Ocean Wind
An Ørsted & PSEG project

Appendix F-4 - Historic Properties Treatment Plans

Ocean Wind
An Ørsted & PSEG project

Historic Properties Treatment Plan for Historic Properties Subject to Adverse Effect

Applicant-Proposed Draft with BOEM Revisions – Subject to Review by Consulting Parties

Draft
Historic Properties Treatment Plan
for the
Ocean Wind 1 Offshore Wind Farm Project

Historic Properties Subject to Adverse Visual Effect
Cape May, Atlantic, and Ocean Counties, New Jersey

Submitted to:

Bureau of Ocean Energy Management
U.S. Department of the Interior

Prepared for:

Ocean Wind 1
https://oceanwind.com/

Prepared by:

HDR Engineering, Inc.
www.hdrinc.com

January 2023

ABSTRACT

Federal Undertaking:	Ocean Wind 1 Offshore Wind Farm Project, OCS-A 0498
Location:	Outer Continental Shelf, New Jersey
Federal and State Agencies:	Bureau of Ocean Energy Management Bureau of Safety and Environmental Enforcement Environmental Protection Agency National Marine Fisheries Service U.S. Army Corps of Engineers New Jersey Department of Environmental Protection/State Historic Preservation Office Advisory Council on Historic Preservation
ACHP Project No.:	016649
HPO Project No.:	18-1184-30
Potential Adverse Visual Effect Finding for:	Seventeen Properties in Cape May, Atlantic, and Ocean Counties
Date:	January 2023

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LIST OF ACRONYMS

ACHP	Advisory Council on Historic Preservation
ADLS	Aircraft Detection Lighting System
APE	Area of Potential Effects
BOEM	Bureau of Ocean Energy Management
BSEE	Bureau of Safety and Environmental Enforcement
CFR	Code of Federal Regulations
COP	Construction and Operations Plan
EPA	Environmental Protection Agency
FEIS	Final Environmental Impact Statement
FR	Federal Regulation
HDR	HDR, Inc.
HPTP	Historic Preservation Treatment Plan
HRVEA	Historic Resources Visual Effects Analysis
N/A	Not Applicable
NHL	National Historic Landmark
NHPA	National Historic Preservation Act of 1966
NJ DEP	New Jersey Department of Environmental Protection
NJ SHPO	New Jersey State Historic Preservation Office(r)
NMFS	National Marine Fisheries Service
NPS	National Park Service
NRHP	National Register of Historic Places
OCS	Outer Continental Shelf
OW1	Ocean Wind 1 Offshore Wind Farm Project
RFP	Request for Proposal
ROD	Record of Decision
SOI	Secretary of the Interior
TCP	Traditional Cultural Property
USCG	United States Coast Guard
WFA	Wind Farm Area
WTG	Wind Turbine Generator

INTRODUCTION

This Historic Properties Treatment Plan (HPTP) was prepared to support fulfillment of Stipulation III.B of the *Memorandum of Agreement (MOA) Among the Bureau of Ocean and Energy Management, The New Jersey State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Ocean Wind 1 Offshore Wind Farm Project*. This HPTP provides background data, historic property information, and detailed steps that will be implemented to carry out the mitigation actions to resolve adverse visual effects to 10 historic properties identified by the Bureau of Ocean Energy Management (BOEM) through Section 106 consultation for the Ocean Wind 1 Offshore Wind Farm (OW1), as identified in the *Ocean Wind Visual Effects on Historic Properties* (VEHP), also commonly referred to as the HRVEA (Historic Resources Visual Effects Analysis), dated October 2022 (HDR and SEARCH 2022), as well as seven additional historic properties BOEM has determined will be adversely affected as a result of consultation. The mitigation measures and the process for implementation described herein were developed in consultation with the New Jersey Historic Preservation Officer (NJ HPO), federally recognized Tribes, the Advisory Council on Historic Preservation (ACHP), and other consulting parties. This HPTP outlines mitigation measures, implementation steps, and timeline for actions.

Introduction: Outlines the content of this HPTP.

Background Information: Briefly summarizes the OW1 (the Undertaking) while focusing on cultural resources regulatory contexts (federal, tribal, state, and local, including preservation restrictions), identifies the five historic properties discussed in this HPTP that will be adversely affected by the Undertaking, and summarizes the pertinent conditions that guided the development of this document.

Existing Conditions and Historic Significance: Provides a physical description of each historic property included in this HPTP. Set within its historic context, each resource is discussed in terms of the applicable National Register of Historic Places (NRHP) criteria, with a focus on the contribution of a seaside setting to its significance and integrity.

Mitigation Measures: Presents specific steps to carry out the mitigation measures proposed by OW1 in the Construction and Operations Plan (COP). Each mitigation measure includes a detailed description, intended outcome, and specifications that include maximum cost, methods, standards, requirements for documentation, and reporting instructions. Property-specific challenges, if any have been identified, are outlined as well.

Implementation: Establishes the process for executing mitigation measures at the historic properties, as identified in Section 4.0 of this HPTP. For each action, organizational responsibilities are outlined, a timeline is provided, and regulatory reviews are listed.

References: A list of works cited in this HPTP.

BACKGROUND INFORMATION

BOEM has determined that approval, approval with modification, or disapproval of the Ocean Wind 1 Offshore Wind Farm COP constitutes an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA; 54 U.S.C. § 306108) and its implementing regulations (36 CFR § 800), and that the activities proposed under the COP have the potential to affect historic properties. The Ocean Wind 1 Offshore Wind Farm undertaking (the Undertaking) is defined as a wind-powered electric generating facility composed of up to 98 wind turbine generators (WTGs) and associated foundations, up to three offshore substations, and inter-array cables connecting the WTGs and the offshore substations (Figure 1).

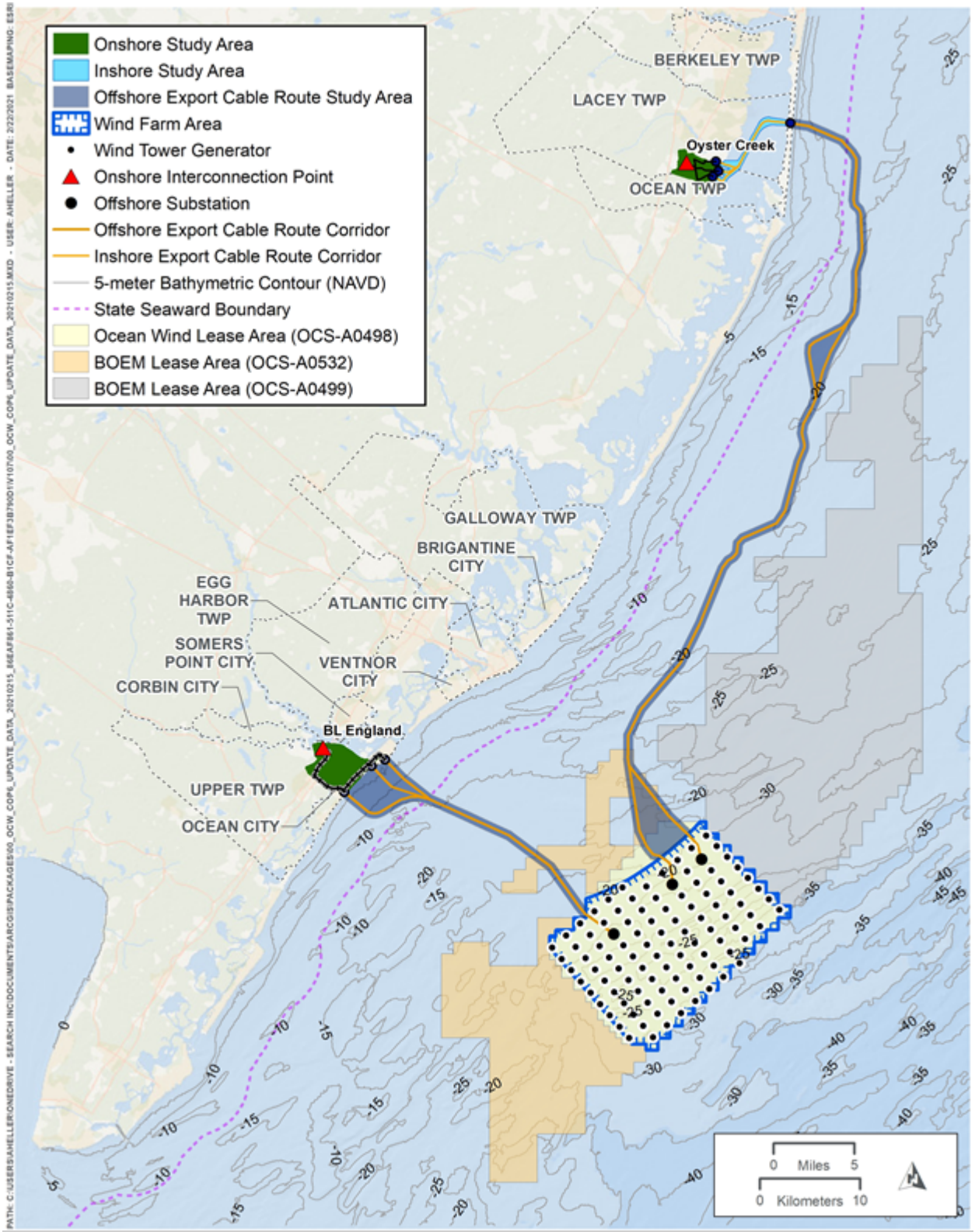
The WTGs, foundations, offshore substations, and inter-array cables will all be in federal waters on the Outer Continental Shelf (OCS), approximately 15 statute miles (mi) (13 nautical miles [nm]) southeast of Atlantic City, New Jersey. Cables will be buried below the seabed. Export cables from the offshore substations will extend along the seabed and connect to buried onshore export cables, which will connect to two interconnection points, at Oyster Creek and Bl England. Onshore cables will be buried within up to a 15-m-wide (50-ft-wide) construction corridor with a permanent easement up to 9.8-m-wide (30-ft-wide) for BL England. Two new onshore substations are proposed at Oyster Creek and BL England along with grid connections to the existing grid for each substation. Onshore substation locations would be sited on existing parcels containing decommissioned power facilities at BL England and Oyster Creek. The Oyster Creek and BL England onshore substation locations would require a permanent site up to 31.5 acres (ac) (12.7 hectares [ha]) and 13 ac (5.3 ha) respectively, for the substation equipment and buildings, energy storage, and stormwater management and associated landscaping. Underground or overhead transmission lines would connect the substations to the planned interconnection point (grid connections).

The maximum height of the offshore substations is 296 feet (ft) above mean lower low water (mllw) with a maximum length and width of 295 ft. The visible offshore components of the operational Undertaking will be located in Lease Area OCS-A 0532 (OCS-A 0498 prior to March 26, 2021) in water depths ranging from approximately 49 to 118 ft below mllw. See Figure 1, Project Location.

BOEM, as the lead federal agency for the NHPA Section 106 review, has defined the APE for the Undertaking as follows:

- The depth and breadth of the seabed potentially impacted by any bottom-disturbing activities;
- The depth and breadth of terrestrial areas potentially impacted by any ground disturbing activities;
- The viewshed from which renewable energy structures, whether located offshore or onshore, would be visible; and
- Any temporary or permanent construction or staging areas, both onshore and offshore.

Figure 1: Project Location



To support BOEM's efforts to identify historic properties within the APE, OW1 conducted a terrestrial archaeological resource assessment (TARA), marine archaeological resource assessment (MARA), and historic resources visual effects assessment (HRVEA) within the APE. The results of these investigations can be found in Volume II, Section 2.4 of the Ocean Wind 1 COP. Based on a review of these documents and consultations with NHPA Section 106 consulting parties, BOEM has determined that the undertaking will result in adverse effects to historic properties. Information about BOEM's assessment of adverse effects can be found in BOEM's Finding of Adverse Effect (FoAE) for the Undertaking.

In the FoAE, BOEM determined that the OW1 undertaking will have an adverse visual effect on 17 historic properties. BOEM has consulted with the Advisory Council on Historic Preservation (ACHP), New Jersey Historic Preservation Office (NJ HPO), federal recognized Native American Tribes, and other NHPA Section 106 consulting parties to seek ways to avoid, minimize, or mitigate adverse effects to historic properties. BOEM has decided to codify the resolution of adverse effects through an NHPA Section 106 MOA pursuant to 36 CFR § 800.8(c)(4)(i)(B). As defined in 36 CFR § 800.6 (c), a project-specific MOA records the terms and conditions agreed upon to resolve adverse effects of the undertaking (i.e., the approval, approval with modification, or disapproval of the OW1 COP). This HPTP provides background data, historic property information, and detailed steps that will be implemented to carry out the mitigation measures. The measures agreed upon by BOEM, the ACHP, and NJ HPO to resolve adverse effects to historic properties are recorded in the *Memorandum of Agreement Among the Bureau of Ocean and Energy Management, The New Jersey State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Ocean Wind 1 Offshore Wind Farm Project.*

Pursuant to the terms and conditions of the MOA, OW1 will implement applicant-proposed environmental protection measures to avoid potential visual impacts to historic properties (see MOA Stipulations I.B and II.A). This HPTP was developed by the applicant to fulfill Stipulation III.B of the MOA to resolve adverse visual effects to 17 historic properties. Mitigation measures implemented under this HPTP will be conducted in accordance with all agreed upon terms and conditions in the MOA and with applicable local, state, and federal regulations and permitting requirements. Responsibilities for specific compliance actions are described in further detail in Section 5.2, Organizational Responsibilities.

Municipal Regulations

Before implementation, any on-site mitigation measures will be coordinated with local cities, towns, and commissions to obtain approvals, as appropriate. These may include, but are not limited to building permits, zoning, land use, planning, historic commissions, and design review boards. See Table 1 for local government administrative departments that will be contacted as part of the mitigation measures for the adversely affected historic properties. Additional information regarding compliance with local requirements appears below in Section 5.0, Implementation.

Table 1. Municipal Departments Requiring On-Site Mitigation Coordination

Historic Property	Municipality	Departments
Ocean City Boardwalk	Ocean City	Construction Code Division, Planning Board, Historic Preservation Commission
Ocean City Music Pier	Ocean City	Construction Code Division, Planning Board, Historic Preservation Commission
Flanders Hotel	Ocean City	Construction Code Division, Planning Board, Historic Preservation Commission
U.S. Lifesaving Station #35	Stone Harbor	Planning Board, Zoning Board
North Wildwood Lifesaving Station	North Wildwood	Construction Office, Planning Board, Historic Preservation Commission
Hereford Inlet Lighthouse	North Wildwood	Construction Office, Planning Board, Historic Preservation Commission
Brigantine Hotel	Brigantine	Planning Board
Absecon Lighthouse	Atlantic City	Construction Division, Planning and Development, Historic Preservation Commission
Atlantic City Boardwalk	Atlantic City	Construction Division, Planning and Development, Historic Preservation Commission
Atlantic City Convention Hall	Atlantic City	Construction Division, Planning and Development, Historic Preservation Commission
Ritz-Carlton Hotel	Atlantic City	Construction Division, Planning and Development, Historic Preservation Commission
Riviera Apartments	Atlantic City	Construction Division, Planning and Development, Historic Preservation Commission
Vassar Square Condominiums	Ventnor City	Division of Construction Code Enforcement, Planning Board
114 S Harvard Avenue	Ventnor City	Division of Construction Code Enforcement, Planning Board
Lucy the Margate Elephant	Margate City	Planning Board and Zoning, Historical Society
Great Egg Coast Guard Station	Longport	Zoning/Planning Board
Little Egg Harbor U.S. Lifesaving Station #23 (U.S. Coast Guard Station #119)	Little Egg Harbor	Construction Department, Zoning and Code Enforcement

Preservation Easements and Restrictions

Preservation easements and restrictions protect significant historic, archaeological, or cultural resources. Any mitigation work associated with a historic property will comply with the conditions of all extant historic

preservation legislation (see Table 2. Additional information regarding compliance with extant preservation legislation appears below in Section 5.0, Implementation.

Table 2. Applicable State/Local Legislation for Historic Properties

Legislation	Legislation	Agency
New Jersey Register of Historic Places Act	Chapter 268, Laws of 1970	Department of Environmental Protection
New Jersey Conservation Restriction and Historic Preservation Restriction Act	Chapter 378, Laws of 1979	Department of Environmental Protection
New Jersey Economic Recovery Act of 2020, Historic Property Reinvestment Program	Chapter 156, Laws of 2020, amended 2021	New Jersey Economic Development Authority
Municipal Land Use Law	Chapter 291, Laws of 1975	Municipal Historic Preservation Commissions/Planning Boards

Participating NHPA Section 106 Participating Parties

For the purposes of this HPTP, Participating Parties are defined as a subset of the NHPA Section 106 consulting parties that have a functional role in the process of fulfilling Stipulation III.B of the MOA and the mitigation measure implementation processes described herein. The roles of Participating Parties are identified for each mitigation measure in Section 4.0 of this document, including meeting participation and document reviews. Participating Parties with a demonstrated interested in the adversely affected historic properties are summarized in Table 3.

No other NHPA Section 106 consulting parties are anticipated to be Participating Parties for this Visual Effect HPTP. If BOEM determines additional consulting parties will participate in this plan, the plan will be updated to include those parties. The list of invited and participating of consulting parties is available as Attachment 3 of the MOA.

