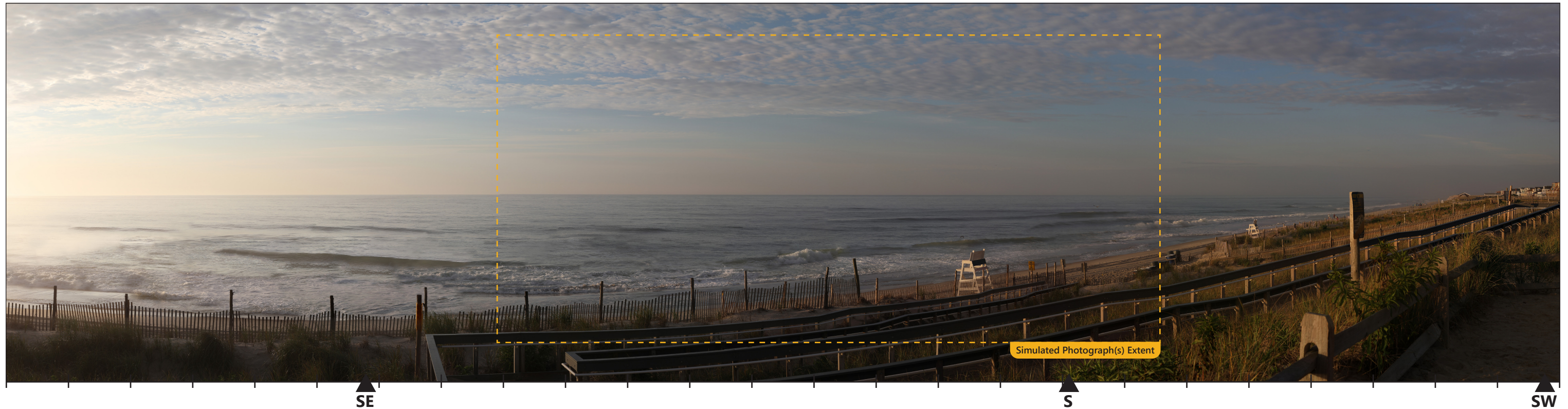


BHB01 Beach Haven Historic District

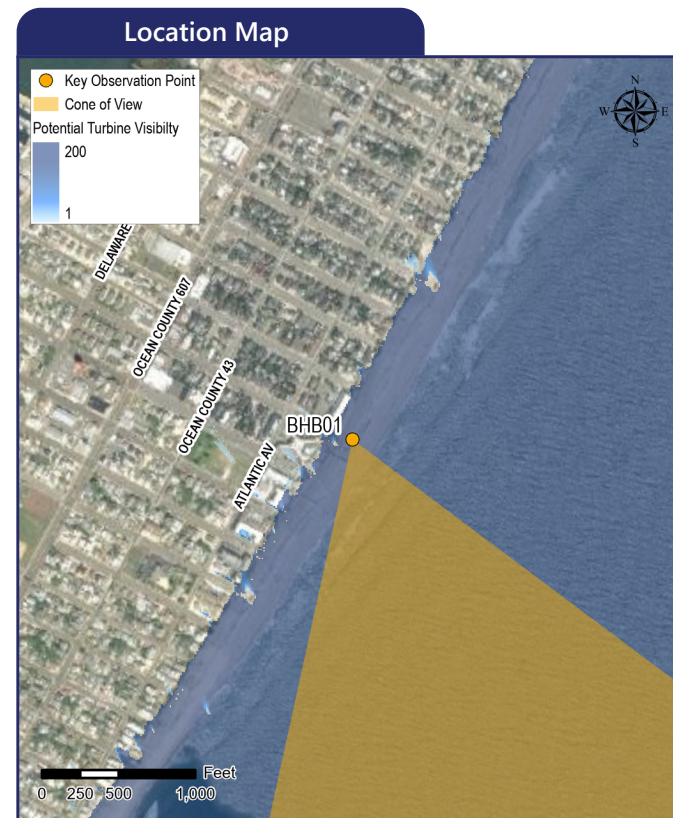
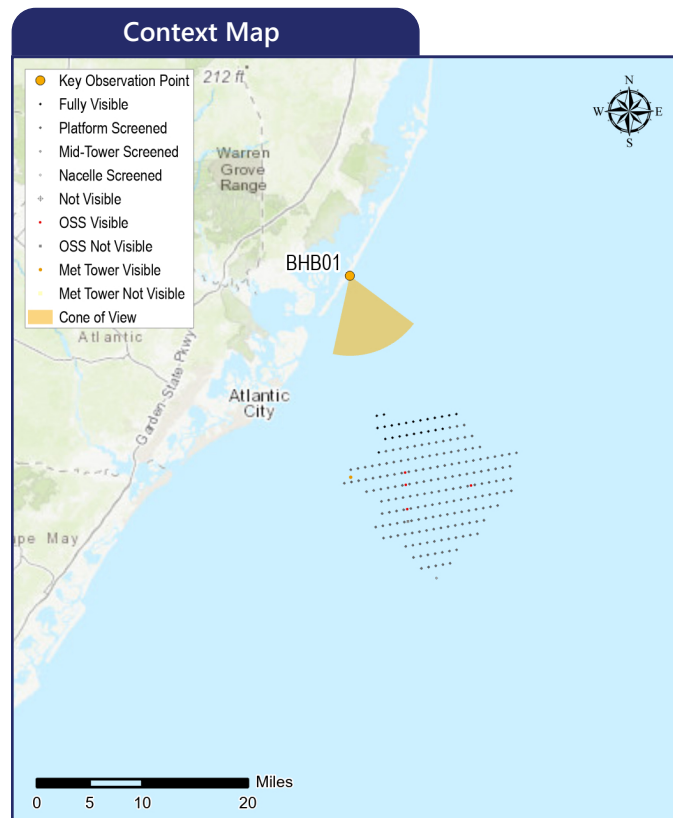
Beach Haven Borough, Ocean County, New Jersey



