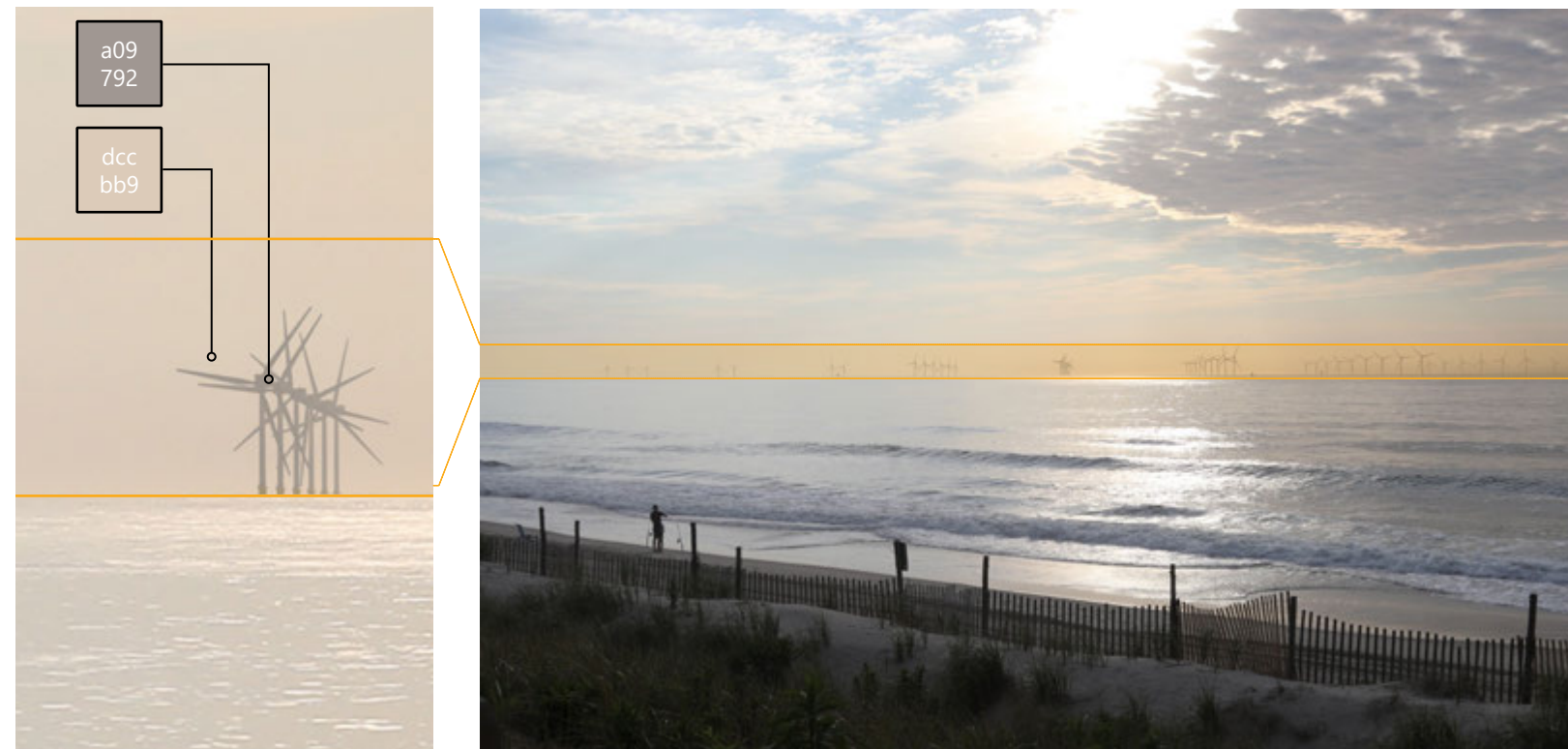
**Color Contrast Rating:**

Turbine: 1.81  
 Background: 1.81

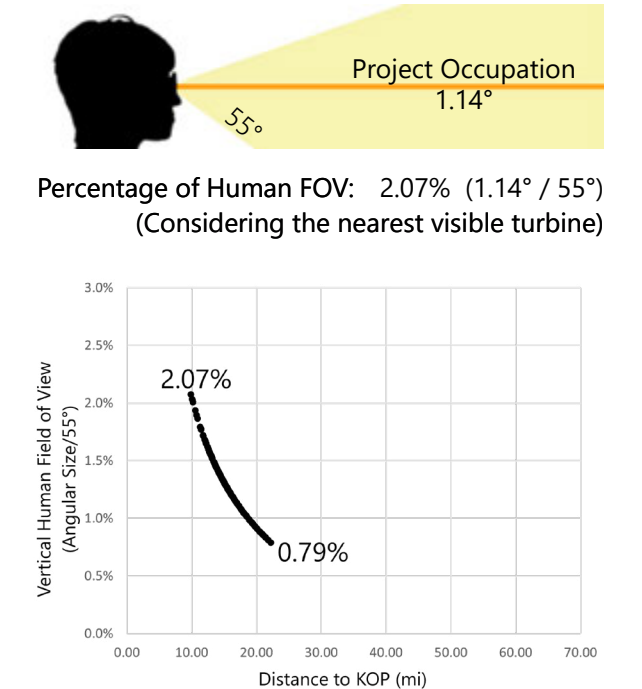
Lighting Condition: Back lit  
 Season: Summer  
 Sky Condition: Cloudy  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

KOP BHB02 illustrates the project from 9.84 miles in the side lit condition. This provides an indication of how the turbines may appear from this KOP during midday conditions.



## Vertical Occupation





# BHB01 Beach Haven Historic District

Beach Haven Borough, Ocean County, New Jersey

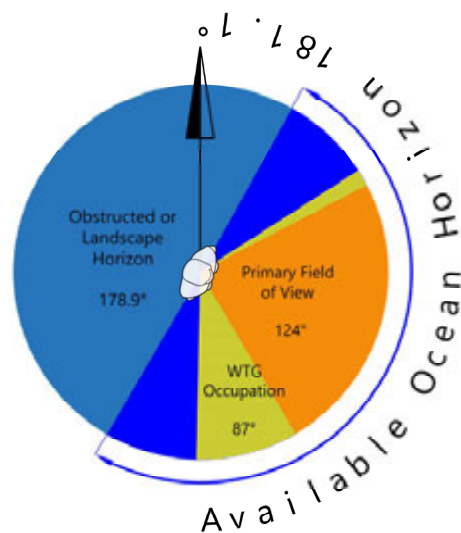
## KOP Information

Primary Field of View/Simulation Direction:	ESE/ESE
Distance to Closest WTG:	9.9 miles
Camera Height:	17.7 ft
User Groups:	Residents, Tourists, Fishing Comm.
Horizon Occupation (% HFOV):	Large (87.0°, 70.1%)
Vertical Occupation:	Large ( 1.14°, 2.07%)
Character Area Type:	Seascape
Character Area:	Residential Beachfront (SCA)

## Existing View



## Field of View

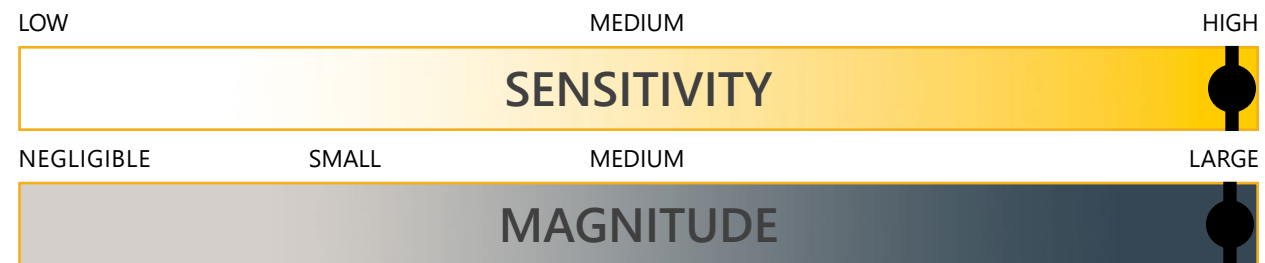


## Existing Landscape/ Seascape Character Description:

This view is from the edge of the Beach Haven Historic District in the Borough of Beach Haven and within the Residential Beachfront SCA. A portion of this area was added to the National Register of Historic Places on July 14, 1983, for its significance in architecture and history as a beachfront resort during the 19th century. The district includes 149 contributing buildings. The adjacent Beach Haven Borough Public Beach is a popular swimming and sunbathing destination on Long Beach Island. In-season access requires a beach badge, and lifeguard and beach patrol services are provided. The KOP is located on one of many beach access paths that occur at the end of roads leading to the shoreline. This area is mostly comprised of typical single family residential vacation or permanent homes, but there are also three hotels and a condominium complex sandwiched between the homes. The dunes are large as with most in this area, angular paths traverse the dunes to provide beach access. Centre Street also has a large comfort station at the start of the beach path. At high tide, the beach is relatively narrow, and the ocean appears to occasionally encroach on the dunes. However, the dune structure is relatively healthy as evidenced by the established grasses.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	View is representative of residential viewers from the beachfront homes. It is somewhat representative of views from a nearby historic district and the ocean view is important to user experience
Value	High	The residents of LBI requested specific views from three locations in Beach Haven, including Centre Street, suggesting that these represent locations with high value to the residents.
Sensitivity Rating	High	The high susceptibility and value results in high sensitivity.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	The vertical scale is large, with the nearest WTGs occupying approximately 1.14 degrees or 2.07% of the vertical field of view, resulting in a visual prominence factor of 6.
Geographic Extent	Large	The Project would occupy approximately 70 percent or 87 degrees of the 124 degree human field of view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	With a large geographic extent and large vertical scale, the overall magnitude rating is large.

## Project Contrast:

During clear viewing conditions, the line, form, color, occupation, motion, and lighting would strongly contrast with ocean views due to the novel form of the WTGs. Similar contrasts would occur with landform and structures and rotor motion could detract from vegetation. The presence of stacking WTGs (when WTGs rows are perfectly aligned with the viewer position) will result in discordant features on the horizon when fully visible under clear conditions.

Overall Impact  
**Major**



Existing Conditions



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



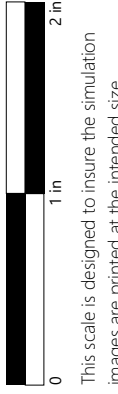
Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB01 - Beach Haven Historic District  
Attachment E: Photosimulations: Page 106 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB01 – Beach Haven Historic District  
Attachment E: Photosimulations; Page 108 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB01 - Beach Haven Historic District  
Attachment E: Photosimulations: Page 110 of 289

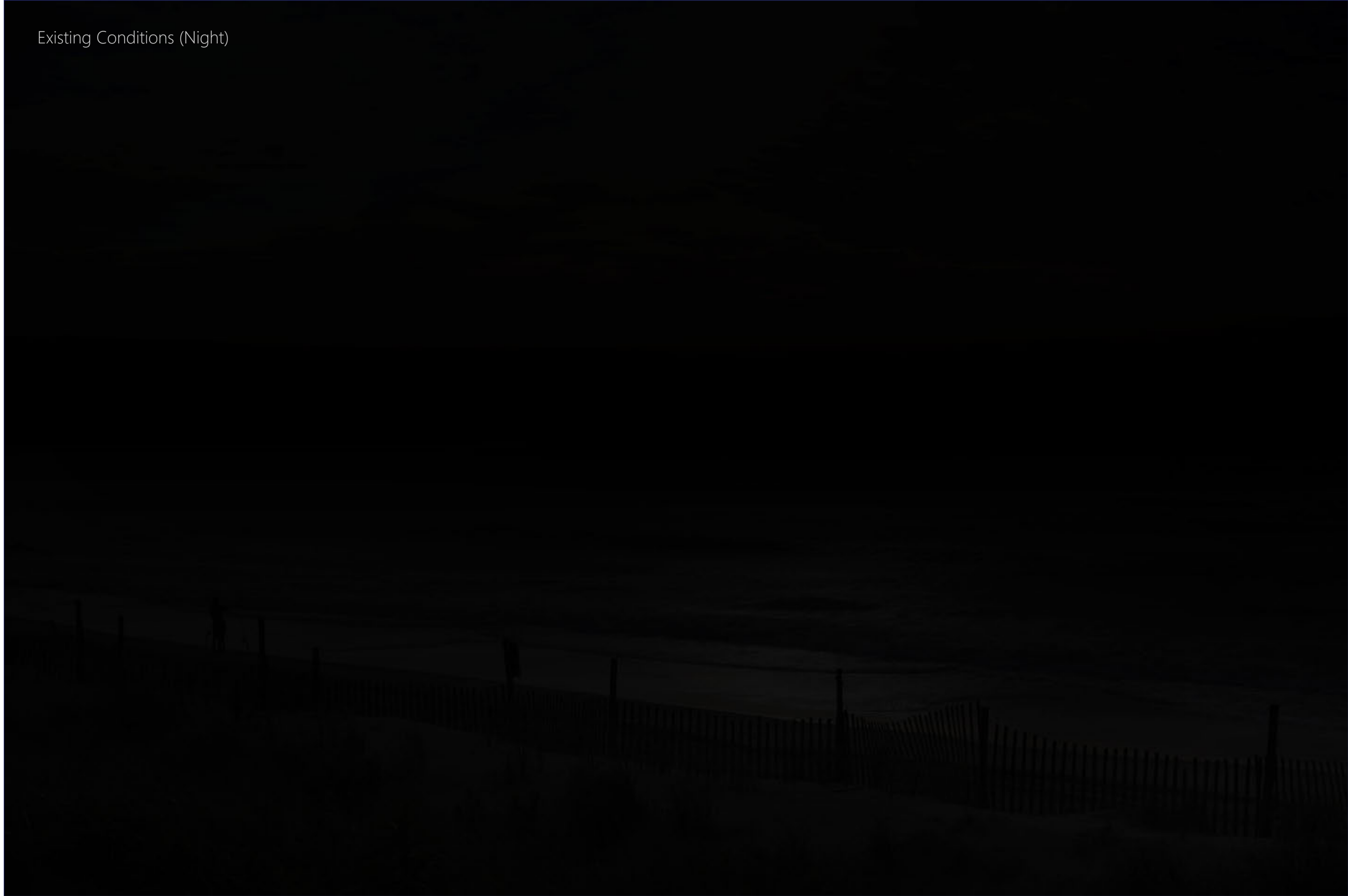
Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Night)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Night) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB01 - Beach Haven Historic District  
Attachment E: Photosimulations: Page 112 of 289

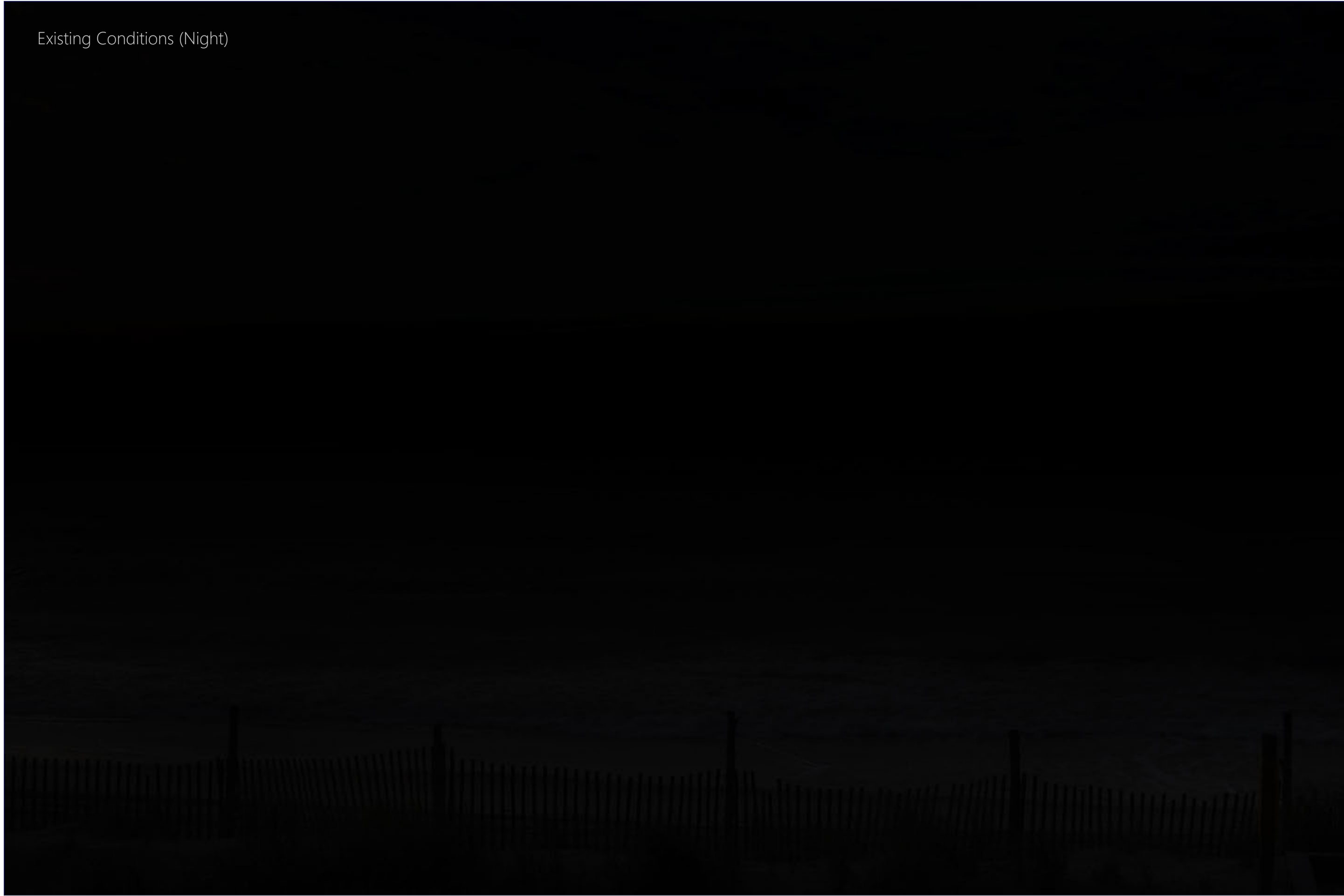
Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



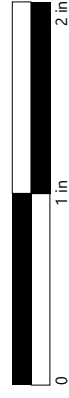
This scale is designed to insure the simulation images are printed at the intended size.



Existing Conditions (Night)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Night) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB01 - Beach Haven Historic District  
Attachment E: Photosimulations: Page 114 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Night)



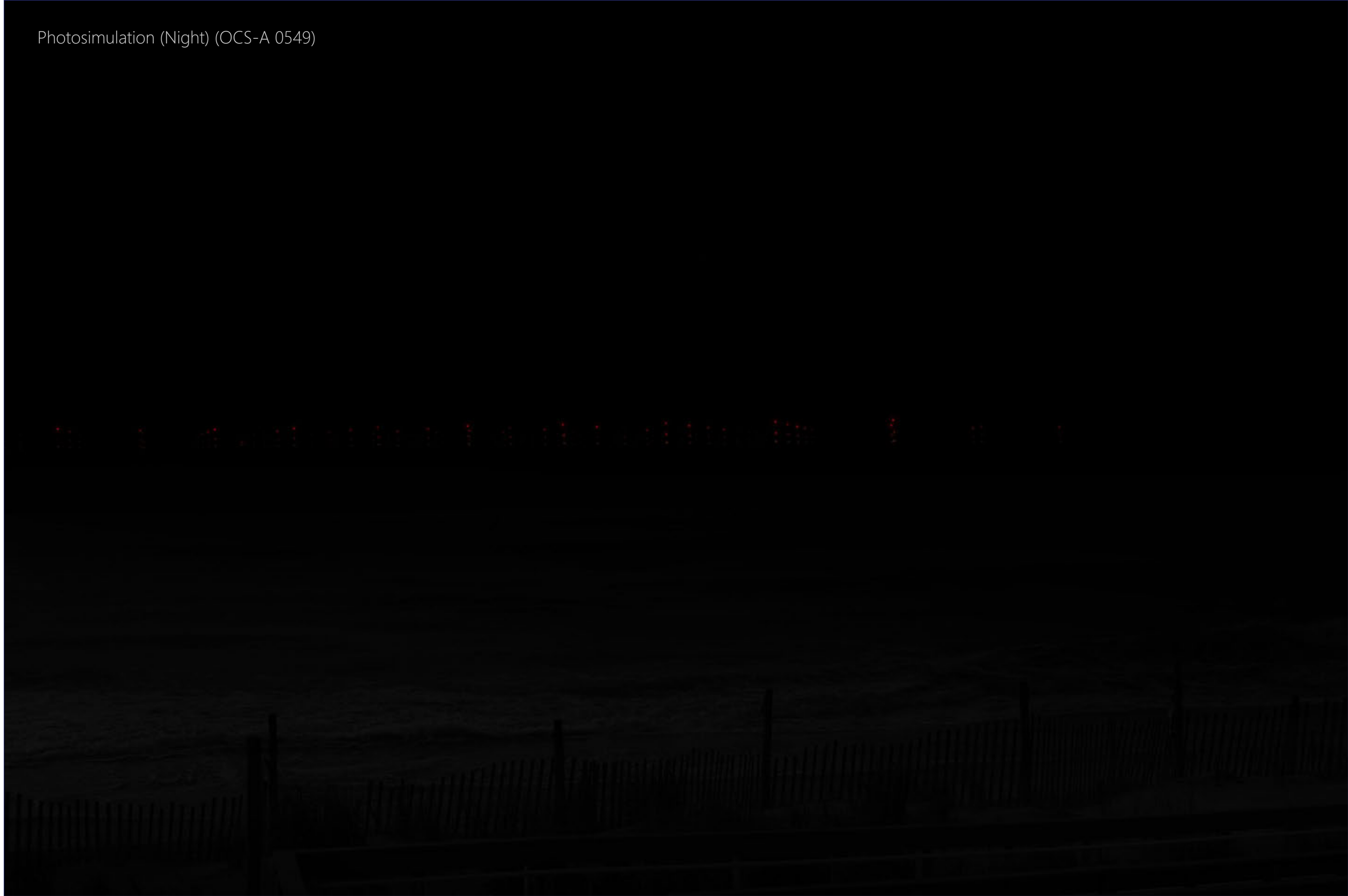
Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Night) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549  
Key Observation Point: BHB01 – Beach Haven Historic District  
Attachment E: Photosimulations: Page 116 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



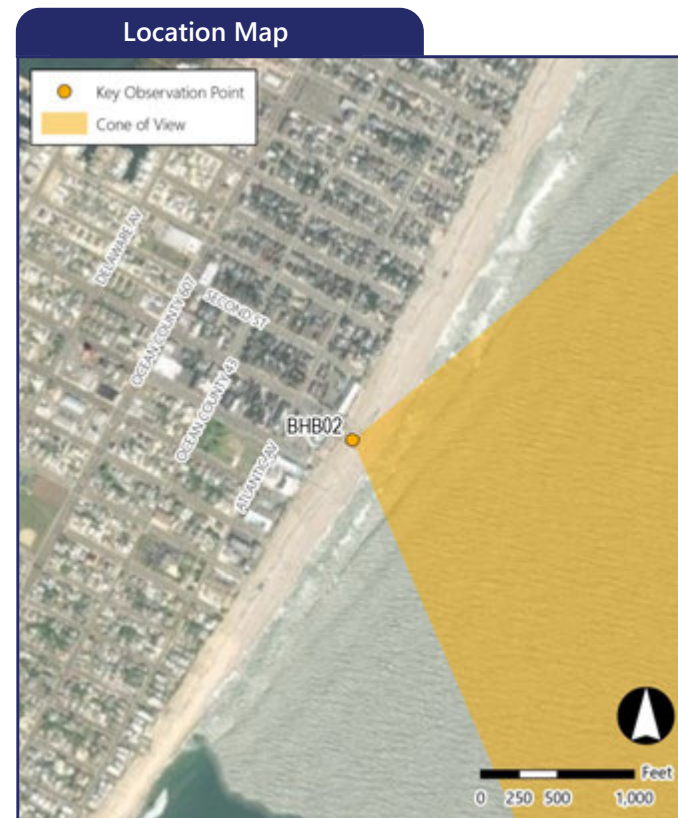
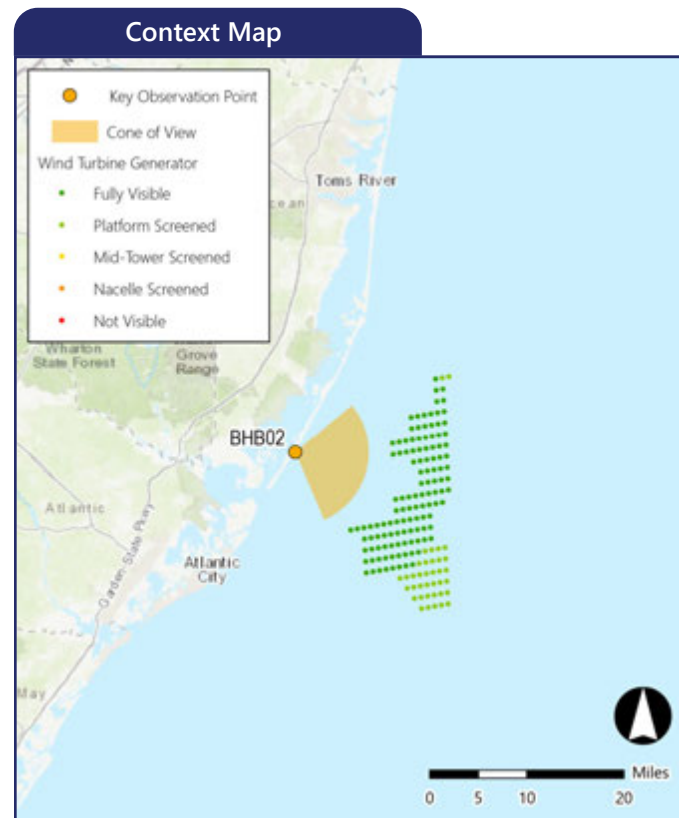


# BHB02 Centre Street, Beach Haven

Beach Haven Borough, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from the Long Beach Island, panning clockwise from northeast (left) to southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates:	39.56166°N, 74.23568°W
Character Area:	Residential Beachfront, Seascape (SCA)
User Group:	L. Residents, Tourists, S. Residents
Direction of View:	East
Distance to Nearest Visible Turbine:	9.8 miles
Sensitive Resource:	Beach Haven Borough Public Beach, Beach Haven Historic District, New Jersey Coastal Heritage Trail Area

## Environmental Information

Date Taken:	03/02/2022
Time:	12:03 PM
Temperature:	54°F
Humidity:	40%
Visibility:	10 miles
Wind Direction:	West-northwest
Wind Speed:	13 mph
Conditions Observed:	Fair

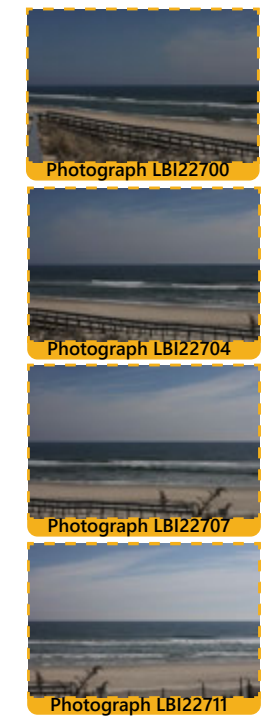
## Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	27.0 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)





# BHB02 Centre Street, Beach Haven

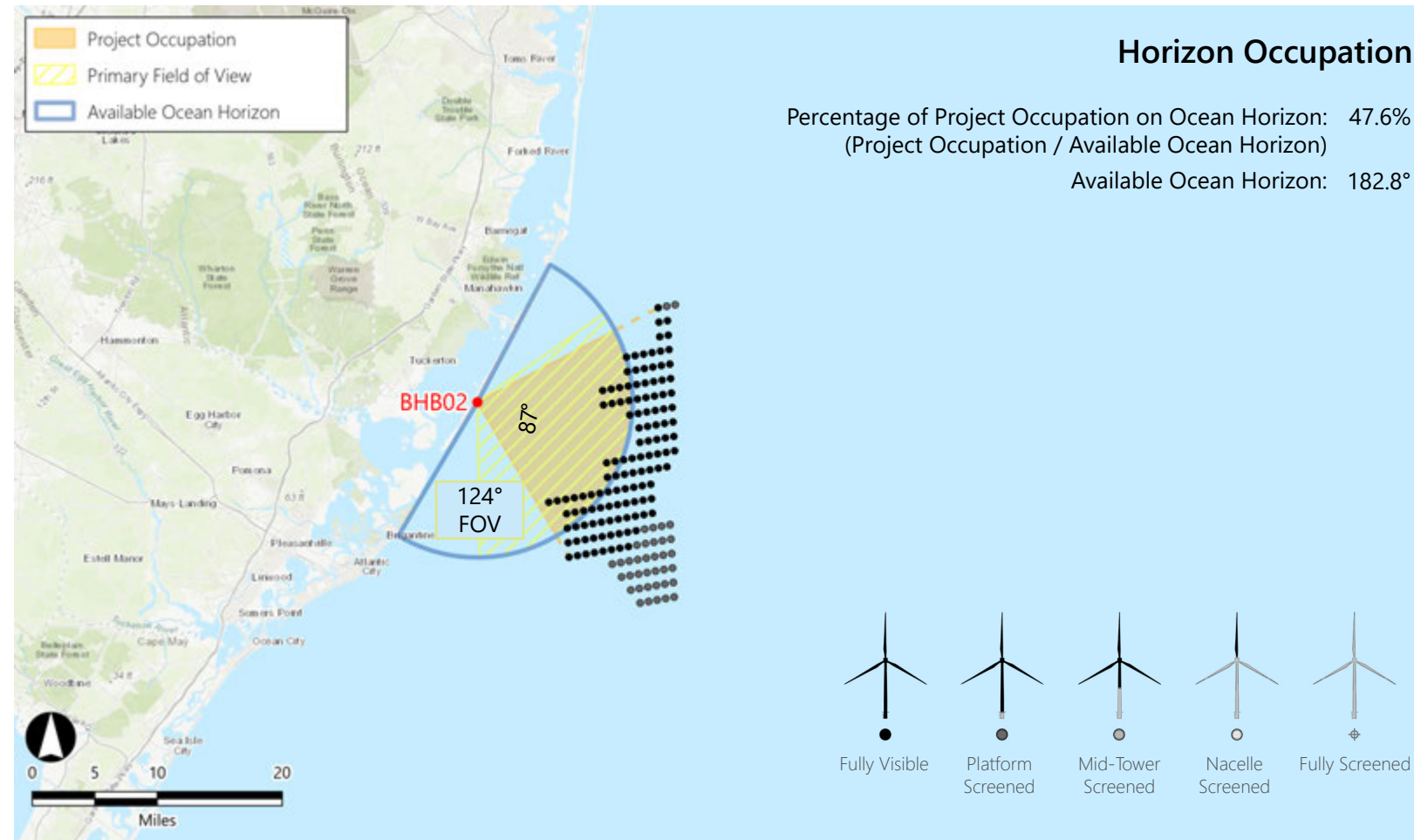
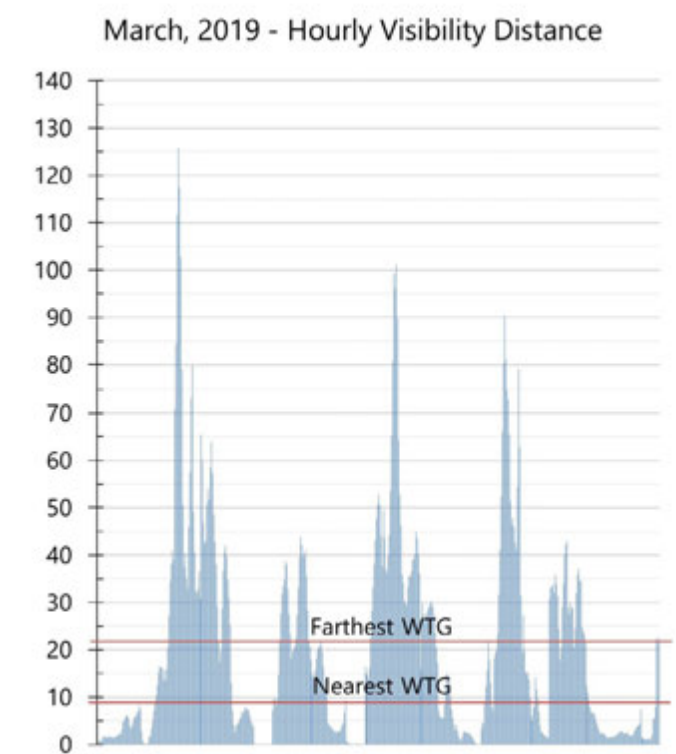
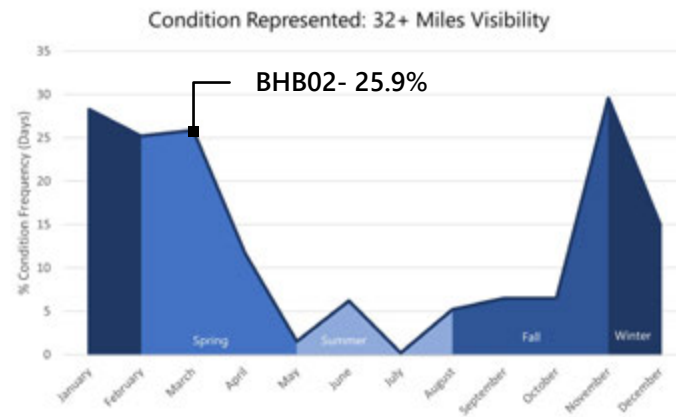
Beach Haven Borough, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 9.8 miles  
 Camera Height: 27.0 feet  
 User Groups: L. Residents, Tourists, S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

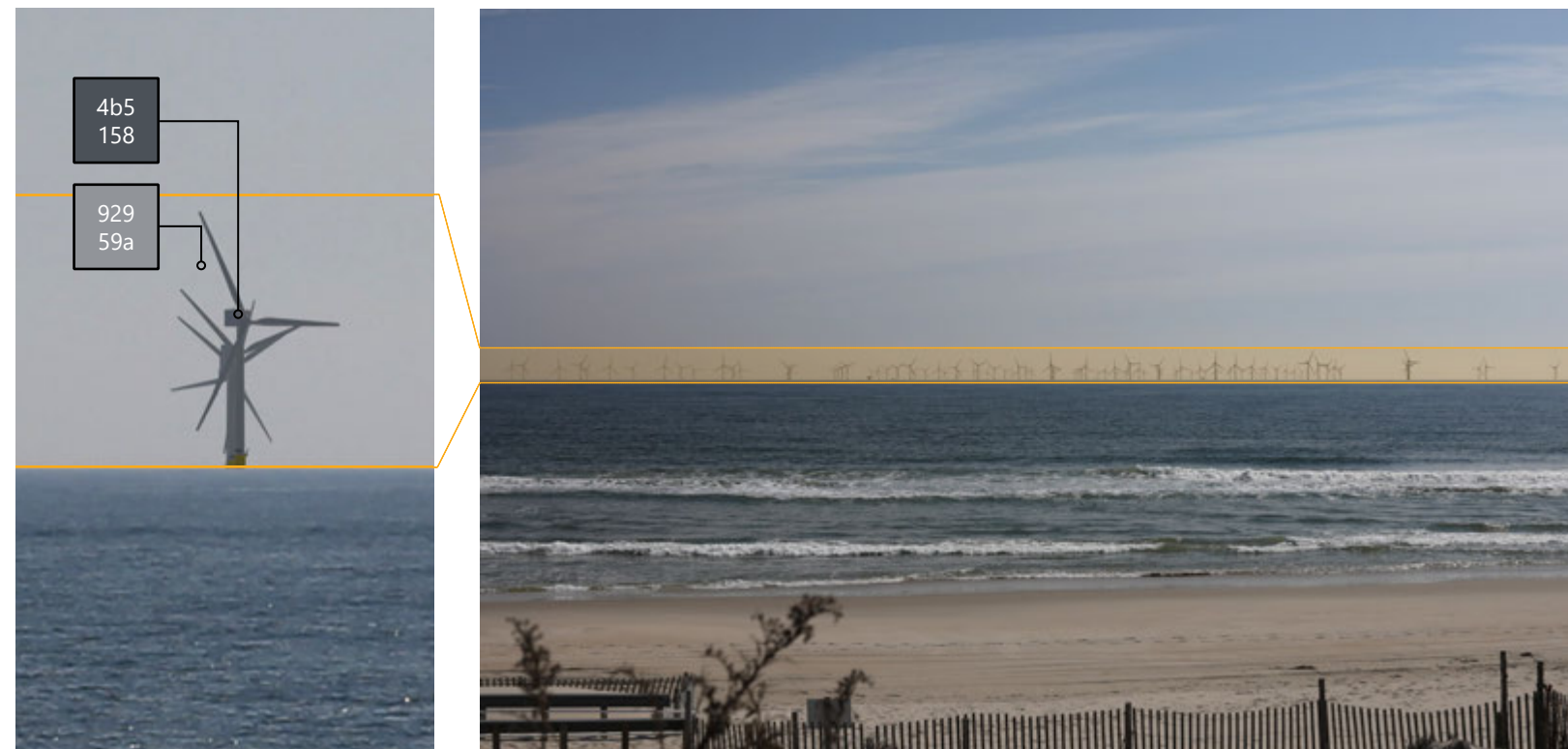
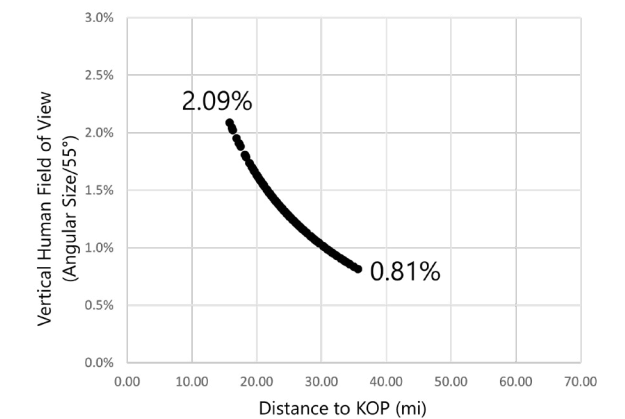
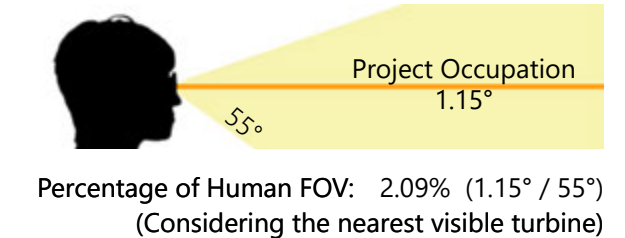
**Color Contrast Rating:**  
 Turbine: 2.67  
 Background: 2.67

Lighting Condition: Side lit  
 Season: Winter  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

KOP BLB02 illustrates the project from 10.07 miles in the back lit condition. This provides an indication of how the turbines may appear from this KOP during midday conditions.

## Vertical Occupation





# BHB02 Centre Street, Beach Haven

Beach Haven Borough, Ocean County, New Jersey

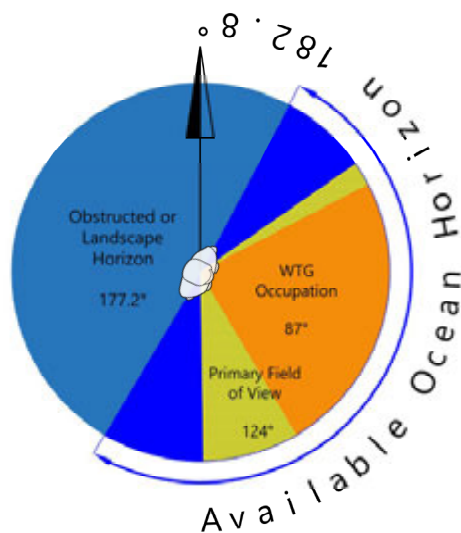
## KOP Information

Primary Field of View/Simulation Direction:	ESE/ESE
Distance to Closest WTG:	9.8 miles
Camera Height:	27.0 ft
User Groups:	Residents, Tourists, Fishing Comm.
Horizon Occupation (% HFOV):	Large (87.0°, 70.1%)
Vertical Occupation:	Large ( 1.15°, 2.09%)
Character Area Type:	Seascape
Character Area:	Residential Beachfront

## Existing View



## Field of View

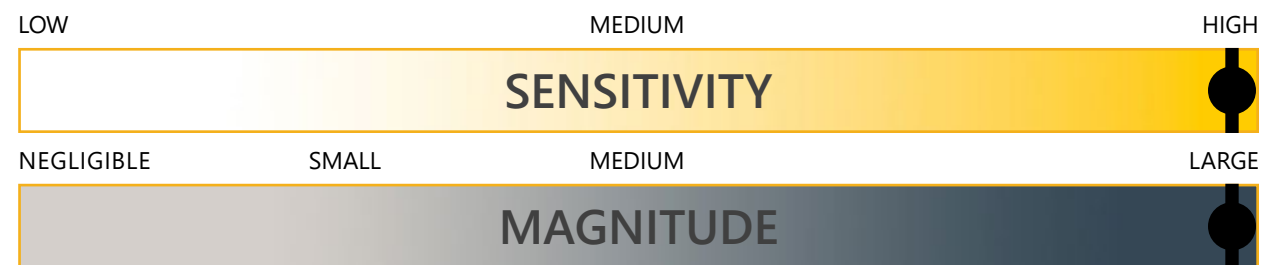


## Existing Landscape/ Seascape Character Description:

Like BHB01, this view is from the edge of the Beach Haven Historic District in the Borough of Beach Haven and within the Residential Beachfront SCA. A portion of this area was added to the National Register of Historic Places on July 14, 1983, for its significance in architecture and history as a beachfront resort during the 19th century. The district includes 149 contributing buildings. The adjacent Beach Haven Borough Public Beach is a popular swimming and sunbathing destination on Long Beach Island. In-season access requires a beach badge, and lifeguard and beach patrol services are provided. The KOP is located on one of many beach access paths that occur at the end of roads leading to the shoreline. This area is mostly comprised of typical single family residential vacation or permanent homes, but there are also three hotels and a condominium complex sandwiched between the homes. The dunes are large as with most in this area, angular paths traverse the dunes to provide beach access. Centre Street also has a large comfort station at the start of the beach path. At high tide, the beach is relatively narrow, and the ocean appears to occasionally encroach on the dunes. However, the dune structure is relatively healthy as evidenced by the established grasses.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	View is representative of residential viewers from the beachfront homes. It is somewhat representative of views from a nearby historic district and the ocean view is important to user experience
Value	High	The residents of LBI requested specific views from three locations in Beach Haven, including Centre Street, suggesting that these represent locations with high value to the residents.
Sensitivity Rating	High	The high susceptibility and value results in high sensitivity.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	The vertical scale is large, with the nearest WTGs occupying approximately 1.14 degrees or 2.07% of the vertical field of view, resulting in a visual prominence factor of 6.
Geographic Extent	Large	The Project would occupy approximately 70 percent or 87 degrees of the 124 degree human field of view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	With a large geographic extent and large vertical scale, the overall magnitude rating is large.

## Project Contrast:

During clear viewing conditions, the line, form, color, occupation, motion, and lighting would strongly contrast with ocean views due to the novel form of the WTGs. Similar contrasts would occur with landform and structures and rotor motion could detract from vegetation. The presence of stacking WTGs (when WTGs rows are perfectly aligned with the viewer position) will result in discordant features on the horizon when fully visible under clear conditions.

