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Mayflower Wind Project Draft Environmental Impact Statement

February 2023

Volume III: Appendices I-M

Bureau of Ocean Energy Management

Appendix I: Determination of Effect for NHPA Section 106 Consultation

The Bureau of Ocean Energy Management (BOEM) has made a Finding of Adverse Effect under Section 106 of the National Historic Preservation Act (NHPA) pursuant to 36 Code of Federal Regulations (CFR) 800.5 for the undertaking, defined as the construction, installation, operations and maintenance (O&M), and conceptual decommissioning of the Mayflower Wind Project (Project), as described in the Mayflower Wind Energy LLC (Mayflower Wind) Construction and Operations Plan (COP) (Mayflower Wind 2022). The Project is anticipated to have adverse effects on historic properties. As defined in 36 CFR 800.16(l)(1), the term *historic property* means "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places [NRHP; National Register] maintained by the Secretary of the Interior." The term *historic property* also includes National Historic Landmarks (NHLs) as well as resources of traditional religious and cultural importance to tribal nations that meet National Register criteria.

BOEM finds that the undertaking would adversely affect the following historic properties:

- 21 marine archaeological resources (Table I-4; Section I.3.1.1, *Assessment of Effects on Historic Properties in the Marine APE*).
- Seven ancient submerged landform features (ASLFs) with potential or known archaeological or traditional cultural property (TCP) significance (Table I-5; Section I.3.1.1, *Assessment of Effects on Historic Properties in the Marine APE*).
- Two terrestrial archaeological resources (Table I-6; Section I.3.1.2, *Assessment of Effects on Historic Properties in the Terrestrial APE*).
- Two TCPs: Chappaquiddick Island and Nantucket Sound (Section I.3.1.1, *Assessment of Effects on Historic Properties in the Marine APE*; Section I.3.1.3, *Assessment of Effects on Historic Properties in the Visual APE*).
- Two historic aboveground resources: the Nantucket Historic District NHL and Oak Grove Cemetery (Section I.3.1.3, *Assessment of Effects on Historic Properties in the Visual APE*).

Per 36 CFR 800.5(a)(1), the Project would cause adverse effects on a historic property by altering, directly or indirectly, characteristics that qualify the historic property for inclusion in the National Register (see Section I.3, *Application of the Criteria of Adverse Effect*).

Construction of the Project would cause physical adverse effects on historic properties that are marine cultural resources (i.e., marine archaeological resources and ASLFs) in the marine portion of the area of potential effects (APE) and terrestrial archaeological resources in the terrestrial portion of the APE as Project components and/or associated work zones are proposed for locations within the defined areas of these resources (COP, Appendices Q and R; Mayflower Wind 2022). Additional terrestrial archaeological resources potentially subject to adverse effects from the Project may be identified during Mayflower Wind's process of phased identification and evaluation of historic properties as defined in 36

CFR 800.4(b)(2) (COP, Appendix R.2; Mayflower Wind 2022; Section I.5, *Phased Identification and Evaluation*).

The Project would also cause physical effects, visual effects, or both, and contribute to cumulative effects on two historic properties that are TCPs: Chappaquiddick Island and Nantucket Sound. For Chappaquiddick Island TCP, contributing historic aboveground elements would be visually affected by the visibility of Offshore Project components (COP, Appendix S; Mayflower Wind 2022). For Nantucket Sound TCP, some of the identified ASLFs in the Falmouth export cable corridor (ECC) portion of the marine APE may be contributing elements that would be physically affected, and contributing historic aboveground elements would be visually affected by the visibility of Offshore Project components (COP, Appendices Q and S; Mayflower Wind 2022).

Aside from the two aforementioned TCPs, the Project would also cause visual effects from Project component visibility on two other historic aboveground resources that are historic properties: the Oak Grove Cemetery and Nantucket Historic District NHL (COP, Appendix S; Mayflower Wind 2022). The Oak Grove Cemetery has landscape views that are a character-defining feature contributing to its NRHP eligibility; these landscape views are subject to adverse effects from Onshore Project components. The Nantucket Historic District NHL has ocean views that are a character-defining feature contributing to the historic property's NRHP eligibility and subject to adverse effect from Offshore Project components. BOEM has determined that the Project would contribute to cumulative adverse effects from Offshore Project component visibility to this NHL. For compliance with NHPA Section 110(f) per 36 CFR 800.10, which applies specifically to NHLs, BOEM has determined that the Nantucket Historic District NHL would be adversely affected by the Project and will, to the maximum extent possible, undertake planning and actions as may be necessary to minimize harm to the NHL.

BOEM elected to use the National Environmental Policy Act (NEPA) substitution process for Section 106 purposes, as described in 36 CFR 800.8(c), during its review. The regulations at 36 CFR 800.8(c) provide for use of the NEPA substitution process to fulfill a federal agency's NHPA Section 106 review obligations in lieu of the procedures set forth in 36 CFR 800.3 through 800.6. The NEPA substitution process is described at https://www.achp.gov/integrating_nepa_106. Both NEPA and Section 106 allow participation of consulting parties. Consistent with use of the NEPA substitution process to fulfill Section 106 requirements, BOEM will document the mitigation measures to resolve adverse effects in a Memorandum of Agreement (MOA) pursuant to 36 CFR 800.8(c)(4)(i)(B). See Attachment A, *Draft Memorandum of Agreement*.

I.1 Project Overview

In February 2021, BOEM received a COP from Mayflower Wind proposing an offshore wind energy facility in Renewable Energy Lease Area OCS-A 0521, offshore Massachusetts. In addition, Mayflower Wind submitted updates to the COP in August 2021, October 2021, March 2022, and December 2022. In its COP, Mayflower Wind proposes construction and installation, O&M, and conceptual decommissioning of an up to 2,400-megawatt (MW) wind energy project consisting of offshore wind turbine generators (WTGs) and their foundations, offshore substation platforms (OSPs) and their

foundations, scour protection for foundations, interarray cables linking the individual turbines to the OSPs, offshore export cables and an onshore export cable system, onshore substations, and connections to the existing electrical grid in Massachusetts (Figure I-1). At their nearest point, WTG and OSP components of the Project would be approximately 26 nautical miles (30 statutory miles, 48 kilometers) south of Martha's Vineyard and 20 nautical miles (23 statutory miles, 37 kilometers) south of Nantucket, Massachusetts. Offshore Project elements would be on the OCS, with the exception of portions of the offshore export cables in Massachusetts and Rhode Island state waters. Mayflower Wind is using a Project Design Envelope (PDE) in its COP, which represents a reasonable range of design parameters that may be used for the Project. In reviewing the PDE, BOEM is analyzing the maximum-case scenario that could occur from any combination of the contemplated parameters. This includes any Project alternatives that may require phased identification of historic properties (COP, Appendix R.2; Mayflower Wind 2022; Section I.5, *Phased Identification and Evaluation*). BOEM's analysis and review of the PDE may result in the approval of a project that is constructed within that range or a subset of design parameters within the proposed range.

If approved by BOEM and other agencies with authority to approve Project components outside of BOEM's jurisdiction, Mayflower Wind would construct and operate WTGs, export cables to shore, and associated facilities, including those outside BOEM's jurisdiction, for a specified term. BOEM is now conducting its environmental and technical reviews of the COP and has published a Draft Environmental Impact Statement (EIS) under NEPA for its decision regarding approval of the plan. A detailed description of the proposed Project can be found in Chapter 2, *Alternatives*, of the Draft EIS. This Draft EIS considers reasonably foreseeable impacts of the Project, including impacts on cultural resources, which include historic properties.

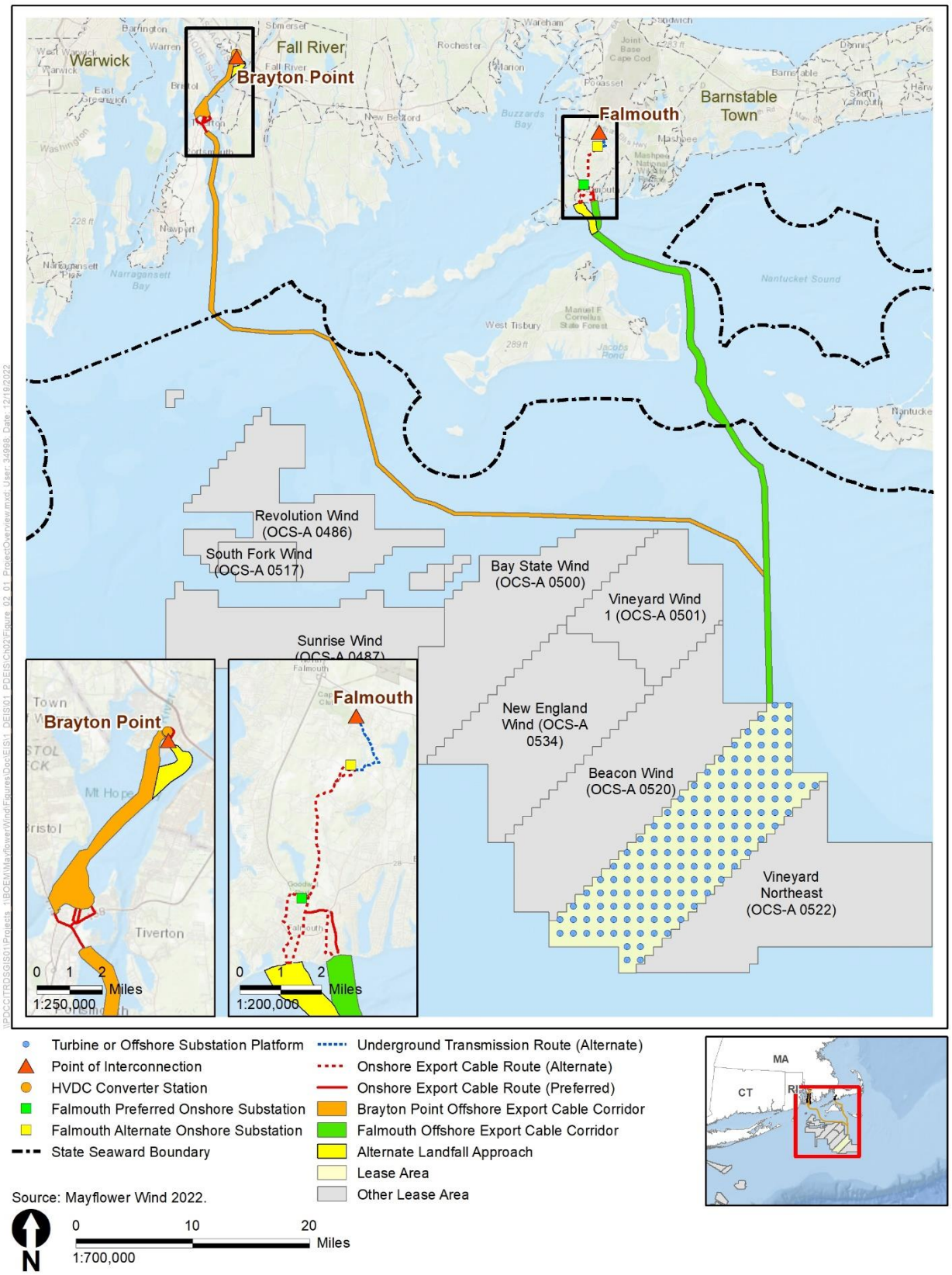

Figure I-1. Mayflower Wind COP proposed Project elements

I.1.1 Background

The Project is in a commercial lease area that received previous Section 106 review by BOEM regarding the issuance of the commercial lease and approval of site assessment activities.

On February 6, 2012, BOEM published in the *Federal Register* (FR) a *Notice of Intent to Prepare an Environmental Assessment for Commercial Wind Lease Issuance and Site Characterization Activities on the Atlantic OCS Offshore Massachusetts* (77 FR 5830). On November 2, 2012, BOEM announced the availability of an environmental assessment (EA) for public review and comment (77 FR 66185). BOEM considered comments received from this notice and on June 18, 2014, made available a revised EA for the Wind Energy Area (WEA) offshore Massachusetts (79 FR 34781). As a result of the analysis in the revised EA, BOEM issued a Finding of No Significant Impact, which concluded that reasonably foreseeable environmental effects associated with commercial wind lease issuance and related site assessment activities would not significantly affect the environment. The Section 106 process was completed pursuant to a programmatic agreement (PA), executed on June 8, 2012 (*Programmatic Agreement among the U.S. Department of the Interior, Bureau of Ocean Energy Management; the State Historic Preservation Officers of Massachusetts and Rhode Island; the Mashpee Wampanoag Tribe; the Narragansett Indian Tribe; the Wampanoag Tribe of Gay Head (Aquinnah); and the Advisory Council on Historic Preservation Regarding the "Smart from the Start" Atlantic Wind Energy Initiative: Leasing and Site Assessment Activities Offshore Massachusetts and Rhode Island*) and concluded with a BOEM determination of no historic properties affected for lease issuance, corresponding to the Finding of No Significant Impact for the EA. On December 2018, BOEM held a competitive lease sale for WEAs offshore Massachusetts. Mayflower Wind was identified as the winner of Lease Area OCS-A 0521.

Subsequent to award of the lease, Mayflower Wind submitted a site assessment plan describing the proposed installation, O&M, and decommissioning of a meteorological buoy within the Lease Area. Pursuant to Stipulation 1 of the PA, BOEM issued a Finding of No Historic Properties Affected on January 28, 2020 and notified the signatories of the PA to the finding.

Mayflower Wind's COP proposed to develop the entire Lease Area as an offshore wind renewable energy project. The Project would consist of up to 149 positions in the Lease Area to be occupied by WTGs and OSPs. The 149 positions would conform to a 1.0-by-1.0-nautical mile (1.9-by-1.9-kilometer) grid layout with an east–west and north–south orientation across the entire Massachusetts Rhode Island Wind Energy Area (MA/RI WEA), as agreed upon by Mayflower Wind and the other MA/RI WEA leaseholders. WTGs, which would be up to 1,066 feet above mean sea level, and OSPs would be connected via interarray cables in the Lease Area.