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

Notes

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



Simulation Information

Coordinates: 39.56188°N, 74.23545°W
 Character Area: Residential Beachfront, Seascape (SCA)
 User Group: Residents/Tourists, Fishermen
 Direction of View: South-southeast
 Distance to Nearest Visible Turbine: 13.5 miles
 Visually Sensitive Resource: Beach Haven Borough Public Beach, Beach Haven Historic District

Environmental Information

Date Taken: 08/19/2020
 Time: 6:53 AM
 Temperature: 73°F
 Humidity: 87%
 Visibility: 10 miles
 Wind Direction: Calm
 Wind Speed: 0 mph
 Conditions Observed: Cloudy

Photograph Information

Camera: Canon EOS 5D Mark IV
 Resolution: 30.4 Megapixels
 Focal Length: 50mm
 Camera Height: 17.72 feet AMSL

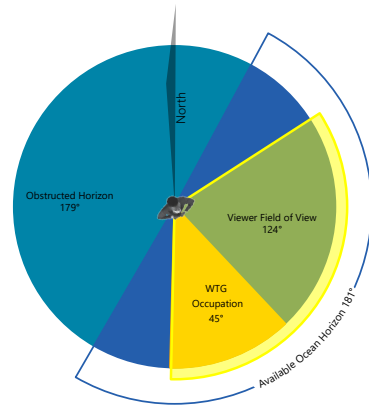
Meteorological Visibility Model (2019)

Visibility Conditions Represented in Photosimulation: 30 Miles
 Frequency of Visibility Condition in August, 2020: 6.3%
 Alternative Condition/Frequency #1: 18 miles/(19.4%)
 Alternative Condition/Frequency #2: 20 miles/(15.2%)

Simulated Photograph(s)

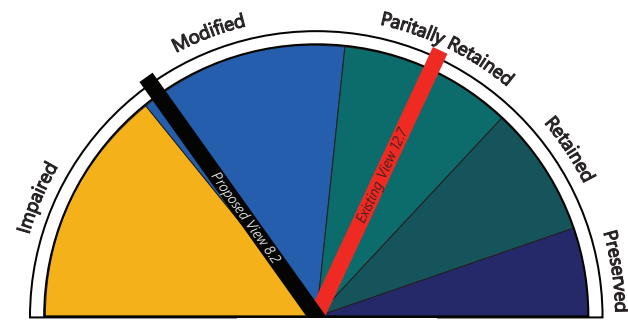


Field of View



Visual Impact Rating

Impact Rating Summary



-4.5. Significant

Visual Threshold Level (VTL)

5 An object/phenomenon that is not large but contrasts with the surrounding landscape elements so strongly that it is a major focus of visual attention, drawing viewer attention immediately and tending to hold that attention. In addition to strong contrasts in form, line, color, and texture, bright light sources such as lighting and reflections and moving objects associated with the study subject may contribute substantially to drawing viewer attention. The visual prominence of the study subject interferes noticeably with views of nearby landscape/seascape elements (Sullivan et al., 2013).