Overall Impact  
**Major**



Existing Conditions (Morning)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations; Page 120 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Morning) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 121 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions (Morning)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations; Page 122 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Morning) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 123 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions (Morning)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations; Page 124 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Morning) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 125 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions (Morning)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 126 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Morning) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 127 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions (Noon)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations; Page 128 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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Photosimulation (Noon) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations; Page 129 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Noon)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 130 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Noon) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 131 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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Existing Conditions (Noon)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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Photosimulation (Noon) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 133 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions (Noon)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 134 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Noon) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 135 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Evening)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Evening) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH02 - Centre Street, Beach Haven  
Attachment E: Photosimulations; Page 137 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Evening)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations; Page 138 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Evening) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 139 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions (Evening)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations; Page 140 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Evening) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations; Page 141 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions (Evening)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Evening) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 143 of 289

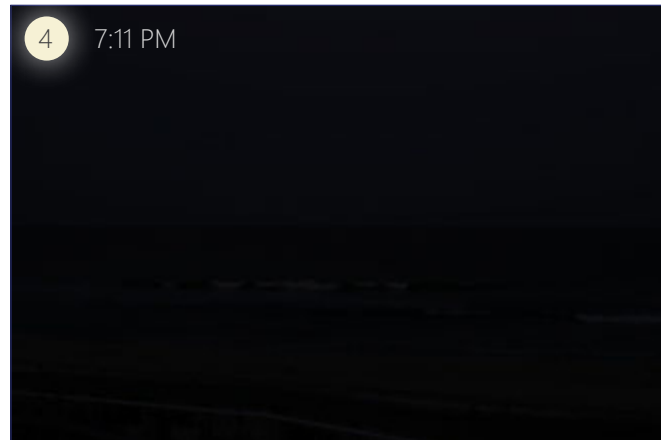
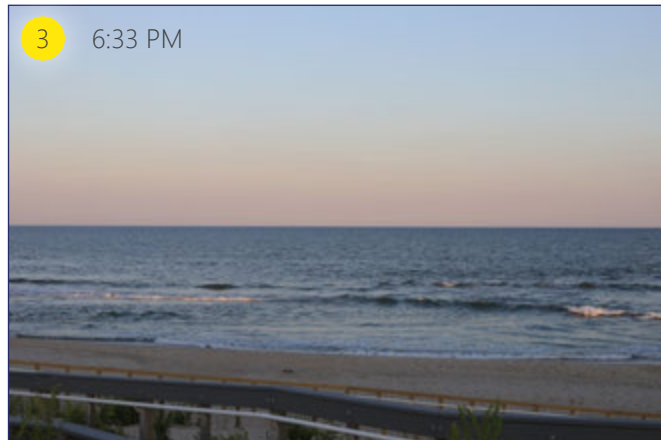
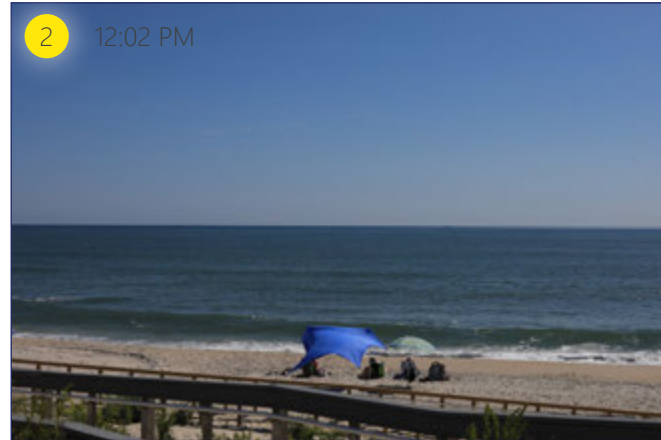
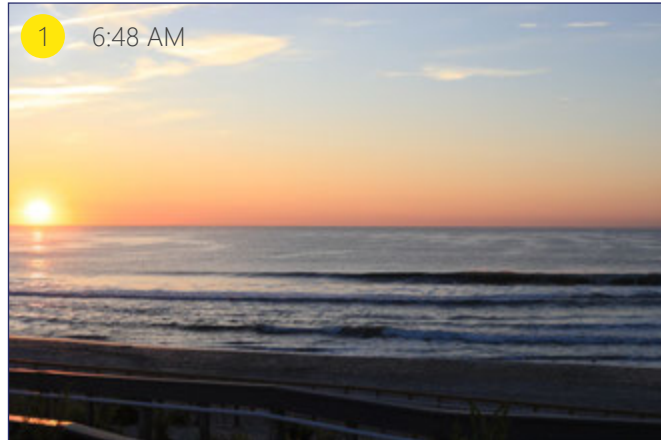
Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



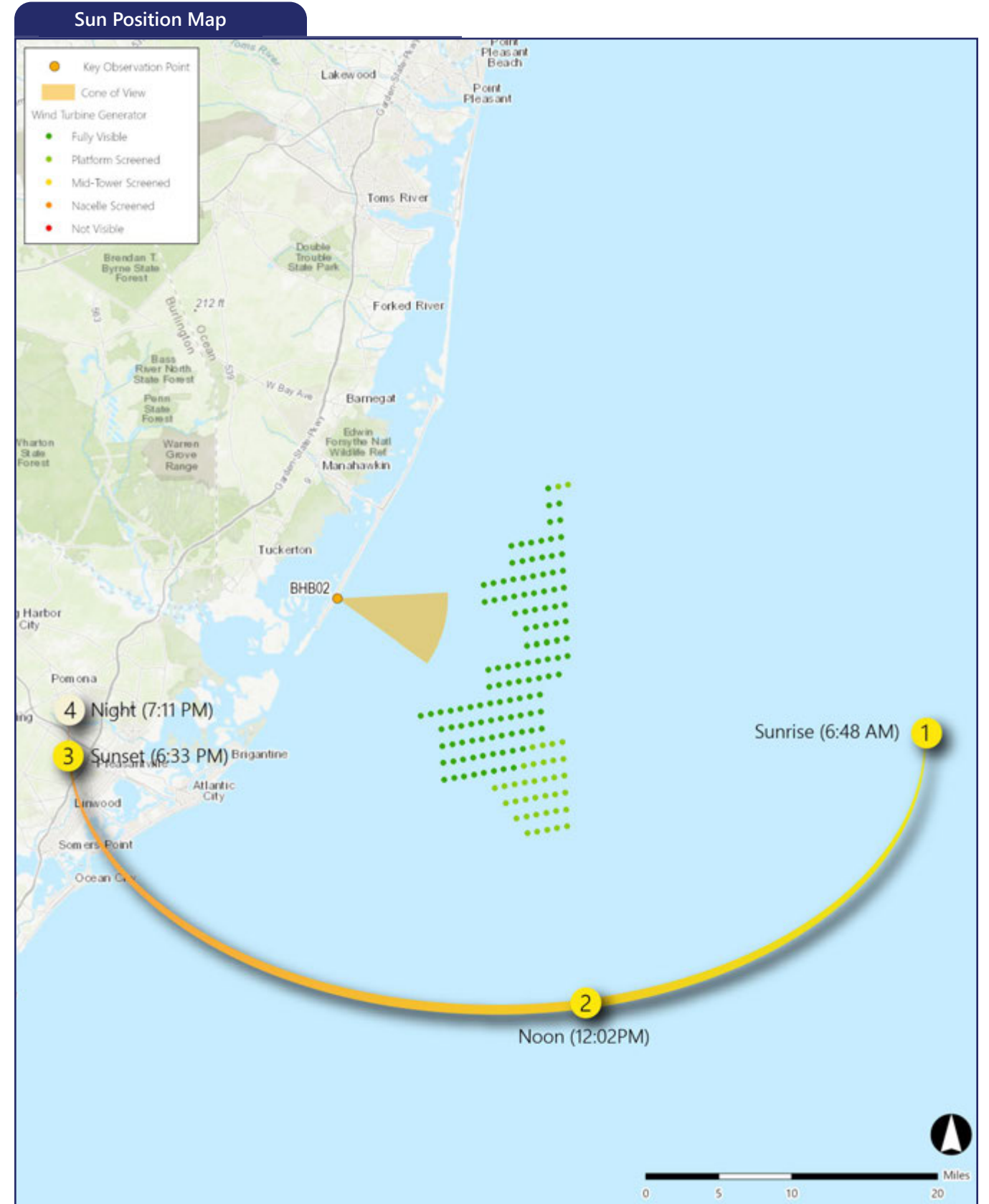


# BHB02 Centre Street, Beach Haven

Beach Haven Borough, Ocean County, New Jersey



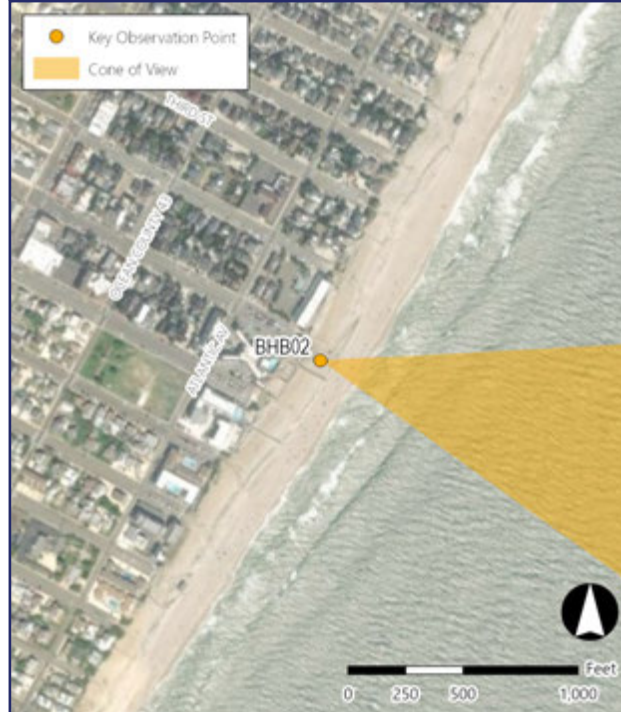
QR Code for Timelapse Video  
[Timelapse Video Link](#)



## Simulation Information

Coordinates:	39.56173°N, 74.23565°W
Character Area:	Residential Beachfront, Seascape (SCA)
User Group:	L. Residents, Tourists, S. Residents
Direction of View:	East-southeast
Distance to Nearest Visible Turbine:	9.8 miles
Sensitive Resource:	Beach Haven Borough Public Beach, Beach Haven Historic District, New Jersey Coastal Heritage Trail Area

## Context Map



## Environmental Information

Date Taken:	09/20/2023
Time:	Various
Temperature:	73°F
Humidity:	53%
Visibility:	10 miles
Wind Direction:	Southwest
Wind Speed:	6 mph
Conditions Observed:	Fair

## Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	27.0 feet AMSL

**Notes**  
 Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.



Existing Conditions (Sunrise)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations; Page 145 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Sunrise) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 146 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions (Noon)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations; Page 147 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Noon) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 148 of 289

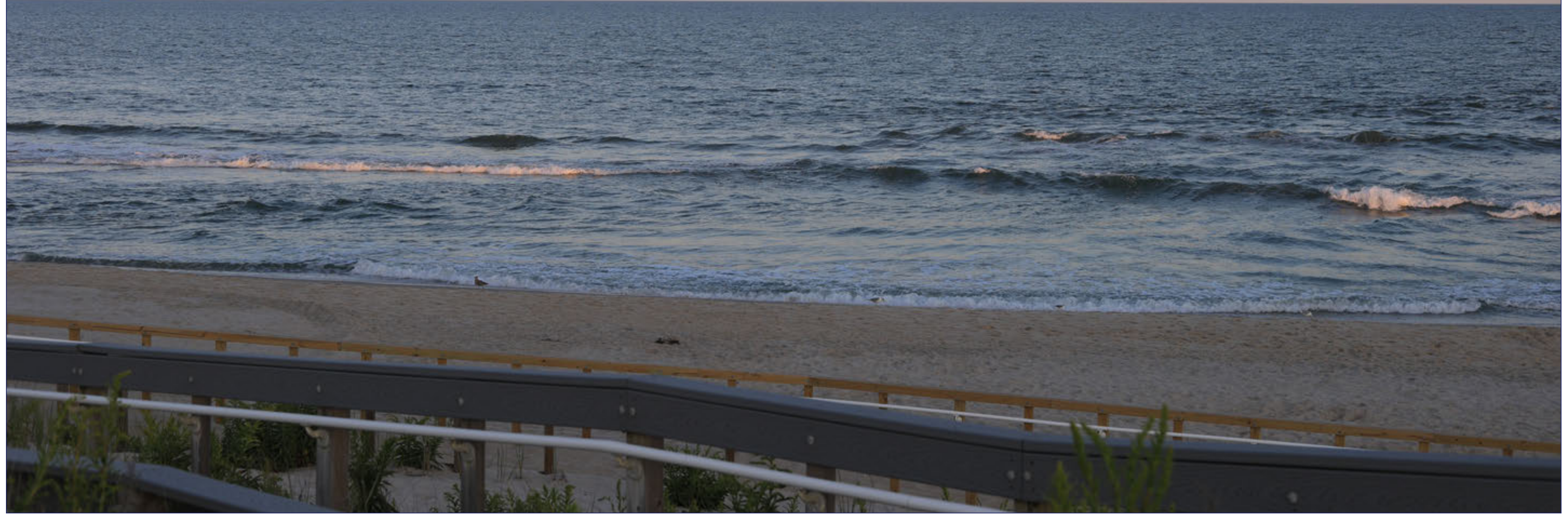
Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Sunset)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 149 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Sunset) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 150 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

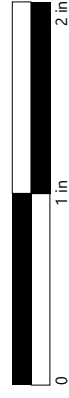




Existing Conditions (Night)



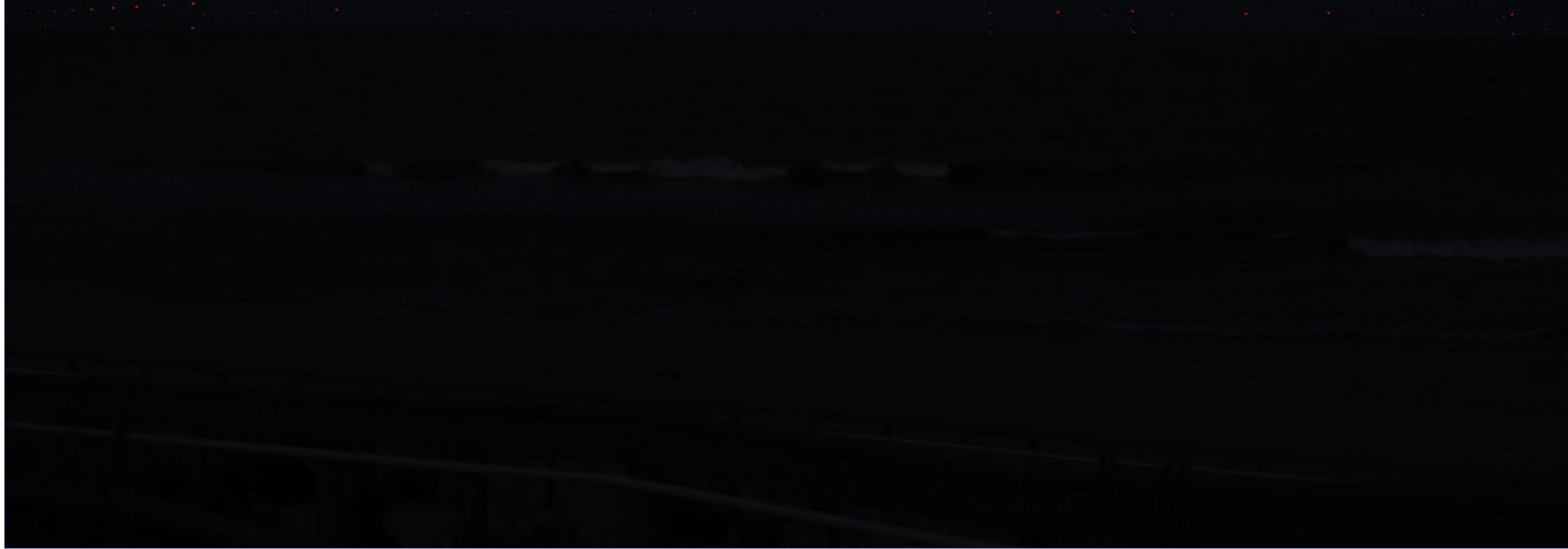
Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Night) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB02 - Centre Street, Beach Haven  
Attachment E: Photosimulations: Page 152 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

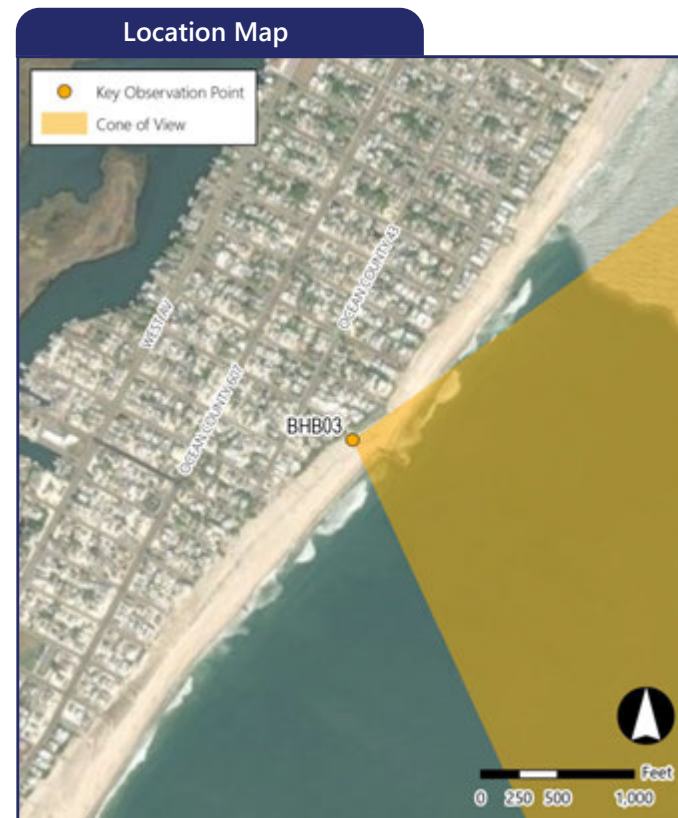
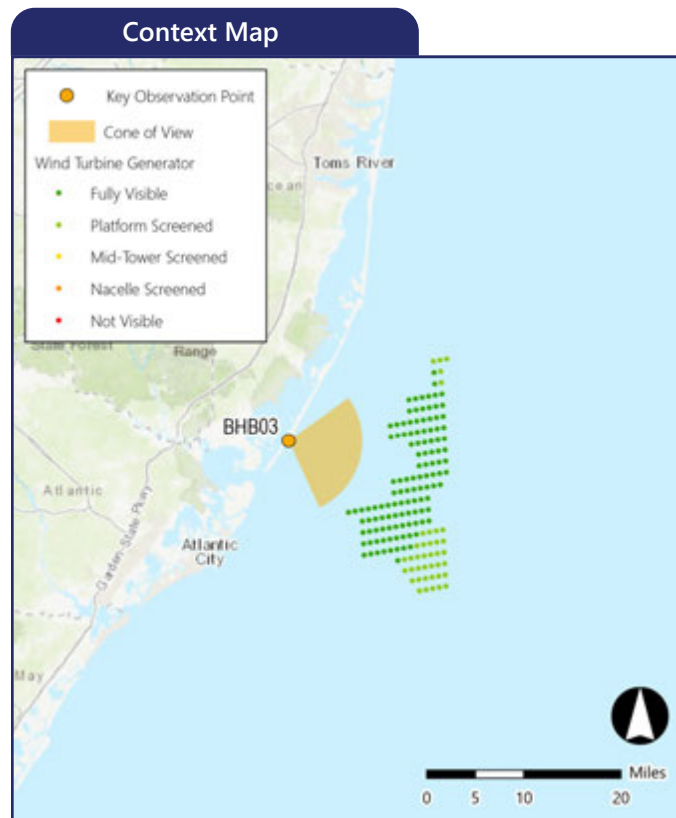


# BHB03 Holyoke Avenue, Beach Haven

Beach Haven Borough, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from the Long Beach Island, panning clockwise from northeast (left) to southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



### Simulation Information

Coordinates: 39.55258°N, 74.24419°W  
 Character Area: Residential Beachfront, Seascape (SCA)  
 User Group: L. Residents, Tourists, S. Residents  
 Direction of View: East-southeast  
 Distance to Nearest Visible Turbine: 9.6 miles  
 Sensitive Resource: Beach Haven Borough Public Beach, New Jersey Coastal Heritage Trail Area

### Environmental Information

Date Taken: 03/02/2022  
 Time: 5:23 PM  
 Temperature: 55°F  
 Humidity: 30%  
 Visibility: 10 miles  
 Wind Direction: West  
 Wind Speed: 9 mph  
 Conditions Observed: Fair

### Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 26.9 feet AMSL

### Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

### Simulated Photograph(s)





# BHB03 Holyoke Avenue, Beach Haven

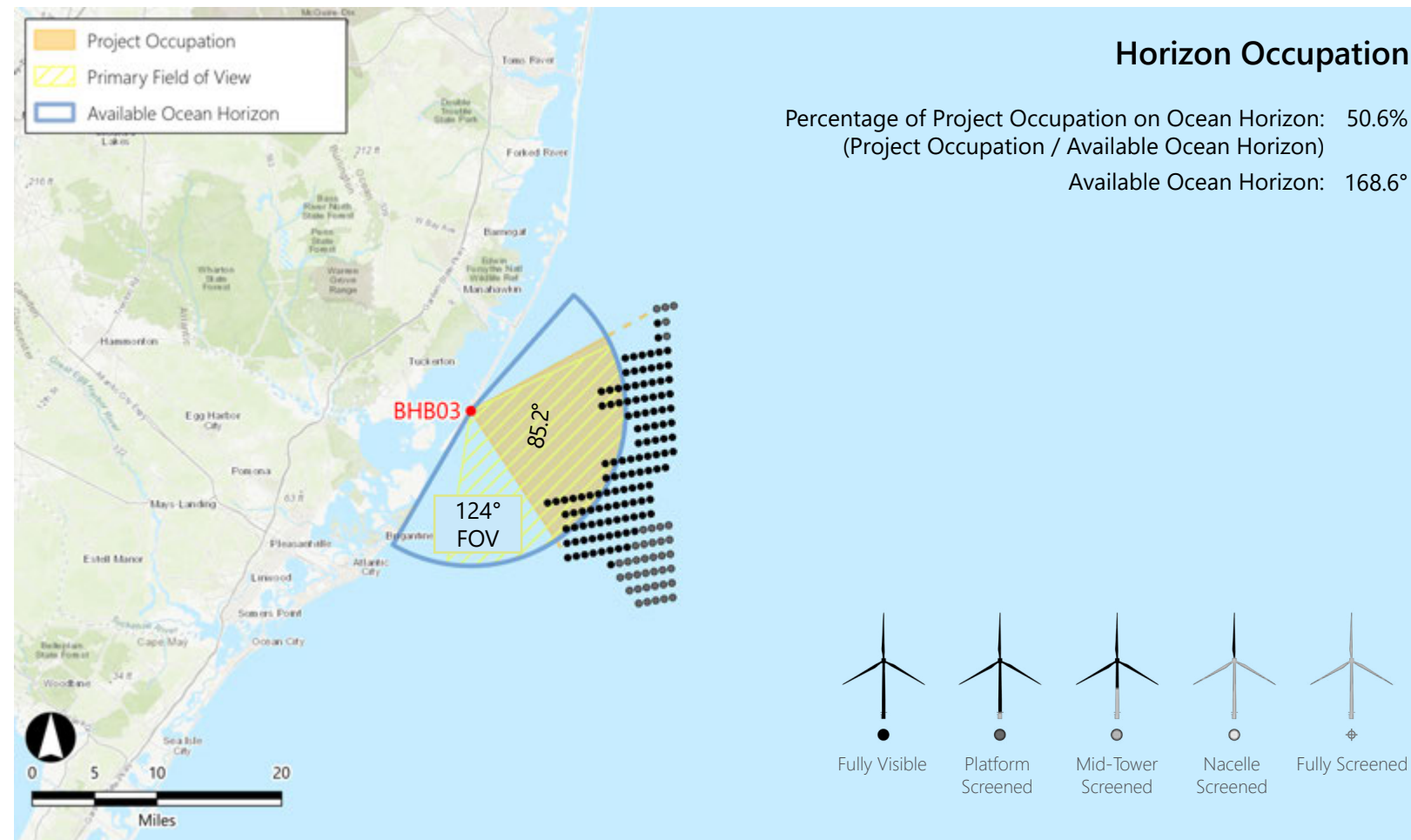
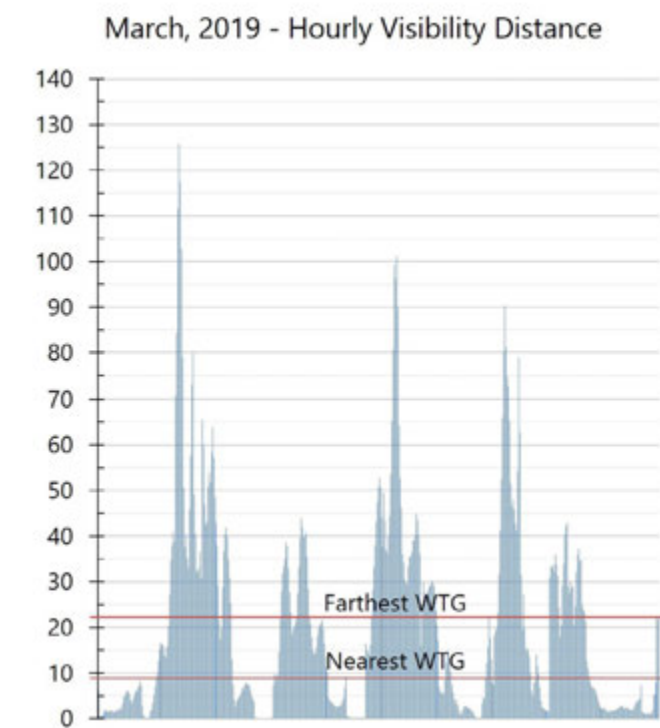
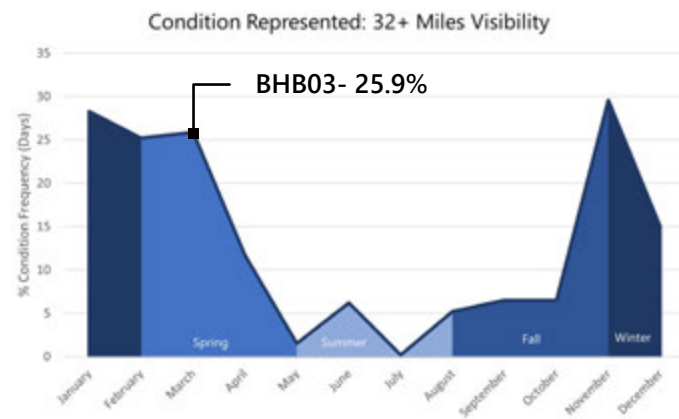
Beach Haven Borough, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 9.6 miles  
 Camera Height: 26.9 feet  
 User Groups: L. Residents, Tourists, S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

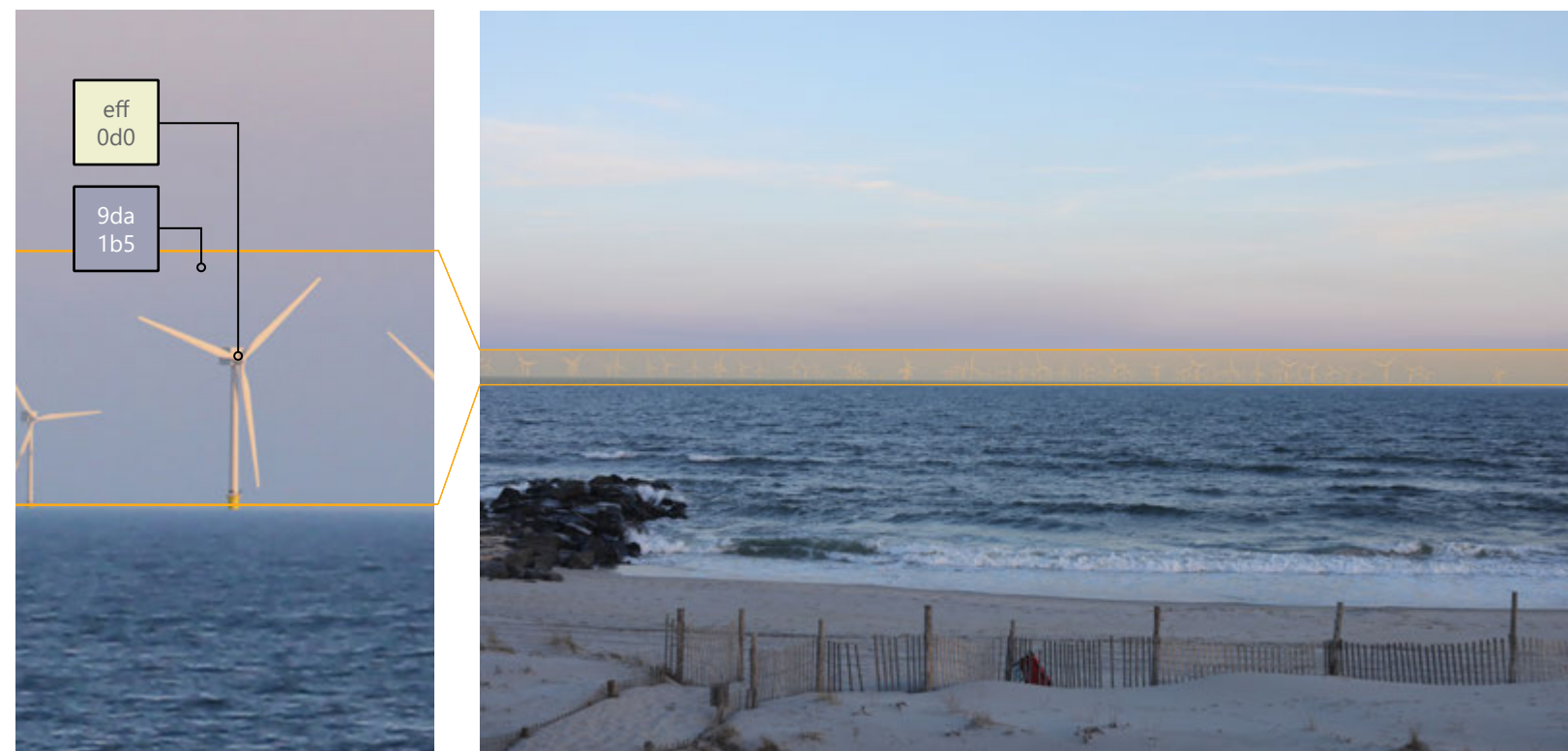
Color Contrast Rating:



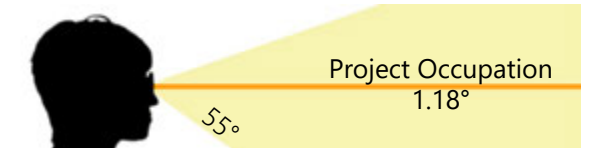
Lighting Condition: Front lit  
 Season: Winter  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

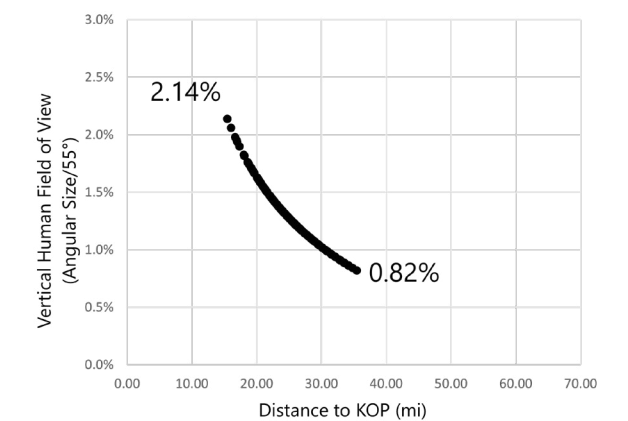
KOP BT01 Illustrates the project from 11.73 miles in the side lit condition. This provides an indication of how the turbines may appear from this KOP during morning conditions.



## Vertical Occupation



Percentage of Human FOV: 2.14% (1.18° / 55°)  
 (Considering the nearest visible turbine)





# BHB03 Holyoke Avenue, Beach Haven

Beach Haven Borough, Ocean County, New Jersey

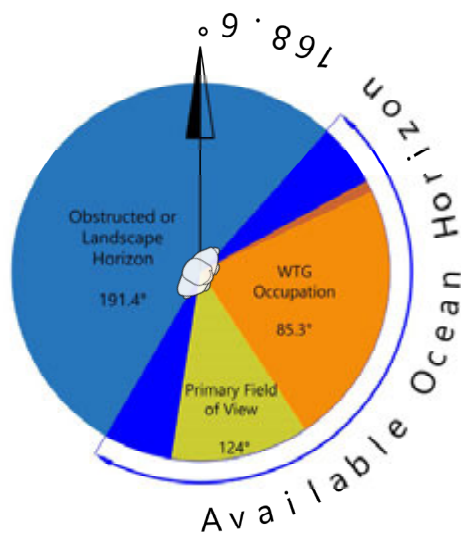
## KOP Information

Primary Field of View/Simulation Direction:	ESE/ESE
Distance to Closest WTG:	9.6 miles
Camera Height:	26.9 ft
User Groups:	Residents, Tourists, Fishing Comm.
Horizon Occupation (% HFOV):	Large (85.2°, 68.7%)
Vertical Occupation:	Large ( 1.18°, 2.14%)
Character Area Type:	Seascape
Character Area:	Residential Beachfront

## Existing View



## Field of View

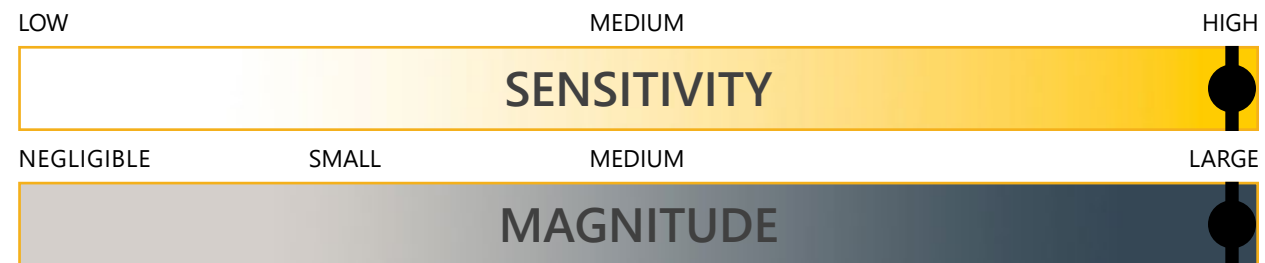


## Existing Landscape/ Seascape Character Description:

This example of the residential beachfront SCA is characterized by large, modern residential homes that rise well above the large dunes. The architecture is incongruous with the natural beach environment. The view toward the ocean includes a quintessential beach scene with partially vegetated dunes, sand, and pristine ocean horizon. This KOP is at one of many beach access paths that occur at the end of roads leading to the shoreline. This area is mostly comprised of large, modern single family residential vacation or permanent homes. The dunes are large and have angular paths traversing them to provide beach access. Unlike Centre Street the Holyoke Avenue access point does not include a comfort station. At high tide, the beach is very narrow, and the ocean appears to regularly encroach on the dunes creating steep gouges at the toe of the dunes. The view toward the ocean includes a quintessential beach scene with partially vegetated dunes, sand, and pristine ocean horizon. The dune and beach view has high scenic integrity. The inland view is compromised by the development patterns.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	View is representative of residential viewers from the beachfront homes. It is somewhat representative of views from a nearby historic district and the ocean view is important to user experience
Value	High	The residents of LBI requested specific views from three locations in Beach Haven, including Centre Street, suggesting that these represent locations with high value to the residents.
Sensitivity Rating	High	The high susceptibility and value results in high sensitivity.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	The vertical scale is large, with the nearest WTGs occupying approximately 1.18 degrees or 2.14% of the vertical field of view, resulting in a visual prominence factor of 6.
Geographic Extent	Large	The Project would occupy approximately 68.7 percent or 85.2 degrees of the 124 degree human field of view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	With a large geographic extent and large vertical scale, the overall magnitude rating is large.

## Project Contrast:

During clear viewing conditions, the line, form, color, occupation, motion, and lighting would strongly contrast with ocean views due to the novel form of the WTGs. Similar contrasts would occur with landform and structures and rotor motion could detract from vegetation. The presence of stacking WTGs (when WTGs rows are perfectly aligned with the viewer position) will result in discordant features on the horizon when fully visible under clear conditions.

Overall Impact  
**Major**



Existing Conditions (Morning)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations: Page 156 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Morning) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations: Page 157 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Morning)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations: Page 158 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Morning) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations: Page 159 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Morning)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Morning) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations; Page 161 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions (Noon)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations; Page 162 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Noon) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations: Page 163 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



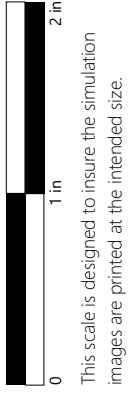
Existing Conditions (Noon)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations: Page 164 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Noon) (OCS-A 0549)



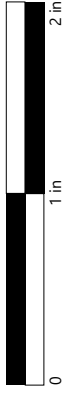
Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH03 - Holyoke Avenue, Beach Haven

Attachment E: Photosimulations: Page 165 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Noon)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Noon) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations; Page 167 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Evening)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations; Page 168 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Evening) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations: Page 169 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Evening)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations: Page 170 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Evening) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations: Page 171 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Existing Conditions (Evening)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Evening) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BH03 - Holyoke Avenue, Beach Haven  
Attachment E: Photosimulations; Page 173 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

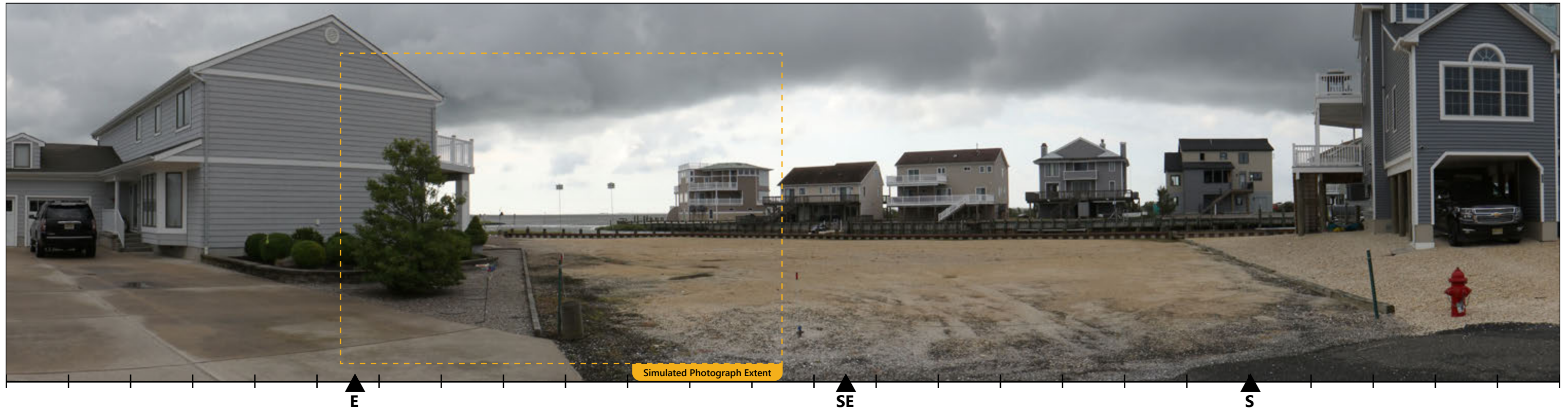


This scale is designed to insure the simulation images are printed at the intended size.

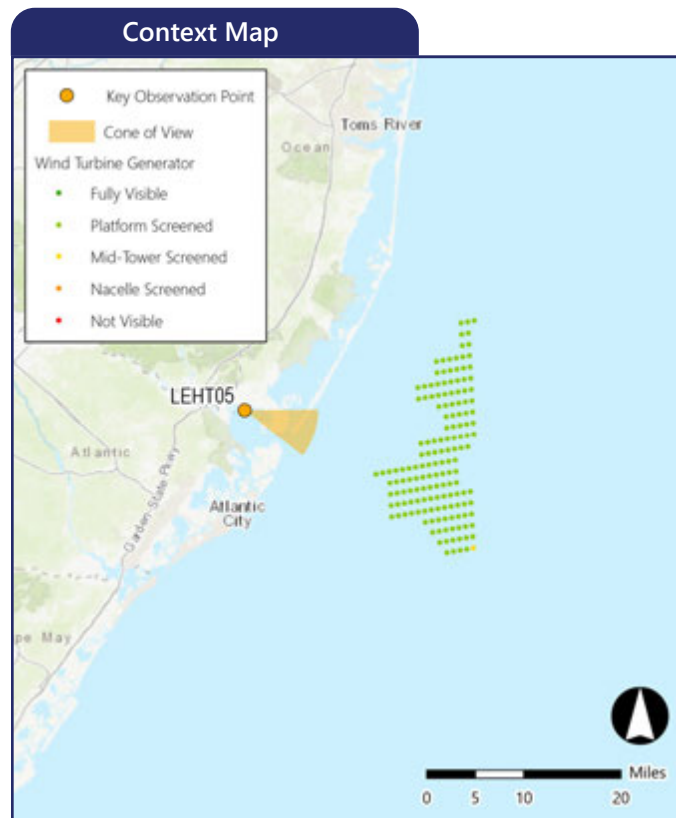


# LEHT05 Kentucky Drive

Little Egg Harbor Township, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from Kentucky Drive, panning clockwise from east (left) to south (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates: 39.54215°N, 74.38249°W  
 Character Area: Dredged Lagoon (LCA)  
 User Group: L. Residents  
 Direction of View: East-southeast  
 Distance to Nearest Visible Turbine: 15.1 miles  
 Sensitive Resource: New Jersey Coastal Heritage Trail Area, Mystic Island State Preserve

## Environmental Information

Date Taken: 08/18/2023  
 Time: 9:21 AM  
 Temperature: 76°F  
 Humidity: 74%  
 Visibility: 10 miles  
 Wind Direction: Northwest  
 Wind Speed: 14 mph  
 Conditions Observed: Mostly Cloudy

## Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 11.2 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)



Photograph ASOW0419



# LEHT05 Kentucky Drive

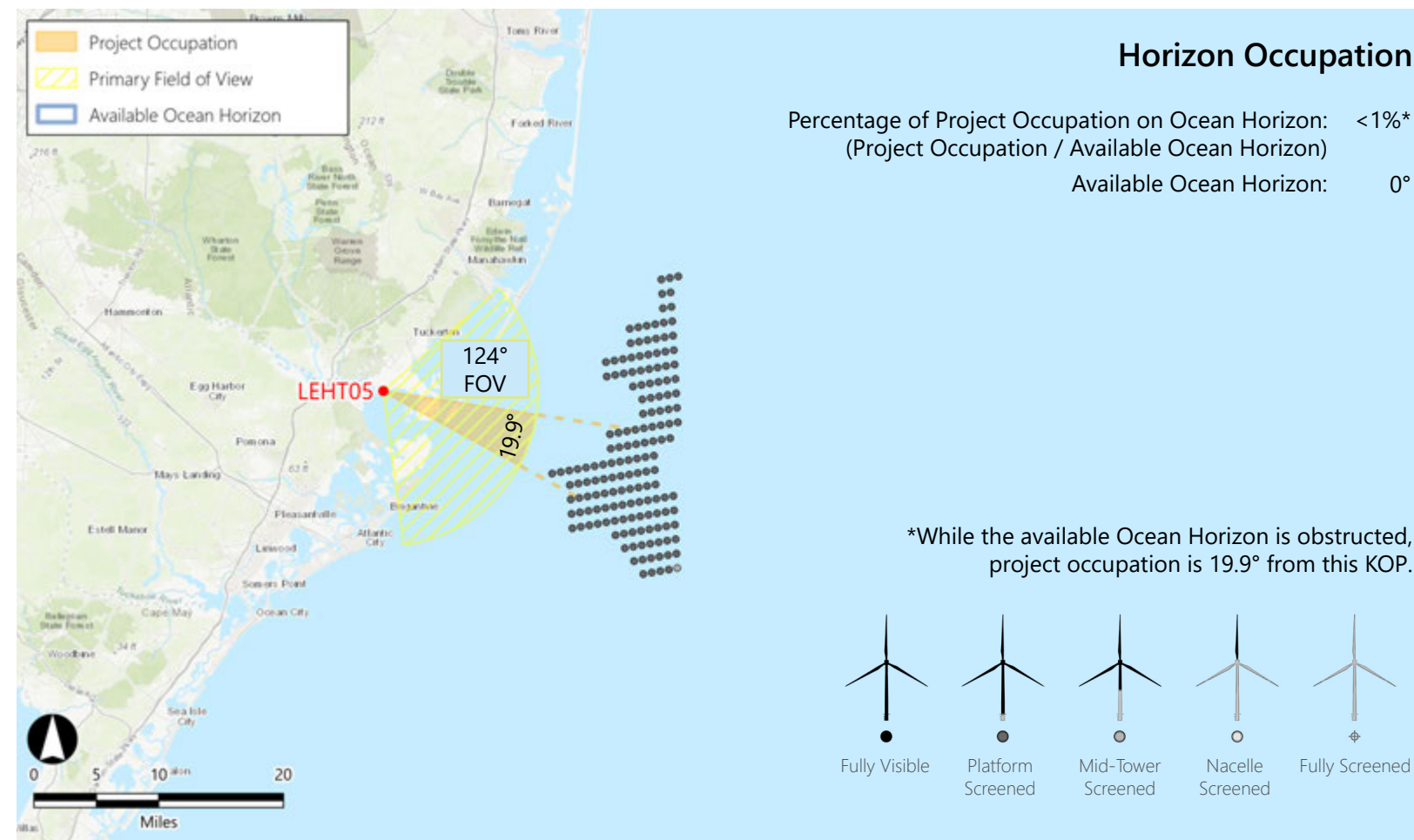
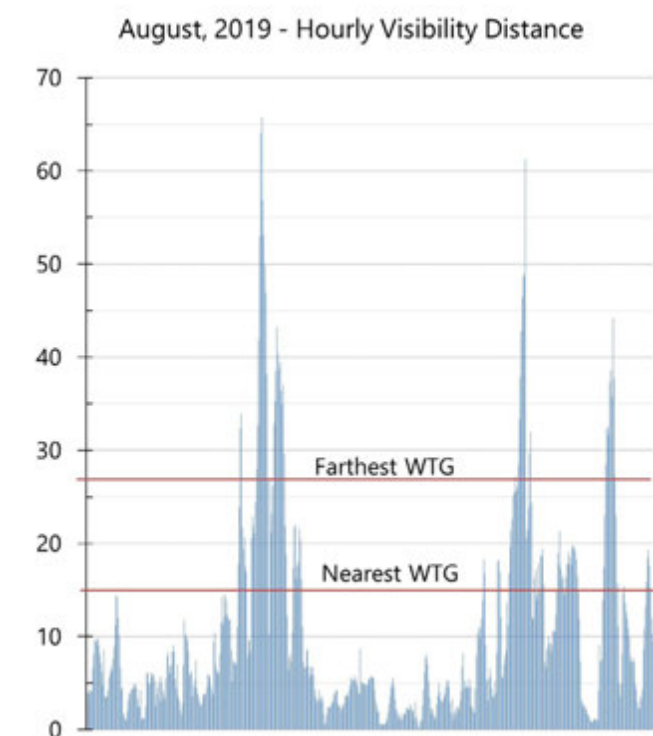
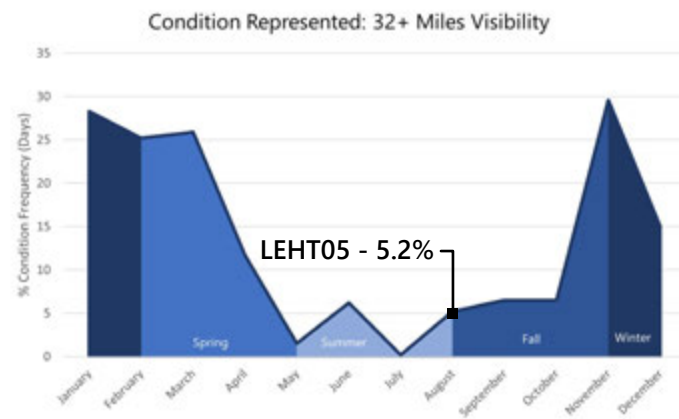
Little Egg Harbor Township, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 15.1 miles  
 Camera Height: 11.2 feet  
 User Groups: L. Residents, Tourists, S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

### Color Contrast Rating:

Turbine: 1.5  
 Background: 1.5

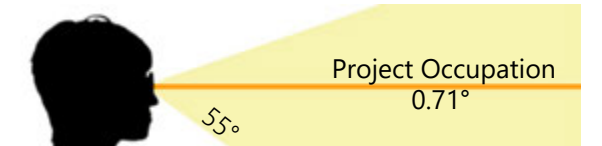
Lighting Condition: Back lit  
 Season: Summer  
 Sky Condition: Mostly Cloudy  
 Atmospheric Condition: >10 Miles

## SIMILAR VIEWING PARAMETERS:

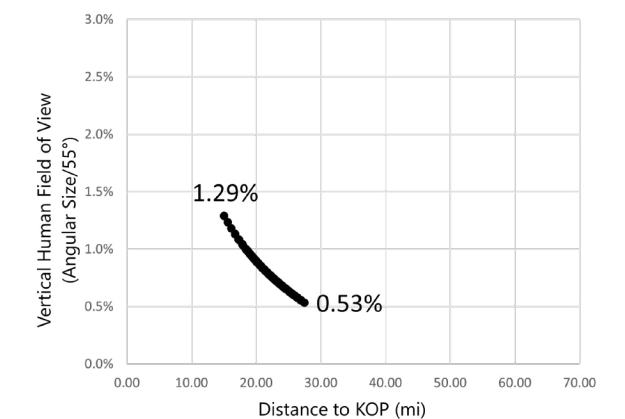
KOP AC02 Illustrates the project from 17.67 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during noon conditions.



## Vertical Occupation



Percentage of Human FOV: 1.29% (0.71° / 55°)  
 (Considering the nearest visible turbine)





# LEHT05 Kentucky Drive

Little Egg Harbor Township, Ocean County, New Jersey

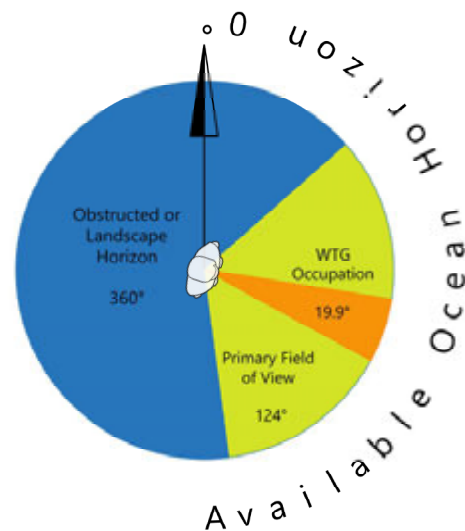
## KOP Information

Primary Field of View/Simulation Direction:	ESE/ESE
Distance to Closest WTG:	15.1 miles
Camera Height:	11.2 ft
User Groups:	Residents, Tourists, Fishing Comm.
Horizon Occupation (% HFOV):	Medium (19.9°, 16.0%)
Vertical Occupation:	Large (0.71°, 1.29%)
Character Area Type:	Landscape
Character Area:	Dredged Lagoon

## Existing View



Field of View



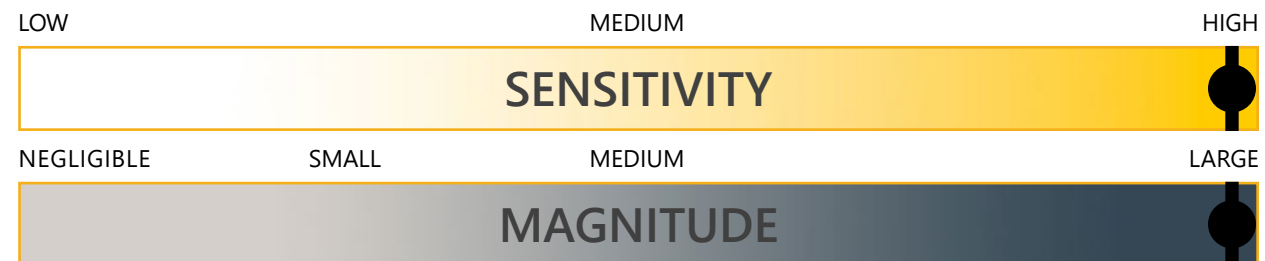
## Existing Landscape/Seascape Character Description:

This KOP is in the Dredged Lagoon Character Area which is characterized by residential neighborhoods with seasonal and year-round homes situated along an artificial dredged waterway. This neighborhood consists of homes arranged along a tight, organized network of curvilinear local with water channels that run between the backyards of adjacent residences. The separation of land created by water channels and roadways allows individual streets to function as discrete neighborhoods, which together comprise a larger residential community. Homes on the canal typically have docks for boat mooring.

In this heavily modified landscape, the residents maintain neatly manicured yards and tidy landscape treatments. The houses are situated such that only the outermost residents have an unencumbered view of the bay and the homes further inland can not see much of it. Considering the vast natural seascape beyond, the views have a relatively high scenic integrity if not somewhat comprised by the juxtaposed development.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Views from this location represent a small number of residents in the community who may experience this type of view from within their home, or in their yards.
Value	Medium	While residents place a high value on their home and their view, value from a public perspective is not inherent in this location. There is no recognition or protection of scenic qualities and only a small subset of the population can visit this location.
Sensitivity Rating	High	Due to the high susceptibility, this view is also highly sensitive.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	With a vertical occupation of 0.71 degrees the WTGs may occupy up to 1.29 percent of the human vertical field of view (55 degrees). The visual prominence rating is 5, which indicates the Project may strong attract visual attention and is prominent.
Geographic Extent	Medium	The geographic extent is small as indicated by the horizon occupation of 19.9 degrees which would typically occupy about 16.0 percent of the human horizontal field of view.
Duration/Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	Considering the large size and scale and medium geographic extent (resulting from screening provided by the homes) the magnitude is large.

