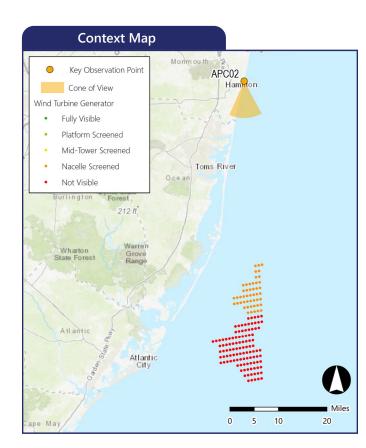
APC02 Asbury Park Convention Center (Beach)

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, S
User Group:	L. Residents, Tourists, S. R
Direction of View:	South
Distance to Nearest Visible Turbine:	38.0 miles
Sensitive Resource:	Asbury Park Convention H
and Beach, Howard Johnson's Pavilion, New Jer	sey Coastal Heritage Trail A
8070.03, EJA	

Environmental Information		Photograph Information	
Date Taken:	03/03/2022	Camera:	Canon EOS
Time:	2:00 PM	Resolution:	30.4 Mega
Temperature:	43°F	Focal Length:	50mm
Humidity:	31%	Camera Height:	14.5 feet Al
Visibility:	10 miles	Notes	
Wind Direction:	West-northwest	Printed at 100%, th	ne photosimul
Wind Speed:	14 mph	inches wide by 10 i	nches high. At
Conditions Observed:	Partly Cloudy	photosimulation(s) should distance of 21 inches.	

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

Attachment E: Photosimulations

Page 1 of 289

Seascape (SCA) Resident

Hall, Boardwalk Area, Census Tract

anon EOS 5D Mark IV .4 Megapixels mm .5 feet AMSL

hotosimulations are 15 high. At this size, the Ild be viewed from a

Simulated Photograph(s)



APC02 Asbury Park Convention Center (Beach)

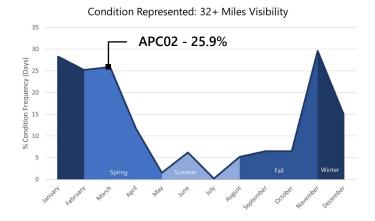
East

City of Asbury Park, Monmouth County, New Jersey

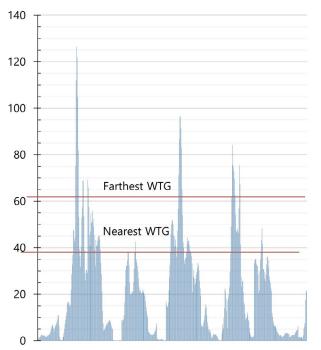
KOP Information Primary Field of View: Distance to Closest WTG: 38.0 miles Camera Height: 14.5 feet User Groups: L. Residents, Tourists, S.Residents

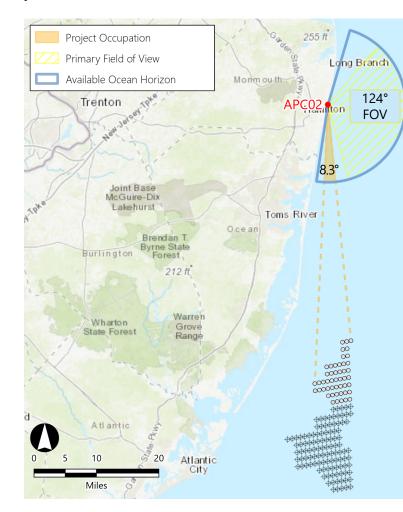
Atmospheric Perspective

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



March, 2019 - Hourly Visibility Distance

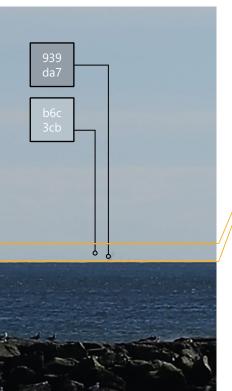




Horizon Occupation

Percentage of Project Occupation on Ocean Horizon: 4.8% (Project Occupation / Available Ocean Horizon) Available Ocean Horizon: 172.0°







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

Page 2 of 289

Back lit

Winter

Partly Cloudy

>10 Miles



Color Contrast Rating:



Lighting Condition:

Season:

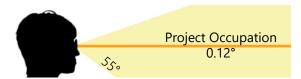
Sky Condition:

Atmospheric Condition:

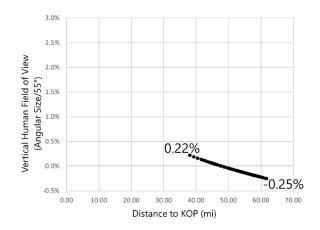
SIMILAR VIEWING PARAMETERS:

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.

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

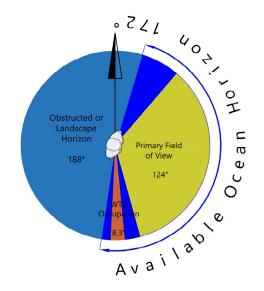
KOP Information

Primary Field of View/Simulation E	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:

Sensitivity

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.

Magr Rating Rationale Sensitivity Facto Factor Residents in beachfront properties, recreationalists, and resources with historic/ cultural importance occur around this KOP. As Size ar such it is assumed that the view of the ocean is Scale an important aspect of the viewer experience Susceptibility High 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. Geogr Extent The areas receives a large number of viewers seasonally and they often come specifically Value High for the New Jersey Shore. There is local pride in history and in Asbury Park's namesake as a culture and arts community. Duratio Reversi Highly valued and highly susceptible seascape Sensitivity Magni High with historic, cultural, and view-scape Rating Rating importance. LOW MEDIUM SENSITIVITY NEGLIGIBLE SMALL MEDIUM MAGNITUDE

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.

Magnitude

nitude or	Rating	Rationale
nd	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.
raphic t	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.
ion/ sibility	Fair	Long term and fully reversible.
itude 9	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.
		HIGH



Overall Impact Negligible



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

size Printed at 100% t 15 inches wide by







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% t 15 inches wide by

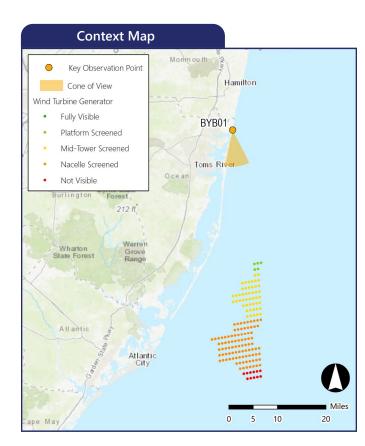


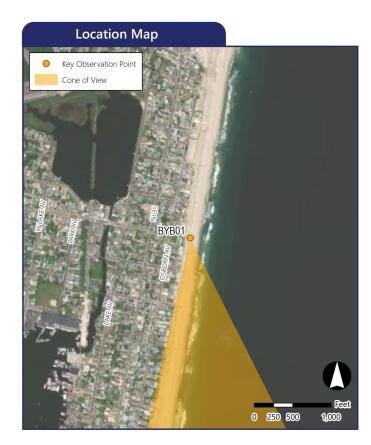
BYB01 Bay Head Historic District

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: Character Area: User Group: Direction of View: Distance to Nearest Visible Turbine: Sensitive Resource:

Environmental Information

Conditions Observed: Partly Cloudy

08/18/2023

4:31 PM

81°F

44%

West

10 miles

24 mph

Date Taken:

Temperature:

Wind Direction:

Wind Speed:

Humidity:

Visibility:

Time:

40.06996°N, 74.04189°W Residential Beachfront, Seascape (SCA) L. Residents, Tourists, S. Residents South 28.0 miles New Jersey Coastal Heritage Trail Area, Bay Head Historic District

Photograph Information

Camera:	Cano
Resolution:	30.4
Focal Length:	50m
Camera Height:	24.6
Notes	
Printed at 100%, th	ne pho

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.

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

Attachment E: Photosimulations

Page 6 of 289

Simulated Photograph(s)



non EOS 5D Mark IV Megapixels nm feet AMSL

BYB01 Bay Head Historic District

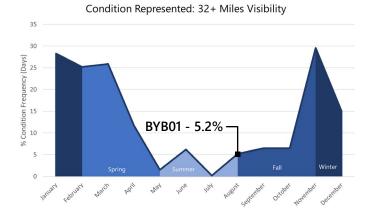
Bay Head Borough, Ocean County, New Jersey

KOP Information

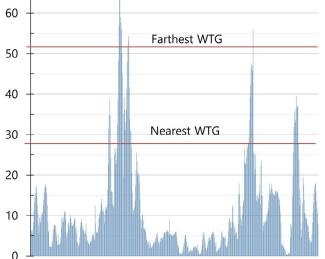
Primary Field of View:	East
Distance to Closest WTG:	28.0 miles
Camera Height:	24.6 feet
User Groups:	L. Residents, Tourists, S. Residents

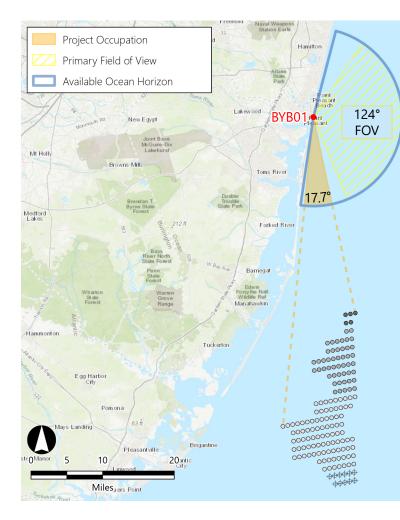
Atmospheric Perspective

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



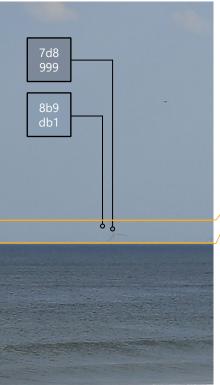
August, 2019 - Hourly Visibility Distance 80 70 60 Farthest WTG 50









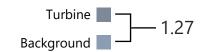




Atlantic Shores Offshore Wind: North (OCS-A 0549) Attachment E: Photosimulations Page 7 of 289

WTG Color Contrast

Color Contrast Rating:



Lighting Condition:

Season:

Sky Condition:

Atmospheric Condition:

Partly Cloudy

Summer

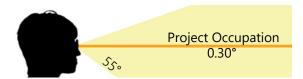
Side lit

>10 Miles

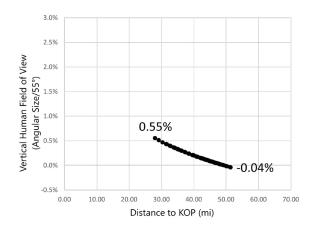
SIMILAR VIEWING PARAMETERS:

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

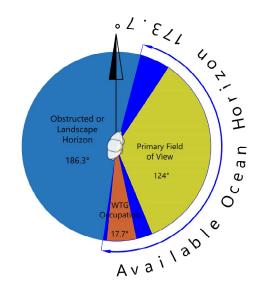
KOP Information

Primary Field of View/Si	imulation Directio	on: East/South
Distance to Closest WT	G:	28.0 miles
Camera Height:		24.6 ft
User Groups:	L. Residents,	Tourists, S. Residents
Horizon Occupation (%	HFOV):	Small (17.7°, 14%)
Vertical Occupation:	M	edium (0.30°, 0.55%)
Character Area Type:		Seascape
Character Area:	Residential Beach	nfront, 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.

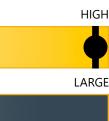
Concitivity

Sensitivity			Magnitud	le	
Sensitivity Factor	Rating	Rationale	Magnitude 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	Size and Scale	Medium	At approximately 28 miles (45 km) the nacelles or 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 wou be detectable in five of the nearest turbines. The visual prominence rating is a 2.
		focused on the Ocean, the primary view is not in the direction of the Project.			The Project does not occur within the primary ocean field of view and would require the viewer
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.	Geographic Extent	Geographic Extent Small	to actively look south, down the beach. The WTG and OSSs occupy only 17.7 degrees or 14 percen of the 124 degree field of view.
		Dune and beach restoration are required regularly to maintain usability.	Duration/ Reversibility	Fair	Long term and fully reversible.
Sensitivity Rating	High	Highly valued and highly susceptible seascape with and view-scape importance.	Magnitude Rating	Small	With a visual prominence rating of 2, viewers w 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 wou remain unaffected by the Project.
.OW		MEDIUM	L		HIGH
		SENSITIVITY			Overall Impa
NEGLIGIBLE		SMALL MEDIUM			LARGE Mino
		MAGNITUDE			

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.

Magnituda





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 9 of 289

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

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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 15 inches wide by 10 inches high. At this size ar focal length, the simulation should be viewe from a distance of 21 inches.

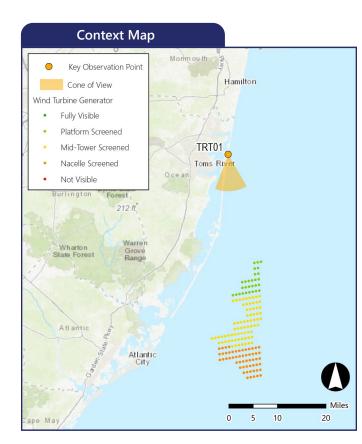


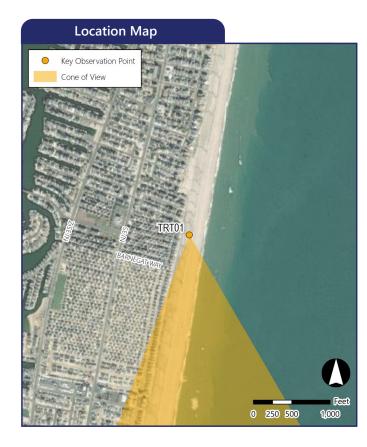
TRT01 Ocean Beach Historic District

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: Character Area: User Group: Direction of View: Distance to Nearest Visible Turbine: Sensitive Resource:

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

39.99382°N, 74.06042°N
Residential Beachfront, S
L. Residents, Tourists, S.
South
23.0 miles
Ocean Beach Historic D
and 3), New Jersey Coa
Area

Photograph Information

Camera:	Cano
Resolution:	30.4
Focal Length:	50m
Camera Height:	27.0
Notes	
Printed at 100%, t	the pho

ted 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.

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

Page 11 of 289

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Simulated Photograph(s)



W

Seascape (SCA) Resident

District (Units 1, 2, astal Heritage Trail

non EOS 5D Mark IV Megapixels nm feet AMSL

TRT01 Ocean Beach Historic District

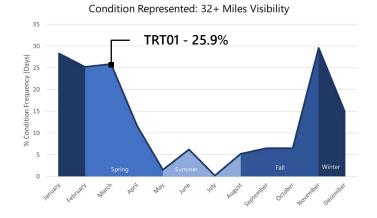
Toms River Township, Ocean County, New Jersey

KOP Information

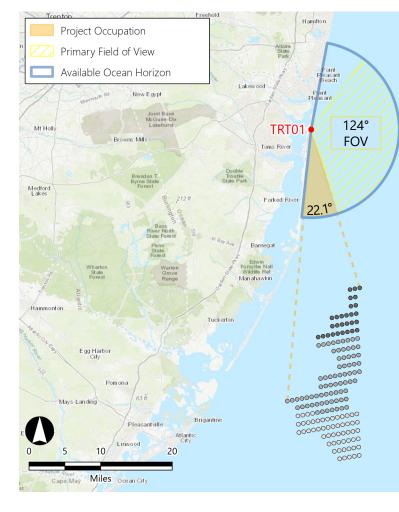
Primary Field of View:	East
Distance to Closest WTG:	23.0 miles
Camera Height:	27.0 feet
User Groups:	L. Residents, Tourists, Fishing Comm., S.Residents

Atmospheric Perspective

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



March, 2019 - Hourly Visibility Distance



Horizon Occupation

Percentage of Project Occupation on Ocean Horizon: 12.6% (Project Occupation / Available Ocean Horizon) Available Ocean Horizon: 175.7°





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

Page 12 of 289

Side lit

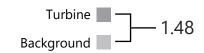
Winter

Partly Cloudy

>10 Miles



Color Contrast Rating:



Lighting Condition:

Season:

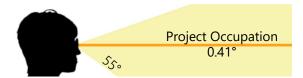
Sky Condition:

Atmospheric Condition:

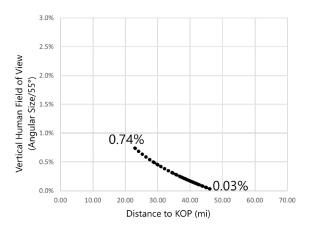
SIMILAR VIEWING PARAMETERS:

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: 0.74% (0.41° / 55°) (Considering the nearest visible turbine)





TRT01 Ocean Beach Historic District

Toms River Township, Ocean County, New Jersey

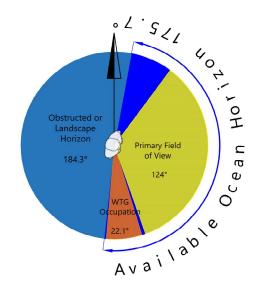
KOP Information

Primary Field of View/Simu	ulation Directi	on: East/	South
Distance to Closest WTG:		23	miles
Camera Height:			27 ft
User Groups:	L. Residents	s, Tourists, S. Res	sident
Horizon Occupation (% HF	OV):	Medium (22.1°,	, 18%)
Vertical Occupation:	Me	edium (0.41°, 0	.74%)
Character Area Type:		Sea	scape
Character Area:	F	esidential Beacl	nfront

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.

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

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.

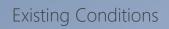
Extent

Magnitude

nitude or	Rating	Rationale
nd	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.
raphic t	Medium	The Project occupies approximately 18% (22 degrees) of the human horizontal field of view and 12.6% of the available ocean horizon.
ion/ sibility	Fair	Long term and fully reversible.
iitude g	Medium	Medium geographic extent and medium scale contrast result in medium magnitude.



Overall Impact Moderate







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 15 inches wide by 10 inches high. At this size ar focal length, the simulation should be viewe from a distance of 21 inches.



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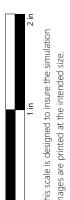




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549

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

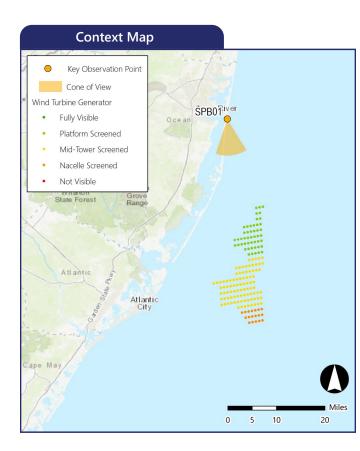
Printed at 100% the resulting simulation size 15 inches wide by 10 inches high. At this size an focal length, the simulation should be viewe from a distance of 21 inches.

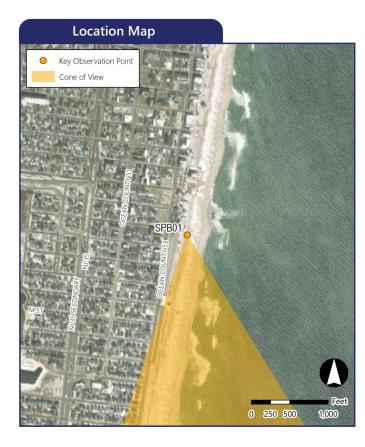


Seaside Park Borough, Ocean County, New Jersey



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	Informatior
Simulation	mornation

Wind Speed:

Conditions Observed: Fair

Coordinates:		39.93536°N, 74.07	7165°W
Character Area:		Commercial Beacl	nfront, S
User Group:		L. Residents, Touri	sts, Fishi
		Resident	
Direction of View:		South	
Distance to Nearest	Visible Turbine:	19.3 miles	
Sensitive Resource:		Seaside Park Beac	:h and B
Life Saving Station N	o. 13, New Jersey Coasta	al Heritage Trail Area,	EJA
Environmental In	formation	Photograph In	formati
Date Taken:	09/23/2020	Camera:	Canor
Time:	5:35 PM	Resolution:	30.4 N
Temperature:	74°F	Focal Length:	50mm
Humidity:	52%	Camera Height:	23.2 fe
Visibility:	10 miles	Notes	
Wind Direction:	West-northwest	Printed at 100% t	ha photo

7 mph

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.

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

Attachment E: Photosimulations Page 16 of 289

Seascape (SCA) hing Comm., S.

Boardwalk, U.S.

ntion

on EOS 5D Mark IV Megapixels nm feet AMSL

Simulated Photograph(s)



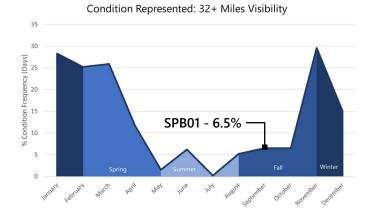
Seaside Park Borough, Ocean County, New Jersey

KOP Information

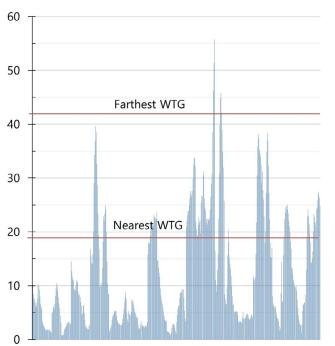
Primary Field of View:	East
Distance to Closest WTG:	19.3 miles
Camera Height:	23.2 feet
User Groups:	L. Residents, Tourists, Fishing Comm., S.Residents

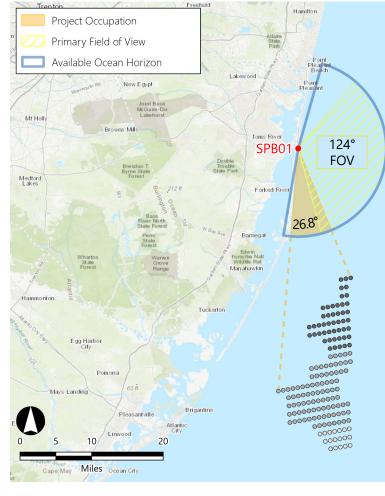
Atmospheric Perspective

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



September, 2019 - Hourly Visibility Distance

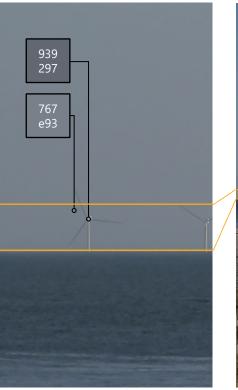




Horizon Occupation

Percentage of Project Occupation on Ocean Horizon: 15.4% (Project Occupation / Available Ocean Horizon) Available Ocean Horizon: 173.9°





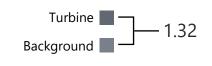


Atlantic Shores Offshore Wind: North (OCS-A 0549) Attachment E: Photosimulations

Page 17 of 289



Color Contrast Rating:

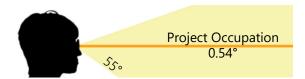


Lighting Condition:	Side lit
Season:	Fall
Sky Condition:	Fair
Atmospheric Condition:	>10 Miles

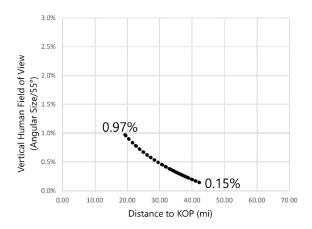
SIMILAR VIEWING PARAMETERS:

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.

Vertical Occupation



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





Seaside Park Borough, Ocean County, New Jersey

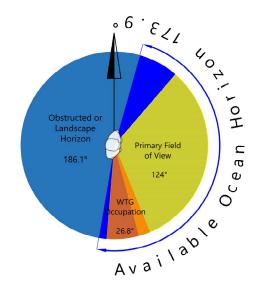
KOP Information

Primary Field of View/Sim	nulation Dir	rection:	East/South
Distance to Closest WTG:			19.25 miles
Camera Height:			23.18 ft
User Groups:	Residents	, Tourists, Fisł	ning Comm.
Horizon Occupation (% H	HFOV):	Medium (2	26.8°, 21.6%)
Vertical Occupation:		Medium (0.	54°, 0.97%)
Character Area Type:			Seascape
Character Area:		Commercia	l Beachfront

Existing View



Field of View



Existing Landscape/ Seascape Character Description:

Sensitivity

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.

Magr Sensitivity Rating Rationale Facto Factor Historic and cultural sites are inland of the dunes and therefore do not have open ocean Size ar views in this location. Residences are set back Scale from the commercial district, and ocean views Susceptibility Medium 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. Geogr Extent Value is high due to the large crowds that come to this location in the summer. It is High Value highly advertised on social media and a repeat destination for many families. Durati Reversi Magni Moderately susceptible and high value Sensitivity High Rating Rating seascape results in high sensitivity. LOW MEDIUM SENSITIVITY NEGLIGIBLE SMALL MEDIUM TUDE MAG

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.

Magnitude

nitude or	Rating	Rationale
nd	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.
raphic t	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.
ion/ sibility	Fair	Long term and fully reversible.
itude 9	Medium	Medium size and scale and medium geographic extent results in medium magnitude.