Principles of Composition and Factors Affecting Visual Impact Summary

| Design Elements | Description |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Focal Point | The tall beach lookout chair anchors this view and provides a focal point due to its contrasting color. Secondary focal points include the beach fencing, pink-tinged horizon line and cotton-candy clouds. |
| Order | The horizontal landscape is punctuated by the repeating vertical fence elements and railings, which are a visual barrier, and the broken clouds in the sky that compress the view to the center of the image. |
| Visual Clutter | There is "clutter" in this view (boardwalk railing, dilapidated shoreline fence, signage, and lifeguard chair) but it is not significant enough to disrupt any kind of natural order. |
| Movement | Waves, boats on the water, people on the beach, and wildlife. |
| Duration & Frequency of View | Moderate to long duration and high frequency view experienced by residents and beach-goers. |
| Atmospheric Conditions | The early morning view has a dark sky, a clear or bright sky would increase WTG definition.; Drier conditions might increase visibility |
| Lighting Direction | Side-Lit |
| Scenic or Recreational Value | NRHP Historic District and this location is a popular beach destination. The ocean is the major contribution to the scenic value of this resource. |

Compatibility and Contrast Rating Average

| Beach Haven Historic District | | | |
|-------------------------------|---------------|-------|-------------------|
| Resource | Compatibility | Scale | Spatial Dominance |
| Water Resources | 2.8 | 2.8 | 2.5 |
| Landform | 1.5 | 1.5 | 2.0 |
| Vegetation | 1.3 | 1.3 | 2.0 |
| Land Use | 2.5 | 2.3 | 2.3 |
| User Activity | 2.5 | 2.3 | 2.3 |

| | | |
|-------------------------|--------------|-----------------|
| 1 – Compatible | 1 – Minimal | 1 – Subordinate |
| 2 – Somewhat Compatible | 2 – Moderate | 2 – Co-Dominant |
| 3 – Not Compatible | 3 – Severe | 3 – Dominant |

Existing Conditions

Scenic Quality: Partially Retained
Rating Panel Score Average: 12.7
Rating Panel Score Range: 11.7 - 13.7

This view is from the edge of the Beach Haven Historic District in the Borough of Beach Haven, New Jersey. The District 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's boundary was increased on November 19, 2014 to cover 30 square blocks, with its boundary running from 5th Street to Chatsworth Avenue and from Bay Avenue to Atlantic Avenue. It now 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 existing view to the south-southeast from this location looks across a fenced dune restoration area directly out to the ocean. The early morning light is illuminating the fence posts and lifeguard chairs, as well as the surface of the sand and foam along the beach. Continuing away from the gentle surf, the ocean's surface is a silver blue to deep green color, reflecting the rising sun. Swells near the shoreline give way to a relatively smooth water surface that extends to the horizon line. In the distance, the blue water meets low, illuminated clouds on the horizon, which then transitions to a blue sky streaked with clouds overhead. Adjacent residential development is not visible (behind the viewer), but the abundant fencing, lifeguard chairs, and signage demonstrate a strong level of human use/management along the beach. The view is peaceful and the lighting is attractive, and the overall scenic quality of this view is average to distinct.

Rating panel members indicated that the view of the early morning light across the open water with the warm tones of the sand and the deep green of the ocean is visually appealing. The dapple clouded, light blue sky is accentuated by the pink tinge along the horizon. In contrast to the natural beauty of the seascape, the foreground view contains a high level of man-made visual clutter, however, the horizontal lines of the elements, that include the beach fencing, ramp rails, and signposts, are installed parallel to the shoreline and complement the rolling wave action, thereby not entirely detracting from the view. It was also noted by a rating panel member that while the view appears to be undeveloped, the viewer merely needs to turn 180-degrees to observe the heavily built residential Historic District behind them. Rating panel scores for the existing conditions photographs ranged from 11.7 to 13.7 (average score = 12.7). The score indicates that this view is partially retained.