## Project Contrast:

During clear viewing conditions, the Project presents moderate line, form, and color contrast with landform, and structures. Motion may present strong contrast with structures and landform. The form contrast combined with rotor motion may contrast strongly with the inland bay, but line, color, and motion would present moderate contrasts due to the competing features in the view. Contrasts with vegetation will be weak due to the lack of discernible vegetation.

Overall Impact  
**Major**



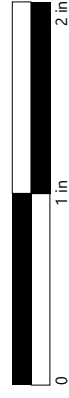


Existing Conditions

Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LEHT05 Kentucky Drive  
Attachment E: Photosimulations: Page 177 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



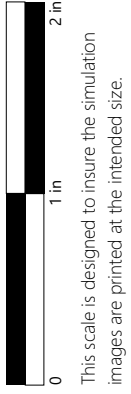
Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549

Key Observation Point: LEHT05 Kentucky Drive

Attachment E: Photosimulations: Page 178 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

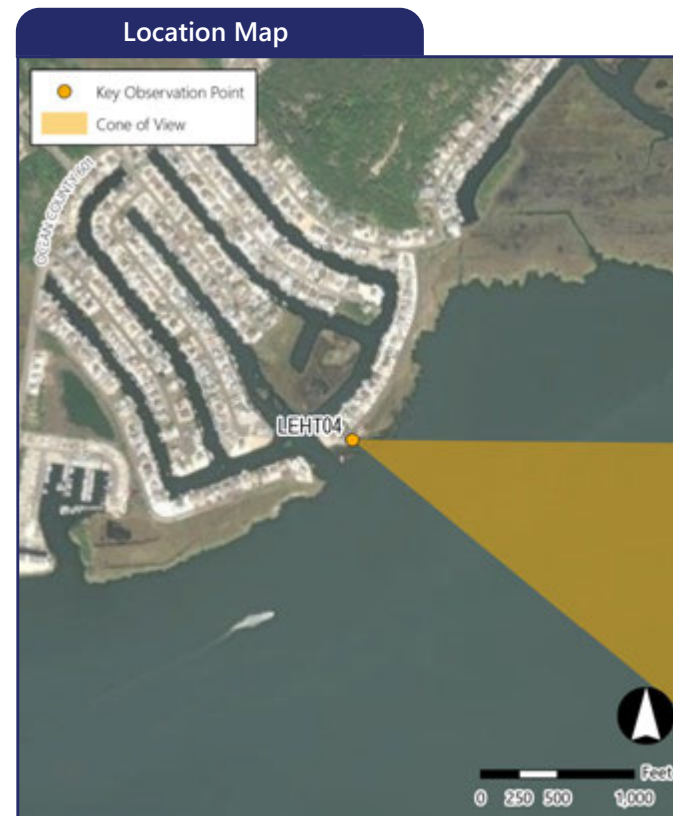
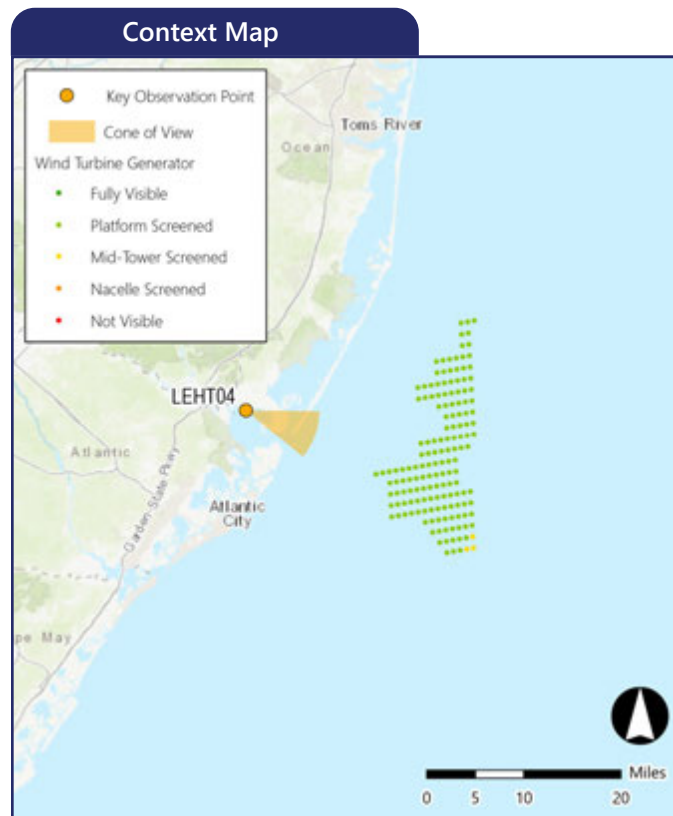


# LEHT04 Osborn Island

Little Egg Harbor, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from Osborn Island, panning clockwise from northeast (left) to southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates:	39.54201°N, 74.38002°W
Character Area:	Dredged Lagoon (LCA)
User Group:	L. Residents
Direction of View:	East-southeast
Distance to Nearest Visible Turbine:	14.9 miles
Sensitive Resource:	Mystic Island State Preserve, New Jersey Coastal Heritage Trail Area

## Environmental Information

Date Taken:	08/18/2023
Time:	9:29 AM
Temperature:	76°F
Humidity:	74%
Visibility:	10 miles
Wind Direction:	Northwest
Wind Speed:	14 mph
Conditions Observed:	Mostly Cloudy

## Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	7.5 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)



Photograph ASOW0438



# LEHT04 Osborn Island

Little Egg Harbor, Ocean County, New Jersey

## KOP Information

Primary Field of View: Southeast

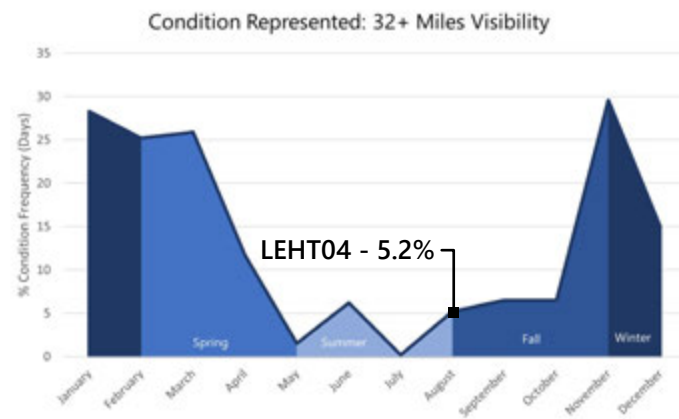
Distance to Closest WTG: 14.9 miles

Camera Height: 7.5 feet

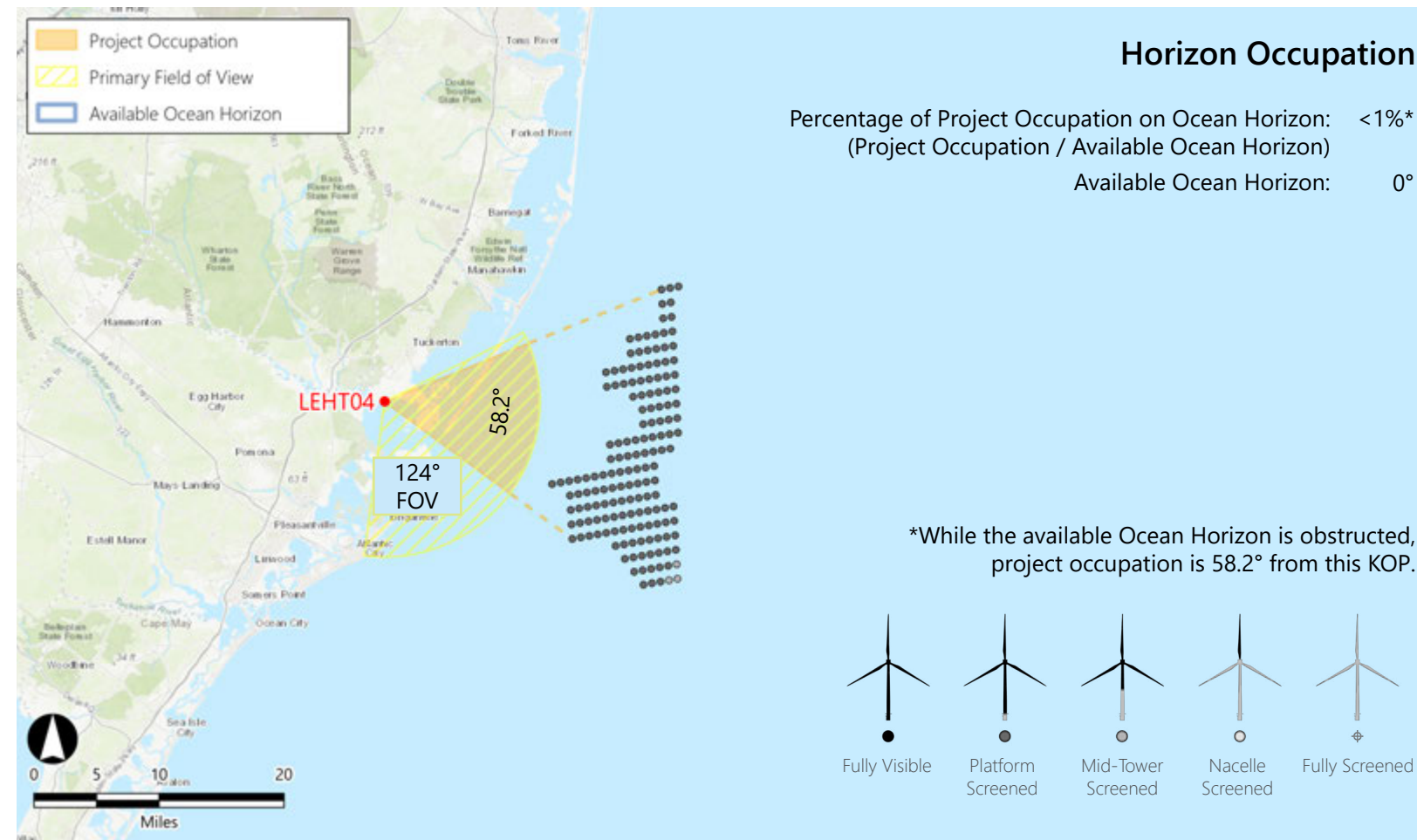
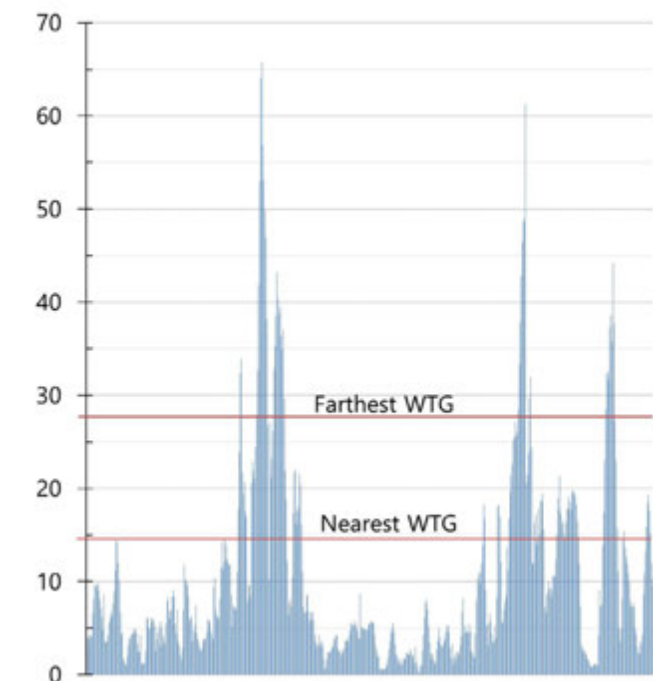
User Groups: L. Residents, S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.

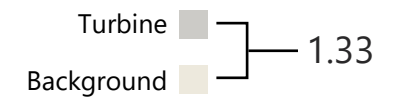


August, 2019 - Hourly Visibility Distance



## WTG Color Contrast

Color Contrast Rating:



Lighting Condition: Back lit

Season: Summer

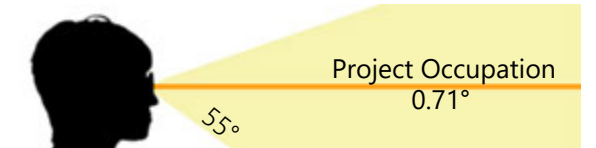
Sky Condition: Mostly Cloudy

Atmospheric Condition: > 10 Miles

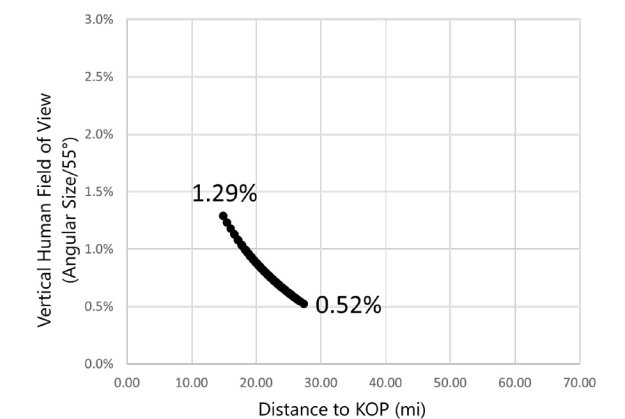
## SIMILAR VIEWING PARAMETERS:

KOP AC02 Illustrates the project from 17.67 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during noon conditions.

## Vertical Occupation



Percentage of Human FOV: 1.29% (0.71° / 55°)  
(Considering the nearest visible turbine)





# LEHT04 Osborn Island

Little Egg Harbor, Ocean County, New Jersey

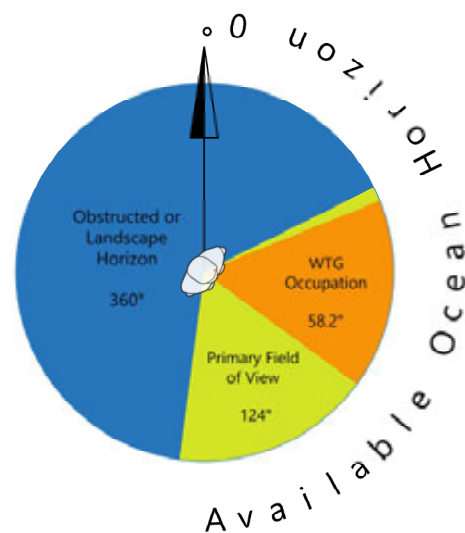
## KOP Information

Primary Field of View/Simulation Direction:	ESE/ESE
Distance to Closest WTG:	14.9 miles
Camera Height:	7.5 ft
User Groups:	Residents
Horizon Occupation (% HFOV):	Large (58.2°, 47.9%)
Vertical Occupation:	Large (0.71°, 1.29%)
Character Area Type:	Landscape
Character Area:	Dredged Lagoon

## Existing View



## Field of View

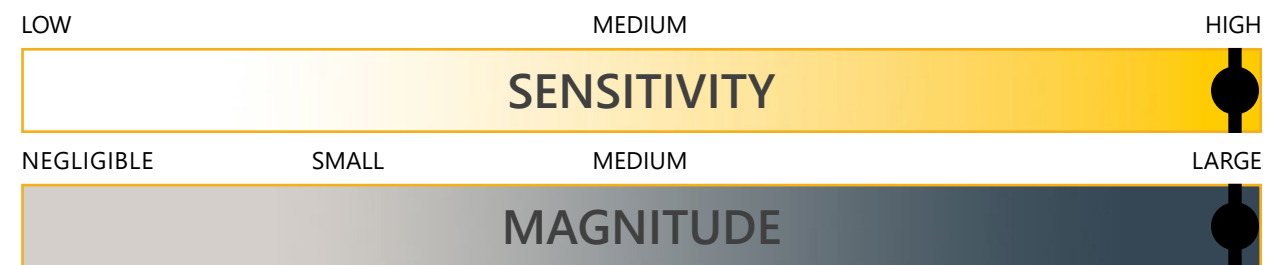


## Existing Landscape/ Seascape Character Description:

This KOP is only about 700 feet east of LEHT05 and also represents the Dredged Lagoon Character Area. This KOP is in a cul-de-sac on Iowa Court Road at the edge of a salt marsh. This established community features a mix of modern homes ranging from one to two stories. The inland view features residential development as far as the eye can see. A large, dredged channel enters the residential areas to the southwest of the KOP before breaking into three separate navigation courses which serve several communities. The salt marsh runs right up to the edge of the road and has rock armoring on the bay side as well as some apparent efforts to naturalize the salt marsh with plug marsh grasses. This is clearly a heavily modified landscape, but efforts are being made to maintain engineered and natural shoreline resiliency. The community has some age, with signs of disrepair in the roads, driveways, and some homes. However, from this KOP it feels a little like a quaint bay side community. The barrier island development is less intense when viewed from this location.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Views from this location represent a small number of residents in the community who may experience this type of view from within their home, or in their yards.
Value	Medium	While residents place a high value on their home and their view, value from a public perspective is not inherent in this location. There is no recognition or protection of scenic qualities and only a small subset of the population can visit this location.
Sensitivity Rating	High	Due to the high susceptibility, this view is also highly sensitive.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	With a vertical occupation of 0.71 degrees the WTGs may occupy up to 1.29 percent of the human vertical field of view (55 degrees). The visual prominence rating is 5, which indicates the Project may strong attract visual attention and is prominent.
Geographic Extent	Large	The geographic extent is medium as indicated by the theoretical horizon occupation of 58.2 degrees which occupies about 47.9 percent of the human horizontal field of view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	The large size, scale, and geographic extent results in large magnitude.

## Project Contrast:

During clear viewing conditions, the Project presents strong form, lighting, and motion contrast with landform and the bay. The line contrast with the bay is strong, but moderate with landform. Color and horizontal scale are medium for landform, bay, vegetation and structures. Overall contrasts are strong.

Overall Impact  
**Major**



Existing Conditions



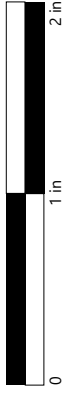
Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549

Key Observation Point: LEHT04 Osborn Island

Attachment E: Photosimulations: Page 182 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549  
Key Observation Point: LEHT04 Osborn Island  
Attachment E: Photosimulations: Page 183 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

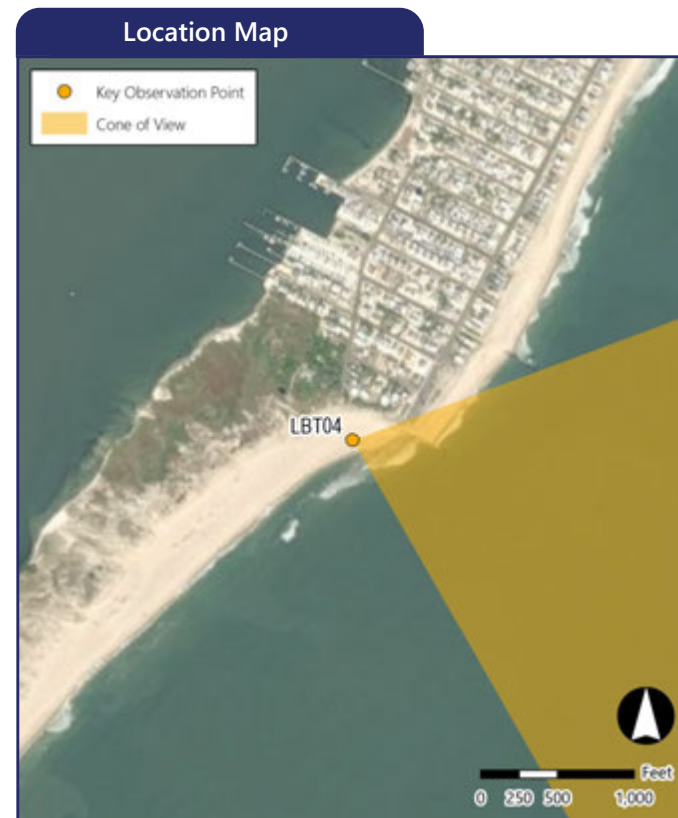
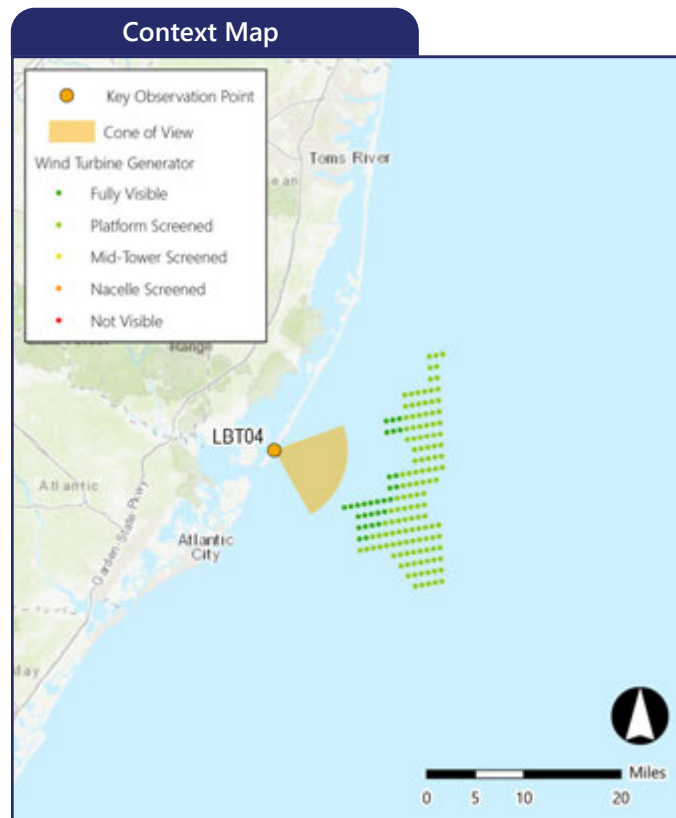


# LBT04 Long Beach Township

Long Beach Township, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from the Long Beach Island, panning clockwise from northeast (left) to southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates: 39.53091°N, 74.26447°W  
 Character Area: Residential Beachfront, Seascape (SCA)  
 User Group: L./S. Residents, Tourists, Fishing Comm  
 Direction of View: East-southeast  
 Distance to Nearest Visible Turbine: 9.3 miles  
 Sensitive Resource: Edwin B. Forsythe NWR, Beach Haven Heights Park, Long Beach Township Municipal Beach, New Jersey Coastal Heritage Trail Area

## Environmental Information

Date Taken: 03/03/2022  
 Time: 7:00 AM  
 Temperature: 47°F  
 Humidity: 71%  
 Visibility: 10 miles  
 Wind Direction: West-northwest  
 Wind Speed: 10 mph  
 Conditions Observed: Cloudy

## Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 7.0 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)





# LBT04 Long Beach Township

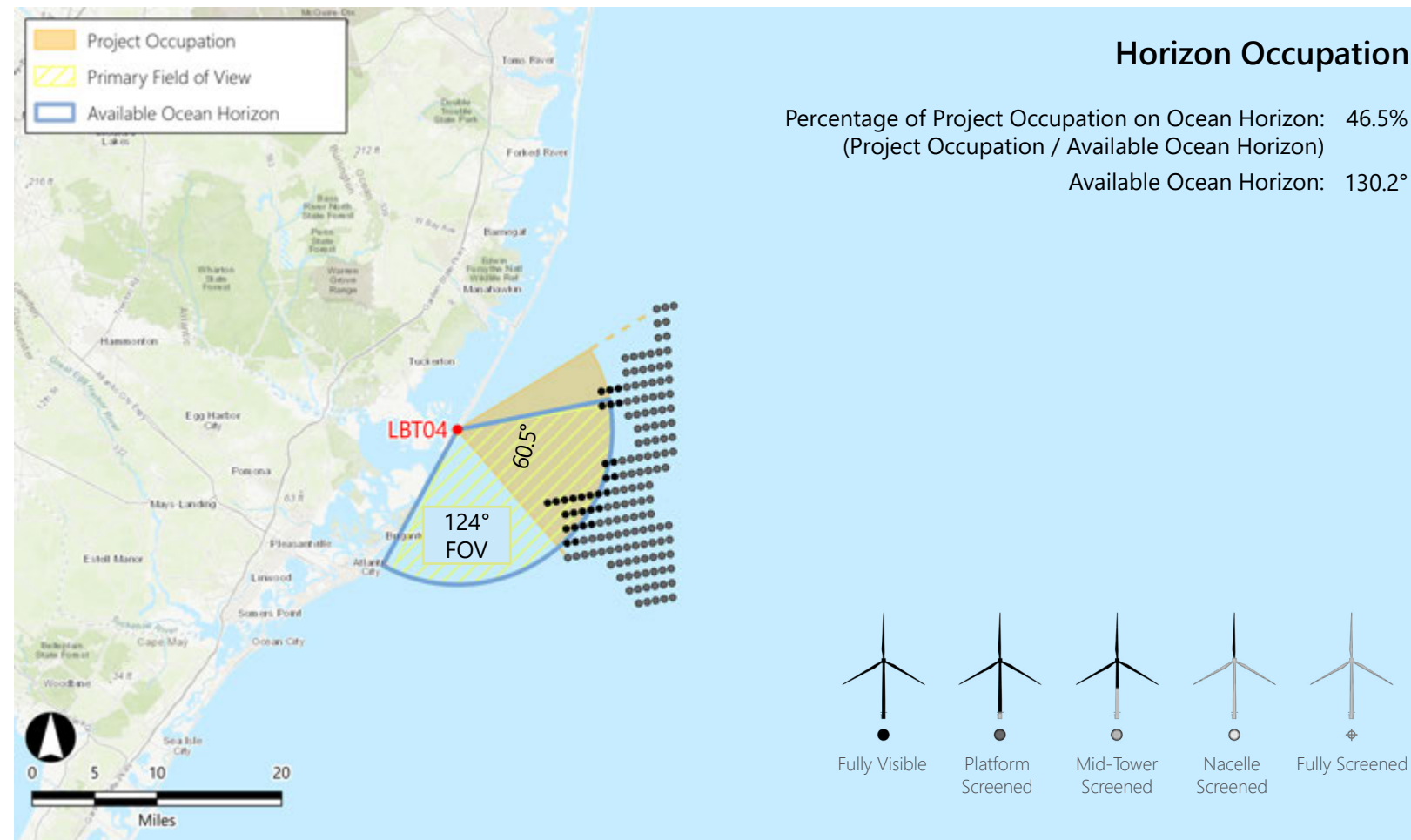
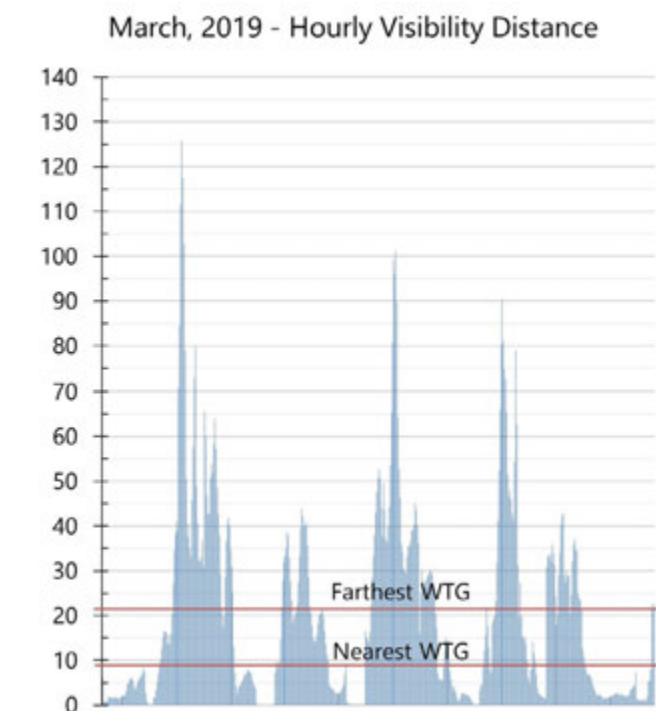
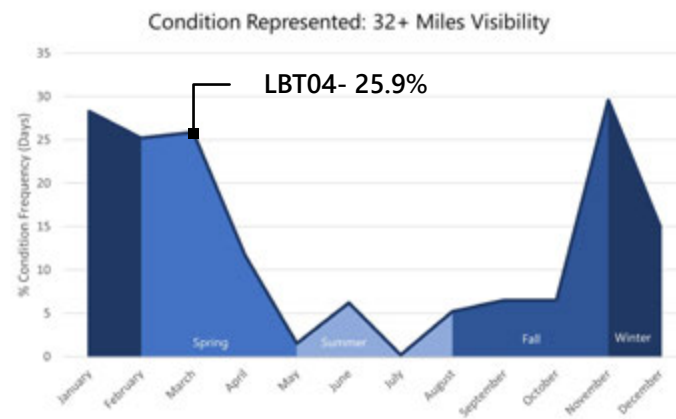
Long Beach Township, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 9.3 miles  
 Camera Height: 7.0 feet  
 User Groups: L. Residents, Tourists, S. Residents, Fishing Comm.

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

Color Contrast Rating:

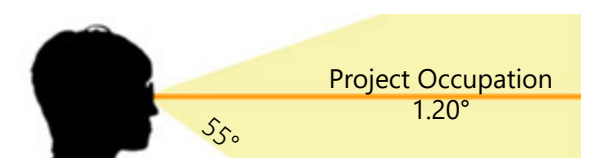
Turbine: 7.21  
 Background

Lighting Condition: Back lit  
 Season: Winter  
 Sky Condition: Cloudy  
 Atmospheric Condition: > 10 Miles

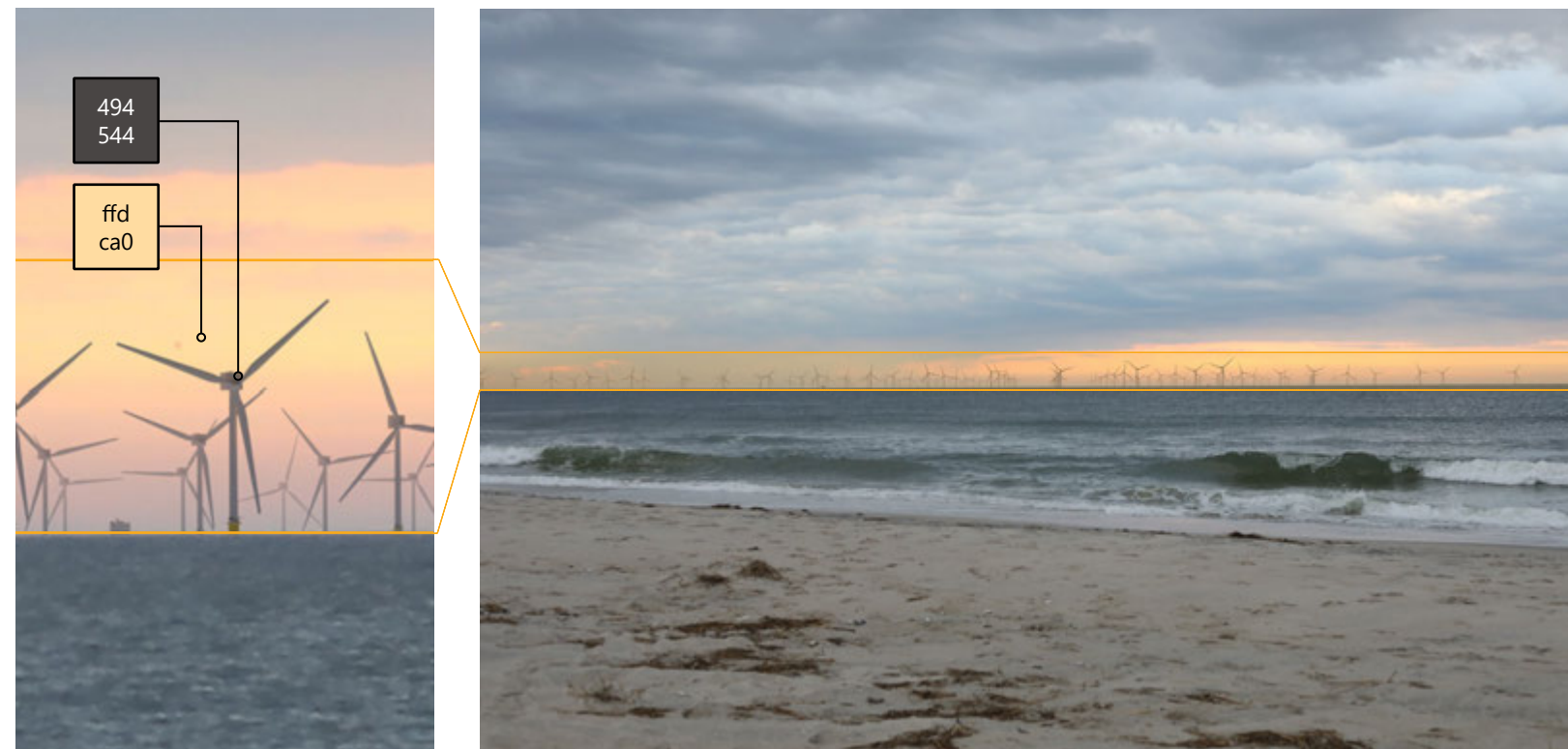
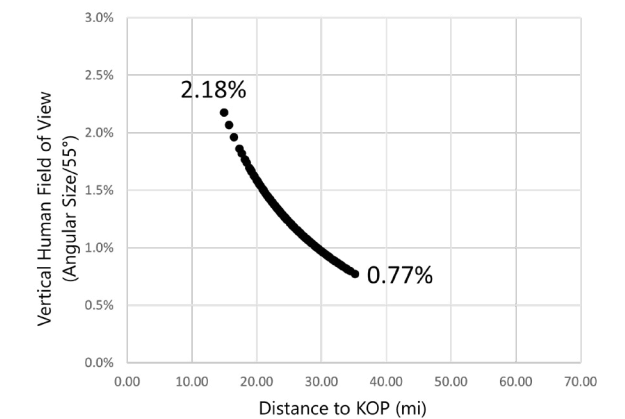
## SIMILAR VIEWING PARAMETERS:

KOP SPB01 illustrates the project from 19.25 miles in the side lit condition. This provides an indication of how the turbines may appear from this KOP during evening conditions.

## Vertical Occupation



Percentage of Human FOV: 2.18% (1.20° / 55°)  
 (Considering the nearest visible turbine)





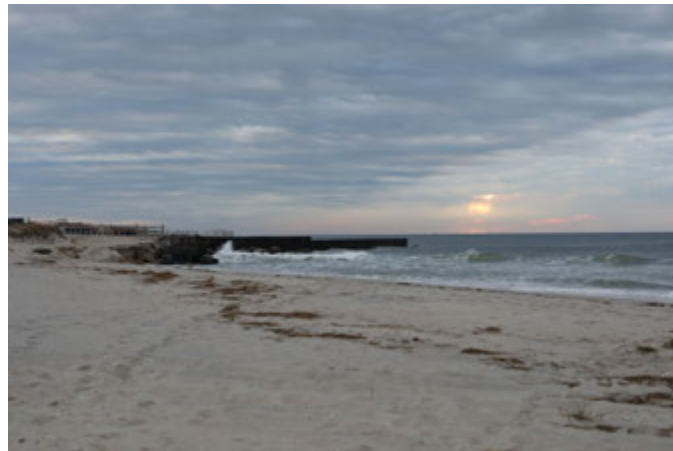
# LBT04 Long Beach Township

Long Beach Township, Ocean County, New Jersey

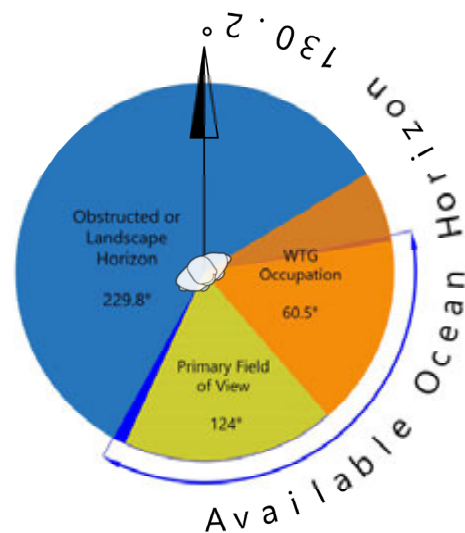
## KOP Information

Primary Field of View/Simulation Direction:	ESE/ESE
Distance to Closest WTG:	9.3 miles
Camera Height:	7.0 ft
User Groups:	Residents, Tourists, Fishing comm.
Horizon Occupation (% HFOV):	Large (60.5°, 48.8%)
Vertical Occupation:	Large (1.20°, 2.18%)
Character Area Type:	Seascape
Character Area:	Residential Beachfront

## Existing View



Field of View

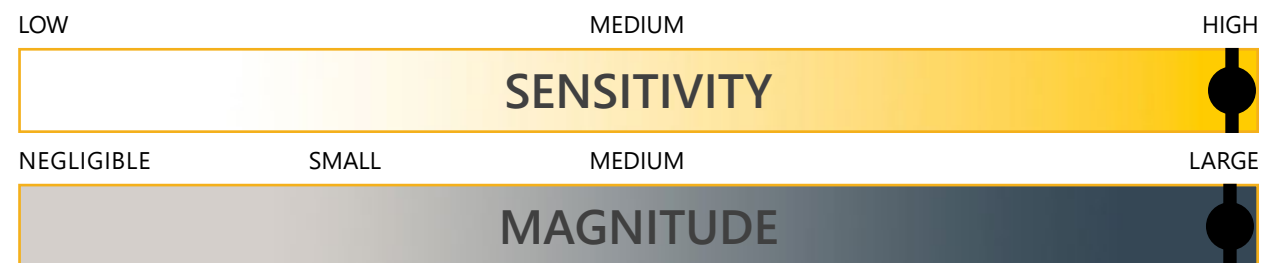


## Existing Landscape/ Seascape Character Description:

This KOP is at the edge of the Residential Beachfront SCA. While the residential component is apparent when viewing north, the southern view is one of natural, undisturbed beachfront. This is a unique vantage point in that the views toward the Project include development, but the natural views do not. This KOP is very near the boundary of the Undeveloped Beach SCA. It features a very wide (up to 500 feet) beach backed by natural dunes, forest, and salt marsh. Some homes are nestled amongst the trees to the north, delineating the line of the National Wildlife Refuge. To the south, the view includes a desolate and unspoiled beach where the waves are left to carve the seascape. The view south has high scenic integrity due to the lack of development. The view northeast is marred by the onset of residential development and a large breakwater that juts out into the ocean. These elements juxtaposed with the natural seascape appear incongruous.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Represents views from residences and is experienced by recreationalists engaged in seascape or ocean viewing. The view is an important part of the user experience.
Value	High	The residents of LBI requested specific views from three locations, including Holgate, suggesting that these represent locations with high value to the residents.
Sensitivity Rating	High	Due to high susceptibility and value, the sensitivity is also high.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	With a vertical occupation of 1.20 degrees the WTGs may occupy up to 2.18 percent of the human vertical field of view (55 degrees). The visual prominence rating is 6, which indicates the Project dominates the view and occupies a significant portion of the field of view.
Geographic Extent	Large	The geographic extent is large as indicated by the theoretical horizon occupation of 60.5 degrees which occupies about 48.8 percent of the human horizontal field of view (124 degrees).
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	Considering the large size and scale, and large geographic extent, the magnitude is Large.

## Project Contrast:

During clear viewing conditions, the WTGs present strong line, form, color, scale contrasts compounded by lighting and motion. At times the Project will also compete strongly with structures and vegetation resulting from the blade motion, lighting, and scale.

Overall Impact  
**Major**



Existing Conditions (Morning)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT04 - Edwin B. Forsythe NWR, Holgate  
Attachment E: Photosimulations; Page 187 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Morning) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT04 - Edwin B. Forsythe NWR, Holgate  
Attachment E: Photosimulations; Page 188 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Morning)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT04 - Edwin B. Forsythe NWR, Holgate  
Attachment E: Photosimulations: Page 189 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Morning) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT04 - Edwin B. Forsythe NWR, Holgate  
Attachment E: Photosimulations: Page 190 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Noon)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Noon) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT04 - Edwin B. Forsythe NWR, Holgate  
Attachment E: Photosimulations: Page 192 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Noon)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Noon) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT04 - Edwin B. Forsythe NWR, Holgate  
Attachment E: Photosimulations: Page 194 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Evening)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT04 - Edwin B. Forsythe NWR, Holgate  
Attachment E: Photosimulations; Page 195 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Evening) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT04 - Edwin B. Forsythe NWR, Holgate  
Attachment E: Photosimulations: Page 196 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

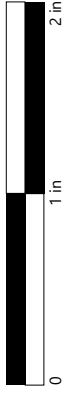




Existing Conditions (Evening)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Evening) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LBT04 - Edwin B. Forsythe NWR, Holgate  
Attachment E: Photosimulations: Page 198 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

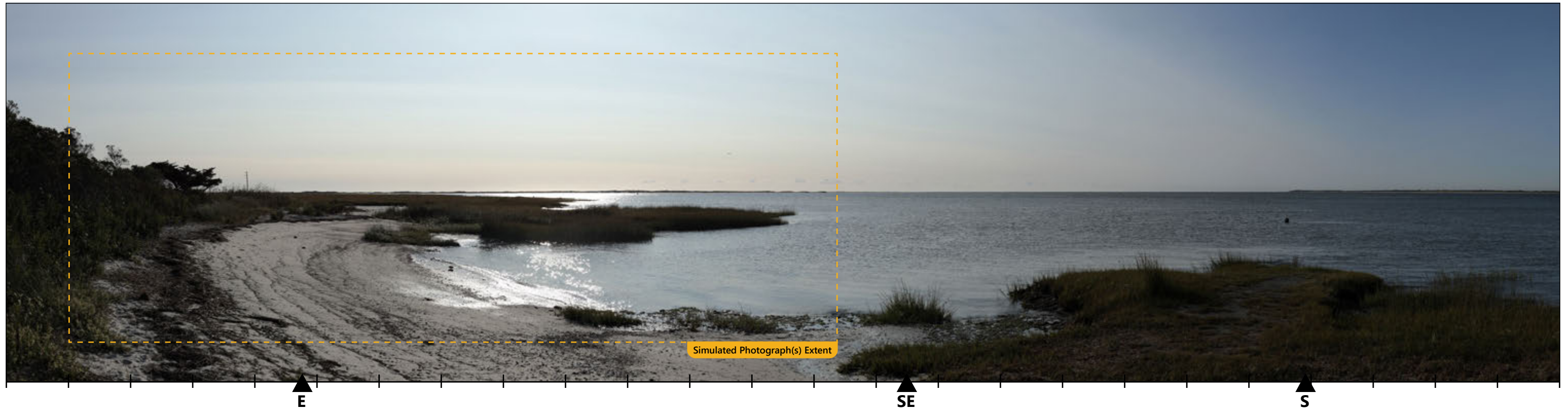


This scale is designed to insure the simulation images are printed at the intended size.

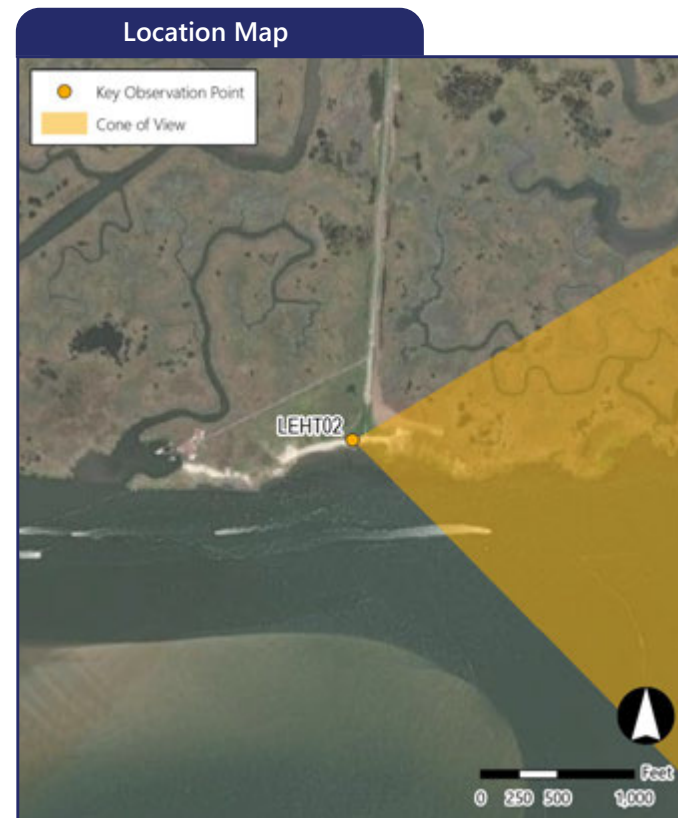
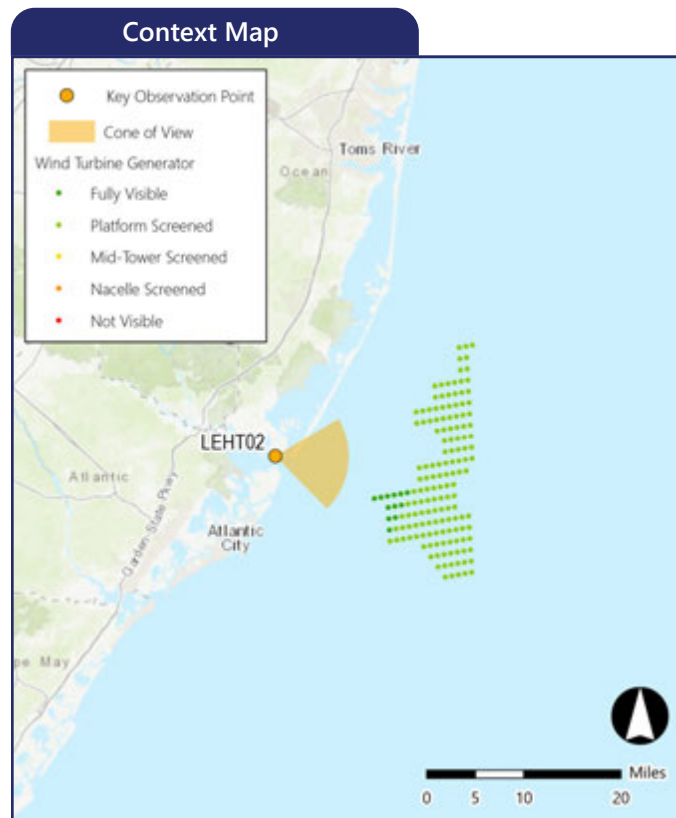


# LEHT02 Great Bay Boulevard WMA/Rutgers Field Station

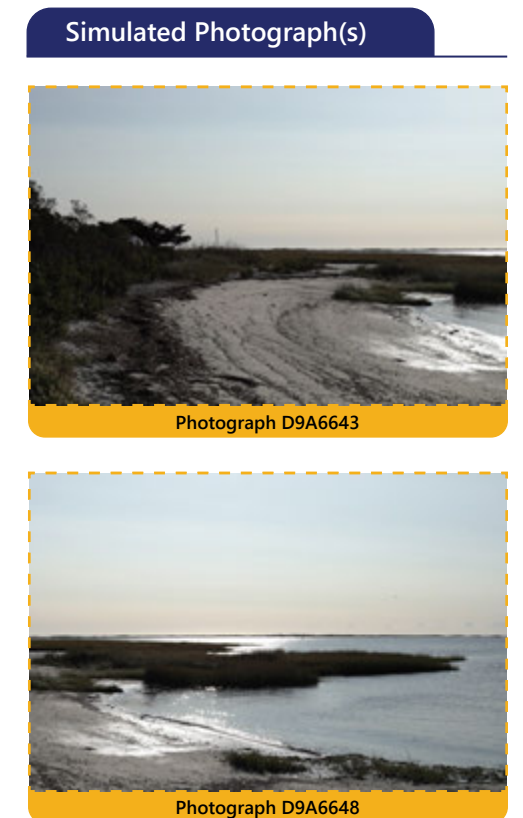
Little Egg Harbor Township, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from the Great Bay Boulevard Wildlife Management Area (WMA)/Rutgers Field Station, panning clockwise from east (left) to south (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



Simulation Information	
Coordinates:	39.50912°N, 74.32037°W
Character Area:	Salt Marsh (SCA)
User Group:	L. Residents, Tourists, Fishing Comm., S. Residents
Direction of View:	East
Distance to Nearest Visible Turbine:	11.1 miles
Sensitive Resource:	Great Bay Boulevard Wildlife Management Area, Little Egg Harbor US Life Saving Station #23, New Jersey Coastal Heritage Trail Area
Environmental Information	
Date Taken:	09/22/2020
Time:	8:32 AM
Temperature:	59°F
Humidity:	49%
Visibility:	10 miles
Wind Direction:	North-northwest
Wind Speed:	12 mph
Conditions Observed:	Fair
Photograph Information	
Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	10.0 feet AMSL
Notes	
Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.	