HIGH

LARGE

Overall Impact Moderate





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

g the Printed at 100% the 15 inches wide by focal length, the focal length, the from a distance of



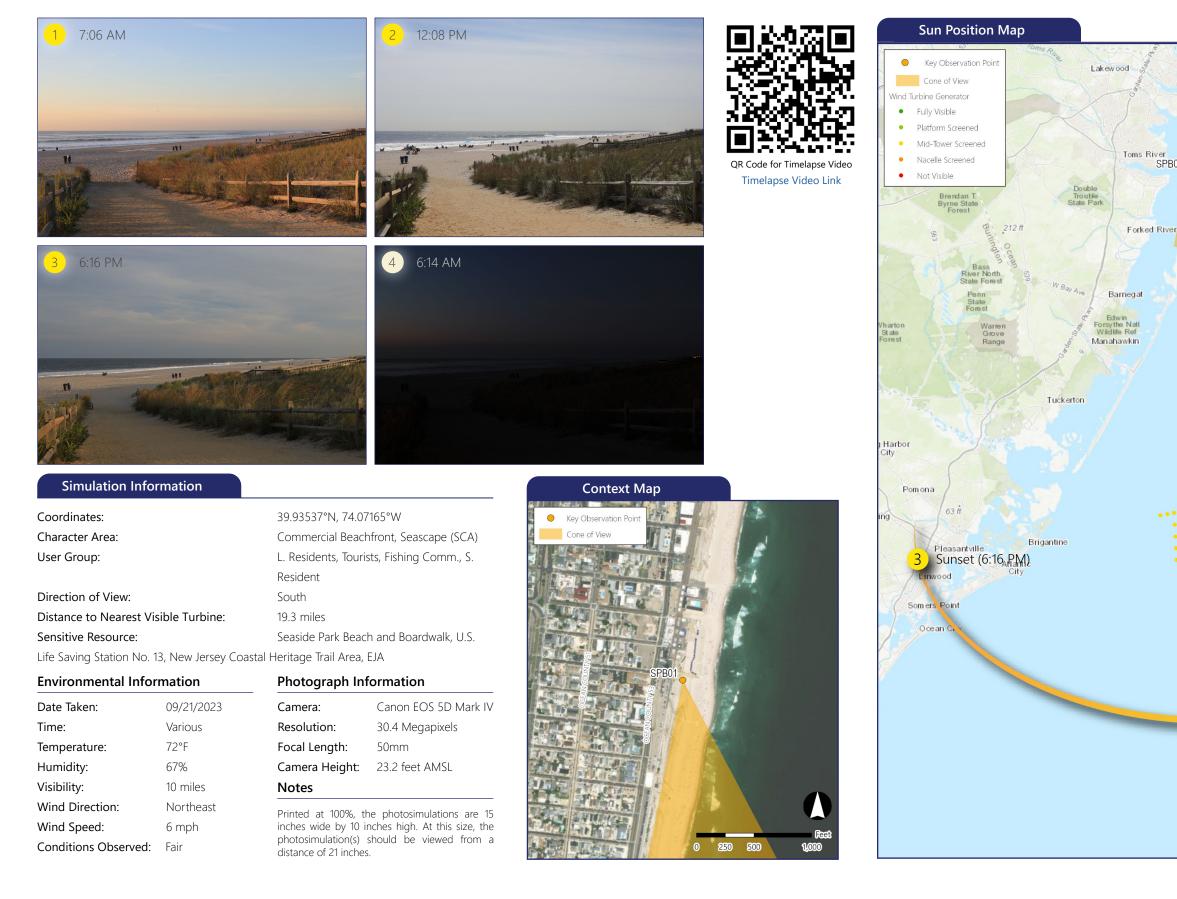


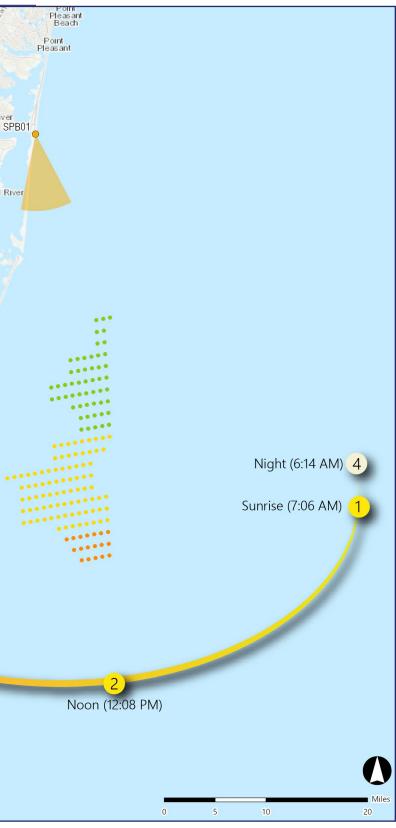
Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: SPB01 - Seaside Park Beach Attachment E: Photosimulations: Page 20 of 289

Printed at 100% 1 15 inches wide by



Seaside Park Borough, Ocean County, New Jersey







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 15 inche





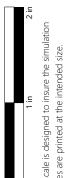
Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: SPB01 - Seaside Park Beach Attachment E: Photosimulations: Page 23 of 289

Printed 15 inche



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 a





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

Pri





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

size g Printed at 100% t 15 inches wide by

<u>.</u>









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

size at Printed a 15 inches

<u>.</u>



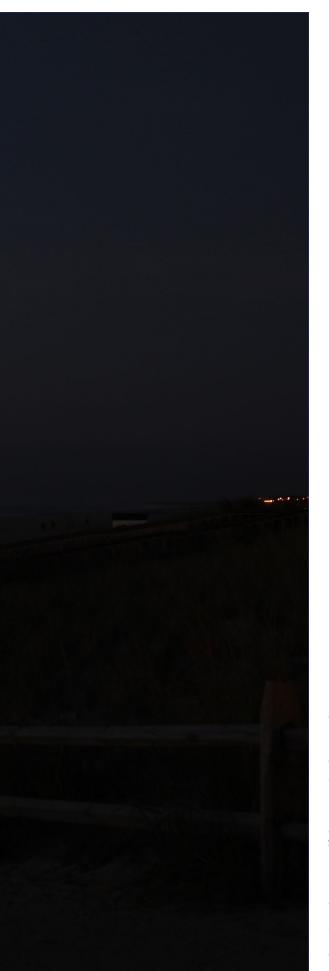


Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: SPB01 - Seaside Park Beach Attachment E: Photosimulations: Page 28 of 289

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

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: 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.



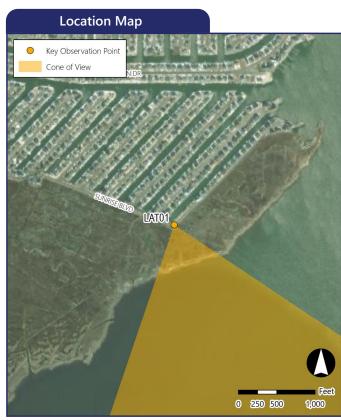
LAT01 Edwin B. Forsythe NWR at the Woodmansee Estate

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: Character Area: User Group: Direction of View: Distance to Nearest Visible Turbine: Sensitive Resource:

Environmental Information

08/21/2020

6:24 AM

70°F

87%

10 miles

Calm

0 mph

Date Taken:

Temperature:

Wind Direction:

Conditions Observed: Fair

Wind Speed:

Humidity:

Visibility:

Time:

39.83711°N, 74.15082°W Dredged Lagoon (LCA) L. Residents, S. Resident South-southeast 15.3 miles Edwin B. Forsythe National Wildlife Refuge, New Jersey Coastal Heritage Trail Area

Photograph Information

Camera:	Can
Resolution:	30.4
Focal Length:	50m
Camera Height:	9.8 f
Notes	

inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

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

Attachment E: Photosimulations Page 30 of 289

Simulated Photograph(s)





Photograph ASOW6972

non EOS 5D Mark IV Megapixels nm feet AMSL

Printed at 100%, the photosimulations are 15

LAT01 Edwin B. Forsythe NWR at the Woodmansee Estate

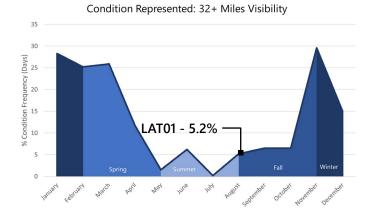
Lacey Township, Ocean County, New Jersey

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

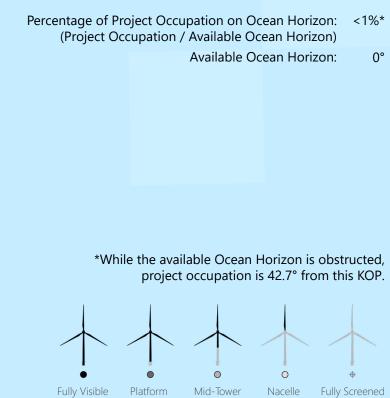
Atmospheric Perspective

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



August, 2019 - Hourly Visibility Distance 100 90 80 70 60 50 40 Farthest WTG 30 20 Nearest WTG 10 0

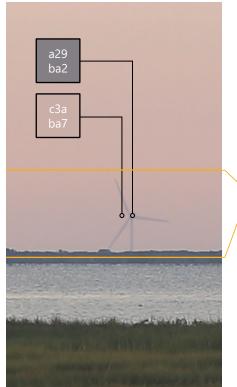




Screened

Screened

Screened





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

Attachment E: Photosimulations Page 31 of 289

Horizon Occupation

WTG Color Contrast

Color Contrast Rating:

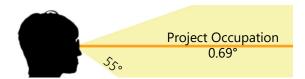


Lighting Condition:	Back lit
Season:	Summer
Sky Condition:	Fair
Atmospheric Condition:	>10 Miles

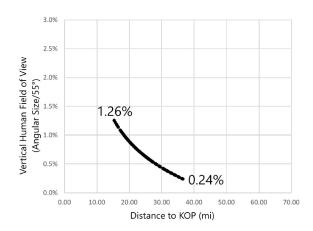
SIMILAR VIEWING PARAMETERS:

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



Percentage of Human FOV: 1.26% (0.69° / 55°) (Considering the nearest visible turbine)



LAT01 Edwin B. Forsythe NWR at the Woodmansee Estate

Lacey Township, Ocean County, New Jersey

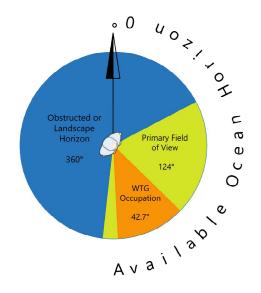
KOP Information

Primary Field of View/Simulation D	irection: 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:

Sensitivity

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.

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

Project Contrast:

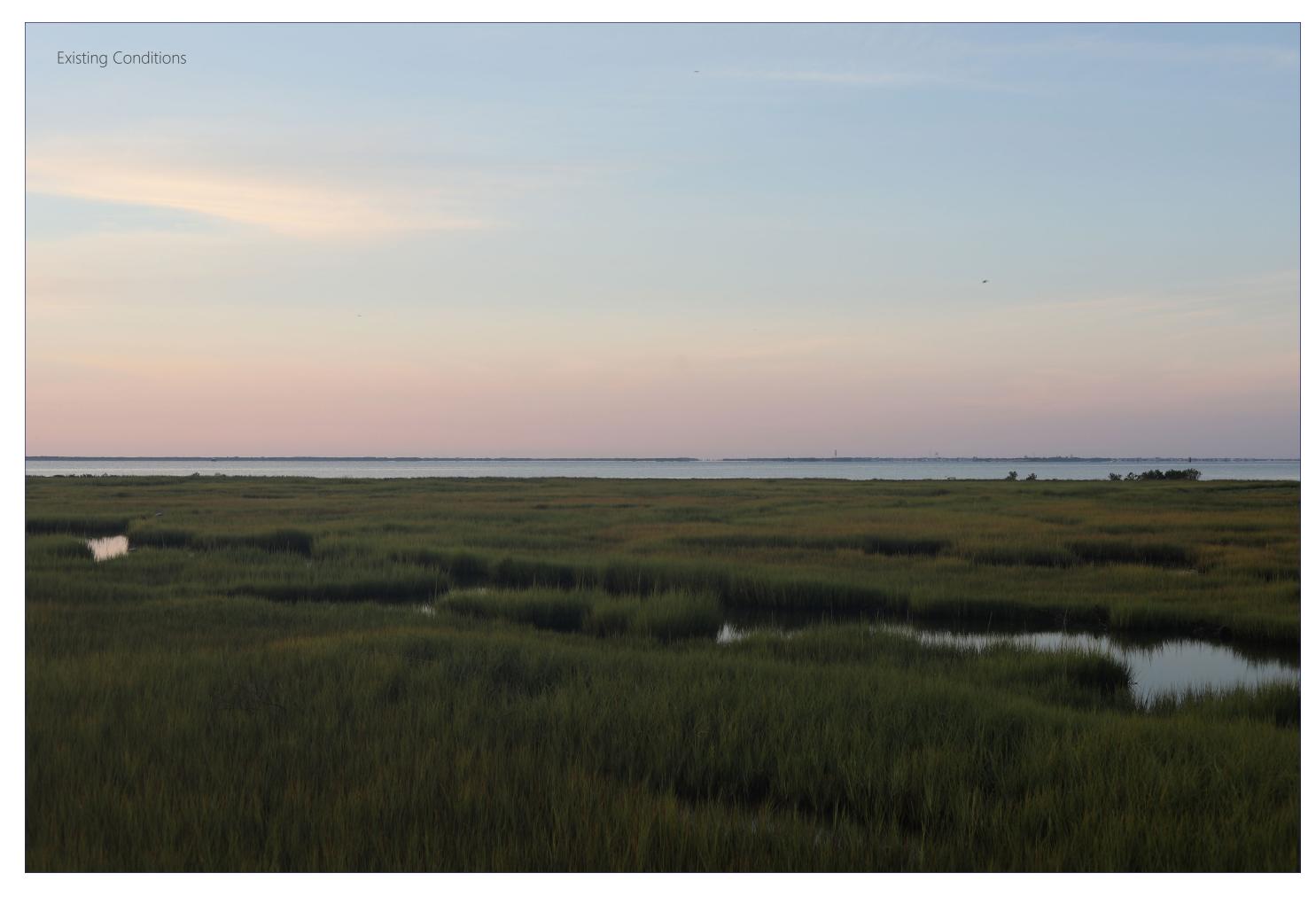
The WTG result in strong form contrast with the barrier island and structures as they appear to jut out from the land mass and rise above the distant structures such as water towers and buildings. The vertical scale of the WTGs also contrast strongly with these existing features. This strong contrasts 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.

Magnitude

nitude or	Rating	Rationale
nd	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.
raphic t	Medium	The Project only occupies approximately 42.7% of the human horizontal field of view and 34.4% of the human field of view.
ion/ sibility	Fair	Long term and fully reversible.
itude 9	Medium	Medium size, scale, and geographic extent.

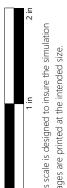


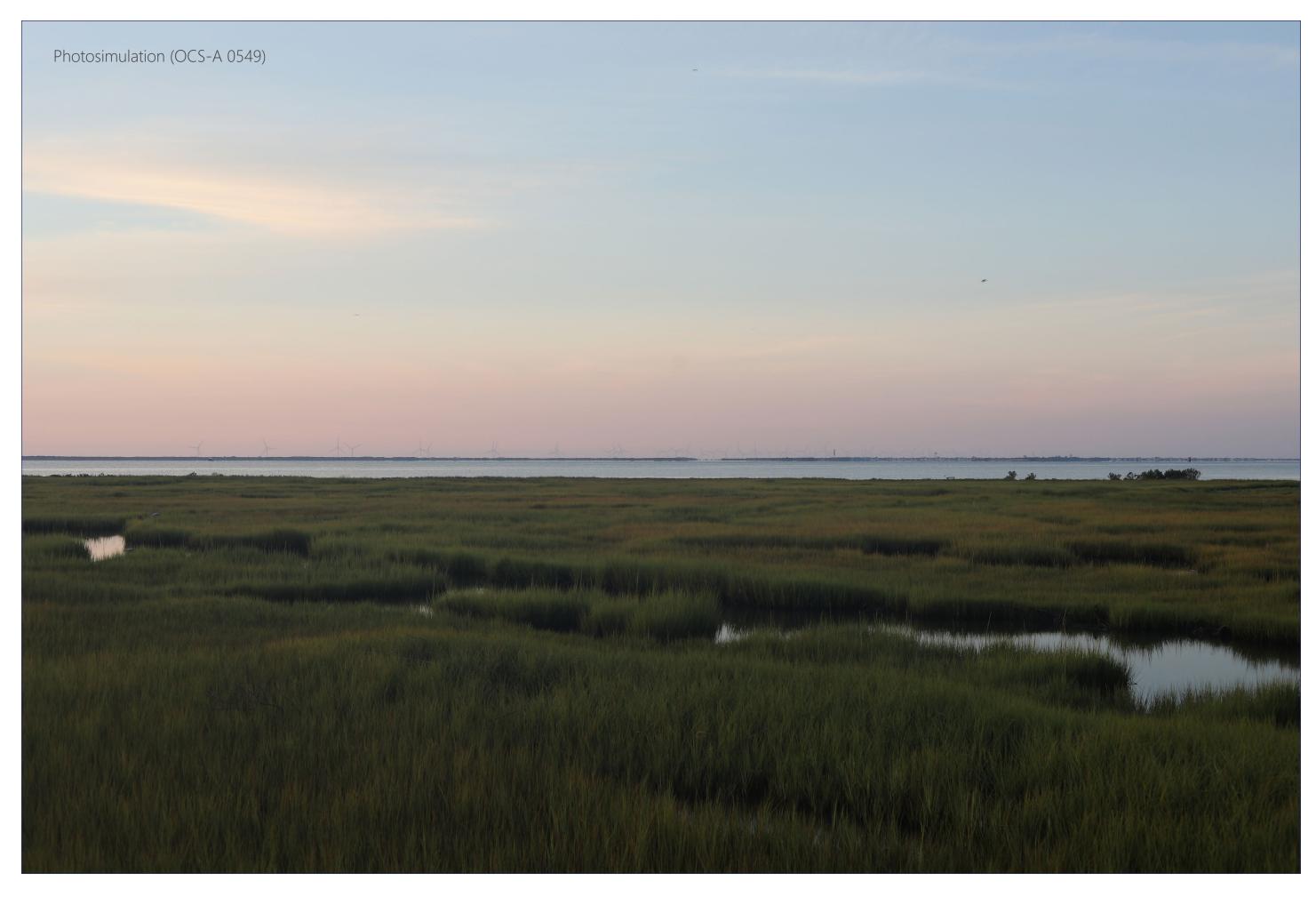
Overall Impact Moderate



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

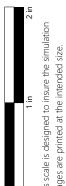
liting simulation size is be be Printed at 100% the 15 inches wide by 1 focal length, the 1 from a distance of

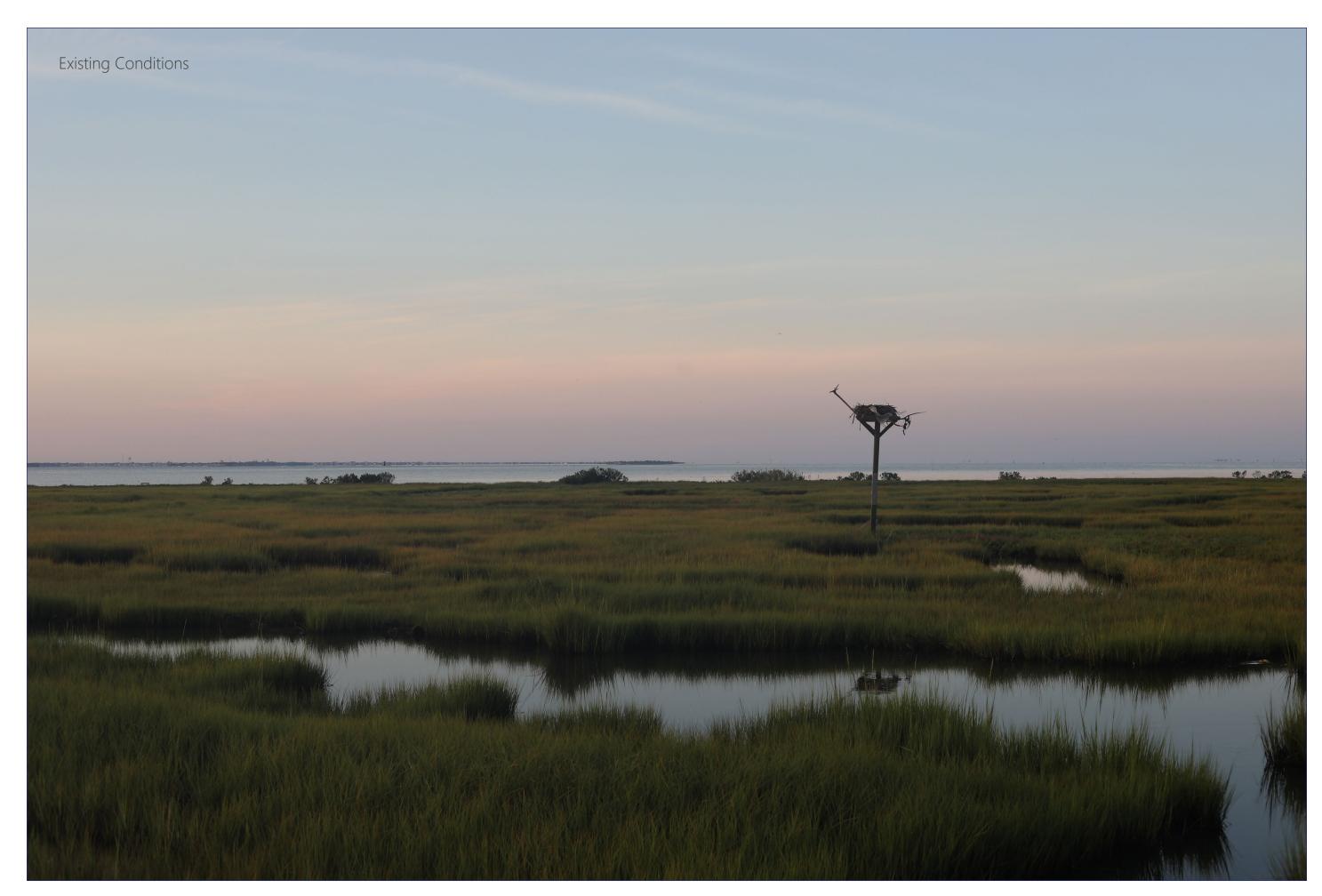




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point. LAT01 - Edwin B. Forsythe National Wildlife Refuge at the Woodmansee Estate Attachment E: Photosimulations: Page 34 of 289

<u>.</u> size ig simulation be 9 Printed at 100% 1 15 inches wide by





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

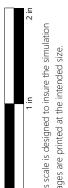
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Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point. LAT01 - Edwin B. Forsythe National Wildlife Refuge at the Woodmansee Estate Attachment E: Photosimulations: Page 36 of 289

size p Printed at 100% 15 inches wide by



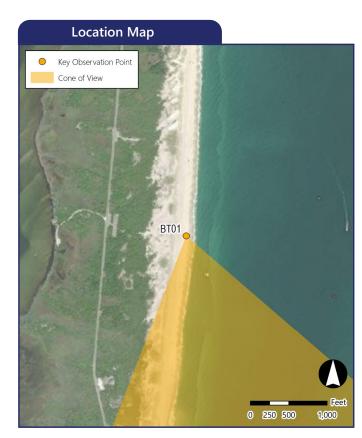
BT01 Island Beach State Park

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: Character Area: User Group:

Direction of View: Distance to Nearest Visible Turbine: Sensitive Resource:

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

39.80805°N, 74.08997°N
Undeveloped Beach, Se
L. Residents, Tourists, Fis
Resident
South
11.7 miles
Island Beach State Park,
Coastal Heritage Trail Ar
Dhotograph Inform

Photograph Information

Camera:	Can
Resolution:	30.4
Focal Length:	50m
Camera Height:	10.5
Notes	
Printed at 100% th	na như

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.

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

Attachment E: Photosimulations Page 37 of 289

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Simulated Photograph(s)





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eascape (SCA) shing Comm., S.

New Jersey rea

non EOS 5D Mark IV .4 Megapixels nm feet AMSL

BT01 Island Beach State Park

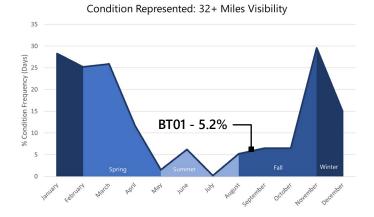
Berkeley Township, Ocean County, New Jersey

KOP Information

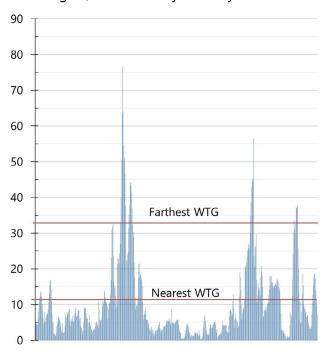
Primary Field of View:	East
Distance to Closest WTG:	11.7 miles
Camera Height:	10.5 feet
User Groups:	L. Residents, Tourists, Fishing Comm., S.Residents

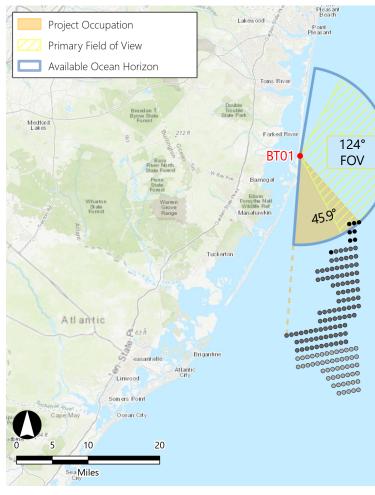
Atmospheric Perspective

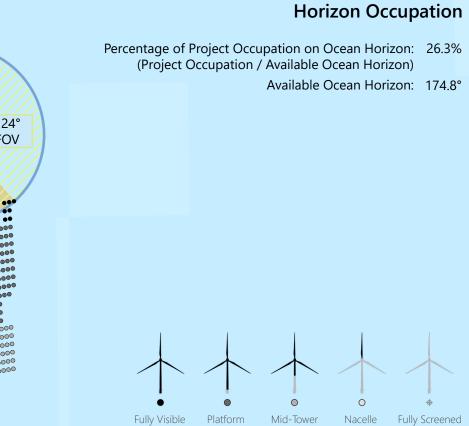
The effect the atmosphere has on the appearance of an object as viewed from a distance.



August, 2019 - Hourly Visibility Distance







Screened

Screened

Screened



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

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Color Contrast Rating:



Lighting Condition:

Season:

Sky Condition:

Atmospheric Condition:

Summer Partly Cloudy

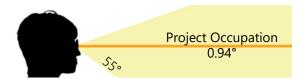
Side lit

>10 Miles

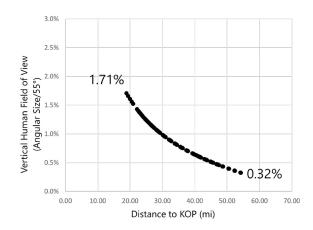
SIMILAR VIEWING PARAMETERS:

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



Percentage of Human FOV: 1.71% (0.94° / 55°) (Considering the nearest visible turbine)



BT01 Island Beach State Park

Berkeley Township, Ocean County, New Jersey

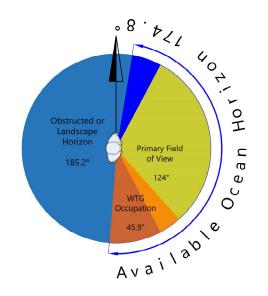
KOP Information

Primary Field of View/Sim	nulation Direction:	East/South-SE
Distance to Closest WTG:		11.7 miles
Camera Height:		10.5 ft
User Groups:	Residents, Touris	ts, Fishing Comm.
Horizon Occupation (% H	HFOV): Me	dium (45.9°, 37%)
Vertical Occupation:	Lai	rge (0.94°, 1.71%)
Character Area Type:		Seascape
Character Area:	Ur	ndeveloped 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.