Proposed Conditions

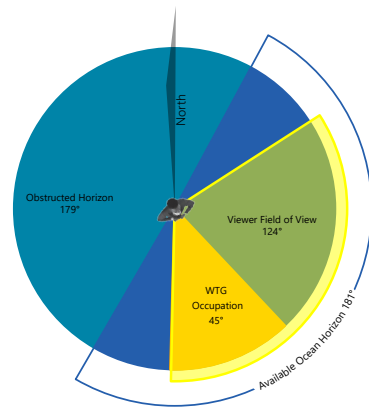
Scenic Quality: Modified
Rating Panel Score Average: 8.2
Rating Panel Score Range: 4.7 - 10.7
Impact Magnitude: 4.5 (Significant)

With the proposed Project in place, the view is dominated by a large array of WTGs that span across an extensive portion of the ocean view to the south-southwest from this location. The Project is in varying states of visibility due to the side-lit conditions of the morning sky. Of the 185-degrees of relatively unobstructed ocean horizon, the Project occupies approximately 45-degrees or approximately 24 percent of the view. Project visibility is enhanced by the relative proximity of the WTGs and the rising sun side-lighting condition, which makes the WTGs appear light colored and a ghostly blue-gray color against the pink horizon. Rating panel members had a somewhat variable range of reactions to the impact resulting from the Project WTGs, with the VIA scores ranging from 4.7 to 10.7 (average score = 8.2). These scores indicate an average reduction of 4.5 points in comparison to the existing view, which suggests the view has become modified and significant visual impacts would result from the Project during clear conditions. Individual rating panel members indicated score reductions that ranged from 1.0 to 8.3. One panel member suggested that the WTGs are a dominant built feature in a once nearly pristine seascape. Despite the light color and slender silhouette of the WTGs against the sky, the stacking of the WTGs (in the left of the view) plays into a perceived arrangement of disorganized and random elements as the viewer moves to the right, thereby creating an increased sense of visual clutter. The movement of the overlapping rotor blades will also attract viewer attention and make the WTGs the focus of this ocean view. However, the clear conditions presented in this photosimulation are not typical or frequent viewing conditions. Based on the 2019 meteorological data, the atmospheric conditions represented in this photosimulation (visibility extending to 32 miles) only occurs during approximately 7% of the daylight hours in August. Two additional photosimulations were created to illustrate atmospheric conditions that occur during 15% and 20% of the daylight hours in August to show more typical visibility conditions. During 15% of daylight hours visibility extends to a distance of 20 miles and during 20% of daylight hours visibility extends to 18 miles. As illustrated in the 15% scenario, only the first few rows of WTGs are faintly visible on the horizon and their prominence is significantly reduced due to a reduction in color contrast and less visible stacking or layering of multiple rows of WTGs. During the 20% scenario, even the nearest WTGs become difficult to see though the atmospheric haze. It is important to note that during these atmospheric condition scenarios, weather conditions on the shore are still perceived as clear and viewers would likely characterize the day as "very clear".

Panel members assigned the Project visibility an average VTL of 5 from this KOP. The WTGs were considered not compatible, resulted in severe scale contrast, and are the dominant feature when considered in the context of the Ocean (water resources). The rating panel also indicated significant scale, compatibility, and spatial dominance contrast with land use and user activity. These scores are consistent with a VTL of 5.

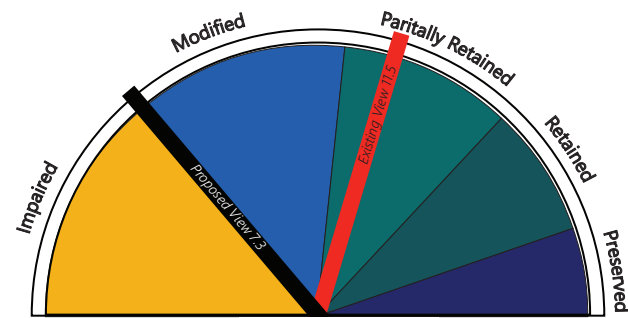
BHB01 Beach Haven Historic District (Night)

Field of View



Visual Impact Rating

Impact Rating Summary



-4.3. Significant

Visual Threshold Level (VTL)

5 An object/phenomenon that is not large but contrasts with the surrounding landscape elements so strongly that it is a major focus of visual attention, drawing viewer attention immediately and tending to hold that attention. In addition to strong contrasts in form, line, color, and texture, bright light sources such as lighting and reflections and moving objects associated with the study subject may contribute substantially to drawing viewer attention. The visual prominence of the study subject interferes noticeably with views of nearby landscape/seascape elements (Sullivan et al., 2013).