Table 3. Participating Parties involved with the Historic Property/s[1]

Name	Relationship to Historic Property	Address
Absecon Lighthouse	Interested Party	31 S Rhode Island Ave, Atlantic City NJ 08401
Advisory Council on Historic Preservation	Federal Agency	Federal Property Management Section, 401 F St NW, Suite 308, Washington DC 20001
Atlantic County	Local Govt	1333 Atlantic Ave, Atlantic City NJ 08401
Cultural Heritage Partners	Interested Party	2101 L Street NW, Suite 800, Washington DC 20037
Delaware Nation	Tribal Govt	PO Box 825, Anadarko OK 73005
Delaware Tribe of Indians	Tribal Govt	5100 Tuxedo Blvd, Bartlesville OK 74006
Environmental Protection Agency	Federal Agency	Region 2, 290 Broadway, 25th Fl, New York NY 10007
Garden State Seafood Association	Interested Party	1636 Delaware Ave, Cape May NJ 08204

Borough of Harvey Cedars	Local Govt	7606 Long Beach Blvd, PO Box 3185, Harvey Cedars NJ 08008
Linwood City	Local Govt	400 Poplar Ave, Linwood NJ 08221
Long Beach Island Historical Museum	Interested Party	129 Engleside Ave, Beach Haven NJ 08008
Margate City	Local Govt	9001 Winchester Ave, Margate NJ 08402
Stockbridge-Munsee Community Band of Mohican Indians	Tribal Govt	N8705 MohHeConNuck Rd, Bowler WI 54416
MThirtySix PLLC	Tribal Advocacy	700 Pennsylvania Ave SE, 2nd Fl – The Yard, Washington DC 20003
National Park Service	Federal Agency	Region 1, 1234 Market Street, 20th Fl, Philadelphia PA 19107
New Jersey Department of Environmental Protection – Historic Preservation Office	State Agency	Mail Code 501-048, NJDEP Historic Preservation Office, PO Box 420, Trenton NJ 08625-0420
Noyes Museum of Art	Interested Party	2200 Fairmount Ave, Atlantic City NJ 08401
Ocean City	Local Govt	861 Asbury Ave, Ocean City NJ 08226
Quality Home Center and Paneling	Interested Party	3300 Route 9 S, Rio Grande NJ 08242
Sea Isle City	Local Govt	233 John F Kennedy Blvd, Sea Isle City NJ 08243
Snyderman, Paul	Property Owner	Vassar Square Condominiums, 4800 Boardwalk, Ventnor City NJ 08406
City of Somers Point	Local Govt	1 W New Jersey Ave, Somers Point NJ 08244
Stafford Township	Local Govt	260 E Bay Ave, Manahawkin NJ 08050
US Coast Guard	Federal Agency	Sector Delaware Bay, 1 Washington Ave, Philadelphia PA 19147
US Coast Guard	Federal Agency	National Offshore Safety Advisory Committee, 2703 Martin Luther King Jr. Ave SE, Stop 7509, Washington DC 20593-7509
Wampanoag Tribe of Gay Head (Aquinnah)	Tribal Govt	20 Black Brook Rd, Aquinnah MA 02535

[1] Ongoing consultation may result in refinement of this list of Participating Parties.

EXISTING CONDITIONS AND HISTORIC SIGNIFICANCE

Historic Properties

This HPTP involves 17 resources, as identified below in Table 4. All 17 historic properties are located along the New Jersey shoreline within 15–24 miles of the Wind Farm Area (WFA), and ocean views are a character-defining feature of each property's significance.

Table 4. Historic Properties included in the Visual Effect HPTP

Name	Property Address	BOEM Effect Finding
Cape May County		
Ocean City Boardwalk	East 6th Street to East 14th Street, Ocean City	Adverse effect
Ocean City Music Pier	811 Boardwalk, Ocean City	Adverse effect
Flanders Hotel	719 East 11th Street, Ocean City	Adverse effect
U.S. Lifesaving Station #35	11617 2nd Avenue, Stone Harbor	Adverse effect
North Wildwood Lifesaving Station	113 North Central Avenue, North Wildwood	Adverse effect
Hereford Inlet Lighthouse	111 North Central Avenue, North Wildwood	Adverse effect
Atlantic County		
Brigantine Hotel	1400 Ocean Avenue, Brigantine City	Adverse effect
Absecon Lighthouse	Pacific and Rhode Island Avenues, Atlantic City	Adverse effect
Atlantic City Boardwalk	South New Jersey Avenue to South Georgia Avenue	Adverse effect
Atlantic City Convention Hall	Boardwalk at Pacific Avenue	Adverse effect
Ritz-Carlton Hotel	2715 Boardwalk, Atlantic City	Adverse effect
Riviera Apartments	116 South Raleigh Avenue, Atlantic City	Adverse effect
Vassar Square Condominiums	4800 Boardwalk, Ventnor City	Adverse effect
114 South Harvard Avenue	114 South Harvard Avenue, Ventnor City	Adverse effect
Lucy the Margate Elephant	Decatur and Margate Avenues, Margate City	Adverse effect
Great Egg Coast Guard Station	2301 Atlantic Avenue, Longport	Adverse effect
Ocean County		
Little Egg Harbor U.S. Lifesaving Station #23 (U.S. Coast Guard Station #119)	800 Great Bay Boulevard, Little Egg Harbor	Adverse effect

Adversely Affected Historic Properties

In Section 3.2, the resources are described generally both physically and historically, with a focus on the contribution of an ocean view to the properties' significance and integrity.

Physical Description and Existing Conditions

Ocean City Boardwalk

Origins of the Ocean City Boardwalk date to 1880, when the first seasonal structure was constructed from 2nd Street to 4th Street and West Avenue. The Boardwalk was expanded in 1885 to extend the length of the beach, accommodating a new amusement pavilion at 11th Street (The Shore Blog 2021). In keeping with Ocean City's history as a Methodist camp, the Boardwalk offered not only live music, restaurants, and shopping, but free educational seminars and church services (*Daily Intelligencer Journal* 1950:10). The Boardwalk burned in 1927 and was reconstructed the following year. The 1928 Boardwalk was built on a concrete foundation in response to the fire, but portions reconstructed in the 2000s removed the concrete and replaced it with more cost-effective wood (*The Morning Call* 2017). Two important outcomes of the Boardwalk fire were the relocation of a large section of the Boardwalk one block closer to the beachfront and the establishment of a city ordinance that banned building on the ocean side of the Boardwalk (Kelly 2018). The Boardwalk was again reconstructed after the Ash Wednesday Storm of 1962. The Ocean City Boardwalk currently extends approximately 2.5 mi. Like the boardwalks in neighboring Atlantic City and Wildwood, the Ocean City Boardwalk is home to hotels, motels, amusement parks and other entertainments, restaurants, and shopping, housed in buildings constructed throughout the twentieth century. The local ordinance prohibiting construction on the east side of the Ocean City Boardwalk has preserved open and unobstructed views of the ocean along its length. Only the Ocean City Music Pier stands on the ocean side of the Boardwalk, as it was built in 1928, immediately after the fire. The Ocean City Boardwalk was treated as eligible for the NRHP as a result of the survey undertaken for OW1, with a boundary extending from East 6th Street to East 14th Street, reflecting the concentration of commercial development along its length. The property's significance is associated with the commercial and recreation-related growth of Ocean City (Criterion A). The WFA is approximately 15 mi southeast of this historic property.

The Ocean City Boardwalk is integral to the history of commercial development and recreation on the Jersey Shore. While the physical infrastructure of the Boardwalk has changed through the years, due to expansion, general improvements, and storm-related replacement and repairs, its role as a conduit along the shoreline has remained constant. The Ocean City Boardwalk is home to resources from the early twentieth century through the twenty-first century, offering visitors accommodations, entertainment, and food. Upgrades and improvements made to the buildings that line the Boardwalk have impacted the overall setting and feeling of the Boardwalk, as have modern infill buildings and structures. The Boardwalk has offered commercial and recreational opportunities along the seashore since its inception, and it has been subject to ongoing investment and economic development along its route, which in fact attests to its ongoing vitality and viability. However, visitors walking along the Boardwalk in 2022 are offered similar unobstructed sea views as those who walked the Boardwalk 50 years ago and 100 years ago, due the ordinance restricting development on the ocean side of the Boardwalk. The WFA would be visible along the horizon approximately 15 mi from the Boardwalk. Views of the WFA from the entire length of Boardwalk will alter its setting, which has been preserved through the local ordinance passed in the 1920s. As a result, the project will have an adverse effect on the Ocean City Boardwalk.

Ocean City Music Pier

The Ocean City Music Pier was constructed as a concert hall in 1928, after a fire destroyed much of the Ocean City boardwalk. The Ocean City Music Pier was determined eligible for the NRHP in 1990. NJ HPO online records do not include information on the building's NRHP significance; however, it appears to be

significant under Criterion A for Entertainment and Recreation due to its long history as an entertainment venue on the Ocean City Boardwalk, and under Criterion C for Architecture. The Ocean City Music Pier continues to function as a music venue. The building includes an enclosed concert hall and attached open-air loggia. The enclosed portion of the building features large arched windows, while the loggia has open arches. There are sea views from both inside the concert hall and inside the loggia, although the views have changed somewhat over the years. Originally, the pier was built over the water and views were exclusively of the ocean. In 1993, a major beach restoration project imported 6.4 million cubic ft of sand to widen Peck Beach in Ocean City (USACE 2011). Since 1993, the pier has been over sand rather than water and the views to the north and south primarily include the beach, with water views visible at an angle. The building's primary entrance faces west and is accessed via the Ocean City Boardwalk, and the rear of the building sits on piers driven into the sand. The WFA is due east of the Ocean City Music Pier, approximately 15.2 mi away.

The Ocean City Music Pier is the only building in Ocean City located on the east side of the Boardwalk. The building has a direct relationship with the ocean due to its location. Location and setting are both character-defining features that are echoed in the building's design and construction, and directly relate to its significance under Criterion A for Entertainment and Recreation, and Criterion C for Architecture. As a result of its location and lack of development on its north, east and west sides, the views of the beach and ocean are unobstructed for people enjoying programs inside of the facility and people observing the building from the Boardwalk. The building's significance under Criterion A for Entertainment and Recreation is historically tied to its prominent location on the Boardwalk. The building is at the center of activity in Ocean City and although there are other entertainment venues in Ocean City, the music pier is arguably the most popular due to its location and setting (Pritchard 2012). The property's significance under Criterion C is for its Mediterranean Revival style. The open loggia and expansive arched windows with sea views are key features of that significance. Given the proximity of the WFA to this property and that open shoreline and sea views are character-defining features, the proposed project's introduction of a modern visual element to the music pier's setting may diminish its integrity of setting, feeling, and association as it relates to its significance. Therefore, the project will have an adverse effect on the Ocean City Music Pier.

Flanders Hotel, Ocean City

The Flanders Hotel is an NRHP-listed property located one-half block from the boardwalk in Ocean City. The building is listed under Criterion A for Entertainment and Recreation, and Community Planning and Development, and under Criterion C for Architecture. The property currently includes a 1923 nine-story U-Shaped Spanish-Colonial style hotel, a two-story commercial and solarium annex, a pool, and a parking lot (Bethke 2009). The hotel is the tallest building in the area. Its upper floors (approximately floors 5–9) have unobstructed views of the ocean, while its lower levels (approximately floors 1–4) have views blocked or obscured by Playland's Castaway Cove and other nearby development.

The two-story solarium annex is located on the building's east side, and from 1927 to 1978, the solarium overlooked three saltwater pools located between the hotel and the Ocean City Boardwalk. When it was built, the two-story solarium annex featured large windows and an open central section, all with direct views to the water. The pools were removed in 1978 and the land was later redeveloped (Bethke 2009). The

building originally featured an 8th-story terrace overlooking the ocean. The terrace was a significant part of the original design meant to capture expansive sea views. According to the hotel's 2009 NRHP nomination, the terrace was enclosed in 1960. The building also originally featured a tower on the building's south wing with open sides that had unobstructed sea views. A 1990s remodeling project included the addition of two stories to the south wing. According to the NRHP nomination, much of the building's significance is associated with it being the first high-end hotel in Ocean City. The project is due east of the hotel, approximately 15.2 mi distant. BOEM has determined that the project will have an adverse effect on the Flanders Hotel.

U.S. Lifesaving Station #35, Stone Harbor

The U.S. Lifesaving Station #35 (now the Steven C. Ludlum American Legion Post 331) is a former US Life-Saving Service and US Coast Guard Station constructed in 1895. The building is located at 11617 2nd Avenue at the northwest corner of 2nd Avenue and 117th Street in Stone Harbor. The American Legion currently owns and operates the building after purchasing it in 1948 when its function as a lifesaving station became obsolete. The building is listed in the NRHP under Criterion A for Transportation and Maritime History and under Criterion C for Architecture. The station is a representative example of the 1893 Duluth Design by George R. Tolman (Koski-Karell et al. 2013). The main structure features three parts and includes the primary lifesaving station building along the south, a four-story tower in the center, and a boat room along the north façade. The NRHP nomination for U.S. Lifesaving Station #35 states that the structure was originally located on ocean front property but is now positioned two blocks to the west due to dense residential infill and sand deposits to the east along the shoreline. The building is approximately 21.9 mi from the project. BOEM has determined that the project will have an adverse effect on U.S. Lifesaving Station #35.

North Wildwood Lifesaving Station, North Wildwood

The North Wildwood Lifesaving Station is a former U.S. Coast Guard Station constructed in 1938. The building is located at 113 North Central Avenue and sits on the northeast corner of the intersection of North Central Avenue and East First Avenue, directly to the northeast of the Hereford Inlet Lighthouse. The building was determined eligible by the New Jersey HPO in 2001. It was constructed later than the Hereford Lighthouse, thus, the North Wildwood Lifesaving Station is not mentioned as a contributing resource to the Hereford Lighthouse in its the lighthouse's NRHP nomination. NJ HPO's online records do not include information on the building's significance; however, it is likely significant under Criterion A for Maritime History and under Criterion C as an example of the 1934 Roosevelt Design for Coast Guard stations during that era (Koski-Karell et al. 2013). The station is positioned near the Hereford inlet between North Wildwood and Stone Harbor. The inlet was heavily trafficked by ships and an important entry location for the Intracoastal Waterway pivotal to local commerce. The building was constructed in 1938 as a U.S. Coast Guard station, then later converted to the NJ Marine Police Headquarters.

The station replaced an 1888 lifesaving station at this same site (Koski-Karell et al. 2013). The 1934 Roosevelt Design was transitional, incorporating design cues from previous lifesaving station designs with evolving missions and administrative duties after consolidation of predecessor services under the U.S. Coast Guard. Key to the station's significance is its intact representation of the 1934 standardized Roosevelt Design. The

station is approximately 23.4 mi from the project. BOEM has determined that the project will have an adverse effect on the North Wildwood Lifesaving Station.

Hereford Inlet Lighthouse, North Wildwood

The Hereford Inlet Lighthouse, constructed in 1874 and listed in the NRHP in 1977, is located at 113 North Central Avenue on the north end of North Wildwood. The lighthouse sits on the northeast corner of the intersection of North Central Avenue and East First Avenue. The lighthouse originally marked the Hereford Inlet between North Wildwood and Stone Harbor, an important waterway for local commerce. The lighthouse consists of one- and two-story sections surrounding a central four-story tower. The lighthouse's original setting was approximately 150 ft west of its present-day location. It was relocated in the early twentieth century due to erosion, weathering, and damage to the foundation (Elias 2018). Its NRHP nomination indicates that the lighthouse is no longer adjacent to the shoreline due to infill, which includes the construction of a contemporary police station to its north. The U.S. Coast Guard automated the lighthouse in 1964 and eventually converted it into a museum. The lighthouse is significant under Criterion A for Commerce and Criterion C for Architecture. The project is approximately 23.4 mi from the Hereford Inlet Lighthouse. BOEM has determined that the project will have an adverse effect on the Hereford Inlet Lighthouse.

Brigantine Hotel, Brigantine City

The Brigantine Hotel, at 1400 Ocean Avenue is an 11-story rectangular plan, Art Deco-inspired hotel built in 1926–1927. The Brigantine Hotel was surveyed for OW1 in January 2021 and was recommended eligible for NRHP listing under Criterion A for Ethnic Heritage: Black, due to its associations with prominent African American figures and its role in integrating the Jersey Shore. The hotel is on Brigantine Beach at a distance of approximately 16 mi from the project.

The Brigantine Hotel is sited directly on the beach and has unobstructed sea views from most of the building. The hotel is recommended significant under Criterion A for Ethnic Heritage due to its association with black history on the Jersey Shore. As a hotel, the building represents a recreational property type associated with tourist activity in New Jersey, which heightens the importance of its setting, in particular those of sea views within the setting. As possibly the first hotel to welcome black guests and integrate New Jersey's beaches, the Brigantine Hotel reflects the challenges black Americans faced to gain equal access to recreational opportunities. Because the focus of recreational activity in this location is the beach and access to the sea, this aspect of the setting supports the hotel's significance under Criterion A. Conspicuous views of the WFA from the both the beach and guest rooms in the hotel will alter the character-defining setting of the building. As a result, the project will have an adverse effect on the Brigantine Hotel.

Absecon Lighthouse, Atlantic City

The Absecon Lighthouse, constructed in 1856, is an NRHP-listed property on the north end of Atlantic City. The lighthouse originally marked the inlet between Absecon and Brigantine Islands, although that channel has shifted northward since the lighthouse's construction. The 171-ft-tall light tower is constructed of iron and brick, and has a diameter of 27 ft at its base and 13 ft-7.5 in at the lens chamber. Lightkeepers had a

view of the Absecon Inlet from "A catwalk at a storage level just below the lens" (Wilson 1970). The Absecon Lighthouse was decommissioned in 1933. Its original setting was the undeveloped north end of Absecon Island, and the light station site included a keeper's house, assistant keeper's house, and oil house (all nonextant, although the keeper's house has been reconstructed). The 1970 NRHP nomination states the lighthouse is significant for navigational history (Criterion A) and architecture (Criterion C). The project is approximately 15.3 mi southeast of the Absecon Lighthouse. BOEM has determined that the project will have an adverse effect on the Absecon Lighthouse.

Atlantic City Boardwalk, Atlantic City

Origins of the Atlantic City Boardwalk date to 1870, when the first seasonal structure was constructed between South Massachusetts Avenue and what is now Columbia Place (between South Mississippi and Missouri Avenues). Four boardwalks soon followed in succession prior to 1900: widened for increased usage, but still seasonal (1880); permanent with electric lighting (1884); replacement due to hurricane (1890); and steel-braced (1898). Several piers were added in the 1890s, including Playground Pier, Central Pier, and Steel Pier. Large-scale hotels attracting tourists and businesspeople lined the west side of the Boardwalk beginning in the late 1890s and into the first decades of the twentieth century. Only a few of the hotels remain, largely due to the 1976 state legislation that required hotels to have at least 400 rooms, 325 square ft each, in order to operate a casino on the premises. This precluded many of the existing hotels from taking advantage of the new gambling legislation without extensive renovations. Many of the grand hotels on the Boardwalk were razed in the 1970s and 1980s to make room for new construction (*The Daily News* 1978:13). The Atlantic City Boardwalk was identified as a potential historic property in 1978, with NJ HPO data indicating a boundary extending from the Atlantic City Convention Hall (South Georgia Avenue) to just northeast of South New Jersey Avenue. NJ HPO data indicates the property's potential significance is associated with the commercial and recreation-related growth of Atlantic City (Criterion A). The WFA is approximately 15.3 mi southeast of Atlantic City Boardwalk. The Boardwalk is being treated as eligible for NRHP listing for the purposes of Section 106 compliance for the Project.