The Project would include two ECCs: one making landfall and interconnecting to the ISO New England Inc. (ISO-NE) grid in Falmouth, Massachusetts, and one making landfall and interconnecting to the ISO-NE grid at Brayton Point in Somerset, Massachusetts. Mayflower Wind is proposing to develop the Project with interconnection to both Falmouth and Brayton Point.

Within the Falmouth ECC, up to five submarine offshore export cables, including up to four power cables and up to one dedicated communications cable, would be installed from one or more OSPs in the Lease

Area in federal waters, and run through Muskeget Channel into Nantucket Sound in Massachusetts state waters, to make landfall in Falmouth, Massachusetts. The three landfall sites considered in the PDE include coastal locations at the end of Worcester Avenue, Central Park, and Shore Street.

Within the Brayton Point ECC, up to six submarine offshore export cables, including up to four power cables and up to two dedicated communications cables, would be installed from one or more OSPs in the Lease Area in federal waters, and run through the Sakonnet River, make intermediate landfall on Aquidneck Island in Portsmouth, Rhode Island, which includes an underground onshore export cable route, and then into Mount Hope Bay, to make landfall at Brayton Point in Somerset, Massachusetts. The two landfall sites considered in the PDE include developed coastal locations on either side of Brayton Point: the Western landfall from the Lee River and the Eastern landfall from the Taunton River.

Mayflower Wind would use horizontal directional drilling (HDD) for the sea-to-shore transition of export cables between the ocean and the land. From the landfall site in Falmouth, up to 12 new underground onshore export power cables would transmit the proposed Project's electric generation to a new Mayflower Wind-developed onshore substation. The onshore export cables would travel underground from the landfall location to the newly constructed onshore substation, located in Falmouth, Massachusetts. There are two onshore substation locations under consideration in Falmouth, Massachusetts. The onshore substation would transform the export cable voltage to 345 kilovolts (kV) to enable connection to the transmission line. Eversource Energy (Eversource) would be responsible for designing, permitting, constructing, and operating the overhead transmission line in Eversource Right-of-Way #341 that would connect the proposed onshore substation to the existing POI at Falmouth Tap in Falmouth, Massachusetts; the overheard transmission line is not considered part of the PDE. Alternatively, the Project is also considering an underground transmission route, which would connect the onshore substation to the Falmouth POI. Collectively, these onshore components in Falmouth, Massachusetts are referred to as the Falmouth Onshore Project Area.

For the offshore export cable landfall sites at Brayton Point in Somerset, Massachusetts, up to four new underground onshore export power cables would transmit the Project's high-voltage direct-current (HVDC) electric generation to a new, Mayflower Wind-developed onshore HVDC converter station. The onshore converter station is a specialized electrical substation designed to convert the HVDC power from the export cables to high-voltage alternating-current power to enable interconnection to the existing transmission infrastructure. The new underground 345-kV transmission line would be constructed entirely within the previously disturbed industrial Brayton Point property. The underground transmission line would connect the converter station to the existing National Grid Substation at Brayton Point in Somerset, Massachusetts, the Brayton Point POI. Collectively, these onshore components at Brayton Point in Somerset, Massachusetts are referred to as the Brayton Point Onshore Project Area.

The proposed Project has a designed life span of approximately 35 years; some installations and components may remain fit for continued service after this time. O&M activities would include inspections, preventative maintenance, and, as needed, corrective maintenance for onshore substations, onshore export cables, and grid connections. Mayflower Wind would conduct annual

maintenance of WTGs, including safety surveys of lifesaving equipment. Substructures would undergo internal and external inspections every 2 years. Mayflower Wind would need to use vessels, vehicles, and aircraft during O&M activities.

Although the proposed Project is anticipated to have an operational life of 35 years, it is possible that some installations and components may remain fit for continued service after this time. Mayflower Wind would have to apply for and be granted a renewal of the operations term of its lease under BOEM's regulations at 30 CFR 585.425, et seq., if it wanted to operate the proposed Project for more than the 33-year operations term stated in its lease. The process of decommissioning would remove all facilities, cables, pipelines, and obstructions and clear the seafloor of all obstructions created by the proposed Project. All foundations would need to be removed 15 feet (4.6 meters) below the mudline (30 CFR 585.910(a)). Absent permission from BOEM, Mayflower Wind would have to achieve complete decommissioning within 2 years of termination of the lease and either reuse, recycle, or responsibly dispose of all materials removed. A Section 106 review would be conducted at the decommissioning stage.

I.1.2 Undertaking

BOEM has determined that the Project constitutes an undertaking subject to Section 106 of the NHPA as amended (54 USC 306108) and its implementing regulations (36 CFR 800), and the Project activities proposed under the COP have the potential to affect historic properties. Confidential appendices to the COP referenced in this document were sent electronically or by mail depending on expressed preference to all consulting parties on February 2, 2023. The COP, as well as its public and confidential appendices, is hereby incorporated by reference.

The undertaking for this Section 106 review is the Proposed Action. As described in Chapter 2, Section 2.1.2, *Alternative B – Proposed Action*, of the Draft EIS, the Proposed Action would include the construction, installation, O&M, and conceptual decommissioning of a wind energy facility on the OCS offshore Massachusetts, occurring within the range of design parameters outlined in the COP (Mayflower Wind 2022), subject to applicable mitigation measures. BOEM's election to use NEPA substitution for the Section 106 review of the Project includes the identification and evaluation of historic properties for the undertaking and assessment of effects for all the action alternatives identified during the NEPA review and as presented in the Draft EIS. For BOEM's assessment of the action alternatives, see Section I.4.1, *Alternatives Considered*.

I.1.3 Area of Potential Effects

Per 36 CFR 800.16(d), the APE is defined as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." BOEM (2020) defines the APE for the undertaking to include the following areas:

- The depth and breadth of the seabed potentially impacted by any bottom-disturbing activities, constituting the marine portion of the APE.

- The depth and breadth of terrestrial areas potentially impacted by any ground-disturbing activities, constituting the terrestrial portion of the APE.
- The viewshed from which renewable energy structures, whether offshore or onshore, would be visible, constituting the visual portion of the APE.
- Any temporary or permanent construction or staging areas, both onshore and offshore, which may fall into any of the above portions of the APE.

These are described below in greater detail with respect to the proposed activities, consistent with BOEM's *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585* (BOEM 2020). See Attachment B, Figure I.B-1 for an overview map of the Project APE.

I.1.3.1 Marine Portion of the APE

The marine portion of the APE (hereafter referred to as the *marine APE*) for the Project is the depth and breadth of the seabed potentially impacted by any bottom-disturbing activities and temporary or permanent offshore construction or staging areas. It includes a conservative PDE that can accommodate a number of potential designs, whether piled, suction bucket, or gravity foundations are used and installed by jack-up vessels as well as necessary support vessels and barges. The marine APE (Figure I.B-2) encompasses activities in the Lease Area (Figure I.B-3), Falmouth offshore ECC (Figure I.B-4), and Brayton Point offshore ECC (Figure I.B-5). The defined vertical extent of the marine APE, as discussed below, varies based on the type of Offshore Project component and accounts for the maximum vertical burial depth and seabed disturbance identified for each of those Project components and their installation.

The Lease Area encompasses 127,388 acres (51,552 hectares) with water depths ranging from 121.7 feet (37.1 meters) to 208.3 feet (63.5 meters) in relation to mean lower low water (MLLW) (COP Volume 1, Section 1.2; Mayflower Wind 2022). In the Lease Area, Mayflower Wind proposes up to 149 positions to be occupied by WTGs and OSPs. WTGs and OSPs would be connected via interarray cables in the Lease Area.

The marine APE also includes offshore portions of the two proposed ECCs: Falmouth and Brayton Point ECCs (COP Volume 1, Section 3.3.5 and Table 3-14; Mayflower Wind 2022). Within the maximum 87.0-mile (140.0-kilometer) long Falmouth ECC, up to five submarine offshore export cables would be installed from one or more OSPs in the Lease Area in federal waters and would run through Muskeget Channel into Nantucket Sound in Massachusetts state waters, to make landfall in Falmouth, Massachusetts. Within the maximum 124-mile (200-kilometer) long Brayton Point ECC, up to six submarine offshore export cables would be installed from one or more OSPs in the Lease Area in federal waters, and run through the Sakonnet River, make intermediate landfall on Aquidneck Island in Portsmouth, Rhode Island, which includes an underground onshore export cable route, and then into Mount Hope Bay, to make landfall at Brayton Point in Somerset, Massachusetts. Mayflower Wind intends to maintain an ECC width of between 2,625 feet to 3,280 feet (800 meters to 1,000 meters) for the Falmouth ECC and between 1,640 feet to 2,300 feet (500 meters to 700 meters) for the Brayton Point ECC to allow for maneuverability during installation and maintenance. The offshore ECCs may be

locally narrower or wider to accommodate sensitive locations and to provide sufficient area at landfall locations, at crossing locations, or for anchoring (COP Volume 1, Section 3.3.5.2; Mayflower Wind 2022).

Mayflower Wind would use horizontal directional drilling (HDD) for the sea-to-shore transition of export cables between the ocean and the land. Three potential sea-to-shore transition (landfall) locations in Falmouth, Massachusetts, two potential locations at Brayton Point in Somerset, Massachusetts, and four potential locations on Aquidneck Island in Portsmouth, Rhode Island are under consideration. The submerged areas of these activities are included in the marine APE; the landfall locations and related HDD activities located onshore are included in the terrestrial APE (discussed in section that follows).

The approximate maximum horizontal area and vertical depth of seabed disturbance associated with the construction or installation each of these aforementioned Offshore Project components and composing the marine APE are provided in Table I-1.

Table I-1. Approximate maximum horizontal and vertical extents of seabed disturbance for construction of Offshore Project components composing the marine APE

Project Component	Seabed Disturbance	
	Maximum Horizontal Area	Maximum Vertical Depth
Per WTG foundation	22.2 ac (9.0 ha); 984 ft x 984 ft (300 m x 300 m)	230 ft (70 m)
Per OSP foundation	22.2 ac (9.0 ha); 984 ft x 984 ft (300 m x 300 m)	262 (80 m)
Interarray cables	35,180.6 ac (14,237.1 ha); 497.1 mi (800 km) x 591 ft (180 m)	8.2 ft (2.5 m)
Falmouth offshore ECC	2,624-3,280 ft (800-1,000 m) centered on the cables along their entire length	16.4 ft (5.0 m)
Falmouth HDD		90 ft (27 m)
Brayton Point offshore ECC	Up to 2,300 ft (700 m) centered on the cables along their entire length	16.4 ft (5.0 m)
Brayton Point HDD		90 ft (27 m)
Aquidneck Island HDD		90 ft (27 m)

Notes:
Cable corridors may be locally wider in specific areas to allow for micro-routing and hazard avoidance. Cables may be micro-routed within the defined and surveyed horizontal marine APE extent.
Source: COP Volume 2, Table 7-1 and Appendix II-Q1, Tables II-1 and II-2; Mayflower Wind 2022.
ac = acres; ft = feet; ha = hectares; m = meters.

I.1.3.2 Terrestrial Portion of the APE

The terrestrial portion of the APE (hereafter referred to as the *terrestrial APE*) includes the depth and breadth of terrestrial areas potentially impacted by any ground-disturbing activities and temporary or permanent onshore construction or staging areas. The APE is presented as part of a conservative PDE and includes the export cable landfall sites, onshore export cable routes and associated installation areas, onshore HDD areas, onshore substation, and converter station. Figure I.B-6 depicts the terrestrial APE for onshore cable and landfall site options in Falmouth, Massachusetts. Figure I.B-7 depicts the terrestrial APE for onshore cable and landfall site options in Aquidneck Island in Portsmouth, Rhode

Island and Somerset, Massachusetts. Figure I.B-8 depicts the terrestrial APE for onshore cable and landfall site options in Brayton Point in Somerset, Massachusetts. The defined vertical extents of the terrestrial APE, as discussed below, vary based on the type of Onshore Project component and account for the maximum burial depth and vertical ground disturbance identified for each of those Project components and their installation.

The terrestrial APE includes the sea-to-shore transition landfall sites. Three potential sea-to-shore transition locations in Falmouth, Massachusetts, two potential locations at Brayton Point in Somerset, Massachusetts, and four potential locations on Aquidneck Island in Portsmouth, Rhode Island are under consideration (COP Volume 1, Section 3.3.6; Mayflower Wind 2022). The landfall locations in Falmouth, Massachusetts include Worcester Avenue, Central Park, and Shore Street. The landfall locations at Brayton Point in Somerset, Massachusetts include the western landfall location from the Lee River and the eastern landfall location from the Taunton River. Additionally, the Brayton Point offshore export cables would make intermediate landfall on Aquidneck Island in Portsmouth, Rhode Island. This landfall would require HDDs at two locations: one entering and one exiting Aquidneck Island. One landfall location is under consideration for entering Aquidneck Island; three route options, one of which has two sub-options, are under consideration for exiting Aquidneck Island. At all potential landfall locations, including those on Aquidneck Island, Mayflower Wind would use HDD to transition between ocean and land (COP Volume 1, Section 3.3.6; Mayflower Wind 2022).