Principles of Composition and Factors Affecting Visual Impact Summary

| Design Elements | Description |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Focal Point | The lifeguard chair becomes a focal point only because it is white in an otherwise dark landscape. |
| Order | The layering of shoreline, open water and horizon create a natural order. |
| Visual Clutter | There is hardly any ambient light to illuminate the context. The fence line and chair in the foreground attract one's attention. |
| Movement | Waves and buoy lights likely to be the only features in motion. |
| Duration & Frequency of View | Short Duration and Occasional |
| Atmospheric Conditions | Clear |
| Lighting Direction | Nighttime |
| Scenic or Recreational Value | Beach Haven Historic District; This area will be used by nearby homeowners and visitors for recreation and views of the nighttime sky. |

Compatibility and Contrast Rating Average

| Beach Haven Historic District - Night | | | |
|---------------------------------------|---------------|-------|-------------------|
| Resource | Compatibility | Scale | Spatial Dominance |
| Water Resources | 2.3 | 2.3 | 2.3 |
| Landform | 1.5 | 1.8 | 2.3 |
| Vegetation | 1.0 | 1.0 | 1.5 |
| Land Use | 2.6 | 2.6 | 2.8 |
| User Activity | 2.5 | 2.8 | 2.8 |

1 – Compatible
 2 – Somewhat Compatible
 3 – Not Compatible
 1 – Minimal
 2 – Moderate
 3 – Severe
 1 – Subordinate
 2 – Co-Dominant
 3 – Dominant

Existing Conditions

Scenic Quality: Partially Retained
 Rating Panel Score Average: 11.5
 Rating Panel Score Range: 9.8 - 12.3

This nighttime view is from the edge of the Beach Haven Historic District in the Borough of Beach Haven, New Jersey. The existing view from this KOP is extremely dark, presenting few features that allow the eye to focus, except for a fence in the foreground and low surf at the shoreline. Although the open ocean is directly in front of the viewer, the horizon is barely visible in the distance below a subtle veil of low clouds. In this setting, user experience at the KOP is more likely to be defined by the extreme darkness, and the sound and smell of the adjacent ocean, rather than any visual components of the landscape.

Rating panel scores for the existing conditions photograph ranged from 9.8 to 12.3 (average score = 11.5). The rating panel score for this KOP indicates that the nighttime view from this KOP is partially retained.

Proposed Conditions

Scenic Quality: Impaired
 Rating Panel Score Average: 7.3
 Rating Panel Score Range: 4.7 - 9.7
 Impact Magnitude: 4.3 (Significant)

With the proposed Project in place, the WTG's flashing red lights extend across a substantial portion of the horizon. The visual effect of the lights is accentuated by their number, expanse, and the stacking of rows of WTGs, which increases the intensity of the lights and creates visual hot spots in the view. Due to the lack of other visible features, the WTG lights are the only real focus of the view. All other landscape elements blend together in the dark in comparison to the lights. Due to viewer perspective of the WTG array's grid layout the WTGs appear as a splay of red lights in the middle of the view that appears somewhat odd. Variation in perceived WTG height (due to varying distance from the viewer) in combination with the flash pattern and rotor movement will make the lights the dominant feature of the view.

Rating panel members had variable reactions to the nighttime impact resulting from the Project WTGs, with the VIA scores ranging from 4.7 to 9.7 (average score = 7.3). These scores indicate an average reduction of 4.3 points in comparison to the existing view suggesting significant visual impacts may result from the AOWLs at nighttime when active. Individual rating panel members indicated reductions that ranged from 0.3 to 7.3. With the Project in place, the AWOLs result in this view becoming impaired.

The rating panel scores indicated an average VTL score of 5. Considering the compatibility, scale contrast, and spatial dominance factors that influenced the VTL at this KOP, impacts to user activity and land use were the greatest. The rating panel felt the AWOLs are not compatible, present severe scale contrast, and dominate the nighttime view. The AWOLs present moderate scale contrast with the ocean (water resources), as well as co-dominance and