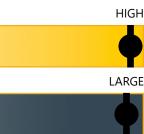
Sensitivity

Sensitivity				Magnitude		
Sensitivity Factor	Rating	Rationale		Magnitude 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.	viewer experience. This developed, and exhibits a		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.
Value	High	Despite relatively low visitation and lack of amenities for visitors, this State Park has inherent protections for the natural	his State Park	Geographic Extent	Medium	The Project occupies approximately 37% of the human horizontal field of view and 12.6% of the available ocean horizon.
protections that make this stretch of beach	Duration/ Reversibility	Fair	Long term and fully reversible.			
Sensitivity Rating	High	The SCA is highly susceptible and has high value to the users and the state, therefore the sensitivity is high.		Magnitude Rating	Large	Large size and scale and medium geographic extent results in large magnitude.
OW	I	MEDIUM				HIGH
		SENSITIVITY				Overall Impa
NEGLIGIBLE		SMALL MEDIUM				
		MAGNITUDE				Majo

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.

Magnitude







Shores Offshore Wind: North (OCS-A 0549) tinental Shelf – OCS-A 0549 Atlantic Shor Outer Continenta Key Observation Poi Attachment E: Photo

vation Point: BT01 - Island Beach State Park nt E: Photosimulations: Page 40 of 289





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





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

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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

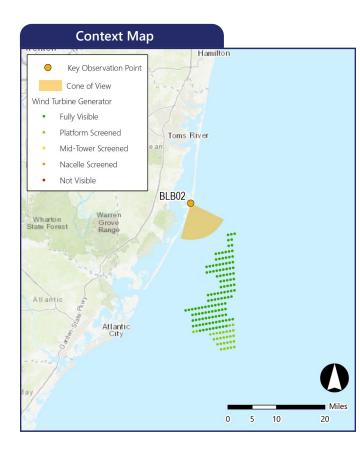


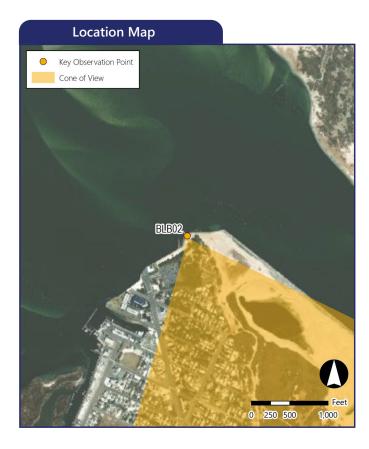
BLB02 Barnegat Lighthouse State Park

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
Simulation	mormation

Coordinates:		39.76433°N, 74.10	621°W
Character Area:		Recreation, Seasca	ape (SCA
User Group:		L. Residents, Touris	sts, Fishi
		Residents	
Direction of View:		South-southeast	
Distance to Nearest Vis	ible Turbine:	10.1 miles	
Sensitive Resource:		Barnegat Lighthou	use State
Lighthouse State Park -	Fishing Access, New Je	ersey Coastal Herita	ge Trail
Environmental Infor	mation	Photograph Inf	format
Date Taken:	09/20/2018	Camera:	Canor
Time:	11:35 AM	Resolution:	30.4 N
Temperature:	73°F	Focal Length:	50mm
Humidity:	68%	Camera Height:	155.7
Visibility:	10 miles	Notes	
Wind Direction:	East	Printed at 100%, th	ne photo
Wind Speed:	7 mph	inches wide by 10 inches photosimulation(s) should distance of 21 inches.	
Conditions Observed:	Cloudy		

Viewshed Analysis indicates no ground-level visibility from this resource.

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

Attachment E: Photosimulations

Page 44 of 289

CA) hing Comm. S.

ite Park, Barnegat Area

ntion

on EOS 5D Mark IV Megapixels nm feet AMSL

tosimulations are 15 igh. At this size, the be viewed from a

Simulated Photograph(s)





BLB02 Barnegat Lighthouse State Park

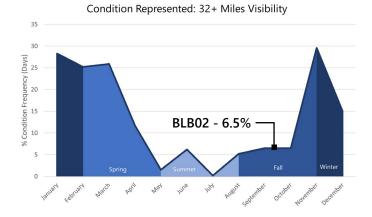
Barnegat Light Borough, Ocean County, New Jersey

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

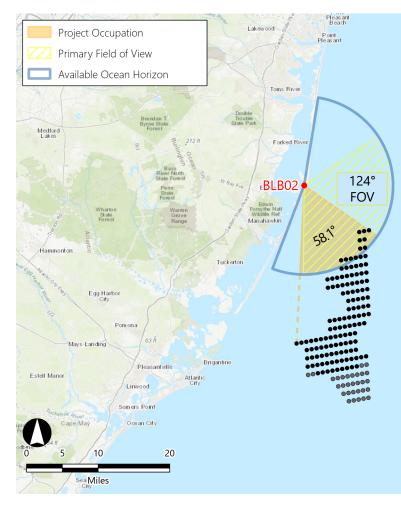
Atmospheric Perspective

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



September, 2019 - Hourly Visibility Distance

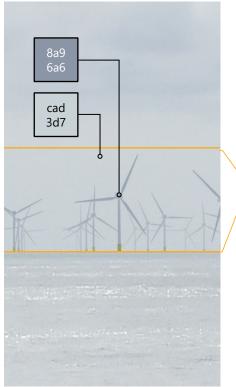
0



Horizon Occupation

Percentage of Project Occupation on Ocean Horizon: 30.3% (Project Occupation / Available Ocean Horizon) Available Ocean Horizon: 191.7°







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

Page 45 of 289

WTG Color Contrast

Color Contrast Rating:

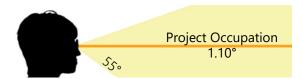


Lighting Condition:	Back lit
Season:	Winter
Sky Condition:	Cloudy
Atmospheric Condition:	>10 Miles

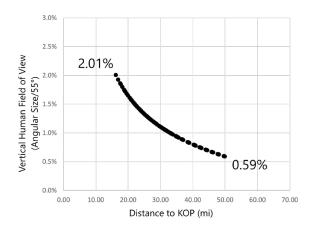
SIMILAR VIEWING PARAMETERS:

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



Percentage of Human FOV: 2.01% (1.10° / 55°) (Considering the nearest visible turbine)





BLB02 Barnegat Lighthouse State Park

Barnegat Light Borough, Ocean County, New Jersey

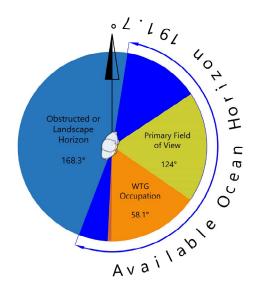
KOP Information

Primary Field of View/Sim	nulation Direction:	East/South-SE
Distance to Closest WTG:		10.1 miles
Camera Height:		155.7 ft
User Groups:	Residents, Tourist	s, Fishing Comm.
Horizon Occupation (% H	HFOV): L	arge (58.1°, 47%).
Vertical Occupation:	La	arge (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

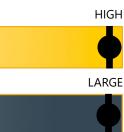
Sensitivity Factor	Rating	Rationale	Magnitude Factor	Rating	Rationale
Susceptibility High Additionally, the lighthouse is a historic Susceptibility Susceptibility High structure and feature of the NJCHT. The state park offers comfort amenities for visitors and people come here for the history, recreation,		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.	
/alue	High	and views. 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	Geographic Extent	Large	The Project occupies approximately 47% of the human horizontal field of view and 12.6% of the available ocean horizon.
		experience the view, it is recognized as a highly valued resource.	Duration/ Reversibility	Fair	Long term and fully reversible.
ensitivity tating	High	Due to high susceptibility and value, this resource has high sensitivity.	Magnitude Rating	Large	Large size and scale and large geographic extent results in large magnitude.
OW	<u> </u>	MEDIUM		<u> </u>	HIGH
		SENSITIVITY			Overall Impact
IEGLIGIBLE		SMALL MEDIUM			

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.

MAGNITUDE

Magnitude





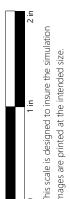


Existing Conditions



Offshore Wind: North (OCS-A 0549) helf – OCS-A 0549 ک Shores Atlantic Outer Cont Key Observat

nouse State Park BLB02





Shores Offshore Wind: North (OCS-A 0549) tinental Shelf – OCS-A 0549 Atlantic Outer Cont Key Observat

gat Lighthouse State Park 18 of 289 BLB02





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 49 of 289

Printed at 100% the resulting simulation size I5 inches wide by 10 inches high. At this size a ocal length, the simulation should be view from a distance of 21 inches.





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

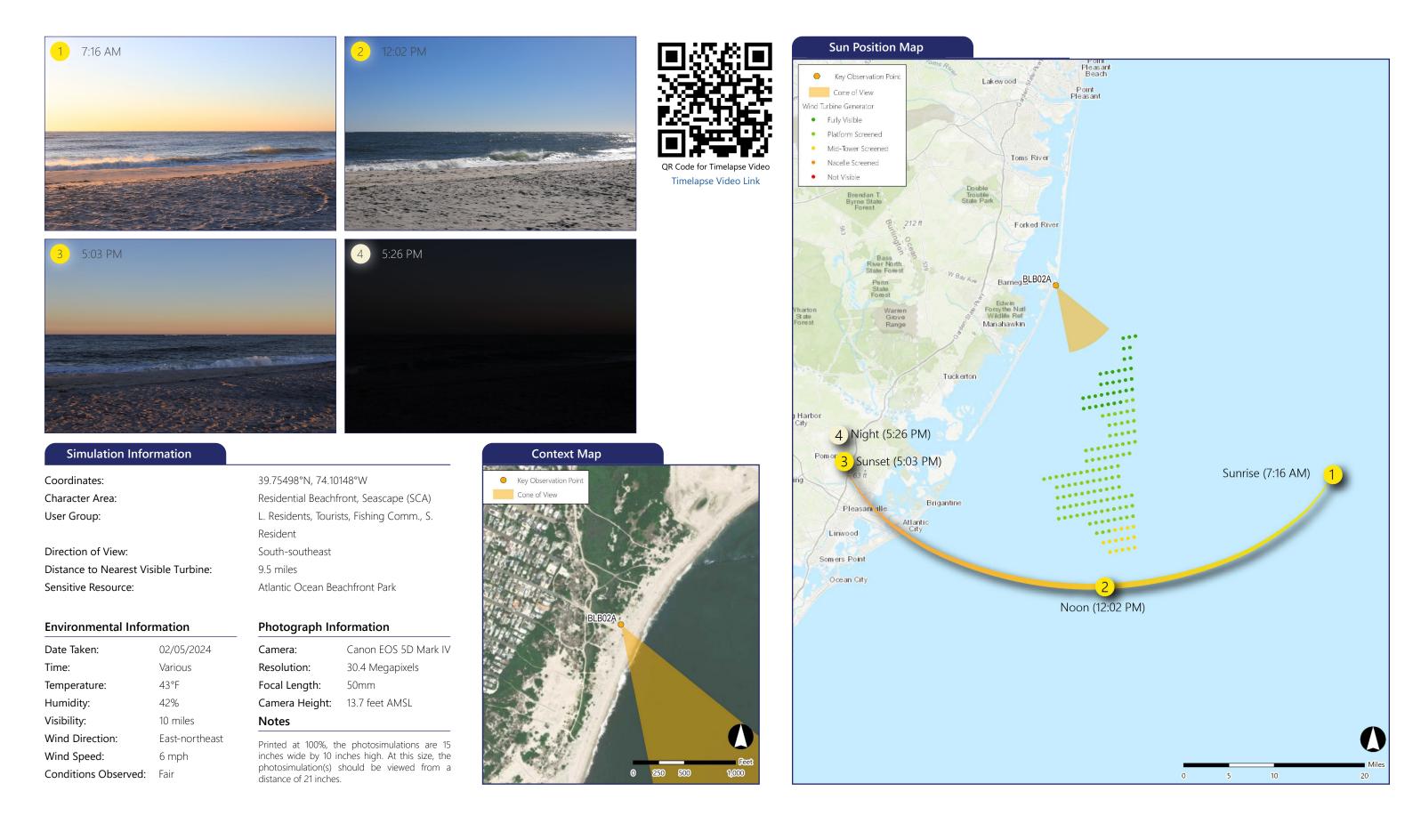
Key Observation Point: BLB02 - Barnegat Lighthouse State Park Attachment E: Photosimulations: Page 50 of 289

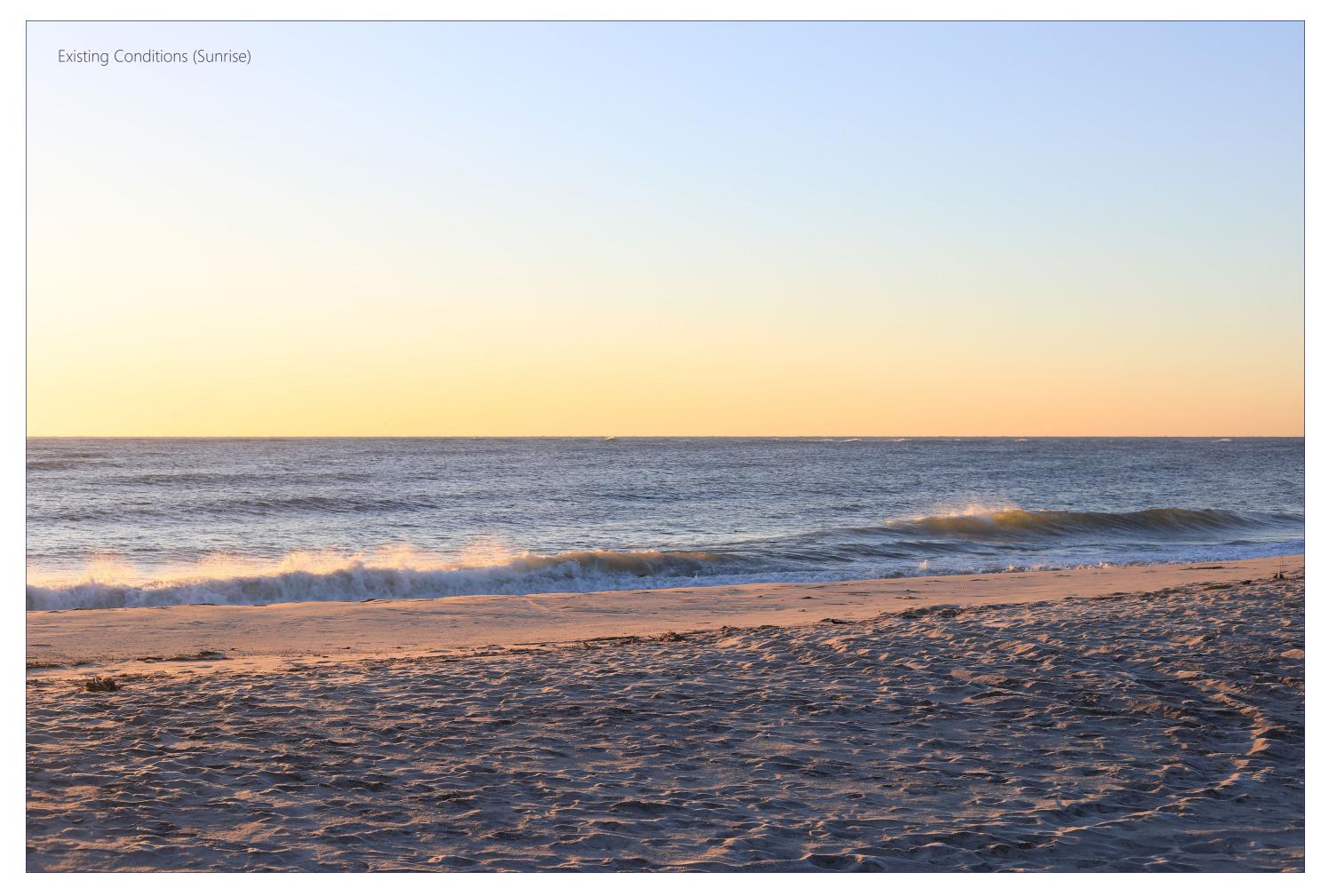
Printed at 100% the resulting simulation size 15 inches wide by 10 inches high. At this size ar ocal length, the simulation should be view from a distance of 21 inches.



BLB02A Altantic Ocean Beachfront

Barnegat Light Borough, Ocean County, New Jersey



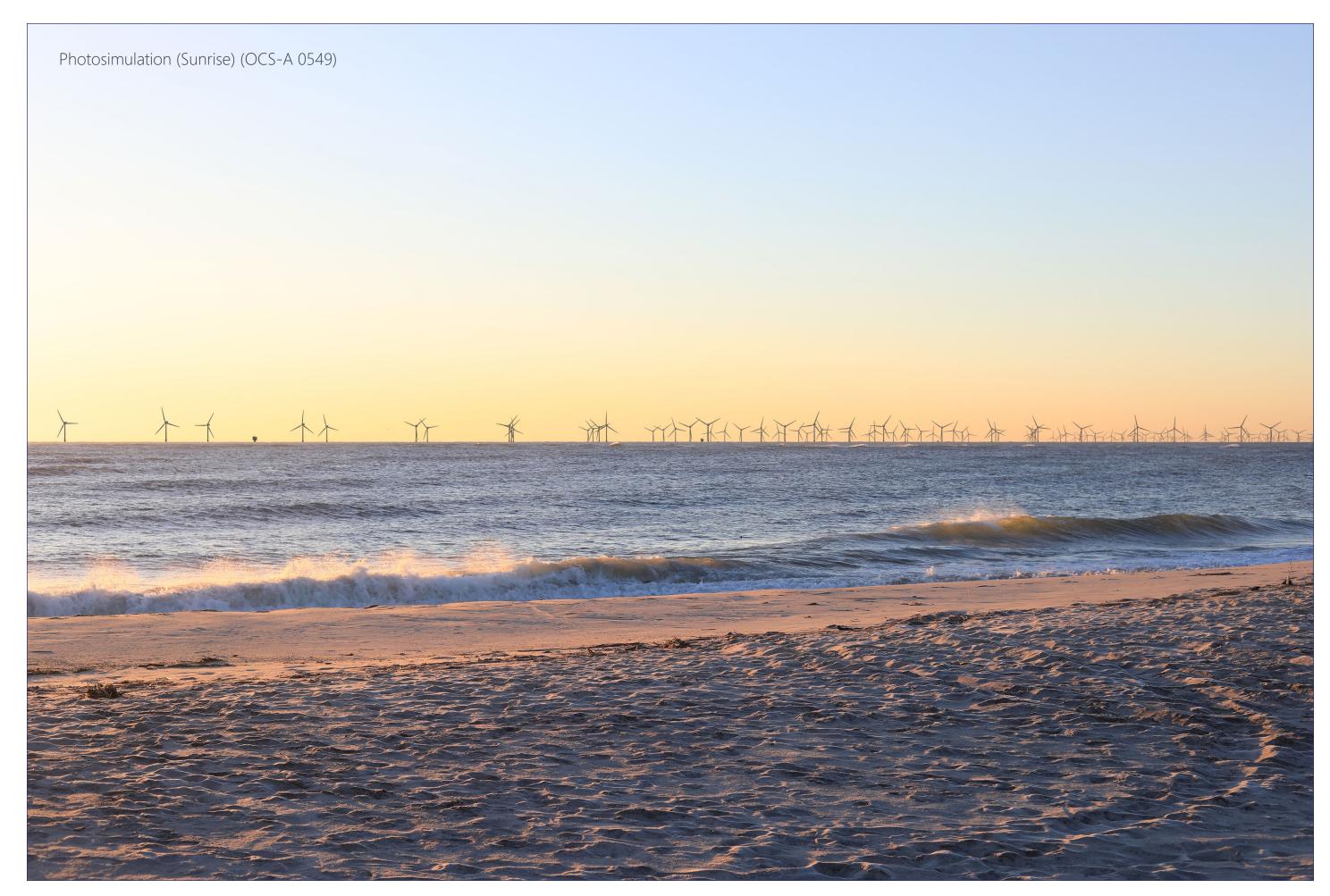


Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549

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

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





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

nted at 100% the resulting simulation size i inches wide by 10 inches high. At this size an al length, the simulation should be viewe m a distance of 21 inches.







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

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Photosimulation (Noon) (OCS-A 0549)

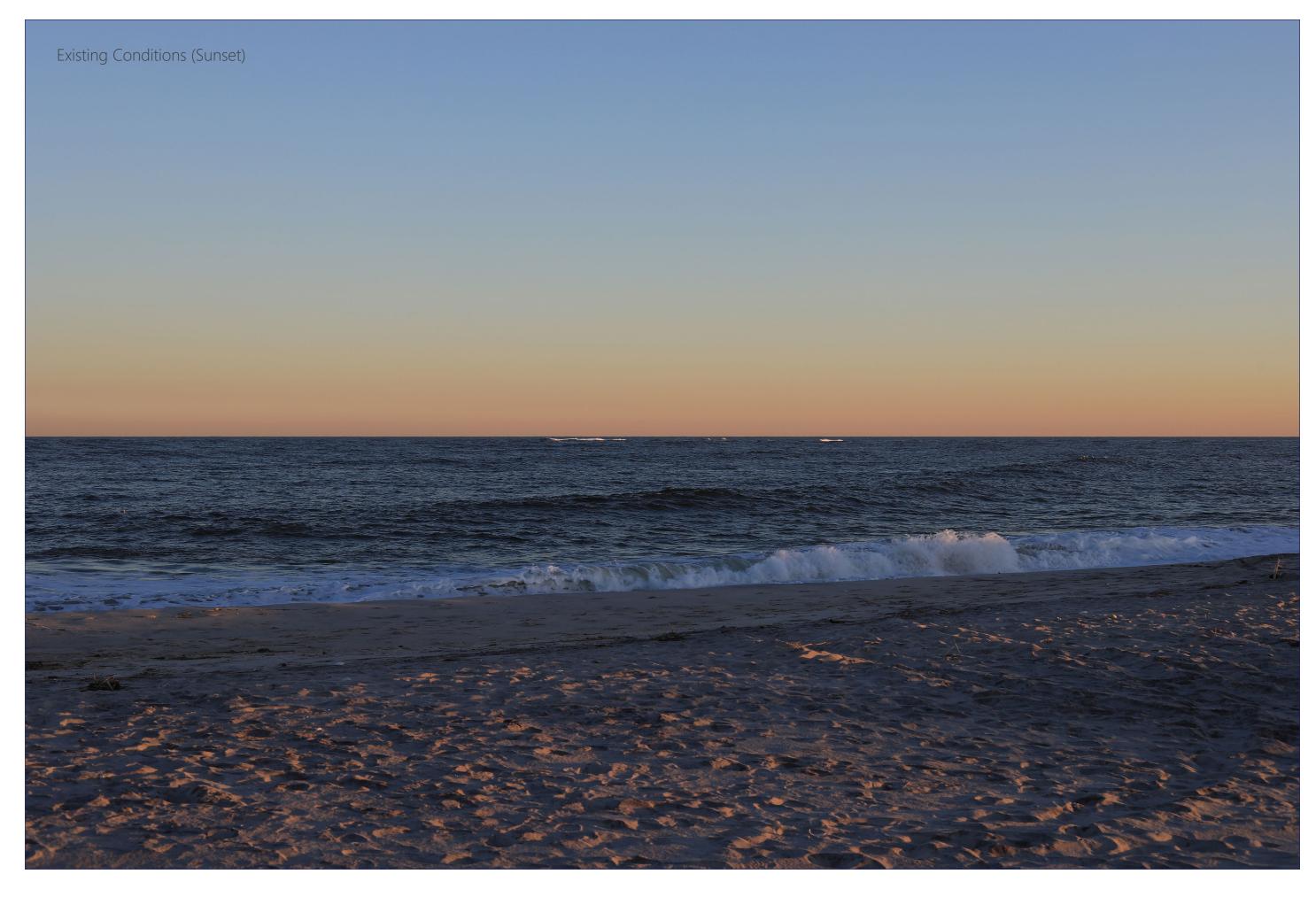


Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BLB02A - Atlantic Ocean Beachfront Attachment E: Photosimulations: Page 55 of 289

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

Pri





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 15 inche



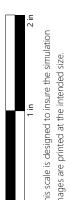
Photosimulation (Sunset) (OCS-A 0549)





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 15 inche



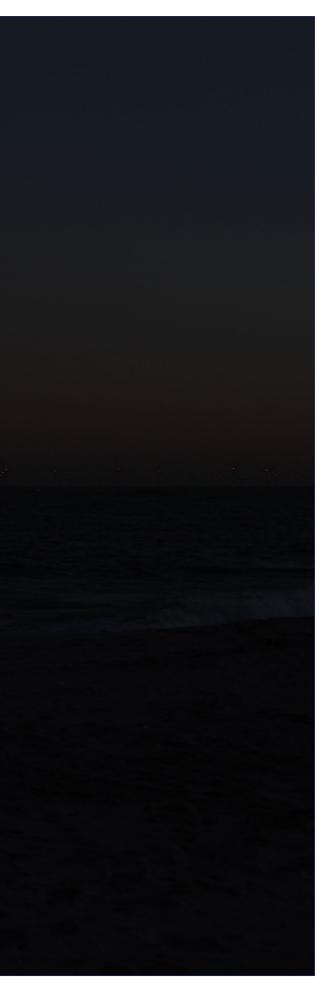


Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BLB02A - Atlantic Ocean Beachfront Attachment E: Photosimulations: Page 58 of 289

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

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. 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.