From the landfall site options, the underground onshore export cables would be routed to the new onshore substation or converter station, depending on the landfall location (COP Volume 1, Sections 3.3.6 and 3.3.7; Mayflower Wind 2022). The onshore export cables would be installed in existing roadways, where feasible. One of three Falmouth onshore export cable routes and one of two Brayton Point onshore export cable routes from the landfall site options would be used based on landfall site selection. For the Falmouth onshore export cable route options, the minimum length would be 1.9 miles (3.0 kilometers) and maximum length would be 6.4 miles (10.3 kilometers) (COP Volume 1, Table 3-18; Mayflower Wind 2022). For the Brayton Point onshore export cable route options, the maximum length would be 3,940 feet (1,200 meters; COP Volume 1, Table 3-18; Mayflower Wind 2022). Additionally, an intermediate landfall would occur on Aquidneck Island in Portsmouth, Rhode Island, including a 3-mile (4.8-kilometer) underground onshore export cable route, as part of the Brayton Point export cable route. The maximum width of the trench excavation for cable installation is anticipated to be approximately 11.0 feet (3.3 meters) per trench (COP Volume 1, Section 3.3.7.1; Mayflower Wind 2022). In areas where trench boxes cannot be used, the maximum width of disturbance would be 35.0 feet (10.7 meters) per trench.

The onshore cables would connect to the proposed onshore and converter stations. Mayflower Wind would commission the development of one new onshore substation to transform the underground export cable transmission circuit for interconnection with the Falmouth POI (COP Volume 1, Section 3.3.8; Mayflower Wind 2022). There are two onshore substation locations under consideration, including the Lawrence Lynch site at 396 Gifford Street (Option A) and Cape Cod Aggregates site at 469 Thomas Landers Road (Option B). Mayflower Wind would also commission the development of one new

HVDC converter station to convert the Project's HVDC power for interconnection with the Brayton Point POI. The converter station would be constructed at the site of the former Brayton Point Power Station.

Since a final determination for the location(s) of the O&M facility has not yet been made, the terrestrial and visual APE for the O&M facility will be defined using a process of phased identification and evaluation, in consultation with BOEM and the State Historic Preservation Officer (SHPO), as defined in 36 CFR 800.4(b)(2).

The approximate maximum horizontal area and vertical depth of ground disturbance associated with constructing or installing each of the aforementioned Onshore Project components and composing the terrestrial APE are provided in Table I-2.

Table I-2. Approximate maximum horizontal and vertical extents of ground disturbance for construction of Onshore Project components composing the terrestrial APE

Project Component		Ground Disturbance	
		Maximum Horizontal Area	Maximum Vertical Depth
Falmouth	Export cable landfall	2.5 ac (1.0 ha)	90 ft (27 m)
	Onshore export cable installation area	36.2 ac (14.6 ha)	25 ft (7.6 m)
	Onshore substation	31 ac (12.5 ha)	60 ft (18.3 m)
	Underground transmission route	9.0 ac (3.6 ha)	25 ft (7.6 m)
Aquidneck	Export cable landfall	1.6 ac (0.65 ha)	90 ft (27 m)
	Onshore export cable route	8.5 ac (3.4 ha)	25 ft (7.6 m)
	Export cable route departure (HDD)	1.8 ac (0.73 ha)	90 ft (27 m)
Brayton Point	Export cable landfall	1.2 ac (0.49 ha)	90 ft (27 m)
	Onshore export cable installation area	2.2 ac (0.89 ha)	25 ft (7.6 m)
	Converter station	10 ac (4.0 ha)	60 ft (18.3 m)
	Underground transmission route	2.2 ac (0.89 ha)	25 ft (7.6 m)

Source: COP Volume 2, Table 7-3; Mayflower Wind 2022.
ac = acres; ft = feet; ha = hectares; HDD = horizontal directional drilling; m = meters.

I.1.3.3 Visual Portion of the APE

The visual portion of the APE (hereafter referred to as the visual APE) includes the viewshed from which renewable energy structures—whether offshore or onshore—would be visible.

Development of the visual APE for Offshore Project components begins with a boundary of 43 miles radial distance from the Lease Area, which is the approximate maximum theoretical distance—a distance that does not factor in certain environmental factors such as weather or environmental conditions—at which the WTGs could be visible (COP, Appendix S; Mayflower Wind 2022). Geographic information system analysis and subsequent field investigation delineated the visual APE for Offshore Project components methodically through a series of steps, beginning with the maximum theoretical distance WTGs could be visible. This was determined by first considering the visibility of a WTG from the water level to the tip of an upright rotor blade at a height of 1,066.3 feet (325 meters). The analysis then

accounted for how distance and Earth curvature impede visibility as the distance increases between the viewer and WTGs (i.e., by a 43-mile distance, even blade tips would be below the sea level horizon line). The mapping effort then removed all areas with obstructed views toward WTGs, such as those views impeded by intervening topography, vegetation, and structures. Areas with unobstructed views of Offshore Project elements then constituted the APE. Based on this analysis, the visual APE for Offshore Project components is defined as portions of the Preliminary APE, which includes all areas with views of the Offshore Project components located within 1 mile (1.6 kilometers) of the southern shorelines of Martha's Vineyard and Nantucket (COP, Appendix S; Mayflower Wind 2022). Figures I.B-9 through I.B-11 show the visual APE for Offshore Project components.

Development of the visual APE for Onshore Project components followed a similar process: a preliminary viewshed was established for the onshore substation locations under consideration in the Falmouth Onshore Project area, including Lawrence Lynch (preferred; Figure I.B-12) and Cape Cod Aggregates (alternate) substation (Figure I.B-13), based on the maximum height of the onshore structures, and was refined based on areas of potential visibility. The resultant visual APE reflects the maximum visibility of the substation structures, which considers screening associated with intervening topography, vegetation, and structures. The Preliminary APE for each onshore substation is based on actual field verified visibility and is limited to an area extending 0.1 mile (0.16 kilometer) from the substation boundary (COP, Appendix S; Mayflower Wind 2022). The Preliminary APE for the Brayton Point Onshore Project area was based on a maximum Area of Potential Visual Impact (AVPI) of 3.5 miles in all directions from the center point of the converter station site. Similar digital modeling was used to identify areas of potential visibility while accounting for distance, Earth curvature, atmospheric conditions, and topography, as well as screening from vegetation and buildings. Views were verified through field visits in sensitive viewpoints identified in the resultant viewshed, which was determined to be a 0.5-mile (0.8-kilometer) radius around the converter station siting area (Figure I.B-14; COP, Appendix S.1; Mayflower Wind 2022). Onshore export cables and transmission routes are anticipated to have only temporary visual effects on aboveground historic properties and TCPs during the construction phase (COP Volume 2, Section 7.3; Mayflower Wind 2022); therefore, these areas are not included in the visual APE for Onshore Project components. Figures I.B-12 through I.B-14 show the visual APE for Onshore Project components.

BOEM released a technical memorandum delineating the APE on February 2, 2023 and concurring with the scope and boundaries of the Project APE as defined in the Mayflower Wind technical reports.

I.2 Steps Taken to Identify Historic Properties

I.2.1 Technical Studies and Reports

To support the identification of historic properties in the APE, Mayflower Wind has provided technical reports detailing the results of cultural resource investigations in the marine, terrestrial, and visual portions of the APE. Table I-3 provides a summary of these efforts to identify historic properties and the results and key findings of each investigation. Collectively, BOEM finds that these reports represent a

good-faith effort to identify historic properties in portions of the Project APE that are not subject to the phased identification process. The documents summarized in Table I-3 have been shared with consulting parties and are hereby incorporated by reference.

BOEM has reviewed the reports summarized in Table I-3, found them sufficient, and reached the following conclusions:

- BOEM has reviewed the Marine Archaeological Resources Assessment (MARA) Report and has determined that the data are sufficient for identifying historic properties in the marine APE.
- BOEM has reviewed the Terrestrial Archaeological Resources Assessment (TARA) Reports and Phased Identification Plan (PIP) and determined that the completed and planned investigations summarized in the documents will be sufficient for identifying historic properties in the terrestrial APE. Efforts conducted for the TARA thus far are sufficient for determining effects on some identified historic properties, but given logistical limitations, not all of the terrestrial APE has been fully investigated. Mayflower Wind will be using phased identification of historic properties, as defined in 36 CFR 800.4(b)(2), for completion of archaeological investigations in the terrestrial APE, a process specifically provided for in the MOA that will be issued pursuant to 36 CFR 800.8(c)(4)(i)(B). See Section I.5, *Phased Identification and Evaluation,* for additional details on the phased process, and Attachment A for the Draft MOA.
- BOEM has reviewed the Analysis of Visual Effects to Historic Properties (AVEHP) Reports and determined the studies and reports are sufficient for identifying and assessing effects on historic properties in the visual APE. BOEM finds that the APE for potential visual effects analyzed is appropriate for the scale and scope of the undertaking.

In addition to these conclusions, BOEM has found that the assessment of effects on historic properties in the marine, terrestrial, and visual APEs contained in these reports is sufficient to apply the criteria of adverse effects and continue consultations with consulting parties for resolving adverse effects on historic properties.

Consequent to the reports prepared for the COP submittal, ICF prepared for BOEM a technical report to support BOEM's cumulative effects analysis, the *Cumulative Historic Resources Visual Effects Analysis for Mayflower Wind Energy Project* (BOEM 2023). The Cumulative Historic Resources Visual Effects Assessment (CHVREA) presents the analysis of cumulative visual effects where BOEM, in review of the AVEHP (COP, Appendix S; Mayflower Wind 2022), has determined that Offshore Project components would cause adverse visual effects on historic properties (BOEM 2023). The effects of other reasonably foreseeable wind energy development activities are additive to those adverse effects from the Project, resulting in cumulative effects. Three aboveground historic properties in the viewshed of WTGs for the Project and other reasonably foreseeable offshore wind energy development activities would be adversely affected by cumulative visual effects: the Chappaquiddick Island TCP, Nantucket Historic District NHL, and Nantucket Sound TCP.

Table I-3. Summary of cultural resources investigations performed by Mayflower Wind in the Project APE

Portion of APE	Report	Description	Key Findings/ Recommendations
Marine	*Marine Archaeological Resources Assessment for the Mayflower Wind Project Located in Massachusetts and Rhode Island State Waters and OCS Block OCS-A 0521 Offshore Massachusetts* (COP, Appendix Q; Mayflower Wind 2022)	Marine Archaeological Resources Assessment. Prepared by RCG&A. Assessment of HRG survey data collected during multiple non-intrusive survey campaigns conducted by marine survey contractors and geotechnical investigations in the marine APE representing the extent of anticipated seabed impacts associated with the Project.	RCG&A identified 50 potential marine archaeological resources: five in the Lease Area, 16 in the Falmouth ECC, 25 in the Brayton Point ECC, and four outside the marine APE but included in the report. Upon review of the HRG survey data, 32 of the 46 targets in the marine Preliminary APE (PAPE) have been marked for avoidance due to their potential cultural significance. The remaining 14 targets were determined to not be culturally significant; therefore, avoidance of these targets was not recommended. RCG&A also identified nine ASLFs in the marine PAPE and seven outside the marine PAPE. All ASLFs in the marine APE have been recommended for avoidance with an avoidance buffer derived from a review of seismic profiles and informed by the ground model to ensure that it covers the extent of the potentially preserved features. The Nantucket Sound TCP was also identified in the marine APE.
Terrestrial	*Archaeological Reconnaissance Survey of Mayflower Wind Project, Falmouth, Barnstable County, Massachusetts* (COP, Appendix R; Mayflower Wind 2022)	Terrestrial Archaeological Resources Assessment: Falmouth Phase IA Report. Prepared by AECOM. Background research of known cultural resources, development of archaeological sensitivity model, and reconnaissance-level field assessment of existing field conditions in the Falmouth, Barnstable County, MA portion of the terrestrial APE.	AECOM conducted a reconnaissance study for Onshore Project components in Falmouth, Barnstable County, MA. The survey area included roughly 10.0 mi (16.1 km) of linear routes along with an additional 64 ac (25.9 ha) in larger areas at proposed sea-to-shore transition and facility sites. The reconnaissance survey includes a contextualizing review of existing documentation. Based on that review, an archaeological sensitivity model was developed, identifying much of the survey area to be archaeologically sensitive due to the desirable environmental features that have made the area a place of human habitation for millennia. Lastly, a field assessment was conducted to document existing conditions and provide further nuance to the overall sensitivity. The entire survey area was surveyed, which included 13 soil profiles sampled using a 1-3/8-in diameter split-spoon hand

Portion of APE	Report	Description	Key Findings/ Recommendations
			auger. Additionally, geotechnical borings were assessed for potential buried landscapes at two of the landfall locations.
Terrestrial	Intensive (Locational) Archaeological Survey and Archaeological Construction Monitoring Plan (COP, Appendix R; Mayflower Wind 2022)	Terrestrial Archaeological Resources Assessment: Falmouth Phase 1B Work Plan. Prepared by AECOM. Work and archaeological construction monitoring plan for AECOM to conduct archaeological field investigation in Falmouth, Barnstable County, MA on behalf of Mayflower Wind.	No substantive findings or recommendations beyond those presented in *Archaeological Reconnaissance Survey of Mayflower Wind Project, Falmouth, Barnstable County, Massachusetts* (COP, Appendix R; Mayflower Wind 2022). Contains work and archaeological construction monitoring plan to conduct archaeological field investigation in Falmouth, Barnstable County, MA.
Terrestrial	*Terrestrial Archaeological Resources Assessment, Mayflower Wind Offshore Wind Project: Brayton Point HVDC Converter Station Onshore Facilities and Underground Cable Route* (COP, Appendix R; Mayflower Wind 2022)	Terrestrial Archaeological Resources Assessment: Brayton Point Phase 1A Report. Prepared by PAL. Background research of known cultural resources, previous and current land use, and assessment of archaeological sensitivity in the Somerset, Bristol County, MA portion of the terrestrial APE.	PAL conducted a field assessment for the proposed Brayton Point HVDC converter station onshore component of the Project in Somerset, Bristol County, MA. Historical maps and aerial imagery document substantial development in the Project area since the mid-20th century that includes canal excavation and infilling, power generation facilities improvements and demolition, and environmental management (landfill burial) of waste coal ash. Although pre- and post-Contact archaeological resources have been recorded on Brayton Point and the adjacent area, significant disturbance from previous construction has occurred. Installation of the Brayton Point HVDC converter station, underground cable system, and HDD sites are unlikely to affect any historic properties potentially eligible for listing in the State or NRHP, and no further archaeological investigation was recommended.
Terrestrial	*Terrestrial Archaeological Resources Assessment, Mayflower Wind Project, Aquidneck Island (Portsmouth) Landfall* (COP, Appendix R; Mayflower Wind 2022)	Terrestrial Archaeological Resources Assessment: Aquidneck Phase 1A/1B Report. Prepared by PAL. Background research of known cultural resources, previous and current land use, assessment of archaeological sensitivity, and Phase IB subsurface archaeological survey in the Portsmouth, Newport County, RI portion of the terrestrial APE.	Terrestrial archaeological resources [redacted] and [redacted] were newly identified in Phase IB survey. Both resources were recommended as potentially eligible for the NRHP under Criteria A and D and for avoidance and/or construction monitoring by the Project. Phase IB survey of Route Segment F and Mount Hope Bridge HDD Option 4 was recommended if Segment F is selected as the preferred duct bank alternate. Archaeological monitoring of HDD Options 1 and 3 was recommended to document any