BHB01 Beach Haven Historic District

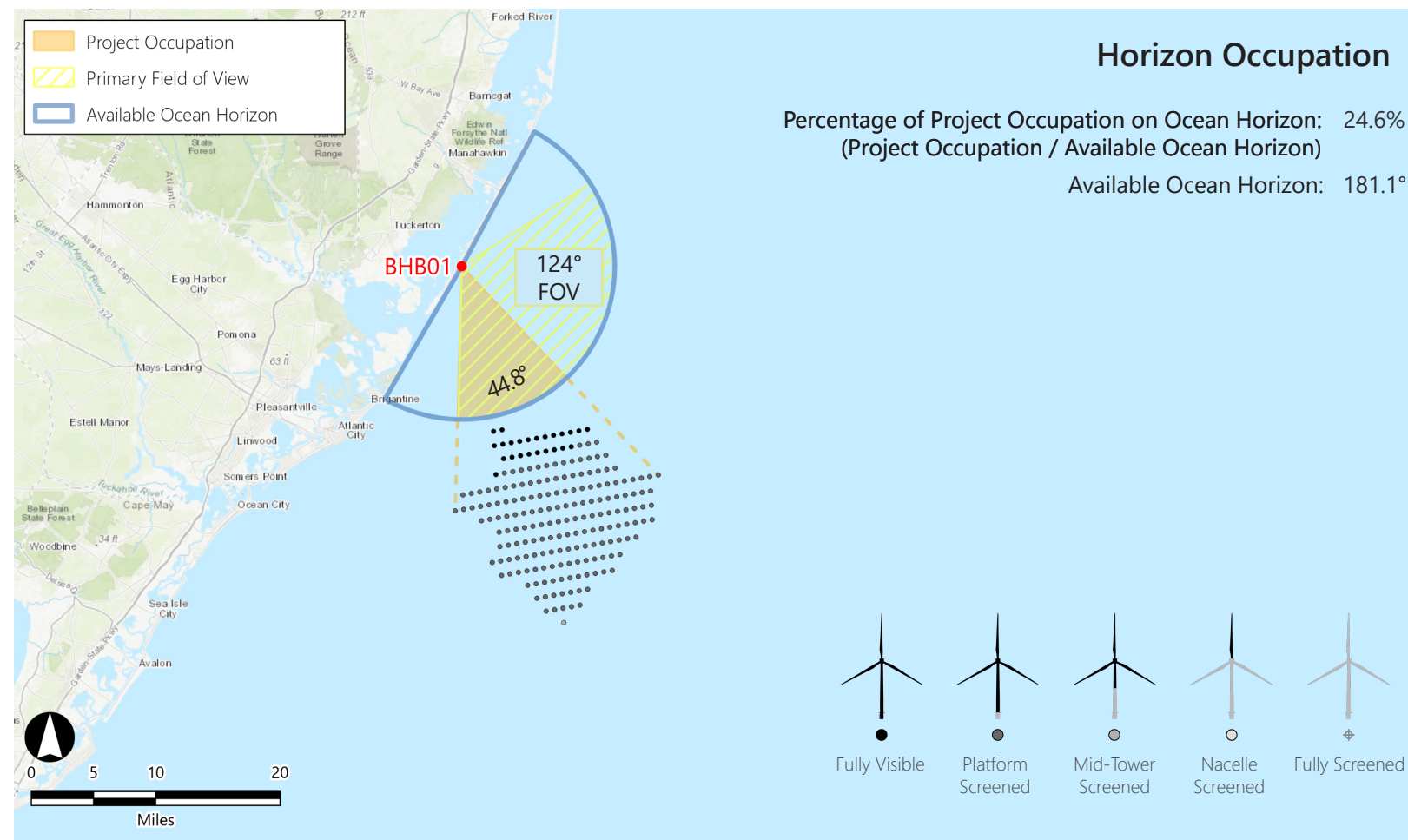
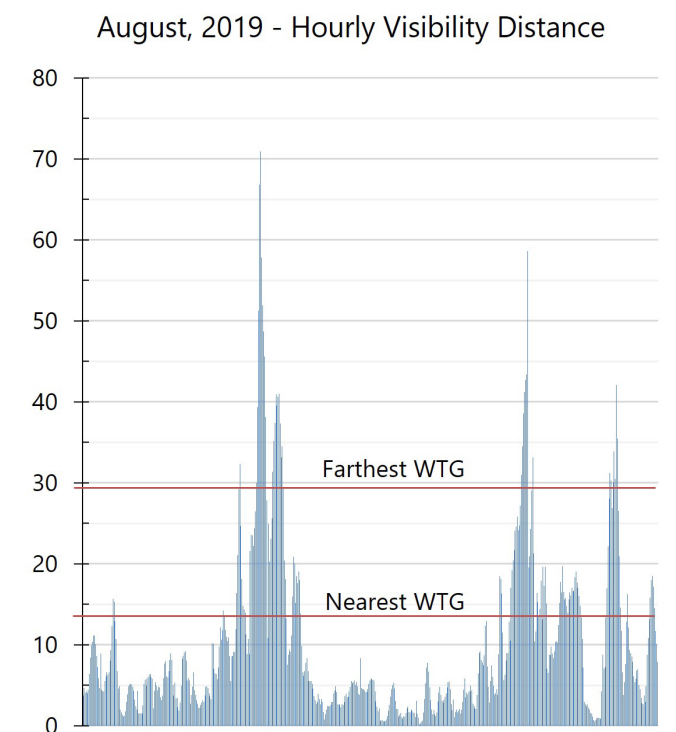
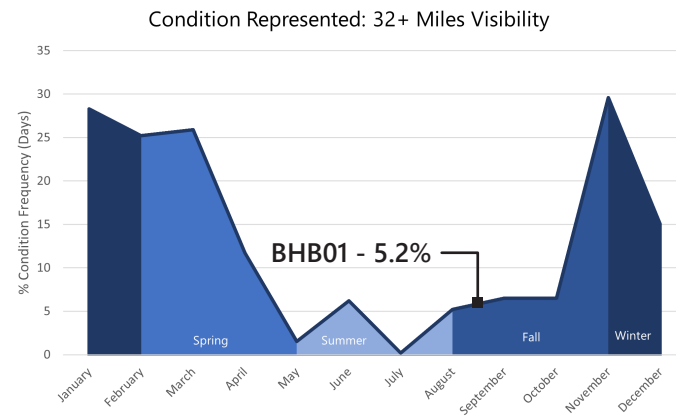
Beach Haven Borough, Ocean County, New Jersey