# LEHT02 Great Bay Boulevard WMA - Rutgers Field Station

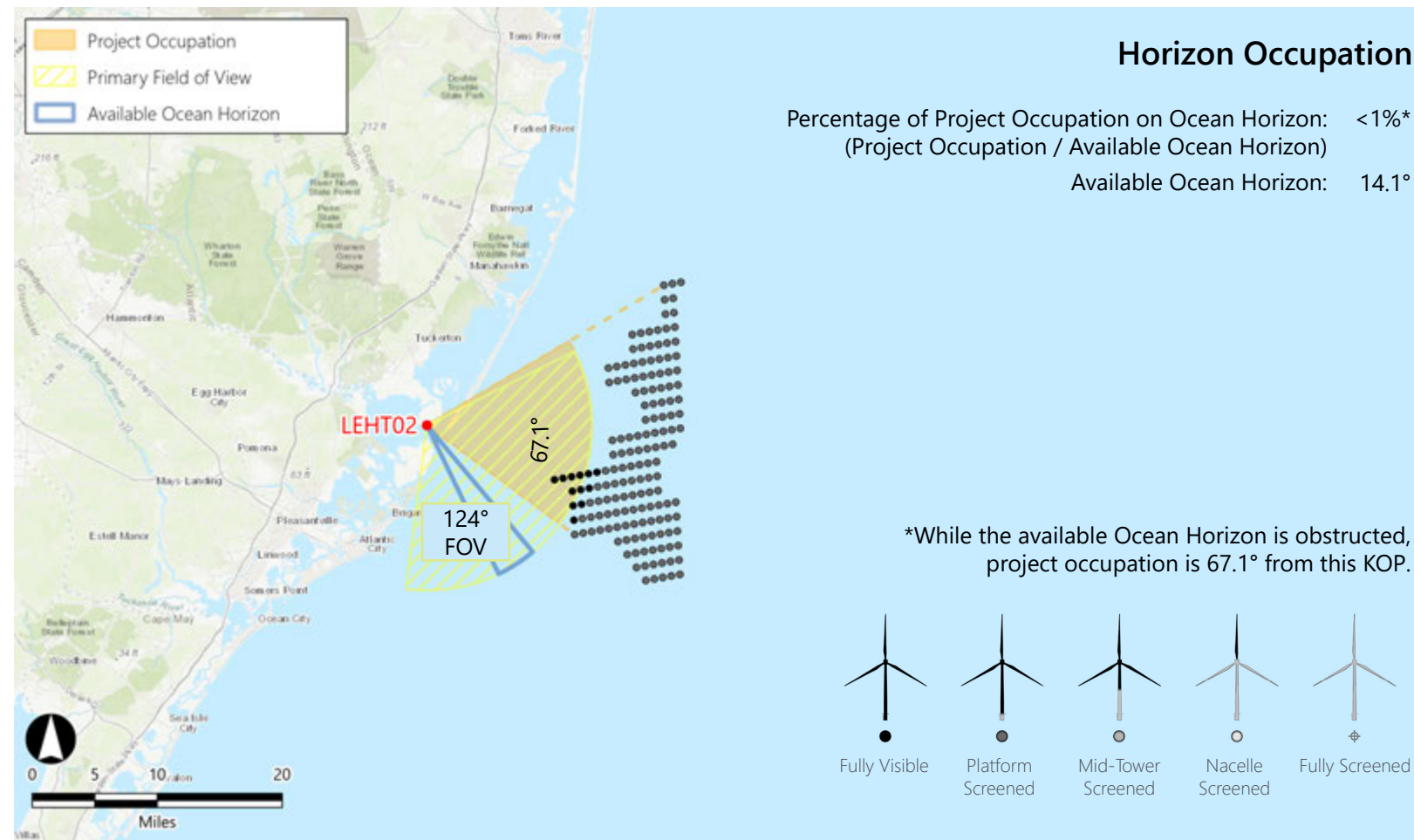
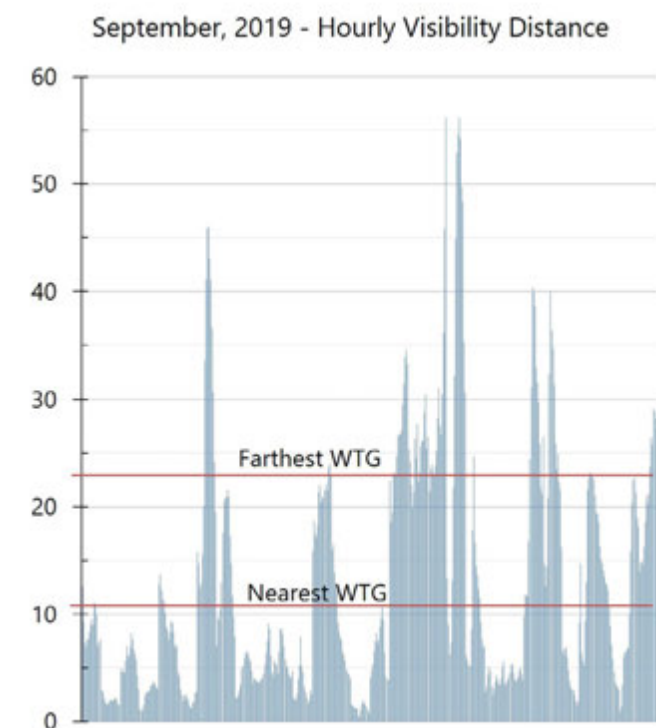
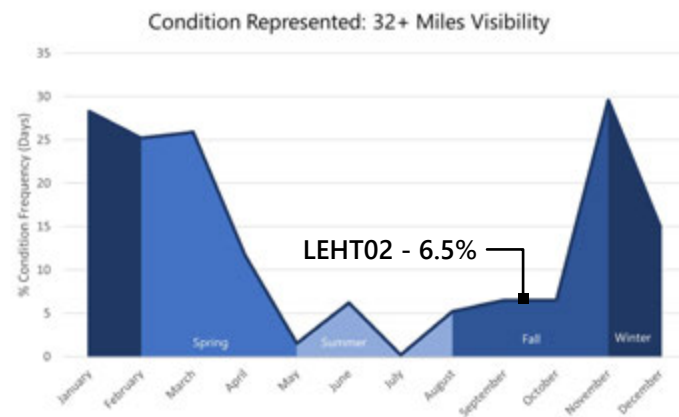
Little Egg Harbor Township, Ocean County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 11.1 miles  
 Camera Height: 10.0 feet  
 User Groups: L. Residents, Tourists, Fishing Comm., S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

**Color Contrast Rating:**

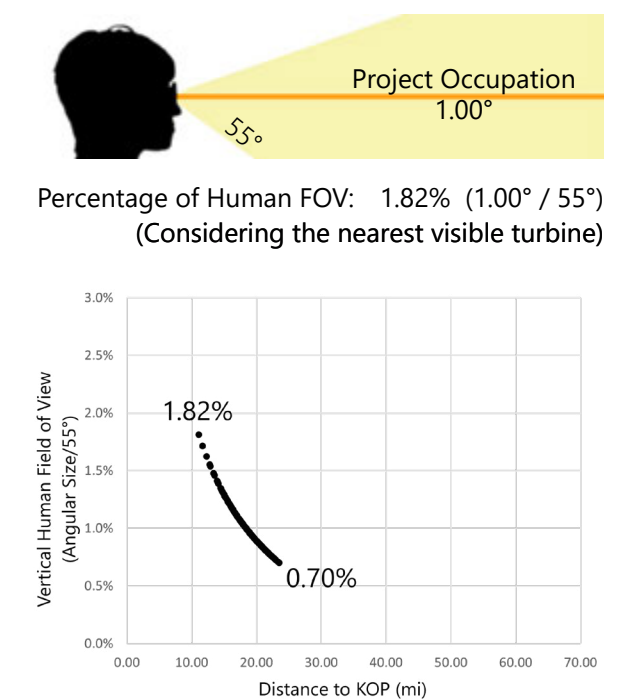
Turbine: 2.0  
 Background: 2.0

Lighting Condition: Back lit  
 Season: Fall  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

KOP SBB01 Illustrates the project from 8.52 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during afternoon conditions.

## Vertical Occupation





# LEHT02 Great Bay Boulevard WMA - Rutgers Field Station

Little Egg Harbor Township, Ocean County, New Jersey

## KOP Information

Primary Field of View/Simulation Direction: East/Southeast

Distance to Closest WTG: 11.1 miles

Camera Height: 10.0 ft

User Groups: Residents, Tourists, Fishing comm.

Horizon Occupation (% HFOV): Large (67.1°, 54.1%)

Vertical Occupation: Large (1.00°, 1.82%)

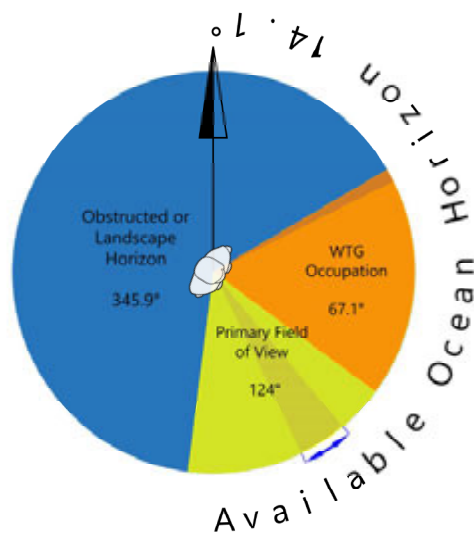
Character Area Type: Seascape

Character Area: Salt Marsh

## Existing View



## Field of View

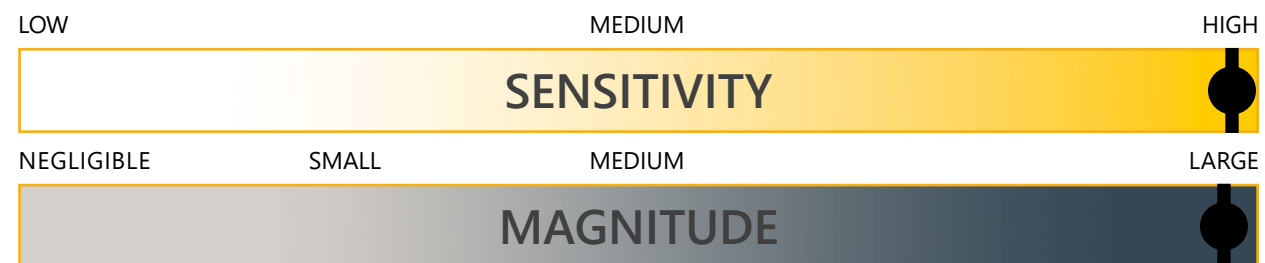


## Existing Landscape/ Seascape Character Description:

This view is from the Salt March SCA, looking over the Inland Bay which receives some local use for fishing and walking and other passive recreation activities. This location is accessed through a short trail through the woods which is served by a small informal roadside parking area. There is no signage to direct the user, but there is a fishing line disposal kiosk at the head of a short, wooded trail at the end of Great Bay Boulevard. The view looks out over some remnant salt marsh across the undeveloped bay and to the barrier islands of Brigantine and LBI. Viewer can catch a very small glimpse of the ocean at the inlet between islands when the waters are rough. The historic lifesaving station (now Rutgers Field Station) sits amid the salt marshes west of the COP. Atlantic City is visible at 10.6 miles distant to the south-southwest.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Represents views experienced by recreationalists engaged in seascape or ocean viewing. The view is an important part of the user experience.
Value	High	This wildlife management area, while not heavily visited, appears to be highly valued by those that do visit. Also, its designation as a WMA will preserve the natural environment and protect it from future alteration or development.
Sensitivity Rating	High	Due to high susceptibility and value, the sensitivity is also high.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	With a vertical occupation of 1.00 degrees the WTGs may occupy up to 1.82 percent of the human vertical field of view (55 degrees). The visual prominence rating is 5, which indicates the Project strongly attracts visual attention.
Geographic Extent	Large	The geographic extent is medium as indicated by the theoretical horizon occupation of 67.1 degrees which occupies about 54.1 percent of the human horizontal field of view (124 degrees).
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	Considering the large size and scale, and large geographic extent, the magnitude is Large.

## Project Contrast:

During clear viewing conditions, the WTGs present strong line, form, scale contrasts compounded by lighting and motion with the landform and open bay. At times the Project will also compete strongly with structures and vegetation resulting from the blade motion, lighting, or scale. Moderate line and form contrasts also occur with the vegetation that is visible on the barrier island and salt marsh. These will also be compounded by light and motion, when visible.

Overall Impact  
**Major**



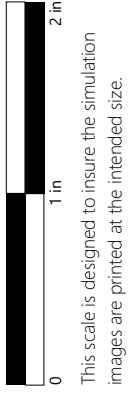
Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LEHT02 - Great Bay Boulevard WMA/Rutgers Field Station  
Attachment E: Photosimulations: Page 202 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LEHT02 - Great Bay Boulevard WMA/Rutgers Field Station  
Attachment E: Photosimulations: Page 203 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LEHT02 - Great Bay Boulevard WMA/Rutgers Field Station  
Attachment E: Photosimulations, Page 204 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: LEHT02 - Great Bay Boulevard WMA/Rutgers Field Station  
Attachment E: Photosimulations: Page 205 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

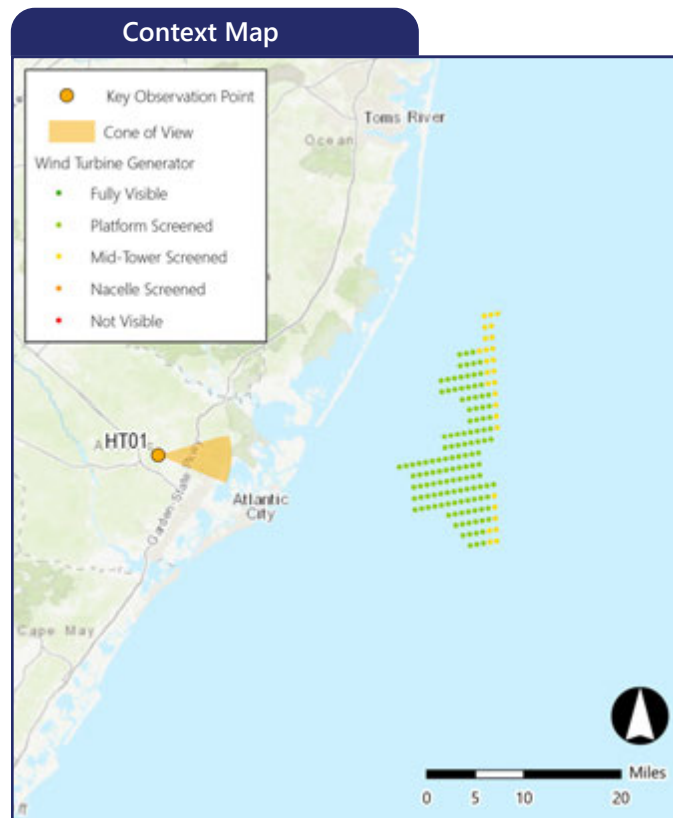


# HT01 Atlantic City Airport

Hamilton Township, Atlantic County, New Jersey



The image above is a +/- 124° panorama photograph from Atlantic 563, panning clockwise from northeast (left) to southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



### Simulation Information

Coordinates:	39.46492°N, 74.59475°W
Character Area:	Industrial
User Group:	Through Travelers
Direction of View:	East
Distance to Nearest Visible Turbine:	24.9 miles
Sensitive Resource:	EJA

### Environmental Information

Date Taken:	08/18/2023
Time:	8:14 AM
Temperature:	74°F
Humidity:	91%
Visibility:	10 miles
Wind Direction:	Northwest
Wind Speed:	5 mph
Conditions Observed:	Mostly Cloudy

### Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	78.5 feet AMSL

### Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

### Simulated Photograph(s)



Photograph ASOW0408



Existing Conditions



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: HT01 Atlantic City Airport  
Attachment E: Photosimulations: Page 208 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: HT01 Atlantic City Airport  
Attachment E: Photosimulations: Page 209 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

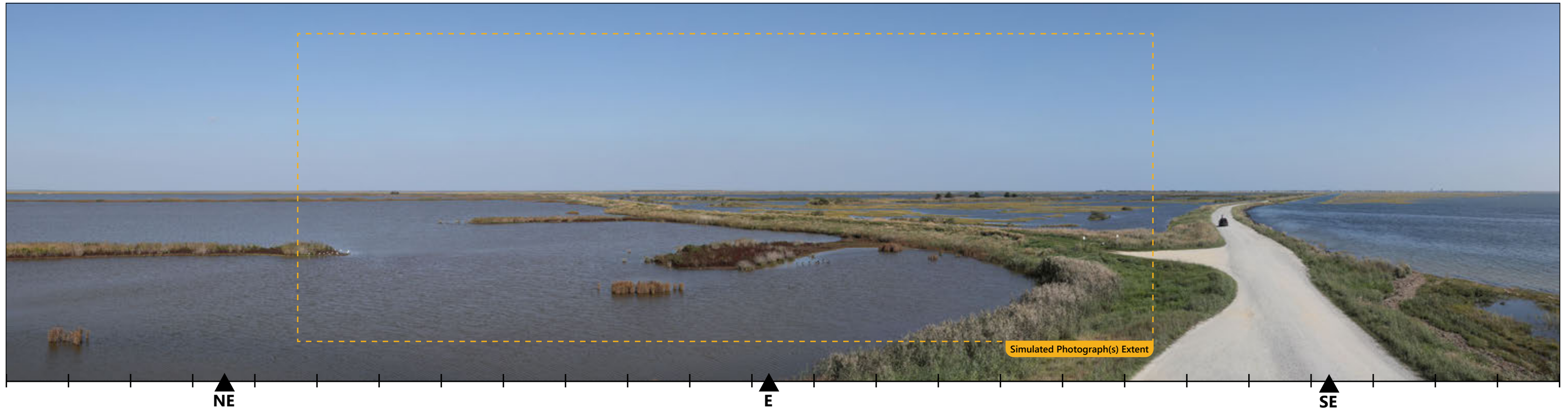


This scale is designed to insure the simulation images are printed at the intended size.

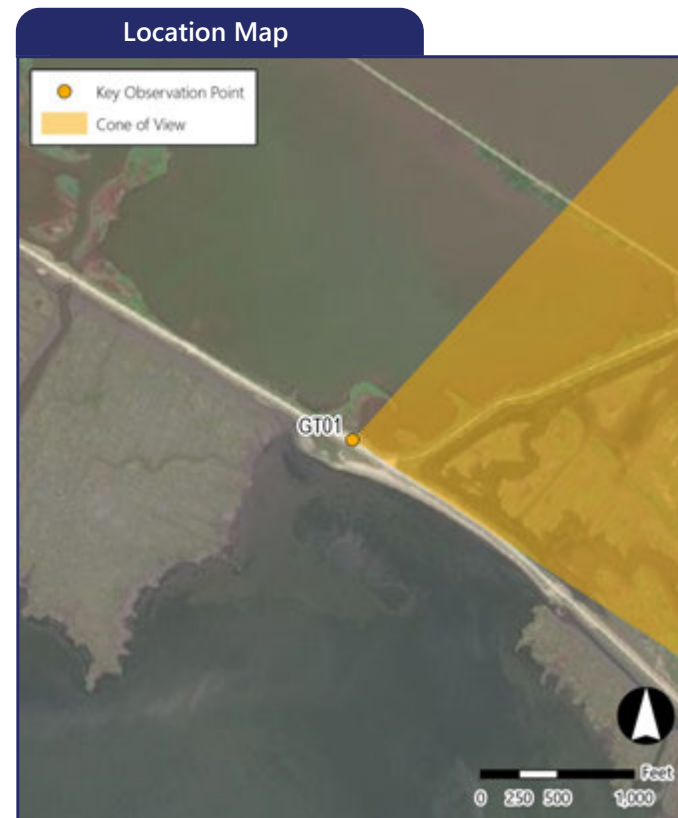
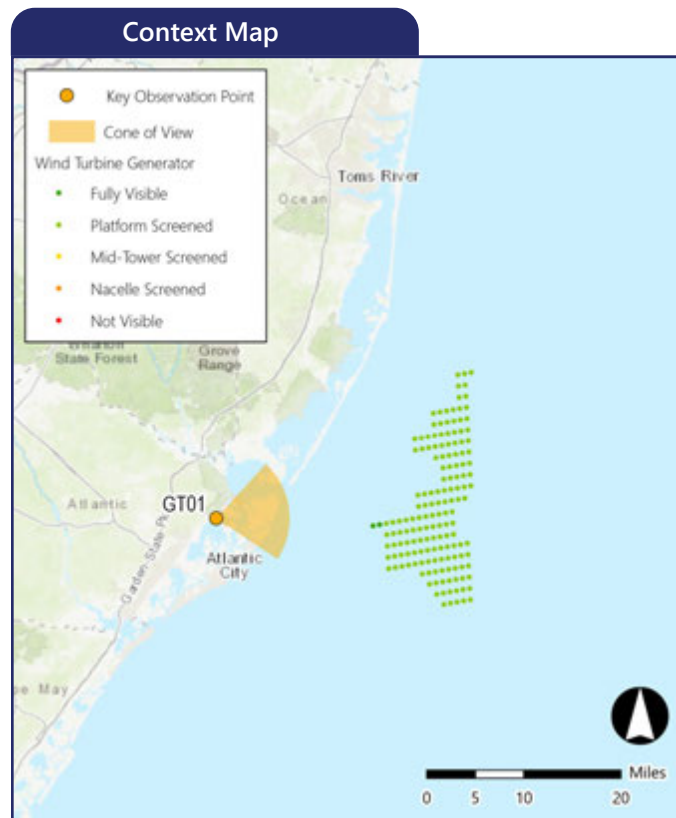


# GT01 Edwin B. Forsythe National Wildlife Refuge

Galloway Township, Atlantic County, New Jersey



The image above is a +/- 124° panorama photograph from the Edwin B. Forsythe National Wildlife Refuge, panning clockwise from north-northeast (left) to south-southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



### Simulation Information

Coordinates:	39.45787°N, 74.43224°W
Character Area:	Salt Marsh (LCA)
User Group:	L. Residents, Tourists, S. Residents
Direction of View:	East
Distance to Nearest Visible Turbine:	16.2 miles
Sensitive Resource:	Edwin B. Forsythe NWR, New Jersey Coastal Heritage Trail Area

### Environmental Information

Date Taken:	09/23/2020
Time:	3:19 PM
Temperature:	80°F
Humidity:	39%
Visibility:	10 miles
Wind Direction:	West-northwest
Wind Speed:	14 mph
Conditions Observed:	Fair

### Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	32.6 feet AMSL

### Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

### Simulated Photograph(s)





# GT01 Edwin B. Forsythe National Wildlife Refuge

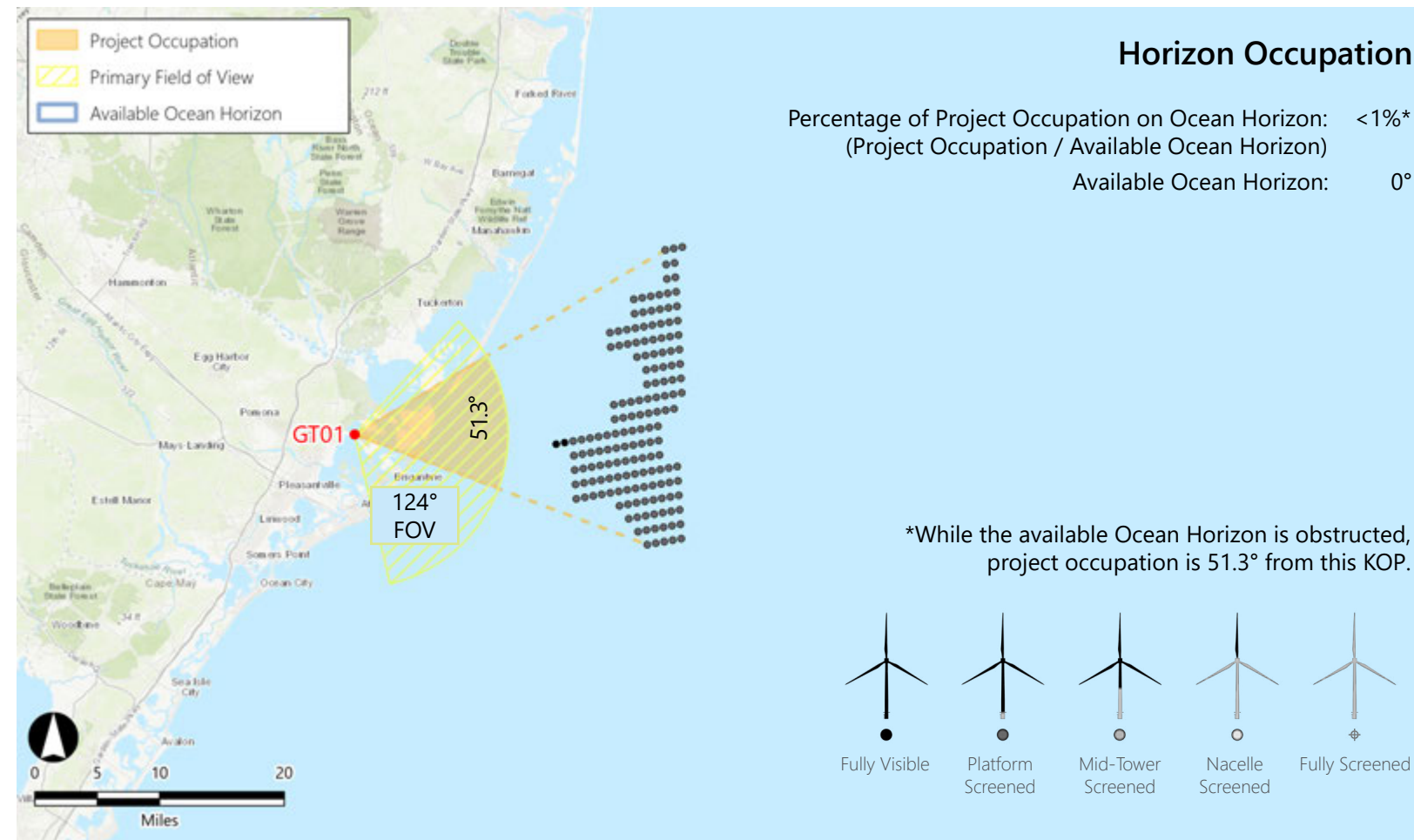
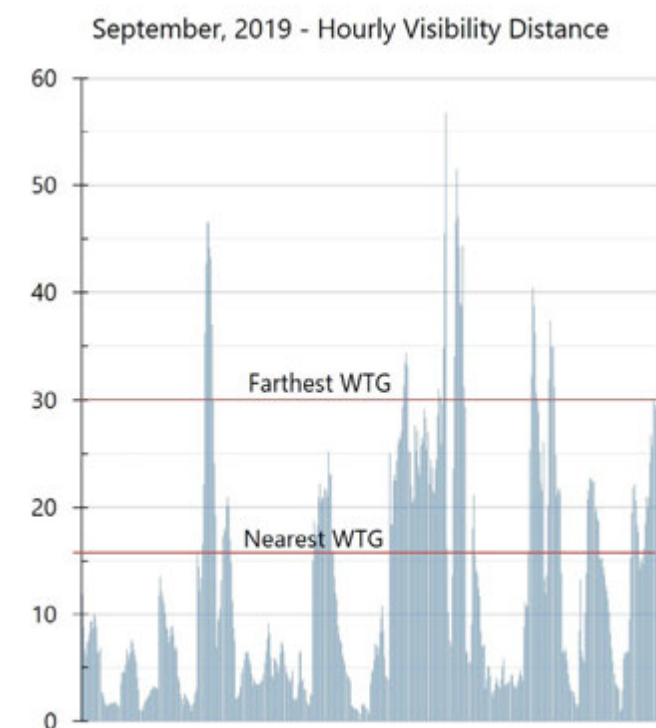
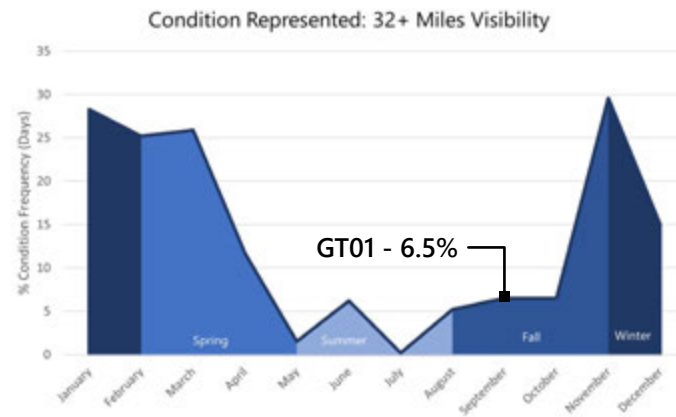
Galloway Township, Atlantic County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 16.2 miles  
 Camera Height: 32.6 feet  
 User Groups: L. Residents, Tourists, S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

### Color Contrast Rating:

Turbine: 1.31  
 Background: 1.31

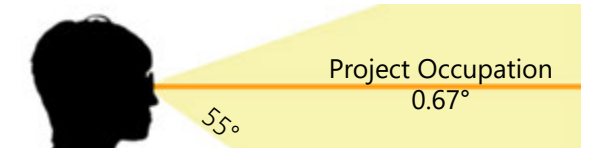
Lighting Condition: Front lit  
 Season: Fall  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

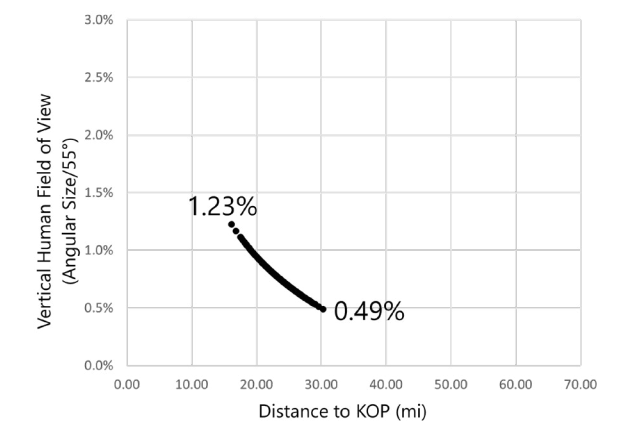
KOP LAT01 illustrates the project from 15.3 miles in the back lit condition. This provides an indication of how the turbines may appear from this KOP during morning conditions.



## Vertical Occupation



Percentage of Human FOV: 1.23% (0.67° / 55°)  
 (Considering the nearest visible turbine)





# GT01 Edwin B. Forsythe National Wildlife Refuge

Galloway Township, Atlantic County, New Jersey

## KOP Information

Primary Field of View/Simulation Direction: East/Southeast

Distance to Closest WTG: 16.2 miles

Camera Height: 32.6 ft

User Groups: Residents, Tourists,

Horizon Occupation (% HFOV): Large (51.3°, 41.4%)

Vertical Occupation: Large (0.67°, 1.23%)

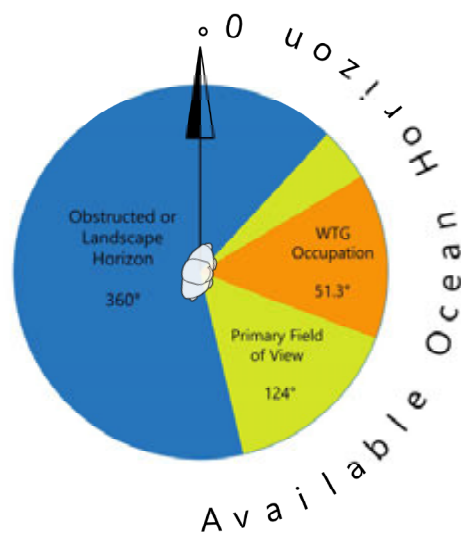
Character Area Type: Landscape

Character Area: Salt Marsh

## Existing View



## Field of View



## Existing Landscape/ Seascape Character

### Description:

This view is from the Edwin B. Forsythe NWR in Galloway Township, New Jersey in the Salt Marsh LCA. This NWR protects more than 48,000 acres of southern New Jersey coastal habitats, primarily salt marsh interspersed with shallow coves and bays. The refuge's location in one of the Atlantic Flyways most active flight paths makes it an important link in seasonal bird migration. The refuge includes several scenic trails that pass through coastal wetlands, freshwater ponds, early successional fields, and woodlands. The refuge offers a non-motorized boat launch on Lily Lake, and motorized boat access at Scott's Landing boat launch. The refuge also features a Visitor Information Center, from which visitors can access the Wildlife Drive, an 8-mile auto tour through one of the best birding areas in the region. The Wildlife Drive features two wildlife observational towers (one of which is this KOP), a boardwalk extending over the salt marsh with views of the Atlantic City skyline, and links to a network of trails, providing opportunities for hiking, wildlife observation, and photography.

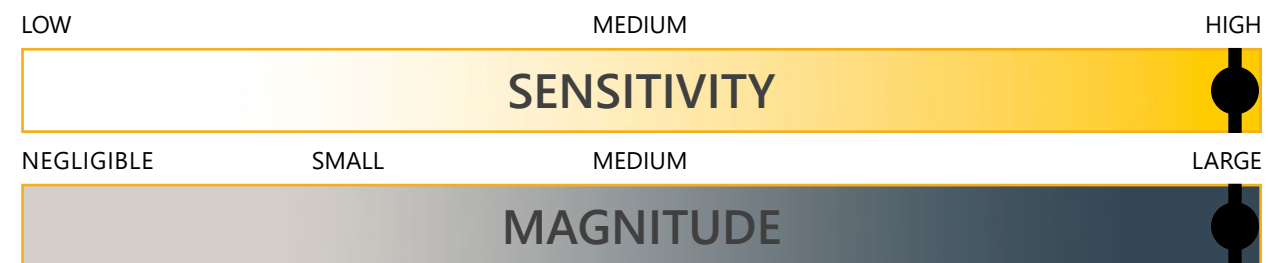
The open water, low vegetation, and broad expanse of unbroken sky give the view an open, panoramic character. The landscape appears largely undeveloped, giving this view high scenic integrity.

## Project Contrast:

During clear viewing conditions, the WTGs present moderate line and form contrast with landform and the inland bay/salt marsh. Turbine motion and lighting will result in moderate contrast, and are likely to attract viewer attention, when visible. Due to the small number of structures on the barrier island, there is minimal scale contrast, but moderate scale contrast may occur when viewed on plane with Barnegat lighthouse and a water tower.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Represents views experienced by recreationalists engaged in landscape and wildlife. The view is an important part of the user experience. In fact, the platform is specifically situated for the purpose of the elevated landscape view.
Value	High	Rating completed during the spring migration and the area seemed to have a moderate number of viewers during the weekday. The observation tower was lightly used and most users appear to drive the roads and stop occasionally to photograph. The roads would not support very large crowds of people.
Sensitivity Rating	High	Due to high susceptibility and value, the sensitivity is also high.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	With a vertical occupation of 0.67 degrees the WTGs may occupy up to 1.23 percent of the human vertical field of view (55 degrees). The visual prominence rating is 4, which indicates the Project is visible, but not dominant to existing features in the view.
Geographic Extent	Large	The geographic extent is large as indicated by the theoretical horizon occupation of 51.3 degrees which occupies about 41.4 percent of the human horizontal field of view (124 degrees).
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	Considering the large size and scale, and geographic extent, the magnitude is also large.

Overall Impact  
**Major**



Existing Conditions



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



**Atlantic Shores Offshore Wind: North (OCS-A 0549)**  
**Outer Continental Shelf – OCS-A 0549**

Key Observation Point: GT01 - Edwin B. Forsythe National Wildlife Refuge  
Attachment E: Photosimulations: Page 214 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: GT01 - Edwin B. Forsythe National Wildlife Refuge  
Attachment E: Photosimulations; Page 216 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

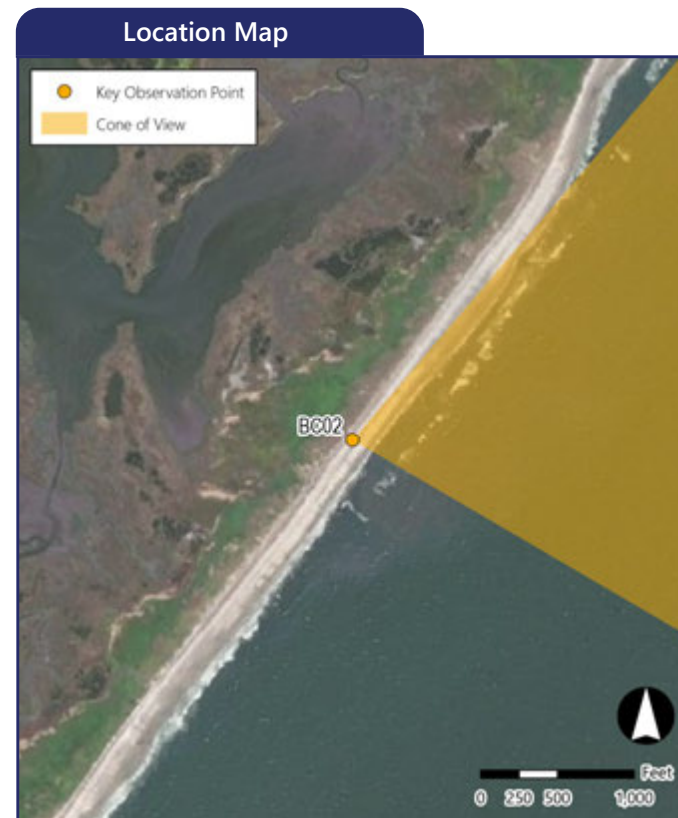
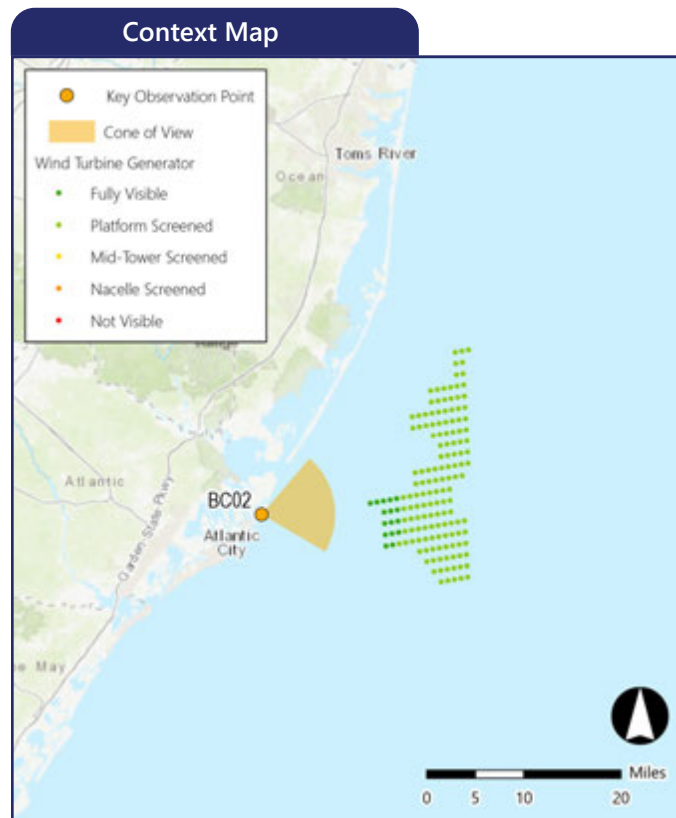


# BC02 North Brigantine Natural Area

Brigantine City, Atlantic County, New Jersey



The image above is a +/- 124° panorama photograph from the North Brigantine Natural Area, panning clockwise from northeast (left) to south (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



Simulation Information	
Coordinates:	39.42954°N, 74.33968°W
Character Area:	Undeveloped Beach, Seascape (SCA)
User Group:	L. Residents, Tourists, Fishing Comm., S. Residents
Direction of View:	East
Distance to Nearest Visible Turbine:	11.3 miles
Sensitive Resource:	North Brigantine State Natural Area, New Jersey Coastal Heritage Trail Area
Environmental Information	
Date Taken:	08/18/2020
Time:	12:00 PM
Temperature:	84°F
Humidity:	53%
Visibility:	10 miles
Wind Direction:	West-southwest
Wind Speed:	3 mph
Conditions Observed:	Fair
Photograph Information	
Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	11.1 feet AMSL
Notes	
Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.	





# BC02 North Brigantine Natural Area

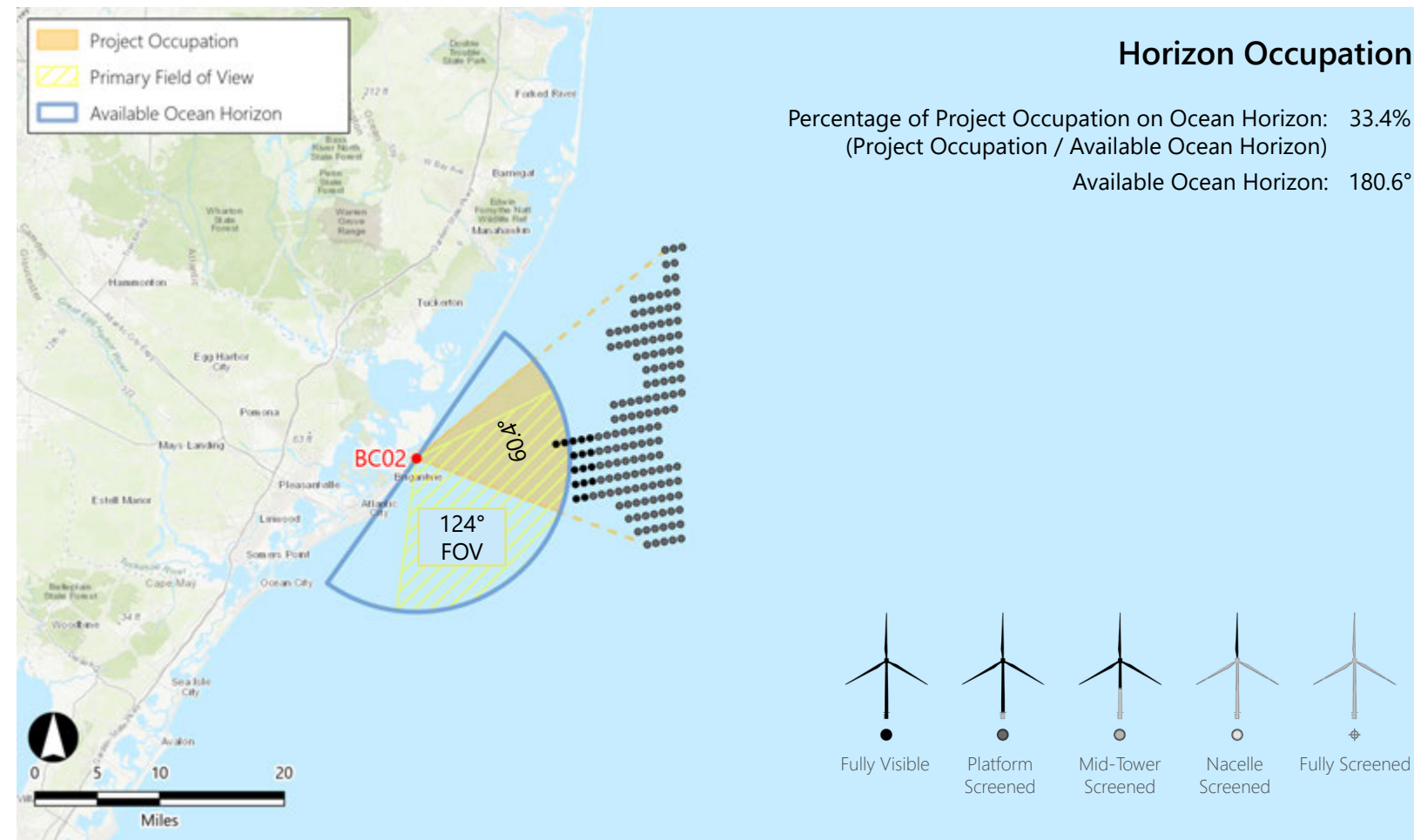
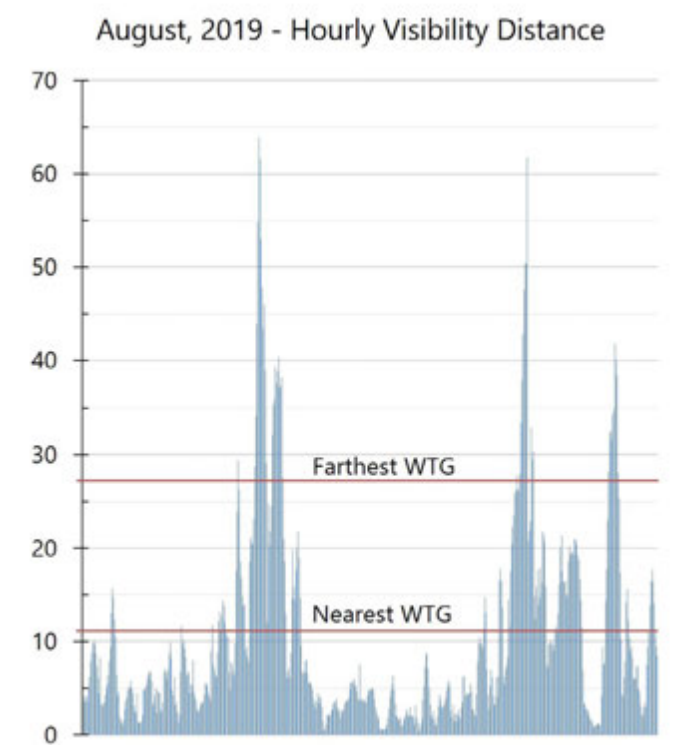
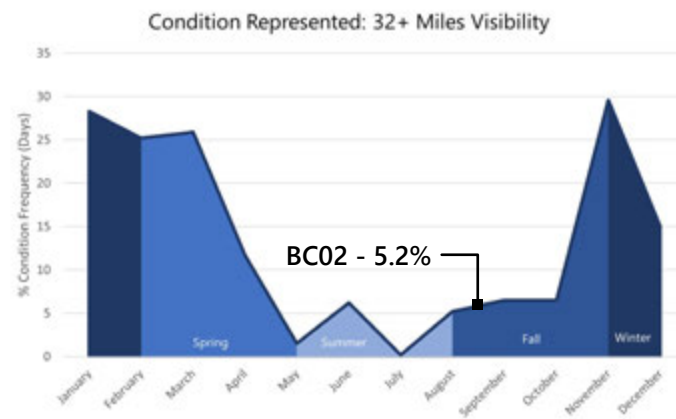
Brigantine City, Atlantic County, New Jersey

## KOP Information

Primary Field of View: Southeast  
 Distance to Closest WTG: 11.3 miles  
 Camera Height: 11.1 feet  
 User Groups: L. Residents, Tourists, Fishing Comm., S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

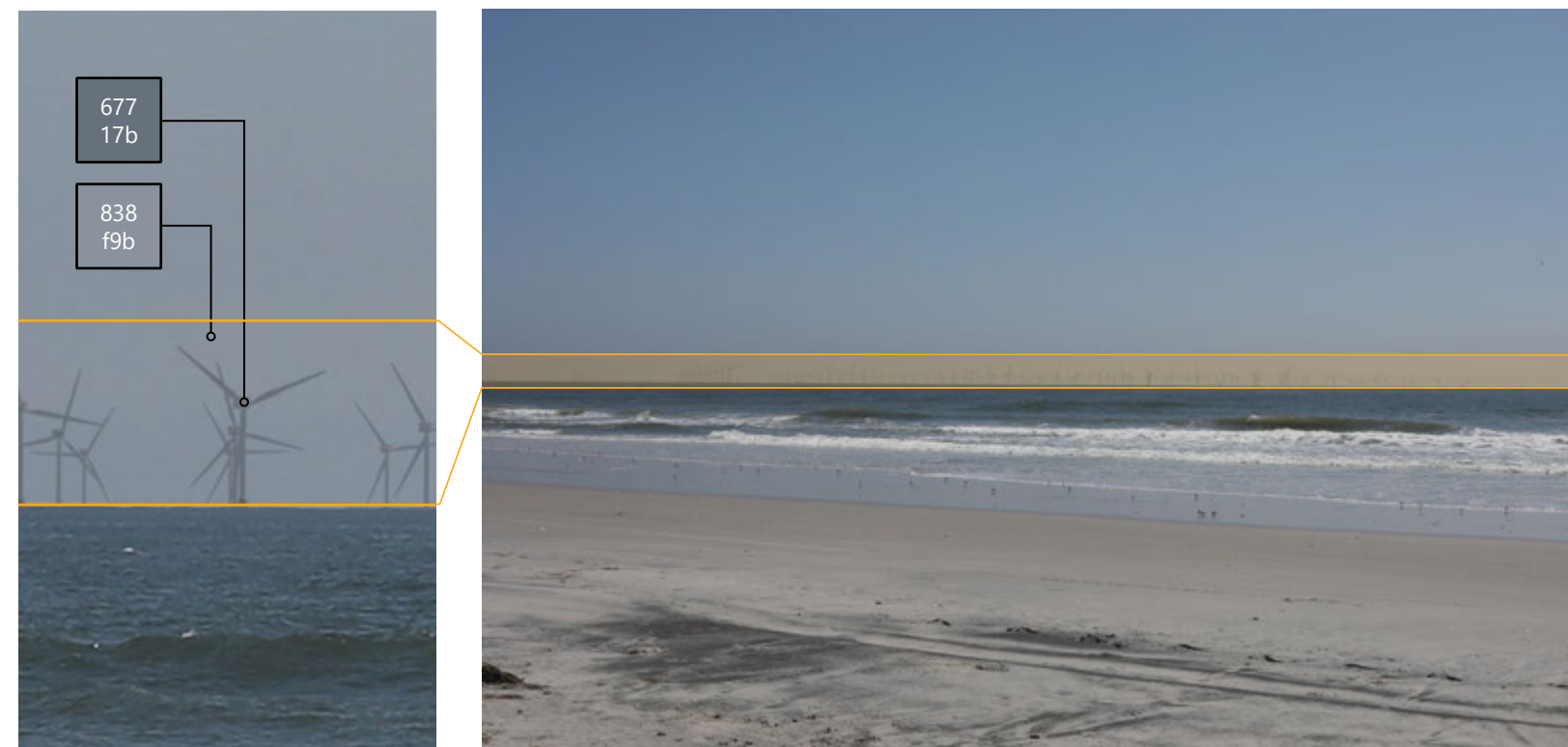
### Color Contrast Rating:

Turbine [dark grey square] } 1.5  
 Background [light grey square]

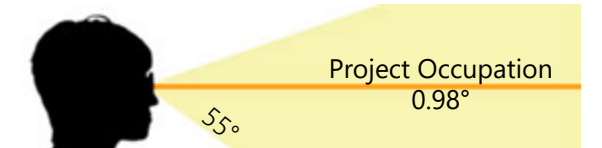
Lighting Condition: Side lit  
 Season: Summer  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

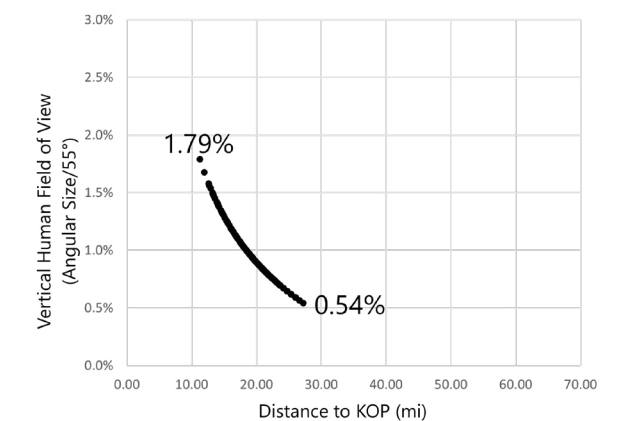
KOP BLB02 illustrates the project from 10.07 miles in the back lit condition. This provides an indication of how the turbines may appear from this KOP during midday conditions.