Portion of APE	Report	Description	Key Findings/ Recommendations
			pre- or post-Contact archaeological features or deposits that may be encountered during boring for the HDDs. No archaeological testing was conducted along Boyds Lane north of Anthony Road; therefore, the presence of archaeological resources along Route Segment F and Mount Hope Bridge HDD Option 4 are unknown.
Visual	*Analysis of Visual Effects to Historic Properties* (COP, Appendix S; Mayflower Wind 2022)	Historic Resource Visual Effects Assessment. Prepared by AECOM. Background research of known aboveground historic properties and TCPs in the visual APE for offshore and Onshore Project components in Falmouth, MA.	This report analyzed the effects of the Project on historic aboveground resources in the visual PAPE. The report determined that there were 17 historic aboveground resources, historic properties, and historic districts and three TCPs in the visual PAPE for Offshore Project components and two historic aboveground resources and historic properties for Onshore Project components in Falmouth, MA. Of these 19 resources, 14 historic properties would have views of the Offshore Project components, and two would have views of the Onshore Project components in Falmouth at the Lawrence Lynch substation. The report recommended that one historic district, the Nantucket Historic District NHL and the Oak Grove Cemetery would experience an adverse effect as a result of the Project.
Visual	*Analysis of Visual Effect to Historic Properties—Brayton Point* (COP, Appendix S.1; Mayflower Wind 2022)	Historic Resource Visual Effects Assessment. Prepared by Tetra Tech. Visual effects analysis of aboveground historic properties (including known properties and a desktop analysis of potentially eligible properties) in the visual APE for Onshore Project components at Brayton Point in Somerset, MA.	This report analyzed the effects of the Project on historic aboveground resources in the visual PAPE for onshore Project components at Brayton Point in Somerset, MA. A total of 11 previously identified historic aboveground resources, historic properties, and historic districts identified in this portion of the visual PAPE have potential views of the onshore Project components. The report concluded that the Project would result in no adverse effect on all 11 properties.

HRG = high-resolution geophysical; PAPE = preliminary area of potential effects

I.2.2 Consultation and Coordination with the Parties and Public

I.2.2.1 Early Coordination

Since 2009, BOEM has coordinated OCS renewable energy activities offshore Massachusetts and Rhode Island with its federal, state, local, and tribal government partners through its Intergovernmental Renewable Energy Task Force. In January 2019, Governor Christopher Sununu of the State of New Hampshire requested the establishment of an intergovernmental offshore wind renewable energy Task Force for the state. Given the regional nature of offshore wind energy development, BOEM has decided to establish a Gulf of Maine Task Force—including representation from New Hampshire, Massachusetts, Maine, and federally recognized Native American tribes in the area. BOEM has met regularly with federally recognized tribes that may be affected by renewable energy activities in the area, specifically during planning for the issuance of leases and review of site assessment activities. BOEM also hosts public information meetings to help keep interested stakeholders updated on major renewable energy milestones. Information pertaining to BOEM's Intergovernmental Renewable Energy Task Force meetings is available at https://www.boem.gov/renewable-energy/state-activities/renewable-energy-task-force-meetings. Information pertaining to BOEM's stakeholder engagement efforts in Massachusetts is available at https://www.boem.gov/renewable-energy/state-activities/massachusetts-activities. Information pertaining to BOEM's stakeholder engagement efforts in Rhode Island is available at https://www.boem.gov/renewable-energy/state-activities/rhode-island-activities. Information pertaining to the Gulf of Maine Task Force is available at: https://www.boem.gov/Gulf-of-Maine.

I.2.2.2 NEPA Scoping and Public Hearing

On November 1, 2021, BOEM announced its Notice of Intent (NOI) to prepare an EIS for the COP. The purpose of the NOI was to solicit input on issues and potential alternatives for consideration in the EIS. Throughout the scoping process, federal agencies; state, tribal, and local governments; and the general public had the opportunity to help BOEM determine significant resources and issues, impact-producing factors, reasonable alternatives, and potential mitigation measures to be analyzed in the EIS, as well as provide additional information. BOEM also used the NEPA commenting process to allow for public involvement in the NHPA Section 106 consultation process (54 USC 300101 et seq.), as permitted by 36 CFR 800.2(d)(3). Through this notice, BOEM announced its intention to inform its NHPA Section 106 consultation using the NEPA commenting process and invited public comment and input regarding the identification of historic properties or potential effects on historic properties from activities associated with approval of the COP.

Additionally, BOEM held virtual public scoping meetings, which included specific opportunities for engaging on issues relative to NHPA Section 106 for the COP, on November 10, 15, and 18, 2021. Virtual public scoping meeting materials and records are available at https://www.boem.gov/renewable-energy/state-activities/mayflower-wind-scoping-virtual-meetings.

Through this NEPA scoping process, BOEM received comments related to cultural, historic, archaeological, or tribal resources. These are presented in BOEM's EIS Scoping Report and are summarized as follows:

- Commenters asked that BOEM ensure compliance with Sections 106 and 110(f) of the NHPA as well as NEPA, including ensuring adequate consultation with consulting parties, SHPOs, tribal nations, National Historic Lighthouse and National Historic Lighthouse Preservation Act Lighthouse owners, and other stakeholders throughout the EIS process. Commenters also emphasized that BOEM must consider a wide range of potential effects on historic and cultural resources to ensure compliance with these laws, including visual impacts on NHLs.
- Commenters stated that BOEM should recognize tribal nations' sovereign status and provide adequate government-to-government consultation with tribal governments throughout the EIS process.
- Commenters noted that the proposed Project would have an adverse visual impact on Nantucket's historic properties and cultural heritage, including the Nantucket Historic District, and requested that BOEM select an alternative that preserves the historic integrity of historic properties in Nantucket. Commenters also asked that BOEM consult with the Nantucket Historic District Commission, as well as Nantucket's historic and cultural review boards and stakeholders during any historic or archaeological review.
- Commenters felt that the VIA was not adequate and expressed concern over viewshed or visual impacts on historic properties from the proposed Project including impacts on Nantucket. Commenters requested that additional visual assessments be conducted including during different lighting and atmospheric conditions to accurately assess adverse impacts and to develop appropriate avoidance, minimization, and mitigation (AMM) measures. Other commenters asked for clarification regarding aspects of the VIA including the heights of the key observation points.
- Commenters identified specific historic properties to be identified in the APE for the cultural resources analysis including Nantucket Historic District NHL, Gay Head Light, Muskeget Island National Natural Landmark (NNL), Gay Head Cliff NNL. They also noted that all NHLs, National Historic Lighthouse Preservation Act Lighthouses, and NNLs should be identified on relevant Project maps.
- Commenters asked for tribal nations to be included in the development of the Marine Archaeological Resources Assessment and the Terrestrial Resources Assessment, as well as an Unanticipated (Post-Review) Discovery Plan and that the EIS provide an overview of BOEM and proponent engagement with tribal nations and a discussion of issues important to tribal nations.

On February 17, 2023, BOEM published a Notice of Availability for the Draft EIS which commences a 45-day public comment period. The input received via this process will be used to inform preparation of the Final EIS.

I.2.2.3 NHPA Section 106 Consultations

On September 29, 2021, BOEM contacted the Advisory Council on Historic Preservation (ACHP), MHC, and RIHPHC to provide Project information and notify these agencies of BOEM's intention to use the NEPA substitution process to fulfill Section 106 obligations under 36 CFR 800.8(c) in lieu of the procedures set forth in 36 CFR 800.3 through 800.6.

On September 29, 2021, BOEM contacted the Delaware Nation, Delaware Tribe of Indians, Mashantucket Pequot Tribal Nation, Mashpee Wampanoag Tribe, Mohegan Tribe of Connecticut, Narragansett Indian Tribe, Shinnecock Indian Nation, and Wampanoag Tribe of Gay Head (Aquinnah) with information about the Project, and an invitation to be a consulting party to the NHPA Section 106 review of the COP. BOEM also used this correspondence to notify of its intention to use the NEPA substitution process for Section 106 purposes, as described in 36 CFR 800.8(c), during its review. The following five tribal nations notified BOEM of their interest in participating as a consulting party: the Mashantucket Pequot Tribal Nation on October 19, 2021; the Mashpee Wampanoag Tribe on October 6, 2021; the Narragansett Indian Tribe on November 1, 2021; the Shinnecock Indian Nation on February 4, 2022; and the Wampanoag Tribe of Gay Head (Aquinnah) on November 1, 2021. The Delaware Tribe of Indians and the Mohegan Tribe of Connecticut did not respond to BOEM's initiation of consultation; however, BOEM has included these tribal nations in all consulting party communications and considers them consulting parties. One tribe, the Delaware Nation, declined the invitation to be a consulting party on October 13, 2021. BOEM requested information from tribal consulting parties on sites of religious and cultural significance to the tribal nations that the proposed Project could affect, and BOEM offered its assistance in providing additional details and information on the proposed Project to the tribal nations.

From September 29 to October 7, 2021, BOEM corresponded with 88 points of contact from local, state, and federal government agencies and agencies and organizations due to the nature of their legal or economic relation to the undertaking or affected properties by mail and email, including information about the Project and an invitation to be a consulting party to the NHPA Section 106 review of the COP. BOEM also used this correspondence to notify of its intention to use the NEPA substitution process for Section 106 purposes, as described in 36 CFR 800.8(c), during its review. To aid those consulting parties not familiar with the NEPA substitution process, BOEM developed a *National Environmental Policy Act (NEPA) Substitution for Section 106 Consulting Party Guide* (available at https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/NEPA-Substitution-Consulting-Party-Guide.pdf), which it attached to the correspondence.

On October 8, 2021, BOEM sent a Memorandum of Understanding (MOU) to the Delaware Nation, Delaware Tribe of Indians, the Mashantucket Pequot Tribal Nation, the Mashpee Wampanoag Tribe, the Mohegan Tribe of Connecticut, the Narragansett Indian Tribe, the Shinnecock Indian Nation, and the Wampanoag Tribe of Gay Head (Aquinnah) to establish a cooperating agency relationship with the purpose of preparing an EIS.

From October 13 to November 2, 2021, BOEM conducted outreach by phone to confirm receipt of correspondence among the governments and organizations that had not responded to the invitation to consult.

On October 26, 2021, BOEM corresponded with an additional six points of contact from governments and organizations by mail and email, to invite them to be consulting parties to the NHPA Section 106 review of the COP and provide the aforementioned NEPA substitution and Section 106 materials. On November 2, 2021, BOEM conducted outreach by phone to confirm receipt of correspondence among the additional points of contact from governments and organizations.

On November 1, 2021, BOEM contacted ACHP, MHC (the Massachusetts SHPO), the Rhode Island Historical Preservation & Heritage Commission (RIHPHC; the Rhode Island SHPO), and points of contact from consulting party governments and organizations by mail and email to notify all parties of the issuance the NOI to prepare an EIS consistent with NEPA regulations to assess the potential impacts of the Proposed Action and alternatives.

On November 2, 2021, BOEM contacted Delaware Nation, Delaware Tribe of Indians, the Mashantucket Pequot Tribal Nation, the Mashpee Wampanoag Tribe, the Mohegan Tribe of Connecticut, the Narragansett Indian Tribe, the Shinnecock Indian Nation, and the Wampanoag Tribe of Gay Head (Aquinnah) by mail and email to notify the tribal nations of the issuance the NOI to prepare an EIS consistent with NEPA regulations to assess the potential impacts of the Proposed Action and alternatives.

On November 2, 2021, BOEM invited Delaware Nation, Delaware Tribe of Indians, the Mashantucket Pequot Tribal Nation, the Mashpee Wampanoag Tribe, the Mohegan Tribe of Connecticut, the Narragansett Indian Tribe, the Shinnecock Indian Nation, and the Wampanoag Tribe of Gay Head (Aquinnah) to participate in a government-to-government consultation meeting. The email outreach also notified the tribal nations that public scoping meeting recordings and materials could be accessed via the virtual meeting website. On November 5, 2021, BOEM distributed an email reminder to consulting parties regarding the opportunity to participate in virtual public scoping meetings on November 10, November 15, and November 18, 2021.

From November 2 to November 18, 2021, BOEM corresponded with tribal nations who responded to the government-to-government consultation meeting invitation to schedule the meeting during a day and time of mutual availability.