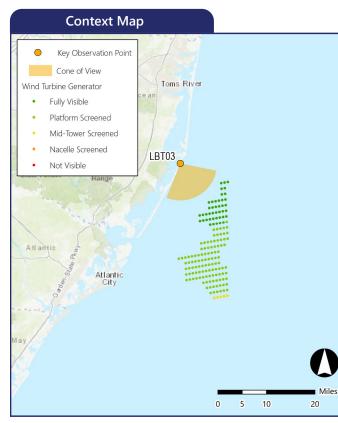


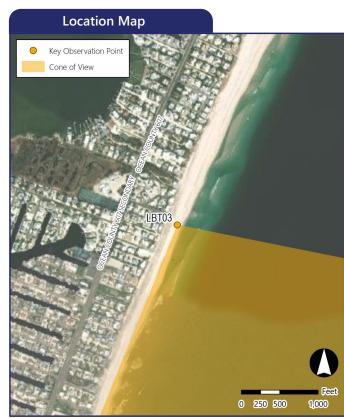
LBT03 Beach at Long Beach Island Foundation for the Arts and Sciences

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
Simulation	mormation

Coordinates:
Character Area:
User Group:

Direction of View: Distance to Nearest Visible Turbine: Sensitive Resource:

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

39.72895°N, 74.12058°N
Residential Beachfront,
L. Residents, Tourists, Fig
Residents
South-southeast
9.4 miles
New Jersey Coastal Her

Photograph Information

Camera:	Cano
Resolution:	30.4
Focal Length:	50m
Camera Height:	16.6
Notes	
Driptod at 1000/ th	u nha

inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

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

Attachment E: Photosimulations

Page 60 of 289

W

Seascape (SCA) shing Comm. S.

ritage Trail Area

non EOS 5D Mark IV Megapixels nm feet AMSL

Printed at 100%, the photosimulations are 15

Simulated Photograph(s)



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

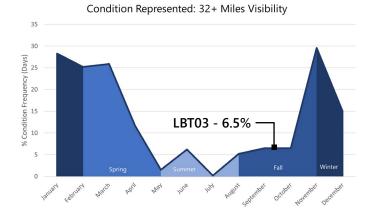
Long Beach Township, Ocean County, New Jersey

KOP Information

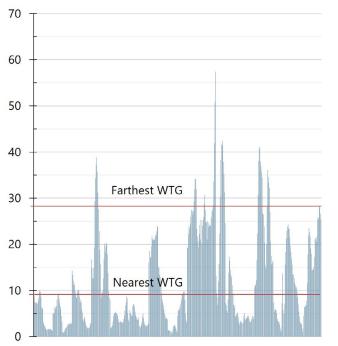
Primary Field of View:	East
Distance to Closest WTG:	9.4 miles
Camera Height:	16.6 feet
User Groups:	L. Residents, Tourists, Fishing Comm., S.Residents

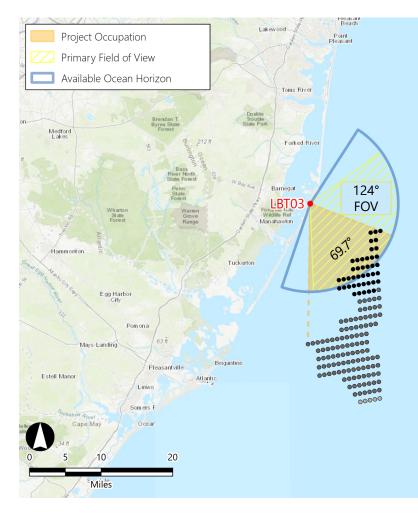
Atmospheric Perspective

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



September, 2019 - Hourly Visibility Distance





Horizon Occupation

Percentage of Project Occupation on Ocean Horizon: 42.0% (Project Occupation / Available Ocean Horizon) Available Ocean Horizon: 166.0°





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

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WTG Color Contrast

Color Contrast Rating:

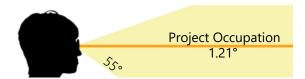


Lighting Condition:	Side lit
Season:	Fall
Sky Condition:	Fair
Atmospheric Condition:	>10 Miles

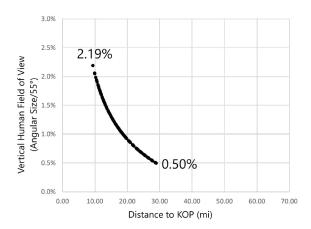
SIMILAR VIEWING PARAMETERS:

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



Percentage of Human FOV: 2.19% (1.21° / 55°) (Considering the nearest visible turbine)





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

Sensitivity

Long Beach Township, Ocean County, New Jersey

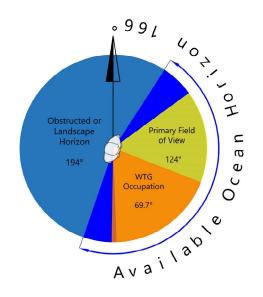
KOP Information

Primary Field of View/Sim	ulation Direction:	East/South-SE
Distance to Closest WTG:		9.4 miles
Camera Height:		16.6 ft
User Groups:	Residents, Tourist	s, Fishing Comm.
Horizon Occupation (% H	IFOV): La	arge (69.7°, 56%)
Vertical Occupation:	Lar	ge (1.21°, 2.19%)
Character Area Type:		Seascape
Character Area:	Residential Beac	hfront, Seascape

Existing View



Field of View



Existing Landscape/ Seascape Character Description:

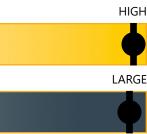
This view is from the beach accessed via East Coast Avenue off Long Beach Boulevard on Long Beach Island in the township of Long Beach. The KOP occurs along a narrow ocean shoreline which low and even up to the dunes which rise abruptly from the beach substantially screening residential area beyond when 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 Factor	Rating	Rationale	Magnitude Factor	Rating	Rationale	
Susceptibility	High	This KOP is representative of residents, tou and recreationalists for whom the scenic q of the seascape and ocean is an important of their experience.	ality	Large		cale occupies 2.19% of the vertical field is approximately 1.21°.
Value	Medium	Unlike many other beaches along the NJ co this area is intended exclusively for homeo and vacationers who rent beach houses. W they individually place value on the view o	ners ile	Large	56% of the hi total visible o	tic extend occupies 69.7° which is uman field of view and 42% of the cean horizon. As such, the viewer sily avoid a view of the Project when pcean.
		ocean to varying degrees, there are no for scenic protections in place.		Fair	Long term and	d fully reversible.
Sensitivity Rating	High	Due to the high susceptibility and mediur value, this view is highly sensitive.	Magnitude Rating	Large	-	de is large due to the large vertical izon occupation.
.OW		MEDIUM		J	HIGH	
		SENSITIVITY				Overall Impac
NEGLIGIBLE		SMALL MEDIUM			LARGE	
		MAGNITUD				Major

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.

Magnitude



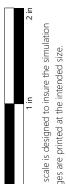


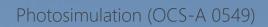




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point. LBT03 - Beach at Long Beach Island Foundation for the Arts and Sciences Attachment E: Photosimulations: Page 63 of 289

þ Printed a 15 inches



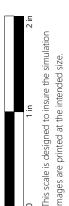






Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: LBT03 - Beach at Long Beach Island Foundation for the Arts and Sciences Attachment E: Photosimulations: Page 64 of 289

Printed 15 inche

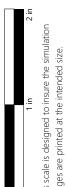




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point. LBT03 - Beach at Long Beach Island Foundation for the Arts and Sciences Attachment E: Photosimulations: Page 65 of 289

size g Printed at 1 15 inches wi

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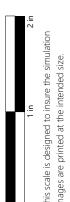






Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: LBT03 - Beach at Long Beach Island Foundation for the Arts and Sciences Attachment E: Photosimulations: Page 66 of 289

Printed a









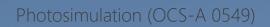


Shores Offshore Wind: North (OCS-A 0549) tinental Shelf - OCS-A 0549

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 67 of 289

Printed 15 inche







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 15 inches wide by 10 inches high. At this size ar focal length, the simulation should be view from a distance of 21 inches.

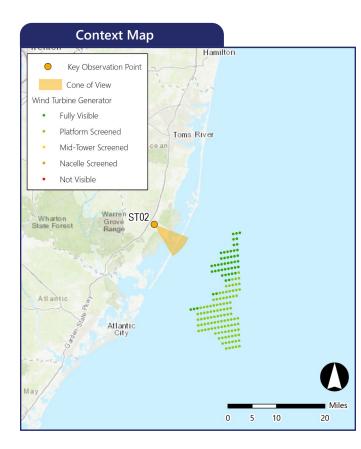


ST02 Barnegat Road

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: Character Area: User Group: Direction of View: Distance to Nearest Visible Turbine: Sensitive Resource:

Environmental Information

Date Taken:	08/18/2023
Time:	3:25 PM
Temperature:	83°F
Humidity:	44%
Visibility:	10 miles
Wind Direction:	West
Wind Speed:	15 mph
Conditions Observed:	Fair

Camera: Can
Photograph Informa
NWR
Census Tract 7351.01, Ed
New Jersey Coastal Heri
14.6 miles
Southeast
Through Travelers, L. Re
Commercial Strip Develo

Notes	
Camera Height:	52.8
Focal Length:	50m
Resolution:	30.4
Camera:	Can

inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a distance of 21 inches.

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

Attachment E: Photosimulations

Page 69 of 289

39.69998°N, 74.26803°W lopment esidents

> ritage Trail Area, dwin B. Forsythe

ation

non EOS 5D Mark IV Megapixels nm feet AMSL

Printed at 100%, the photosimulations are 15

Simulated Photograph(s)



ST02 Barnegat Road

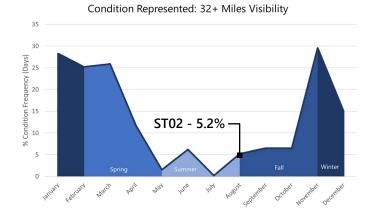
Stafford Township, Ocean County, New Jersey

KOP Information

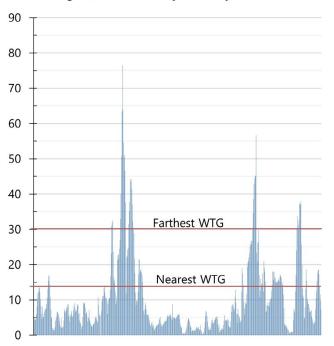
Primary Field of View:	Southeast
Distance to Closest WTG:	14.6 miles
Camera Height:	52.8 feet
User Groups:	Through Travelers, L. Residents

Atmospheric Perspective

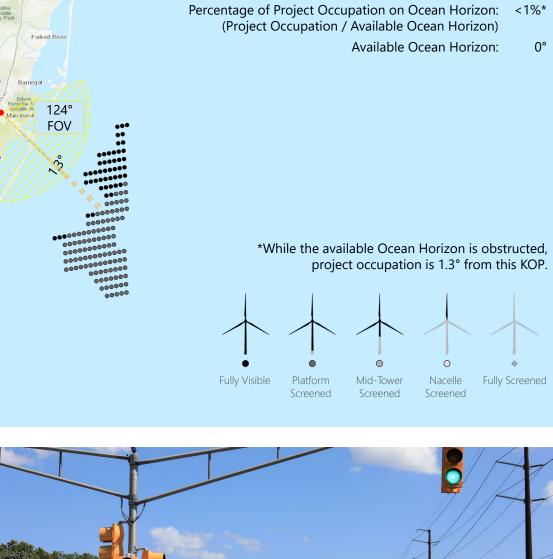
The effect the atmosphere has on the appearance of an object as viewed from a distance.



August, 2019 - Hourly Visibility Distance









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

Attachment E: Photosimulations Page 70 of 289

Horizon Occupation

WTG Color Contrast

Color Contrast Rating:

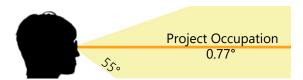


Lighting Condition:	Front lit
Season:	Summer
Sky Condition:	Fair
Atmospheric Condition:	>10 Miles

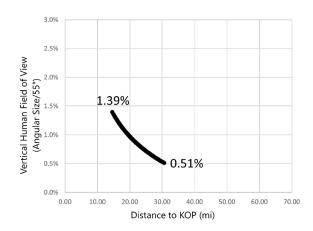
SIMILAR VIEWING PARAMETERS:

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° / 55°) (Considering the nearest visible turbine)



ST02 Barnegat Road

Stafford Township, Ocean County, New Jersey

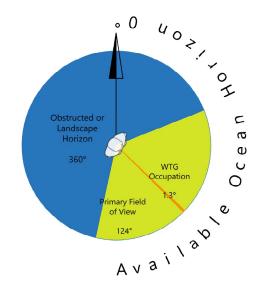
KOP Information

Primary Field of View/Simu	ulation Direction:	Southeast/SE
Distance to Closest WTG:		14.6 miles
Camera Height:		52.8 ft
User Groups:	Through Travel	ers, L. Residents
Horizon Occupation (% HF	OV): 5	Small (1.3°, 1.0%)
Vertical Occupation:	Small (0.77°, 1.3	39%) Theoretical
Character Area Type:		Landscape
Character Area:	Commercial Str	ip 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	Magnitude 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.	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	Small	The Project would occupy approximately 1.0		
Value Low	Low	While the representative viewers are likely to be local residents, this utilitarian corridor is a means to have minimal engagement with	Extent	Small	percent or 1.3 degrees of the 124 degree human field of view.
	the visual environment in favor of the retail experience.	Duration/ Reversibility	Fair	Long term and fully reversible.	
Sensitivity Rating	Low	The area does not have scenic integrity and little thought is given to the visual environment.	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.
OW		MEDIUM		1	HIGH
þ		SENSITIVITY			Overall Impac
NEGLIGIBLE		SMALL MEDIUM			
		MAGNITUDE			Mino

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.

Magnitude



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

n size size an simulation be a ulting : hes resi Printed at 100% the r 15 inches wide by 10 in focal le from a

<u>.</u>2

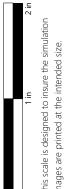




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: ST02 Barnegat Road Attachment E: Photosimulations: Page 73 of 289

n size i size ano simulation be ulting : hes rest Ľ. Printed at 100% the r 15 inches wide by 10 in focal length, the simu from a distance of 21 in

<u>.</u>2



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
Jinuation	mornation

Coordinates:	39.68394° N, 74.20768° \	
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, I	
Coastal Heritage Trail Area, Manahawkin Bottomland Hardwood Forest, N		
Wildlife Management Area		

Environmental Information		Photograph Informa	
Date Taken:	09/22/2020	Camera:	Canc
Time:	2:43 PM	Resolution:	30.4
Temperature:	71°F	Focal Length:	50mi
Humidity:	30%	Camera Height:	14.1 fe
Visibility:	10 miles	Notes	
Wind Direction:	West-northwest	Printed at 100%, the pho inches wide by 10 inches photosimulation(s) should distance of 21 inches.	
Wind Speed:	15 mph		
Conditions Observed:	Fair		

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

Attachment E: Photosimulations Page 74 of 289

W

New Jersey Manahawkin

ation

. . .

non EOS 5D Mark IV Megapixels nm feet AMSL

otosimulations are 15 high. At this size, the be viewed from a

Simulated Photograph(s)





Photograph D9A7167

ST01 Manahawkin Wildlife Management Area

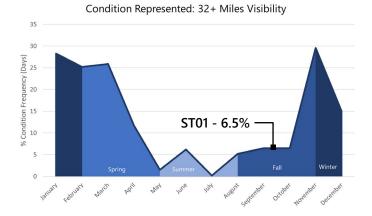
Stafford Township, Ocean County, New Jersey

KOP Information

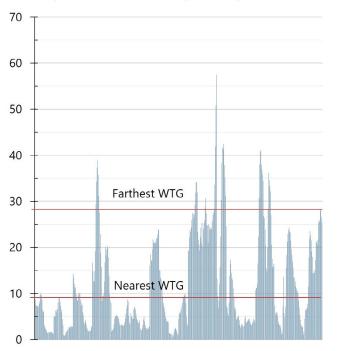
Primary Field of View:	Southeast
Distance to Closest WTG:	11.4 miles
Camera Height:	14.1 feet
User Groups:	L. Residents, Tourists, S Residents

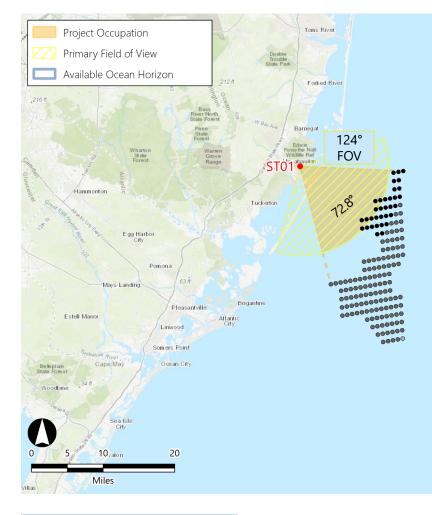
Atmospheric Perspective

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



September, 2019 - Hourly Visibility Distance





Horizon Occupation

Percentage of Project Occupation on Ocean Horizon: <1% (Project Occupation / Available Ocean Horizon) Available Ocean Horizon: 0°





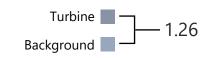


Atlantic Shores Offshore Wind: North (OCS-A 0549)

Attachment E: Photosimulations Page 75 of 289



Color Contrast Rating:



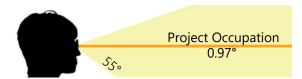
Lighting Condition:	Side lit
Season:	Fall
Sky Condition:	Fair
Atmospheric Condition:	>10 Miles



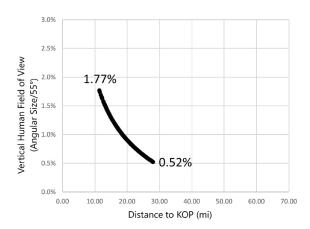
SIMILAR VIEWING PARAMETERS:

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

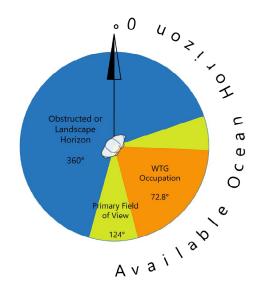
KOP Information

Primary Field of View/Simu	lation Direction:	Southeast/SE
Distance to Closest WTG:		14.1 miles
Camera Height:		11.4 ft
User Groups:		L. Residents
Horizon Occupation (% HF	OV): La	rge (72.8°, 59%)
Vertical Occupation:	Small Med Large	e (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.

NEGLIGIBLE

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

SMALL

Project Contrast:

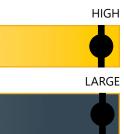
During clear viewing conditions, the Project presents strong form and color contrast with landform, inland water, and structures. Line contrast is also strong against the inland water component. Motion is also likely to produce a degree of strong contrast, particularly when the rotor are bisected by 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.

MEDIUM

MAGNITUDE

Magnitude

nitude or	Rating	Rationale
nd	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."
raphic t	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.
ion/ sibility	Fair	Long term and fully reversible.
itude 9	Large	The large scale and geographic extent results in a large magnitude rating.



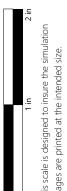
Overall Impact





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.



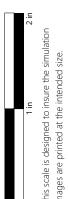






Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: ST01 Manahawkin Wildlife Management Area Attachment E: Photosimulations: Page 78 of 289

<u>.</u>2 sulting simulation size i hes high. At this size and ation should be viewed hes Printed at 100% the r. 15 inches wide by 10 in focal length, the simu of 21





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 79 of 289

ulting simulation size is les high. At this size and this s I be hes Printed at 100% the n 15 inches wide by 10 in focal length, the simu-from a distance of 21 in





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

<u>.v</u> size size simulation e a ulting : Printed at 100% the r 15 inches wide by 10 in focal length, the simi from a distance of 21 i



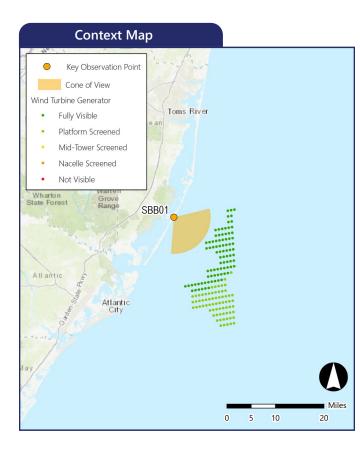
SBB01 Ship Bottom Borough Municipal Beach

Ship Bottom Borough, Ocean County, New Jersey



NE

The image above is a $+/-124^{\circ}$ 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).



Location Map \bigcirc Key Observation Poi one of Vie 0 250 500 1.000

Simulation Information

Coordinates:
Character Area:
User Group:
Direction of View:
Distance to Nearest Visible Turbine:
Sensitive Resource:

Environmental Information

Conditions Observed: Clear

12 mph

Date Taken:

Temperature:

Wind Direction:

Wind Speed:

Humidity:

Visibility:

Time:

39.65152°N, 74.17169°W Residential Beachfront, Seascape (SCA) L. Residents, Tourists, S. Residents Southeast 8.5 miles Ship Bottom Borough Municipal Beach, New Jersey Coastal Heritage Trail Area

Photograph Information

09/22/2020	Camera:	Can
3:45 PM	Resolution:	30.4
72°F	Focal Length:	50m
33%	Camera Height:	24.0
10 miles	Notes	
West-northwest	Printed at 100%, th	ne pho
12 mph	inches wide by 10 inc	

distance of 21 inches.

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

Attachment E: Photosimulations Page 81 of 289

non EOS 5D Mark IV Megapixels nm 0 feet AMSL

otosimulations are 15 inches wide by 10 inches high. At this size, the photosimulation(s) should be viewed from a

Simulated Photograph(s)







SBB01 Ship Bottom Borough Municipal Beach

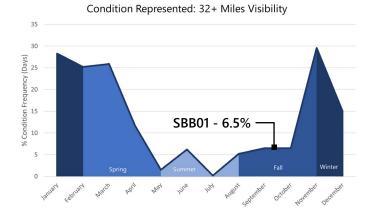
Ship Bottom Borough, Ocean County, New Jersey

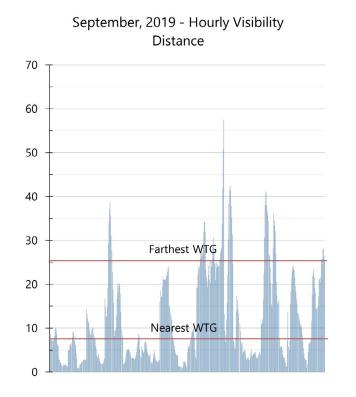
KOP Information

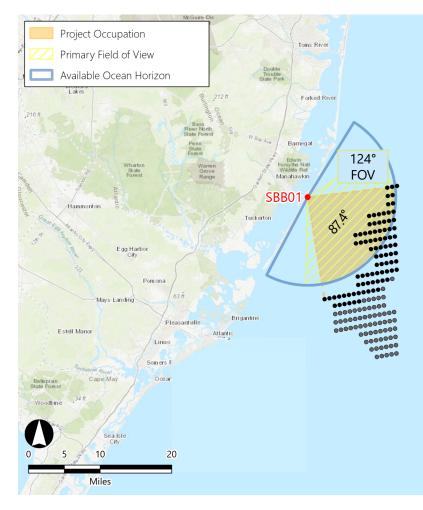
Primary Field of View:	East
Distance to Closest WTG:	8.5 miles
Camera Height:	24.0 feet
User Groups:	L. Residents, Tourists, S Residents

Atmospheric Perspective

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



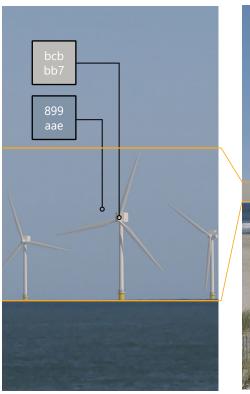




Horizon Occupation

Percentage of Project Occupation on Ocean Horizon: 49.6% (Project Occupation / Available Ocean Horizon) Available Ocean Horizon: 176.1°







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

Attachment E: Photosimulations Page 82 of 289



Color Contrast Rating:

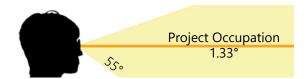


Lighting Condition:	Side lit
Season:	Fall
Sky Condition:	Clear
Atmospheric Condition:	>10 Miles

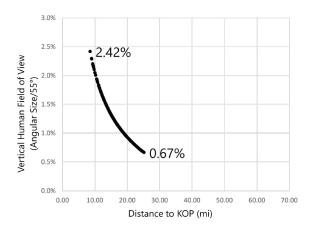
SIMILAR VIEWING PARAMETERS:

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

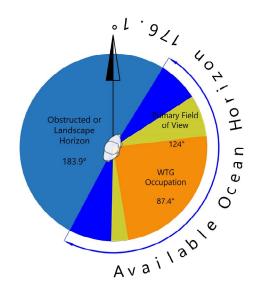
KOP Information

Primary Field of View/Simu	llation Direction:	Southeast/SE
Distance to Closest WTG:		8.5 miles
Camera Height:		24 ft
User Groups:	L. Residents, Tou	ırists, S.Residents
Horizon Occupation (% HF	OV): Lar	ge (87.4°, 70.5%)
Vertical Occupation:	Larg	e (1.33°, 2.42%)
Character Area Type:		Seascape
Character Area:	Reside	ential Beachfront

Existing View



Field of View



Existing Landscape/ Seascape Character Description:

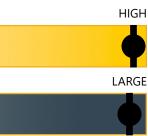
This view is from Ship Bottom Borough Municipal Beach in Borough of Ship Bottom, New Jersey. The beach is representative of the Residential Beachfront seascape character area and is a popular swimming and sunbathing destination on Long Beach Island. In-season access requires a beach badge, and lifeguard 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 Magnitude Magr Sensitivity Rating Rationale Facto Factor Size ar Representative of views experienced by full Scale time and seasonal residents/business owners, Susceptibility High tourists, and recreationalists. Views of the ocean are important to these visitors. Geogr Extent Despite the lack of accommodation for the visiting public, this location is highly valued as High Value a vacation destination and for those that own nearby homes. Duratio Reversi Magni Highly valued and susceptible landscape, Sensitivity High Rating Rating resulting in high sensitivity. LOW MEDIUM SENSITIVITY NEGLIGIBLE SMALL MEDIUM MAGNITUDE

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.

nitude or	Rating	Rationale
nd	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.
raphic t	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.
ion/ sibility	Fair	Long term and fully reversible.
itude 9	Large	The size, scale, geographic extent, duration, and reversibility result in a large magnitude rating.

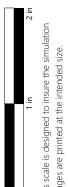


Overall Impact Major



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 84 of 289

Printed a 15 inches

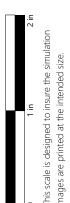






Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: SBB01 - Ship Bottom Borough Municipal Beach Attachment E: Photosimulations: Page 85 of 289

Printed a

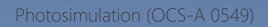




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: SBB01 - Ship Bottom Borough Municipal Beach Attachment E: Photosimulations: Page 86 of 289

size Ō Printed at 100% t 15 inches wide by









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 1 15 inches wi





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 siz 15 inches wide by 10 inches high. At this size. focal length, the simulation should be view from a distance of 21 inches.