## Vertical Occupation



Percentage of Human FOV: 1.79% (0.98° / 55°)  
 (Considering the nearest visible turbine)





# BC02 North Brigantine Natural Area

Brigantine City, Atlantic County, New Jersey

## KOP Information

Primary Field of View/Simulation Direction: East/Southeast

Distance to Closest WTG: 11.3 miles

Camera Height: 11.1 ft

User Groups: Residents, Tourists, Fishing Comm.

Horizon Occupation (% HFOV): Large (60.4°, 48.7%)

Vertical Occupation: Large (0.98°, 1.79%)

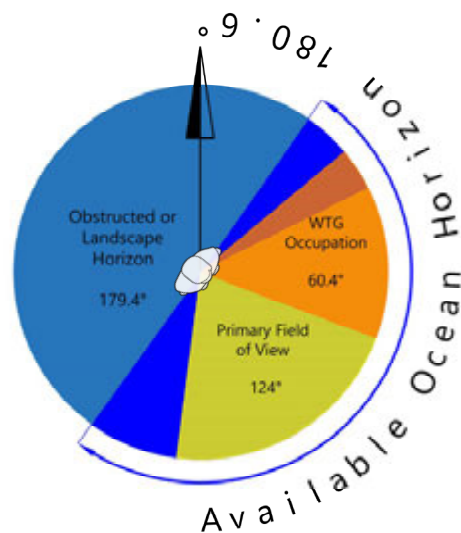
Character Area Type: Seascape

Character Area: Undeveloped Beach

## Existing View



## Field of View



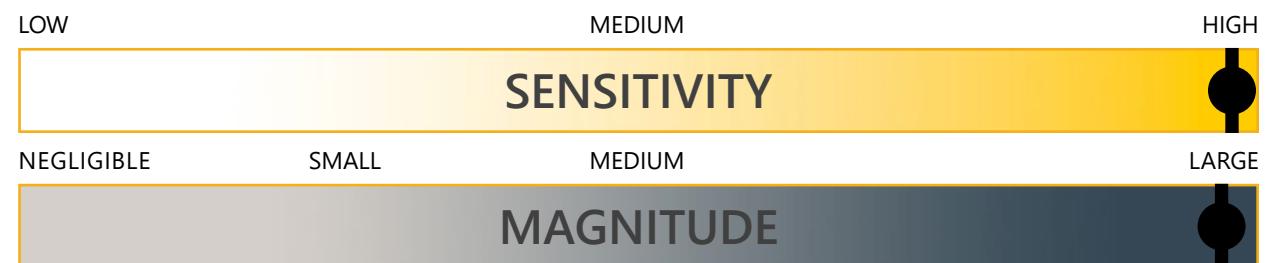
## Existing Landscape/ Seascape Character

### Description:

This view is from the Undeveloped Beach SCA in North Brigantine State Natural Area, between developed portions of the City of Brigantine, New Jersey and Brigantine Inlet. The North Brigantine Natural Area was acquired by the state in 1967 and is managed by the New Jersey Department of Environmental Protection. The view to East includes an undeveloped sandy beach at low tide. An expanse of relatively level exposed sand extends from the wrack line in the immediate foreground to a line of breaking waves in the middle ground. Shorebirds can be seen on the beach at the water's edge. Beyond the surf line, the dark blue gray ocean extends without interruption to the horizon line where it meets the light blue sky. The action and texture of the breaking waves in the middle ground contrast with the smoothness of the sand and sky. The existing view lacks any man-made features other than some old pilings at the water's edge outside the selected field of view (to the right). This, along with the lack of people on the beach, gives the view an undeveloped natural character.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Represents views experienced by recreationalists engaged in seascape and ocean viewing. The view is an important part of the user experience.
Value	High	While not a high number of users, the state protects this regionally rare undeveloped area.
Sensitivity Rating	High	Due to high susceptibility and value, the sensitivity is also high.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	With a vertical occupation of 0.98 degrees the WTGs may occupy up to 1.79 percent of the human vertical field of view (55 degrees). The visual prominence rating is 5, which indicates the Project may strongly attract visual attention.
Geographic Extent	Large	Based on the horizon occupation of 60.4 degrees the Project occupies 48.7 percent of the human field of view, some of which occurs in the primary viewing direction, resulting in a large geographic extent.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	Considering the large size and scale, and large geographic extent, the magnitude is also large.

## Project Contrast:

During clear viewing conditions, the WTGs present strong line, form, and color contrast with the ocean. Turbine motion, lighting, and scale will also result in strong contrast with the Ocean and landform.

Overall Impact  
**Major**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BC02 - North Brigantine Natural Area  
Attachment E: Photosimulations; Page 220 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BC02 - North Brigantine Natural Area  
Attachment E: Photosimulations: Page 221 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BC02 - North Brigantine Natural Area  
Attachment E: Photosimulations; Page 222 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: BC02 - North Brigantine Natural Area  
Attachment E: Photosimulations; Page 223 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

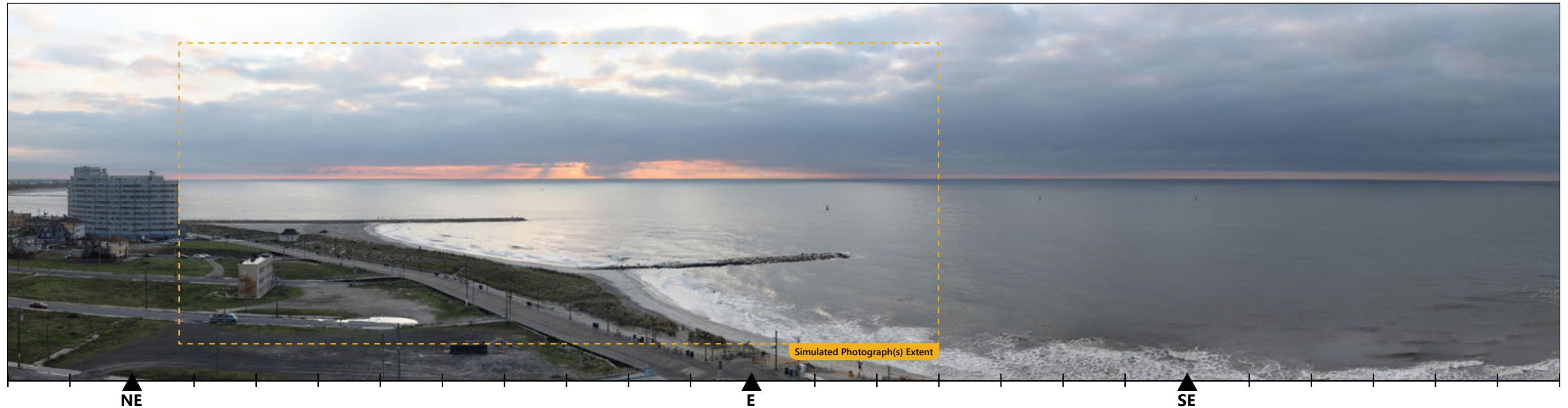


This scale is designed to insure the simulation images are printed at the intended size.

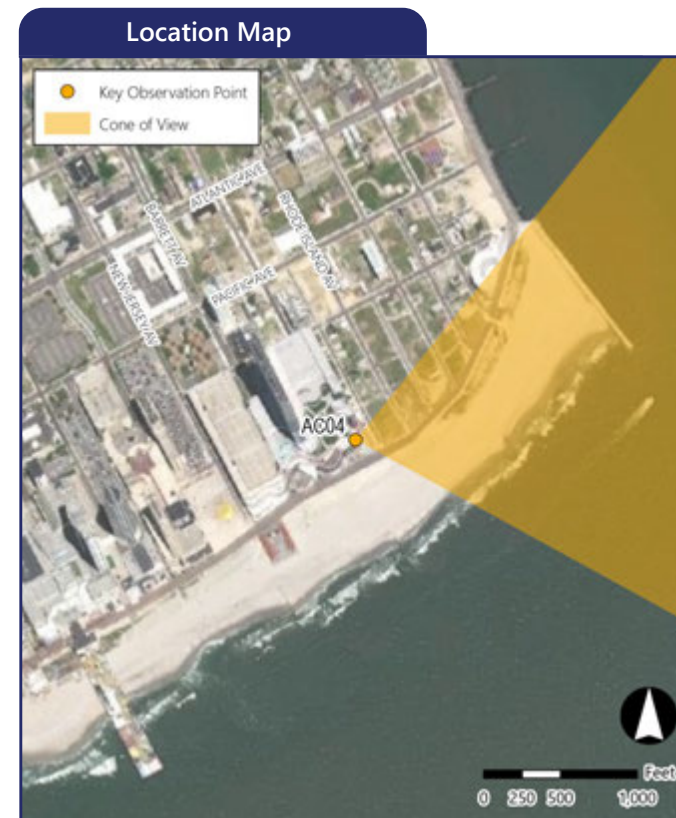
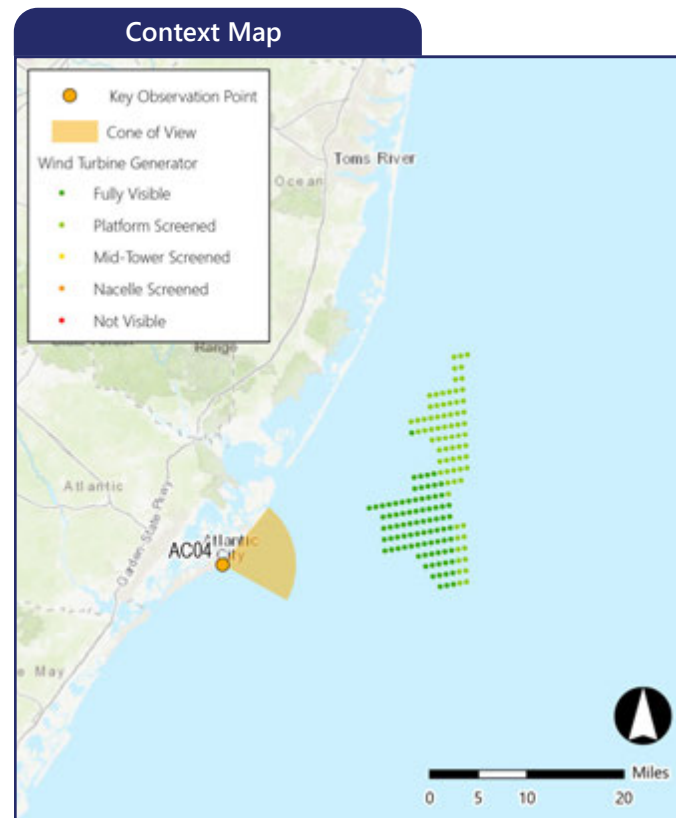


# AC04 Ocean Casino Resort – Sky Garden

Atlantic City, Atlantic County, New Jersey



The image above is a +/- 124° panorama photograph from the Ocean Casino Resort - Sky Garden, panning clockwise from northeast (left) to southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



### Simulation Information

Coordinates:	39.36225°N, 74.41353°W
Character Area:	Atlantic City, Seascapes (SCA)
User Group:	L. Residents, Tourists, S. Residents
Direction of View:	East-northeast
Distance to Nearest Visible Turbine:	16.2 miles
Sensitive Resource:	Atlantic City Beach, New Jersey Coastal Heritage Trail Area, Census Tract 19, Census Tract 24, EJA

### Environmental Information

Date Taken:	08/18/2020
Time:	6:31 AM
Temperature:	70°F
Humidity:	93%
Visibility:	10 miles
Wind Direction:	Calm
Wind Speed:	0 mph
Conditions Observed:	Mostly Cloudy

### Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	117.3 feet AMSL

**Notes**

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.





# AC04 Ocean Casino Resort – Sky Garden

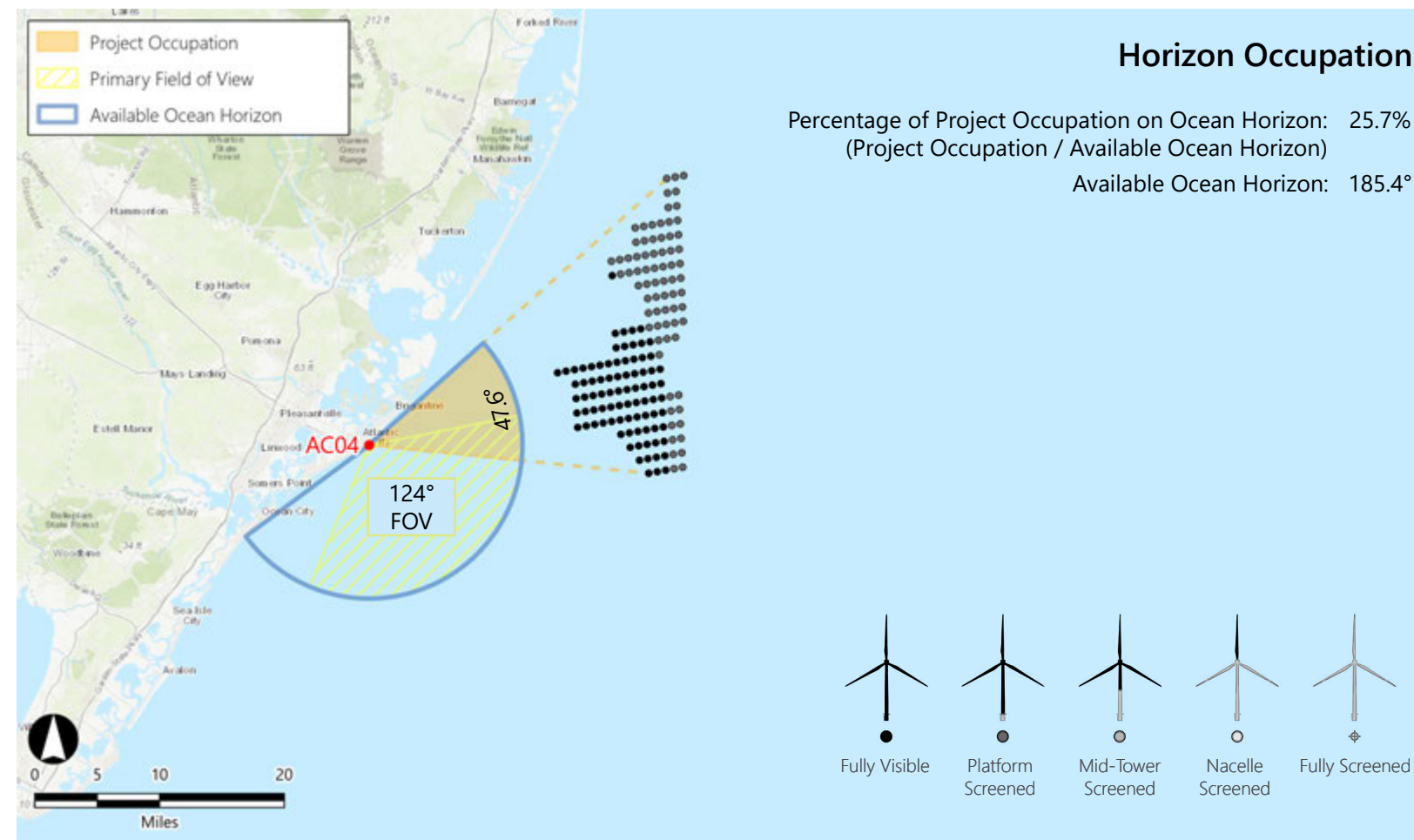
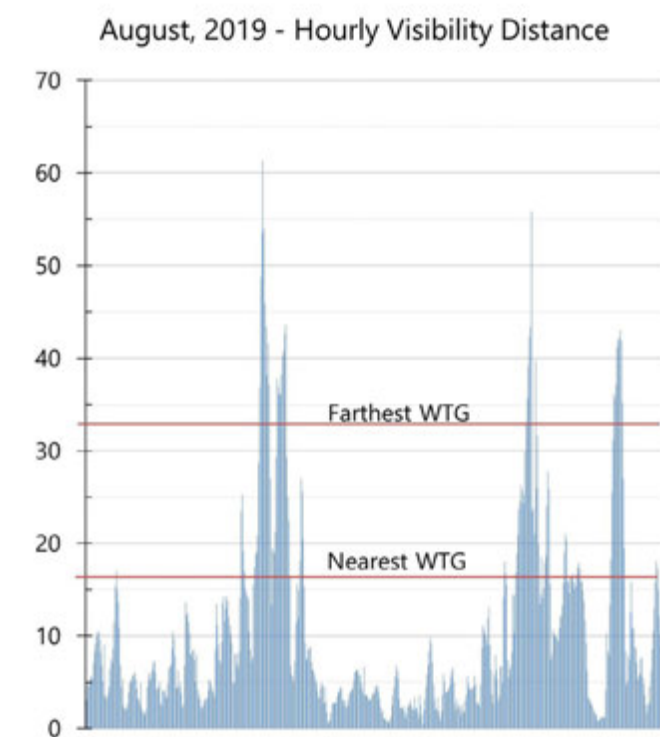
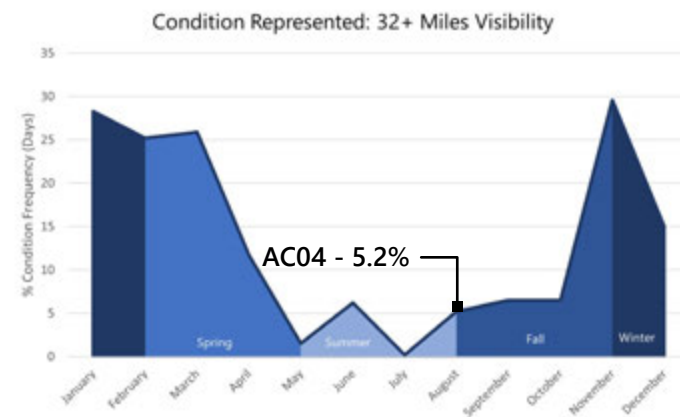
Atlantic City, Atlantic County, New Jersey

## KOP Information

Primary Field of View:	Southeast
Distance to Closest WTG:	16.2 miles
Camera Height:	117.3 feet
User Groups:	L. Residents, Tourists, S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

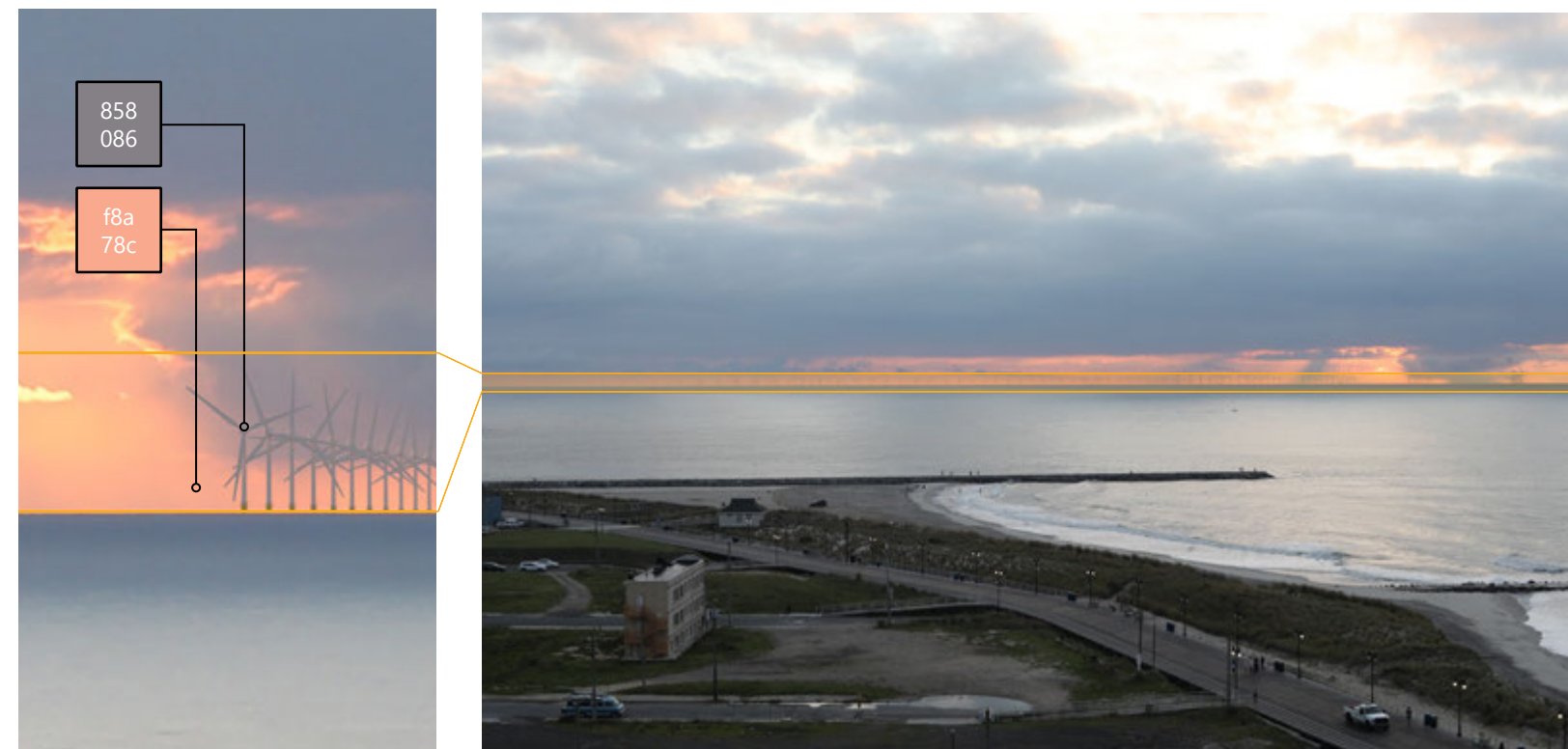
### Color Contrast Rating:



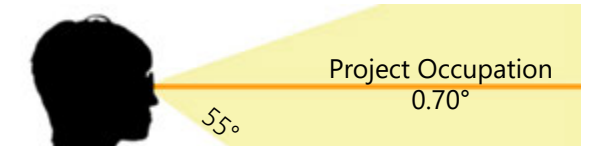
Lighting Condition:	Back Lit
Season:	Summer
Sky Condition:	Mostly Cloudy
Atmospheric Condition:	> 10 Miles

## SIMILAR VIEWING PARAMETERS:

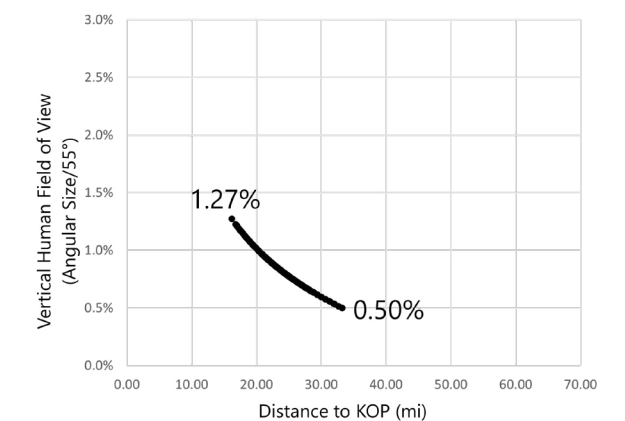
KOP AC02 illustrates the project from 17.67 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during midday conditions.



## Vertical Occupation



Percentage of Human FOV: 1.27% (0.70° / 55°)  
(Considering the nearest visible turbine)





# AC04 Ocean Casino Resort – Sky Garden

Atlantic City, Atlantic County, New Jersey

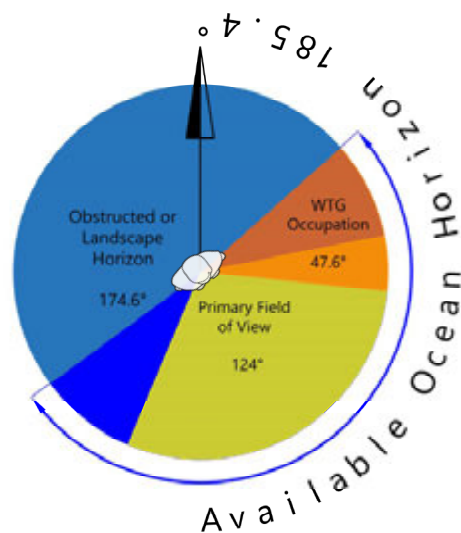
## KOP Information

Primary Field of View/Simulation Direction:	Southeast/East
Distance to Closest WTG:	16.2 miles
Camera Height:	117.3 ft
User Groups:	Residents, Tourists
Horizon Occupation (% HFOV):	Large (47.6°, 38.4%)
Vertical Occupation:	Large (0.70°, 1.27%)
Character Area Type:	Seascape
Character Area:	Atlantic City

## Existing View



## Field of View



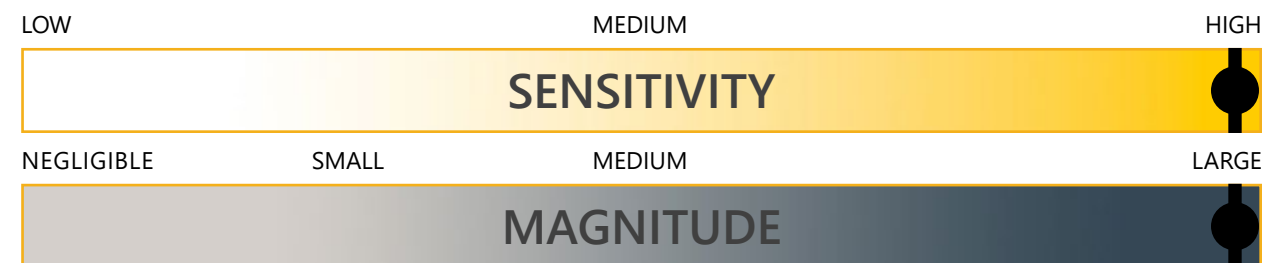
## Existing Landscape/ Seascape Character

### Description:

Although viewed from an urbanized setting, the existing view is a relatively pristine, uninterrupted vista of the open ocean that will be experienced by visitors to the casino's Sky Garden. The orange band of color in the sky and its contrast with the dark ocean, along with the general lack of competing landscape features, enhances the expansive feel of the view and draws the viewer's eye to the horizon. Although viewed from an urbanized setting, the existing view is a relatively pristine, uninterrupted vista of the open ocean that will be experienced by visitors to the casino's Sky Garden. The orange band of color in the sky and its contrast with the dark ocean, along with the general lack of competing landscape features, enhances the expansive feel of the view and draws the viewer's eye to the horizon. Despite the high integrity of the ocean and horizon, the overall view has moderate scenic integrity due to the lack of orderly development around the Casino. Empty lots surrounded by chain link fence, large stone groins, standalone buildings with highly variable, and uninteresting architectural styles detract from view.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	The view is an important part of the user experience.
Value	High	This is a highly publicized and important part of the tourism industry and the Ocean Casino along with its patrons appreciate and value the experience offered by the Sky Garden.
Sensitivity Rating	High	Due to high susceptibility and value, the sensitivity is also high.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Large	With a vertical occupation of 0.70 degrees the WTGs may occupy up to 1.27 percent of the human vertical field of view (55 degrees). The visual prominence rating is 4, which indicates the Project will be plainly visible, but not dominant.
Geographic Extent	Large	The geographic extent is large as indicated by the theoretical horizon occupation of 47.6 degrees which occupies about 38.4 percent of the human horizontal field of view (124 degrees).
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Large	Considering the large size, scale, and geographic extent, the magnitude is also large.

## Project Contrast:

During clear viewing conditions, the WTGs present strong line, form, and color contrast with the ocean. Turbine motion, lighting, and scale will also result in strong contrast with the ocean. Considering landform, the WTG present moderate scale, line, form, and color contrast and motion could result in a diversion of viewer attention. The Project occupation is not aligned with the primary field of view, but does overlap to a small degree. Particularly during sunrise, when viewership is very low.

Overall Impact  
**Major**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 227 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 228 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations; Page 229 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 230 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Night)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 231 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



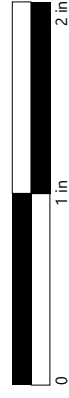
Photosimulation (Night) (OCS-A 0549)



**Atlantic Shores Offshore Wind: North (OCS-A 0549)**  
**Outer Continental Shelf – OCS-A 0549**

Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 232 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Night)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Night) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 234 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

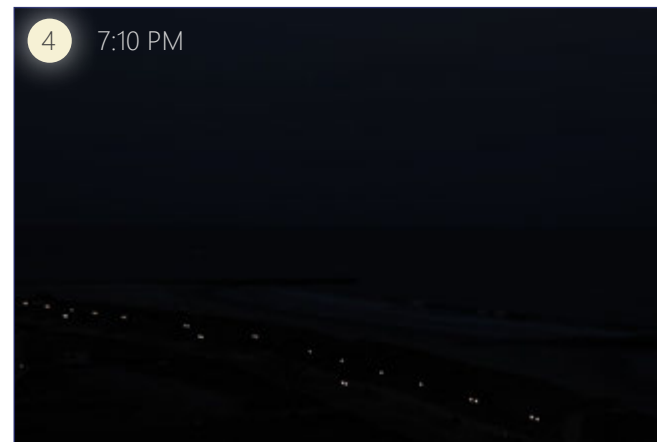
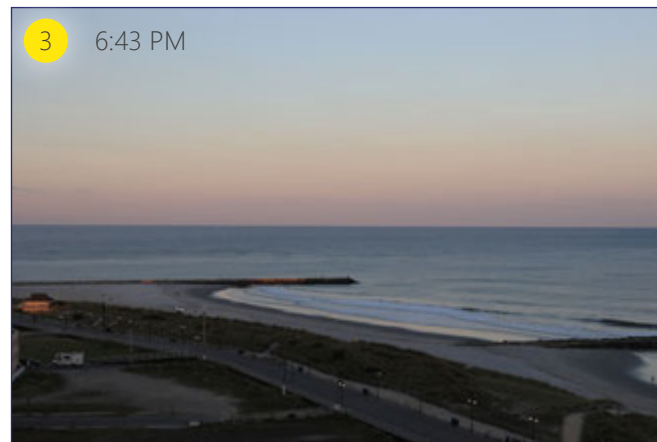
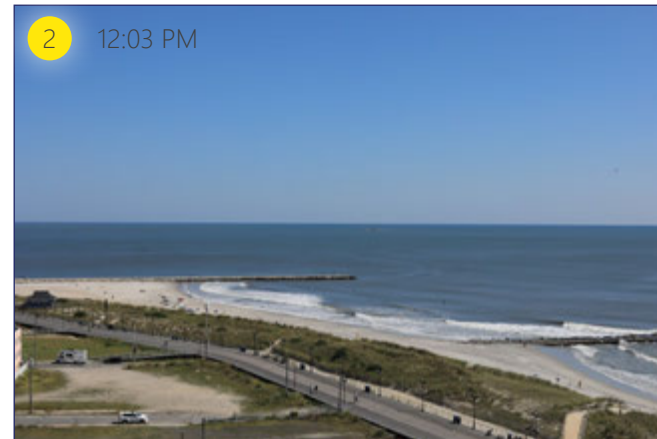
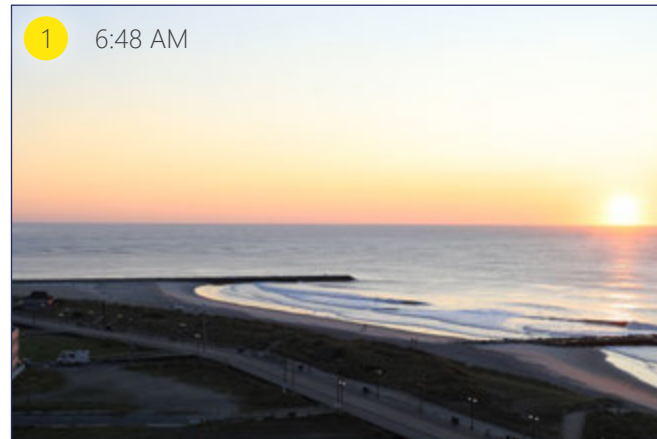


This scale is designed to insure the simulation images are printed at the intended size.

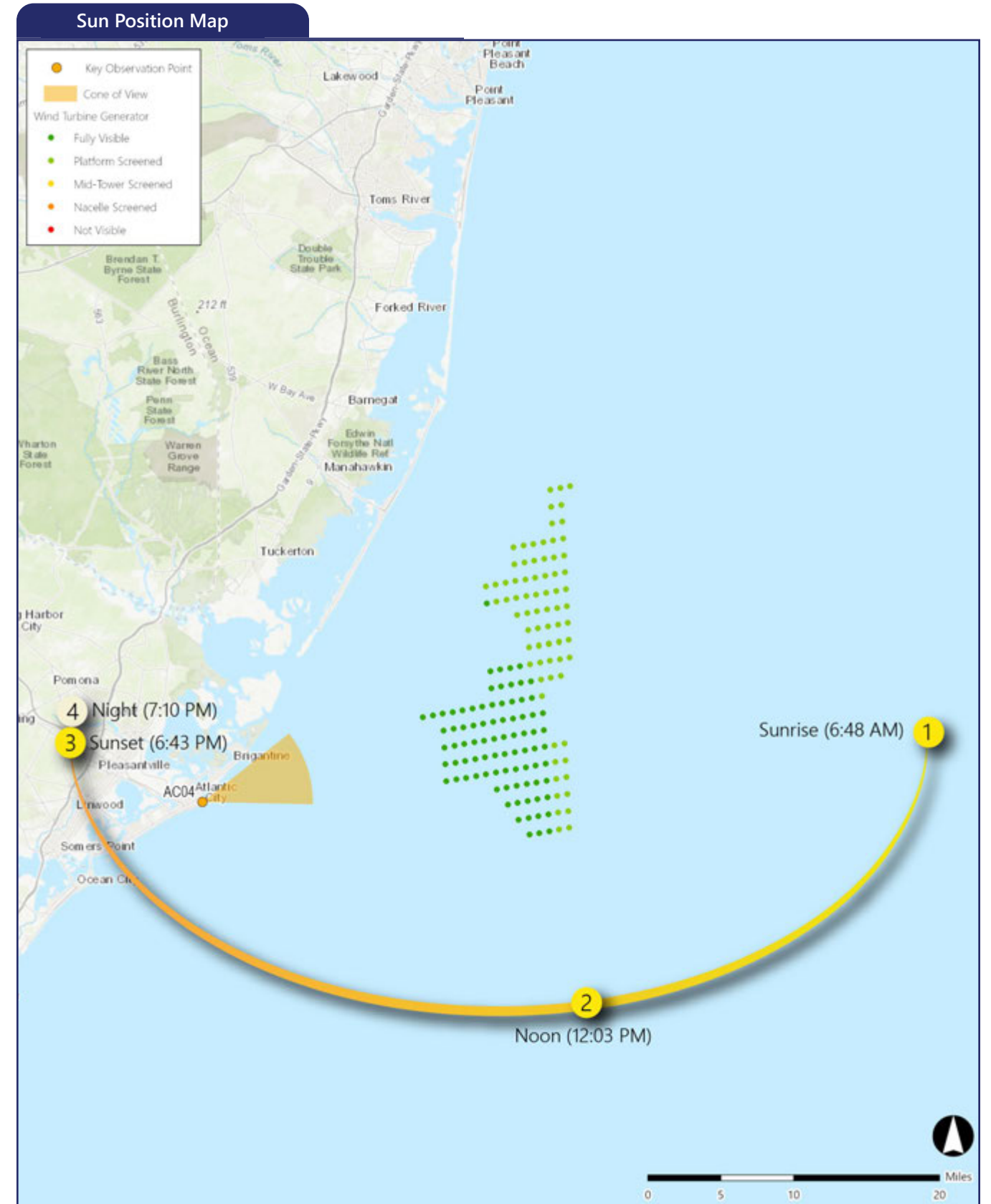


# AC04 Ocean Casino Resort – Sky Garden

Atlantic City, Atlantic County, New Jersey



QR Code for Timelapse Video  
[Timelapse Video Link](#)



## Simulation Information

Coordinates:	39.36228°N, 74.41353°W
Character Area:	Atlantic City, Seaside (SCA)
User Group:	L. Resident, Tourist, S. Residents
Direction of View:	East-northeast
Distance to Nearest Visible Turbine:	16.2 miles
Sensitive Resource:	Atlantic City Beach, New Jersey Coastal Heritage Trail Area, Census Tract 19, Census Tract 24, EJA

## Environmental Information

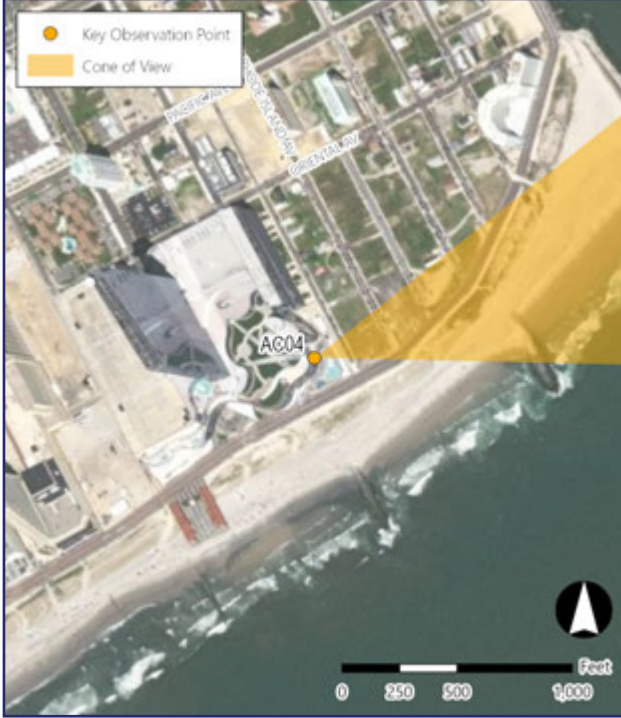
Date Taken:	09/19/2023
Time:	Various
Temperature:	72°F
Humidity:	52%
Visibility:	10 miles
Wind Direction:	West
Wind Speed:	9 mph
Conditions Observed:	Clear

## Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	117.3 feet AMSL

**Notes**  
 Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Context Map





Existing Conditions (Sunrise)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 236 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Sunrise) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 237 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Noon)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 238 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Noon) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 239 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Sunset)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Sunset) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

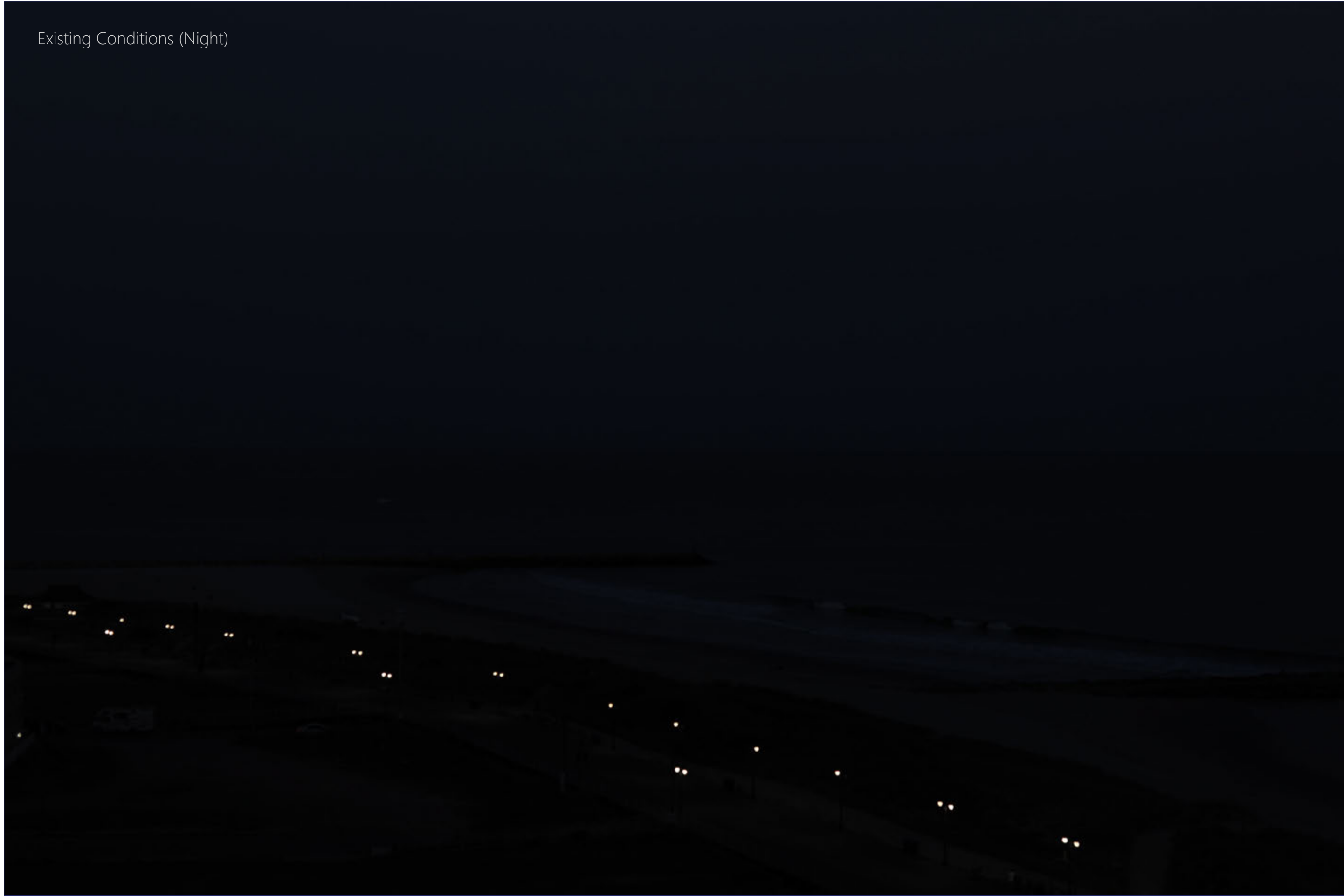
Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 241 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





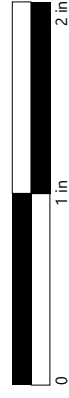
Existing Conditions (Night)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 242 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Night) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)

Outer Continental Shelf – OCS-A 0549  
Key Observation Point: AC04 - Ocean Casino Resort – Sky Garden  
Attachment E: Photosimulations: Page 243 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



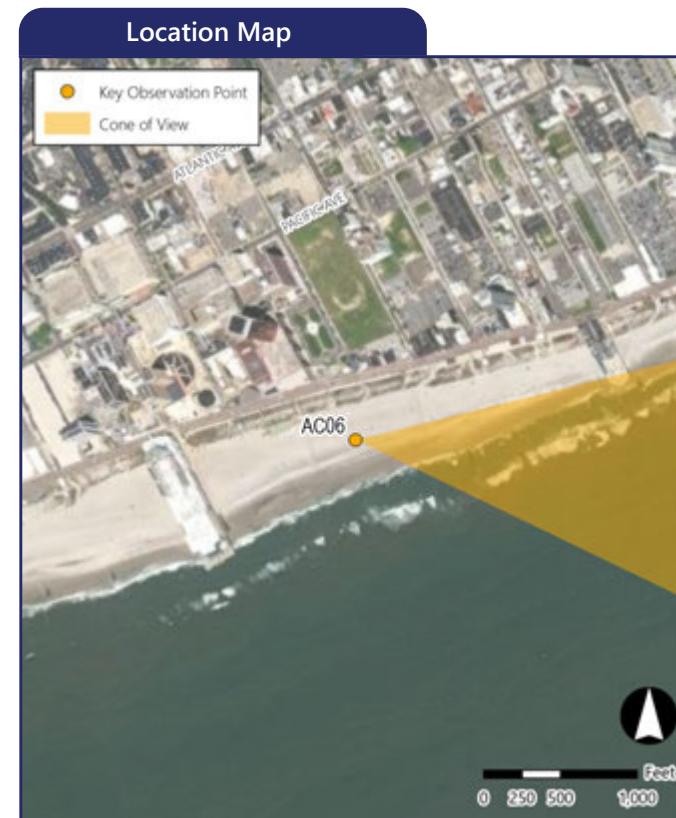
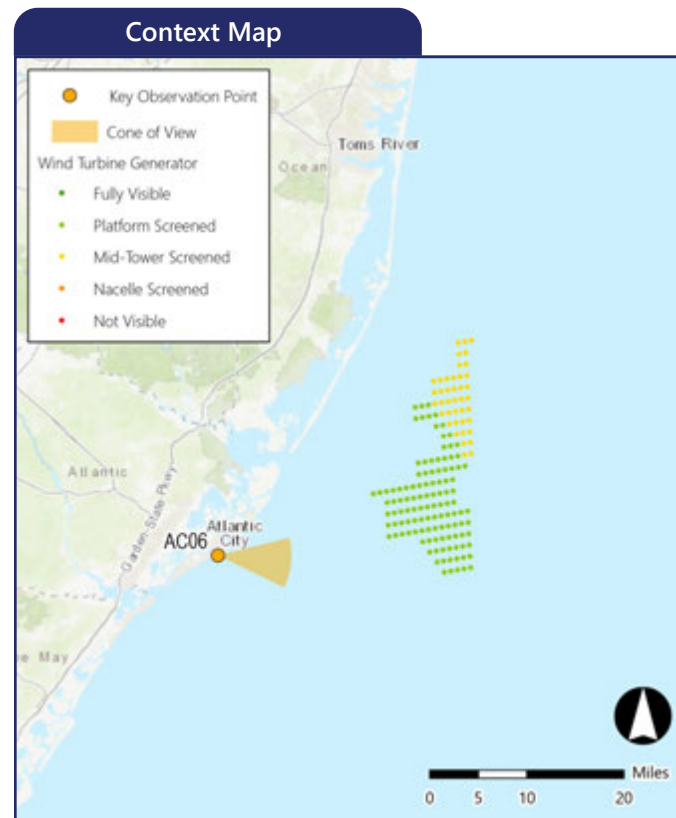


# AC06 Atlantic City Beach

Atlantic City, Atlantic County, New Jersey



The image above is a +/- 124° panorama photograph from Atlantic City Beach, panning clockwise from northeast (left) to south (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



### Simulation Information

Coordinates:	39.35480°N, 74.43032°W
Character Area:	Commercial Beachfront, Seascapes (SCA)
User Group:	L. Residents, Tourists, S. Residents
Direction of View:	East
Distance to Nearest Visible Turbine:	17.7 miles
Sensitive Resource:	New Jersey Coastal Heritage Trail Area, EJA, Census Tract 23, Census Tract 24, Atlantic City Beach, Chicken Bone Beach

### Environmental Information

Date Taken:	08/18/2023
Time:	1:13 PM
Temperature:	81°F
Humidity:	49%
Visibility:	10 miles
Wind Direction:	Northwest
Wind Speed:	20 mph
Conditions Observed:	Fair

### Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	10.3 feet AMSL

### Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.