KOP Information

Primary Field of View: East
 Distance to Closest WTG: 13.5 miles
 Camera Height: 17.72 ft
 User Groups: Residents, Tourists, Fishermen

Atmospheric Perspective

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



WTG Color Contrast

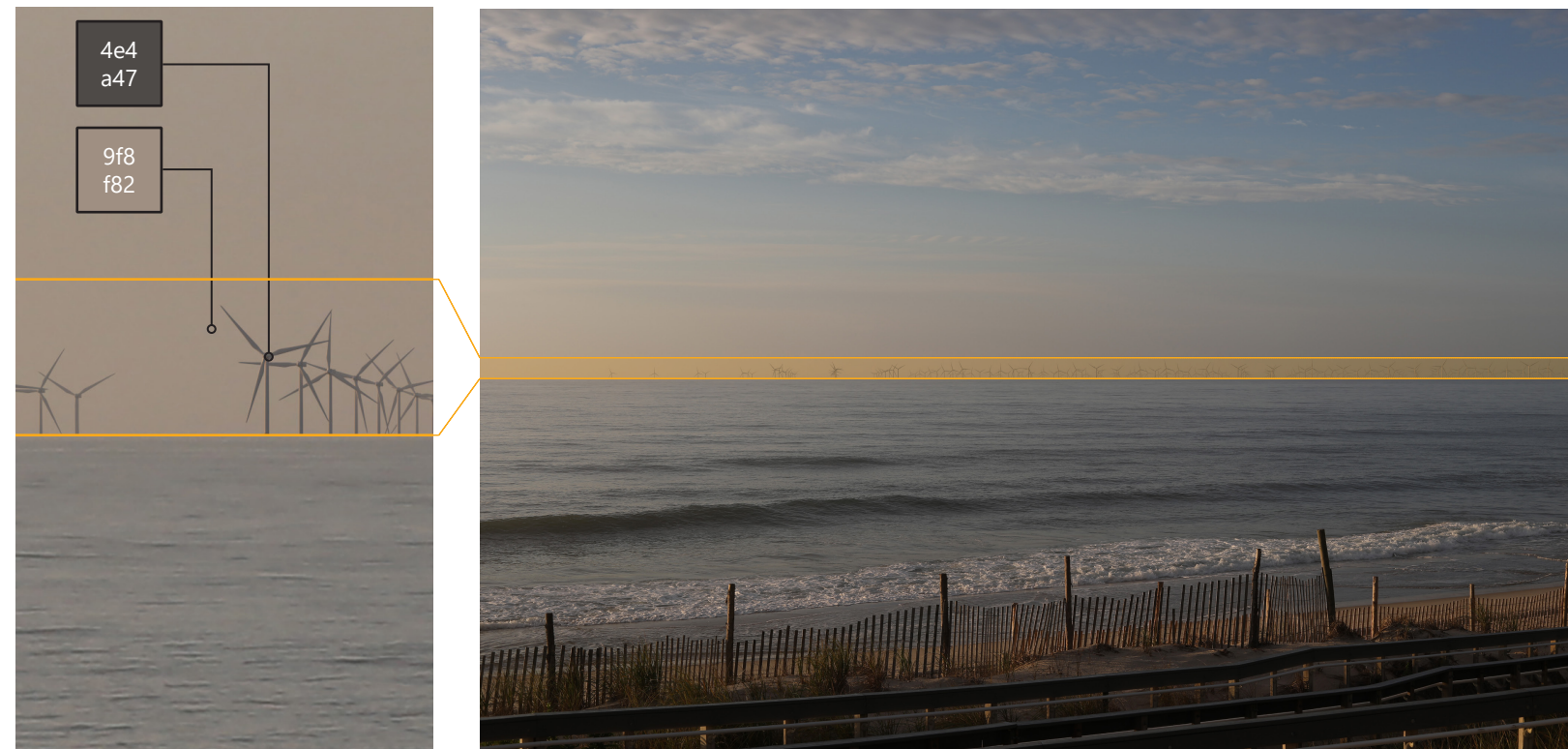
Color Contrast Rating: 2.8

Turbine
 Background

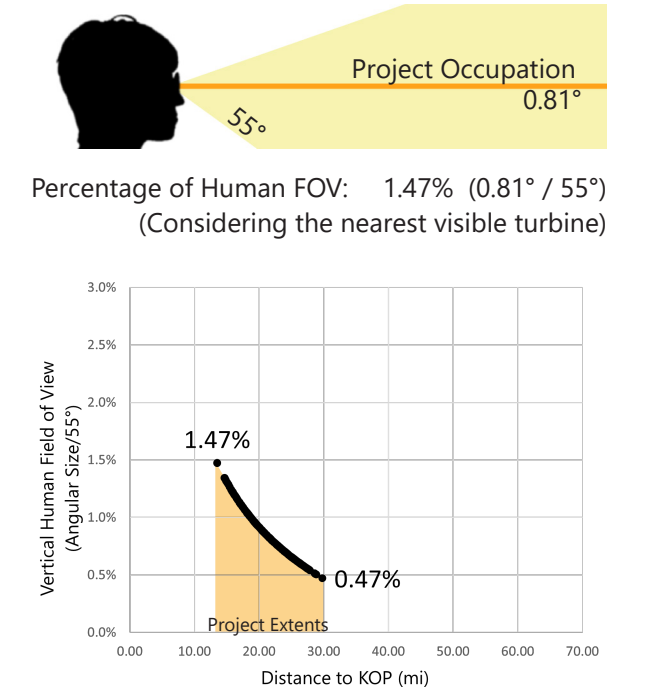
Lighting Condition: Back lit
 Season: Summer
 Sky Condition: Cloudy
 Atmospheric Condition: > 10 Miles

SIMILAR VIEWING PARAMETERS:

KOP MC02 illustrates the project from 14.43 miles in the front lit condition. This provides an indication of how the turbines may appear from this KOP during evening conditions.



Vertical Occupation



Existing Conditions



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



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

Photosimulation



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



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

Photosimulation - 18-mile Visibility



Atlantic Shores Offshore Wind Project
Outer Continental Shelf - New Jersey

Key Observation Point: BHB01 - Beach Haven Historic District
Attachment E: Photosimulations; Page 47 of 159

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



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

Photosimulation - 20-mile Visibility



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



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

Existing Conditions (Nighttime Rendering)



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



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

Photo Rendering (Nighttime)



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



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

Existing Conditions



Atlantic Shores Offshore Wind Project

Outer Continental Shelf - New Jersey

Key Observation Point: BHB01 - Beach Haven Historic District

Attachment E: Photosimulations; Page 51 of 159

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



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

Photosimulation



Atlantic Shores Offshore Wind Project

Outer Continental Shelf - New Jersey

Key Observation Point: BHB01 - Beach Haven Historic District
Attachment E: Photosimulations: Page 52 of 159

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



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

Photosimulation - 18-mile Visibility



Atlantic Shores Offshore Wind Project

Outer Continental Shelf - New Jersey

Key Observation Point: BHB01 - Beach Haven Historic District

Attachment E: Photosimulations: Page 53 of 159

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



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

Photosimulation - 20-mile Visibility



Atlantic Shores Offshore Wind Project
Outer Continental Shelf - New Jersey

Key Observation Point: BHB01 - Beach Haven Historic District
Attachment E: Photosimulations: Page 54 of 159

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



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

Existing Conditions (Nighttime Rendering)



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



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

Photo Rendering (Nighttime)



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



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