The Atlantic City Boardwalk is integral to the history of commercial development and recreation on the Jersey Shore. While the physical infrastructure of the Boardwalk has changed through the years, due to expansion, general improvements, and storm-related replacement and repairs, its role as a conduit along the shoreline has remained constant. The Atlantic City Boardwalk is home to resources from the early twentieth century through the twenty-first century, offering visitors accommodations, entertainment, and food, and, since the late 1970s, gambling opportunities. While large-scale towers built since the 1970s, including Caesar's Atlantic City (1979), Atlantic Palace (1986), Showboat Atlantic City (1987), Bally's Tower (1989), Hard Rock Hotel and Casino (1990), Ocean Casino (2012), have impacted the overall setting and feeling of the Boardwalk, as have the upgrades and improvements made to many of the one- and two-story buildings that line the Boardwalk, visitors walking along the Boardwalk in 2022 are still offered unobstructed sea views in some locations. Dunes and vegetation obstruct views of the horizon in other locations. Yet the Boardwalk has offered commercial and recreational opportunities along the seashore since its inception, and it has been subject to ongoing investment and economic development along its route, which in fact attests to its ongoing vitality and viability. To the extent that the WFA would be visible along the horizon

approximately 15.3 mi from the Boardwalk, BOEM has determined that the impact to setting rises to the level of adverse effect.

Atlantic City Convention Hall, Atlantic City

The Atlantic City Convention Hall, constructed 1929, is a National Historic Landmark-designated property on the Boardwalk in Atlantic City. The Convention Hall's 1985 NRHP nomination notes its eligibility under Criterion A for Recreation and Criterion C for Engineering. The Convention Hall's relationship to the Boardwalk, and by extension to the ocean, is defined by a curved limestone exedra (arcade) across the Boardwalk and in front of the hall's oceanside entrance. The exedra is "appropriately ocean-oriented, with decoration, like that of contemporary Atlantic City hotels, using forms of ocean flora and fauna" (Charleton 1985:2). The Convention Hall's views to the ocean from the building's interior are limited to ground floor entrances, where direct views of the ocean are screened partially by the exedra, and a ballroom on the second floor. The WFA is approximately 15.5 mi from the Atlantic City Convention Hall.

The Atlantic City Boardwalk was the center of social activity on the Jersey Shore in the early twentieth century, and the Convention Hall epitomized the Boardwalk's social and entertainment appeal. The Convention Hall's significance as a recreational venue (Criterion A) is tied to its large auditorium that hosted concerts, pageants, and sporting and political events. While the auditorium has no views to the exterior, an event space on the second story above the main Boardwalk entrance features a loggia of arched windows designed to provide sea views. This space was historically utilized as a ballroom but currently serves as a multi-function space for gatherings and smaller events (a reversible change).

The Project will have a visual effect on the Atlantic City Convention Hall, largely borne by the exedra walkway, a contributing structure of the site, located across the Boardwalk from the Convention Hall. While the Project would not alter any characteristics or physical features within the Convention Hall that contribute to its historic significance, BOEM determined that the Project would diminish its integrity of setting, an aspect of its historic integrity that relates to its significance. The Atlantic City Convention Hall is significant under Criterion A for Recreation and Criterion C for Engineering. The building's location on Atlantic City's Boardwalk is paramount to its history and associated significance. To the extent that the WFA would be visible along the horizon approximately 15.5 mi from the historic property, BOEM has determined that the impact to setting rises to the level of adverse effect.

Ritz-Carlton Hotel, Atlantic City

The Ritz-Carlton Hotel (constructed 1921, now The Ritz Condominiums) is an NRHP-eligible property at 2715 Boardwalk in Atlantic City. It was designed by Philadelphia's Horace Trumbauer in association with New York-based Warren and Wetmore. The hotel has a five-story block fronting the Atlantic City Boardwalk and a 15-story block that extends north creating an L footprint. The hotel was determined eligible for the NRHP in 2011. NJ HPO data indicates the property's significance is associated with its construction at the height of Atlantic City's "urban hotel by the sea" period. The Boardwalk wing capitalizes on the Boardwalk's commercial activity while the orientation of the main block of hotel rooms maximized rooms with northeast and southwest sea views. It was determined to be significant under Criterion A for Commerce and Criterion C for Architecture. The WFA is approximately 15.3 mi southeast of this property.

The Ritz-Carlton Hotel is on the Atlantic City Boardwalk with the main hotel block extending north-northwest from the shoreline. The hotel block rising behind the commercial Boardwalk block is oriented to maximize the number of rooms on its narrow, deep lot. The ocean-facing elevation of this block is three bays wide, with a central-bay Juliet balcony on each floor. In addition to southeast elevation windows on both the main hotel block and the five-story Boardwalk block, most windows on the southwest elevation will have a view of the WFA. The building's siting and orientation are important to its Criterion A significance for Commerce. While architectural elements oriented toward the WFA have been subject to modification, most notably at the mezzanine level on the exterior, where a redesign with replacement materials creates a solid screen in front of double-height arched windows, conspicuous views of the WFA from guest rooms in the hotel will alter the character-defining setting of the building. As a result, the project will have an Adverse Effect to the Ritz-Carlton Hotel.

Riviera Apartments, Atlantic City

The Riviera Apartments at 116 South Raleigh Avenue in Atlantic City is a nine-story apartment building dating to 1930. It was surveyed for OW1 in January 2021 and was recommended eligible under Criterion C for its Spanish-influenced Art Deco style of architecture. NJ SHPO records attribute the design to Philadelphia architect Harry Sternfeld, and describe the building as "the queen of Atlantic City's larger apartment houses—its concrete and tile decoration are exuberant and original, rare outside of New York" (NJ HPO 1980). The building appears to have undergone very few changes over the years, maintaining its original form, massing, and Art Deco design details. The building is adjacent to the Atlantic City Boardwalk. Its primary façade (northeast elevation) does not face the ocean. Both the northeast and southeast elevations include bands of windows, some of which are bay windows to optimize sea views. The building also includes rooftop balconies with sea views. It is approximately 15.6 mi from the WFA.

The Riviera Apartments building sits directly on the Atlantic City Boardwalk. This area was developed by the time the Riviera Apartments were constructed; however, aerial imagery shows that the surrounding buildings were primarily modest single-family detached homes in the 1930s, likely two to three stories tall. The apartment building was the tallest building in the area and would have had clear ocean views. The building's design focused on both the northeast and southeast elevations, with the southwest elevation having the appearance of a wall that would typically be found facing an alley. The two elevations with design emphasis have numerous windows, including bay windows, that maximize light and views in the apartments. Under the apartment building's significance for Criterion C, the property's historic integrity of location, design, materials and workmanship are critical, and those will not be altered by the proposed Project. Integrity of setting, feeling, and association have the potential to be affected by the project. Both ground-level views and views from inside the nine-story building may be affected by the introduction of the WFA on the horizon. The seascape was an important consideration in the selection of the location for this building, reflected in its design and siting. The project will be conspicuously visible in the viewshed, and it will affect views to the sea, a character-defining feature of the property. Therefore, the project will have an adverse effect on the Riviera Apartments.

Vassar Square Condominiums, Ventnor City

The Vassar Square Condominiums building at 4800 Boardwalk in Ventnor City is a high-rise building dating to 1969. The 21-story building is 218 ft (66.45 m) tall (CTUBH 2021) and was surveyed for OW1 in January 2021. The building was surveyed for OW1 in January 2021 and was recommended eligible for the NRHP under Criterion C for Architecture, as a good example of mid-century high-rise design with Formalist architectural details (reinterpretations of classical building components). The building's units each have a cantilevered balcony with glass railings. Corner balconies have views in multiple directions. This is especially important for units at the rear of the building (northwest), which, despite their location, have sea views due to the balcony design. Balconies on the northeast and southwest elevations angle outward to create an interesting dimensional effect across the wall plane. The angle also affords additional space on the balcony and increases the field of view from each unit. The building's upper levels are primarily glass and brick, while the ground level features stuccoed arches infilled with glass or metal grate. The building is approximately 16 mi from the WFA.

The Vassar Square Condominiums building sits directly on the Atlantic City Boardwalk. It sits on a deep lot with its longest elevations facing to the northeast and southwest. Although these elevations are perpendicular to the coastline, due to the building's height, extended balconies allow for sea views along these longer elevations. When the building was originally constructed, the Vassar Square area primarily included single-family detached houses two to three stories tall. However, multistory and multi-unit buildings were becoming more common south of the Atlantic City core. Although there are several similarly sized buildings in the vicinity as of 2021, Vassar Square Condominiums offer sea views from nearly all units. The building's design maximized sea views for its residents. Each unit has a glass-railed balcony, and even those that are farthest from the beachfront have corner balcony designs that allow for at least partial water views. Under the property's significance for Criterion C, its historic integrity of location, design, materials and workmanship are critical, and those will not be altered by the proposed project. Integrity of setting, feeling, and association have the potential to be affected by the project. Both ground-level views along the Boardwalk and views from inside the building may be affected by the introduction of the WFA on the horizon. Because the seascape was an important consideration in the selection of the location for this building and the building's design maximized expansive sea views, the project will impact a characteristic of the property that supports its eligibility for listing in the NRHP. Therefore, the project will have an adverse effect on the Vassar Square Condominiums building.

114 South Harvard Avenue, Ventnor City

The house at 114 South Harvard Avenue in Ventnor City is a two-and-a-half-story French Eclectic style building dating to 1925. The building was surveyed for OW1 in January 2021 and was recommended NRHP-eligible under Criterion C for Architecture as a good example of early twentieth-century beachfront housing in Ventnor City. The building appears to retain its original form and massing, and includes French Eclectic features such as textured stucco walls, a steeply pitched roof, flared eaves and multiple eave heights, and an asymmetrical plan with a tower. The house is immediately adjacent to the beach and Boardwalk, and has open views toward the Atlantic Ocean. The building faces northeast toward South Harvard Avenue, with its southeast elevation facing the Boardwalk. The southeast elevation includes an enclosed ground-level sun room with arched windows facing the ocean. Above the sun room is a second-story porch with unobstructed sea views. The WFA is approximately 15.7 miles southeast of the property.

With limited visual obstructions, the project is expected to be visible on the horizon from this location. The building does not directly face the water, but sea views appear to have been an important consideration in the building's design, as it includes a sea-facing sun room and a second-story deck on its southeast elevation. Under significance for Criterion C for Architecture, the property's historic integrity of location, design, materials and workmanship are critical, and those will not be altered by the proposed project. Integrity of setting, feeling, and association may be impacted by the project. Both ground-level views and views from inside the building may be affected by the introduction of the WFA on the horizon. The seascape was an important consideration in the building's design, and the proposed project will alter a characteristic of the property that qualifies it for NRHP eligibility. Therefore, the project will have an adverse effect on the house at 114 South Harvard Avenue in Ventnor City.

Lucy the Margate Elephant, Margate City

Lucy the Margate Elephant, originally known as Elephant Bazaar, was NRHP-listed in 1971 and designated as a National Historic Landmark in 1976. The building is listed under Criterion C for Invention, Sculpture, and Other: "architectural folly" (Pitts 1971). Lucy the Margate Elephant is a six-story, elephant-shaped architectural folly located in Margate City. Lucy was built in 1881 by inventor James V. Lafferty, who had received a U.S. patent with exclusive rights to construct buildings in the shape of animals beginning in 1881. Lafferty was a land speculator who owned undeveloped land in the area that is now Margate City. Lucy was originally constructed in this barren location by Lafferty as a means of attracting potential buyers and visitors to the area (Lucy the Elephant 2011a). Lafferty sold Lucy to Anton Gertzen in 1887, and members of the Gertzen family continued to own the building until 1970 (Lucy the Elephant 2011a, 2011d). During the Gertzen family ownership, the building was used temporarily as both a house and tavern, but primarily as a piece of novelty architecture. The family capitalized on it by offering tours for an admission fee (Lucy the Elephant 2011b, 2011c).

Modifications to Lucy include the partitioning of the domed interior space in 1902 and replacement of the original howdah (canopied seat) after it was destroyed in a storm in 1928. The building went without a howdah (or with a very deteriorated howdah) for several years. When the building was nominated as an NHL in 1976, the nomination stated, "she will have a new howdah when funds permit." The howdah was eventually replaced with a less ornate version with a different roof type (Pitts 1971). In 1968, the Gertzen family sold the parcel on which Lucy was located and donated the building to the City. It was moved to its current parcel in 1970. Lucy's original location was near the intersection of present-day Atlantic Avenue and South Cedar Grove Avenue, two blocks north-northeast of its present location (NETR 1963, 1970). The building is currently located approximately one half-block farther inland than its original location. It continues to operate as a tourist attraction, with guided tours offered for a fee. The immediate surroundings include a single-story beachfront grill, several two- and three-story condominium buildings, a restaurant, and a 19-story condominium building (located on Lucy's original site). The building is approximately 15.3 mi west-northwest of the WFA. From its upper levels, views to the Atlantic Ocean are unobstructed.

Lucy the Margate Elephant is integral to the history of commercial development and recreation on the Jersey Shore. Originating as an architectural folly, it stands as one of the most recognizable symbols of the

Jersey Shore experience. Part commercial, part recreational, part functional, part folly, Lucy is a tourist attraction that represents the vision a late nineteenth-century entrepreneur had for seaside development that continued through the twentieth century, a vision reflected in Margate's growth all around the building. While some original materials have changed through the years, and its setting has been subject to infill, impacting ground-level views of the sea, Lucy provides similar unobstructed sea views from its upper level as it did when it was first built. The uniqueness of the resource and its property type merited additional consideration during effects assessment.

The building's seaside location, while not original, generally replicates the sea views and setting of its original location a few blocks away. The building has windows on all sides, albeit small. The 18-in windows facing the ocean are inserted as the elephant's porthole eyes. The howdah (canopied seat) at the top of the building also has unobstructed ocean sea views; it was reportedly used by Lafferty as a viewing platform for potential investors to see advantageous views of the surrounding real estate (NJ South 2019).

At a distance of 15.3 mi, characterized in the VIA as apparent, the WFA will be visible on the horizon, altering the property's setting and potentially, the experience of visitors to the site. Lucy's significance as an architectural folly and sculpture, while not specified in its NRHP nomination, likely falls under Criteria A and C. Sea views are a key component of the building's property type and contribute to its significance. Therefore, a finding of Adverse Effect is recommended for Lucy the Margate Elephant.

Great Egg Coast Guard Station, Longport

The Great Egg Coast Guard Station is located at 2301 Atlantic Avenue in Longport. It was listed in the NRHP in October 2005 under Criterion C for Architecture as an example of the 1934 Roosevelt Design for Coast Guard stations (Berkey 2005; Koski-Karell et al. 2013). The station is located in an area of Longport that is approximately two blocks deep between Great Egg Harbor and the Atlantic Ocean. The station was constructed in 1938 as a U.S. Coast Guard station, and was abandoned in 1947 by the U.S. Treasury Department, which oversaw the Coast Guard until 1967. The City of Longport purchased the building and used it as a municipal hall (Berkey 2005). In 1994, it was leased to the Longport Historical Society and Museum. The primary building is two-and-a-half stories with a central three-story tower set within the roof ridgeline. The station replaced an 1888 lifesaving station at this same site (Berkey 2005). The 1934 Roosevelt Design was transitional, incorporating design cues from previous lifesaving station designs with evolving missions and administrative duties after consolidation of predecessor services under the U.S. Coast Guard. Located approximately 0.14 mi (740 ft) from the shore, the building is one-and-a-half blocks removed from the ocean front. It is approximately 15.2 mi from the project. BOEM has determined that the project will have an adverse effect on the Great Egg Coast Guard Station.

Little Egg Harbor U.S. Lifesaving Station #23 (U.S. Coast Guard Station #119, Little Egg Harbor)

The original Little Egg Harbor U.S. Lifesaving Station #23 was built in 1869 on Tucker Island and moved several times due to beach erosion. It succumbed to the ocean in the early 1930s, while Tucker Island itself disappeared by the early 1950s. In 1937, the U.S. Coast Guard constructed the current station, a two-and-one-half-story building, just west of Tucker Island on the southern point of Little Egg Harbor's salt marsh peninsula on Great Bay. The station used the federal government's 1934 Roosevelt Design that incorporated

Colonial Revival elements into a two-story, rectangular plan with a central cupola. The station and associated boathouses are on elevated piers to accommodate the tides (Koski-Karell et al. 2013). The station is accessed from Great Bay Road by a long pedestrian boardwalk. The Coast Guard operated the station into the 1960s. It was then left vacant until purchased in 1972 by Rutgers University for use as a marine field station, and it continues to operate as Rutgers Tuckerton Marine Field Station.

The station was determined individually eligible for NRHP listing by NJ HPO in 2014. NJ HPO's online records do not include information on the building's NRHP significance; however, it appears to be significant under Criterion A for Maritime History and under Criterion C for Architecture as an example of the 1934 Roosevelt Design, based on application of the eligibility requirements in the U.S. Government Lifesaving Stations, Houses of Refuge, and pre-1950 U.S. Coast Guard Lifeboat Stations Multiple Property Documentation Form (MPDF) (Koski-Karell et al. 2013). The 1934 Roosevelt Design was transitional, incorporating design cues from previous lifesaving station designs with evolving missions and administrative duties after consolidation of predecessor services under the U.S. Coast Guard. Key to the station's significance is its intact representation of the 1934 standardized Roosevelt Design. Its period of significance, 1937–1960s, reflects its use as a Coast Guard station. The project is approximately 21.25 mi south of the station. BOEM has determined that the project will have an adverse effect on U.S. Coast Guard Station #119.