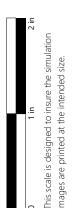




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549

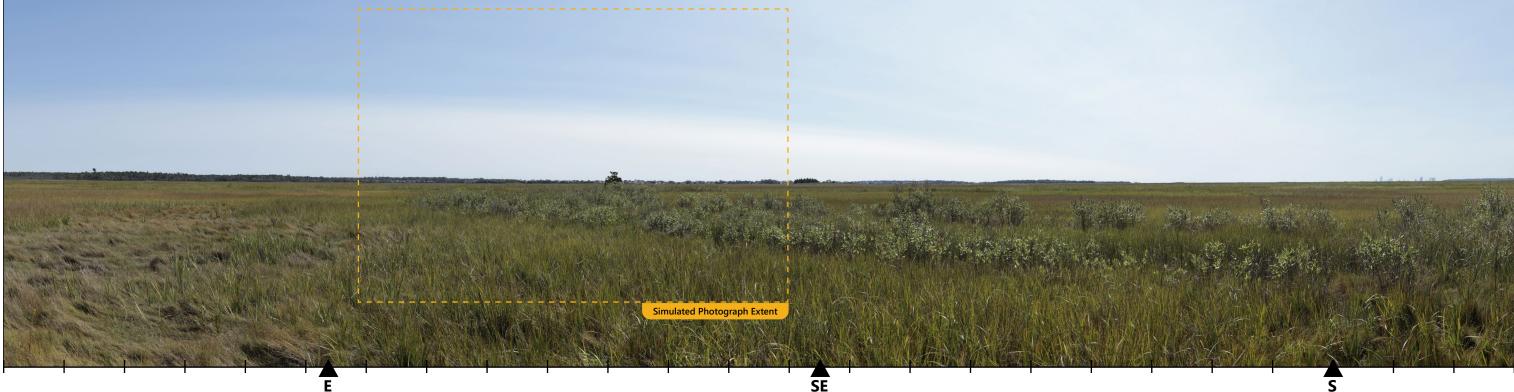
Key Observation Point: SBB01 - Ship Bottom Borough Municipal Beach Attachment E: Photosimulations: Page 89 of 289

Printed at 100% the resulting simulation siz 15 inches wide by 10 inches high. At this size. focal length, the simulation should be view 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:
Character Area:
User Group:
Direction of View:
Distance to Nearest Visible Turbine:
Sensitive Resource:

Environmental	I 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			

39.57672°N, 74.40830°N
Salt Marsh (LCA)
L. Residents, Tourists, S.
East-Southeast
17.4 miles
Edwin B. Forsythe NWR
Forest, Bass River State
District

Photograph Information

Camera:	Cano
Resolution:	30.4
Focal Length:	50m
Camera Height:	6.9 fe
Notes	
Printed at 100%, t	he pho

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

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

Attachment E: Photosimulations Page 90 of 289

Simulated Photograph(s)



W

Residents

R, Bass River State Forest Historic

non EOS 5D Mark IV Megapixels nm eet AMSL

BRT01 Bass River State Forest

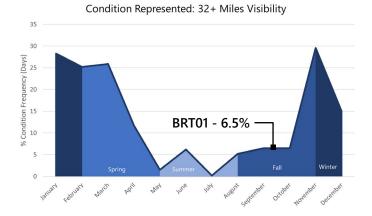
Bass River Township, Burlington County, New Jersey

KOP Information

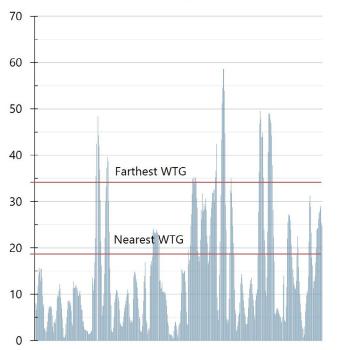
Primary Field of View:	Northwest
Distance to Closest WTG:	17.4 miles
Camera Height:	6.9 feet
User Groups:	L. Residents, Tourists, S.Residents

Atmospheric Perspective

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



September, 2019 - Hourly Visibility Distance





Horizon Occupation

Percentage of Project Occupation on Ocean Horizon: <1%* (Project Occupation / Available Ocean Horizon) Available Ocean Horizon: 0°

*While the available Ocean Horizon is obstructed, project occupation is 54.5° from this KOP.



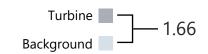


Atlantic Shores Offshore Wind: North (OCS-A 0549)

Attachment E: Photosimulations Page 91 of 289



Color Contrast Rating:



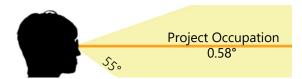
Lighting Condition:	Side lit
Season:	Fall
Sky Condition:	Fair
Atmospheric Condition:	>10 Miles



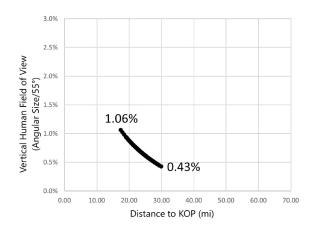
SIMILAR VIEWING PARAMETERS:

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



Percentage of Human FOV: 1.06% (0.58° / 55°) (Considering the nearest visible turbine)



BRT01 Bass River State Forest

Bass River Township, Burlington County, New Jersey

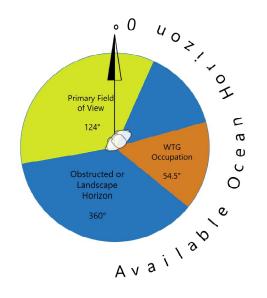
KOP Information

Primary Field of View/Simulation Direction: Northwest/ESE			
Distance to Closest WTG:		17.4 miles	
Camera Height:		6.9 ft	
User Groups:	L. Residents, To	urists, S. Residents	
Horizon Occupation (% H	IFOV): Med	ium (54.5° 44.0%)	
Vertical Occupation:	Med	ium (0.58°, 1.06%)	
Character Area Type:		Landscape	
Character Area:		Salt Marsh	

Existing View



Field of View



Existing Landscape/ Seascape Character Description:

The Bass River State Forest in Bass River Township, Burlington County, New Jersey is highly representative of a healthy, wellestablished 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	Rating	Rationale	Magnitude Factor	Rating	Rational	e
Factor	High	This area hosts recreationalists that place a high importance on the natural scenery as a part of	Factor Size and Scale	Medium	degrees a heavily sc As such, c	theoretical vertical occupation is 0.58 and 1.06%, the majority of WTGs are reened by structures and vegetation. only about 6-8 WTG nacelles would be
		their experience.			Again, the	The visual prominence rating is 3. e theoretical horizon occupation is 54.5 which is 44% of the human field of
Value High Bass River State For	The area receives moderate visitation and the Bass River State Forest is advertised in social media, local publications and on the NJDEP	Geographic Extent	Medium	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.		
		guide material.	Duration/ Reversibility	Fair	Long tern	n and fully reversible.
Sensitivity Rating	High	Highly valued and susceptible landscape, resulting in high sensitivity.	Magnitude Rating	Small	number o	e visual prominence rating and the sma of hubs, rotors and widest portions of as visible, the overall magnitude is smal
.OW	•	MEDIUM		•	HIGH	
		SENSITIVITY			•	Overall Impa
NEGLIGIBLE		SMALL MEDIUM MAGE TUDE			LARGE	Moderate

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.

Magnitude







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 93 of 289

.<u>v</u> at Printed a 15 inches focal





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 15 inches wide by 10 inches high. At this size an focal length, the simulation should be viewe from a distance of 21 inches.

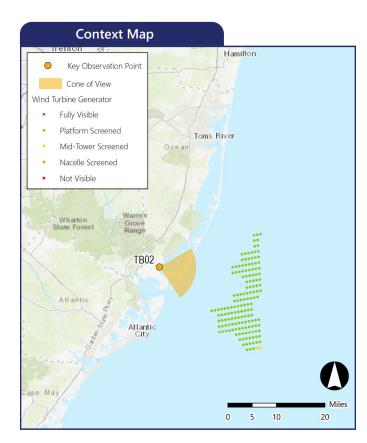


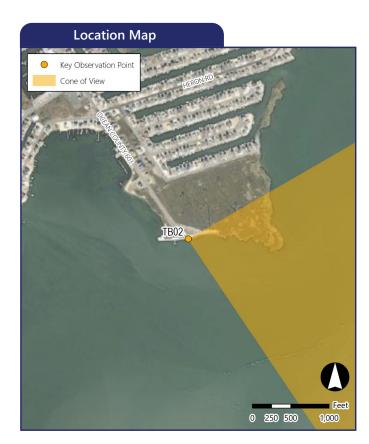
TB02 South Green Street Park

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).





Cimentation	1
Simulation	Information

Coordinates: Character Area: User Group:

Direction of View: Distance to Nearest Visible Turbine: Sensitive Resource:

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
Coastal Heritage Trail Area
Tuckerton Green Street Beach,
14.0 miles
East-southeast
Residents
L. Residents, Tourists, Fishing C
Recreation, Seascape (LCA)
39.57661°N, 74.33016°W

Notes	
Camera Height:	5.5 f
Focal Length:	50m
Resolution:	30.4
Camera:	Can

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.

Atlantic Shores Offshore Wind: North (OCS-A 0549) Attachment E: Photosimulations Page 95 of 289



N CA) shing Comm., S.

Beach, New Jersey rea

non EOS 5D Mark IV Megapixels nm feet AMSL

Simulated Photograph(s)





Photograph ASOW3509

TB02 South Green Street Park

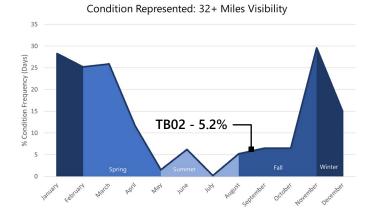
Tuckerton Borough, Ocean County, New Jersey

KOP Information

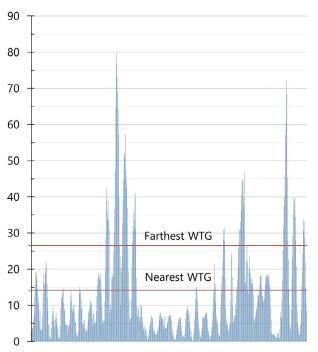
Primary Field of View:	East
Distance to Closest WTG	: 14.0 miles
Camera Height:	5.5 feet
User Groups:	L. Residents, Tourists, Fishing Comm., S. Residents

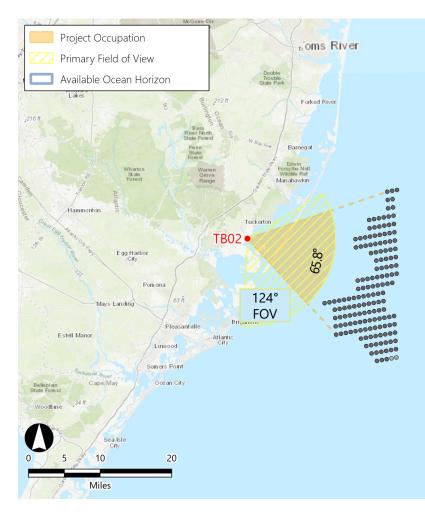
Atmospheric Perspective

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



August, 2019 - Hourly Visibility Distance



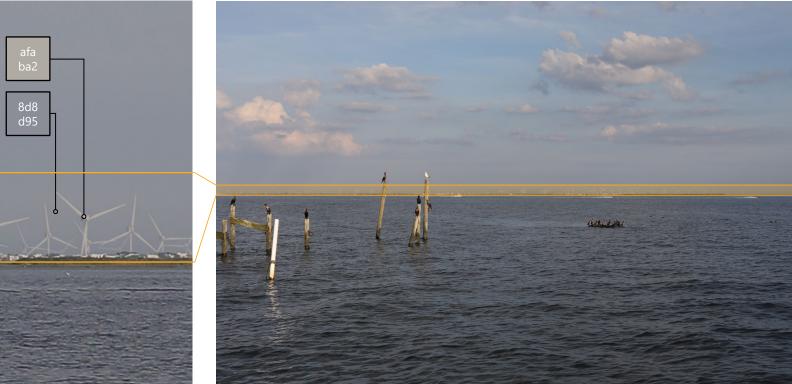


Horizon Occupation

Percentage of Project Occupation on Ocean Horizon: <1%* (Project Occupation / Available Ocean Horizon) Available Ocean Horizon: 0°







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

Page 96 of 289



Color Contrast Rating:



Lighting Condition:

Season:

Sky Condition:

Atmospheric Condition:

Front lit

Summer

Partly Cloudy

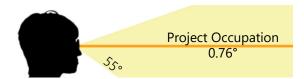
>10 Miles



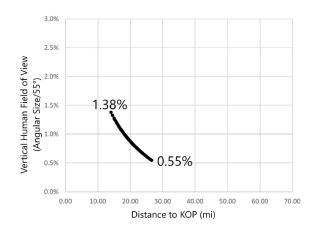
SIMILAR VIEWING PARAMETERS:

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.

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

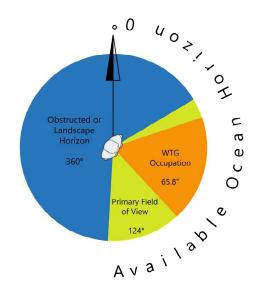
KOP Information

Primary Field of View/Simulation Direction:		ESE/ESE	
Distance to Closest WTG:			14 miles
Camera Height:			5.5 ft
User Groups:	L/S Resident	s, Tourists, Fishii	ng Comm.
Horizon Occupation (% HFOV):		Large (6	5.8°, 53%)
Vertical Occupation:		Medium (0.7	6°, 1.38%)
Character Area Type:		l	andscape
Character Area:		I	Recreation

Existing View



Field of View



Existing Landscape/ Seascape Character Description:

Sensitivity

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 march exhibit high scenic quality and integrity.

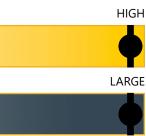
Magr Sensitivity Rating Rationale Facto Factor Size ar While there are not any specific historic or Scale cultural aspects to this viewing location, Susceptibility High views maybe an important part of the user experience. Geogr Extent Despite low attendance, no designation at the local, state, or federal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

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.

Magnitude

nitude or	Rating	Rationale
nd	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.
raphic t	Large	The Project would occupy approximately 53 percent or 65.8 degrees of the 124 degree human field of view.
ion/ sibility	Fair	Long term and fully reversible.
itude 9	Large	With a large geographic extent and medium (bordering on large) vertical scale, the overall magnitude rating is large.



Overall Impact Major



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

size g Printed at 100% the r 15 inches wide by 10 in focal length, the simu from a distance of 21 i





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% t 15 inches wide by





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

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



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.

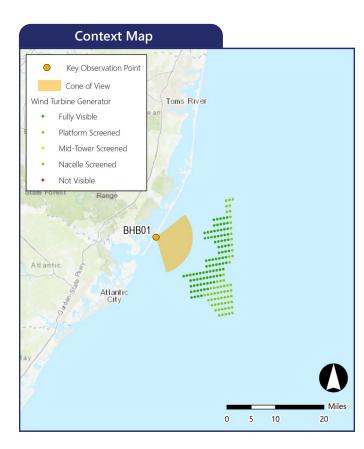


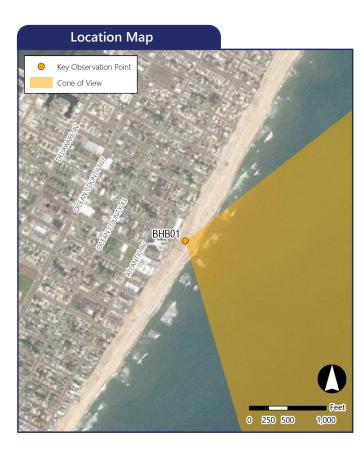
BHB01 Beach Haven Historic District

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, S	ie
User Group:		L. Residents, Tourists, Fisł	h
		Residents	
Direction of View:		East-southeast	
Distance to Nearest Visible Turbine:		9.9 miles	
Sensitive Resource:		Beach Haven Borough P	ι
Haven Historic District, N	New Jersey Coast	tal Heritage Trail Area	
Environmental Infor	mation	Photograph Informa	ıt
Date Taken:	08/19/2020	Camera: Cano	С
Time:	7:19 AM	Resolution: 30.4	١
Temperature:	73°F	Focal Length: 50m	n
Humidity:	87%	Camera Height: 17.7	f
Visibility:	10 miles	Notes	
Wind Direction:	Calm	Printed at 100%, the pho	- t
Wind Speed:	0 mph	inches wide by 10 inches h	٦i
Conditions Observed:	Cloudy	photosimulation(s) should distance of 21 inches.	

Night time simulations are digitally adjusted from daytime photographs.

Atlantic Shores Offshore Wind: North (OCS-A 0549) Attachment E: Photosimulations Page 102 of 289

Seascape (SCA) hing Comm., S.

ublic Beach, Beach

ation

on EOS 5D Mark IV Megapixels nm feet AMSL

otosimulations are 15 high. At this size, the be viewed from a

Simulated Photograph(s)







BHB01 Beach Haven Historic District

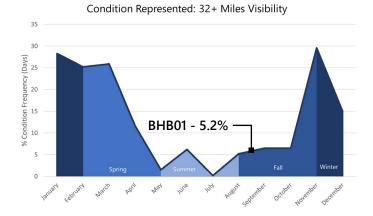
Beach Haven Borough, Ocean County, New Jersey

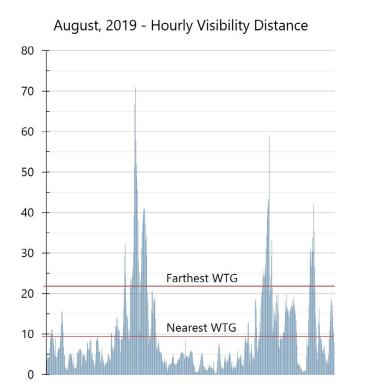
KOP Information

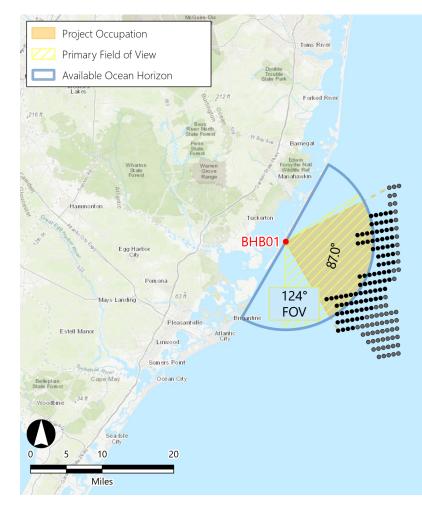
Primary Field of View:	East
Distance to Closest WTG	: 9.9 miles
Camera Height:	17.7 feet
User Groups:	L. Residents, Tourists, Fishing Comm., S. Residents

Atmospheric Perspective

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



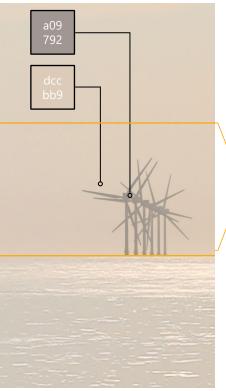


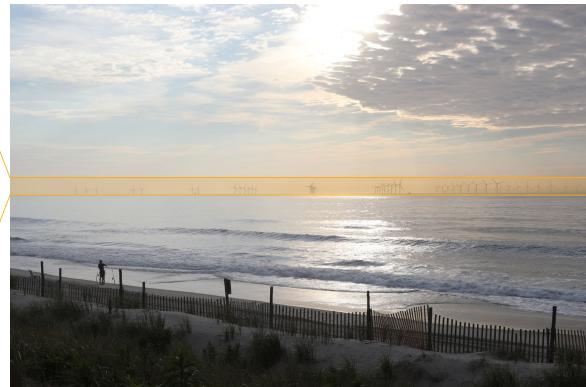


Horizon Occupation

Percentage of Project Occupation on Ocean Horizon: 48.0% (Project Occupation / Available Ocean Horizon) Available Ocean Horizon: 181.1°







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

Attachment E: Photosimulations Page 103 of 289



Color Contrast Rating:

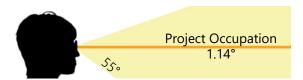


Lighting Condition:	Back lit
Season:	Summer
Sky Condition:	Cloudy
Atmospheric Condition:	>10 Miles

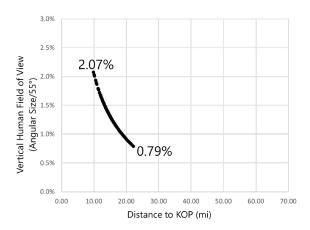
SIMILAR VIEWING PARAMETERS:

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



Percentage of Human FOV: 2.07% (1.14° / 55°) (Considering the nearest visible turbine)





BHB01 Beach Haven Historic District

Beach Haven Borough, Ocean County, New Jersey

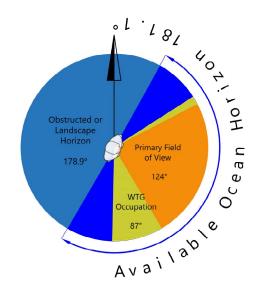
KOP Information

Primary Field of View/Simulation	on Direction: ESE/ESE
Distance to Closest WTG:	9.9 miles
Camera Height:	17.7 ft
User Groups: Resi	dents, 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:

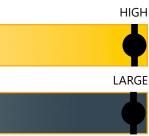
This view is from the edge of the Beach Haven Historic District in the Borough of Beach Haven and within the Residential Beachfront SCA. A portion of this area was added to the National Register of Historic Places on July 14, 1983, for its significance in architecture and history as a beachfront resort 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 Magnitude Magr Sensitivity Rating Rationale Facto Factor Size ar View is representative of residential viewers from the beachfront homes. It is somewhat Scale Susceptibility High representative of views from a nearby historic district and the ocean view is important to user experience Geogr Extent The residents of LBI requested specific views from three locations in Beach Haven, including High Value Centre Street, suggesting that these represent locations with high value to the residents. Duratio Reversi Magni The high susceptibility and value results in Sensitivity High Rating Rating high sensitivity. LOW MEDIUM SENSITIVITY NEGLIGIBLE SMALL MEDIUM MAGNITUDE

Project Contrast:

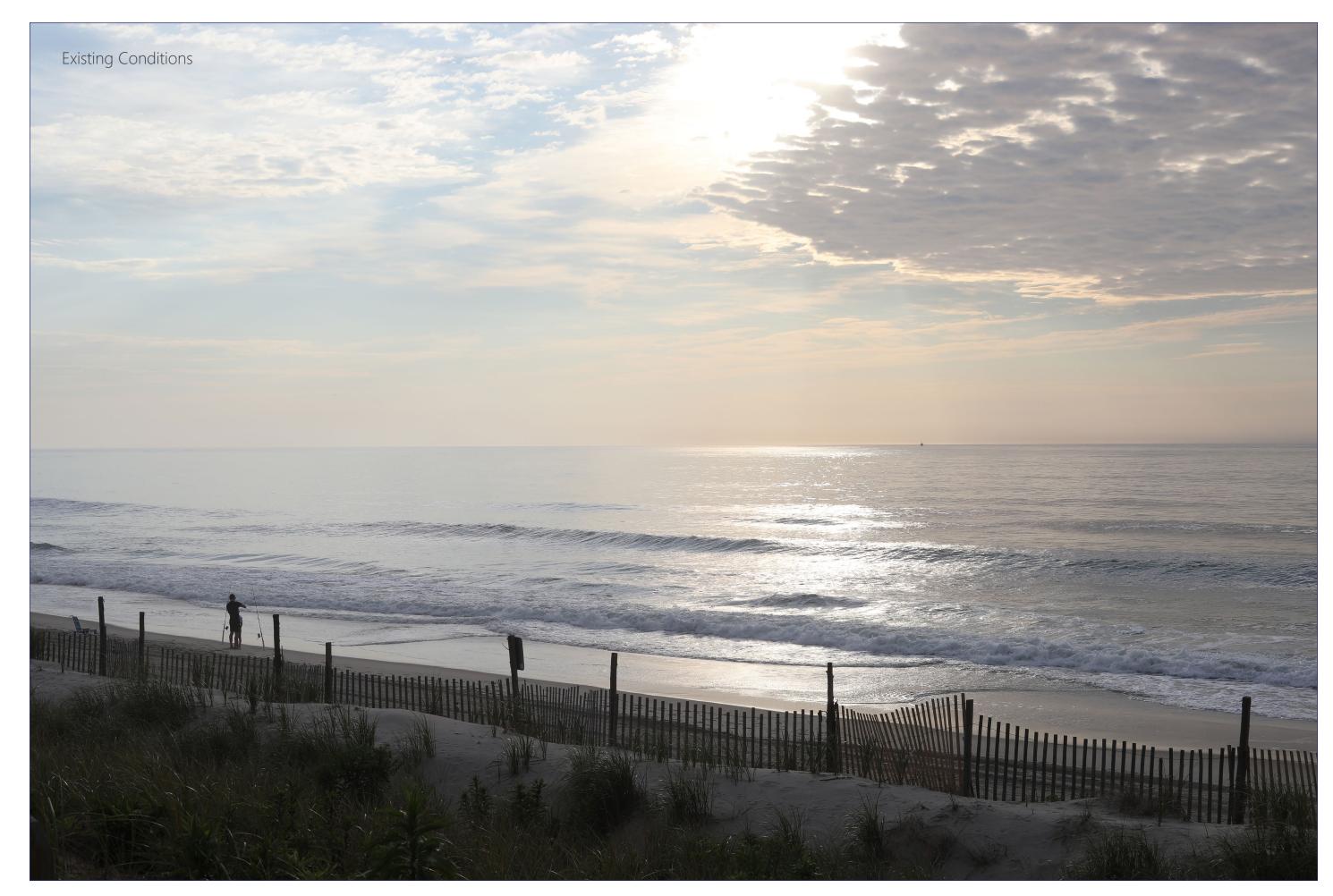
During clear viewing conditions, the line, form, color, occupation, motion, and lighting would strongly contrast with ocean views due to the novel form of the WTGs. Similar contrasts would occur with landform and structures and rotor motion could detract from vegetation. The presence of stacking WTGs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

nitude or	Rating	Rationale
nd	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.
raphic t	Large	The Project would occupy approximately 70 percent or 87 degrees of the 124 degree human field of view.
ion/ sibility	Fair	Long term and fully reversible.
itude 9	Large	With a large geographic extent and large vertical scale, the overall magnitude rating is large.