BOEM invited the Delaware Nation, Delaware Tribe of Indians, the Mashantucket Pequot Tribal Nation, the Mashpee Wampanoag Tribe, the Mohegan Tribe of Connecticut, the Narragansett Indian Tribe, the Shinnecock Indian Nation, and the Wampanoag Tribe of Gay Head (Aquinnah) to participate in a government-to-government consultation meeting on November 19, 2021.

On November 19, 2021, BOEM hosted a government-to-government consultation meeting with the Mashantucket Pequot Tribal Nation, the Mashpee Wampanoag Tribe, and the Wampanoag Tribe of Gay Head (Aquinnah). During the meeting, BOEM presented information about the NEPA/NHPA review

process for offshore renewable energy projects, about the Project, and solicited input regarding reasonable alternatives for consideration in the EIS; the identification of historic properties or potential effects on historic properties from activities associated with the proposed Project; and potential measures to avoid, minimize, or mitigate impacts on environmental and cultural resources to be analyzed in the EIS.

On May 2, 2022, BOEM held a government-to-government meeting specifically with the Chairwoman, Tribal Historic Preservation Officer [THPO], and Council members of the Wampanoag Tribe of Gay Head (Aquinnah). In the meeting, BOEM introduced and discussed the overall renewable energy program and process and summarized details and status of projects off the coast of New England. Topics identified for future discussion included cumulative visual simulations and resource impacts, the transmission process that is part of a lease, decommissioning process and oversight, proposed mitigation plans and agreements, and the tribal capacity building initiatives.

On June 1, 2022, BOEM held a government-to-government meeting with the Chairwoman and Council members of the Wampanoag Tribe of Gay Head (Aquinnah). This meeting was a follow up to the May 2, 2022, meeting to continue the conversation on various topics and tribal concerns related to offshore wind development off the New England coast collectively.

On June 2, 2022, the BOEM Director met in-person with the Mashpee Wampanoag Tribe to provide the Tribal Council with an overview of the current state of wind farm permitting off the coast of New England, including Gulf of Maine. Topics discussed during the meeting included the following: project and regional biological and economic concerns and potential mitigation strategies; cumulative visual impacts and simulations; and other programmatic topics, including transmission as part of a lease and capacity building initiatives.

From July 1 to July 8, 2022, BOEM corresponded with an additional three points of contact from governments and organizations by phone, mail, email, to invite them to be consulting parties to the NHPA Section 106 review of the COP and provide the aforementioned NEPA substitution and Section 106 materials.

On July 7, 2022, BOEM held virtual NHPA Section 106 Consultation Meeting #1. The presentation included a brief Project overview, review of NEPA substitution for the NHPA Section 106 process, overview of Section 106 consultation opportunities for the Project, NHPA Section 110(f) compliance requirements, and a question-and-answer session with discussion.

On September 1, 2022, BOEM held a government-to-government meeting with representatives from the Mashantucket Pequot Tribal Nation, the Mashpee Wampanoag Tribe, and the Wampanoag Tribe of Gay Head (Aquinnah) to follow up on topics raised during NHPA Section 106 Consulting Meeting #1.

On February 2, 2023, BOEM shared with consulting parties the cultural resource technical reports prepared by Mayflower Wind (see Table I-3) and the Cumulative Historic Resources Visual Effects Assessment (CHRVEA) report (BOEM 2023). At that time, BOEM also shared with consulting parties a

technical memorandum detailing the delineation of the APE for the Project, this Finding of Effect, and the Draft MOA.

BOEM distributed a Notice of Availability to notify the consulting parties that the Draft EIS was available for public review and comment for a 45-day period commencing on February 17, 2023.

Additional consultation meetings will be scheduled between the Draft EIS and issuance of the ROD to consult on the finding of effect and resolve adverse effects via the MOA. Additional consultation will occur if any alternatives that require phased identification are selected for the final Project design (COP, Appendix R.2; Mayflower Wind 2022; Section I.5, *Phased Identification and Evaluation*).

The list of the governments and organizations invited to participate as consulting parties is included in Attachment C. Entities that responded to BOEM's invitation or were subsequently made known to BOEM and added as consulting parties are listed in Attachment D.

I.3 Application of the Criteria of Adverse Effect

The Criteria of Adverse Effect under NHPA Section 106 (36 CFR 800.5(a)(1)) states that an undertaking has an adverse effect on a historic property if the following occurs:

> when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association…Adverse Effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

According to regulation, adverse effects on historic properties include, but are not limited to (36 CFR 800.5(a)(2)):

i. Physical destruction of or damage to all or part of the property;

ii. Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary of the Interior's standards for the treatment of historic properties (36 CFR part 68) and applicable guidelines;

iii. Removal of the property from its historic location;

iv. Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

v. Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;

vi. Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

vii. Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

I.3.1 Assessment of Effects on Historic Properties

This section documents assessment of effects for the affected historic properties in the marine, terrestrial, and visual APEs.

I.3.1.1 Assessment of Effects on Historic Properties in the Marine APE

This section assesses effects on marine cultural resources (i.e., marine archaeological resources and ASLFs, including those affiliated with any TCPs) in the marine APE. Based on the information presented below, BOEM finds that historic properties would be adversely affected in the marine APE.

Marine Archaeological Resources

Marine geophysical archaeological surveys performed for the Proposed Action identified 50 magnetic anomalies, acoustic contacts, and buried reflectors representing potential marine archaeological resources (Table I-4; COP, Appendix Q; Mayflower Wind 2022). Of this total, 46 resources are in the marine APE: five in the Lease Area, 16 in the Falmouth ECC, and 25 in the Brayton Point ECC. The remaining four other resources were identified outside the marine APE but reported for due diligence purposes; BOEM anticipates the Proposed Action will have no effect on these resources. Of the 46 resources in the marine APE, 32 resources were recommended to be historic properties potentially eligible for listing in the NRHP and are therefore considered for potential effects from the undertaking. The remaining 14 marine archaeological resources likely relate to recent debris, industrial objects, and non-cultural geological features and therefore are not recommended to be historic properties; these are therefore not considered for potential effects from the Proposed Action, as indicated in Table I-4.

Table I-4. Marine archaeological resources identified in Mayflower Wind's investigations

Resource ID	Potential Source	Location in Marine APE	Finding of Effect [a]
[redacted]	Unknown shipwreck	Outside marine APE (near Lease Area)	No effect (outside APE)
[redacted]	Unknown shipwreck	Lease Area	Adverse effect
[redacted]	Unknown shipwreck	Lease Area	Adverse effect
[redacted]	Unknown objects	Lease Area	Adverse effect
[redacted]	Unknown shipwreck	Lease Area	Adverse effect
N/A	Known shipwreck [redacted]	Lease Area	Not applicable
[redacted]	Unknown shipwreck	Falmouth ECC	No effect (will be avoided)
[redacted]	Known shipwreck [redacted]	Falmouth ECC	Adverse effect
[redacted]	Unknown shipwreck	Falmouth ECC	No effect (will be avoided)

Resource ID	Potential Source	Location in Marine APE	Finding of Effect [a]
[redacted]	Unknown shipwreck	Falmouth ECC	No effect (will be avoided)
[redacted]	Unknown shipwreck	Outside marine APE (near Falmouth ECC)	No effect (outside APE)
N/A	Known shipwreck [redacted]	Outside marine APE (near Falmouth ECC)	No effect (outside APE)
[redacted]	Known shipwreck [redacted]	Falmouth ECC	Adverse effect
[redacted]	Unknown shipwreck	Falmouth ECC	Adverse effect
[redacted]	Disarticulated debris	Falmouth ECC	Adverse effect
[redacted]	Unknown shipwreck	Falmouth ECC	Adverse effect
[redacted]	Unknown shipwreck	Falmouth ECC	Adverse effect
[redacted]	Known shipwreck [redacted]	Falmouth ECC	Adverse effect
[redacted]	Unknown shipwreck	Falmouth ECC	Adverse effect
[redacted]	Unknown shipwreck	Falmouth ECC	No effect (will be avoided)
[redacted]	Unknown debris	Falmouth ECC	Adverse effect
[redacted]	Unknown object	Falmouth ECC	Adverse effect
[redacted]	Unknown shipwreck	Falmouth ECC	Adverse effect
[redacted]	Unknown shipwreck	Falmouth ECC	Adverse effect
[redacted]	Unknown shipwreck	BP ECC	Not applicable
[redacted]	Unknown shipwreck	Outside marine APE (near Brayton Point ECC)	No effect (outside APE)
[redacted]	Disarticulated debris	Brayton Point ECC	Adverse effect
[redacted]	Unknown shipwreck	Brayton Point ECC	Adverse effect
[redacted]	Unknown shipwreck	Brayton Point ECC	Adverse effect
[redacted]	Unknown objects	Brayton Point ECC	Not applicable
[redacted]	Unknown shipwreck	Brayton Point ECC	Not applicable
[redacted]	Unknown shipwreck	Brayton Point ECC	Not applicable
[redacted]	Unknown shipwreck	Brayton Point ECC	No effect (will be avoided)
[redacted]	Unknown shipwreck	Brayton Point ECC	Not applicable
[redacted]	Unknown object	Brayton Point ECC	Adverse effect
[redacted]	Known shipwreck [redacted]	Brayton Point ECC	No effect (will be avoided)
[redacted]	Known shipwreck [redacted]	Brayton Point ECC	No effect (will be avoided)
[redacted]	Known shipwreck [redacted]	Brayton Point ECC	No effect (will be avoided)
[redacted]	Unknown shipwreck	Brayton Point ECC	Not applicable

Resource ID	Potential Source	Location in Marine APE	Finding of Effect [a]
[redacted]	Unknown shipwreck or boulder	Brayton Point ECC	Not applicable
[redacted]	Unknown lobster traps or debris	Brayton Point ECC	Not applicable
[redacted]	Unknown object	Brayton Point ECC	No effect (will be avoided)
[redacted]	Unknown debris	Brayton Point ECC	No effect (will be avoided)
[redacted]	Unknown shipwreck	Brayton Point ECC	Adverse effect
[redacted]	Known shipwreck [redacted]	Brayton Point ECC	No effect (will be avoided)
[redacted]	Unknown shipwreck	Brayton Point ECC	Not applicable
[redacted]	Unknown object	Brayton Point ECC	Not applicable
[redacted]	Unknown shipwreck	Brayton Point ECC	Not applicable
[redacted]	Unknown shipwreck	Brayton Point ECC	Not applicable
[redacted]	Unknown shipwreck	Brayton Point ECC	Not applicable

Notes: Resources for which the finding of effect has been marked as "Not applicable" are those resources that have been recommended not eligible for listing in the NRHP.
Source: COP, Appendix Q; Mayflower Wind 2022.
[a] BOEM anticipates that all adverse effects have the potential to be resolved through the adoption of AMM measures. BOEM anticipates that the number of adversely affected marine archaeological resources may be refined through ongoing Section 106 consultations.
ID = identification

The severity of effects would depend on the extent to which integral or significant components of the affected marine archaeological resource are disturbed, damaged, or destroyed, resulting in the loss of contributing elements to the historic property's eligibility or potential eligibility for listing in the NRHP. Avoidance buffers for the marine archaeological resources that are historic properties in the marine APE have been recommended (COP Appendix Q; Mayflower Wind 2022). The avoidance buffers for these historic properties are determined using several factors in a process developed by Mayflower Wind's Qualified Marine Archaeologist (QMA). Those resources with a small visual footprint (i.e., <16.4 feet [<5 meters]) are recommended to be protected by an avoidance buffer comprising a minimum 165-foot (50-meter) radius (84,539.54 ft^2 [7,853.98 $meters^2$]) extending from the target's centroid. Those with a larger visual footprint are recommended to be protected by an avoidance buffer comprising a 164-foot (50-meter) buffer established off of all extant features, typically creating an ellipsoid or polygon-shaped avoidance area. Avoidance buffers recommended for each resource may contain contributing elements to the NRHP eligibility of the resources. Modifications to the recommended avoidance buffers of these resources may be adjusted through ongoing analysis and consultation.

Mayflower Wind has presently committed to avoiding 11 of the 32 marine archaeological resources recommended to be historic properties potentially eligible for listing in the NRHP, and therefore the undertaking would have no effect on these resources (see Table I-4 and Attachment A, the Draft MOA). However, development of the final Project design is ongoing, and it is currently unclear whether Mayflower Wind would be able to avoid effects on the other 21 resources. As such, BOEM finds that 21

historic properties would be subject to adverse effects from the undertaking. Adverse effects on resources may potentially be avoided, minimized, or mitigated in the final Project design. BOEM anticipates that the number of adversely affected historic properties may be refined through ongoing Section 106 consultations.

Ancient Submerged Landform Features

ASLFs may be individually eligible for listing in the NRHP or considered contributing elements to a TCP eligible for listing in the NRHP. ASLFs in the marine APE are considered archaeologically sensitive. Although the marine geophysical remote-sensing studies performed to identify historic properties did not find direct evidence of pre-Contact Native American cultural materials, they do represent a good-faith effort to identify submerged historic properties in the APE potentially affected by the undertaking, as defined at 36 CFR 800.4. If undiscovered archaeological resources are present within the identified ASLFs and they retain sufficient integrity, these resources could be eligible for listing in the NRHP under Criterion D. Furthermore, ASLFs are considered by Native American tribes in the region to be culturally significant resources as the lands where their ancestors lived and as locations where events described in tribal histories occurred prior to inundation. In addition, BOEM recognizes these landforms are similar to features previously determined to be TCPs and that are presumed to be eligible for listing in the NRHP under Criterion A.