Historic Context

North Wildwood, Cape May County

The city of North Wildwood is on Five Mile Island, where the Lenni-Lenape tribe often visited to fish and collect shells they used as currency. Farmers used the Wildwood area to graze their livestock, and fishermen and whalers established temporary camps on Five Mile Island between the early seventeenth and the mid-nineteenth centuries. Fishermen established the first settlement on Five Mile Beach—Anglesea—ca. 1859. Development increased following construction of a railroad and bridge in 1884. Anglesea incorporated as the North Wildwood Borough in 1885. The borough became the City of North Wildwood City in 1917. The city experienced a post-World War II boom following the growing popularity of personal automobiles and resultant tourism (VisitNJShore.com 2021a). New hotels featured futuristic forms and neon signage, a distinctive style later called Wildwood's "Doo Wop." North Wildwood was heavily damaged by the Ash Wednesday Storm of 1962, which flooded and destroyed beachfront properties and roads and caused major coastline loss (NPS 2019). Tourism declined in the 1970s and 1980s, but rebounded in the late 1990s with the establishment of the Doo Wop Preservation League, charged with restoring and promoting appreciation of the Wildwood area hotels and their history (VisitNJShore.com 2021a).

Ocean City, Cape May County

A barrier island, Ocean City (first known as Peck's Beach) was regularly used as a whaling camp by 1700. Later in the eighteenth century, John Townsend acquired much of the seven-mile-long island that featured several freshwater ponds, making it beneficial for grazing cattle (Miller 2003). It had its first permanent residence by 1850. In the post-Civil War period, Peck's Beach evolved into a tourist destination. Atlantic City, which featured a famous boardwalk and hotels in the 1870s, served as a model for Peck's Beach, albeit with exceptions. In 1879, a group of Methodists leaders—including Rev. Ezra B. Lake, Rev. James B. Lake, Rev. S.

Wesley Lake, and Rev. William H. Burrell—founded Ocean City. The founders were intent of developing a Christian-influenced resort that, unlike Atlantic City, boasted no gambling or drinking (Esposito and Esposito 1996). One of the main attractions was a boardwalk completed in 1883. Development of transportation was key to the city's success as a tourist destination, as early twentieth-century options included a steamboat service, bridges, and a trolley (VisitNJShore.com 2021b). The national prosperity of the post-World War I period was reflected development of beachfront hotels. A fire destroyed much of Ocean City in 1927, including the city's beachside boardwalk (Ocean City, New Jersey 2021). The boardwalk was rebuilt in 1928–1929. The Great Depression severely impacted the local New Jersey Shore economy (Bzdak 2001), but, bolstered by a post-World War II economic recovery, Ocean City was the largest town in Cape May County by 1960 (VisitNJShore.com 2021b).

Brigantine City, Atlantic County

The Lenni-Lenape tribe first traveled to Brigantine Island from the mainland to fish and collect shells they used as currency. Brigantine Improvement Company purchased the island by the late nineteenth century. Railroad and light rail transportation facilitated early development during the period, but growth was limited by bad weather and difficult financial times. Brigantine invested in infrastructure development in the 1920s, including the construction of roads and sewage lines, only to have its growth stymied again by numerous storms and the Great Depression (SouthJersey.com 2015). Development continued post-World War II. Brigantine was heavily damaged by the Ash Wednesday Storm of 1962, which flooded and destroyed beachfront properties and roads, causing major coastline loss (NPS 2019). Due to its proximity and access to Atlantic City, development was consistent in the second half of the twentieth century, with older neighborhoods and commercial development interspersed with newer single-family and multi-family housing (Gatza 1991).

Atlantic City, Atlantic County

Atlantic City is located on Absecon Island, where the Lenni-Lenape tribe often visited to fish and collect shells they used as currency. Jeremiah Leeds built the first structure on the island in 1785, and his descendant had built seven permanent dwellings by 1850 (Town Square Publications 2010). The city incorporated in 1854 and rail development soon followed. The city grew quickly in the late nineteenth century as a resort town located near New York and Philadelphia. Unlike primarily residential communities on the New Jersey Shore, Atlantic City development included businesses, recreational spaces, and tourist attractions like theaters and the Boardwalk. Half of the Boardwalk was destroyed in the Great Atlantic Hurricane of 1944. The city's popularity continued through the mid-twentieth century. but diminished in the 1950s when air travel allowed vacationers more options (ACFPL 2021). Atlantic City was heavily damaged by the Ash Wednesday Storm of 1962, which flooded and destroyed beachfront properties and roads and caused major coastline loss (NPS 2019). Another wave of large-scale development followed the city's gambling legalization in 1976 (ACFPL 2021).

Ventnor City, Atlantic County

Ventnor City is located immediately south of Atlantic City on Absecon Island. The name Ventnor City was chosen in 1889 in honor of Ventnor, England. The arrival of railroad service catalyzed development in the late nineteenth and early twentieth centuries. The city incorporated in 1903, and between 1910 and 1917,

the number of buildings in Ventnor City increased from approximately 100 to nearly 1,300. New York-based architects John M. Carrère and Thomas Hastings created a downtown plan for Ventnor City ca. 1907–1908 using City Beautiful planning principles. Architect Frank Seeburger designed homes in what is now the John Stafford NRHP-listed historic district (Thomas 1986). The city's popularity continued through the first half of the twentieth century given its proximity to Atlantic City. Films advertising Ventnor City were shown in Reading Terminal in Philadelphia, highlighting the city's beaches, boardwalk, public buildings, and homes (Smith 1963). Ventnor City was heavily damaged by the Ash Wednesday Storm of 1962, which flooded and destroyed beachfront properties and roads and caused major coastline loss (NPS 2019). By the mid-1960s, Ventnor City was the second-largest municipality on Absecon Island, a primarily residential resort that catered to seasonal rentals (Smith 1963).

Margate City, Atlantic County

Margate City is located five miles south of Atlantic City on Absecon Island, where the Lenni-Lenape tribe often visited to fish and collect shells they used as currency. Early settlers moved to modern Margate City in the early nineteenth century, and by the mid-nineteenth century, fishing, trade, and salt industries attracted increasing numbers of workers (VisitNJShore.com 2021c). Completion of a rail line from Philadelphia also opened Margate to seasonal residents, and Margate City neighborhoods like Marven Gardens attracted affluent vacationers interested in buying second homes (Ralph 1989). In 1882, James V. Lafferty built Lucy the Elephant, an elephant-shaped hotel and restaurant, to attract land buyers and commercial development. The city incorporated as South Atlantic City in 1897, and changed its name to Margate City in 1909. Development continued in the late nineteenth and early twentieth centuries following the arrival of railroad service (VisitNJShore.com 2021c). The Ash Wednesday Storm of 1962 heavily damaged Margate City, including washing away what remained of the city's boardwalk that had initially been washed out in the Great Atlantic Hurricane of 1944 (Galloway 2019).

Longport, Atlantic County

Longport is located on Absecon Island, where the Lenni-Lenape tribe often visited to fish and collect shells they used as currency. The borough is named for James Long, who owned the area including modern Longport from 1857 to 1882. Long sold the parcel to M. Simpson McCollough, who planned to develop a resort community. Development in the late nineteenth and early twentieth centuries was largely commercial, while development in the mid-twentieth century was primarily residential. Longport was heavily damaged by the Ash Wednesday Storm of 1962 (NPS 2019). Two early twentieth-century buildings—the Longport Cabin Inn and the Gospel Hall Home for the Aged—were demolished in the early twenty-first century in favor of residential development. Several historic buildings have been remodeled and repurposed, however, including the Betty Bacharach Home for Afflicted Children, which has served as Borough Hall since 1987 (Borough of Longport 2021).

MITIGATION MEASURES

This section details the proposed mitigation measures to resolve adverse effects to historic properties stipulated in the MOA, and describes the purpose and intended outcome, scope of work, methodology, standards, deliverables and funds and accounting for each measure. The content of this section was developed on behalf of OW1 by individuals who meet Secretary of the Interior (SOI) Qualifications Standards for History, Architectural History and/or Architecture (62 FR 33708) and is consistent with fulfilling the mitigation measures such that they fully address the nature, scope, size, and magnitude of the visual adverse effect. Fulfillment of the mitigation measures will be led by individuals who meet SOI Qualifications Standards for History, Architectural History and/or Architecture. This document identifies which mitigation measures are likely to trigger need for compliance with the identified state/local level legislation.

Note that historic properties subject to adverse effect may already have completed HABS documentation, preservation plans, master plans, and/or historic structure reports. In those cases, mitigation may include more extensive educational and/or interpretive measures, or alternative measures agreed-upon with consulting parties.

Mitigation Measure 1 – HABS Level II Documentation

Purpose and Intended Outcome

Documentation will serve to record the historic property's significance for the Prints and Photographs Division of the Library of Congress, whose holdings illustrate achievements in architecture, engineering, and landscape design in the United States and its territories. Upon review and acceptance by the National Park Service (NPS), documentation will be available to the public via the Library of Congress and state and local repositories, as appropriate.

Scope of Work

The scope of work for each historic property, as appropriate, will consist of the following:

- Collect and review materials and drawings relating to the construction and history of the property;
- Draft a historical report of the property
- Photograph the property using large-format photography;
- Compile draft HABS documentation for review and comment by Participating Parties;
- Develop final HABS documentation, incorporating comments from the Participating Parties; and
- Upon acceptance of HABS documentation by NPS, distribute HABS documentation packages to the NPS and agreed-upon repositories.

Methodology

OW1 will release a request for proposals (RFP) for consultant services and select a consultant to perform the Scope of Work listed for Mitigation Measure 1, for each property individually, for the historic properties

as a group, or as part of a larger consultancy RFP for additional or all mitigation measures listed herein. The chosen consultant should have staff that meet SOI Professional Qualifications for Architecture, Architectural History, or History. The large-format photographer should have experience with HABS-standard photography. A draft of the documents will be provided to the Participating Parties for review and comment. A final package will be developed incorporating comments from the Participating Parties and will be distributed to the NPS and agreed-upon repositories.

Standards

The project will comply with following standards:

- Historic American Buildings Survey Guidelines for Historic Reports (updated 2020);
- Heritage Documentation Programs Photography Guidelines (updated 2015); and
- Preparing HABS/HAER/HALS Documentation for Transmittal (updated 2021).

Deliverables

The following documentation is to be provided for review by the Participating Parties:

- Preliminary draft of HABS documentation.

The following documentation is to be provided to the NPS and agreed-upon repositories

- Final HABS documentation.

Schedule

The following is a preliminary schedule for execution of the HABS Level II documentation based on the current BOEM timeline for completing the OW1 NEPA and NHPA Section 106 reviews. A more detailed schedule will be requested in the solicitation/request for proposal used to identify and select a consultant to perform the scope of work described in the HPTP. Once the consultant is identified and under contract, the consultant, OW1, and the Participating Parties will develop and agree upon a final delivery schedule.

Summer 2023	Solicitation/Request for Proposal for consultant and contracting consultant to perform documentation.
Fall 2023	Preliminary documentation submitted for 30-day review first by OW1 and then by BOEM. Consultant revisions completed.
Winter 2023	Draft deliverables for 30-day review by Participating Parties followed by submission of final deliverables.

Funds and Accounting

OW1 will be responsible for funding and implementation of this mitigation measure.

Mitigation Measure 2 – HABS-like Level II Documentation

Purpose and Intended Outcome

Documentation to Historic American Buildings Survey Level II standards, substituting digital photography for the HABS-standard large-format photography, will serve to record the historic property's significance for state and local repositories. Upon review and acceptance by the NJ HPO, documentation will be available to the public via state and local repositories, as appropriate.

Scope of Work

The scope of work for the each historic property, as appropriate, will consist of the following:

- Collect and review materials and drawings relating to the construction and history of the property;
- Draft a historical report of the property
- Photograph the property using digital photography;
- Compile draft documentation for review and comment by Participating Parties;
- Develop final documentation, incorporating comments from the Participating Parties; and
- Upon acceptance of documentation by NJ HPO, distribute documentation packages to the NJ HPO and agreed-upon repositories.

Methodology

OW1 will release an RFP for consultant services and select a consultant to perform the Scope of Work listed for Mitigation Measure 2, for each historic property separately, for historic properties as a group, or as part of a larger consultancy RFP for additional or all mitigation measures listed herein. The chosen consultant should have staff that meet SOI Professional Qualifications for Architecture, Architectural History, or History. The photographer should have experience with HABS-like digital photography. A draft of the documents will be provided to the Participating Parties for review and comment. A final package will be developed incorporating comments from the Participating Parties and will be distributed to the NPS and agreed-upon repositories.

Standards

The project will comply with following standards:

- Historic American Buildings Survey Guidelines for Historic Reports (updated 2020); and
- Preparing HABS/HAER/HALS Documentation for Transmittal (updated 2021).

Deliverables

The following documentation is to be provided for review by the Participating Parties:

- Preliminary draft of HABS-like documentation

The following documentation is to be provided to the NJ HPO and agreed-upon repositories:

- Final HABS-like documentation

Schedule

The following is a preliminary schedule for execution of the HABS-like documentation based on the current BOEM timeline for completing the OW1 NEPA and NHPA Section 106 reviews. A more detailed schedule will be requested in the solicitation/request for proposal used to identify and select a consultant to perform the scope of work described in the HPTP. Once the consultant is identified and under contract, the consultant, OW1, and the Participating Parties will develop and agree upon a final delivery schedule.

Summer 2023	Solicitation/Request for Proposal for consultant and contracting consultant to perform documentation.
Fall 2023	Preliminary documentation submitted for 30-day review first by OW1 and then by BOEM. Consultant revisions completed.
Winter 2023	Draft deliverables for 30-day review by Participating Parties followed by submission of final deliverables.

Funds and Accounting

OW1will be responsible for funding and implementation of this mitigation measure.

Mitigation Measure 3 – Historic Structure Report

Purpose and Intended Outcome

A Historic Structure Report (HSR) includes the in-depth history of the building as well as immediate, short-term, and long-range preservation objectives based on the current condition of the building. An HSR helps inform consultation with stakeholders regarding historic property needs, such as repairs or restoration of exterior areas, weatherization and energy efficiency upgrades, or flood protection improvements. For example, the Ocean City Music Pier's location between the boardwalk and shoreline renders it vulnerable to sea level rise and flooding from storm events. Identifying and implementing appropriate flood protection or similar improvements could help preserve the building's integrity and offset potential adverse effects.

Scope of Work

The scope of work for each historic property, as appropriate, will consist of the following:

- Review the existing conditions of the property;
- Document and photograph the existing conditions;
- Consult with the property owner to determine physical concerns, possible future plans;
- Compile relevant documentation collected for the HRVEA, the Survey Report, and any associated Mitigation Measures;

- Draft an HSR to be distributed to the Participating Parties for review and comment;
- Develop a final HSR, incorporating any comments from the Participating Parties; and
- Distribute the final HSR to the property owner.

Methodology

OW1 will release an RFP for consultant services and select a consultant to perform the Scope of Work listed for Mitigation Measure 3, for each historic property individually, for the historic properties as a group, or as part of a larger consultancy RFP for additional or all mitigation measures listed herein. The chosen consultant should have staff that meet SOI Professional Qualifications for Architecture and Architectural History/History. This effort may also include participation from a structural engineer with demonstrated experience assessing historic buildings. A draft of the documents will be provided to the Participating Parties for review and comment. A final report will be developed incorporating comments from the Participating Parties and will be distributed to the property owner and NJ HPO.

Standards

The project will comply with following guidelines:

- National Park Service Preservation Brief 43: The Preparation and Use of Historic Structure Reports (2005).

Deliverables

The following documentation is to be provided for review by the Participating Parties:

- Preliminary draft of HSR.

The following documentation is to be provided to the NJ HPO and property owner:

- Final HSR.

Schedule

The following is a preliminary schedule for execution of an HSR based on the current BOEM timeline for completing the OW1 NEPA and NHPA Section 106 reviews. A more detailed schedule will be requested in the solicitation/request for proposal used to identify and select a consultant to perform the scope of work described in the HPTP. Once the consultant is identified and under contract, the consultant, OW1, and the Participating Parties will develop and agree upon a final delivery schedule.

Summer-Fall 2023	Solicitation/Request for Proposal for consultant and contracting consultant to perform documentation.
Winter 2023-2024	Preliminary documentation submitted for 30-day review first by OW1 and then by BOEM. Consultant revisions completed.

Spring 2024	Draft deliverables for 30-day review by Participating Parties followed by submission of final deliverables.

Funds and Accounting

OW1will be responsible for funding and implementation of this mitigation measure.

Mitigation Measure 4 – NJ/NRHP Nomination

Purpose and Intended Outcome

Listing in the New Jersey and National Registers of Historic Places provides recognition of a resource as historically significant and worthy of preservation. Listing provides a degree of review and protection from public encroachment. Section 106 of the National Historic Preservation Act of 1966, as amended, provides for a review of any federally permitted, licensed, financed, or assisted undertaking for properties listed in, or eligible for listing in, the National Register. The New Jersey Register law requires review of any state, county or municipal undertaking involving properties listed in the New Jersey Register.

Scope of Work

The scope of work for each historic property, as appropriate, will consist of the following:

- Compile relevant documentation collected for the HRVEA, the Survey Report, and any associated Mitigation Measures;
- Draft an NRHP nomination to be distributed to the Participating Parties for review and comment;
- Develop a final NRHP nomination, incorporating any comments from the Participating Parties;
- Distribute the NRHP nomination to NJ HPO; and
- Present NRHP nomination to New Jersey State Review Board for Historic Sites.

Methodology

OW1 will release an RFP for consultant services and select a consultant to perform the Scope of Work listed for Mitigation Measure 4, for each property individually, for historic properties as a group, or as part of a larger consultancy RFP for additional or all mitigation measures listed herein. The chosen consultant should have staff that meet SOI Professional Qualifications for Architecture, Architectural History, or History. A draft of the documents will be provided to the Participating Parties for review and comment. The final nomination will be developed incorporating comments from the Participating Parties and will be submitted to the NJ HPO.

Standards

The project will comply with following standards:

- NPS Bulletin 15: How to Apply the National Register Criteria for Evaluation (revised 1995); and

- NPS Bulletin 16A: How to Complete the National Register Registration Form (1997).

Deliverables

The following documentation is to be provided for review by the Participating Parties:

Preliminary draft of NRHP nomination.

The following documentation is to be provided to the NJ HPO:

- NRHP nomination.

Schedule

The following is a preliminary schedule for execution of one or more National Register Nomination(s) based on the current BOEM timeline for completing the OW1 NEPA and NHPA Section 106 reviews. A more detailed schedule will be requested in the solicitation/request for proposal used to identify and select a consultant to perform the scope of work described in the HPTP. Once the consultant is identified and under contract, the consultant, OW1, and the Participating Parties will develop and agree upon a final delivery schedule.