Overall Impact





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 105 of 289

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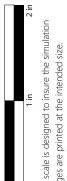
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Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB01 - Beach Haven Historic District Attachment E: Photosimulations: Page 106 of 289

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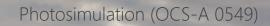




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB01 - Beach Haven Historic District Attachment E: Photosimulations: Page 107 of 289

ulation size is this size and d be viewed 10 inches the simuli ce of 21 inc Printed at 100% the r 15 inches wide by 10 in focal length, the simu from a distance of 21 i



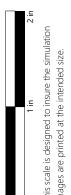


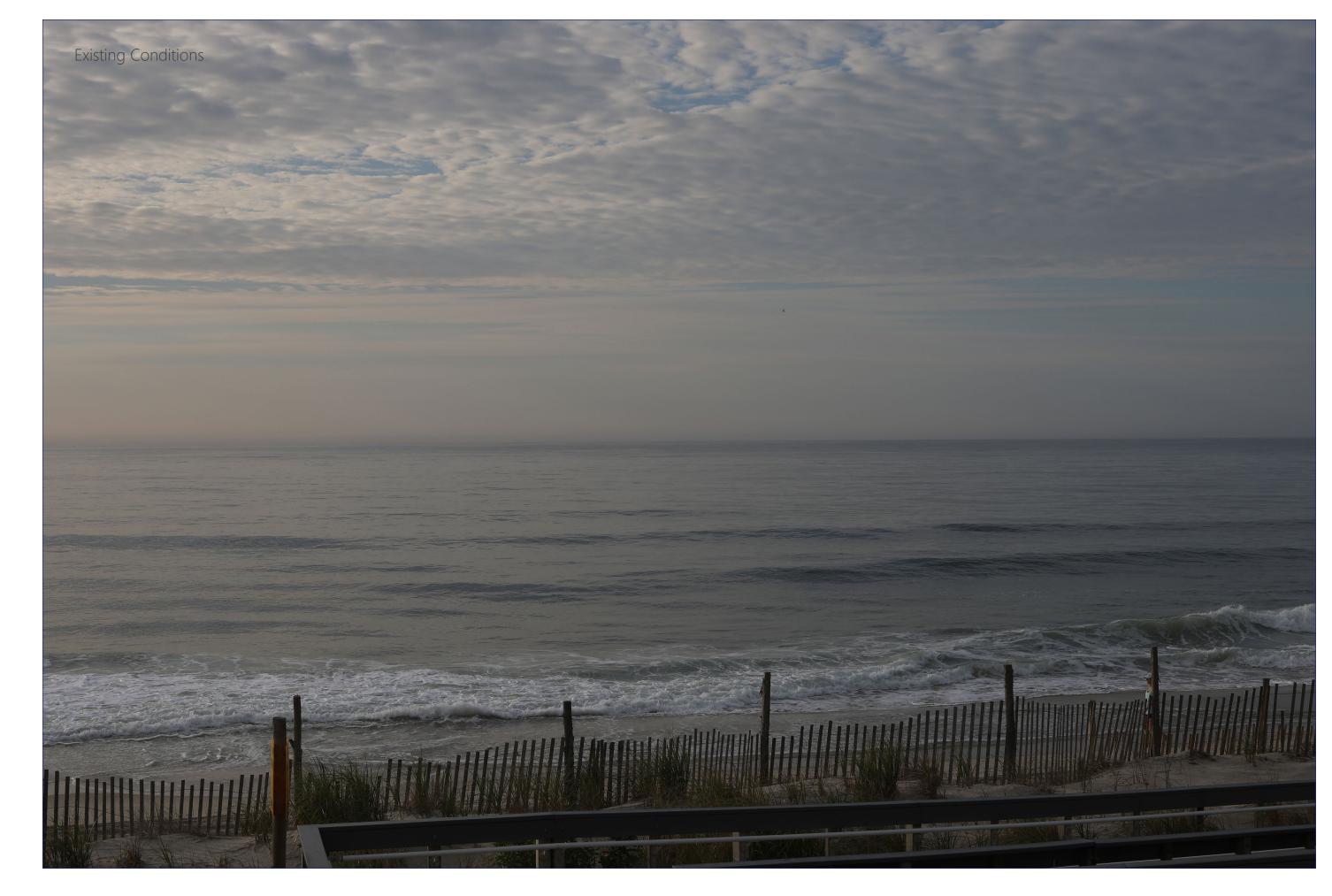
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Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB01 - Beach Haven Historic District Attachment E: Photosimulations: Page 108 of 289

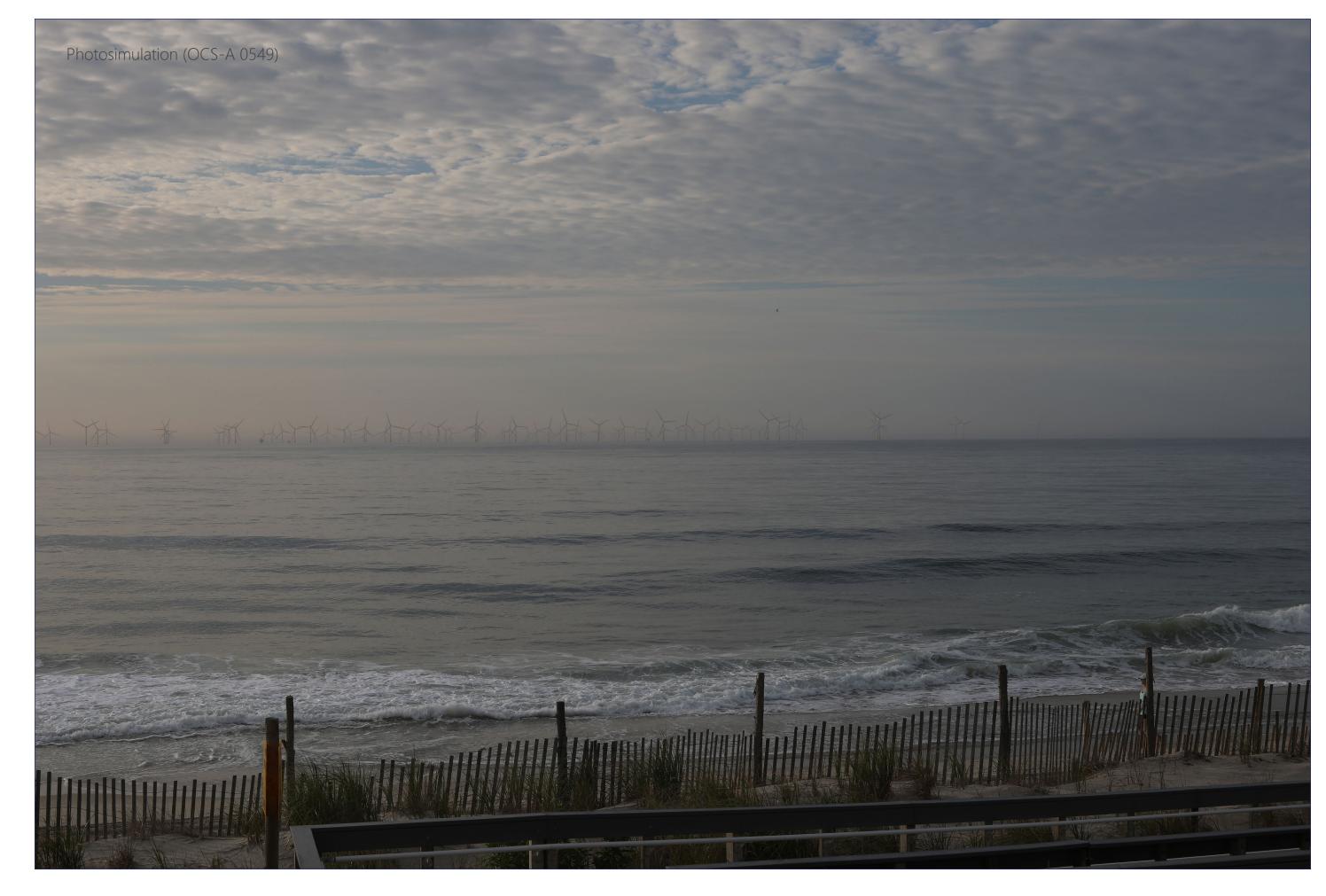
sulting simulation size is hes high. At this size and ation should be viewed Printed at 100% the resulting 15 inches wide by 10 inches hi focal length, the simulation from a distance of 21 inches.





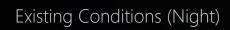
Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point. BHB01 - Beach Haven Historic District Attachment E: Photosimulations: Page 109 of 289

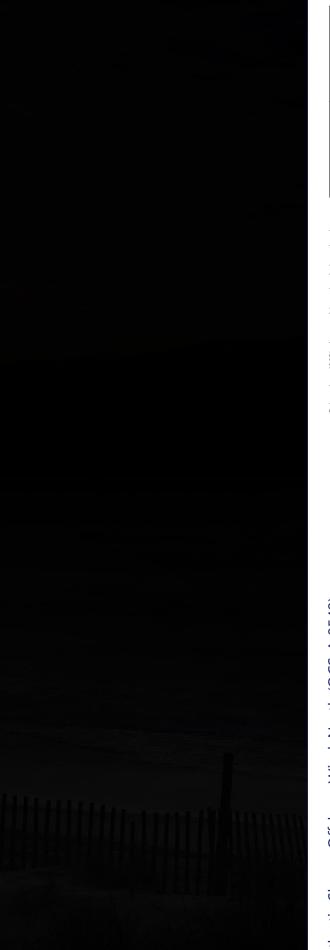




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB01 - Beach Haven Historic District Attachment E: Photosimulations: Page 110 of 289







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 111 of 289

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





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 113 of 289

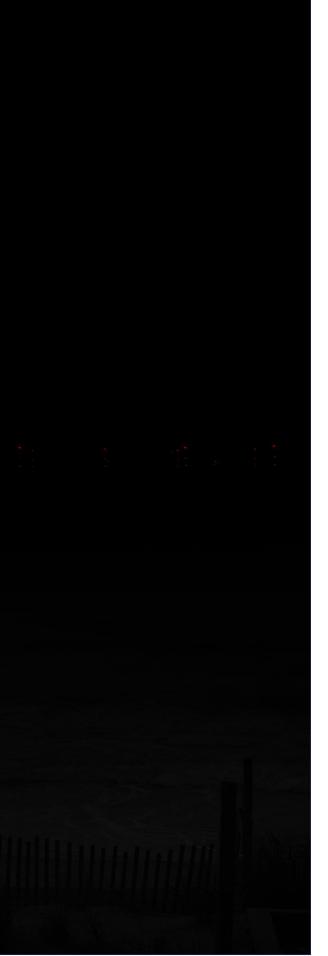


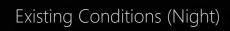
Photosimulation (Night) (OCS-A 0549)



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 wiewed from a distance of 21 inches.

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



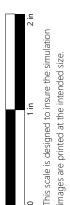




Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

> 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 115 of 289

Photosimulation (Night) (OCS-A 0549)



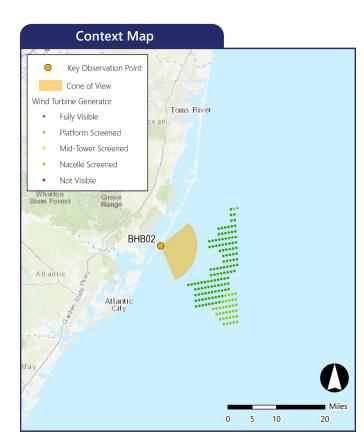
Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

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

Beach Haven Borough, Ocean County, New Jersey



The image above is a $+/-124^{\circ}$ panorama photograph from Centre Street, Beach Haven, panning clockwise from northeast (left) to southeast (right). The yellow rectangle within the photo represents the extent of the photosimulation photo(s).





Simulation	Information
Simulation	mornation

Coordinates:	39.56166°N, 74.23568°W
Character Area:	Residential Beachfront, Se
User Group:	L. Residents, Tourists, S. Re
Direction of View:	East
Distance to Nearest Visible Turbine:	9.8 miles
Sensitive Resource:	Beach Haven Borough Pu
Haven Historic District, New Jersey Coastal Heri	tage Trail Area

Environmental Information		Photograph Informa	
Date Taken:	03/02/2022	Camera:	Can
Time:	12:03 PM	Resolution:	30.4
Temperature:	54°F	Focal Length:	50m
Humidity:	40%	Camera Height:	27.0
Visibility:	10 miles	Notes	
Wind Direction:	West-northwest	Printed at 100%, th	ne pho
Wind Speed:	13 mph	inches wide by 10 in	nches I
Conditions Observed:	Fair	photosimulation(s) should distance of 21 inches.	

Atlantic Shores Offshore Wind: North (OCS-A 0549) Attachment E: Photosimulations Page 117 of 289

Seascape (SCA) Residents

ublic Beach, Beach

ation

non EOS 5D Mark IV .4 Megapixels nm .0 feet AMSL

notosimulations are 15 high. At this size, the be viewed from a

Simulated Photograph(s)



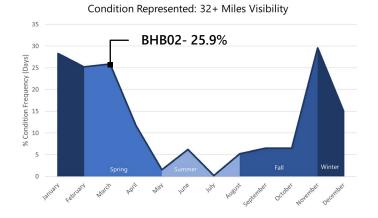
Beach Haven Borough, Ocean County, New Jersey

KOP Information

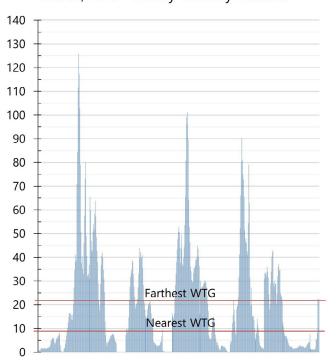
Primary Field of View:	East
Distance to Closest WTG:	9.8 miles
Camera Height:	27.0 feet
User Groups:	L. Residents, Tourists, S. Residents

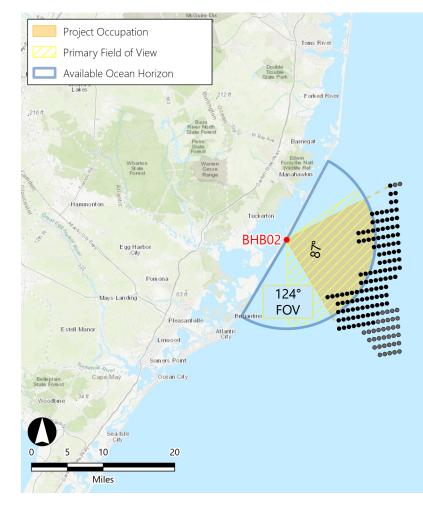
Atmospheric Perspective

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



March, 2019 - Hourly Visibility Distance





Horizon Occupation

Percentage of Project Occupation on Ocean Horizon: 47.6% (Project Occupation / Available Ocean Horizon) Available Ocean Horizon: 182.8°





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

Attachment E: Photosimulations Page 118 of 289



Color Contrast Rating:

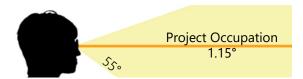


Lighting Condition:	Side lit
Season:	Winter
Sky Condition:	Fair
Atmospheric Condition:	>10 Miles

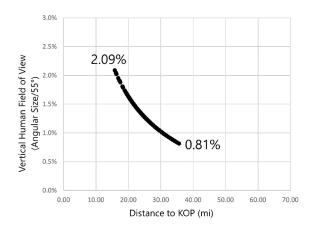
SIMILAR VIEWING PARAMETERS:

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



Percentage of Human FOV: 2.09% (1.15° / 55°) (Considering the nearest visible turbine)





Beach Haven Borough, Ocean County, New Jersey

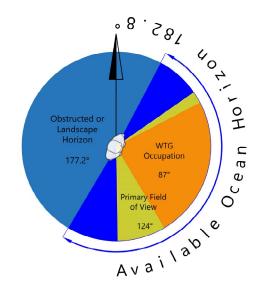
KOP Information

Primary Field of View/Simulation Direction:		ection: ESE/ESE
Distance to Closest WTG:		9.8 miles
Camera Height:		27.0 ft
User Groups:	Residents,	, Tourists, Fishing Comm.
Horizon Occupation (% H	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.

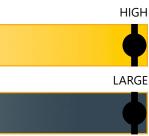
Sensitivity Magr Sensitivity Rating Rationale Facto Factor Size ar View is representative of residential viewers from the beachfront homes. It is somewhat Scale Susceptibility High representative of views from a nearby historic district and the ocean view is important to user experience Geogr Extent The residents of LBI requested specific views from three locations in Beach Haven, including High Value Centre Street, suggesting that these represent locations with high value to the residents. Duratio Reversi Magni The high susceptibility and value results in Sensitivity High Rating Rating high sensitivity. LOW MEDIUM SENSITIVITY NEGLIGIBLE SMALL MEDIUM MAGNITUDE

Project Contrast:

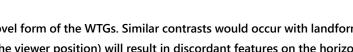
During clear viewing conditions, the line, form, color, occupation, motion, and lighting would strongly contrast with ocean views due to the novel form of the WTGs. Similar contrasts would occur with landform and structures and rotor motion could detract from vegetation. The presence of stacking WTGs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

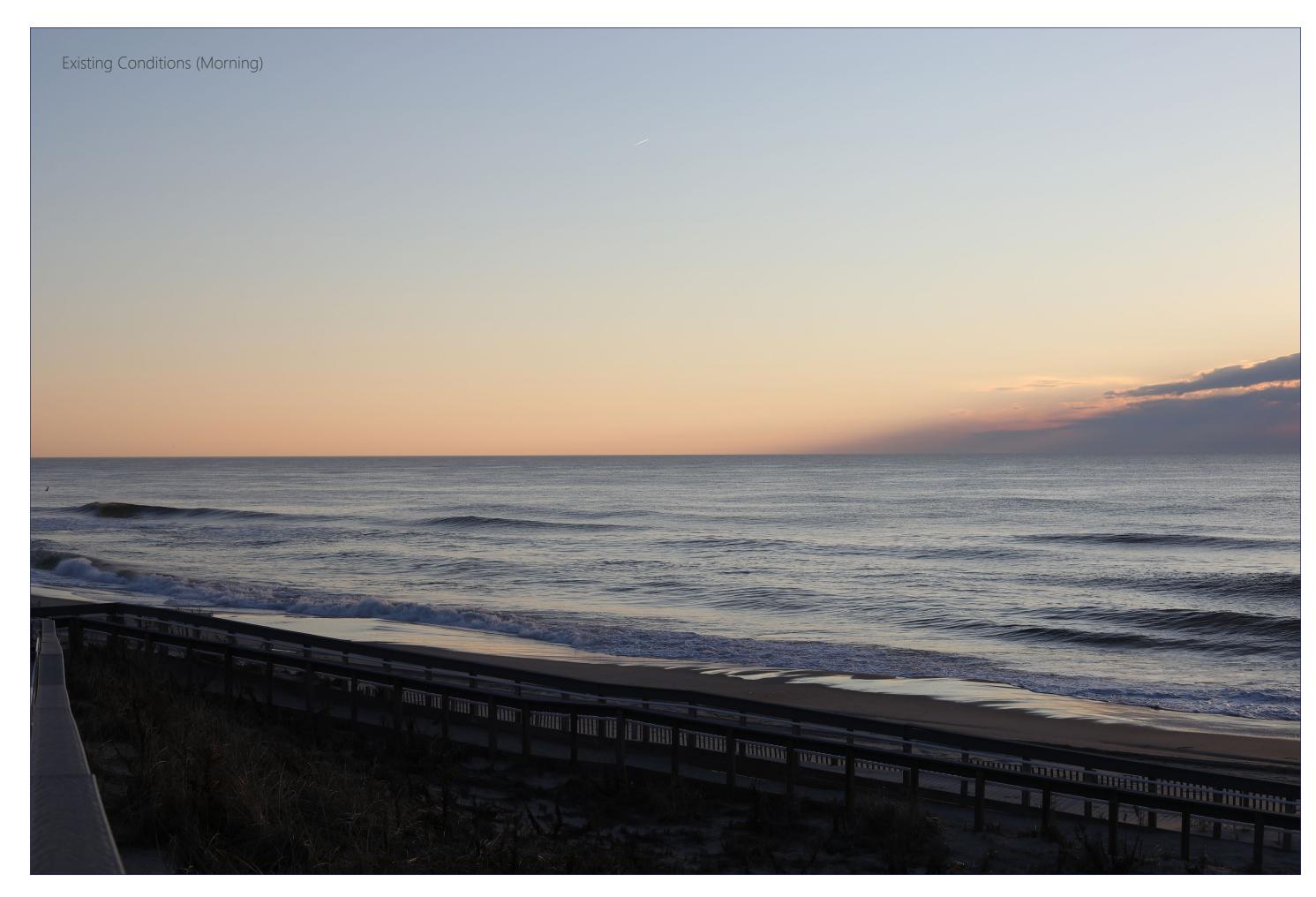
Magnitude

nitude or	Rating	Rationale
nd	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.
raphic t	Large	The Project would occupy approximately 70 percent or 87 degrees of the 124 degree human field of view.
ion/ sibility	Fair	Long term and fully reversible.
itude 9	Large	With a large geographic extent and large vertical scale, the overall magnitude rating is large.



Overall Impact Major



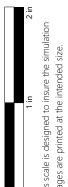


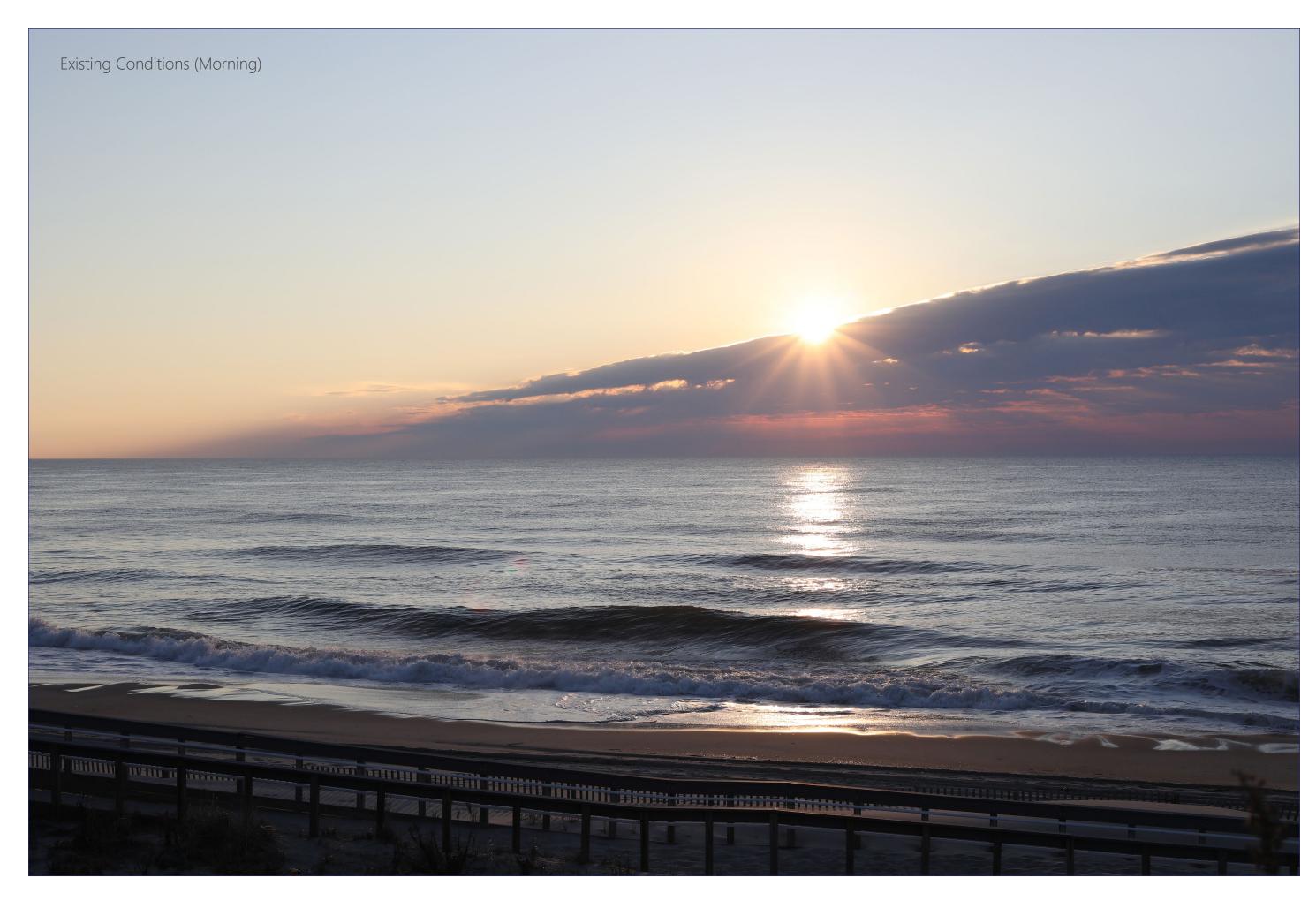
Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB02 - Centre Street, Beach Haven Attachment E: Photosimulations: Page 120 of 289





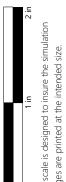
Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB02 - Centre Street, Beach Haven Attachment E: Photosimulations: Page 121 of 289