Mayflower Wind's marine geophysical archaeological surveys and geoarchaeological core processing identified 16 geomorphic features representing potential ASLFs (Table I-5). Of this total, nine are in the marine APE: one in the Lease Area, four in the Falmouth ECC, and four in the Brayton Point ECC (COP, Appendix Q; Mayflower Wind 2022). The seven other identified ASLFs are below the maximum vertical extent of the marine APE; therefore, BOEM anticipates the Proposed Action will have no effect on these resources. In addition to the archaeological potential of ASLFs, a number of the identified landforms along the Falmouth ECC may be contributing elements to one or more TCPs, including the Nantucket Sound TCP (Section I.3.1.4, *Assessment of Effects on Historic Properties Located in Multiple Portions of the APE*). The extent of marine cultural investigations performed for the Proposed Action does not enable conclusive determinations of eligibility for listing identified resources in the NRHP; as such, all identified ASLFs are considered eligible for the purposes of this assessment and, therefore, historic properties. Additional archaeological surveys or analyses, if completed, may enable more refined assessments of integrity, significance, and eligibility for listing these resources in the NRHP.

Table I-5. ASLFs identified in Mayflower Wind's investigations

Resource ID	Location in Marine APE	Finding of Effect [a]
[redacted]	Lease Area	Adverse effect
[redacted]	Outside marine APE (near Falmouth ECC)	No effect (outside APE)
[redacted]	Outside marine APE (near Falmouth ECC)	No effect (outside APE)

Resource ID	Location in Marine APE	Finding of Effect [a]
[redacted]	Outside marine APE (near Falmouth ECC)	No effect (outside APE)
[redacted]	Outside marine APE (near Falmouth ECC)	No effect (outside APE)
[redacted]	Outside marine APE (near Falmouth ECC)	No effect (outside APE)
[redacted]	Outside marine APE (near Falmouth ECC)	No effect (outside APE)
[redacted]	Falmouth ECC	No effect (will be avoided)
[redacted]	Falmouth ECC	No effect (will be avoided)
[redacted]	Falmouth ECC	Adverse effect
[redacted]	Outside marine APE (near Falmouth ECC)	No effect (outside APE)
[redacted]	Falmouth ECC	Adverse effect
[redacted]	Brayton Point ECC	Adverse effect
[redacted]	Brayton Point ECC	Adverse effect
[redacted]	Brayton Point ECC	Adverse effect
[redacted]	Brayton Point ECC	Adverse effect

Source: COP, Appendix Q; Mayflower Wind 2022.
[a] BOEM anticipates that all adverse effects have the potential to be alleviated through the adoption of AMM measures. BOEM anticipates that the number of adversely affected ASLFs may be refined through ongoing Section 106 consultations.
ECC = export cable corridor; ID = identification.

The severity of effects would depend on the extent to which integral or significant components of the affected ASLF are disturbed, damaged, or destroyed, resulting in the loss of contributing elements to the historic property's eligibility for listing in the NRHP. Resource-specific minimum avoidance areas for each of the identified ASLFs have been recommended (COP, Appendix Q; Mayflower Wind 2022). Avoidance measures could include micro-siting facilities and work zones away from features and avoidance buffers and/or adjusting burial depth of cabling across features.

Mayflower Wind has presently committed to avoiding two of the nine ASLFs in the marine APE, and therefore, the undertaking would have no effect on these resources (see Table I-5 and Attachment A, the Draft MOA). However, development of the final Project design is ongoing, and it is currently unclear whether Mayflower Wind would be able to avoid effects on the other seven ASLFs. As such, BOEM finds that seven ASLFs would be subject to adverse effects from the undertaking. Adverse effects on these resources may potentially be avoided, minimized, or mitigated in the final Project design. BOEM also anticipates that the number of adversely affected ASLFs may be refined through ongoing Section 106 consultations.

Nantucket Sound TCP

Mayflower Wind's cultural resource background research identified the Nantucket Sound TCP in and potentially affected by Project activities occurring in the marine APE (COP, Appendix Q; Mayflower Wind 2022). However, this TCP was also identified in the visual APE for Offshore Project components (COP, Appendices S; Mayflower Wind 2022). As such, BOEM's assessment of effects on this historic property can be found in Section I.3.1.4, *Assessment of Effects on Historic Properties Located in Multiple Portions of the APE*.

I.3.1.2 Assessment of Effects on Historic Properties in the Terrestrial APE

Cultural resource investigations completed for the Proposed Action identified historic properties in the terrestrial APE (COP, Appendix R; Mayflower Wind 2022). Based on the information presented below, BOEM finds historic properties would be adversely affected in the terrestrial APE.

Terrestrial Archaeological Resources

As of January 2023, Mayflower Wind's investigations have identified two terrestrial archaeological resources in the terrestrial APE (Table I-6; COP, Appendix R; Mayflower Wind 2022), which are recommended to be eligible for listing in the NRHP under Criteria A and D, and BOEM is treating them as historic properties. Terrestrial archaeological investigations have not been fully completed in the terrestrial APE. As such, potential, presently undiscovered terrestrial archaeological resources may be present in the terrestrial APE and subject to adverse effects from the Proposed Action; these may be identified during Mayflower Wind's process of phased identification and evaluation of historic properties (COP, Appendix R.2; Mayflower Wind 2022; Section I.5, *Phased Identification and Evaluation*). The terrestrial APE also intersects the NRHP-listed Mount Hope Bridge boundary as defined by the U.S. National Park Service (NPS); further discussion of this historic property is provided in the *Historic Aboveground Resources* section below. BOEM anticipates that the number of identified terrestrial archaeological resources and historic properties in the terrestrial APE may be refined through the phased identification process and ongoing Section 106 consultations.

Table I-6. Terrestrial archaeological resources in the terrestrial APE

Resource ID	Cultural Component	Location in Terrestrial APE	Finding of Effect [a]
[redacted]	[redacted]	[redacted]	Adverse effect
[redacted]	[redacted]	[redacted]	Adverse effect

Source: COP, Appendix R; Mayflower Wind 2022.
[a] BOEM anticipates that all adverse effects have the potential to be resolved through the adoption of AMM measures. BOEM anticipates that the number of adversely affected terrestrial archaeological resources may be refined through ongoing Section 106 consultations.
APE = area of potential effect; ID = identification.

The severity of effects would depend on the extent to which integral or significant components of the affected terrestrial archaeological resource are disturbed, damaged, or destroyed, resulting in the loss of contributing elements to the historic property's eligibility for listing in the NRHP. Avoidance of the two known terrestrial archaeological resources has been recommended. If avoidance is not feasible, mitigation in the form of data recovery, excavation, and archaeological construction monitoring has been recommended (COP, Appendix R; Mayflower Wind 2022). Mayflower Wind has committed to monitoring during construction in areas determined to have a moderate to high potential for undiscovered archaeological resources (COP Volume 2, Table 16-1 and Appendix R.3; Mayflower Wind 2022).

Development of the final Project design is ongoing, and it is currently unclear whether Mayflower Wind would be able to avoid effects on terrestrial archaeological resources. Mayflower Wind will be using a process of phased identification as defined in 36 CFR 800.4(b)(2) for the areas of the terrestrial APE identified in Table 2.1-1 of the Terrestrial Archaeology Phased Identification Plan. Completion of Phase IB archaeological surveys during the phased process may lead to the identification of archaeological resources in the terrestrial APE. As such, the undertaking is currently anticipated to have adverse effects on the two known terrestrial archaeological resources identified in the terrestrial APE. Adverse effects on these resources may potentially be avoided, minimized, or mitigated in the final Project design. BOEM also anticipates that the number of adversely affected terrestrial archaeological resources (Table I-6) may be refined through the phased identification process and ongoing Section 106 consultations. BOEM will use the MOA to establish commitments for reviewing the sufficiency of any supplemental terrestrial archaeological investigations; assessing effects on historic properties; and implementing measures to avoid, minimize, or mitigate effects in these areas prior to construction. For additional details, see Section I.5, *Phased Identification and Evaluation*; Attachment A, *Draft Memorandum of Agreement*; and Attachment A, Attachment 13, *Terrestrial Archaeology Phased Identification Plan* (same as COP, Appendix R.2; Mayflower Wind 2022).

Historic Aboveground Resources

One historic aboveground resource listed in the NRHP has been identified in the terrestrial APE: the Mount Hope Bridge (COP, Appendix R; Mayflower Wind 2022). The terrestrial APE intersects the Mount Hope Bridge boundary as defined by NPS; however, the structure itself is not subject to physical adverse effects from the Proposed Action, and the Mount Hope Bridge has been determined to be significant and eligible for listing in the NRHP unrelated to potential archaeological elements. As such, BOEM anticipates the Project would have no effect on this historic property.

I.3.1.3 Assessment of Effects on Historic Properties in the Visual APE

Cultural resource investigations completed for the Proposed Action have identified historic properties in the visual APE (COP, Appendices S and S.1; Mayflower Wind 2022). Based on the information presented below, BOEM finds historic properties would be adversely affected in the visual APE.

Review of the visual APE for Offshore Project components identified 16 historic aboveground resources and three TCPs (i.e., Chappaquiddick Island, Nantucket Sound, and Vineyard Sound and Moshup's Bridge), of which 13 resources would have views of the Project. Review of the visual APE for Onshore Project components identified a total of 13 historic aboveground resources in Falmouth and Brayton Point, of which two would have views of the Onshore Project components in Falmouth. Four aboveground historic properties would experience visual adverse effects from the proposed Project (Table I-7).

Table I-7. Adversely affected aboveground historic properties in the visual APE

Resource Name	Portion of Visual APE	Distance to Nearest WTG [a]	NRHP Status
Chappaquiddick Island TCP	Offshore Project components	30.8 miles	Eligible
Nantucket Historic District	Offshore Project components	23.4 miles	National Historic Landmark
Nantucket Sound TCP	Offshore Project components	25.1 miles	Eligible
Oak Grove Cemetery	Onshore Project components	N/A	Eligible

[a] For the Proposed Action.

Chappaquiddick Island TCP

Chappaquiddick Island TCP is [redacted] As a result, Chappaquiddick Island was determined by BOEM to be potentially eligible for listing in the NRHP as a TCP. The designation does not contain specific boundaries, but would roughly encompass [redacted] The Island is considered eligible under Criterion A [redacted]

[redacted]

Chappaquiddick Island TCP retains its maritime setting and continues to offer significant seaward views that support the integrity of this setting, which contributes to this resource's NRHP eligibility. Those seaward views include vantage points with the potential for an unobstructed view from contributing resources toward the Offshore Project elements. Introduction of the WTGs and OSPs into the seascape horizon of the Chappaquiddick Island TCP would result in an adverse visual effect on the viewshed and maritime setting. Simulated conditions of the south shore of the island Wasque Point, Wasque Reservation, and Wasque Avenue Key Observation Points (KOP) revealed potential weak to moderate visual change to the island; the greatest visual change was found at the Wasque Avenue KOP (COP, Appendices T and S; Mayflower Wind 2022). The intensity of the visual effect depends on blade movement, differing atmospheric conditions, and lighting. Based on this assessment, the introduction of Offshore Project components would result in a change to the unobstructed ocean viewshed of the TCP and would potentially compromise the setting of the TCP, which is a key character-defining feature. As a result, the Project would result in an adverse effect on the Chappaquiddick Island TCP.

As described in the *Mayflower Wind Cumulative Historic Resources Visual Effects Analysis*, the Chappaquiddick Island TCP is 30.8 miles (49.6 kilometers) from the nearest WTG associated with the proposed Project and 14.7 miles (23.7 kilometers) from the nearest potential WTG location for other wind energy development activities. The total number of potentially visible WTGs is 679. Of these, 86 theoretically visible WTGs (12.66 percent) would be from the proposed Project. As such, BOEM determined the Project would add to the cumulative visual effects on the Chappaquiddick Island TCP when combined with the effects of other past, present, or reasonably foreseeable future actions (BOEM 2023).

Nantucket Historic District NHL

Nantucket Historic District is located 22.3 miles (35.9 kilometers) north of the Lease Area and encompasses Tuckernuck Island, Muskeget Island, and Nantucket Island. Nantucket Island is a well-preserved New England seaport, which retains intact buildings dating to the eighteenth and nineteenth centuries, when the whaling industry provided the primary source of commerce in the town. Economic decline on the island is largely responsible for the survival of excellent and intact architectural resources from the Colonial, Federal, Greek Revival, and Victorian periods. Preservation of these resources, and the island's location off the coast of Cape Cod, led to its significance as an early vacation resort. Tuckernuck Island contains a small collection of nineteenth and twentieth century buildings. Like Nantucket Island, this island is known for its nineteenth century architecture and benefited from the rise of the whaling industry. Muskeget Island contains only one building, a circa 1910 former Coast Guard boathouse, which is used as a summer residence. The Nantucket Historic District includes dense residential development from the era of whaling, residential development associated with tourism, grassy public parcels and lawns, undeveloped barren areas with grasslands, heathlands and salt

marshes, scrub oak, deciduous trees, and barrens of pitch pine barrens that are up to 40 feet (12.2 meters) tall (COP, Appendix S:3-7; Mayflower Wind 2022).

The Nantucket Historic District was determined to be an NHL and was listed in the NRHP in November 1966. In October 2012, the NHL nomination was updated and the historic district boundaries were expanded from just Nantucket Island to include Tuckernuck and Muskeget Islands. The district is significant under NRHP Criterion A/NHL Criterion 1 for its association with the whaling industry in New England; NRHP Criterion C/NHL Criterion 4 for the array of well-preserved resources reflecting a range of architectural styles and eras; and NRHP Criterion D for important cultural and historical data it has yielded or may yield. The period of significance begins in 1650 with the origination of the whaling industry, through the industry's demise in 1849, and spans to 1975 to include the period in which it emerged and thrived as a summer resort (Chase-Herrill and Pfeiffer 2012 as cited in COP, Appendix S:3-7; Mayflower Wind 2022). Character-defining features of Nantucket Historic District include the collection of well-preserved buildings from Colonial, Federal, Greek Revival, and Victorian periods; the maritime setting of the district as an important whaling center with a high concentration of buildings, both simple and elaborate, oriented toward shorelines, harbors, and ocean vistas; and unobstructed views of the ocean from locations throughout the island. As a collection of resources that are united historically and aesthetically by plan and physical development, setting is an important character-defining feature of the historic district's integrity (COP, Appendix S:3-7; Mayflower Wind 2022).