Fall 2023	Solicitation/Request for Proposal for consultant and contracting consultant to perform documentation.
Winter 2023-2024	Preliminary documentation submitted for 30-day review first by OW1 and then by BOEM. Consultant revisions completed.
Spring 2024	Draft deliverables for 30-day review by Participating Parties followed by submission of final deliverables.

Funds and Accounting

OW1will be responsible for funding and implementation of this mitigation measure.

Mitigation Measure 5– Historic Context and Multi-Property Documentation Measures

Purpose and Intended Outcome

Based on input from Participating Parties during consultation, historic contexts and multi-property documentation consistent with agreed upon themes will be developed to disseminate significance of specific property types to Jersey Shore history. Examples of potential themes to be presented include Boardwalks of New Jersey, Hotels on the Jersey Shore, and Mid-Century High-Rises on the Jersey Shore. Content would draw largely on additional research to expand on existing documentation. Each context will also provide registration requirements to assist in future NRHP evaluations. For New Jersey Shore Boardwalks, additional documentation including cultural landscape study, historic district survey and

evaluation and National Register of Historic Places Multiple Property Documentation Form with National Register nomination will be prepared.

Scope of Work

The scope of work for each historic context or multi-property documentation, as appropriate, will consist of the following:

- Compile research appropriate to each historic context and, for multi-property documentation, conduct require fieldwork;
- Deliver agreed upon historic context(s) or multi-property documentation for review by OW1, BOEM, and Participating Parties; and
- Deliver final materials to NJ HPO.

Methodology

OW1 will release an RFP for consultant services and select a consultant to perform the Scope of Work listed for Mitigation Measure 5, for each context, or as part of a larger consultancy RFP for additional or all mitigation measures listed herein. The chosen consultant should have staff that meet SOI Professional Qualifications for Architecture, Architectural History, or History. A draft of the documents will be provided to the Participating Parties for review and comment. The final documents will be developed incorporating comments from the Participating Parties and will be submitted to NJ HPO by OW1 in an NJ HPO-approved format.

Standards

The project will comply with following standards and guidelines:

- NPS White Paper: The Components of a Historic Context, Barbara Wyatt (2009);
- NPS Bulletin 15: How to Apply the National Register Criteria for Evaluation (revised 1995); and
- New Jersey Historic Comprehensive Statewide Historic Preservation Plan 2023–2028 (2022).

Deliverables

The following documentation is to be provided for review by the Participating Parties and ultimately, submitted to the NJ HPO:

- Historic context(s).

Schedule

The following is a preliminary schedule for execution of historic contexts based on the current BOEM timeline for completing the OW1 NEPA and NHPA Section 106 reviews. A more detailed schedule will be requested in the solicitation/request for proposal used to identify and select a consultant to perform the

scope of work described in the HPTP. Once the consultant is identified and under contract, the consultant, OW1, and the Participating Parties will develop and agree upon a final delivery schedule.

Fall 2023	Solicitation/Request for Proposal for consultant and contracting consultant to perform tasks.
Winter 2023-2024	Preliminary documentation submitted for 30-day review first by OW1 and then by BOEM. Consultant revisions completed.
Spring 2024	Draft deliverables for 30-day review by Participating Parties followed by submission of final deliverables.

Funds and Accounting

OW1will be responsible for funding and implementation of this mitigation measure.

Mitigation Measure 6 – Interpretive/Educational Content

Purpose and Intended Outcome

Based on input from Participating Parties during consultation, interpretive and educational materials consistent with agreed upon themes, target audiences, and objectives will be developed to disseminate the historic and architectural significance of the historic property. Specific themes to be presented may include the history of the property; the architect of the property, and/or the role of the property/property type in the development of the municipality. Dissemination could take place in a variety of formats, including onsite interpretive materials, onsite signage, and/or web-based media. In each case, content would draw largely on materials gathered for other Mitigation Measures, HABS documentation, historic and present-day photographs, and oral histories. Materials could be packaged or presented to reach not only passersby, but school audiences, local residents, and local history groups.

Scope of Work

The scope of work for each historic property, as appropriate, will consist of the following:

- Compile relevant documentation collected for Mitigation Measures 1–5;
- Determine and organize appropriate materials for presentation in collaboration with Participating Parties, property owners, and website manager;
- Deliver agreed upon interpretive and educational materials for review by OW1, BOEM, and Participating Parties;
- Deliver final signage content, as appropriate, for fabrication by OW1/contracted consultant; and
- Deliver final electronic materials, as appropriate, to property owners and agreed-upon website managers.

Methodology

OW1 will release an RFP for consultant services and select a consultant to perform the Scope of Work listed for Mitigation Measure 6, for each property individually, for historic properties as a group, or as part of a larger consultancy RFP for additional or all mitigation measures listed herein. The chosen consultant should have staff that meet SOI Professional Qualifications for Architecture, Architectural History, or History. A draft of the documents will be provided to the Participating Parties, property owner, and website manager, as appropriate, for review and comment. The final interpretive and educational packages will be developed incorporating comments from the Participating Parties and will be submitted for fabrication by OW1 for interpretive signage, as appropriate, and to the property owners and agreed-upon website managers for electronic content.

Standards

The project will comply with following standards:

- Website standards, as determined by the property owner and website manager.
- Signage standards, as determined by the property owner and appropriate municipality.

Deliverables

The following documentation is to be provided for review by the Participating Parties:

- Compilation of selected materials from Mitigation Measures 1–5.
- Any Interpretive signage, as appropriate.

The following documentation is to be provided to the property owner and website manager:

- Final electronic materials for website.

The following materials are to be provided to the property owner:

- Interpretive signage, as appropriate, upon fabrication by OW1.

Schedule

The following is a preliminary schedule for execution of interpretive and educational materials based on the current BOEM timeline for completing the OW1 NEPA and NHPA Section 106 reviews. A more detailed schedule will be requested in the solicitation/request for proposal used to identify and select a consultant to perform the scope of work described in the HPTP. Once the consultant is identified and under contract, the consultant, OW1, and the Participating Parties will develop and agree upon a final delivery schedule.

Fall 2023	Solicitation/Request for Proposal for consultant and contracting consultant to perform tasks.

Winter 2023-2024	Preliminary documentation submitted for 30-day review first by OW1 and then by BOEM. Consultant revisions completed.
Spring 2024	Draft deliverables for 30-day review by Participating Parties followed by submission of final deliverables.

Funds and Accounting

OW1will be responsible for funding and implementation of this mitigation measure.

Mitigation Measure 7–Funding for Visitor Experience and Public Access

Purpose and Intended Outcome

Based on input from Participating Parties during consultation, funding will be provided to facilitate access and support the visitor experience at historic properties with public visitation. Examples for use of these funds may include: directional signage, parking, improvements to site circulation (including ADA accessibility), public safety and security, and funding for maintenance and improvement to areas heavily used or damaged due to public visitation. When applicable, physical improvements to the properties should adhere to applicable preservation standards, including but not limited to the Secretary of the Interior Standards for Rehabilitation. The intent of this funding is to support and improve public access at these historic properties to foster an appreciation of the sites and their contribution to the historic character of the Jersey Shore. This funding should ensure that improvements are made with careful consideration of the historic character of the property and sympathetic to the existing physical structure. This document provides examples of potential visitor experience and public access needs but anticipates that consultation with stakeholders may reveal more specific needs.

Scope of Work

The scope of work for each historic property, as appropriate, will consist of the following:

- Determine priority projects in collaboration with Participating Parties and property owners.
- Develop plans appropriate to the identified project, and submit plans for review by OW1, BOEM, and Participating Parties.;
- Identify qualified contractors to execute plans.
- Complete planned work and acquire final approval from OW1, BOEM, and Participating Parties, or a designated representative for the three entities.

Methodology

OW1 will provide funds to the property owner for an approved Scope of Work. In consultation with OW1, the property owner will solicit bids for consultant services and select a consultant to perform the approved Scopes of Work,. The chosen consultant should have staff that meet SOI Professional Qualifications for Architecture or Architectural History. Draft project plans developed by the consultant will be provided to

OW1, the Participating Parties and the property owner, as appropriate, for review and comment. Work will be monitored as needed, and a final walkthrough and approval of work is required. Work must be approved by OW1, Participating Parties, and the property owner, or a designee of all three.

Standards

The project will comply with following standards:

- Local preservation standards as applicable.
- The Secretary of the Interior Standards for Rehabilitation (for applicable projects).

Deliverables

The following documentation is to be provided for review by the Participating Parties:

- Project plans.
- Photos of completed work.

Schedule

The following is a preliminary schedule for execution of visitor experience and public access improvements based on the current BOEM timeline for completing the OW1 NEPA and NHPA Section 106 reviews. A more detailed schedule will be requested in the solicitation/request for proposal used to identify and select a consultant to perform the scope of work described in the HPTP. Once the consultant is identified and under contract, the consultant, OW1, and the Participating Parties will develop and agree upon a final delivery schedule.

Fall 2023	Determination of priority projects at each historic property.
Winter 2023-2024	Solicitation/Request for Proposal for consultant and contracting to perform tasks.
Spring 2024	Execution of projects followed by submission of complete project photos and approval of work. .

Funds and Accounting

OW1will be responsible for funding and implementation of this mitigation measure.

IMPLEMENTATION

Table 5 presents a summary of potential mitigation measures applicable to adversely affected historic properties.

Table 5. Potential Mitigation Measures by Historic Property

Historic Property	Mitigation Measure						
	1	2	3	4	5	6	7
Ocean City Boardwalk				√	√	√	√
Ocean City Music Pier	√		√			√	√
Flanders Hotel		√			√	√	
U.S. Lifesaving Station #35	√					√	√
North Wildwood Lifesaving Station	√			√		√	
Hereford Inlet Lighthouse						√	
Brigantine Hotel		√		√	√	√	
Absecon Lighthouse	√					√	√
Atlantic City Boardwalk				√	√	√	√
Atlantic City Convention Hall						√	√
Ritz-Carlton Hotel		√		√	√	√	
Riviera Apartments	√			√	√	√	
Vassar Square Condominiums	√			√	√	√	
114 S Harvard Avenue		√	√	√		√	
Lucy the Margate Elephant						√	√
Great Egg Coast Guard Station	√					√	√
U.S. Coast Guard Station #119	√					√	√

Mitigation Measure 1: HABS Level II Documentation
Mitigation Measure 2: HABS-like Level II Documentation
Mitigation Measure 3: Historic Structure Report
Mitigation Measure 4: NJ/NRHP Nomination
Mitigation Measure 5: Historic Context
Mitigation Measure 6: Interpretive/Educational Content
Mitigation Measure 7: Funding for Visitor Experience and Public Access

Timeline

This section of the HPTP identifies which mitigation measures identified within this HPTP must be implemented prior to the commencement of construction activities for the Undertaking. HABS Photography and HABS-like Digital Photography must be completed prior to construction. All other tasks can occur during and/or after construction. Mitigation measures within this HPTP are to be implemented within one year of its finalization, unless a different timeline is agreed upon by Participating Parties and accepted by BOEM and may be completed simultaneously, as applicable.

The proposed scope of work for Mitigation Measures must be completed within one year unless a different timeline is agreed upon by Participating Parties and accepted by BOEM. Photography for Mitigation

Measures 1 and 2 as outlined herein must be provided to Participating Parties for their review no less than 30 days prior to commencement of project construction unless a different timeline is agreed upon by Participating Parties and accepted by BOEM. OW1 must issue RFPs within 4 months of commencing mitigation measures pursuant to this HPTP.

Reporting

Following the execution of the MOA until it expires or is terminated, OW1 shall prepare and, following BOEM review and approval, provide all signatories, invited signatories, and consulting parties to the MOA a summary report detailing work undertaken pursuant to the MOA consistent with MOA Stipulation IX (Monitoring and Reporting), including the mitigation measures outlined in the final HPTP. This report will be prepared, reviewed, and distributed by January 31, and summarize the work undertaken during the previous year.

Organizational Responsibilities

BOEM

- Make all federal decisions and determine compliance with Section 106;
- Ensure that mitigation measures adequately resolve adverse effects, consistent with the NHPA, and in consultation with the Participating Parties;
- Consult with OW1, NJ SHPO, ACHP, and other consulting parties with demonstrated interest in the affected historic properties; and
- Review and approve the annual summary report prepared and distributed to the consulting parties by OW1.

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- Fund and implement the mitigation measures Stipulated in III.B of the MOA and described in the Mitigation Measures section of this HPTP;
- Prepare Annual Reporting, submit reporting to BOEM for review and approval, and distribute to Consulting Parties per the Mitigation Measures section of this HPTP;
- Submit information for Participating Party review per the Mitigation Measures section of this HPTP;
- Creation and distribution of RFPs to solicit consultant support for mitigation measure fulfillment;
- Proposal review and selection of a consultant who meets the qualifications specified in the SOI Qualifications Standards for History, Architectural History and/or Architecture (62 FR 33708);
- Initial review of Documentation for compliance with the Scope of Work, Methodology and Standards;
- Distribution of Documentation to Participating Parties for their review; and
- Review and comment on deliverables.

New Jersey SHPO

- Consult, when necessary, on implementation of this HPTP.

Advisory Council on Historic Preservation

- Consult, when necessary, on implementation of this HPTP.

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State Regulations

New Jersey Register of Historic Places Act of 1970 (N.J.S.A. 13:1B-15.128 et seq.):
https://www.state.nj.us/dep/hpo/2protection/njsa13.htm

Public documents related to Ocean Wind1

https://www.boem.gov/ocean-wind
https://www.boem.gov/ocean-wind-1-construction-and-operations-plan
[Ocean Wind1 FEIS]
[Ocean Wind1 ROD]

General Information on Section 106

https://www.achp.gov/protecting-historic-properties/section-106-process/introduction-section-106

https://www.achp.gov/digital-library-section-106-landing/section-106-consultation-involving-national-historic-landmarks

Ocean Wind 1
An Ørsted & PSEG project

Historic Property Treatment Plan for Ancient Submerged Landform Features

Ocean Wind 1
An Ørsted & PSEG project

Applicant-Proposed Draft – Subject to Review by BOEM and Consulting Parties

Draft Historic Property Treatment Plan

for the

Ocean Wind 1 Farm

Ancient Submerged Landform Features
Federal Waters on the Outer Continental Shelf

Submitted to:

BOEM
Bureau of Ocean Energy Management

Bureau of Ocean Energy Management
U.S. Department of the Interior

Prepared for:

Ocean Wind 1
An Ørsted & PSEG project

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ABSTRACT

Federal Undertaking:	Ocean Wind1 Offshore Wind Farm Project
Location:	Outer Continental Shelf, New Jersey
Federal and State Agencies:	Bureau of Ocean Energy Management U.S. Army Corps of Engineers New Jersey Department of Environmental Protections/State Historic Preservation Office Advisory Council on Historic Preservation
ACHP Project No.:	
Regulatory Process:	National Environmental Policy Act Section 106 of the National Historic Preservation Act
Regulatory Action:	Cultural Resources Mitigation pursuant to Bureau of Ocean Energy Management approval of the *Ocean Wind 1 Wind Farm Construction and Operations Plan* (BOEM,XXXX).
Potential Adverse Effect Finding for:	13 Properties in Cape May, Ocean, and Atlantic Counties
Date:	April 2023

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LIST OF ACRONYMS

ACHP	Advisory Council on Historic Preservation
ADLS	Aircraft Detection Lighting System
APE	Area of Potential Effects
BOEM	Bureau of Ocean Energy Management
CFR	Code of Federal Regulations
COP	Construction and Operations Plan
FEIS	Final Environmental Impact Statement
FR	Federal Regulation
HDR	HDR, Inc.
HPTP	Historic Properties Treatment Plan
MOA	Memorandum of Agreement
N/A	Not Applicable
NHL	National Historic Landmark
NHPA	National Historic Preservation Act of 1966
NJ DEP	New Jersey Department of Environmental Protection
NJ SHPO	New Jersey State Historic Preservation Office(r)
NPS	National Park Service
NRHP	National Register of Historic Places
OCS	Outer Continental Shelf
OCW1	Ocean Wind1 Offshore Wind Farm Project
QMA	Qualified Marine Archaeologist
PRDP	Post-Review Discoveries Plan
RFP	Request for Proposals
ROD	Record of Decision
SOI	Secretary of the Interior
TCP	Traditional Cultural Property
USCG	United States Coast Guard
WTG	Wind Turbine Generator

1.0 INTRODUCTION

Executive Summary

This Historic Properties Treatment Plan (HPTP) provides background data, historic property information, and detailed steps that will be implemented to carry out the potential cultural resources mitigation actions identified by the Bureau of Ocean Energy Management (BOEM) for the Ocean Wind1 Offshore Wind Farm (OCW1). The mitigation actions, if required, will be developed in consultation with the New Jersey State Historic Preservation Officer (NJ SHPO) and other National Historic Preservation Act (NHPA) Section 106 review consulting parties as elements of the Final Environmental Impact Statement (FEIS) and issued in accordance with 40 CFR parts 1500-1508, 36 CFR §§ 800.8, 800.10. This HPTP outlines the mitigation measures, implementation steps, and timeline for actions.

Section 1.0 Introduction: Outlines the content of this HPTP.

Section 2.0 Cultural Resources Regulatory Context: Briefly summarizes the OCW1 (the Undertaking) while focusing on cultural resources regulatory contexts (federal, tribal, state, and local, including preservation restrictions), identifies the 13 historic properties discussed in this HPTP that will be adversely affected by the Undertaking, and summarizes the pertinent conditions that guided the development of this document.

Section 3.0 Existing Conditions and Historic Significance: Provides a physical description of each historic property included in this HPTP. Set within their historic context, the applicable National Register of Historic Places (NRHP) criteria for each resource is discussed with a focus on the contribution of an ocean setting to its significance and integrity.

Section 4.0 Mitigation Measures: Presents specific steps to carry out the mitigation actions identified proposed by Ocean Wind 1 in the COP. Each mitigation action includes a detailed description, intended outcome, and specifications that include maximum cost, methods, standards, requirements for documentation, and reporting instructions. Property-specific challenges, if any have been identified, are outlined as well.

Section 5.0 Implementation: Establishes the process for executing mitigation actions at the Historic Properties, as identified in Section 4.0 of this HPTP. For each action, organizational responsibilities are outlined, a timeline is provided, and regulatory reviews are listed.

Section 6.0 References: A list of works cited in this HPTP.