# AC06 Atlantic City Beach

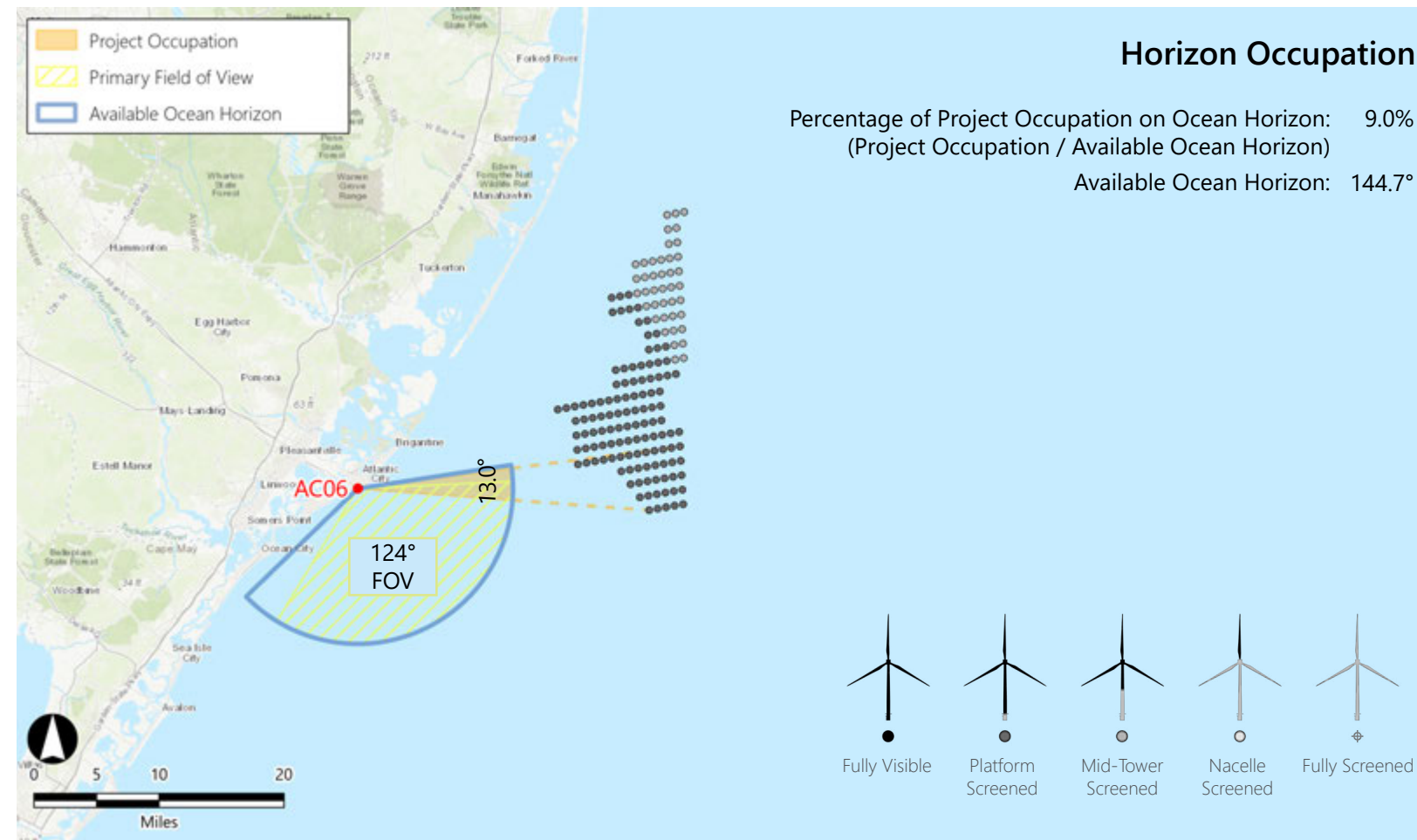
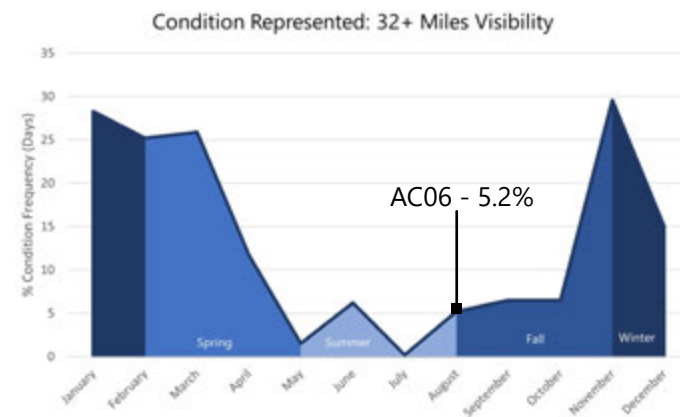
Atlantic City, Atlantic County, New Jersey

## KOP Information

Primary Field of View: Southeast  
 Distance to Closest WTG: 17.7 miles  
 Camera Height: 10.3 feet  
 User Groups: L. Residents, Tourists, S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

### Color Contrast Rating:

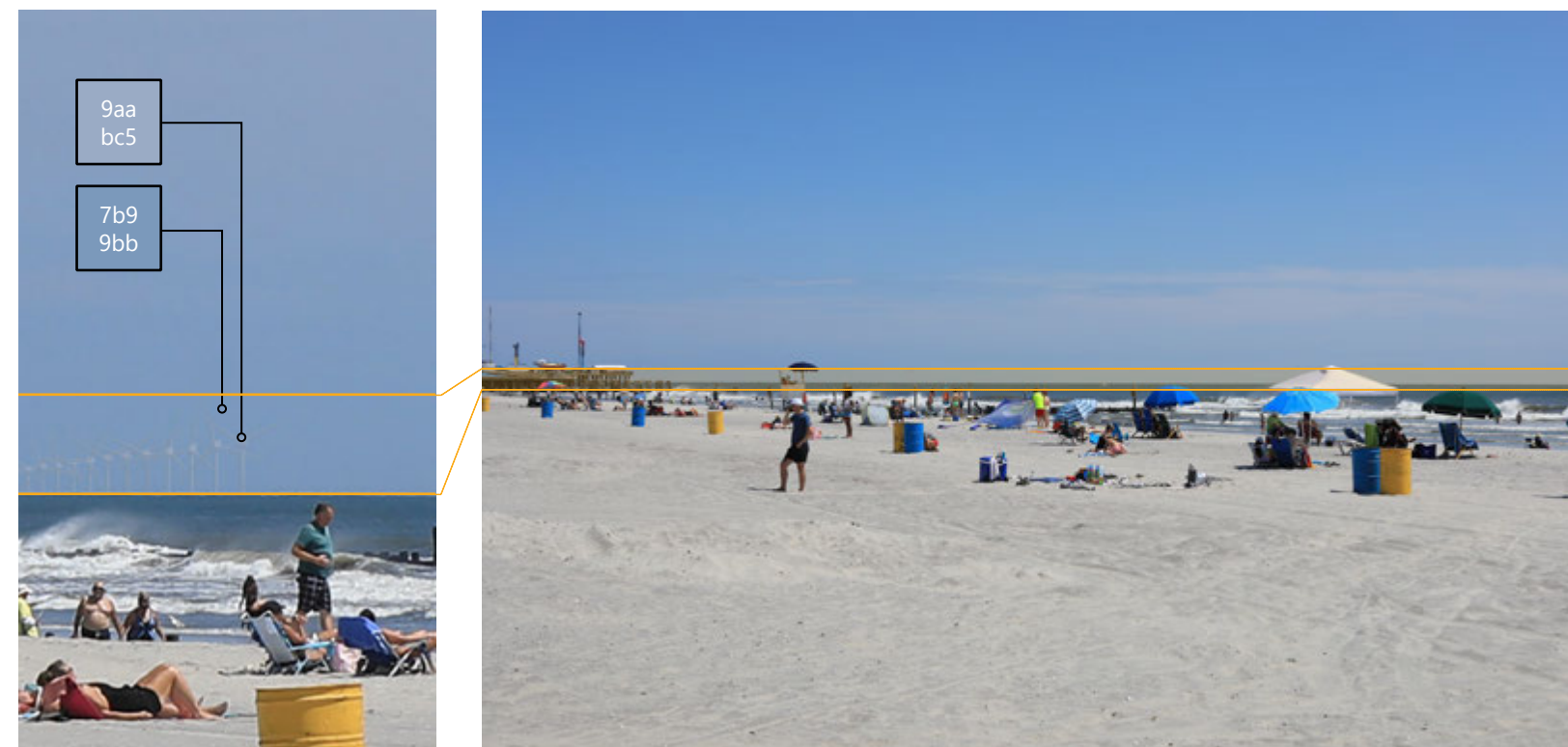
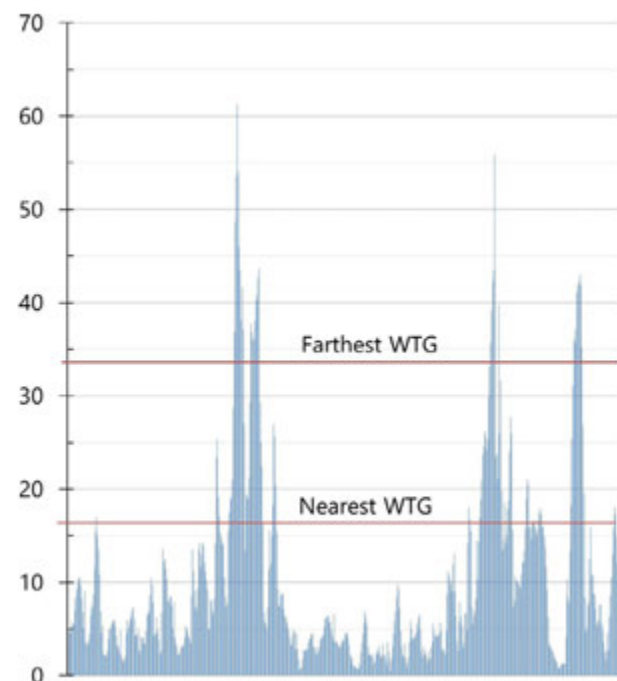
Turbine: 1.26  
 Background: 1.26

Lighting Condition: Side lit  
 Season: Summer  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

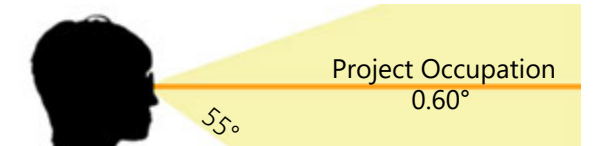
## SIMILAR VIEWING PARAMETERS:

KOP AC02 illustrates the project from 17.67 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during noon conditions.

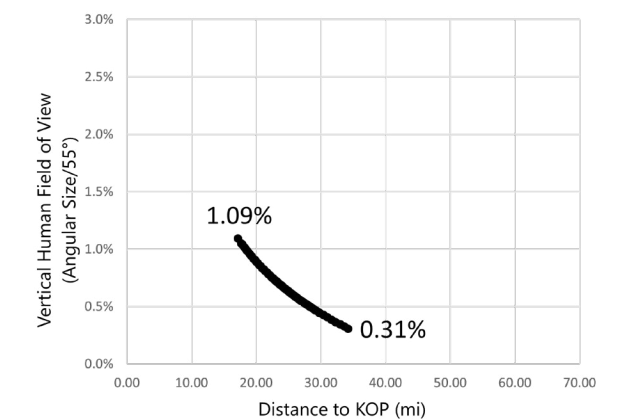
## August, 2019 - Hourly Visibility Distance



## Vertical Occupation



Percentage of Human FOV: 1.09% (0.60° / 55°)  
 (Considering the nearest visible turbine)





# AC06 Atlantic City Beach

Atlantic City, Atlantic County, New Jersey

## KOP Information

Primary Field of View/Simulation Direction: Southeast/East

Distance to Closest WTG: 17.7 miles

Camera Height: 10.3 ft

User Groups: Residents, Tourists

Horizon Occupation (% HFOV): Small (13.0°, 10.4%)

Vertical Occupation: Medium (0.60°, 1.09%)

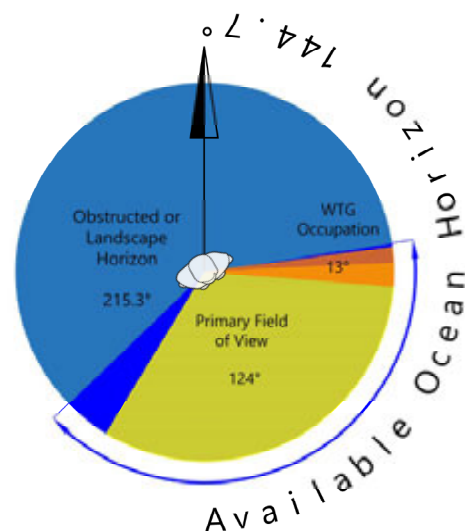
Character Area Type: Seascape

Character Area: Commercial Beachfront

## Existing View



## Field of View



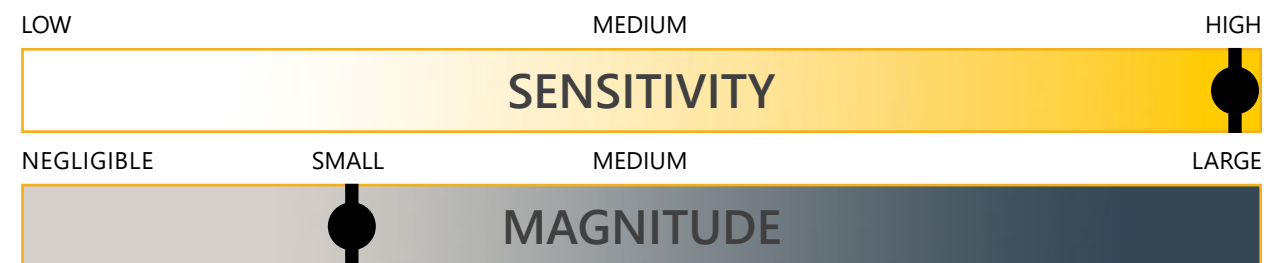
## Existing Landscape/ Seascape Character

### Description:

This is an example of the Commercial Beachfront SCA is near the Historic Atlantic City Convention Hall in Atlantic City, New Jersey. As with many of the Commercial Beachfronts in the GAA, the beach is very wide, extending some 500 feet from the dunes and boardwalk. The wide, wooden boardwalk serves as the frontage for hundreds of commercial enterprises including, hotels, casinos, restaurants, and bars. There are also several vacant spaces at the boardwalk level. Most buildings are multistory and many are high-rises with shiny, sometimes reflective surfaces. Landscape and natural vegetation is sparse in this area and restricted to the dune or in small pockets where businesses have placed landscaping in containers. False vegetation is also fairly common along this commercial beachfront. This KOP is located in the approximate center of an expansive white sand beach. The beach slopes gently to the calm ocean which offers a view to the horizon, occasionally interrupted by beach umbrellas or pier development. On the west side of the beach, a thin strip of dunes and dune vegetation undulates in front of the boardwalk, which is minimally visible from this vantage point. Beyond the boardwalk, high rise buildings extend into the sky.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	The view is an important part of the user experience.
Value	High	Very high summer viewership in the popular boardwalk/beach destination.
Sensitivity Rating	High	Due to high susceptibility and value, the sensitivity is also high.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Medium	With a vertical occupation of 0.60 degrees the WTGs may occupy up to 1.09 percent of the human vertical field of view (55 degrees). The visual prominence rating is 4, which indicates the Project will be plainly visible, but not dominant.
Geographic Extent	Small	The geographic extent is small as indicated by the theoretical horizon occupation of 13.0 degrees which occupies about 10.4 percent of the human horizontal field of view (124 degrees). This is mainly due to the large pier north of the KOP that obstructs WTGs from view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Small	Considering the medium size and scale, and small geographic extent, the magnitude is small.

## Project Contrast:

During clear viewing conditions, the WTGs present moderate form and motion contrast with the ocean and structures in the view. However, the line, color, and scale contrasts are weak particularly when viewed against the other visual intrusions along the shoreline. These features will remain dominant and the WTGs will be secondary even when considering motion and lighting, which is already a strong feature of the view.

Overall Impact  
**Minor**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC06 Atlantic City Beach  
Attachment E: Photosimulations: Page 247 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: AC06 Atlantic City Beach  
Attachment E: Photosimulations: Page 248 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

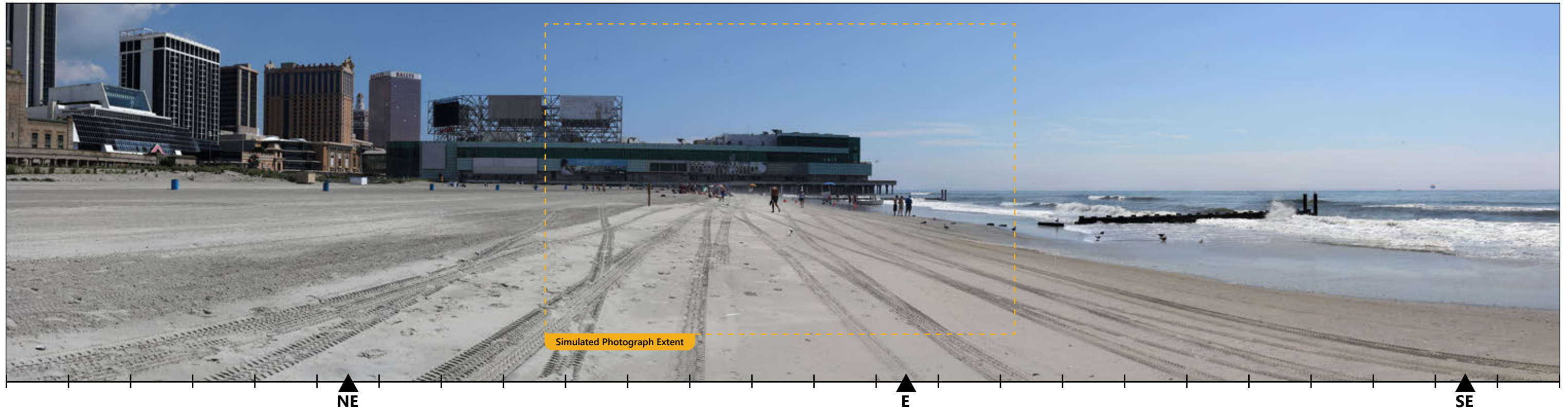


This scale is designed to insure the simulation images are printed at the intended size.

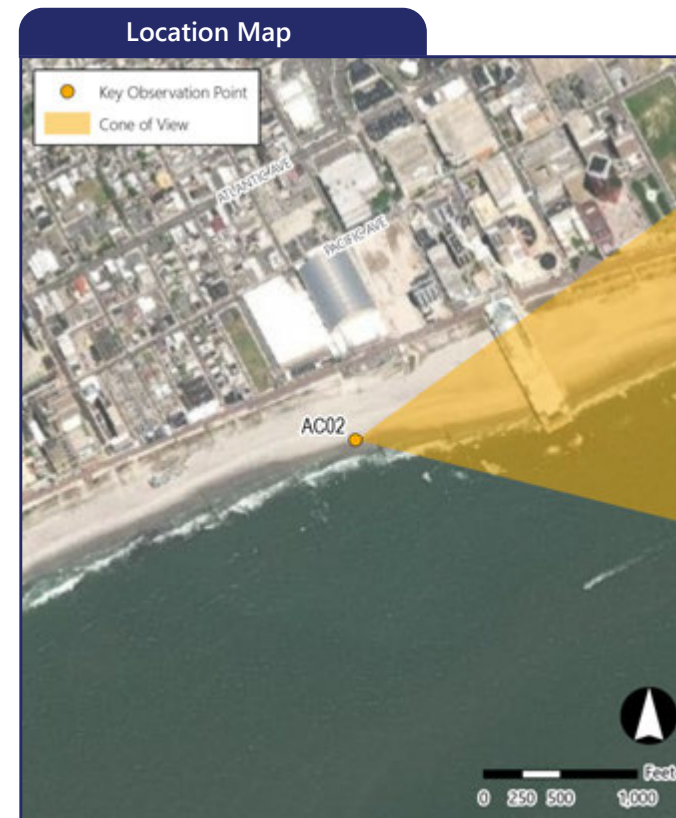
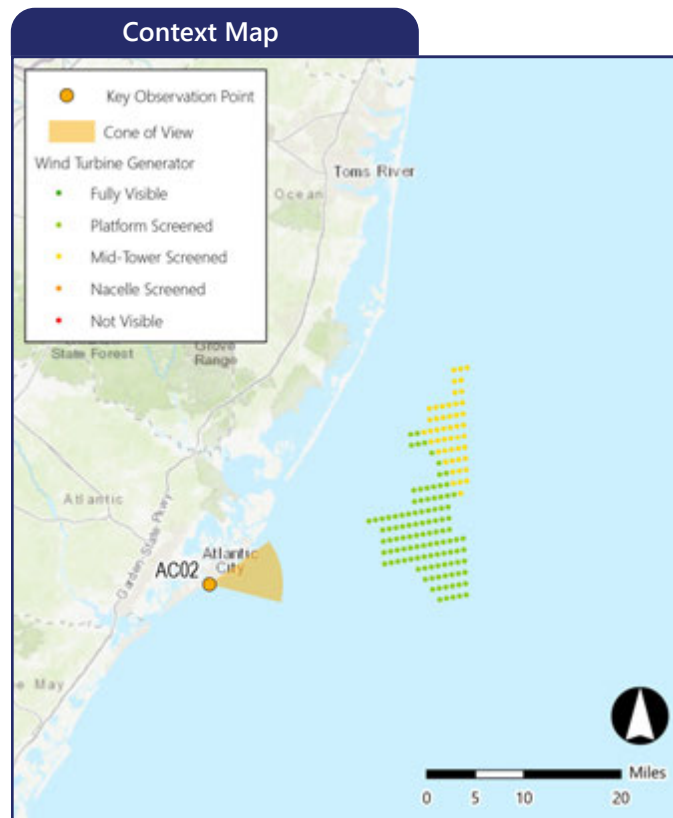


# AC02 Jim Whelan Boardwalk Hall (Atlantic City Convention Hall NHL)

Atlantic City, Atlantic County, New Jersey



The image above is a +/- 124° panorama photograph from near the Jim Whelan Boardwalk Hall (Atlantic City Convention Center National Historic Landmark), panning clockwise from north-northeast (left) to southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates:	39.35245°N, 74.43817°W
Character Area:	Commercial Beachfront, Seascape (SCA)
User Group:	L. Residents, Tourists, S. Residents
Direction of View:	East
Distance to Nearest Visible Turbine:	17.7 miles
Sensitive Resource:	Atlantic City Beach, New Jersey Coastal Heritage Trail Area, Census Tract 4, Census Tract 23, EJA

## Environmental Information

Date Taken:	07/29/2020
Time:	11:45 AM
Temperature:	90°F
Humidity:	48%
Visibility:	10 miles
Wind Direction:	West
Wind Speed:	6 mph
Conditions Observed:	Partly Cloudy

## Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	8.9 feet AMSL

**Notes**  
Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)





# AC02 Jim Whelan Boardwalk Hall (Atlantic City Convention Hall NHL)

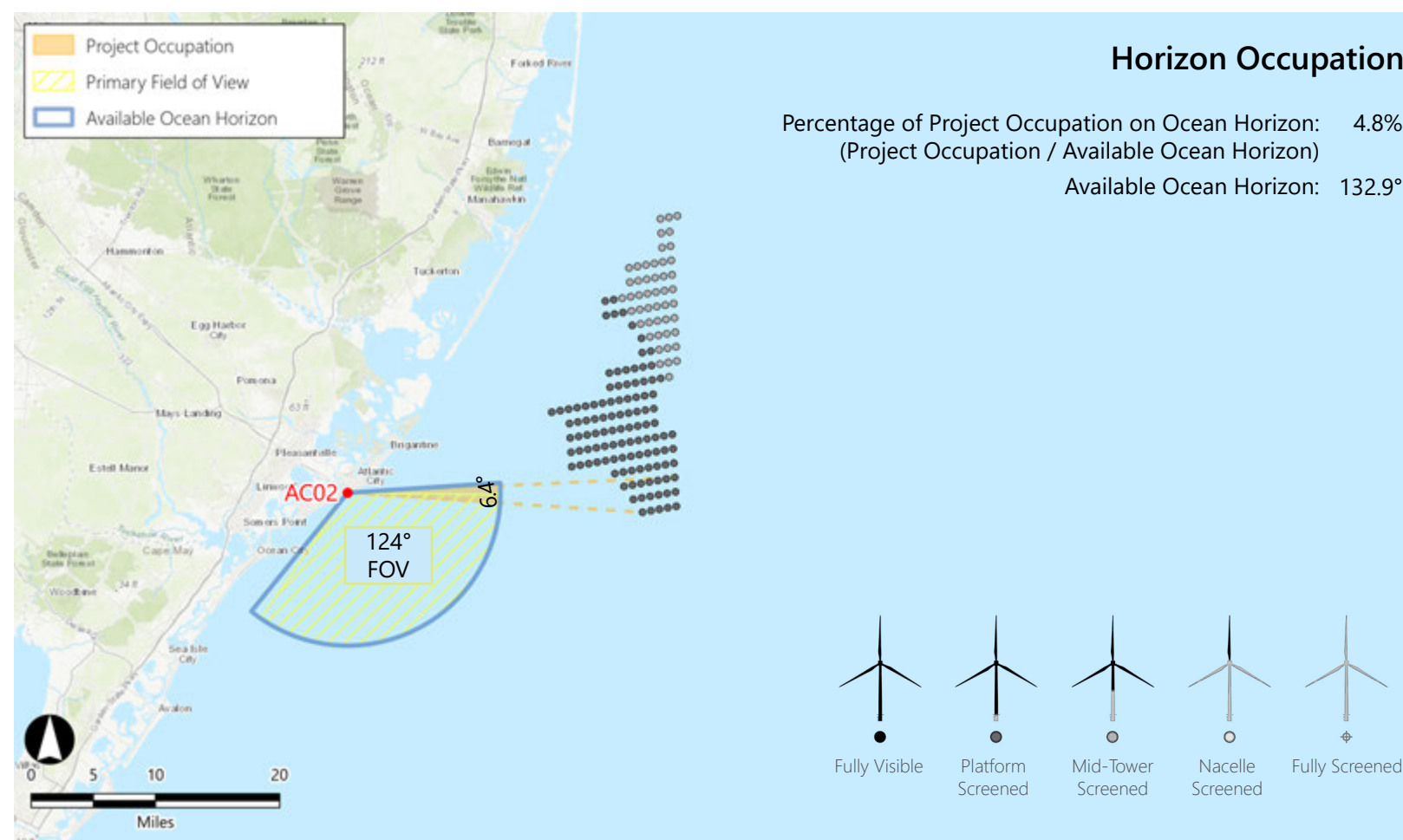
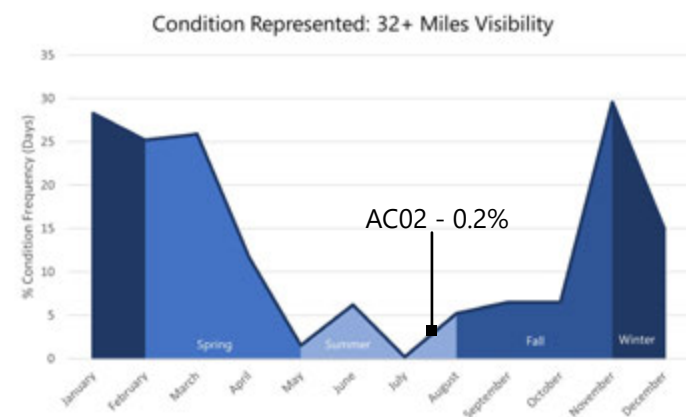
Atlantic City, Atlantic County, New Jersey

## KOP Information

Primary Field of View: Southeast  
 Distance to Closest WTG: 17.7 Miles  
 Camera Height: 8.9 feet  
 User Groups: L. Residents, Tourists, S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

**Color Contrast Rating:**

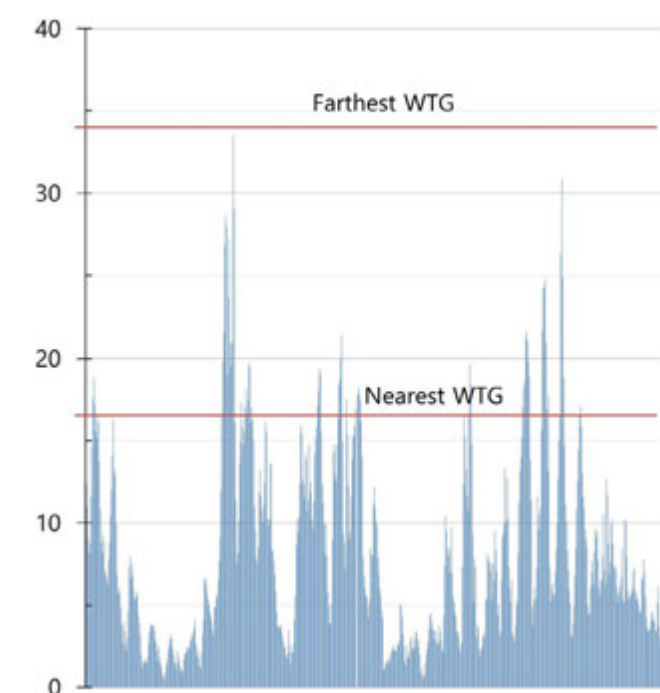
Turbine: 1.24  
 Background: 1.24

Lighting Condition: Side lit  
 Season: Summer  
 Sky Condition: Partly Cloudy  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

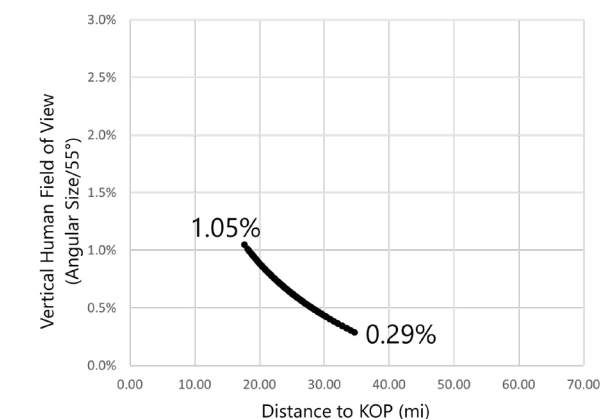
KOP AC04 illustrates the project from 16.20 miles in the backlit condition. This provides an indication of how the turbines may appear from this KOP during morning conditions.

## July, 2019 - Hourly Visibility Distance



## Vertical Occupation

Project Occupation: 0.58°  
 Percentage of Human FOV: 1.05% (0.58° / 55°)  
 (Considering the nearest visible turbine)





# AC02 Jim Whelan Boardwalk Hall (Atlantic City Convention Hall NHL)

Atlantic City, Atlantic County, New Jersey

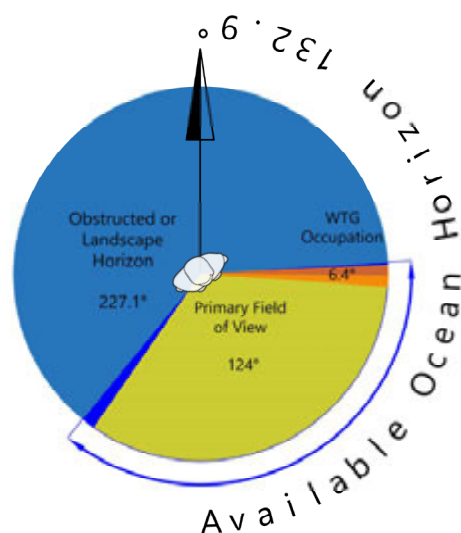
## KOP Information

Primary Field of View/Simulation Direction:	Southeast/East
Distance to Closest WTG:	17.7 miles
Camera Height:	3.9 ft
User Groups:	Residents, Tourists
Horizon Occupation (% HFOV):	Small (6.4°, 5.2%)
Vertical Occupation:	Medium (0.58°, 1.05%)
Character Area Type:	Seascape
Character Area:	Commercial Beachfront

## Existing View



## Field of View



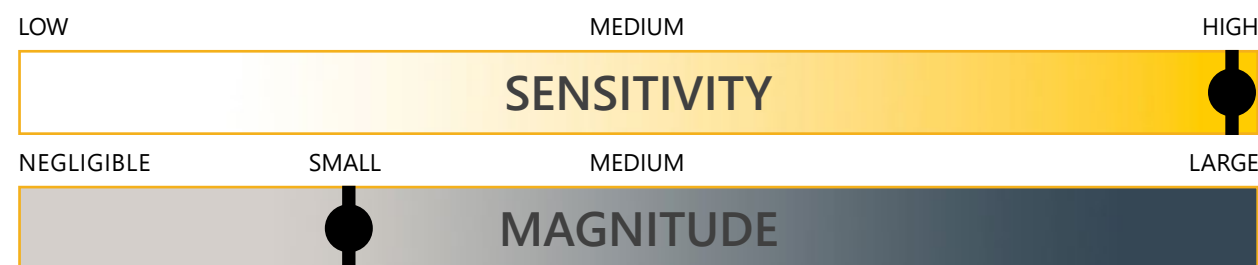
## Existing Landscape/ Seascape Character

### Description:

This is an example of the Commercial Beachfront SCA is near the Historic Atlantic City Convention Hall in Atlantic City, New Jersey. Built in 1926 in the Art Deco style, and designated as a National Historic Landmark in 1987, it is one of the only surviving buildings from the city's heyday as a popular seaside resort. The Commercial Beachfront is this area is unique in that the commercial and retail spaces jut out into the ocean, enclosing specific sections of natural beach. The area is highly developed and visually cluttered, due to the various colors, materials, forms, and scale of the man-made structures. Playground Pier extends out over the beach and into the ocean surf which draws and holds the viewers' attention. The pier is constructed in an uninteresting architectural style and appears in very poor condition with missing panels, vacant billboards, and steel lattice extending high into the sky.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	The view is clearly not an important part of the user experience, but this KOP is on the historic Chicken Bone Beach at the foot of the AC Convention Hall NHL.
Value	High	Very high summer viewership in the popular boardwalk/beach destination.
Sensitivity Rating	High	Due to high susceptibility and value, the sensitivity is also high.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Medium	With a vertical occupation of 0.58 degrees the WTGs may occupy up to 1.05 percent of the human vertical field of view (55 degrees). The visual prominence rating is 3, which indicates the Project visible after a brief glance.
Geographic Extent	Small	The geographic extent is small as indicated by the theoretical horizon occupation of 6.4 degrees which occupies about 5.2 percent of the human horizontal field of view (124 degrees). This is mainly due to the Playground Pier north of the KOP that obstructs WTGs from view.
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Small	Considering the medium size and scale, and small geographic extent, the magnitude is small.

## Project Contrast:

During clear viewing conditions, the WTGs present moderate form and motion contrast with the ocean and structures in the view. However, the line, color, and scale contrasts are weak particularly when viewed against the other visual intrusions along the shoreline. These features will remain dominant and the WTGs will be secondary even when considering motion and lighting, which is already a strong feature of the view.

Overall Impact  
**Minor**



Existing Conditions



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (OCS-A 0549)



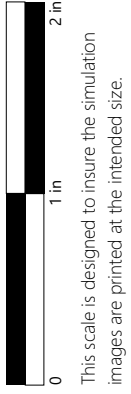
**Atlantic Shores Offshore Wind: North (OCS-A 0549)**

**Outer Continental Shelf – OCS-A 0549**

Key Observation Point: AC02 Jim Whelan Boardwalk Hall (Atlantic City Convention Hall NHL)

Attachment E: Photosimulations: Page 253 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



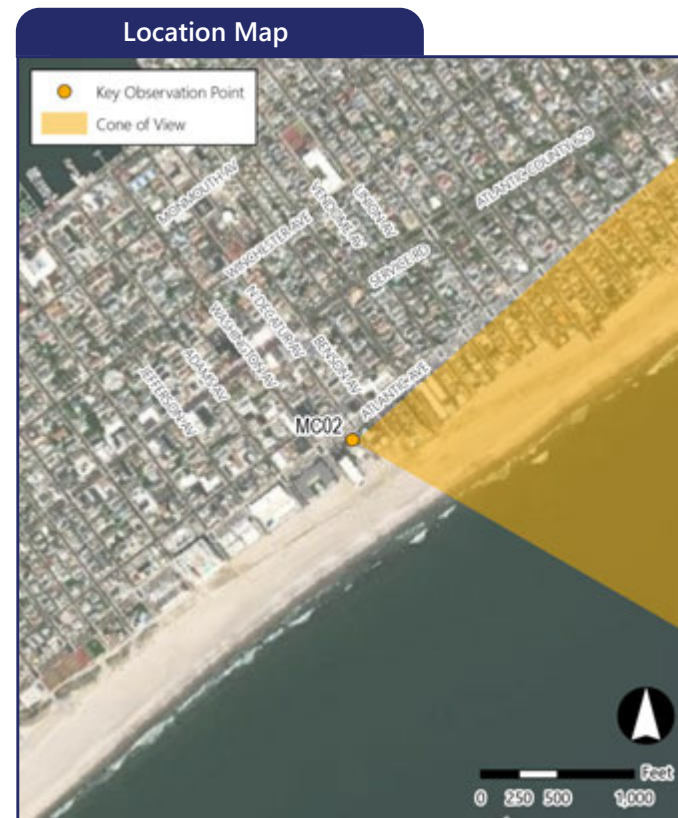
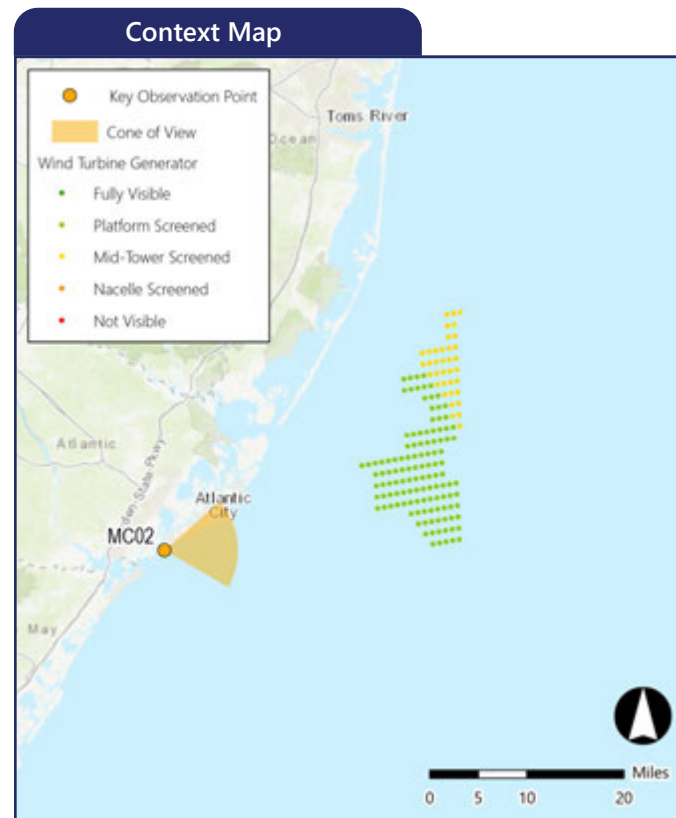


# MC02 Lucy the Margate Elephant National Historic Landmark

Margate City, Atlantic County, New Jersey



The image above is a +/- 124° panorama photograph from the lookout on top of Lucy the Margate Elephant, panning clockwise from northeast (left) to south-southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



### Simulation Information

Coordinates: 39.32088°N, 74.51170°W  
 Character Area: Commercial Beachfront, Seascape (SCA)  
 User Group: L. Resident, Tourists, S. Residents  
 Direction of View: East  
 Distance to Nearest Visible Turbine: 22.1 miles  
 Sensitive Resource: Atlantic Coast Public Beach, Lucy The Margate Elephant, Margate City Public Beach

### Environmental Information

Date Taken: 07/29/2020  
 Time: 3:30 PM  
 Temperature: 92°F  
 Humidity: 35%  
 Visibility: 10 miles  
 Wind Direction: Southwest  
 Wind Speed: 10 mph  
 Conditions Observed: Fair

### Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 51.5 feet AMSL

### Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

### Simulated Photograph(s)



Photograph ASOW1116



Photograph ASOW1119



# MC02 Lucy the Margate Elephant National Historic Landmark

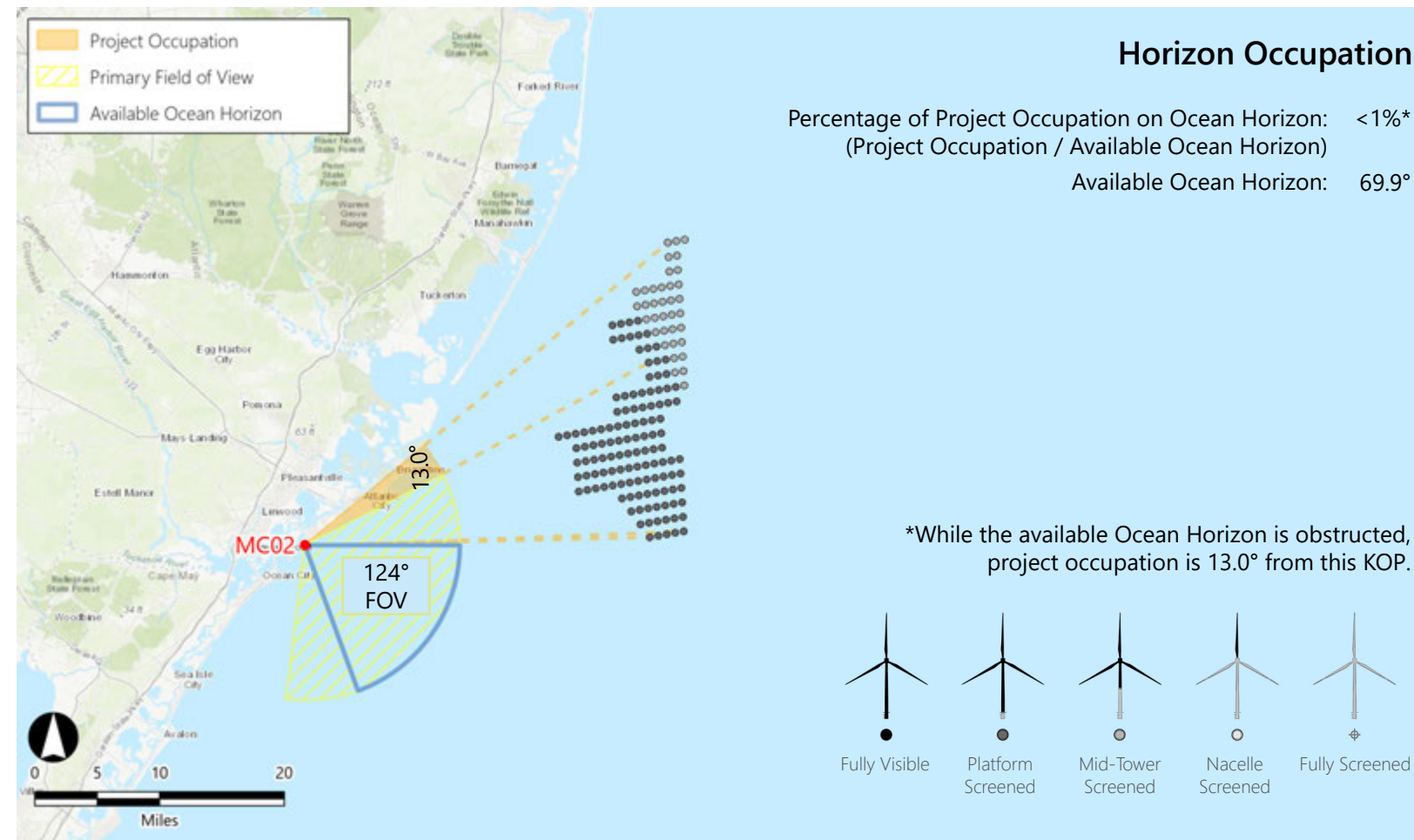
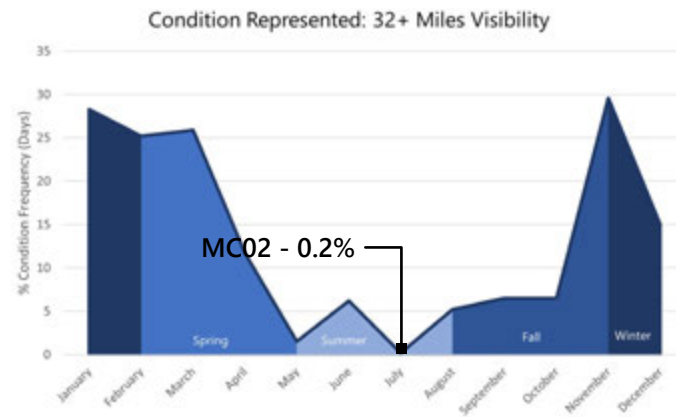
Margate City, Atlantic County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 22.1 miles  
 Camera Height: 51.5 ft  
 User Groups: L. Residents, Tourists, S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

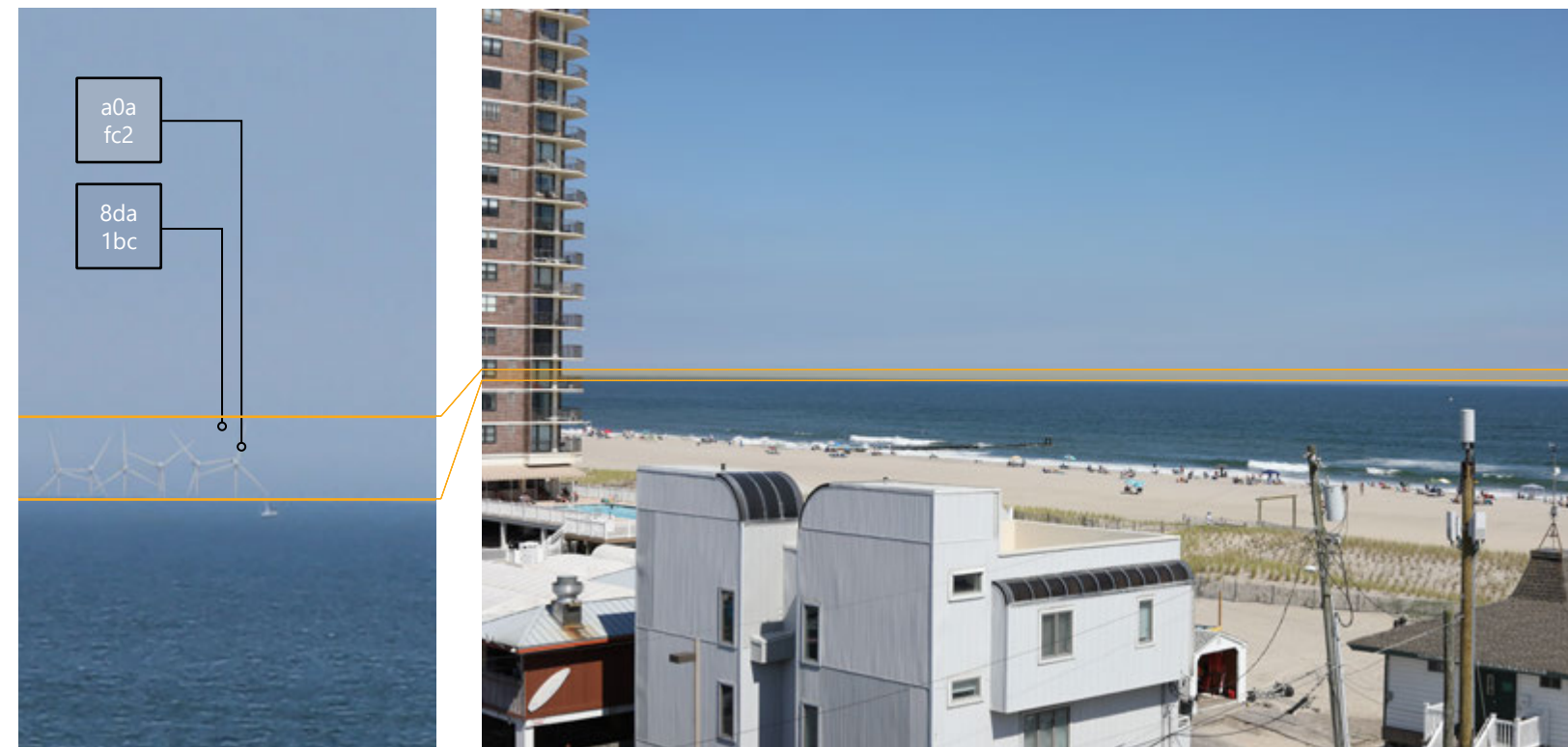
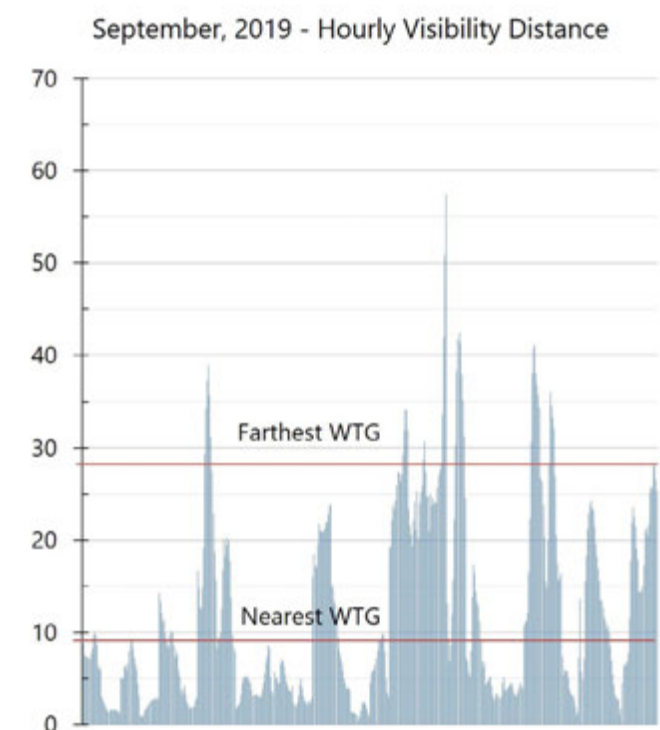
### Color Contrast Rating:

Turbine [ ] 1.65  
 Background [ ]

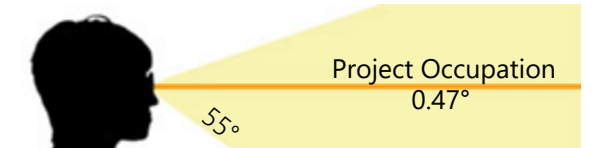
Lighting Condition: Side lit  
 Season: Fall  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

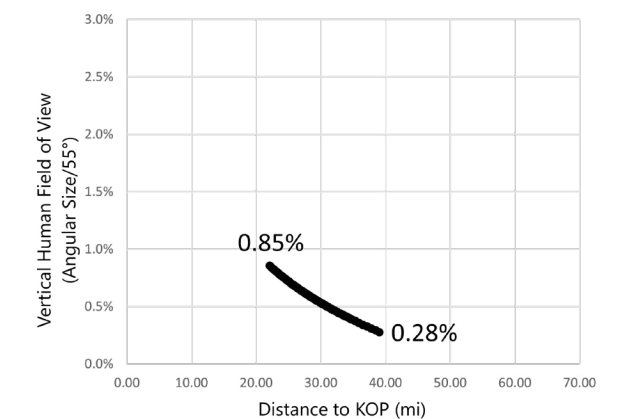
KOP OC05 illustrates the project from 25.03 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during Midday conditions.