The Nantucket Historical Commission maintains a list of contributing and noncontributing resources within the district; this list contains 3,782 properties that are classified as either contributing, noncontributing, or some combination. Within the PAPE, there are 1,822 contributing properties are contributing, 1,108 noncontributing properties, and 852 properties that are either vacant or uncategorized (COP, Appendix S:3-7; Mayflower Wind 2022).

Nantucket Historic District retains its maritime setting and continues to offer significant seaward views that support the integrity of this setting, which contributes to this resource's NRHP eligibility. Those seaward views include vantage points with the potential for an unobstructed view from contributing resources toward the Offshore Project elements. Introduction of the WTGs and OSPs into the seascape horizon of the District would result in an adverse visual effect upon the viewshed and setting. Simulated conditions, particularly along the south shore of the island at historic locations, such as Tom Nevers Field and Miacomet Beach, revealed potential moderate visual change from some areas of the district, and moderate to major visual changes in other places, such as Cisco Beach and the Hummock Pond Road Bike Path. The intensity of the visual effect depends on blade movement, differing atmospheric conditions, and lighting. Based on this assessment, the introduction of Offshore Project components would result in a change to the unobstructed ocean viewshed of the district, would potentially compromise the setting of the district and its contributing resources, which is one of its key character-defining features. As a result, the Project would result in an adverse effect on Nantucket Historic District (COP, Appendix S:3-7-3-8; Mayflower Wind 2022).

As described in the *Mayflower Wind Cumulative Historic Resources Visual Effects Analysis*, the Nantucket Historic District is 23.4 miles (37.7 kilometers) from the nearest WTG associated with the proposed

Project and 14.8 miles (23.8 kilometers) from the nearest potential WTG location for other wind energy development activities. The total number of potentially visible WTGs is 743. Of these, 129 theoretically visible WTGs (17.36 percent) would be from the proposed Project. As such, BOEM determined the Project would add to the cumulative visual effects on the Nantucket Historic District when combined with the effects of other past, present, or reasonably foreseeable future actions (BOEM 2023).

Nantucket Sound TCP

Mayflower Wind's cultural resource background research identified the Nantucket Sound TCP in and potentially affected by Project activities occurring in the visual APE for Offshore Project components (COP, Appendix S; Mayflower Wind 2022). However, this TCP was also identified in the marine APE (COP, Appendices Q; Mayflower Wind 2022). As such, BOEM's assessment of effects on this historic property can be found in Section I.3.1.4, *Assessment of Effects on Historic Properties Located in Multiple Portions of the APE*.

Oak Grove Cemetery (Falmouth, Massachusetts)

The Oak Grove Cemetery was established circa 1850. It encompasses 18.9 acres and consists of 35 contributing resources. The landscape includes manicured lawns and native plantings under an open canopy of deciduous and evergreen trees that are up to 40 feet tall. The cemetery exhibits a mix of the ideals of the rural/garden cemetery movement and the more geometric configuration of formal nineteenth century community cemeteries. The Oak Grove Cemetery was determined to be eligible for listing in the NRHP in 2014. The cemetery is significant under Criterion A for its association with the history of the town of Falmouth and is the town's largest nineteenth century cemetery. It is also significant under Criterion C as a well-preserved local example of both a nineteenth century rural and formal cemetery. The period of significance of the resource area is 1850 to 1964. Character-defining features of the cemetery include the layout and landscape, greenspace, and myriad markers. As a cemetery that is significant for its association with the rural cemetery movement, which sought to create a pastoral park-like environment, the setting is an important characteristic feature of the resource (COP, Appendix S:3-22; Mayflower Wind 2022).

The Oak Grove Cemetery retains its rural setting, which contributes to its NRHP eligibility. From the cemetery, views toward the Onshore Project elements would be possible. The Oak Grove Cemetery is located immediately approximately 0.1 mile west of the Lawrence Lynch substation site and 3.34 miles from the Cape Cod Aggregates Substation site. Distance, vegetation, and other buildings prevent a view of the Cape Cod Aggregates Substation site from the cemetery. Though there is some vegetation between the historic property and the Lawrence Lynch substation site, the historic property is immediately adjacent and would have a view of the building. As a rural, garden-style cemetery that was designed to provide a natural sanctuary for mourners, setting is a character-defining feature of its significance. The cemetery would experience a moderate to major visual change in setting due to the construction of the Lawrence Lynch substation. The introduction of a new, modern visual element has the potential to compromise the rural and contemplative setting, affecting its ability to convey

significance. As a result, the Project would have an adverse effect on the Oak Grove Cemetery (COP, Appendix S:3-22; Mayflower Wind 2022).

I.3.1.4 Assessment of Effects on Historic Properties Located in Multiple Portions of the APE

The historic property discussed in this section has been identified within multiple portions of the APE and, as such, is subject to both physical and visual effects.

Nantucket Sound TCP

In 2009, MHC determined Nantucket Sound was eligible for listing in the NRHP as [redacted] TCP under Criterion D [redacted] (Simon 2009 as cited in the COP, Appendix Q:32; Mayflower Wind 2022). Per Criterion D, Nantucket Sound was found to yield and have the potential to yield valuable information [redacted] (NPS 1995, 2010 as cited in the COP, Appendix Q:44; Mayflower Wind 2022). ASLFs identified through Mayflower Wind's marine geophysical archaeological surveys within or in proximity to the Nantucket Sound may be contributing elements to the TCP's eligibility for listing in the NRHP.

By approximately 17,000 calibrated years Before Present (cal BP), the Laurentide Ice Sheet had retreated to the north shore of Cape Cod, and the southward draining braided streams deposited sediments on a glacial outwash plain. As the stream system migrated laterally south of the retreating ice front, glacial lakes along the coastal plain were buried beneath the prograding outwash. However, some glacial lakes may have drained southward into the Lease Area by way of water gaps between Nantucket and Martha's Vineyard before they were buried (Gutierrez et al. 2003 as cited in the COP, Appendix Q:31; Mayflower Wind 2022). As late as 15,000 cal BP, the southern edge of the continental ice sheet still extended as far south as Cape Cod. At that time, sea stands were as much as 300 feet (91.5 meters) lower than present levels; now-inundated areas of the sea floor were exposed and potentially open to human habitation (Daley 2005 as cited in the COP, Appendix Q:31; Mayflower Wind 2022). However, by cal 13,000 BP, as the climate moderated, most of southeastern New England was ice free (Raposa 2009 and Plymouth Archaeological Research Project [PARP] 2016 as cited in the COP, Appendix Q:31; Mayflower Wind 2022). Sediment cores taken in Nantucket Sound in water depths of between 30 feet (9.1 meters) and 50 feet (15.2 meters) below mean sea level (MSL) demonstrated that the region surrounding Massachusetts' offshore islands once incorporated deciduous forests, wetlands, and swamps (Daley 2005 and Simon 2009 as cited in the COP, Appendix Q:31–32; Mayflower Wind 2022).

Warming climatic conditions combined with isostatic rebound of the land mass resulted in rising sea levels that inundated exposed and potentially habitable landscapes (Bright et al. 2013:31 and Mahlstedt 2007a:24 as cited in the COP, Appendix Q:32; Mayflower Wind 2022). Most of Nantucket Sound and the adjacent Vineyard Sound were submerged by 8,000 cal BP (Dunford 1999:43 as cited in the COP, Appendix Q:32; Mayflower Wind 2022). Despite this trend, the potential for intact early archaeological resources on or beneath the seafloor in this area is generally high.

A number of the ASLFs identified by Mayflower Wind along the Falmouth ECC may be contributing elements to the Nantucket Sound TCP. The Falmouth ECC runs through Muskeget Channel into

Nantucket Sound in Massachusetts state waters to make landfall in Falmouth, Massachusetts. Mayflower Wind has presently committed to avoiding two of four ASLFs located in the Falmouth ECC portion of the marine APE (i.e., FM-P-21-04A and FM-P-21-04B); however, development of the final Project design is ongoing, and it is currently unclear whether Mayflower Wind would be able to avoid effects on the two other ASLFs that may be contributing elements to the Nantucket Sound TCP. As such, BOEM has concluded that the Project would result in adverse *physical* effects—including irreversible damage—to ASLFs that are contributing elements to the Nantucket Sound TCP if they cannot be avoided. Adverse effects on these resources may potentially be avoided, minimized, or mitigated in the final Project design. BOEM also anticipates determining which ASLFs contribute to the TCP and would be adversely affected through ongoing Section 106 consultations.

Additionally, BOEM has concluded that the Project would result in an adverse *visual* effect on the Nantucket Sound TCP. In addition to being determined eligible under Criterion D, the TCP is significant under Criterion A [redacted] It is eligible under Criterion B [redacted] (Shull 2010 as cited in the COP, Appendix S:3-10; Mayflower Wind 2022). Setting is a character-defining feature of the TCP, [redacted] (COP, Appendix S:3-10; Mayflower Wind 2022). Nantucket Sound TCP retains its maritime setting and continues to offer significant seaward views that support the integrity of this setting, which contributes to this resource's NRHP eligibility. Those seaward views include vantage points with the potential for an unobstructed view from contributing resources toward the Offshore Project elements. As a result of the introduction of modern, intrusive elements associated with the Offshore Project components, the Nantucket Sound TCP would experience visual adverse effects.

As described in the *Mayflower Wind Cumulative Historic Resources Visual Effects Analysis*, the Nantucket Sound TCP is 25.1 miles (40.4 kilometers) from the nearest WTG associated with the proposed Project and 14.3 miles (23.0 kilometers) from the nearest potential WTG location for other wind energy development activities. The total number of potentially visible WTGs is 744. Of these, 129 theoretically visible WTGs (17.33 percent) would be from the proposed Project. As such, BOEM determined the Project would incrementally add to the cumulative visual effects on the Chappaquiddick Island TCP when combined with the effects of other past, present, or reasonably foreseeable future actions (BOEM 2023).

I.3.2 Summary of Adversely Affected Historic Properties

I.3.2.1 Adverse Effects on Historic Properties in the Marine APE

The Project would have adverse effects on historic properties in the marine APE: 21 marine archaeological resources; seven ASLFs; and one TCP, to which some of the identified ASLFs may be

considered contributing elements. Avoidance of a historic property would result in no effect on the historic property. However, development of the final Project design is ongoing, and it is currently unclear whether Mayflower Wind would be able to avoid all adverse effects on historic properties identified in the marine APE. Therefore, BOEM has determined the undertaking would have adverse effects on historic properties in the marine APE. BOEM anticipates that the number of adversely affected historic properties may be refined through ongoing Section 106 consultations.

I.3.2.2 Adverse Effects on Historic Properties in the Terrestrial APE

The Project would have adverse effects on known historic properties in the terrestrial APE: two terrestrial archaeological resources. Avoidance has been recommended for these two historic properties; avoidance of a historic property would result in no effect on the historic property. However, development of the final Project design is ongoing, and it is currently unclear whether Mayflower Wind would be able to avoid adverse effects. If avoidance is not feasible, mitigation in the form of data recovery, excavation, and archaeological construction monitoring has been recommended (COP, Appendix R; Mayflower Wind 2022). Therefore, BOEM has determined the undertaking would have adverse effects on historic properties in the terrestrial APE.

Additional terrestrial archaeological resources subject to adverse effects from the Project may be identified during Mayflower Wind's process of phased identification as defined in 36 CFR 800.4(b)(2) (Section I.5, *Phased Identification and Evaluation*). As detailed in Mayflower Wind's Terrestrial Archaeology PIP (COP, Appendix R.2; Mayflower Wind 2022), AMM measures will be determined or refined following the completion of the remaining terrestrial archaeological investigations. BOEM will use the MOA to establish commitments for reviewing the sufficiency of any supplemental terrestrial archaeological investigations completed through the phased identification process; assessing effects on historic properties; and implementing measures to avoid, minimize, or mitigate effects in these areas prior to construction. BOEM anticipates that the number of adversely affected historic properties in the terrestrial APE may be refined through the phased identification process and ongoing Section 106 consultations.

I.3.2.3 Adverse Effects on Historic Properties in the Visual APE

The Project would have direct visual adverse effects on four aboveground historic properties: the Chappaquiddick Island TCP, Nantucket Historic District NHL, Nantucket Sound TCP, and Oak Grove Cemetery. The undertaking would affect the character of the properties' settings that contributes to their historic significance by introducing visual elements that are out of character with the historic setting of the properties. BOEM did, however, determine that, due to the distance and open viewshed, the integrity of the properties would not be so diminished as to disqualify any of them for NRHP eligibility. The adverse effects on the viewshed of the aboveground historic properties would occur for approximately 35 years, but they are unavoidable for reasons discussed in Section I.3.1.3, *Assessment of Effects on Historic Properties in the Visual APE*. This application of the criteria of adverse effect and determination that the effects are direct are based on pertinent NRHP bulletins, subsequent clarification

and guidance by ACHP and NPS, and other documentation, including professionally prepared viewshed assessments and computer-simulated photographs.

Where BOEM found adverse visual effects on historic properties in the visual APE for Offshore Project components (i.e., Chappaquiddick Island TCP, Nantucket Historic District NHL, Nantucket Sound TCP), BOEM also determined that the undertaking would cause cumulative visual effects (BOEM 2023). Cumulative effects are additive effects; where BOEM has determined adverse effects would occur from Offshore Project actions on historic properties, BOEM then assessed if those effects would add to the potential adverse effects of other reasonably foreseeable actions and thereby result in cumulative effects.