2.0 CULTURAL RESOURCES REGULATORY CONTEXT

Project Overview: Ocean Wind1 Offshore Wind Farm (OCW1)

BOEM has determined that approval, approval with modification, or disapproval of the OCW1 COP constitutes an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA; 54 U.S.C. § 306108) and its implementing regulations (36 CFR 800), and that the activities proposed under the COP have the potential to affect historic properties. The OCW1 undertaking is defined as a wind-powered electric generating facility composed of up to 98 wind turbine generators (WTGs) and associated foundations, up to three offshore substations, and inter-array cables connecting the WTGs and the offshore substations (**Figure 2-1**). The WTGs, foundations, offshore substations, and inter-array cables will all be in federal waters on the Outer Continental Shelf (OCS), approximately 15 statute miles (mi) (13 nautical miles [nm]) southeast of Atlantic City, New Jersey. Cables will be buried below the seabed.

Export cables from the offshore substations will extend along the seabed and connect to buried onshore export cables, which will connect to two interconnection points, at Oyster Creek and BL England. Onshore cables will be buried within and up to a 15-meters (m)-wide (50-feet[ft]-wide) construction corridor with a permanent easement up to 9.8-m-wide (30-ft-wide) for BL England. Two new onshore substations are proposed at Oyster Creek and BL England along with grid connections to the existing grid for each substation. Onshore substation locations would be sited on existing parcels containing decommissioned power facilities at BL England and Oyster Creek. The Oyster Creek and BL England onshore substation locations would require a permanent site up to 31.5 acres (ac) (12.7 hectares [ha]) and 13 ac (5.3 ha) respectively, for the substation equipment and buildings, energy storage, and stormwater management and associated landscaping. Underground or overhead transmission lines would connect the substations to the planned interconnection point (grid connections).

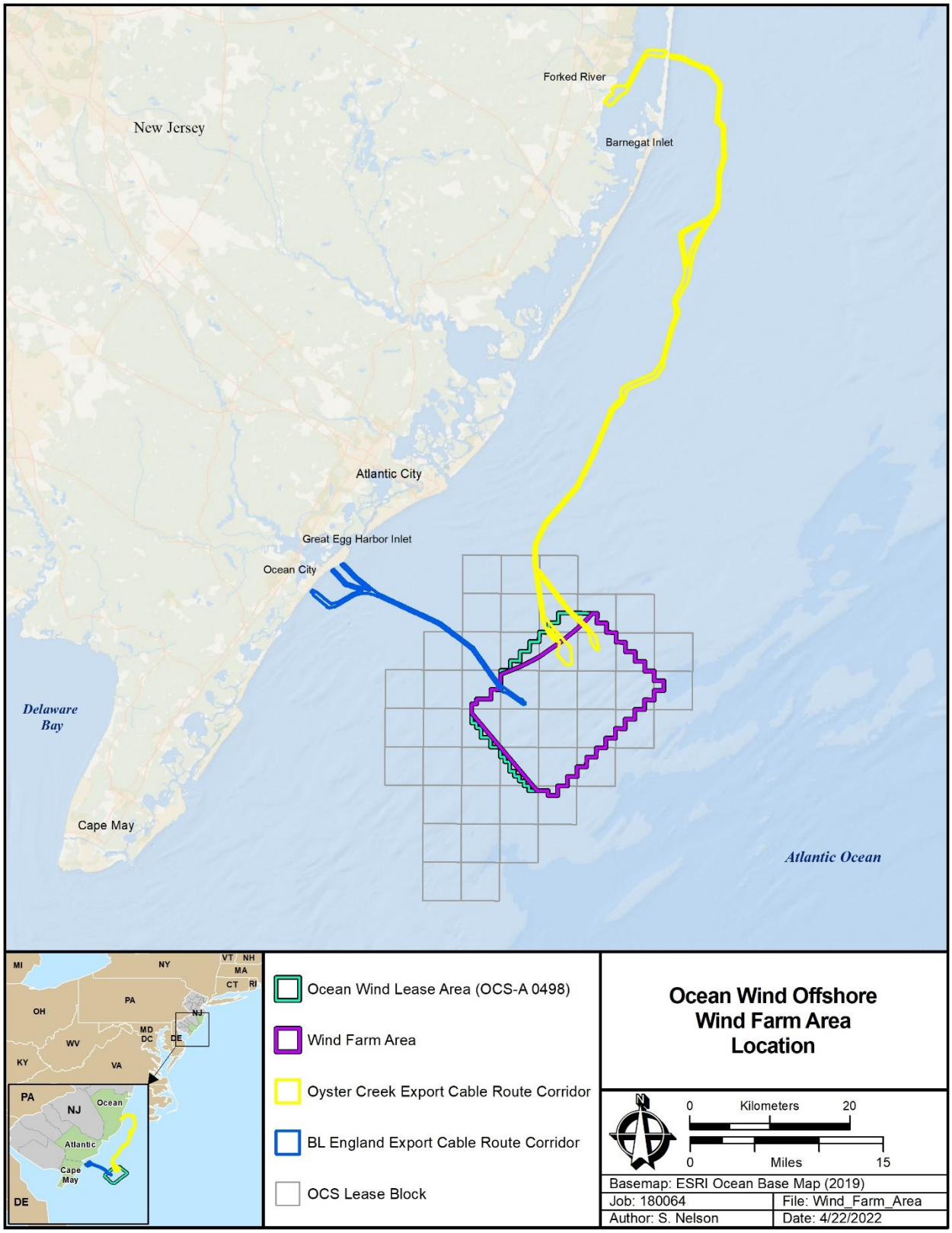

Figure 2-1. Project Location

Section 106 of the National Historic Preservation Act (NHPA)

This HPTP was developed based on coordination with BOEM and reflects consultations conducted by BOEM with multiple consulting parties, including the NJ SHPO and Native American Tribes for whom the historic properties have traditional cultural and/or religious significance. The regulations at 36 CFR § 800.8 provide for use of the National Environmental Policy Act (NEPA) process to fulfill a federal agency's National Historic Preservation Act (NHPA) Section 106 review obligations in lieu of the procedures set forth in 36 CFR § 800.3 through 800.6. Under these provisions, issuance of a Record of Decision (ROD) and implementation of relevant conditions will resolve adverse effects to historic properties caused by the Undertaking. BOEM may also choose to develop an NHPA Section 106 Memorandum of Agreement (MOA) to resolve adverse effects to historic properties. As defined in 36 CFR § 800.6 (c), a project specific MOA will record the terms and conditions agreed upon to resolve adverse effects of the undertaking (i.e., the approval, approval with modification, or disapproval of the OCW1 COP). If BOEM chooses to approve the OCW1 COP or approve the COP with modifications, implementation of the NHPA Section 106 MOA will be in included in the ROD).

Ocean Wind 1 will implement the following applicant-proposed environmental protection measures to avoid and minimize potential impacts to marine archaeological resources:

- Native American tribal representatives were involved, and will continue to be involved, in marine survey protocol design, execution of the surveys, and review of the results;
- An anchoring plan for vessels will be developed prior to construction to identify avoidance/no-anchorage areas around historic properties to avoid anchoring impacts to these resources; and
- An Post-Review Discoveries Plan (PRDP) will be implemented that will include stop-work and notification procedures to be followed if a potentially significant archaeological resource is encountered during construction (refer to the Project's Marine Archaeological Resource Assessment Report [COP Appendix F-1]).

This HPTP describes the applicant-proposed treatment plans to resolve the remaining adverse effects after application of the above-listed measures. The mitigation measures reflect refinement of the conceptual mitigation framework proposed by Ocean Wind1 (see COP Appendix F-4).

All activities implemented under this HPTP will be conducted in accordance with any conditions imposed by BOEM in its ROD and with applicable local, state, and federal regulations and permitting requirements. Responsibilities for specific compliance actions are described in further detail in Section 5.0, Organizational Responsibilities.

Participating NHPA Section 106 Consulting Parties

BOEM initiated consultation under Section 106 with invitations to potential consulting parties on **[INSERT DATE]**, including the NJ SHPO and ACHP. BOEM invited the following federally and state recognized Tribes/Tribal Nations with historic and cultural ties to the Ocean Wind 1 project areas to participate in the Section 106 review as consulting parties:

- Absentee-Shawnee Tribe of Indians of Oklahoma
- Delaware Tribe of Indians
- Eastern Shawnee Tribe of Oklahoma
- Shawnee Tribe
- Stockbridge-Munsee Community Band of Mohican Indians
- The Delaware Nation
- The Narragansett Indian Tribe
- The Shinnecock Indian Nation

In addition to the federally and state recognized Tribes/Tribal Nations, BOEM invited the following state recognized Tribes/Tribal Nations to participate as Section 106 consulting parties.

- Nanticoke Indian Association, Inc.
- Nanticoke Lenni-Lenape Tribal Nation
- Nanticoke Lenni-Lenape Tribe
- Powhatan Renape Nation
- Ramapough Lenape Indian Nation
- Ramapough Mountain Indians
- Lenape Indian Tribe of Delaware

Ocean Wind 1 anticipates the above-listed parties and any subsequently identified parties will participate in the finalization of this HPTP through BOEM's Section 106 consultation process.

After its initial invitation, BOEM hosted the following Section 106 consultation meetings with consulting parties on the following dates:

- April 13, 15, and 20, 2021: NEPA Public Scoping Meeting
- March 8, 2022: Section 106 Consulting Party Meeting 1
- May 4, 2022: Section 106 Consulting Party Meeting 2

Ocean Wind1 anticipates that BOEM will hold additional meetings pursuant to Sections 106 and 110(f) of the NHPA and in accordance with 36 CFR 800.8.

Consulting Parties referred to in this HPTP include the consulting parties, federally and state recognized Tribes/Tribal Nations, and state recognized Tribes/Tribal Nations detailed above. No additional Consulting Parties are expected to be involved in the implementation of this HPTP, not all parties identified may choose to provide input or participate in the HPTP mitigation process.

3.0 EXISTING CONDITIONS AND HISTORIC SIGNIFICANCE

Historic Properties

This HPTP involves thirteen (13) historic properties, as identified below in **Table 3-1**. All 13 historic properties are ancient, submerged landform features (ASLFs) identified during geophysical and

geotechnical investigations within the Ocean Wind 1 Wind Farm Area (WFA) and within the BL England and Oyster Creek Export Cable Routes (ECRs) Corridors.

Table 3-1. Historic Properties included in the HPTP

Name	Project Component Area
Target 21	Wind Farm Area
Target 22	Wind Farm Area
Target 23	Wind Farm Area
Target 24	Wind Farm Area
Target 25	Wind Farm Area
Target 26	Wind Farm Area
Target 28	Wind Farm Area
Target 29	Wind Farm Area
Target 30	Wind Farm Area
Target 31	Wind Farm Area
Target 33	BL England Export Cable Route Corridor
Target 34	Oyster Creek Export Cable Route Corridor
Target 35	Oyster Creek Export Cable Route Corridor

Adversely Affected Historic Properties

Physical Description and Existing Conditions

Target 21: Target 21 represents the northern portion of an interfluve of U30/H30 flanked on the west by a meandering channel and a possible sinuous channel on the east. This topographical high between two channels was most likely a vegetative-rich area. Covering approximately 29.4 ha (146.2 ac), the acoustic imagery of Target 21 indicates a well-preserved margin between two divergent river channels. The reflector is buried 7.5 m (24.7 ft) below seabed (bsb) and is 874.3 m (2,868.4 ft) at its widest. Approximately 40% (23.6 ha [58.2 ac]) of Target 21 is present within the APE around a proposed turbine location and the inter-array cable corridor.

Target 22: Target 22 represents two possible landscapes based on the ground model and the seismic data. Seismic data appears to represent a preserved interfluve associated with U30/H30, while the ground model depicts a margin adjacent to a deeply incised channel. Marine transgression removed a large portion of the possible eastern tributary, resulting in two possible interpretations. Either environment would have been a vegetative rich landscape; archaeological core AC-15 recovered an intact paleosol from this area, aiding in the interpretation of Target 22. Covering approximately 181.9 ha (449.6 ac), the acoustic imagery of Target 22 suggests a well-preserved margin between a major paleochannel and a tributary. The reflector is buried 7.8 m (25.6 ft) bsb and is 1,478.9 m (4,852.0 ft) at its widest. Approximately 70% (127.8 ha [315.7 ac]) of Target 22 is present within the APE around a proposed turbine location and the inter-array cable corridor.

Target 23: Target 23 represents the western flank of a meandering paleochannel associated with U30/H30. Marine transgression removed portions of this margin, downcutting into the potential former subaerial landscape. Nearby archaeological core AC-03_rev did not yield any evidence of a paleosol as it penetrated through the channel. Covering approximately 202.0 ha (499.2 ac), the acoustic imagery of Target 23 evidences a slightly eroded, yet preserved paleochannel flank. The reflector is buried 6.2 m (20.3 ft) bsb and is 2,468.7 m (8,099.4 ft) at its widest. Approximately 76% (154.5 ha [381.7 ac]) of Target 23 is present within the APE around a proposed turbine location and the inter-array cable corridor.

Target 24: Target 24 represents the eastern flank of a meandering paleochannel associated with U30/H30. Marine transgression removed portions of this margin, downcutting into the former subaerial landscape. Archaeological core AC-16 recovered an intact paleosol from this area, aiding in the interpretation of Target 24. Covering approximately 126.5 ha (312.5 ac), the acoustic imagery of Target 24 indicates a slightly eroded, yet preserved paleochannel flank. The reflector, , is buried 3.2 m (10.5 ft) bsb and is 1,178.7 m (3867.1 ft) at its widest. Approximately 60% (75.6 ha [186.9 ac]) of Target 24 is present within the APE around a proposed turbine location and the inter-array cable corridor.

Target 25: Target 25 represents the eastern flank and floodplain of a major paleochannel associated with U30/H30. This geomorphic feature of archaeological interest is an extensive, well-preserved surface represented by a dark reflector in seismic imagery covering approximately 650.6 ha (1,607.6 ac). Archaeological cores AC-13_rev and AC-14_rev recovered similar intact paleosols from within Target 25, aiding in the interpretation of Target 25. The reflector is buried 5.8 m (19.0 ft) bsb and is 2,364.3 m (7,756.9 ft) at its widest. Approximately 41% (268.1 ha [662.5 ac]) of Target 25 is present within the APE intersecting four turbine locations and inter-array cable corridors.

Target 26: Target 26 represents a discrete portion of the western flank and floodplain of a meandering paleochannel associated with U30/H30, similar to Target 23. Covering approximately 33.9 ha (83.7 ac), the acoustic imagery of Target 26 suggests a well-preserved paleochannel flank and floodplain. The reflector is buried 1.8 m (5.9 ft) bsb and is 763.1 m (2,503.6 ft) at its widest. Nearby archaeological core AC-01 did not yield any evidence of a paleosol as it penetrated through the channel (see 2020 Marine Archaeological Geotechnical Campaign). Approximately 99% (33.4 ha [82.5 ac]) of Target 26 is present within the APE around a proposed turbine location and the inter-array cable corridor.

Target 28: Target 28 represents an interfluve between a bifurcation or convergence of a major paleochannel and a tributary associated with U30/H30. A significant portion of this geomorphic feature of archaeological interest remains intact, although marine transgression removed portions of this feature in the northeast, downcutting into the potential former subaerial landscape. Nearby archaeological cores AC-09a and AC-10 did not yield any evidence of a paleosol, as both penetrated the paleochannel. Covering approximately 210.8 ha (520.9 ac), the acoustic imagery of Target 28 indicates a well-preserved surface between two paleochannels. The reflector is buried 2.5 m (8.2 ft) bsb and is 1,7551.1 m (5,758.2 ft) at its widest. Approximately 24% (50.6 ha [125.1 ac]) of Target 28 is present within the APE around a proposed turbine location and the inter-array cable corridor.

Target 29: Target 29 represents an interfluve between a meandering paleochannel and a straight paleochannel associated with U30/H30. Marine transgression removed portions of this margin, truncating the floodplains. Additionally, portions of the meandering paleochannel cut through Target 29 for a period. Nearby archaeological core AC-05a did not yield evidence of a paleosol as it penetrated through a thin portion of U30/H30 to capture lower stratigraphic units. Covering approximately 203.4 ha (502.7 ac), the acoustic imagery of Target 29 suggests a slightly eroded, yet preserved paleochannel flank. The reflector is buried 1.1 m (3.6 ft) bsb and is 1,907.7 m (6,258.8 ft) at its widest. Approximately 41% (83.0 ha [205.2 ac]) of Target 29 is present within the APE around four proposed turbine locations and inter-array cable corridors.

Target 30: Target 30 represents a discrete portion of the eastern flank of a major paleochannel associated with U30/H30. Nearby archaeological core AC-04 captured evidence of a paleosol; however, the spatial extent of this surface is highly truncated ephemeral due to marine transgression. Covering approximately 23.7 ha (58.5 ac), the acoustic imagery of Target 30 indicates a slightly eroded, yet preserved paleochannel flank. The reflector is buried 2.5 m (8.2 ft) bsb and is 417.3 m (1,369.1 ft) at its widest. Approximately 69% (16.3 ha [40.4 ac]) of Target 30 is present within the APE around a proposed turbine location and the inter-array cable corridor.

Target 31: Target 31 represents an extensive portion of the western flank of a major paleochannel associated with U30/H30. Marine transgression removed portions of this margin, downcutting into the potential former subaerial landscape. Nearby archaeological core AC-08 did not yield any evidence of a paleosol as it penetrated through the channel. Radiocarbon dating from Target 31 suggests the former subaerial landscape is older than the archaeological framework for human settlement in North America; however, overlying stratigraphic units dated within the accepted timeframe. Covering approximately 59.6 ha (147.6 ac), the acoustic imagery of Target 31 indicates a slightly eroded, yet preserved paleochannel flank. The reflector is buried 1.8 m (5.9 ft) bsb and is 1,828.9 m (6,000.3 ft) at its widest. Approximately 79% (47.3 ha [116.9 ac]) of Target 31 is present within the APE around two proposed turbine locations and array cable corridors.