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

at 100% Printed a

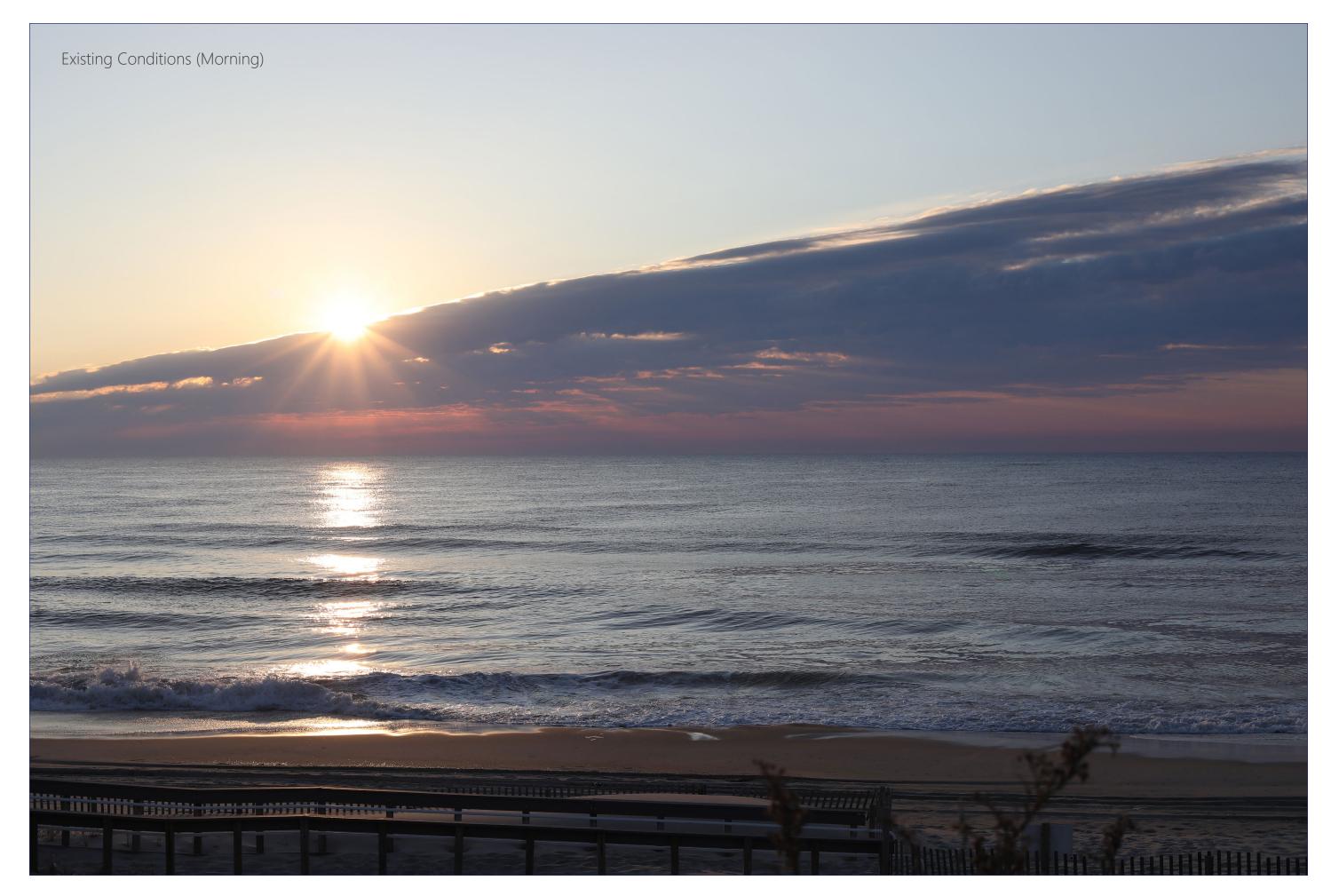




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB02 - Centre Street, Beach Haven Attachment E: Photosimulations: Page 123 of 289

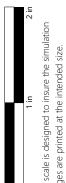
size Printed at 100% t 15 inches wide by





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

size Printed at 100% 15 inches wide by focal length, the from a distance o



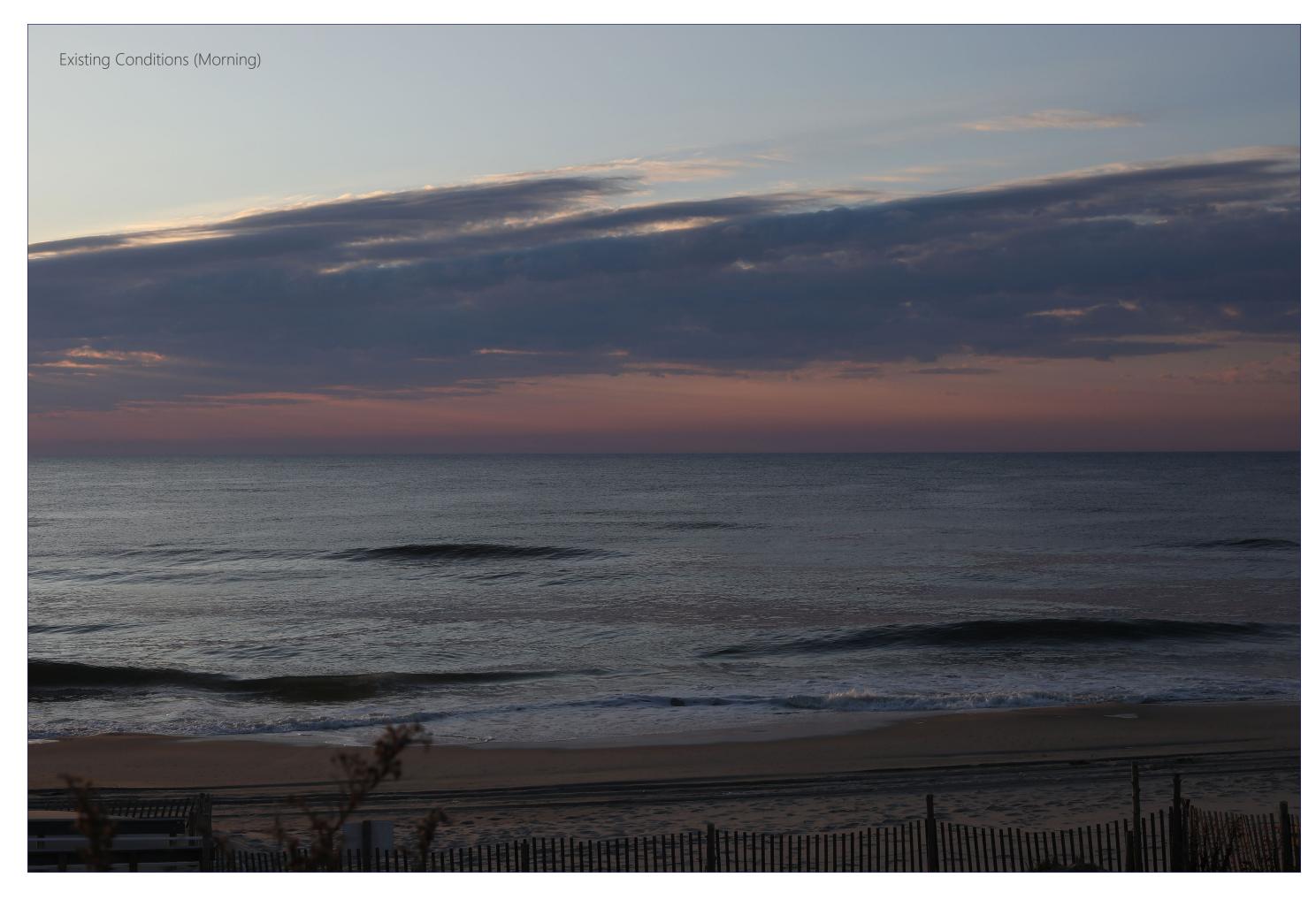
Photosimulation (Morning) (OCS-A 0549)



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

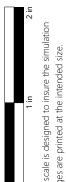
size Printed at 100% 15 inches wide by focal length, the





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% 15 inches wide by

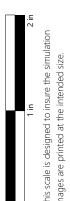


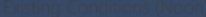
Photosimulation (Morning) (OCS-A 0549)



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 10







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

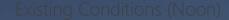


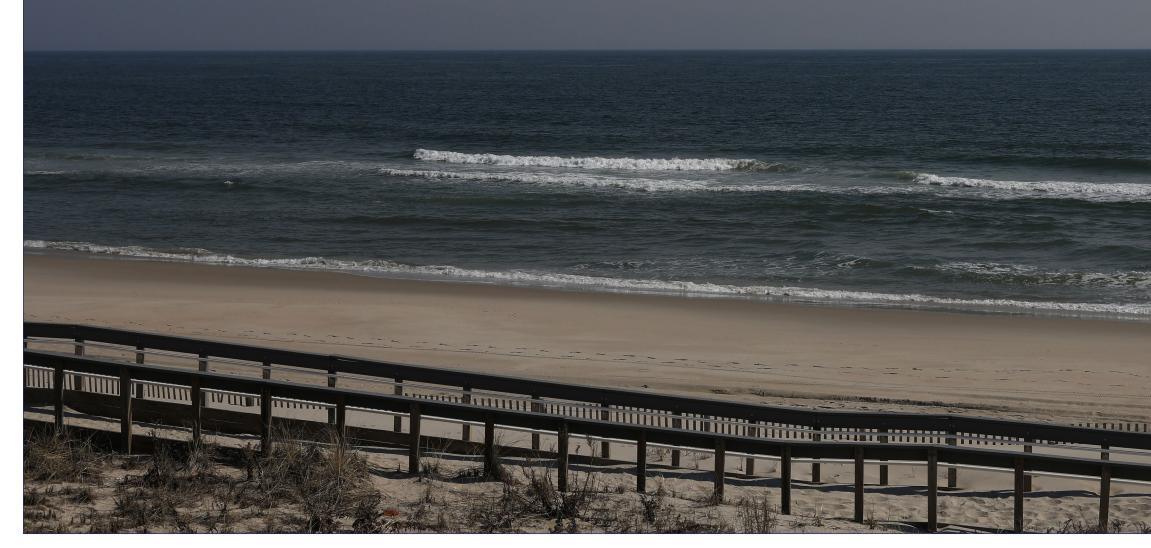
Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB02 - Centre Street, Beach Haven Attachment E: Photosimulations: Page 129 of 289

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.

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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 15 inches wide by 10 inches high. At this size an focal length, the simulation should be viewe from a distance of 21 inches.

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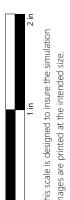




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB02 - Centre Street, Beach Haven Attachment E: Photosimulations: Page 131 of 289

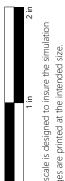
Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance of 21 inches.

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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 132 of 289



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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.

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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)

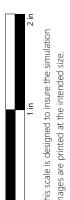
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Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549

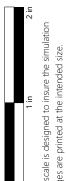
cey Observation Point: BHB02 - Centre Street, Beach Haven
Attachment E: Photosimulations: Page 135 of 289





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 136 of 289

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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 137 of 289

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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

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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 139 of 289

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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

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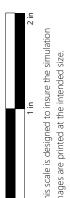
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Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB02 - Centre Street, Beach Haven Attachment E: Photosimulations: Page 141 of 289

Ilting simulation size es high. At this size an this s Printed at 100% the r 15 inches wide by 10 in

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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 142 of 289

.∽ size Iting simulation be Printed at 100% the 15 inches wide by



Photosimulation (Evening) (OCS-A 0549)

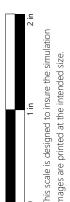




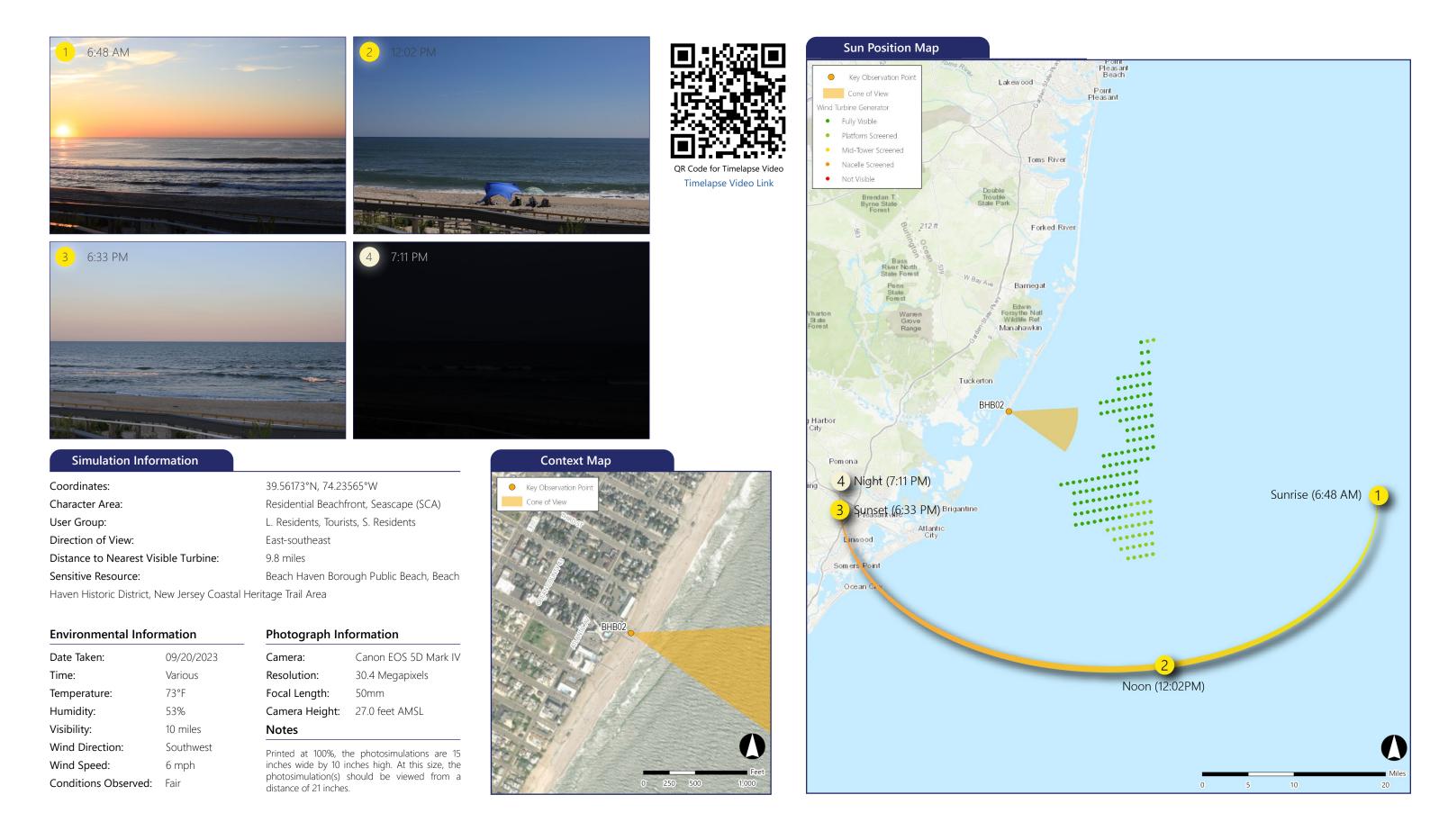
Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point. BHB02 - Centre Street, Beach Haven Attachment E: Photosimulations: Page 143 of 289

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Beach Haven Borough, Ocean County, New Jersey





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

ulting simulation size is d Printed at 100% the resul 15 inches wide by 10 inche focal length, the simulati from a distance of 21 inch



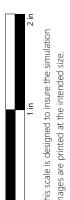
Photosimulation (Sunrise) (OCS-A 0549)

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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

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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

size ulting sim resu Printed at 100% the n 15 inches wide by 10 in focal length, the simu-from a distance of 21 in

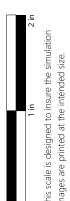
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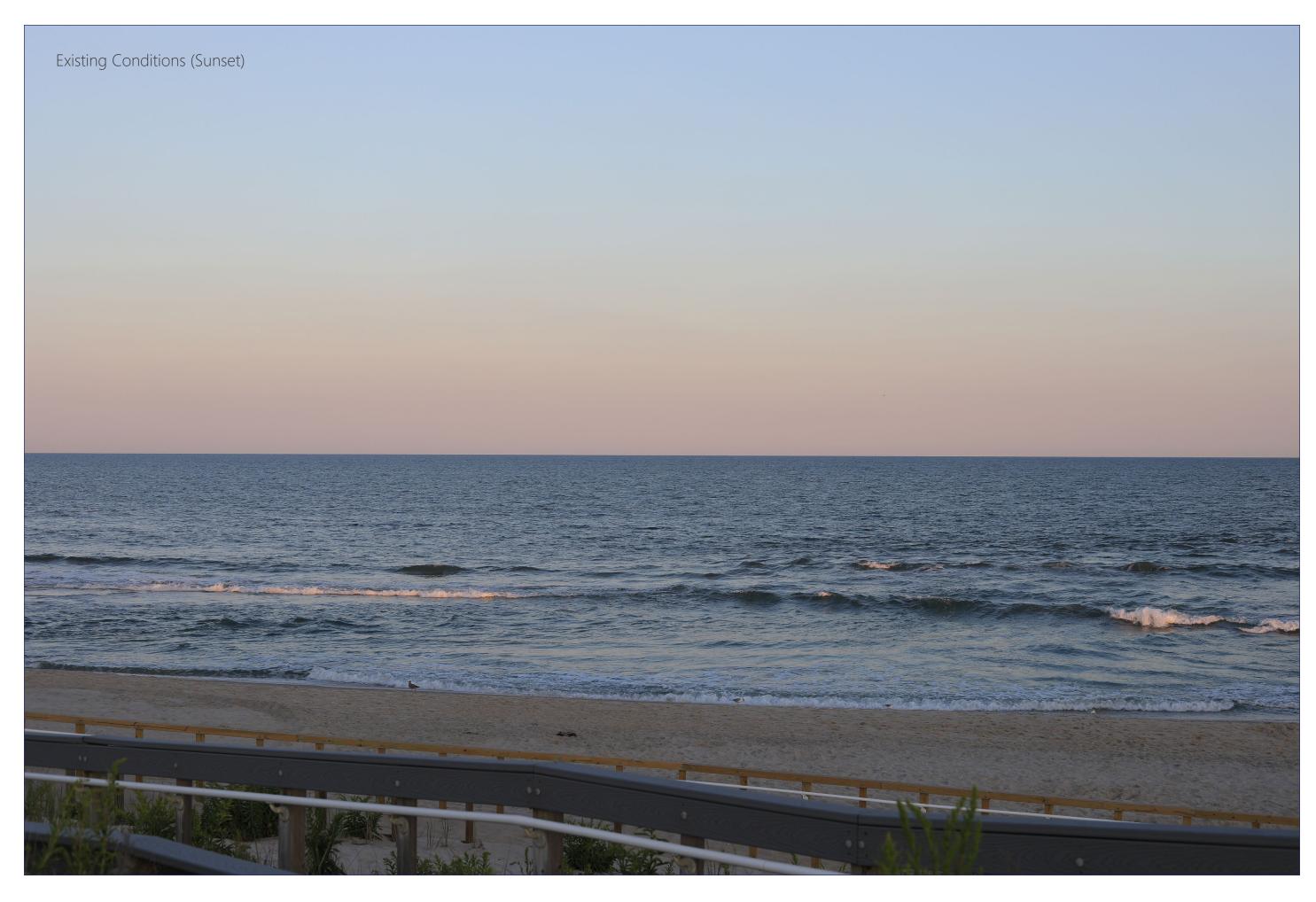




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB02 - Centre Street, Beach Haven Attachment E: Photosimulations: Page 148 of 289

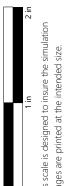
size þ Printed at 100% t 15 inches wide by

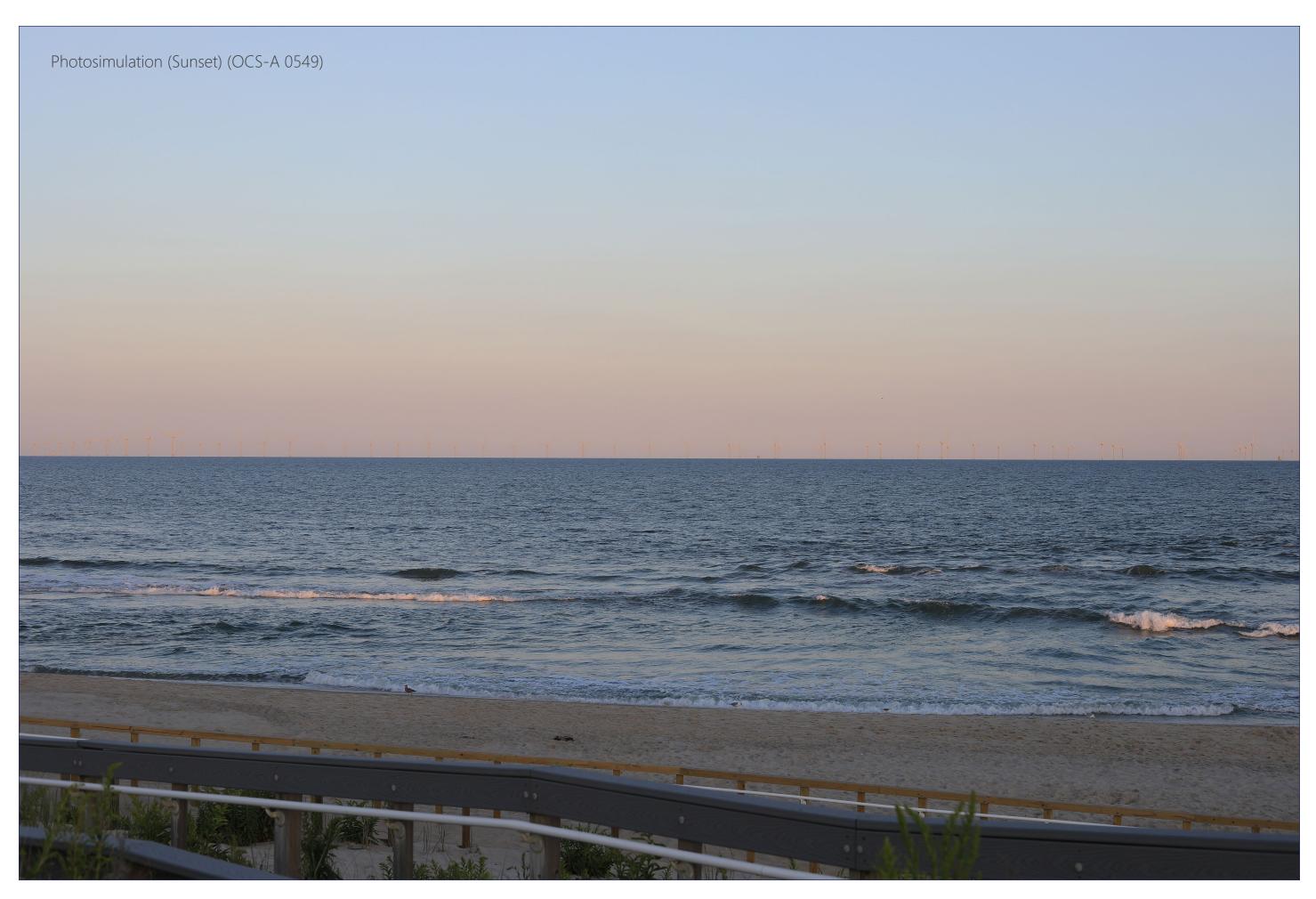




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB02 - Centre Street, Beach Haven Attachment E: Photosimulations: Page 149 of 289

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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

Pri.







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.

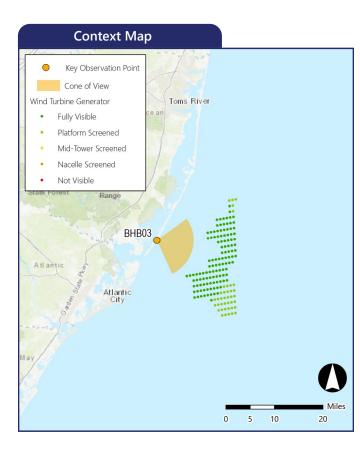


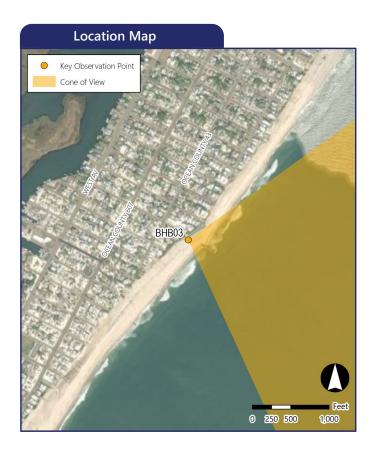
BHB03 Holyoke Avenue, Beach Haven

Beach Haven Borough, Ocean County, New Jersey



The image above is a +/- 124° panorama photograph from Holyoke Avenue, Beach Haven, 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: Character Area: User Group: Direction of View: Distance to Nearest Visible Turbine: Sensitive Resource:

Environmental Information

03/02/2022

5:23 PM

55°F

30%

West

9 mph

10 miles

Date Taken:

Temperature:

Wind Direction:

Conditions Observed: Fair

Wind Speed:

Humidity:

Visibility:

Time:

East-southeast 9.6 miles Beach Haven Borough Public Beach, New Jersey Coastal Heritage Trail Area Photograph Info ation

۲	no	tog	rap	n II	πo	rma
_						

D. I. I. I. (000)		
Notes		
Camera Height:	26.9	
Focal Length:	50m	
Resolution:	30.4	
Camera:	Can	

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.