## Vertical Occupation



Percentage of Human FOV: 0.85% (0.47° / 55°)  
 (Considering the nearest visible turbine)





# MC02 Lucy the Margate Elephant National Historic Landmark

Margate City, Atlantic County, New Jersey

## KOP Information

Primary Field of View/Simulation Direction: Southeast/East

Distance to Closest WTG: 22.1 miles

Camera Height: 51.5 ft

User Groups: Residents, Tourists

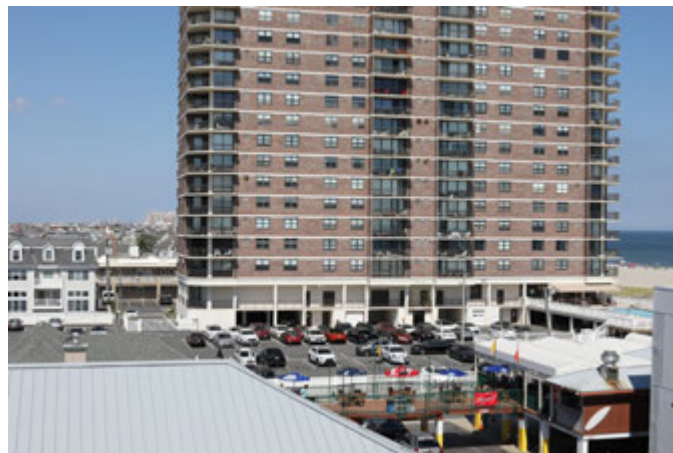
Horizon Occupation (% HFOV): Small (13.0°, 10.4%)

Vertical Occupation: Medium (0.47°, 0.85%)

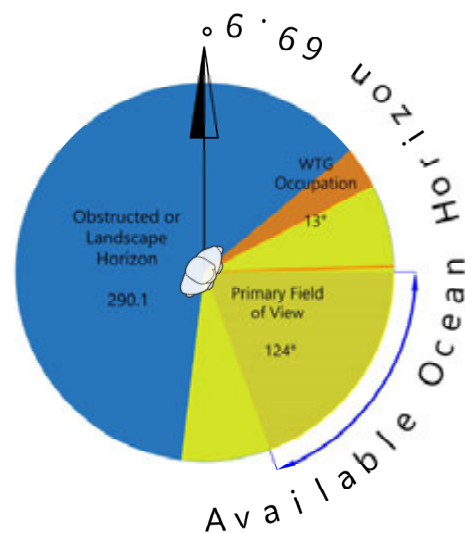
Character Area Type: Seascape

Character Area: Commercial Beachfront

## Existing View



## Field of View



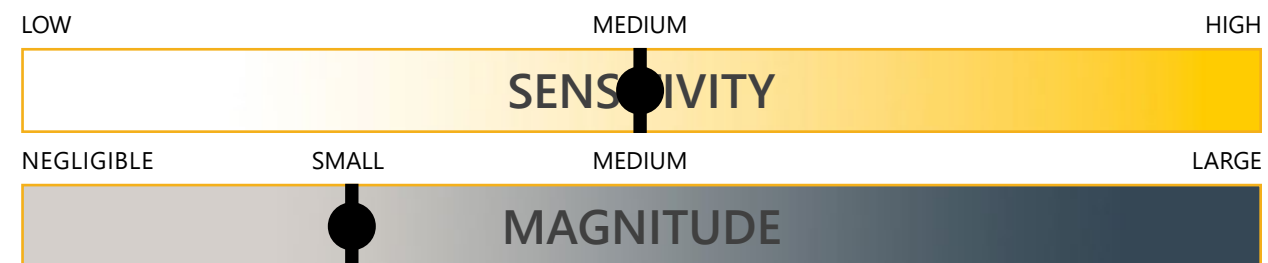
## Existing Landscape/Seascape Character

### Description:

The Commercial Beachfront Seascape Character Area from this KOP appears chaotic and visually cluttered due to the presence of utilities, a mix of incompatible architectural styles, and competing visual interests of the commercial enterprises that make up the shoreline. The ocean and beach quickly become naturalized, but from this location, there are numerous detractors that distract from the natural environment and the ocean view. The Howdah provides an elevated vantage point from within the Commercial Beachfront in Margate. Lucy is surrounded by high-rise buildings to the north and south and Inland Residential areas to the west. The commercialization of the beachfront is apparent from this vantage point and people gather in restaurants and shops when they are not in the nearby motels and hotels or on the beach recreating or sunbathing. Despite the historic significance of Lucy, the surrounding environment detracts from, rather than contributes to, the visitor's viewing experience.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	Low	Despite Lucy's status as a NHL, the setting and view are not significant criteria in its status or importance due to its relocation. The novelty of the structure is the sole draw for visitors and not many people spend time in the Howdah. The development surrounding Lucy does nothing to enhance the viewer experience and ocean views are severely compromised.
Value	High	Lucy's iconic in social media, television, and from an NHL perspective. It is a unique attraction that has been well cared for and has become a beloved icon of Margate and the Jersey Shore.
Sensitivity Rating	Medium	Due to high susceptibility and value, the sensitivity is also high.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Medium	With a vertical occupation of 0.47 degrees the WTGs may occupy up to 0.87 percent of the human vertical field of view (55 degrees). The visual prominence rating is 2, which indicates the Project visible scanning in the general direction of the WTGs.
Geographic Extent	Small	The horizon occupation of 38.5 degrees would typically result in a medium geographic extent, but in this case, approximately 25.5 degrees of this is obstructed by a large building. However, WTGs are visible either side of it resulting in approximately 13 degrees of WTG occupation or 10.4 percent of the human field of view.
Duration/Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Small	Considering the medium size and scale, and small geographic extent, the magnitude is small.

## Project Contrast:

During clear viewing conditions, the WTGs rotor motion would result in moderate contrasts with the ocean horizon for the portion of the Project that occurs over the ocean horizon. Moderate form, color, and vertical scale contrasts are also possible on the ocean horizon. The contrast with structures would be weak across all impact producing factors.

Overall Impact  
**Minor**



Existing Conditions



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



**Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549**

Key Observation Point: MC02 - Lucy the Margate Elephant National Historic Landmark  
Attachment E: Photosimulations: Page 258 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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





Existing Conditions

**Atlantic Shores Offshore Wind: North (OCS-A 0549)**

**Outer Continental Shelf – OCS-A 0549**

Key Observation Point: MC02 - Lucy the Margate Elephant National Historic Landmark  
Attachment E: Photosimulations; Page 259 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)

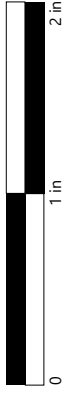


**Atlantic Shores Offshore Wind: North (OCS-A 0549)**

**Outer Continental Shelf – OCS-A 0549**

Key Observation Point: MC02 - Lucy the Margate Elephant National Historic Landmark  
Attachment E: Photosimulations; Page 260 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

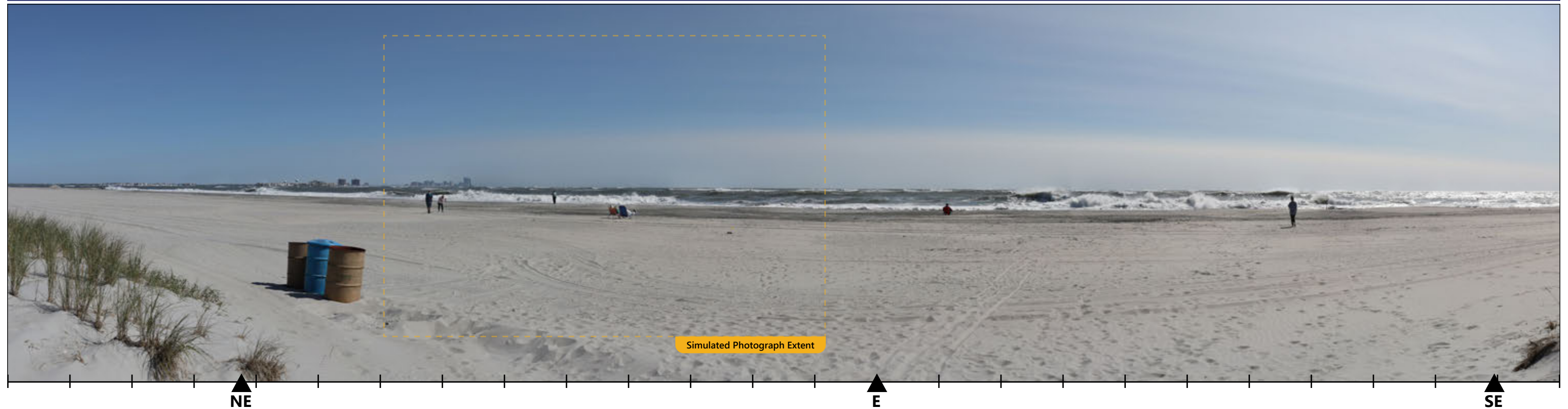


This scale is designed to insure the simulation images are printed at the intended size.

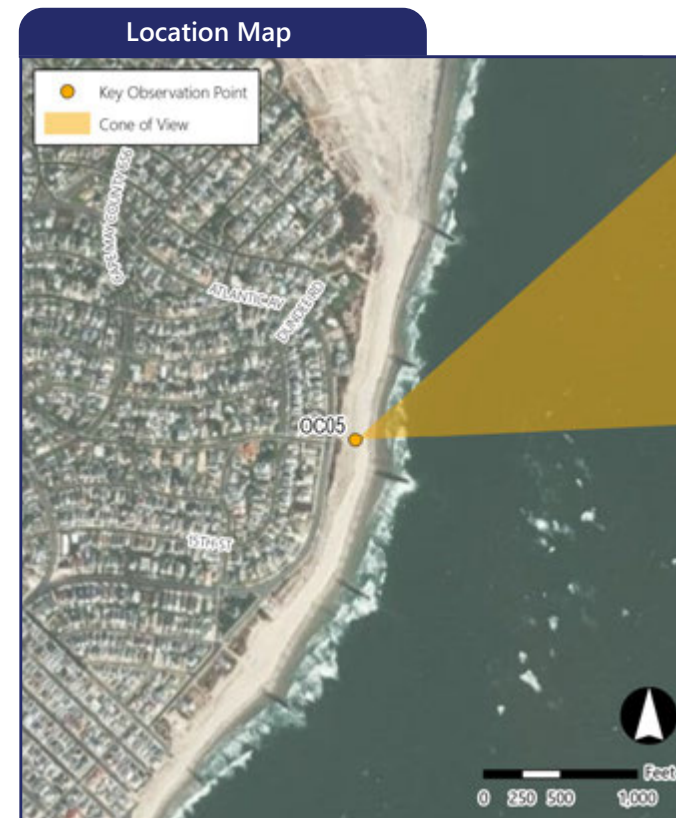


# OC05 Ocean City - East Surf Road Access

Ocean City, Cape May County, New Jersey



The image above is a +/- 124° panorama photograph from Ocean City - East Surf Road Access, panning clockwise from northeast (left) to southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



### Simulation Information

Coordinates: 39.28924°N, 74.55285°W  
 Character Area: Residential Beachfront(SCA)  
 User Group: L. Residents, Tourists, S. Residents  
 Direction of View: East-northeast  
 Distance to Nearest Visible Turbine: 25.0 miles  
 Sensitive Resource: Ocean City Beachfront, New Jersey Coastal Heritage Trail Area

### Environmental Information

Date Taken: 09/22/2020  
 Time: 11:15 AM  
 Temperature: 63°F  
 Humidity: 41%  
 Visibility: 10 miles  
 Wind Direction: North-northwest  
 Wind Speed: 14 mph  
 Conditions Observed: Fair

### Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 15.5 feet AMSL

### Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

### Simulated Photograph(s)





# OC05 Ocean City - East Surf Road Access

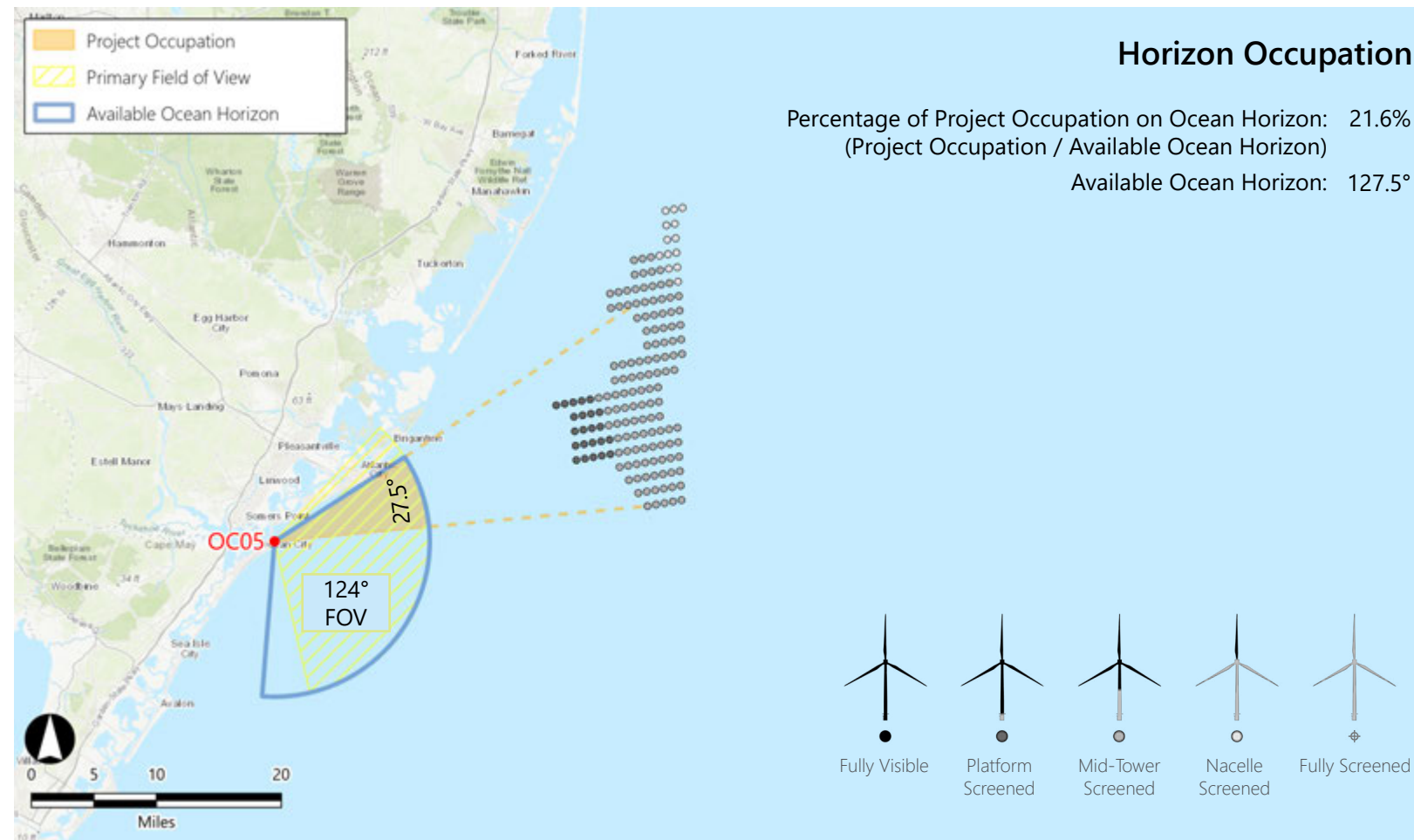
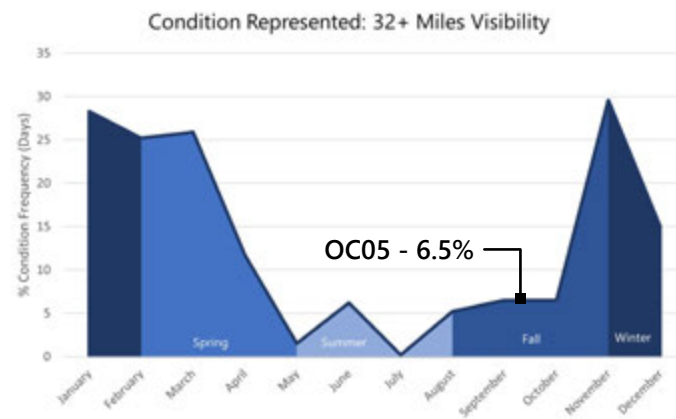
Ocean City, Cape May County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 25.0 miles  
 Camera Height: 15.5 feet  
 User Groups: L. Residents, Tourists, S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

### Color Contrast Rating:

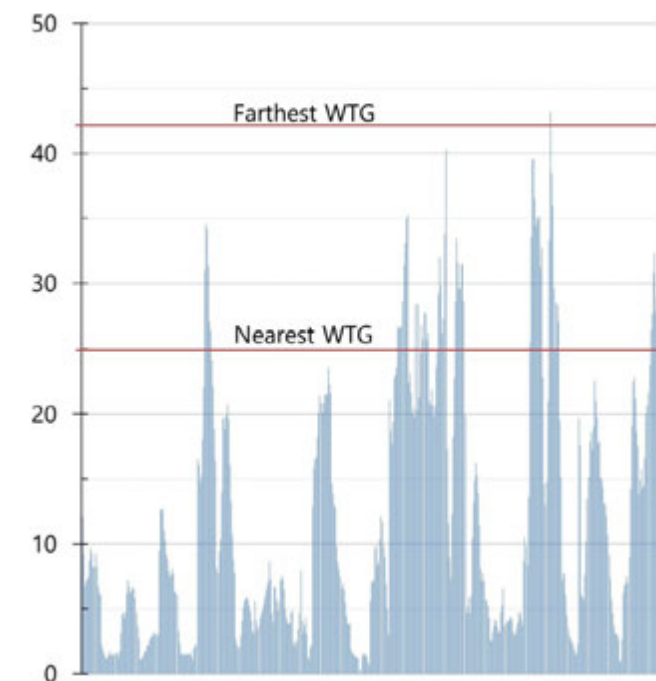
Turbine: 1.11  
 Background: 1.11

Lighting Condition: Side lit  
 Season: Fall  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

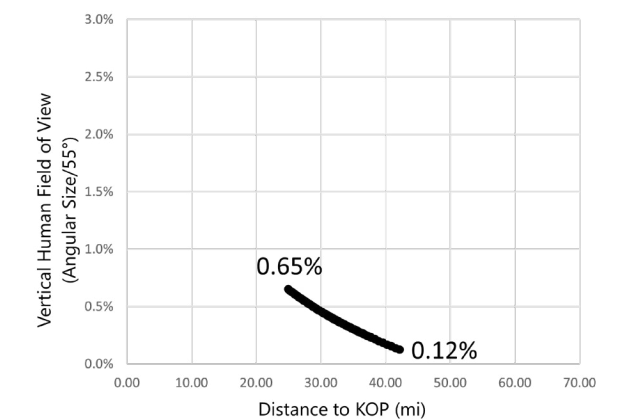
KOP MC02 illustrates the project from 22.13 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during midday conditions.

## September, 2019 - Hourly Visibility Distance



## Vertical Occupation

Percentage of Human FOV: 0.65% (0.36° / 55°)  
 (Considering the nearest visible turbine)





# OC05 Ocean City - East Surf Road Access

Ocean City, Cape May County, New Jersey

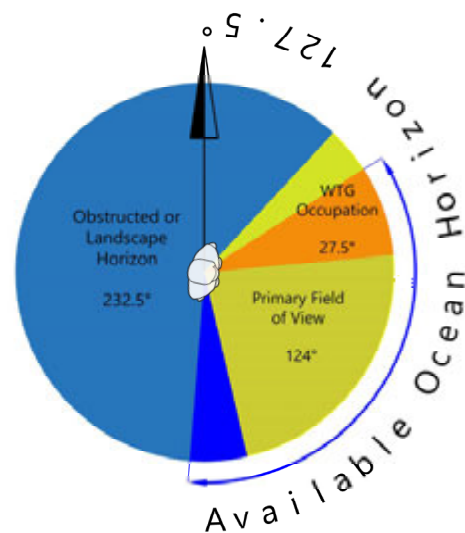
## KOP Information

Primary Field of View/Simulation Direction:	ESE/ENE
Distance to Closest WTG:	25 miles
Camera Height:	15.5 ft
User Groups:	Residents, Tourists
Horizon Occupation (% HFOV):	Medium (27.5°, 22.2%)
Vertical Occupation:	Medium ( 0.36°, 0.65%)
Character Area Type:	Seascape
Character Area:	Residential Beachfront

## Existing View



## Field of View

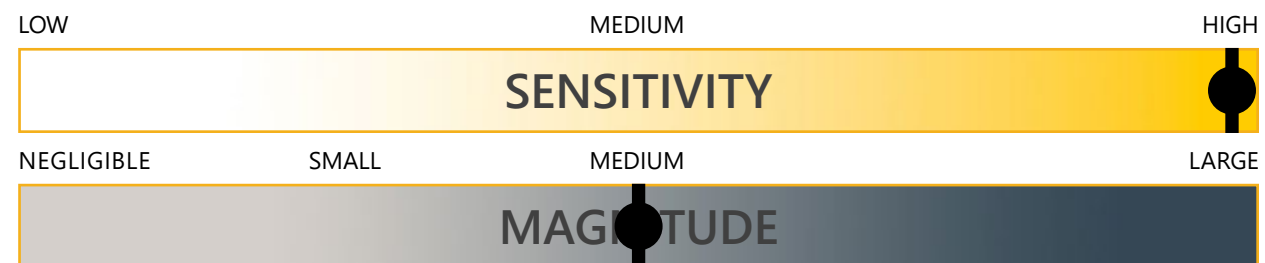


## Existing Landscape/ Seascape Character Description:

This KOP is in the Residential Beachfront SCA adjacent to a large, sprawling inland residential community. The KOP is on the beach access path just off East Atlantic Boulevard. The access path is a wooden boardwalk that crosses the dunes. At East Atlantic Boulevard there is head in, street side parking as well as waste disposal facilities and a bike rack. The area is heavily residential, but East Atlantic Boulevard and the dunes provide a big gap between the beach and the developed areas. The beach is expansive and gradually slopes down to the ocean. It the time of the visit, the ocean was very rough with big breaks and white froth consuming a portion of the distant horizon. In the distance, the high-rises in Atlantic City are a major focal point. The Ocean Casino Resort in Atlantic City appears as a solid mass on the ocean horizon at a distance of approximately 8.95 miles.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Views from residences and experienced by local/seasonal residents, tourist, and recreational users. Seascape and Ocean views are important to the users.
Value	High	This location has accommodation for larger beach crowds and appears in Online advertisements and guidebooks, etc.
Sensitivity Rating	High	Highly susceptible and high value seascape results in high sensitivity.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Medium	With a vertical occupation of 0.36 degrees the WTGs may occupy up to 0.65 percent of the human vertical field of view (55 degrees). The visual prominence rating is 3, which indicates the Project may be visible after only a brief glance in the direction of the project facilities
Geographic Extent	Medium	The geographic extent is medium as indicated by the theoretical horizon occupation of 27.5 degrees which occupies about 22.2 percent of the human horizontal field of view (124 degrees).
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Medium	Medium geographic extent and medium scale contrast.

## Project Contrast:

During clear viewing conditions, the motion of the rotors may attract viewer attention. At times the Project may result in moderate color contrast with the ocean and landforms in the view. Moderate line and form contrasts occur with the ocean, due to the vertical line on the horizon and WTG rotors. Lighting contrast is anticipated to be weak due to the presence of abundant light pollution resulting from Atlantic City which is in the direction of this view.

Overall Impact  
**Moderate**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: OC05 Ocean City - East Surf Road Access  
Attachment E: Photosimulations; Page 264 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: OC05 Ocean City - East Surf Road Access  
Attachment E: Photosimulations; Page 265 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

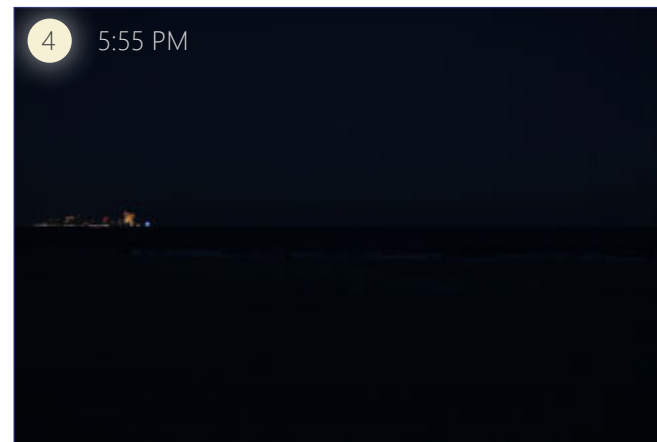
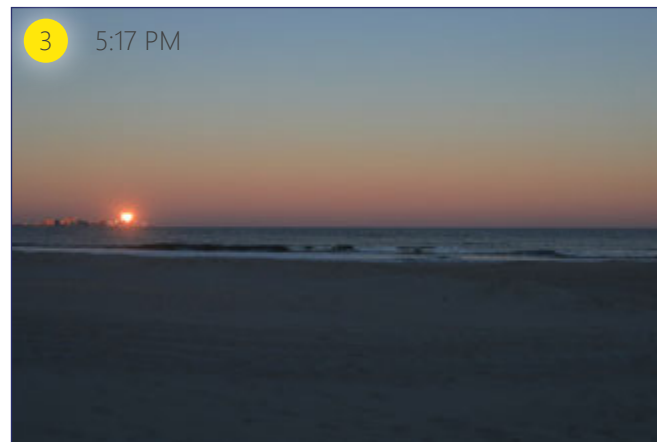
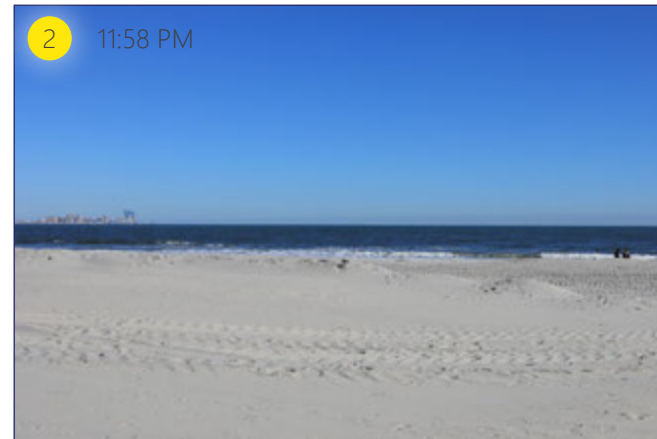
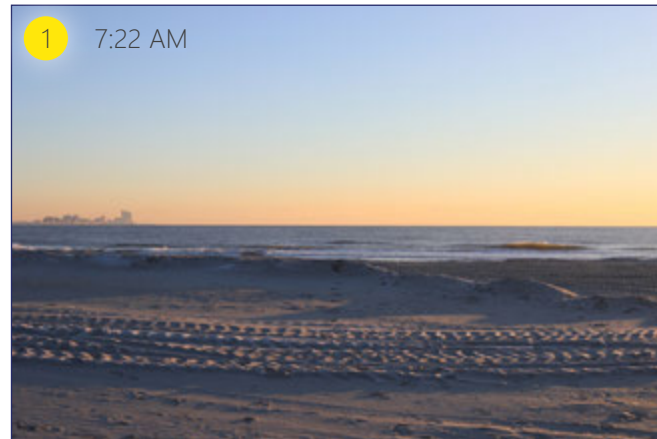


This scale is designed to insure the simulation images are printed at the intended size.

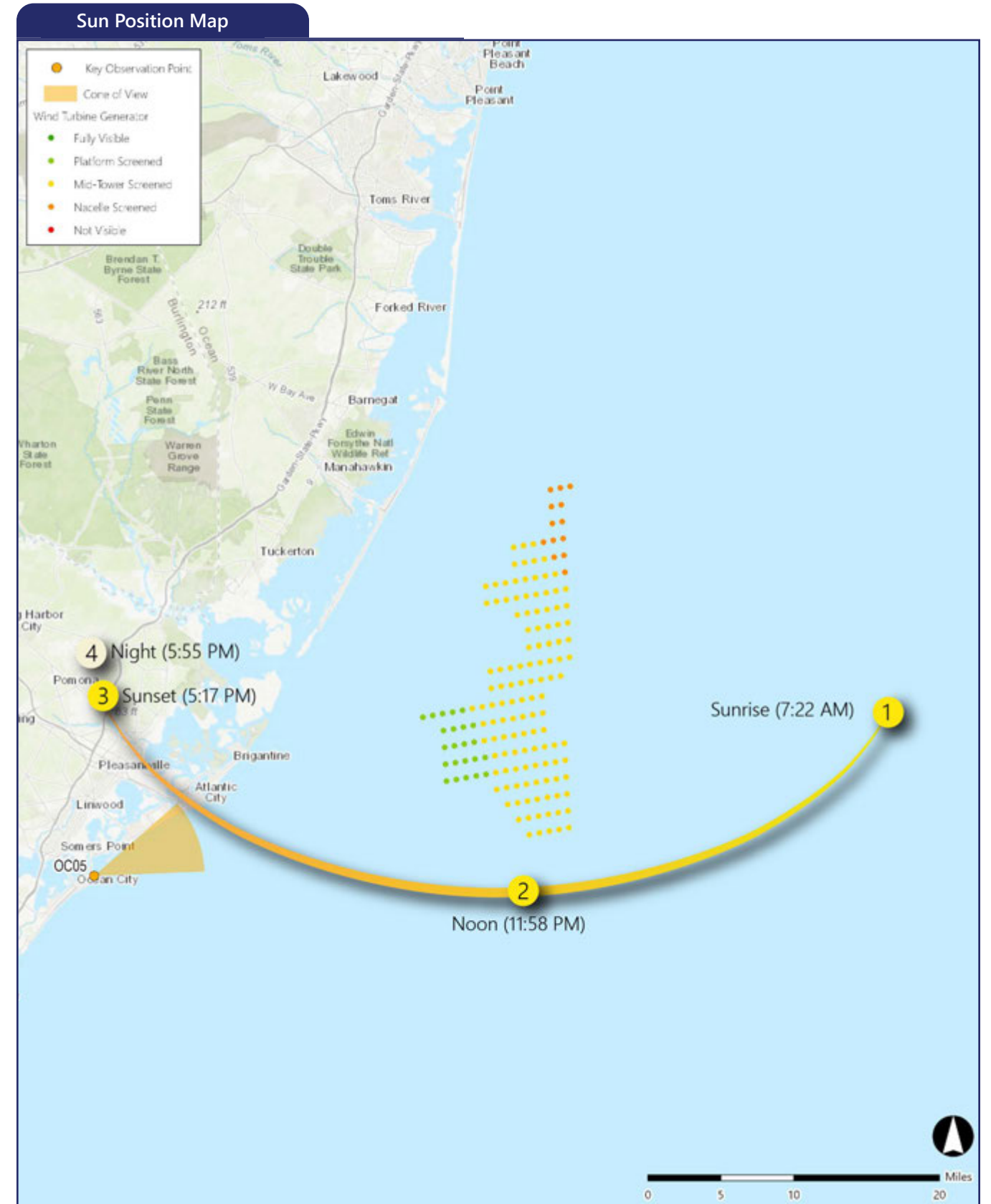


# OC05 Ocean City - East Surf Road Access

Ocean City, Cape May County, New Jersey



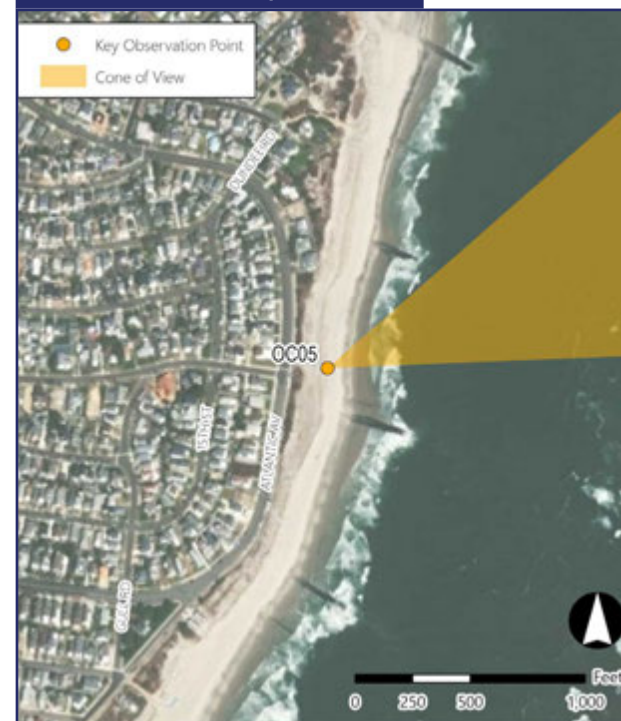
QR Code for Timelapse Video  
[Timelapse Video Link](#)



## Simulation Information

Coordinates:	39.28925°N, 74.55279°W
Character Area:	Residential Beachfront(SCA)
User Group:	L. Resident, Tourist, S. Residents
Direction of View:	East-northeast
Distance to Nearest Visible Turbine:	25.0 miles
Sensitive Resource:	Ocean City Beachfront, New Jersey Coastal Heritage Trail Area

## Context Map



## Environmental Information

Date Taken:	02/04/2024
Time:	Various
Temperature:	35°F
Humidity:	57%
Visibility:	10 miles
Wind Direction:	West-northwest
Wind Speed:	9 mph
Conditions Observed:	Fair

## Photograph Information

Camera:	Canon EOS 5D Mark IV
Resolution:	30.4 Megapixels
Focal Length:	50mm
Camera Height:	14.6 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.



Existing Conditions (Sunrise)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: OC05 Ocean City - East Surf Road Access  
Attachment E: Photosimulations; Page 267 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Sunrise) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: OC05 Ocean City - East Surf Road Access  
Attachment E: Photosimulations; Page 268 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Noon)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: OC05 Ocean City - East Surf Road Access  
Attachment E: Photosimulations; Page 269 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.





Photosimulation (Noon) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: OC05 Ocean City - East Surf Road Access  
Attachment E: Photosimulations: Page 270 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Sunset)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: OC05 Ocean City - East Surf Road Access  
Attachment E: Photosimulations: Page 271 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Sunset) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: OC05 Ocean City - East Surf Road Access  
Attachment E: Photosimulations: Page 272 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Existing Conditions (Night)



Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (Night) (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: OC05 Ocean City - East Surf Road Access  
Attachment E: Photosimulations: Page 274 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

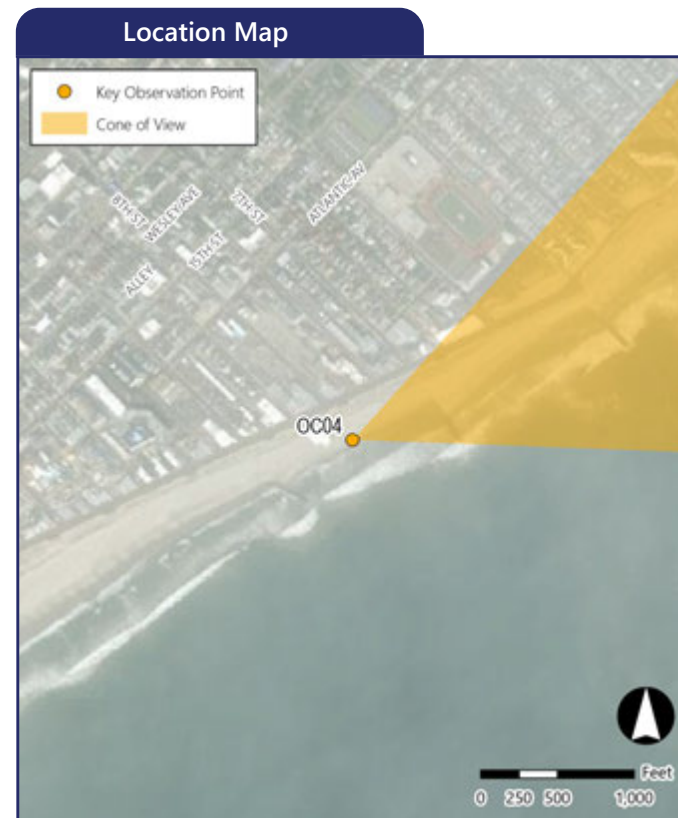
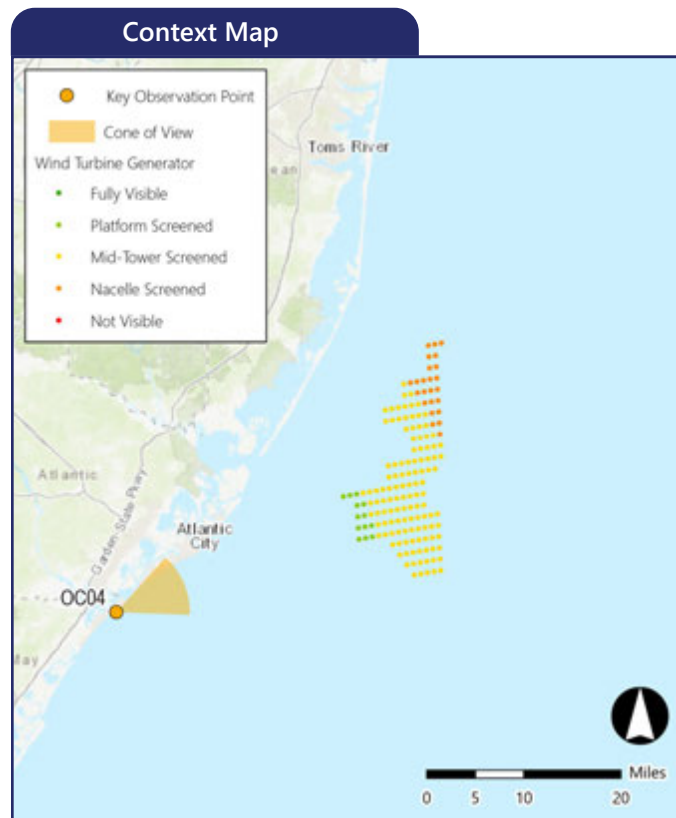


# OC04 Gillian's Wonderland Pier

Ocean City, Cape May County, New Jersey



The image above is a +/- 124° panorama photograph from the beach near Gillian's Wonderland Pier, panning clockwise from north-northeast (left) to southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



### Simulation Information

Coordinates:	39.27510°N, 74.56878°W
Character Area:	Commercial Beachfront, Seascape (SCA)
User Group:	L. Residents, Tourists, Fishing Comm., S. Residents
Direction of View:	East-northeast
Distance to Nearest Visible Turbine:	26.1 miles
Sensitive Resource:	Ocean City Beachfront, Pavilion Motor Lodge, Ocean City Music Pier, New Jersey Coastal Heritage Trail Area, EJA

Environmental Information	Photograph Information		
Date Taken:	09/22/2020	Camera:	Canon EOS 5D Mark IV
Time:	9:21 AM	Resolution:	30.4 Megapixels
Temperature:	63°F	Focal Length:	50mm
Humidity:	41%	Camera Height:	14.5 feet AMSL
Visibility:	10 miles	<b>Notes</b>	
Wind Direction:	North-northwest	Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.	
Wind Speed:	14 mph		
Conditions Observed:	Fair		





# OC04 Gillian's Wonderland Amusement

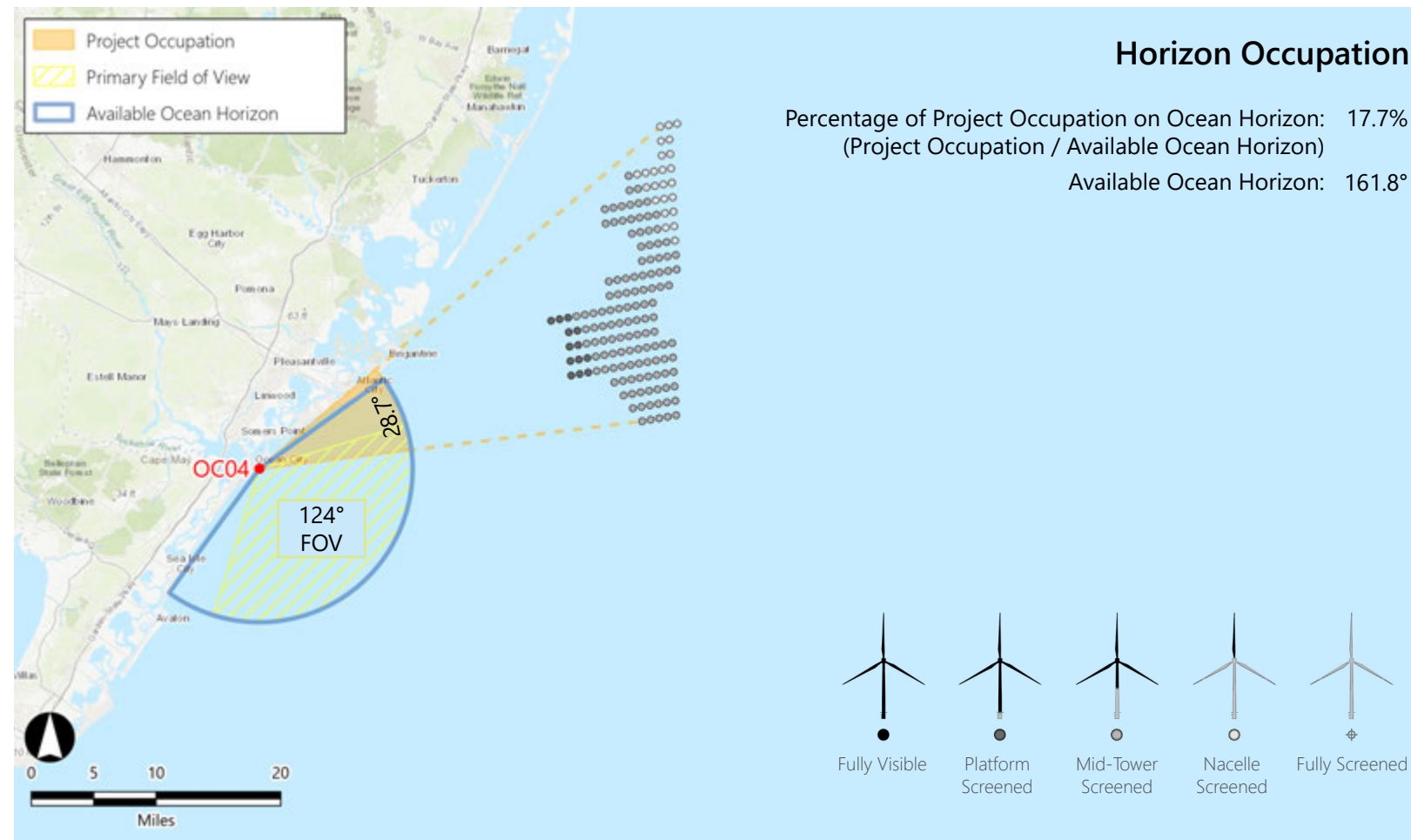
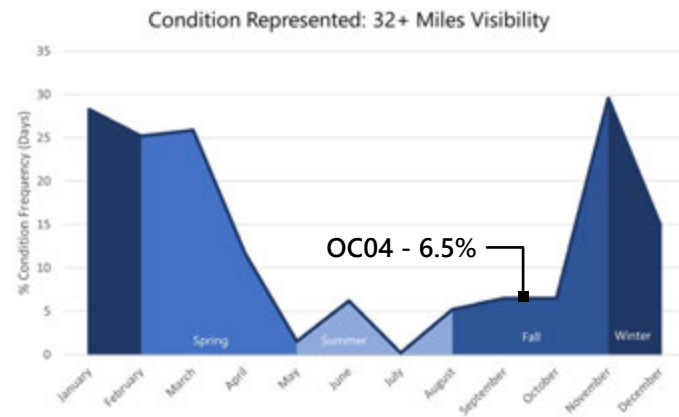
Ocean City, Cape May County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 26.1 miles  
 Camera Height: 14.5 feet  
 User Groups: L. Residents, Tourists, Fishing Comm., S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

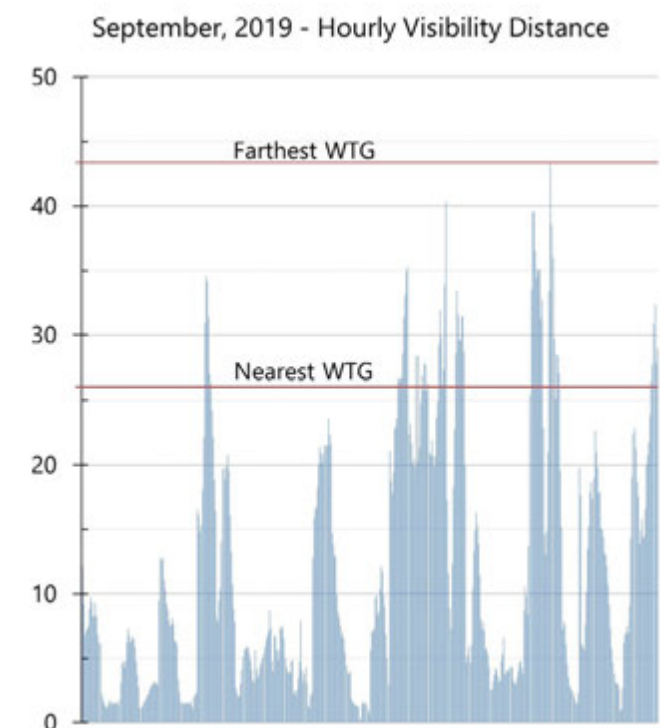
### Color Contrast Rating:

Turbine: 1.93  
 Background

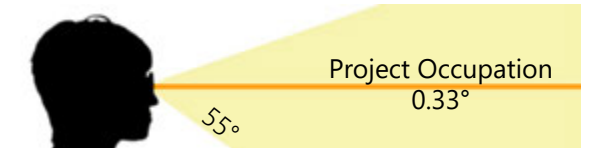
Lighting Condition: Side lit  
 Season: Fall  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

### SIMILAR VIEWING PARAMETERS:

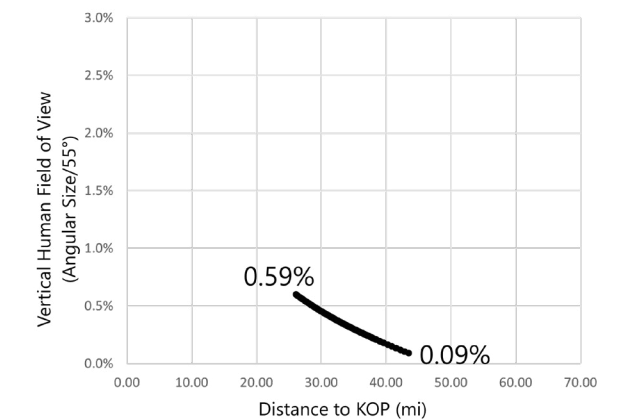
KOP OC05 illustrates the project from 25.03 miles in the side lit condition. This provides an indication of how the turbines may appear from this KOP during midday conditions.