Target 33: Target 33 is located along the BL England ECR Corridor and represents the flank and floodplain of a paleochannel associated with U30/H30. Marine transgression removed portions of this paleolandform, downcutting into the potential former subaerial landscape. Acoustic imagery of Target 33 is similar to other targets within the WFA (i.e., Target 29). Covering approximately 55.9 ha (138.2 ac), the acoustic imagery of Target 33 indicates a slightly eroded, yet preserved paleochannel flank. The reflector is buried 2.3 m (7.5 ft) bsb and is 1,198.8 m (3,933.1 ft) at its widest. Approximately 69% (38.4 ha [94.8 ac]) of Target 33 is present within the APE.

Target 34: Target 34 is within the Oyster Creek ECR Corridor and represents the preserved channel margins of a minor tributary associated with U30/H30. Marine transgression removed portions of this paleolandform, downcutting into the potential former subaerial landscape. Acoustic imagery of Target 34 is similar to other targets within the WFA (i.e., Target 29). Covering approximately 13.1 ha (32.3 ac), the acoustic imagery of

Target 34 is indicative of a slightly eroded, yet preserved paleochannel flank. The reflector is buried 4.0 m (13.1 ft) bsb and is 743.2 m (2,438.3 ft) at its widest. Approximately 80% (10.5 ha [25.8 ac]) of Target 34 is present within the APE.

Target 35: Target 35 is in the Oyster Creek ECR Corridor and a small portion of the WFA and represents the eastern flank of a major paleochannel associated with U30/H30. Marine transgression removed portions of this margin, downcutting into the potential former subaerial landscape. Acoustic imagery of Target 35 is similar to other targets within the WFA (i.e., Target 29). Covering approximately 20.4 ha (50.5 ac), the acoustic imagery of Target 35 suggests a slightly eroded, yet preserved paleochannel flank. The reflector is buried 4.3 m (14.1 ft) bsb and is 1,110.8 m (3,644.3 ft) at its widest. Target 35 exists entirely within the APE.

Historic Context

The paleolandscape reconstruction for the APE based on the geophysical and geotechnical data indicated that unit 30 and its corresponding basal horizon (U30/H30) represented the last subaerial surface available for human occupation prior to the terminal Pleistocene sea level transgression. Radiocarbon data collected during the geoarchaeological campaign confirmed that U30/H30 dated to 9,351 cal BP to 13,646 cal BP. This timeframe correlates to the archaeologically defined Paleoindian Period (Lothrop et al. 2016) and Early Archaic Period (Kraft and Mournier 1982). Targets 21-26, 28-31, and 33-35 represent discontinuous portions of this surface and are the preserved margins adjacent to the paleo-fluvial network that once dominated this landscape. The interpretation of these ASLFs suggests that stable, former subaerial surfaces, such as these, are the most likely locations where evidence of human occupation could be preserved.

Although direct evidence of the former inhabitants does not exist within the current dataset, the paleoenvironmental reconstruction and correlation to similar, known terrestrial archaeological sites suggest the ASLFs are types of locations frequented by indigenous peoples in the region. Paleoindian and early Archaic peoples were highly mobile populations that relied on resource rich areas for survival, such as river valleys. Coastal adaptation during this time is not well-understood due to the nature of marine transgression. It is highly likely that the former coastline now drowned and buried on the OCS also was a locale frequented and utilized by the same indigenous populations.

The ASLFs discussed above represent preserved elements of a former subaerial surface, one that was likely home to the indigenous peoples. These types of features are recognized as having traditional cultural significance to the consulting Native American Tribes, many of whom are ancestors of the people that once traversed this landscape. Several of the Tribes maintain within their traditions that their people have always been present here. Their Tribal histories possess accounts of their ancestors existing and interacting with these former subaerial surfaces, a place that holds value and importance to their heritage and identity.

NRHP Criteria

Based on prior BOEM consultations for the South Fork Wind Farm and Vineyard Wind 1 Wind Farm undertakings and Ocean Wind 1's assessments, the identified ASLFs are potentially eligible for listing in the

National Register of Historic Places, per 36 CFR 60.4, under Criterion D for their potential to yield important information about the indigenous settlement of the northeastern United States and development of coastal subsistence adaptations. Each ASLF may also be eligible for listing under Criterion A for their association with and importance in maintaining the cultural identities of multiple Native American Tribes/Tribal Nations.

4.0 MITIGATION MEASURES

This section details the proposed mitigation measures to resolve adverse effects to historic properties. The conceptual mitigation measures were developed on behalf of Ocean Wind 1 by individuals who meet Secretary of the Interior (SOI) Qualifications Standards for Archeology and/or History (62 FR 33708) and are appropriate to fully address the nature, scope, size, and magnitude of adverse effects including cumulative effects caused by the Project to the NRHP-qualifying characteristics of each historic property that would be affected. Ocean Wind 1 has prepared this draft HPTP for inclusion in the DEIS and subsequent review by consulting parties.

BOEM, Ocean Wind1, and NHPA Section 106 consulting parties with demonstrated interest in the affected properties will identify steps to implement the following proposed measures. The final mitigation measures agreed upon at the conclusion of the NHPA Section 106 consultations will be led by a Qualified Marine Archaeologist (QMA) pursuant to 30 CFR 585 and who meets SOI Qualifications Standards for Archeology and Historic Preservation (48 FR 44738-44739).

Preconstruction Geoarchaeology

Purpose and Intended Outcome

This mitigation measure will consist of, prior to construction, the collection of vibracores within the affected portions of each ASLF that was not previously investigated during the 2020 Geotechnical Survey campaign. Target 22, 24, 25, and 30 have already been sampled during the 2020 geoarchaeological effort and will not be sampled during this effort. The focus will be on the effected landforms not previously investigated. The collected cores, the locations which will be selected in consultation with Native American Tribes/Tribal Nations, BOEM, and the NJ SHPO, and will be analyzed in collaboration with the Tribes/Tribal Nations to provide a more detailed understanding of ancient, former terrestrial landscapes within the Ocean Wind 1 WFA and ECR corridors and how such settings may have been used by Late Pleistocene-Early Holocene indigenous peoples. Data acquired from this effort is expected to refine the age estimates for each stable landform, the timing and character of ecological transitions evidenced in the MARA report and provide an additional opportunity to recover evidence of ancient indigenous use of each ASLF.

This measure will provide for a more detailed analysis of the stratigraphy, chronology, and evolving ecological conditions at each ancient landform. Two separate reports on the analyses and interpretations will be developed. The first will be focused on content of specific interest to the consulting tribes, including a broad approach to integrating available data collected from other recent archaeological research and surveys on the Atlantic OCS. The specific content and formatting of this report will be refined in consultation

with the tribes to align the work product with intended intra- and inter-tribal audiences. The second report will be geared primarily toward technical, Tribal/State Historic Preservation Officer and agency audiences.

Research Agendas

Research surrounding localized regression models and the potential for landscape preservation is growing as development along the Atlantic OCS continues. Results from additional geotechnical sampling may inform a detailed paleoshoreline regression model for this area. Integration of this data with adjacent regression models would serve to increase the understanding of the Pleistocene/Holocene transition and inundation. Additionally, sampling will reveal extant sediment profiles indicative of preserved landforms and living surfaces. The results of this study could inform numerous research agendas including, but not limited to, the following:

1) Inform scientific community of larger inundation trends;
2) Shift shoreline modeling based on localized dates;
3) Provide robust paleoenvironmental reconstruction data;
4) Indicate time frames associated with preserved landforms and cultural complexes;
5) Inform localized preservation potential based on environmental contexts;
6) Determine possible evidence of human presence in the environment.

Additional research agendas and specific research questions will be determined through consultation. The OCS represents the last preserved portion of a former subaerial landscape originally home to the Tribes/Tribal Nations now scattered along the eastern seaboard and across the United States. This mitigation effort (**Table 4.1**)is designed to be a dynamic interaction between scientific research and tribal knowledge. Combining these two factors will serve to produce an understanding of not only the former physical landscape of the OCS, but also the potential interactions of humans with and on this landscape.

Table 4-1. Proposed ASLF Mitigation

ASLF ID	Paleolandform Type	Geotechnical Testing/Results	Proposed Mitigation	Research Agenda
Target 21	Interfluve w/possible meandering and sinuous channels	No testing	2-3 geoarchaeological cores	1-6
Target 22	Possible interfluve or margin adjacent to a large paleochannel	AC-15/preservation	No additional testing recommended	N/A
Target 23	Flank of meandering paleochannel	AC-03/No preservation	2-3 geoarchaeological cores	1-6

ASLF ID	Paleolandform Type	Geotechnical Testing/Results	Proposed Mitigation	Research Agenda
Target 24	Flank of meandering paleochannel	AC-16/preservation	No additional testing recommended	N/A
Target 25	Flank and floodplain of major paleochannel	AC-13, AC-14/preservation	No additional testing recommended	N/A
Target 26	Flank and floodplain of meandering paleochannel	AC-01/No preservation	2-3 geoarchaeological cores	1-6
Target 28	Interfluve between bifurcation/convergence of major paleochannel and tributary	AC-09a, AC-10/No preservation	2-3 geoarchaeological cores	1-6
Target 29	Interfluve between meandering paleochannel and straight paleochannel	AC-05a/No preservation	2-3 geoarchaeological cores	1-6
Target 30	Flank of major paleochannel	AC-04/preservation	No additional testing recommended	N/A
Target 31	Extensive flank of major paleochannel	AC-08/No preservation	2-3 geoarchaeological cores	1-6
Target 33	Flank and floodplain of paleochannel	No testing	2-3 geoarchaeological cores	1-6
Target 34	Channel margins of minor tributary	No testing	2-3 geoarchaeological cores	1-6
Target 35	Flank of major paleochannel	No testing	2-3 geoarchaeological cores	1-6

Scope of Work

The scope of work will consist of the following:

- Collaborative review of existing geophysical and geotechnical data with Native American Tribes/Tribal Nations;
- Selection of coring locations in consultation with Tribes/Tribal Nations;
- Collection of two to three vibracores within each affected ASLF that has not been previously sampled, with a sampling focus on areas that will be disturbed by Project construction activities;
- Written verification to BOEM that the samples collected are sufficient for the planned analyses and consistent with the agreed scope of work;
- Collaborative laboratory analyses at a laboratory located in Rhode Island or New Jersey;
- Screening of recovered sediments for debitage or micro-debitage associated with indigenous land uses;
- Third-party laboratory analyses, including micro- and macro-faunal analyses, micro- and macro-botanical analyses, radiocarbon dating of organic subsamples, and chemical analyses for potential indirect evidence of indigenous occupations;
- Temporary curation of archival core sections;
- Draft reports for review by Consulting Parties;
- Final reporting;
- Public or professional presentations summarizing the results of the investigations, developed with the consent of the consulting Tribes/Tribal Nations.

Methodology

Ocean Wind 1 will conduct the Preconstruction Geoarchaeology in consultation with the Native American Tribes/Tribal Nations, BOEM, and the NJ SHPO. Although BOEM and the NJ SHPO will be consulted, the research, analyses, and interpretations are intended to be a collaborative effort between Ocean Wind 1 and the consulting Tribes/Tribal Nations, who will be invited by Ocean Wind 1 to a series of working sessions to:

- Review existing data;
- Develop specific research questions addressing the Tribes'/Tribal Nations' interests in the ASLFs;
- Select candidate coring locations;
- Split, document, and sample recovered vibracores in the laboratory;
- Review analytic results and preliminary interpretations; and
- Review draft reporting.

Vibracores placed within the affected sections of each ASLF will extend a maximum depth of approximately 20 ft (6 m) below the seafloor. The cores will be cut on the survey vessel into approximately 1-meter-long sections and sealed to minimize the risk of environmental contamination. The core segments will be logged on the survey vessel and a chain of custody will be maintained to ensure all samples are accounted for and that all samples are transferred to the laboratory for geoarchaeological analyses. Once the core segments are transferred to the onshore laboratory, Ocean Wind 1 will invite Tribal representatives to participate in the splitting, documentation, and subsampling of each core.

Each core segment will be split longitudinally into working and archival halves. Subsamples collected from working halves for specific third-party analyses will be packaged in a manner appropriate to the specific analysis for which they are intended. Archival halves will be sealed and stored horizontally on shelves or racks in a climate-controlled facility for at least one year following completion of laboratory analyses. Ocean Wind 1 will prioritize reasonable access to archival core segments by consulting parties and researchers when selecting the storage facility. All samples collected from the working halves will be submitted to third party laboratories within approximately 6 months of core transfer to the Qualified Marine Archaeologist facilities.

Ocean Wind 1 will prepare a presentation of the preliminary results and interpretations for discussion with the Tribes/Tribal Nations (see work session schedule above). Ocean Wind 1 will consider the Tribes'/Tribal Nations' comments and suggestions when preparing the draft reports and will seek to resolve any disagreements among the parties through supplemental consultations prior to preparing the draft reports. Ocean Wind 1 will submit the draft reports to the Consulting Parties for review and comment. Ocean Wind 1 will consider all comments received when developing the final reports. Final digital copies of the completed reports will be provided to all Consulting Parties. Hard copies of the final reports will be submitted to the State Historic Preservation Officers, Tribes/Tribal Nations governments or other parties upon request.

Following the one-year retention period, Ocean Wind 1 will offer transfer of the archival core segments to the Consulting Tribes/Tribal Nations, SHPOs and related state agencies, and regional research institutions with an interest in and capacity to conduct further analyses. Ocean Wind 1 currently anticipates research institutions with potential interests/capacities to include the Princeton University, Rutgers University, New Jersey Institute of Technology, and the University of Rhode Island. Ocean Wind 1 will notify the Consulting Parties of its intent to transfer archival core segments to any party at least 45 days prior to initiating such transfer and will consider any comments provided by Consulting Parties before proceeding. If no external parties agree to accept the archival core segments, Ocean Wind 1 will water-screen the retained segments to identify and collect potential physical evidence of ancient Native American activity at the ASLFs. In such circumstances, Ocean Wind 1 will prepare a technical memorandum summarizing the results of the archival core segment processing and analyses and submit that memorandum to the Consulting Parties.

Standards

The Preconstruction Geoarchaeology effort will be conducted in accordance with BOEM's *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585* (May 2020). The qualified professional archaeologists leading the research will meet the SOI professional qualification standards for archeology (62 FR 33708) and BOEM's standards for Qualified Marine Archaeologists.

Documentation

The following documentation is to be provided for review by Consulting Parties:

- Draft Tribe/Tribal Nations Audience Report;
- Draft Technical Report;
- Final Tribe/Tribal Nations Audience Report;
- Final Technical Report; and
- Draft Public or Professional Presentations.

Funds and Accounting

Ocean Wind 1 will be responsible for funding and implementation of this mitigation measure.

Open-Source GIS and Story Maps

Purpose and Intended Outcome

This mitigation measure will consist of the compilation and transfer of relevant geophysical, geotechnical, and geoarchaeological datasets pertaining to the ASLFs to a non-proprietary GIS system for use by Native American Tribes/Tribal Nations. The datasets will include sub-bottom (seismic) data used to characterize the seabed and ASLF features, the location of all geotechnical/geoarchaeological samples collected, and the vertical and horizontal extents of the affected features or sub-features within each ASLF. The GIS will be, to the extent feasible and practicable, compatible with GIS datasets compiled for other OCS projects to assist in the Tribes/Tribal Nations on-going research and stewardship efforts. Story Maps or equivalent digital media presentations will be prepared to integrate and present the complex technical data compiled during the MARA and mitigation investigations in a manner best suited for inter- and intra-tribal audiences. Story Map content would be developed in close consultation and collaboration with the consulting Native American Tribes/Tribal Nations.

Incorporation of Ocean Wind 1 datasets into a broader GIS framework will allow the Tribes/Tribal Nations to better understand and protect preserved elements of the ASLF of traditional cultural significance. The intent of this measure is to enhance the Tribes/Tribal Nations understanding of existing conditions for a range of ASLFs located in the northeastern Atlantic OCS. This knowledge would allow for more effective Government to Government consultations regarding similar features that may be affected by future federal undertakings. The value of the GIS will increase as additional datasets are acquired and incorporated. Access to the GIS will support each Tribes/Tribal Nations capacity to pursue their own research or intra-tribal educational programs related to the OCS and traditional cultural uses of the now-submerged landscapes of their ancestors.

The combined MARA and Preconstruction Geoarchaeology investigations will provide an important perspective on the preservation of submerged Traditional Cultural Properties within formerly glaciated sections of the OCS and within the footprint of former glacial lakes. Integrated GIS that can accommodate datasets collected from other OCS development projects and surveys would allow for comparisons to areas south of the maximum glacial limits on the OCS to provide a more comprehensive view of the ancient landscapes within the region. Ocean Wind 1 will provide reasonable compensation to tribal representatives

working with Ocean Wind 1 on implementation of this measure. Story Maps created within the GIS will provide a flexible approach to incorporating media from a variety of sources, including geospatial data, interviews with traditional knowledge-holders, photographs, audio recordings, and archival cartography for a compelling interpretive experience. Story Maps can be tailored for specific tribal audiences and uses and would be developed in consultation with the consulting Tribes/Tribal Nations.

Scope of Work

The scope of work will consist of the following:

- Consultation with the Tribes/Tribal Nations to determine the appropriate open-source GIS platform;
- Review of candidate datasets and attributes for inclusion in the GIS;
- Data integration;
- Development of custom reports or queries to assist in future research or tribal maintenance of the GIS;
- Work Sessions with Tribes/Tribal Nations to develop Story Map content;
- Training session with Tribes/Tribal Nations to review GIS functionality;
- Review of Draft Story Maps with Tribes/Tribal Nations;
- Delivery of GIS to Tribes/Tribal Nations; and
- Delivery of Final Story Maps.

Methodology

Ocean Wind 1 will develop the GIS in consultation with the Consulting Parties. At least one work session will be scheduled to refine specific functionality of interest to the Tribes/Tribal Nations. That session will be conducted after the preliminary data analyses for the Preconstruction Geoarchaeology effort has been completed. This will allow for a more focused walk-through of the data and options for organizing and integrating different datasets. Ocean Wind 1 will request from the Tribes/Tribal Nations details on any existing open-source GIS systems currently in use by each Tribe/Tribal Nation to minimize any issues with data integration or interoperability.

Once the work session has been conducted Ocean Wind 1 will proceed with development of the GIS, considering the Tribes'/Tribal Nations' comments and suggestions. The draft GIS system will be shared with the Tribes/Tribal Nations in a training session that presents the functions of the GIS and familiarizes the Tribal representatives with the interfaces, data organization, and any custom features developed to enhance useability. Ocean Wind 1 will consider any feedback from the Tribes/Tribal Nations on the draft GIS before proceeding with finalizing the system design and implementation. Ocean Wind 1 will provide the GIS to the Tribes/Tribal Nations by physical storage media or as a secure digital file transfer, as appropriate to each Tribes/Tribal Nations IT infrastructure and preference. Ocean Wind 1 does not intend to be responsible for the upkeep of the GIS database.