Atlantic Shores Offshore Wind: North (OCS-A 0549) Attachment E: Photosimulations Page 153 of 289

39.55258°N, 74.24419°W Residential Beachfront, Seascape (SCA) L. Residents, Tourists, S. Residents

non EOS 5D Mark IV Megapixels nm 9 feet AMSL

Simulated Photograph(s)



BHB03 Holyoke Avenue, Beach Haven

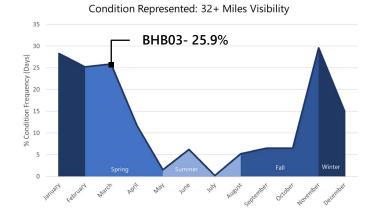
Beach Haven Borough, Ocean County, New Jersey

KOP Information

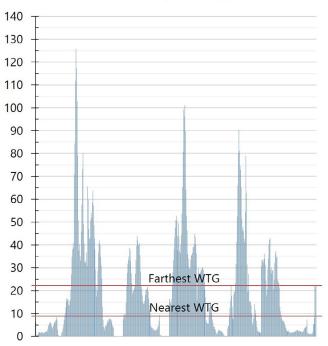
Primary Field of View:	East
Distance to Closest WTG:	9.6 miles
Camera Height:	26.9 feet
User Groups:	L. Residents, Tourists, S. Residents

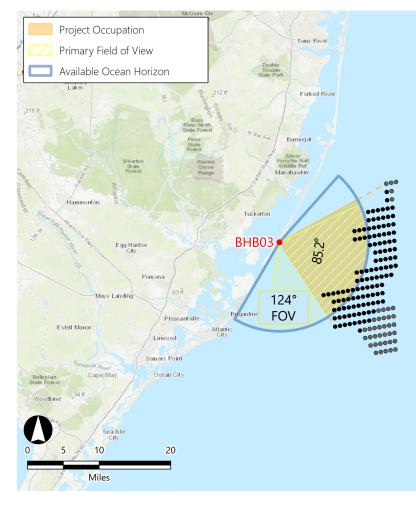
Atmospheric Perspective

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



March, 2019 - Hourly Visibility Distance

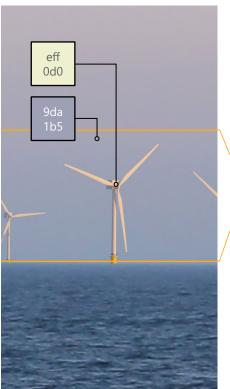


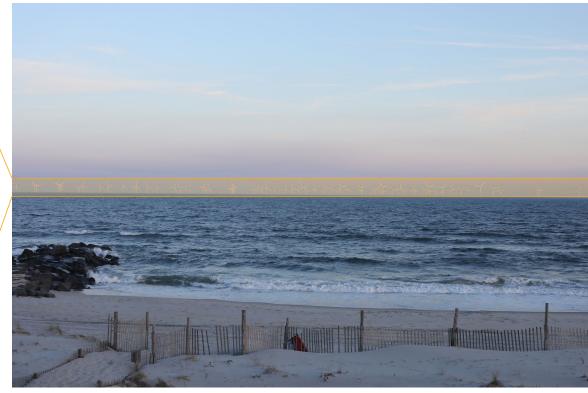


Horizon Occupation

Percentage of Project Occupation on Ocean Horizon: 50.6% (Project Occupation / Available Ocean Horizon) Available Ocean Horizon: 168.6°







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

Attachment E: Photosimulations Page 154 of 289



Color Contrast Rating:

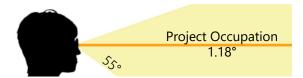


Lighting Condition:	Front lit
Season:	Winter
Sky Condition:	Fair
Atmospheric Condition:	>10 Miles

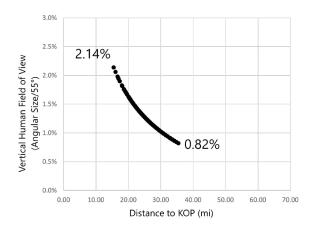
SIMILAR VIEWING PARAMETERS:

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

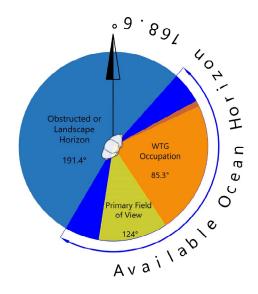
KOP Information

Primary Field of View/Simulation Direction:		ction: I	ESE/ESE
Distance to Closest WTG:		9	.6 miles
Camera Height:			26.9 ft
User Groups:	Residents,	Tourists, Fishing	Comm.
Horizon Occupation (% H	HFOV):	Large (85.2°,	, 68.7%)
Vertical Occupation:		Large (1.18°,	2.14%)
Character Area Type:		Se	eascape
Character Area:		Residential Bea	achfront

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.

Magr Sensitivity Rating Rationale Facto Factor Size ar View is representative of residential viewers from the beachfront homes. It is somewhat Scale High representative of views from a nearby historic Susceptibility district and the ocean view is important to user experience Geogra Extent The residents of LBI requested specific views from three locations in Beach Haven, including High Value Centre Street, suggesting that these represent locations with high value to the residents. Duratio Reversi Magnit The high susceptibility and value results in Sensitivity High Rating Rating high sensitivity. LOW MEDIUM SENSITIVITY NEGLIGIBLE SMALL MEDIUM MAGNITUDE

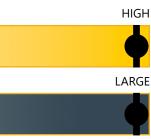
Project Contrast:

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.

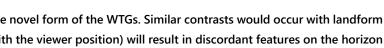
Sensitivity

Magnitude

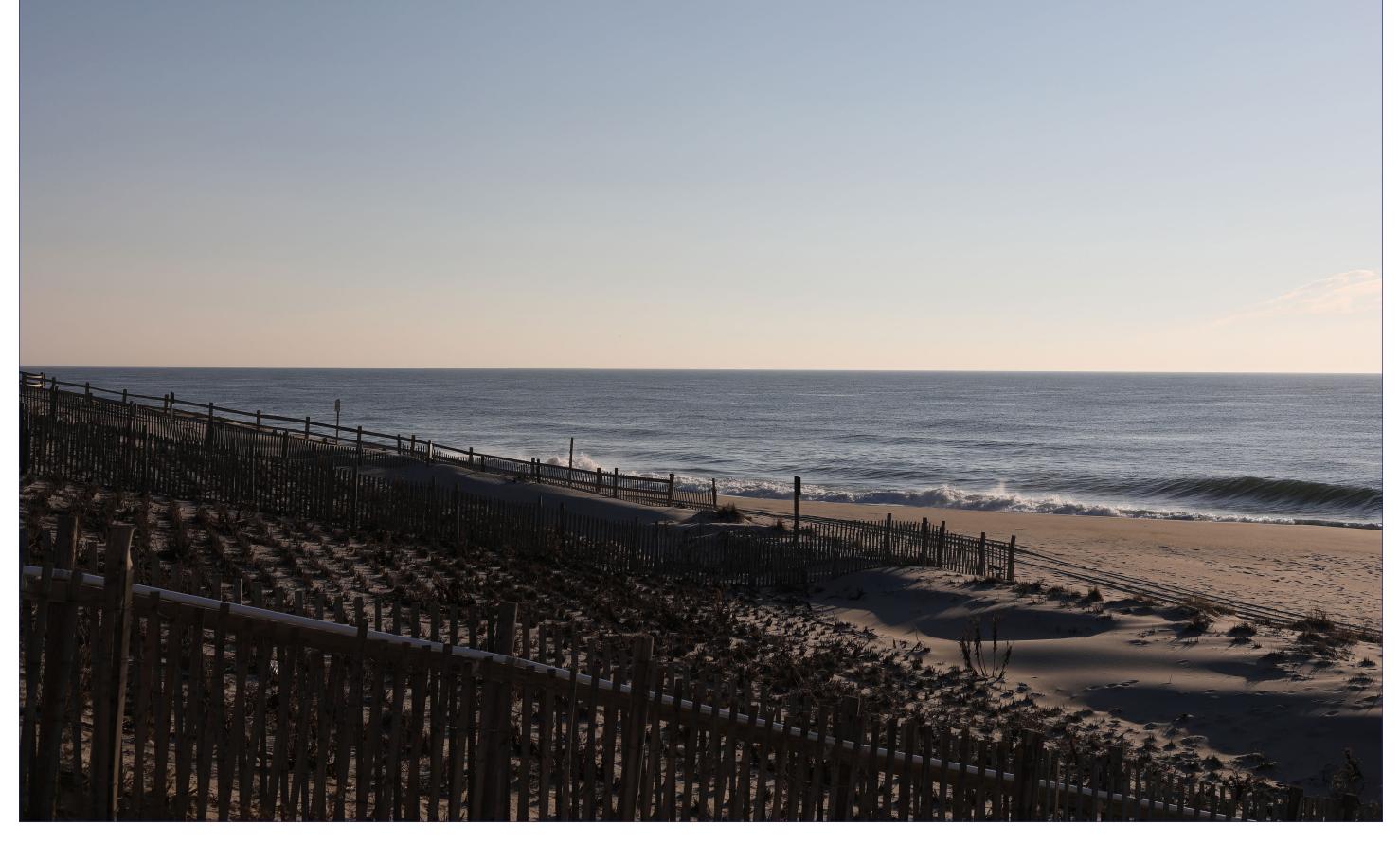
nitude or	Rating	Rationale
nd	Large	The vertical scale is large, with the nearest WTGs occupying approximately 1.18 degrees or 2.14% of the vertical field of view, resulting in a visual prominence factor of 6.
raphic t	Large	The Project would occupy approximately 68.7 percent or 85.2 degrees of the 124 degree human field of view.
ion/ sibility	Fair	Long term and fully reversible.
itude 9	Large	With a large geographic extent and large vertical scale, the overall magnitude rating is large.



Overall Impact Major

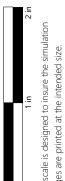






Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven Attachment E: Photosimulations: Page 156 of 289

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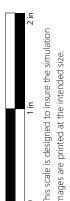


Photosimulation (Morning) (OCS-A 0549)



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 157 of 289

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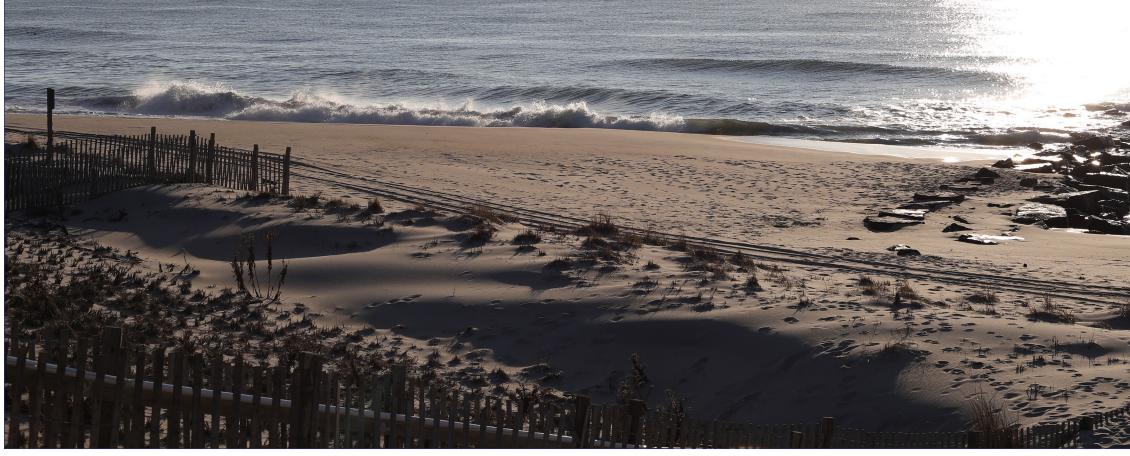


Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven Attachment E: Photosimulations: Page 158 of 289

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Photosimulation (Morning) (OCS-A 0549)





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

(ey Observation Point: BHB03 - Holyoke Avenue, Beach Haven
Attachment E: Photosimulations: Page 159 of 289

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

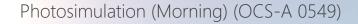




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven Attachment E: Photosimulations: Page 160 of 289

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

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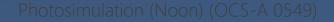




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven Attachment E: Photosimulations: Page 162 of 289

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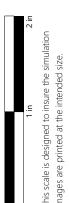


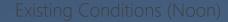




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven Attachment E: Photosimulations: Page 163 of 289

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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 164 of 289

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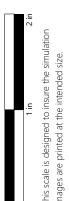






Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven Attachment E: Photosimulations: Page 165 of 289

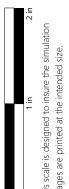
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Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven Attachment E: Photosimulations: Page 166 of 289

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Photosimulation (Noon) (OCS-A 0549)

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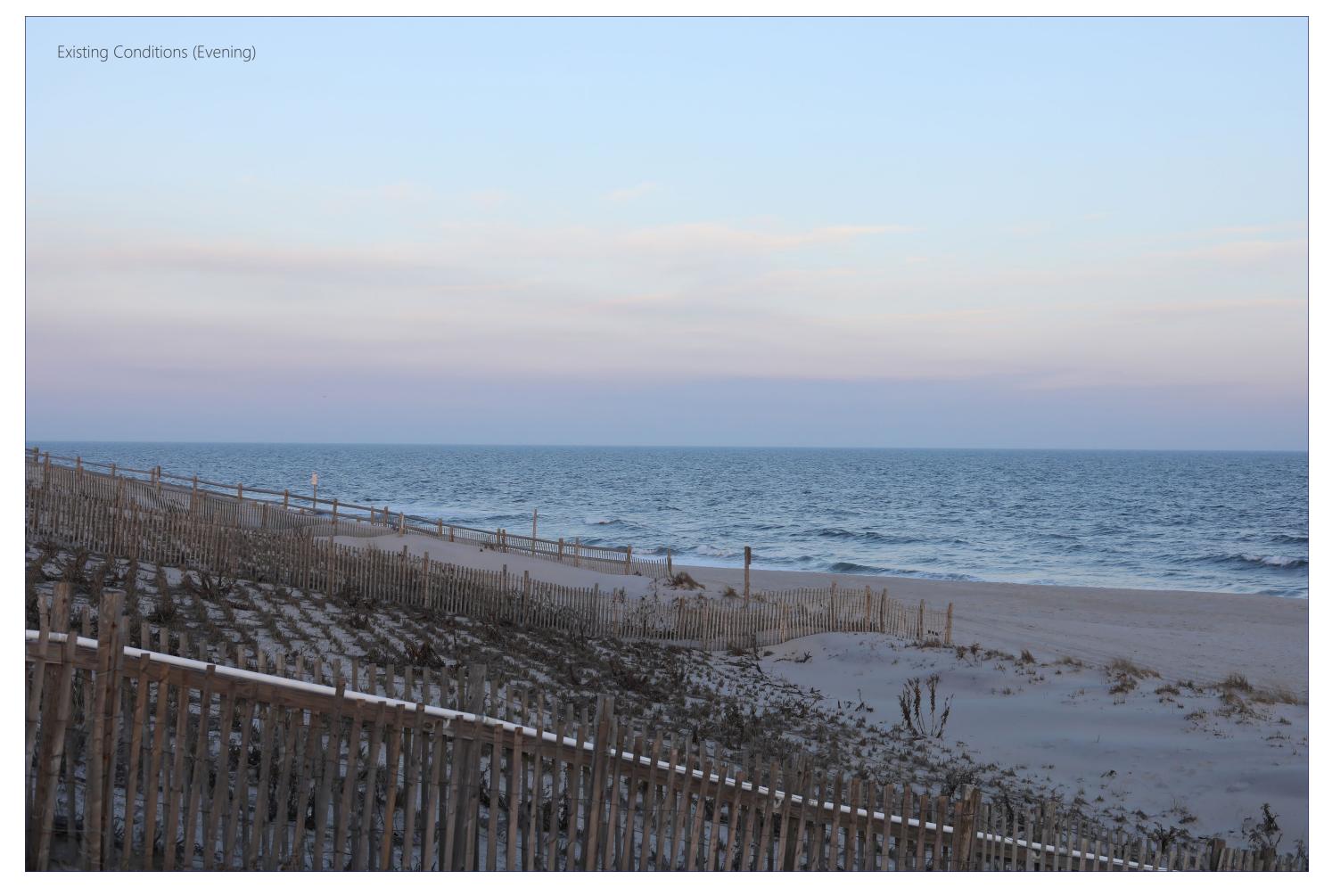




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven Attachment E: Photosimulations: Page 167 of 289

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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

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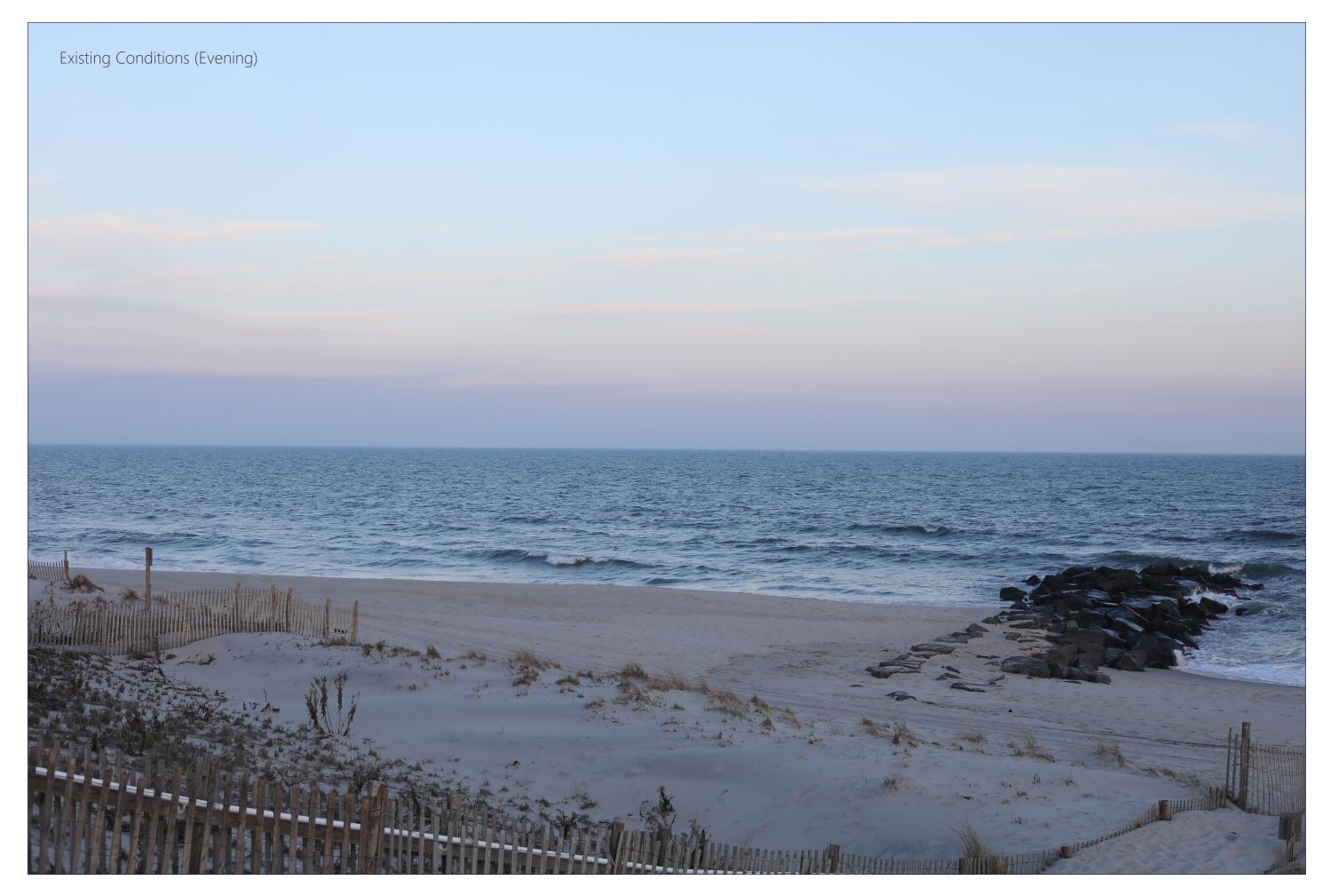




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven Attachment E: Photosimulations: Page 169 of 289

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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 170 of 289

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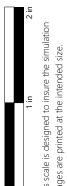


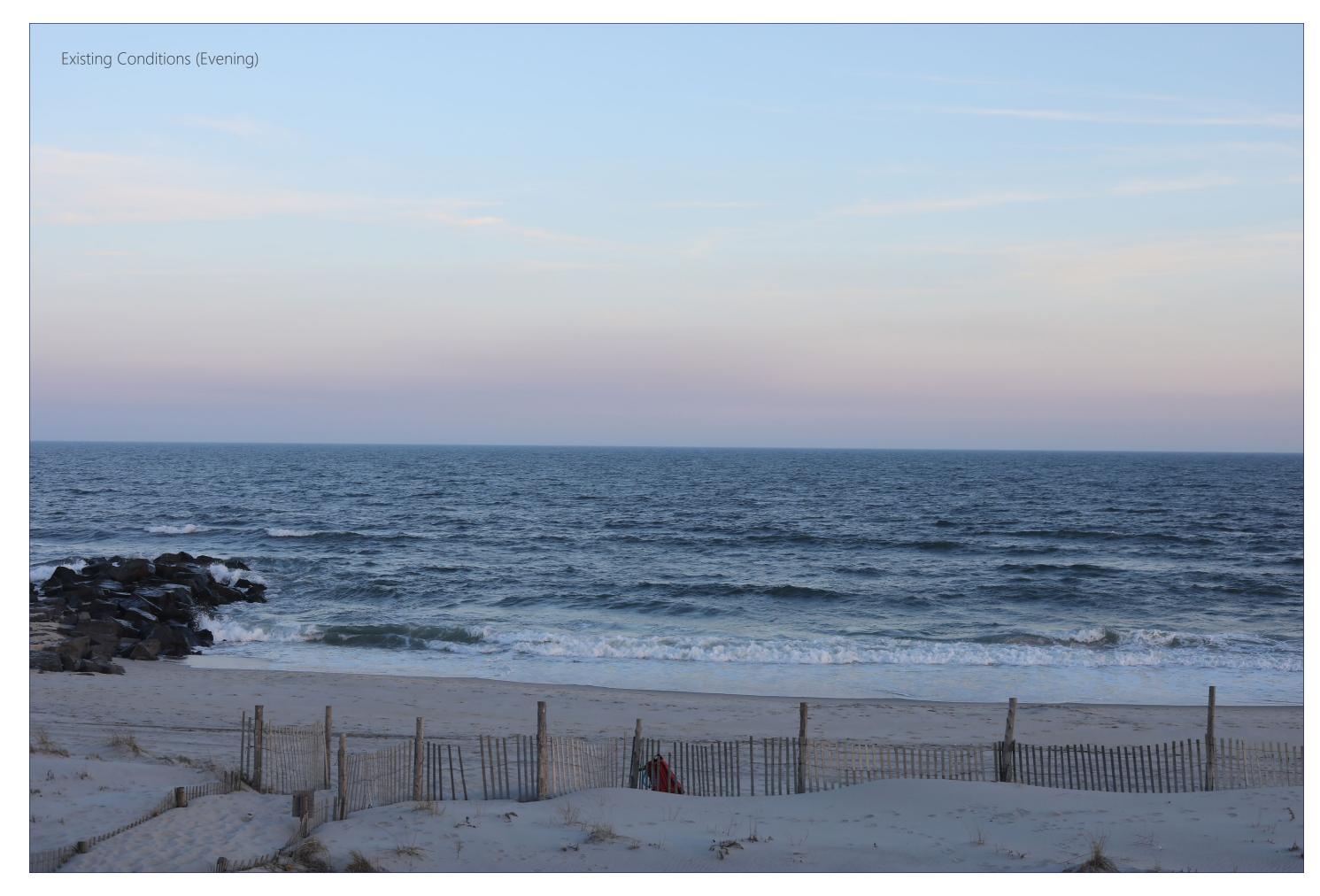


Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point. BHB03 - Holyoke Avenue, Beach Haven Attachment E: Photosimulations: Page 171 of 289

Holyoke Avenue, Beach Haven
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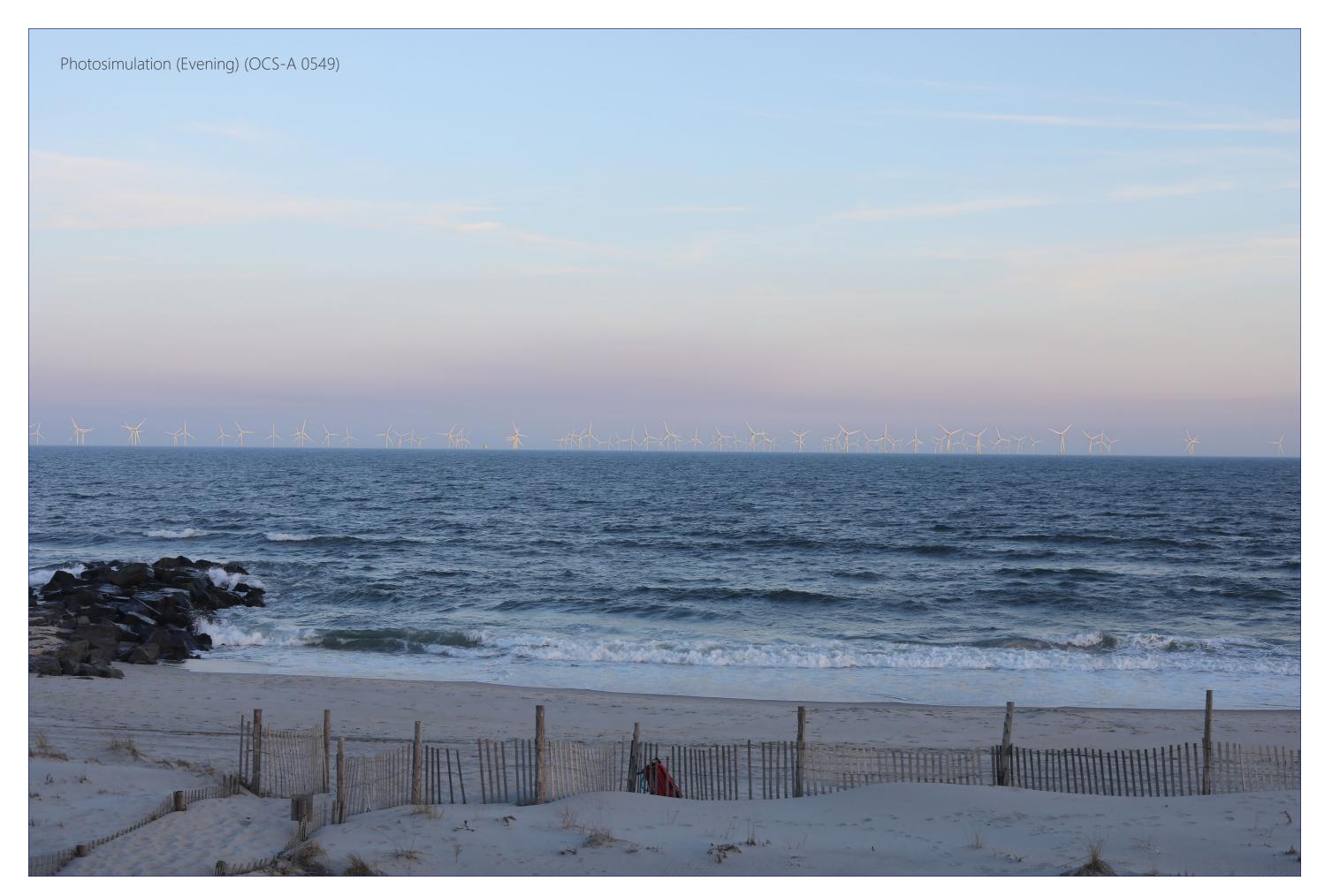




Atlantic Shores Offshore Wind: North (OCS-A 0549) Outer Continental Shelf – OCS-A 0549 Key Observation Point: BHB03 - Holyoke Avenue, Beach Haven Attachment E: Photosimulations: Page 172 of 289

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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 173 of 289

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