## Vertical Occupation



Percentage of Human FOV: 0.59% (0.33° / 55°)  
 (Considering the nearest visible turbine)





# OC04 Gillian's Wonderland Amusement

Ocean City, Cape May County, New Jersey

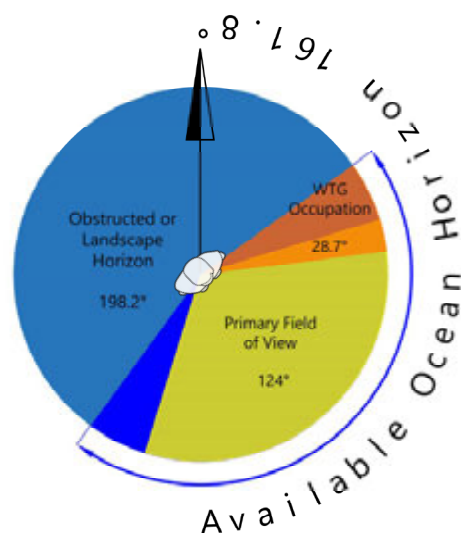
## KOP Information

Primary Field of View/Simulation Direction:	ESE/ENE
Distance to Closest WTG:	26.1 miles
Camera Height:	14.5 ft
User Groups:	Residents, Tourists
Horizon Occupation (% HFOV):	Small (28.7°, 23.1%)
Vertical Occupation:	Medium ( 0.33°, 0.59%)
Character Area Type:	Seascape
Character Area:	Commercial Beachfront

## Existing View



## Field of View

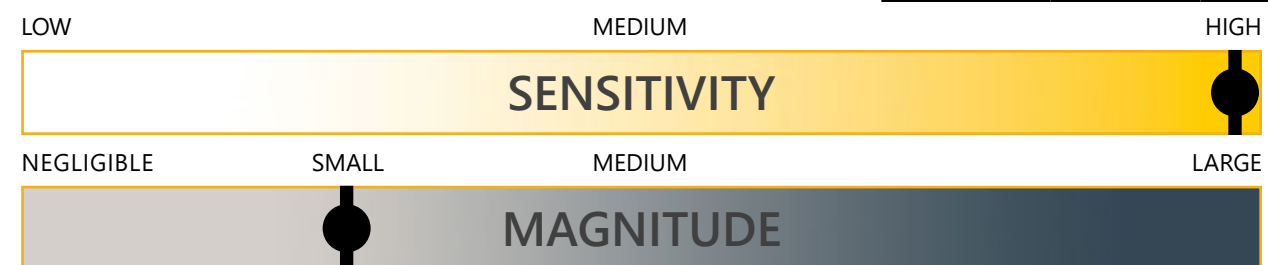


## Existing Landscape/ Seascape Character Description:

The Commercial Beachfront Seascape Character Area includes a deep (wide) beach that provides a buffer between the shoreline development and the natural waterfront. The scale of the development contrasts with the natural beach setting, with high-contrast colors, big steel amusement rides, and tall hotels or residential complexes. However, this is a quintessential commercial beachfront example. The dunes provide somewhat of a visual barrier between the development and the beach, and the buildings are not so tall as to detract entirely from the beach setting. However, at night the lighting is overwhelming to the viewers on the dark beach. The existing view to the east from the selected location looks up the beach along the surf line. The beach slopes gently toward the line of breaking waves that angle from the foreground to the background (right to left) across the view. A scattering of people on the beach and the large breaking waves gives the view a dynamic feel. Little of the ocean is visible beyond the surf, but the thin line of dark water behind the waves presents strong contrast with the hazy white sky at the horizon. The sky transitions to blue overhead and, looking into the sun, people on the beach appear strongly backlit.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Views from residences and experienced by local/seasonal residents, tourist, and recreational users. Seascape and Ocean views are important to the users.
Value	High	This location has accommodation for larger beach crowds and appears in Online advertisements and guidebooks, etc.
Sensitivity Rating	High	Highly susceptible and high value seascape results in high sensitivity.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Medium	With a vertical occupation of 0.33 degrees the WTGs may occupy up to 0.59 percent of the human vertical field of view (55 degrees). The visual prominence rating is 2, which indicates the Project may be visible when scanning in the general direction of the project facilities.
Geographic Extent	Small	The geographic extent is small as indicated by the theoretical horizon occupation of 28.7 degrees which occupies about 23.1 percent of the human horizontal field of view (124 degrees).
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Small	Small geographic extent and medium scale contrast results in small magnitude.

## Project Contrast:

During clear viewing conditions, the WTGs result in moderate line, form, and color contrast with the ocean. At times the rotor motion may attract viewer attention. Moderate line, form, motion, and lighting contrasts anticipated with landform due to the viewer orientation. A weak contrast is possible with structures given the presence of the Atlantic City high rises.

**Overall Impact**  
**Minor**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: OC04 - Gillian's Wonderland Pier  
Attachment E: Photosimulations: Page 278 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: OC04 - Gillian's Wonderland Pier  
Attachment E: Photosimulations: Page 279 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

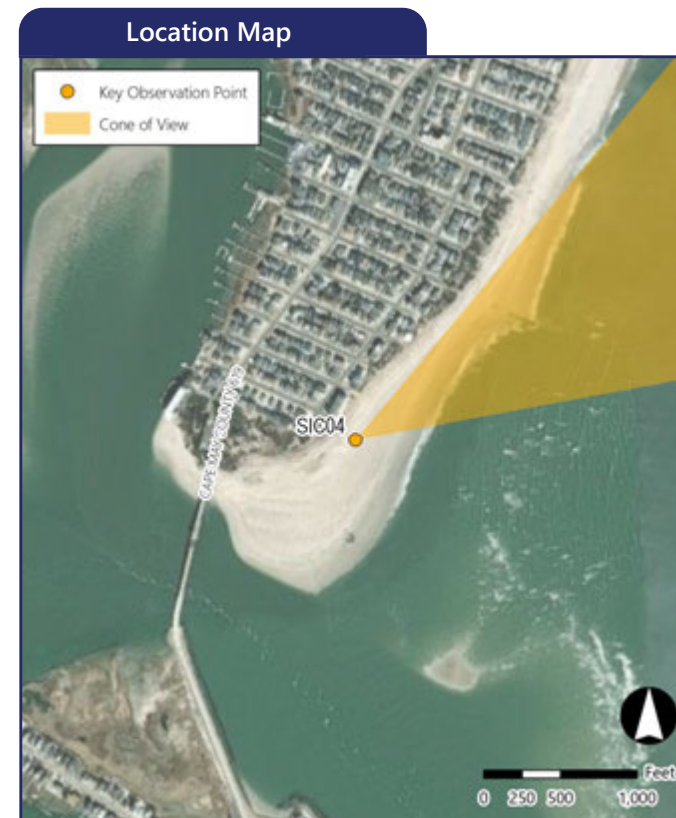
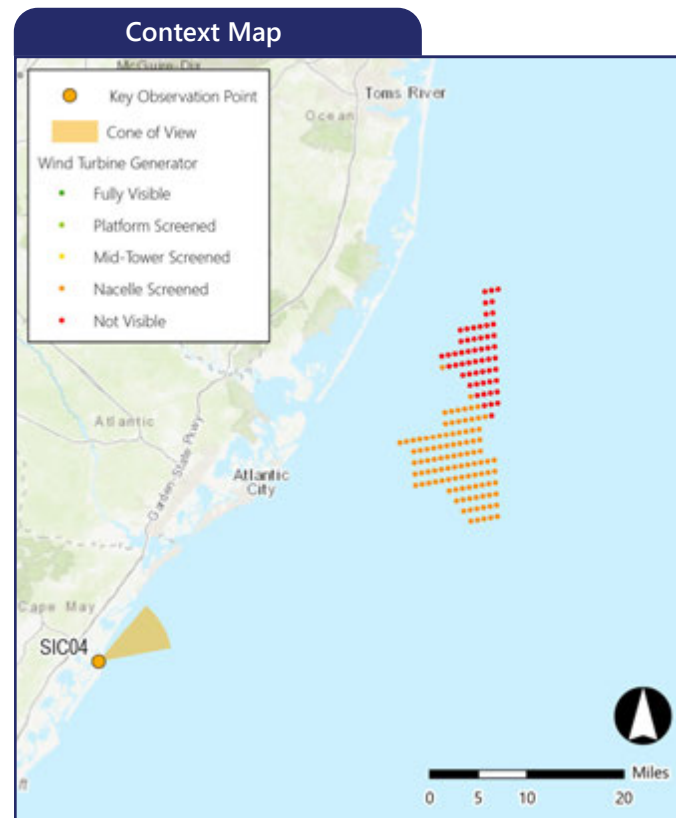


# SIC04 Townsends Inlet Beach

Sea Isle City, Cape May County, New Jersey



The image above is a +/- 124° panorama photograph from Townsends Inlet Beach, panning clockwise from north (left) to east (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates: 39.12094°N, 74.71214°W  
 Character Area: Residential Beachfront, Seascape (SCA)  
 User Group: L. Residents, Tourists, S. Residents  
 Direction of View: Northeast  
 Distance to Nearest Visible Turbine: 37.4 miles  
 Sensitive Resource: New Jersey Coastal Heritage Trail Area, Townsend Inlet Bridge (SI&A # 3100003), Sea Isle City Beach Dune Upland, Sea Isle City Municipal Beach

## Environmental Information

Date Taken: 08/18/2023  
 Time: 11:13 AM  
 Temperature: 79°F  
 Humidity: 60%  
 Visibility: 10 miles  
 Wind Direction: West-northwest  
 Wind Speed: 18 mph  
 Conditions Observed: Fair

## Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 11.0 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)



Photograph ASOW0495



# SIC04 Townsends Inlet Beach

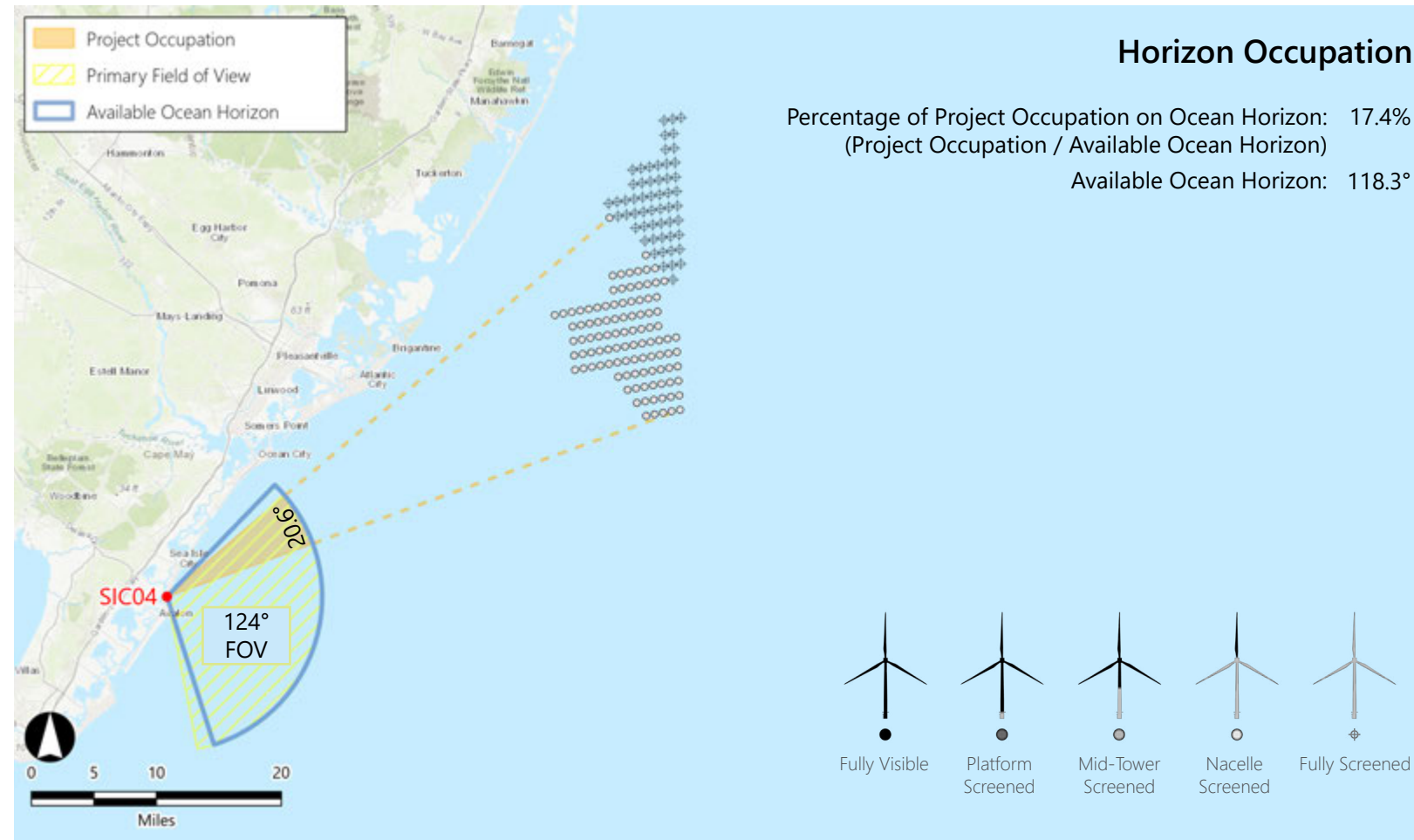
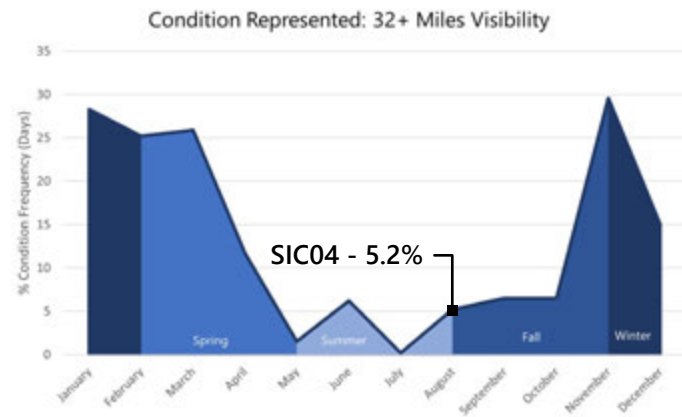
Sea Isle City, Cape May County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 37.4 miles  
 Camera Height: 11.0 feet  
 User Groups: L. Residents, Tourists, S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

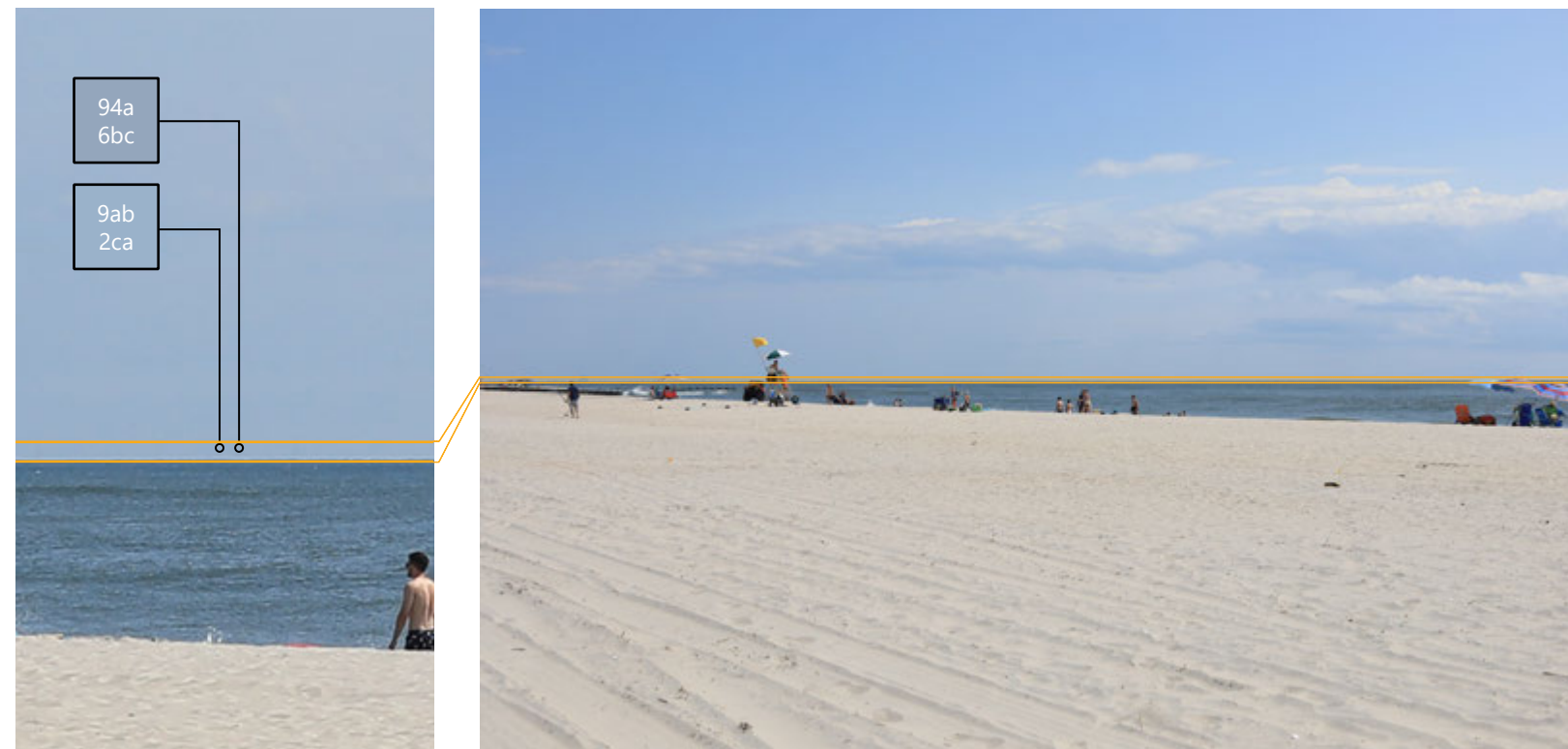
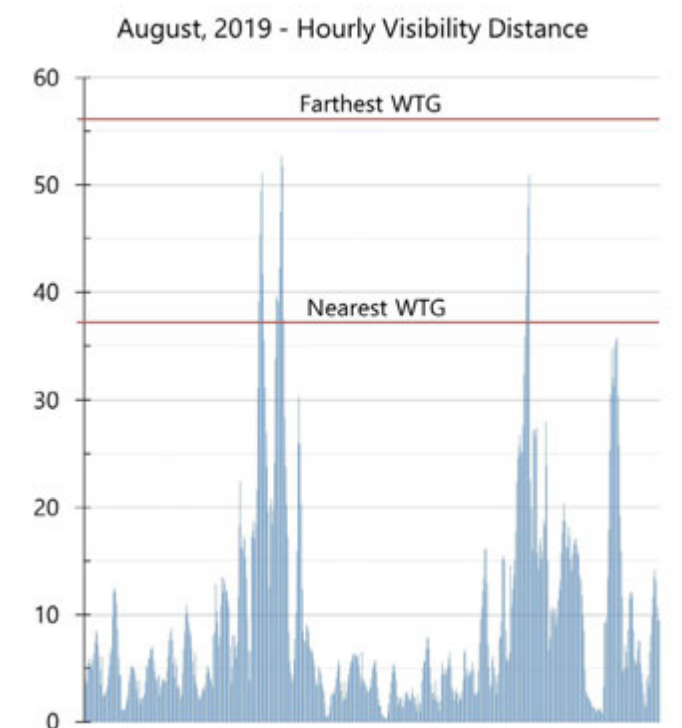
### Color Contrast Rating:

Turbine: 1.13  
 Background: 1.13

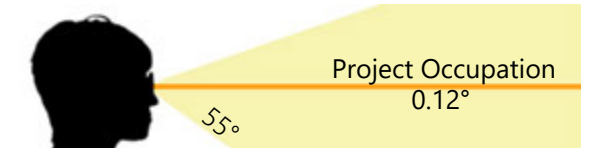
Lighting Condition: Front lit  
 Season: Summer  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

## SIMILAR VIEWING PARAMETERS:

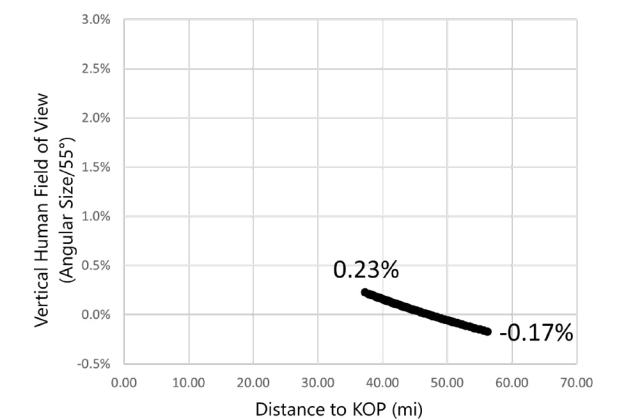
KOP APC02 Illustrates the project from 37.98 miles in the back lit condition. This provides an indication of how the turbines may appear from this KOP during afternoon conditions.



## Vertical Occupation



Percentage of Human FOV: 0.23% (0.12° / 55°)  
 (Considering the nearest visible turbine)





# SIC04 Townsends Inlet Beach

Sea Isle City, Cape May County, New Jersey

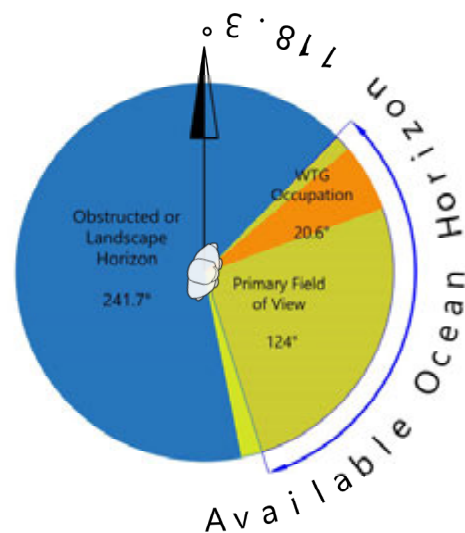
## KOP Information

Primary Field of View/Simulation Direction:	East/NE
Distance to Closest WTG:	37.4 miles
Camera Height:	11 ft
User Groups:	L. Residents, Tourists, S. Resident
Horizon Occupation (% HFOV):	Small (20.6°, 16.6%)
Vertical Occupation:	Negligible ( 0.12°, 0.23%)
Character Area Type:	Seascape
Character Area:	Residential Beachfront

## Existing View



## Field of View

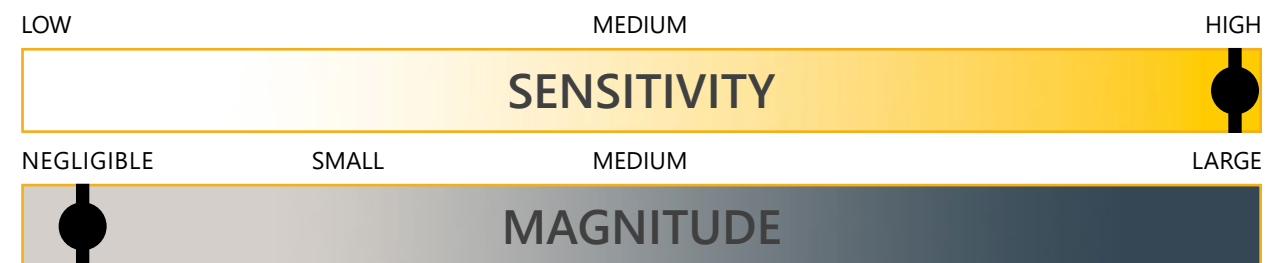


## Existing Landscape/ Seascape Character Description:

Sea Isle City is a unique Beachfront Residential community in that there has been significant effort in protecting the forested dune ecosystem. In many areas (not the KOP in particular) the dunes and forest vegetation screen inland development making the beach and shoreline appear more natural and pristine. At the KOP, there are indications of this, but the forested areas are less frequent exposing viewers to the shoreline development, which is completely out of scale with the natural features in the view. The KOP occurs along a relative wide beach which extends eastward from the undulating vegetated dunes. Beyond the dunes, large closely situated homes line the shore, completely blocking out inland views. The structures range in size, but some appear to be up to five stories and support multiple residential units. This Residential Beachfront has substantially more healthy dune vegetation further north of the KOP, including a forest buffer between the homes and the beach. The ocean, calm on the day of the visit, creates a perfectly flat and untouched horizon with the light blue to white sky.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Views from residences and experienced by local/seasonal residents, tourist, and recreational users. Seascape and Ocean views are important to the users.
Value	High	Sea Isle City clearly places value on the beach. They have expended significant effort in making connective corridors from the parking area at Waterfront Park and they are engaged in dune preservation activities, including interpretive signage, planting, and re-nourishing.
Sensitivity Rating	High	Highly susceptible and moderate value seascape results in high sensitivity.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Negligible	With a vertical occupation of 0.12 degrees the WTGs may occupy up to 0.23 percent of the human vertical field of view (55 degrees). The visual prominence rating is 1, which indicates the Project is only visible after extended close viewing.
Geographic Extent	Small	The geographic extent is small as indicated by the horizon occupation of 20.6 degrees which occupies about 16.6 percent of the human horizontal field of view (124 degrees).
Duration/ Reversibility	Fair	Long term and fully reversible.
Magnitude Rating	Negligible	Small geographic extent and negligible scale contrast.

## Project Contrast:

During extremely clear viewing conditions, the WTGs present weak line, form, and color contrast with the ocean. The significant distance presents atmospheric diffusion of the light, causing the WTG blades to become extremely difficult to see. Under the majority of viewing conditions, the Project will not be visible.

Overall Impact  
**Negligible**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SIC04 Townsends Inlet Beach  
Attachment E: Photosimulations: Page 283 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SIC04 Townsends Inlet Beach  
Attachment E: Photosimulations: Page 284 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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

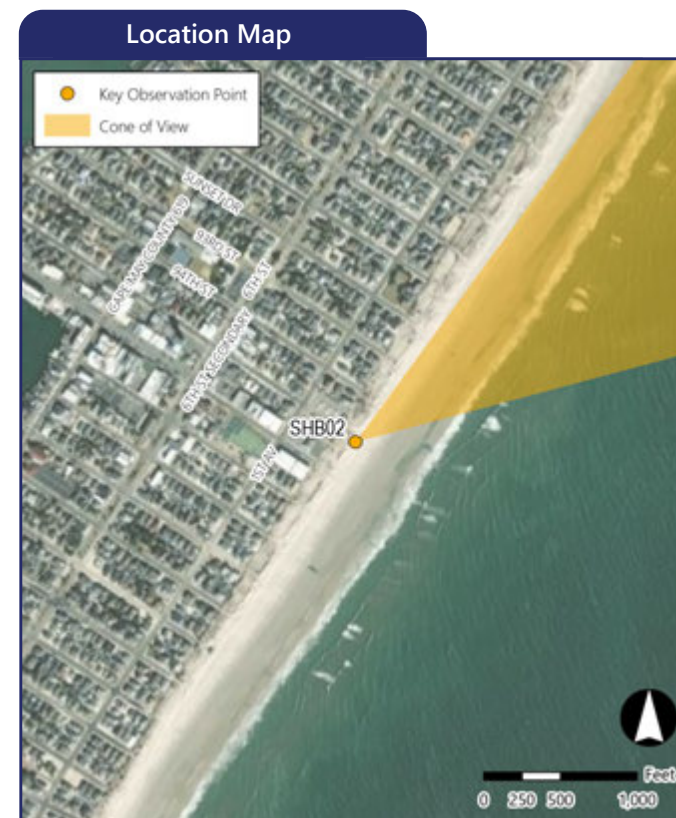
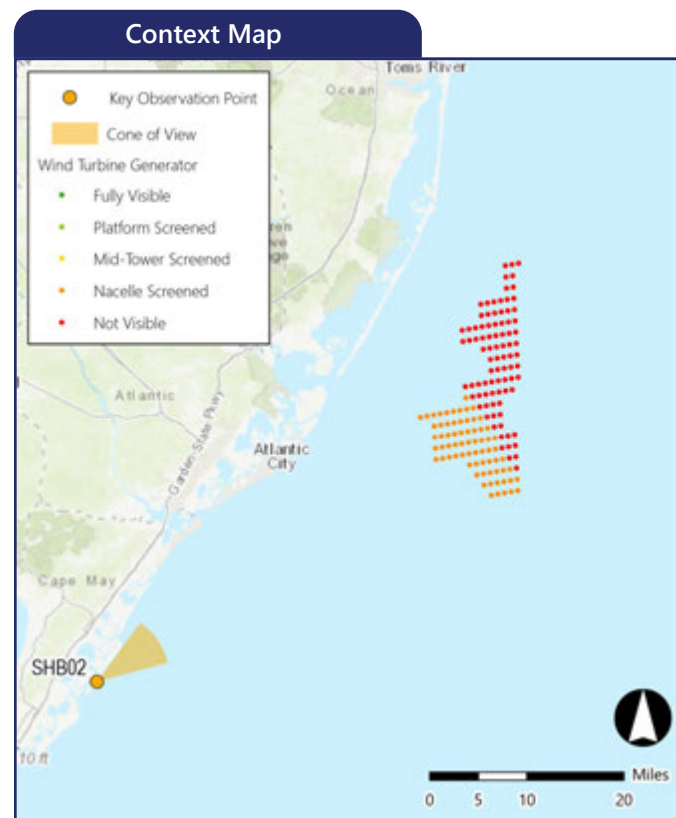


# SHB02 Stone Harbor Point

Stone Harbor Borough, Cape May County, New Jersey



The image above is a +/- 124° panorama photograph from Stone Harbor Point, panning clockwise from northeast (left) to southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).



## Simulation Information

Coordinates: 39.05242°N, 74.75490°W  
 Character Area: Residential Beachfront (SCA)  
 User Group: L. Residents, Tourists, S. Residents  
 Direction of View: Northeast  
 Distance to Nearest Visible Turbine: 41.8 miles  
 Sensitive Resource: New Jersey Coastal Heritage Trail Area

## Environmental Information

Date Taken: 09/23/2020  
 Time: 8:14 AM  
 Temperature: 56°F  
 Humidity: 67%  
 Visibility: 10 miles  
 Wind Direction: West  
 Wind Speed: 9 mph  
 Conditions Observed: Fair

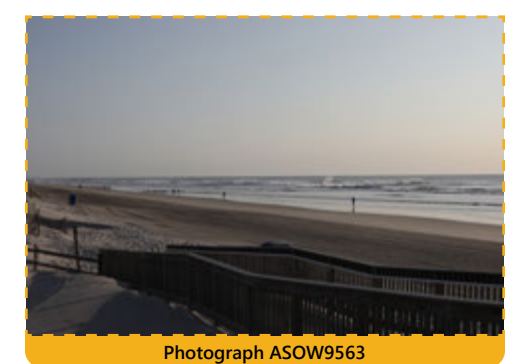
## Photograph Information

Camera: Canon EOS 5D Mark IV  
 Resolution: 30.4 Megapixels  
 Focal Length: 50mm  
 Camera Height: 15.9 feet AMSL

## Notes

Printed at 100%, the photosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

## Simulated Photograph(s)



Photograph ASOW9563



# SHB02 Stone Harbor Point

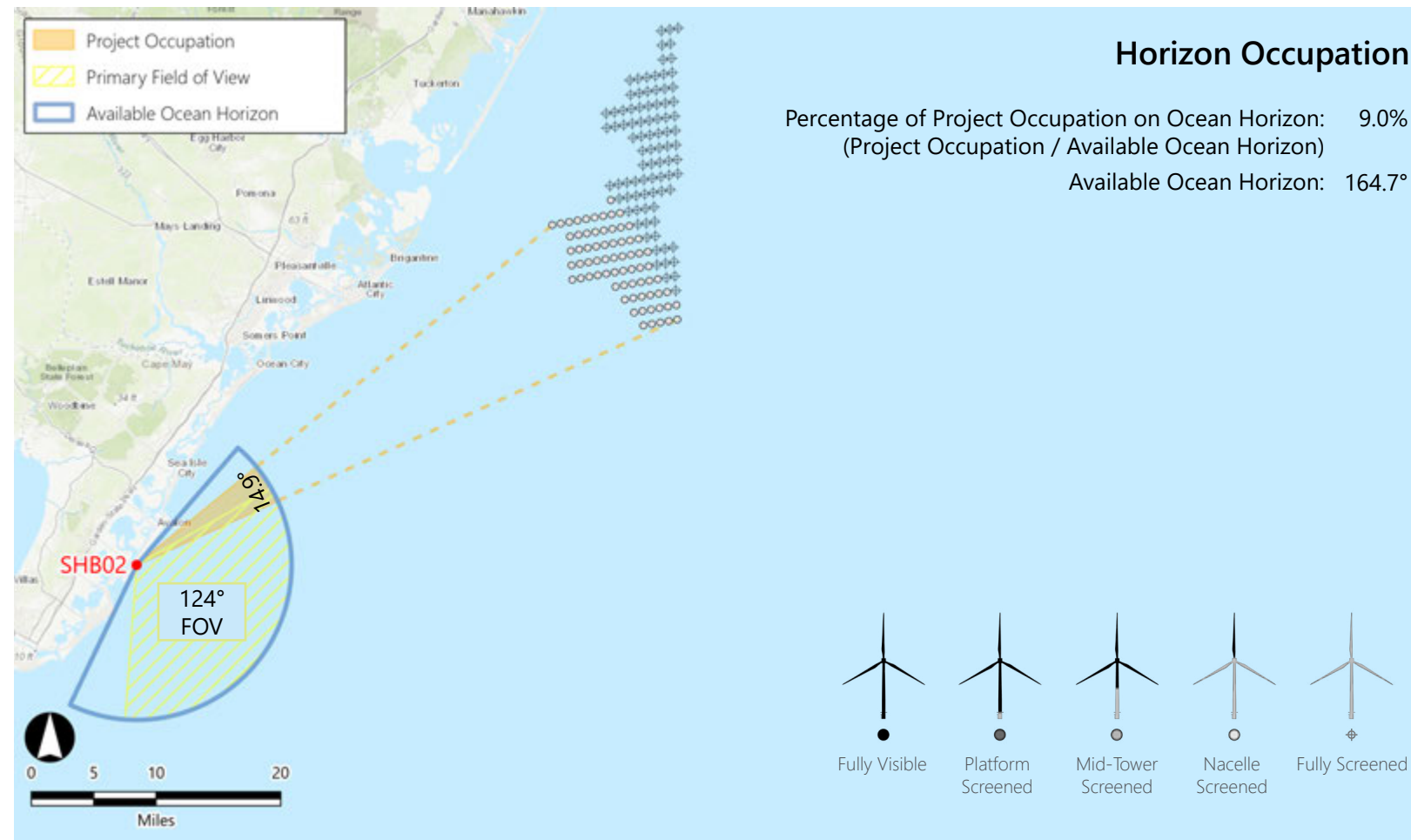
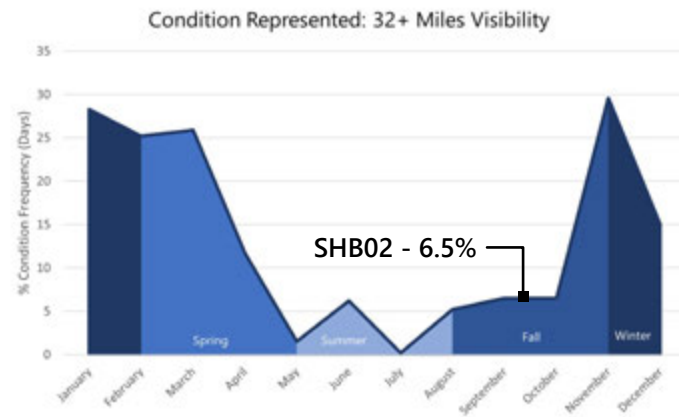
Stone Harbor Borough, Cape May County, New Jersey

## KOP Information

Primary Field of View: East  
 Distance to Closest WTG: 41.8 miles  
 Camera Height: 15.9 feet  
 User Groups: L. Residents, Tourists, S. Residents

## Atmospheric Perspective

The effect the atmosphere has on the appearance of an object as viewed from a distance.



## WTG Color Contrast

### Color Contrast Rating:

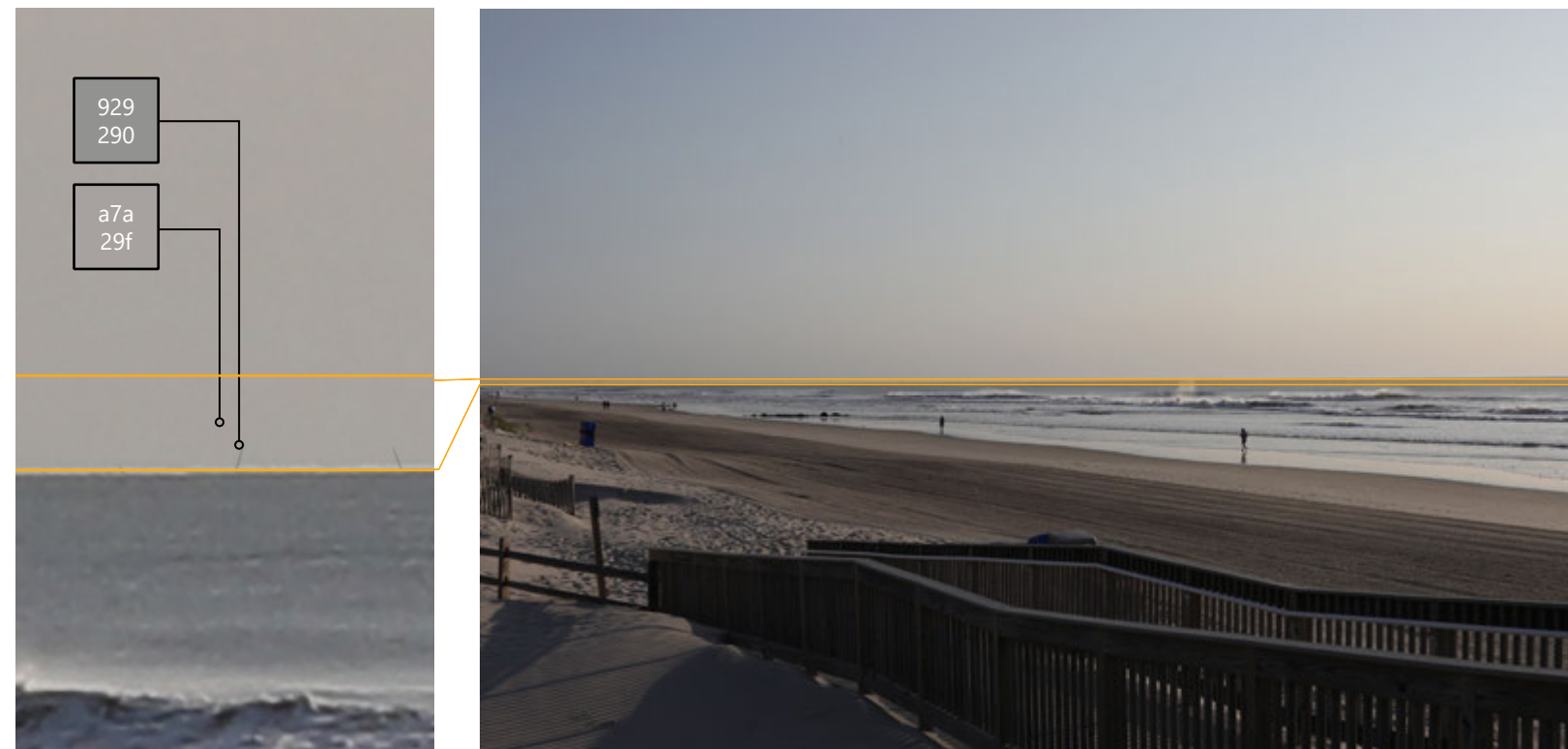
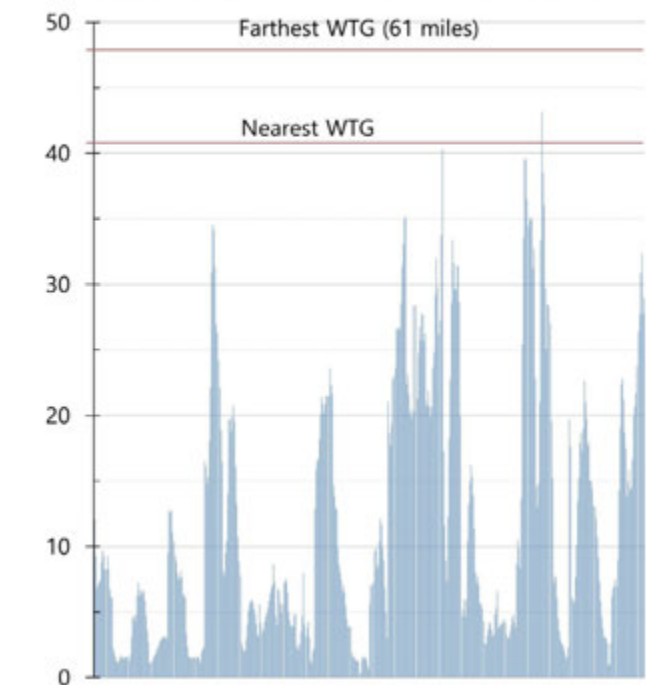
Turbine: 1.23  
 Background: 1.23

Lighting Condition: Side lit  
 Season: Fall  
 Sky Condition: Fair  
 Atmospheric Condition: > 10 Miles

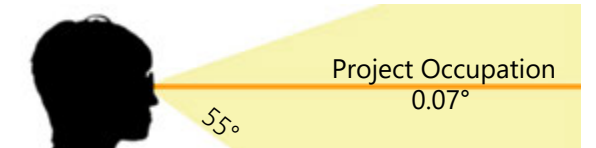
### SIMILAR VIEWING PARAMETERS:

There are no other KOPs within the distance threshold represented by this KOP.

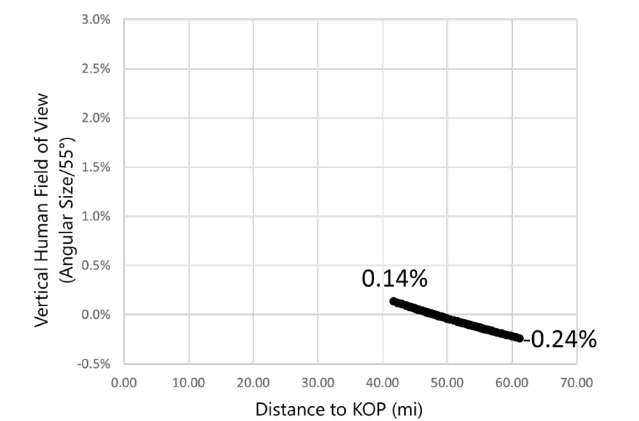
## September, 2019 - Hourly Visibility Distance



## Vertical Occupation



Percentage of Human FOV: 0.14% (0.07° / 55°)  
 (Considering the nearest visible turbine)





# SHB02 Stone Harbor Point

Stone Harbor Borough, Cape May County, New Jersey

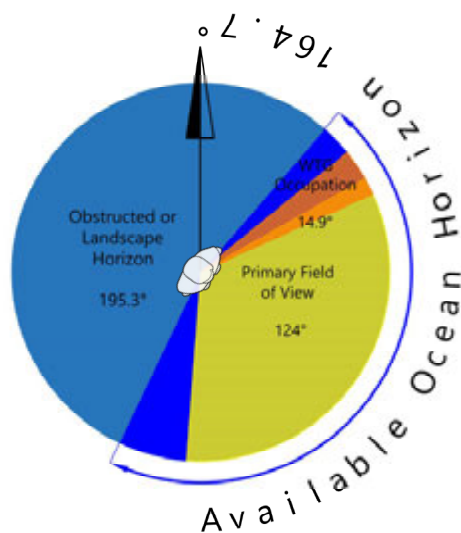
## KOP Information

Primary Field of View/Simulation Direction:	East/NE
Distance to Closest WTG:	41.8 miles
Camera Height:	15.9 ft
User Groups:	L. Residents, Tourists, S. Resident
Horizon Occupation (% HFOV):	Negligible (14.9°, 12.0%)
Vertical Occupation:	Negligible ( 0.07°, 0.14%)
Character Area Type:	Seascape
Character Area:	Residential Beachfront

## Existing View



## Field of View



## Existing Landscape/ Seascape Character Description:

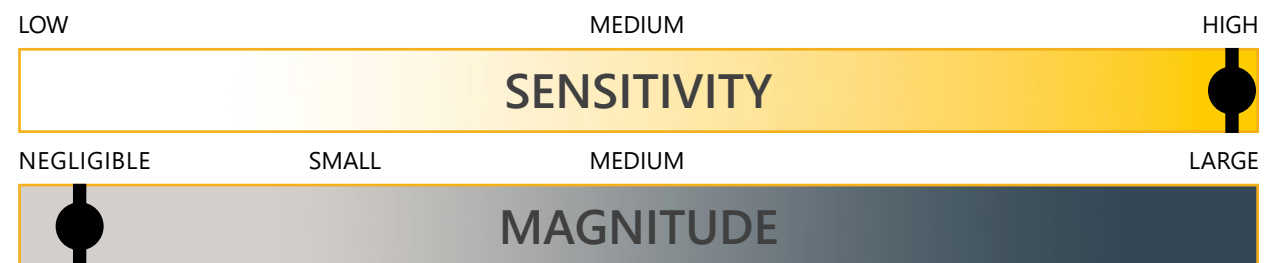
Stone Harbor Point is a Beachfront Residential community with typical access points through the large, wide dunes. In this area, the homes have a significant setback from the beach. This is either by design, or the area is receiving regular, natural beach nourishment, which essentially adds landmass to the beach, extending it further into the ocean. This setback results in a slightly more natural beachfront because the dunes can screen a greater portion of the inland development when viewed from beach level. The inshore is made up of primarily single-family homes, and multi-family complexes or condominiums. A few blocks inland there are shops, recreation facilities, and inland residential areas. The KOP is on the beach access path near the Town's beach tag office. The view includes densely situated homes on the shoreline and inland that vary from 2-4 stories. Most are modern colonial, cape, and Victorian inspired designs. The oceanfront homes have decks situated on the east side of the house and large windows to take advantage of ocean views. The dunes are large, undulating masses that have variable vegetation coverage. The beach consists of a moderately wide, sandy stretch that slopes down to the ocean. The break has large swells just off the beach, but the shoreline interface is shallow and calm. In the distance, the Ocean Casino Resort (28.1 mi. distant) can barely be seen on the horizon.

## Project Contrast:

At a distance of 41.8 miles, the circumstance under which the WTGs could become visible will be so rare and for such a short duration that will have negligible visual impacts.

## Sensitivity

Sensitivity Factor	Rating	Rationale
Susceptibility	High	Views from residences and experienced by local/seasonal residents, tourist, and recreational users. Seascape and Ocean views are important to the users.
Value	High	Sea Isle City clearly places value on the beach. They have expended significant effort in making connective corridors from the parking area at Waterfront Park and they are engaged in dune preservation activities, including interpretive signage, planting, and re-nourishing.
Sensitivity Rating	High	Highly susceptible and moderate value seascape results in high sensitivity.



## Magnitude

Magnitude Factor	Rating	Rationale
Size and Scale	Negligible	With a vertical occupation of 0.07 degrees the WTGs may occupy up to 0.14 percent of the human vertical field of view (55 degrees). There is no visual prominence rating because the WTGs can not be seen at this distance.
Geographic Extent	Negligible	The geographic extent is small as indicated by the theoretical horizon occupation of 14.9 degrees which occupies about 12 percent of the human horizontal field of view (124 degrees).
Duration/ Reversibility	NA	Change will be perceptible and therefore duration and reversibility do not apply from this KOP
Magnitude Rating	Negligible	Small geographic extent and very small scale contrast.

Overall Impact  
**Negligible**



Existing Conditions



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SHB02 Stone Harbor Point  
Attachment E: Photosimulations; Page 288 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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



Photosimulation (OCS-A 0549)



Atlantic Shores Offshore Wind: North (OCS-A 0549)  
Outer Continental Shelf – OCS-A 0549

Key Observation Point: SHB02 Stone Harbor Point  
Attachment E: Photosimulations: Page 289 of 289

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.



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