Story Map content will be developed with the consulting Tribes/Tribal Nations through one or more scheduled work sessions. Potential options for content intended for youth audiences, tribal governments, and/or general tribal membership will be discussed to refine the conceptual framework and develop draft Story Maps for review by the Tribes/Tribal Nations. Ocean Wind 1 will consider all comments and feedback provided by the Tribes/Tribal Nations when preparing the final Story Maps. All comments and feedback will be collated and provided back to the Consulting Parties as part of the process.

Standards

The GIS developed under this measure will be free to use and free to modify by the Tribes/Tribal Nations. To the extent feasible, all data will be provided in formats that allow for interoperability with other GIS platforms that the Tribes/Tribal Nations may use. All datasets incorporated in the GIS will comply with Federal Geographic Data Committee data and metadata standards.

Documentation

Ocean Wind 1 will provide draft descriptions and documentation of the GIS for review by the Consulting Parties and will provide a description of the draft Story Maps to the consulting Tribes/Tribal Nations following the initial working sessions.

The following documentation is to be provided for review by Consulting Parties:

- Draft Description of the GIS with appropriate schema, data organization, and custom reports/queries;
- Draft Story Map descriptions with details on content, formatting, and intended audiences; and
- Final Technical Description of the GIS with schema, data organization, and custom reports/queries.

Funds and Accounting

Ocean Wind 1 will be responsible for funding and implementation of this mitigation measure.

Post-Construction Seafloor Impact Inspection

Purpose and Intended Outcome

Ocean Wind 1 proposes a mitigation measure to assess impacts to ASLFs via seafloor inspection due to construction activities. This effort will focus on areas of cable installation as this activity is more likely to disturb and redistribute shallow portions of a previously identified ASLF. Ocean Wind 1 will construct a 3D model defining the spatial relationship of project components and installation methodology (e.g., cable installation via trenching or jetting) relative to the ASLFs. The 3D model will identify portions of the ASLFs within the vertical APE that will be impacted and possess a high preservation potential for evidence of human occupation. Ocean Wind 1 will coordinate with BOEM and consulting parties on the results of this effort to select locations for post-construction visual inspection.

Ocean Wind 1's QMA will design and direct the visual inspection of the seafloor at the selected locations identified through the above process to assess for the presence/absence of displaced cultural materials from the ASLF. BOEM and Ocean Wind 1 will work together to determine the ROV inspection methodology. Post-construction inspection will focus on the areas of disturbance within the ASLFs. Various factors, including but not limited to environmental conditions, health and safety risks, the spatial extent of impacts, and the unique characteristics of each selected ASLFs will be considered before mobilization to conduct the visual inspection.

Scope of Work

The scope of work will consist of the following:

- Development of 3D model throughout ASLFs designated for review
- Development of the ROV investigation methodology
- Review of candidate datasets and attributes for inclusion in the GIS;
- Data Interpretative technical report draft; and
- Final technical report.

Methodology

Inspection of the impacted portions of the ASLFs will consist of the following:

- Development of 3D model throughout ASLFs designated for review.
- Consultation with BOEM to discuss the ROV investigation methodology.
- QMA directed remotely operated vehicle (ROV) inspection of the seafloor along impacted portions of the selected ASLFs:
    - Multibeam Echosounder (MBES)
    - Scanning Sonar
    - Ultra-short baseline (USBL) positioning
    - HD photo & video camera with laser scale
    - Lowlight camera
    - ROV lighting
    - Forward-looking sonar (FLS) multibeam
- Data interpretative technical draft and final reports with accompanying investigation data.

SEARCH will define the spatial relationship of project components and installation methodology relative to the ASLFs. The upper and lower ranges of each ASLF are not static and undulate unpredictably. Detailed review of the 2D seismic data will allow for selection of the best suited ASLFs for post-construction inspection. Based on the preliminary 2D seismic assessment, SEARCH will develop a 3D model of the affected ASLFs to finalize the areas for review. The 3D model will identify portions of the ASLFs within the vertical APE that will be impacted and possess a high preservation potential for evidence of human

occupation. SEARCH will coordinate with BOEM and consulting parties on the results of this effort to select locations for post-construction visual inspection.

This effort will focus on areas of cable installation as this activity is more likely to disturb and redistribute shallow portions of a previously identified ASLF. Therefore, the inspection process is designed to focus on the ASLFs with the shallowest subsurface expression and highest likelihood of containing intact deposits. The final number of ASLFs will be selected for this post-construction inspection based on a detailed review of the proposed cable route and the aforementioned factors. Review will focus on the disturbed sediments around the as-laid cable route and attempt to delineate any materials indicative of human presence (i.e., lithics, pottery sherds, etc.). It is important to note that it will not be possible to scientifically correlate any archaeological material to a particular ASLF. Any material identified during this inspection will be located on the seafloor and outside of its original archaeological context after being disturbed/removed by construction activities. There is no demonstrable way to determine if those materials were removed from an ASLF during construction activities, were removed from seafloor deposits overlaying the ASLF, or washed in by erosional and/or environmental factors. The goal of the investigation, therefore, is to determine the presence or absence of archaeological material on the OCS, as well as determine the preservation potential of material located on the OCS away from a coastal environment.

SEARCH will design and direct the visual and multibeam echosounder inspection of the seafloor at the selected locations identified through the above process to assess for the presence/absence of displaced cultural materials from the ASLF. ROV investigation will occur over three separate mobilizations and be conducted in 12-hour/day operations. The investigation will utilize a vessel based USBL for subsea positioning of the ROV. The site investigation would include conducting numerous passes at different approaches and orientations to capture video and still imagery of the selected ASLFs, which may be built into composite images and models. The QMA will direct the ROV to other points of interest and data acquisition points for further inspection/investigations and viewing. SEARCH will maintain detailed logs of ROV diving missions and archaeological information, as well as record video with voice-over narration and positioning overlay. Video will be recorded continuously recorded throughout the duration of all divers for later analysis and archiving. Detailed photographs, including the use of a laser scale, will be captured at the discretion of the QMA and ROV operator.

Reporting will include processing of bathymetry and imagery. MBES data will be processed in QPS Qimera to produce final sounding grids and bathymetric results on the project datum. Positional and attitude data will be refined using Applanix POSPac and post-processed vertical positions to reference the project's vertical datum. Spurious data points will be removed from gridding subsets, and sound velocity corrections will be applied before final points, grids and images are produced. Multibeam backscatter processing will be completed in QPS FMGT for each sonar. Photo and camera imagery will be utilized to provide information on potential further understanding the selected ASLFs. Additionally, the imagery data may be merged in post-processing to develop composite images and extract point clouds to develop models of the sites in combination with the bathymetry. The goal of data acquisition and processing is to determine presence or absence of potential cultural material on the seafloor, but no cultural material will be collected.

Standards

To be determined in consultation with BOEM.

Documentation

Ocean Wind 1 will provide appropriate Consulting Parties draft and final technical reports including the development of the 3D models and any resulting seafloor impact assessments.

Funds and Accounting

Ocean Wind 1 will be responsible for funding and implementation of this mitigation measure

Ethnographic Study

Purpose and Intended Outcome

Ocean Wind 1 proposes a mitigation measure to fund an ethnographic study focusing on one New Jersey coastal watershed, the Great Egg Harbor River, and its potential submerged extension onto the Outer Continental Shelf (OCS) to be coordinated by the Delaware Tribe of Indians (DTI) with collaboration by The Delaware Nation (DN) and the Stockbridge-Munsee Community Band of Mohican Indians (SM).

The study will focus on Native American resources, sites, places, and knowledge of the established Great Egg Harbor River Watershed and OCS. This study constitutes baseline research to compile and assess multiple levels of documentary evidence about the ancestral and contemporary connections to the landscape (both onshore and offshore) and will utilize new data on the offshore paleolandscape, including identified ancient, submerged landform features. The study will result in a written report that may follow the general format of an Ethnographic Overview and Assessment document utilized by the National Park Service. The scope of the study may include, but is not limited to, an overview of documentary evidence including historic maps, photographs, oral histories, research reports, archival data, and interviews. Relevant GIS data layers from sources available to the public and from the recent Ocean Wind high resolution geophysical surveys could also be used for predictive modeling purposes to help identify areas of potential archaeological or other resource sensitivity of importance to the Tribal Nations.

This study could complement additional similar studies funded by other offshore wind projects along the New Jersey shore. Although not included in this scope, the goal is for the results of this study to be integrated into a potential larger report focusing on the New Jersey coast and offshore landscapes with the intent of increasing community knowledge of the landscape and for potential use in guiding consultations for future federal undertakings.

Scope of Work

The scope of work will consist of the following:

- Funding ethnographic researcher selected by DTI for 2-year period;
- Funding for researcher travel to New Jersey for research and site visits;
- Funding for DTI, DN, and SM technology upgrades associated with analysis of GIS data;
- Funding for DTI Historic Preservation office oversight and indirect costs;
- Funding for DTI, DN, and SM THPO Collaboration;
- Ocean Wind 1 will provide relevant ASLF GIS data layers to DTI for use in this study as well as provide a tutorial on the data (see previous Open-Source GIS and Story Maps mitigation measure);
- Ocean Wind 1 will hold quarterly progress update calls lasting approximately one-half hour with DTI until the final technical reports are issued.
- Final deliverables will consist of one confidential report that may contain sensitive resource information and one report that could be made available to the public. Both reports will be distributed by the Tribal Nations, at their discretion.
- Funding for a presentation to highlight the results of the study to be coordinated and executed by DTI.

Methodology

In addition to consulting the Tribal Nation's archives, documents, and oral history interviews with DTI elders, this study will also require archival research at applicable repositories in New Jersey by the ethnographic researcher with the intent of acquiring available land transfer documents, historic maps, and other historic documents. Site visits and additional research at the NJ HPO facilities may also be completed by the ethnographic researcher as part of the study. Relevant GIS data layers will also be analyzed for insight into the location of potential archaeological or other resource sensitivity of importance to the Tribe. No archaeological fieldwork or landowner permissions will be required as part of this study. No sensitive or other confidential information including archaeological site locations will be made available in the public document.

Standards

The ethnographic researcher and key team members shall be fully qualified personnel as experts in their areas of traditional knowledge and research as determined by the DTI.

Documentation

To be determined in consultation with BOEM and DTI.

Funds and Accounting

Ocean Wind 1 will be responsible for funding and implementation of this mitigation measure. Funding levels will follow dollar amounts previously agreed to by Ocean Wind 1 and DTI.

5.0 IMPLEMENTATION

Timeline

The timeline for implementation of the mitigation measures will be determined in consultation with consulting parties based on the agreed upon mitigation measures described in the final version of this HPTP. This HPTP will be reviewed by and further developed in consultation with consulting parties as part of BOEM's NHPA Section 106 consultation and NEPA review schedule for Ocean Wind 1 Farm, which is currently anticipated to include the following:

- [INSERT DATE]: [INSERT TITLE/TOPIC OF MEETING]
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The final version of this HPTP included in the FEIS will include a timeline for implementation of the final/agreed upon mitigation measures described herein. It is anticipated that the mitigation measure identified in Section 4.0 will commence within 2 years of ROD issuance or execution of a project specific MOA unless otherwise agreed by the consulting parties and accepted by BOEM. Ocean Wind 1 assumes that the proposed scope of work will be completed within 5 years of ROD issuance or execution of the MOA, unless a different timeline is agreed upon by consulting parties and accepted by BOEM.

Organizational Responsibilities

Bureau of Ocean Energy Management (BOEM)

BOEM remains responsible for making all federal decisions and determining compliance with Section 106. BOEM has reviewed this HPTP to ensure, at minimum, it includes the content required.

- BOEM remains responsible for making all federal decisions and determining compliance with Section 106 of the NHPA;
- BOEM, in consultation with the Consulting Parties, will ensure that mitigation measures adequately resolve adverse effects, consistent with the NHPA;

- Work with Ocean Wind 1, the NJ SHPO, Consulting Parties including federally and state recognized Tribes/Tribal Nations with cultural and/or historic ties to the Project development area, and the ACHP using the previously agreed upon HPTP framework;
- Review and provide feedback on draft HPTP;
- BOEM must accept the final HPTP before Ocean Wind 1 may commence any of the actions included in the HPTP;
- BOEM will be responsible for sharing the annual summary report with consulting parties;
- BOEM is responsible for consultation related to dispute resolution; and
- If parties cannot reach concurrence, consult with ACHP and non-concurring party(s) to make final decision.

Ocean Wind LLC

Ocean Wind LLC will be responsible for:

- Funding the mitigation measures as required in the ROD and/or MOA and the final HPTP;
- Working with BOEM, the SHPO, federally and state recognized Tribes/Tribal Nations with cultural and/or historic ties to the Project development area, and the ACHP using the previously agreed upon HPTP framework;
- Considering the comments provided by the Consulting Parties in the development of this HPTP;
- Funding the mitigation measures specified in Section 4.0;
- Completion of the scope/s of work in Section 4.0;
- Ensuring all Standards in Section 4.0 are met;
- Providing the Documentation in Section 4.0 to the Consulting Parties for review and comment;
- Annual Reporting to BOEM; and
- Ocean Wind 1 will be responsible for ensuring that all work that requires consultation with Tribal Nations are performed by professionals who have demonstrated professional experience consulting with federally and state recognized Tribes/Tribal Nations.

New Jersey SHPO

The New Jersey SHPO will:

- Work with BOEM, Ocean Wind LLC, federally and state recognized Tribes/Tribal Nations with cultural and/or historic ties to the Project development area, and the ACHP using the previously agreed upon HPTP framework; and
- Review and provide feedback on draft HPTPs.

Federally and State recognized Tribes/Tribal Nations with cultural and/or historic ties to the Project development area

Federally recognized Tribes/Tribal Nations with cultural and/or historic ties to the Project development area will:

- Work with BOEM, Ocean Wind LLC, the SHPO, and the ACHP using the previously agreed upon HPTP framework;
- Review and provide feedback on draft HPTPs;
- Participate in all activities outlined in Section 4.0 and complete all associated reviews, comments, requests for feedback/input in agreed upon timeframes.

Advisory Council on Historic Preservation

The Advisory Council on Historic Preservation will:

- Work with BOEM, Ocean Wind, the SHPO, and federally and state recognized Tribes/Tribal Nations with cultural and/or historic ties to the Project development area using the previously agreed upon HPTP framework; and
- If parties cannot reach concurrence, consult with BOEM and non-concurring parties to make final decision.

Other Parties as Appropriate

Ocean Wind 1 does not anticipate participation by any other NHPA Section 106 consulting parties. If BOEM determines additional consulting parties will participate in this plan, the plan will be updated to include those parties.

Participating Party Consultation

Consulting Parties will be provided opportunity for review and comment on the HPTP concurrent with BOEM's anticipated NHPA Section 106 review schedule for Ocean Wind 1. Ocean Wind 1 will provide this draft HPTP to BOEM for inclusion in the DEIS for review by consulting parties as part of BOEM's NHPA Section 106 review to provide meaningful input on the proposed mitigation measures to resolve adverse effects to historic properties. Ocean Wind 1 anticipates that further coordination to refine the HPTP may include meetings, conference calls, HPTP draft reviews and document exchanges, or similar means of communication of information.

6.0 REFERENCES

Federal Regulations

Code of Federal Regulations (CFR). 2022. 40 CFR 1500 – National Environmental Policy Act Implementing Regulations. Available at https://www.ecfr.gov/current/title-40/chapter-V/subchapter-A.

CFR. 2021a. 36 CFR 800 – Protection of Historic Properties [incorporating amendments effective December 15, 2021]. Available at https://www.ecfr.gov/current/title-36/chapter-VIII/part-800.

CFR. 2021b. 36 CFR 61.4(e)(1) – Procedures for State, Tribal, and Local Government Historic Preservation Programs [incorporating amendments effective December 15, 2021]. Available at https://www.ecfr.gov/current/title-36/chapter-I/part-61#p-61.4(e)(1).

CFR. 2021c. 36 CFR 65.2(c)(2) – National Historic Landmarks Program – Effects of Designation [incorporating amendments effective December 15, 2021]. Available at https://www.ecfr.gov/current/title-36/chapter-I/part-65#p-65.2(c)(2). Accessed December 21, 2021.

Federal Register. 1997. 62 FR 33708 – The Secretary of the Interior's Historic Preservation Professional Qualifications Standards. Office of the Federal Register, National Archives and Records Administration. Washington, D.C. Available at https://www.govinfo.gov/app/details/FR-1997-06-20/97-16168.

United States Code. 2016. Title 54 - National Historic Preservation Act [as amended through December 16, 2016]. Available at https://www.achp.gov/sites/default/files/2018-06/nhpa.pdf.

State Regulations

New Jersey Register of Historic Places Act of 1970 (N.J.S.A. 13:1B-15.128 et seq.): https://www.state.nj.us/dep/hpo/2protection/njsa13.htm

Public documents related to Ocean Wind1

https://www.boem.gov/ocean-wind

Ocean Wind1 COP: https://www.boem.gov/ocean-wind-construction-and-operations-plan

Ocean Wind 1 DEIS: TBD

Ocean Wind 1 FEIS: TBD

Ocean Wind 1 ROD: TBD

General Information on Section 106

https://www.achp.gov/protecting-historic-properties/section-106-process/introduction-section-106

https://www.achp.gov/digital-library-section-106-landing/section-106-consultation-involving-national-historic-landmarks

Kraft, Herbert, C. and Alan R. Mournier. 1982 The Archaic Period in New Jersey (ca. 8000 BC–1000 BC). In New Jersey's Archaeological Resources, A Review of Research Problems and Survey Priorities: The Paleo-Indian Period to Present. Electronic resource, http://www.nj.gov/dep/hpo, accessed December 2018.

Lothrop Jonathan, Darrin Lowery, Arthur Spiess, and Christopher Ellis 2016. Early Human settlement of Northeastern North America. PaleoAmerica 2: 192-251

National Park Service (NPS). 1997. How to Apply the National Register Criteria for Evaluation. Rev. ed. National Register Bulletin 15. Available at: https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf. Accessed April 21, 2022.