I.4 Actions to Avoid, Minimize, or Mitigate Adverse Effects

As a requirement of COP approval, BOEM will stipulate measures to avoid, minimize, or mitigate adverse effects, including cumulative visual effects, on historic properties identified in the APE as caused by the Project. This includes considering all prudent and feasible alternatives to avoid adverse effects as discussed in Section I.4.1, *Alternatives Considered*. Specifically, BOEM will stipulate measures for marine archaeological resources, ASLFs, terrestrial archaeological resources, and historic aboveground resources determined to be historic properties listed or eligible for listing in the NRHP. BOEM will also stipulate mitigation measures that would be triggered in cases where there is unanticipated discovery of previously unknown marine or terrestrial archaeological resources that are not currently found to be subject to adverse effects from the Project.

BOEM, with the assistance of Mayflower Wind, will develop and implement Historic Property Treatment Plans (HPTPs) in consultation with consulting parties, including any property owners, who have demonstrated interest in specific historic properties to address effects on these resources if they cannot be avoided. HPTPs will also provide details and specifications for actions consisting of mitigation measures to resolve adverse effects. See Attachment A for the Draft MOA and Attachments 7 through 12 of the Draft MOA for draft HPTPs prepared by Mayflower Wind.

I.4.1 Alternatives Considered

BOEM's election to use NEPA substitution for the Section 106 review of the Project includes the identification and evaluation of historic properties for the undertaking and assessment of effects for all the action alternatives identified during the NEPA review and as presented in the Draft EIS. The Draft EIS analyzes the impacts of the Project on the human environment and specifically on cultural resources, including historic properties. The NEPA Draft EIS and Section 106 review analyze a total of six alternatives (i.e., A through F) as summarized in Table I-8. Additional details on the action alternatives can be found in Chapter 2 of the Draft EIS.

Table I-8. Summary of alternatives analyzed in the Draft EIS and Section 106 review

Alternative	Description
Alternative A – No Action Alternative	Under Alternative A, BOEM would not approve the COP, and the Project's construction and installation, operations and maintenance, and eventual decommissioning would not occur, and no additional permits or authorizations for the Project would be required. Any potential environmental and socioeconomic impacts, including benefits, associated with the Project as described under the Proposed Action would not occur. However, all other existing or other reasonably foreseeable future impact-producing activities would continue. The impact of the No Action Alternative serves as the baseline against which all action alternatives are evaluated.
Alternative B – Proposed Action	Under Alternative B, the construction, operations and maintenance, and conceptual decommissioning of the Project on the OCS offshore of Massachusetts would occur within the range of design parameters outlined in the Mayflower Offshore Wind COP (Mayflower Wind 2022), subject to applicable mitigation measures. The Project would have a capacity of up to 2,400 MW and would consist of up to 147 WTGs in the Lease Area, up to 5 OSPs and associated export cables. Mayflower Wind would space WTGs in a 1-by-1-nautical-mile offset grid pattern (east–west-by-north–south-gridded layout). The Project would include two export cable corridors, one making landfall and interconnecting to the power grid in Falmouth, Massachusetts, and one making landfall and interconnecting to the power grid at Brayton Point, in Somerset, Massachusetts. The export cable corridor to Brayton Point would have an intermediate landfall on Aquidneck Island, Rhode Island.
Alternative C – Fisheries Habitat Impact Minimization	Under Alternative C, the construction, operations and maintenance, and eventual decommissioning of the Project on the OCS offshore Massachusetts would occur within the range of the design parameters outlined in the Mayflower Wind COP, subject to applicable mitigation measures. However, the Project would include an onshore export cable route that would avoid placing the offshore export cable in the Sakonnet River to avoid impacts on fisheries habitats. Alternative C includes two possible onshore export cable routes. • Alternative C-1: Aquidneck Island, Rhode Island Route • Alternative C-2: Little Compton/Tiverton, Rhode Island Route
Alternative D – Nantucket Shoals	Under Alternative D, the construction, operations and maintenance, and eventual decommissioning of the Project on the OCS offshore Massachusetts would occur within the range of the design parameters outlined in the Mayflower Wind COP, subject to applicable mitigation measures. However, up to 6 WTGs (AZ-47, BA-47, BB-47, BC-47, BC-48, and BF-49) would be eliminated in the northeastern portion of the Lease Area to reduce potential impacts on foraging habitat and potential displacement of wildlife from this habitat adjacent to Nantucket Shoals.
Alternative E – Foundation Structures	Under Alternative E, the construction and installation, operations and maintenance, and eventual decommissioning of the Project on the OCS offshore Massachusetts would occur within the range of the design parameters, which includes a range of foundation types (monopile, piled jacket, suction bucket, and gravity based), subject to applicable mitigation measures. This alternative includes three foundation options, which assume the maximum use of piled (monopile and piled jacket), suction bucket, and gravity-based foundation structures to assess the extent of potential impacts from each foundation type. • Alternative E-1: Piled Foundations (monopile and piled jacket) only • Alternative E-2: Suction Bucket Foundations only • Alternative E-3: Gravity-based Foundations only

Alternative	Description
Alternative F – Muskeget Channel Cable Modification	Under Alternative F, the construction, operations and maintenance, and eventual decommissioning of the Project on the OCS offshore Massachusetts would occur within the range of the design parameters outlined in the Mayflower Wind COP, subject to applicable mitigation measures. However, to minimize seabed disturbance in the Muskeget Channel, the Falmouth offshore export cable route would use ±525kV HVDC cables connected to an HVDC converter station, instead of HVAC cables connected to offshore substations, and would only use up to 3 offshore export cables, instead of up to 5 offshore export cables.

I.4.1.1 Action Alternatives that Would Minimize the Adverse Effect of the Project

While some of the action alternatives and sub-alternatives identified for the Project may avoid, minimize, or mitigate adverse effects on some historic properties, no alternative that meets the purpose and need of Project development in the Lease Area would fully avoid adverse effects on historic properties, including from visual effects on NHLs. The following sections compare the other action alternatives to the Proposed Action and discuss which would avoid or minimize the adverse effect of the Project on historic properties. See Chapter 3, Section 3.6.2, *Cultural Resources,* for additional details on each alternative as is applicable to cultural resources and historic properties and for NEPA analyses of the potential impacts of these alternatives on cultural resources.

Minimization of Physical Effects on Historic Properties

The Proposed Action (Alternative B) is anticipated to have physical adverse effects on historic properties. Specifically, these include 21 marine archaeological resources, seven ASLFs, and one TCP (i.e., the Nantucket Sound TCP) in the marine APE; and two terrestrial archaeological resources in the terrestrial APE.

Alternatives C, D, E, and F all involve a potential reduction in number or size of Offshore Project components that would be built for the Project, thereby reducing potential seabed-disturbing activities that could cause physical adverse effects on historic properties. The reduction in number or size of WTGs, OSPs, interlink cables, and export cables may minimize effects on marine archaeological resources, ASLFs, and one TCP depending on the locations of the removed components in relation to the specific locations of these historic properties. Marine archaeological resources and ASLFs located within the area from which Offshore Project components would be removed would experience no or minimized effects from the Project. Additionally, removal of Offshore Project components under these alternatives would minimize potential physical adverse effects on presently undiscovered marine archaeological resources in these areas. However, while these alternatives may minimize adverse effects on some specific historic properties, they may also introduce adverse effects on others. A discussion of each alternative and sub-alternative is provided below.

Alternative C includes two sub-alternatives (C-1 and C-2) to analyze alternate onshore cable route options developed to avoid installation of a portion of the proposed Brayton Point Offshore Export Cable

that runs through the Sakonnet River (Figure I.B-15). Alternative C-1 includes a western and eastern onshore route variation on Aquidneck Island, Rhode Island.

Alternative C-1 (Aquidneck Island, Rhode Island Route) would result in full avoidance of adverse effects on one marine archaeological resource (i.e., [redacted] and two ASLFs (i.e., [redacted] and [redacted]) that are historic properties potentially eligible for listing in the NRHP. Alternative C-2 (Little Compton/Tiverton, Rhode Island Route) would result in full avoidance of adverse effects on two marine archaeological resources (i.e., [redacted] and [redacted]) and two ASLFs (i.e., [redacted] and [redacted]) that are historic properties potentially eligible for listing in the NRHP. BOEM would require Mayflower Wind to uphold the same applicable commitments to avoid specific marine cultural resources should this alternative be adopted (see Attachment A, the Draft MOA, for additional information). However, either sub-alternative may introduce adverse effects on currently unidentified but potential historic properties that may be present within a potential offshore ECC that would encompass this alternate route.

Additionally, for the Alternative C-1 cable route option overall, background research identified a total of 10 known terrestrial archaeological resources and 21 known historic aboveground resources, including six historic properties listed in the NRHP and six historic cemeteries (Table I-9; PAL 2022).[1] One of the terrestrial archaeological resources [redacted] has been previously recommended not eligible for listing in the NRHP; however, because it is the only resource with such a recommendation, BOEM has included consideration of this resource in discussion here for the purposes of NHPA consultation. Adoption of Alternative C-1 using the western route variation would have potential adverse effects on nine terrestrial archaeological resources and 18 historic aboveground resources, including five historic properties listed in the NRHP and five historic cemeteries (PAL 2022). Adoption of Alternative C-1 using the eastern route variation would have potential adverse effects on seven known terrestrial archaeological resources and 15 known historic aboveground resources, including three historic properties listed in the NRHP and four historic cemeteries (PAL 2022). For Alternative C-2, background research identified three known terrestrial archaeological resources and 23 known historic aboveground resources, including four historic properties listed in the NRHP and eight historic cemeteries, that have the potential to be subject to adverse effects (Table I-10; PAL 2022). Overall, BOEM finds Alternative C is unlikely to minimize adverse effects on historic properties.

[1] Rhode Island General Law [RIGL] 23-18-11 et seq. (State Cemeteries Act) conditionally prohibits any town or city from permitting "construction, excavation or other ground disturbing activity within twenty-five (25) feet of a recorded historic cemetery" unless the "boundaries of the cemetery are adequately documented and there is no reason to believe additional graves exist outside the recorded cemetery." As such, BOEM assumes historic cemeteries within 25 feet (7.6 meters) of the Project would be subject to adverse impacts without the adoption of AMMs.

Table I-9. Cultural resources and historic properties subject to potential adverse effects from adoption of Alternative C-1 and its route variations

Resource ID or Name	Resource Type	NRHP Status	Alt. C-1 Route	
			West Variation	East Variation
Bailey Farm	Historic above.	Listed	X	
Boyd's Windmill	Historic above.	Listed	X	
Cory Farm	Historic above.	Poten. eligible	X	X
David Albro Farm	Historic above.	Poten. eligible	X	
Dennis House	Historic above.	Poten. eligible	X	X
Newton HD	Historic above.	Eligible	X	X
Paradise Rocks HD	Historic above.	Eligible	X	X
Paradise School	Historic above.	Listed	X	
Peabody School	Historic above.	Eligible		X
Portsmouth Friends Meeting House/ Parsonage & Cemetery	Historic above.	Listed	X	X
Rural Estates HD	Historic above.	Eligible	X	X
Smith-Gardiner-Norman Farm HD	Historic above.	Listed		X
St. Mary's Episcopal Church & Cemetery	Historic above.	Eligible	X	X
Union Church & Southernmost Schoolhouse	Historic above.	Listed	X	X
Webb House	Historic above.	Poten. eligible	X	X
MT9 (Middletown Cemetery)	Historic above. (cem.)	Undetermined	X	X
MT10 (Gideon Bailey Lot)	Historic above. (cem.)	Undetermined	X	
MT25 (Jewish Cemetery)	Historic above. (cem.)	Undetermined	X	
PO13 (Job Sherman Lot)	Historic above. (cem.)	Undetermined	X	X
PO16 (Union Cemetery)	Historic above. (cem.)	Undetermined	X	X
PO26 (David Albro Lot)	Historic above. (cem.)	Undetermined		X
[redacted]	Terrestrial arch.	Undetermined	[redacted]	
[redacted]	Terrestrial arch.	Undetermined		
[redacted]	Terrestrial arch.	Eligible		
[redacted]	Terrestrial arch.	Not eligible		
[redacted]	Terrestrial arch.	Eligible		
[redacted]	Terrestrial arch.	Undetermined		
[redacted]	Terrestrial arch.	Undetermined		
[redacted]	Terrestrial arch.	Undetermined		
[redacted]	Terrestrial arch.	Undetermined		
[redacted]	Terrestrial arch.	Undetermined		

Notes: BOEM assumes resources with "undetermined" NRHP eligibility are potentially eligible for the purposes of this analysis. Terrestrial archaeological resources and cemeteries in this table are within 25 feet (7.62 meters) of the Alternative C cable routes options.
Source: PAL 2022.
above. = aboveground; cem. = cemetery; HD = historic district; ID = identification; Poten. = potentially

Table I-10. Historic properties subject to potential adverse effects from adoption of Alternative C-2

Resource ID or Name	Resource Type	NRHP Status
Brownell House	Historic above.	Eligible
Col. D. Durfee House/Old Durfee Farm	Historic above.	Eligible
Cory-Hicks-Borden-Gardner-Stevens House	Historic above.	Eligible
David White Farm	Historic above.	Eligible
Edw. Cook Farm/White Homestead	Historic above.	Eligible
Friends Meeting House and Cemetery	Historic above.	Listed
Manchester House	Historic above.	Eligible
Rod Feather Farm/The Almy Farm & Barn	Historic above.	Eligible
Simmons-Wood-Palmer House	Historic above.	Eligible
Stone House Inn	Historic above.	Listed
Taylors Lane HD	Historic above.	Eligible
Tiverton Four Corners Historic District	Historic above.	Listed
Wilbor House	Historic above.	Listed
Wm. Durfee Farm	Historic above.	Eligible
West Main Road HD	Historic above.	Eligible
LC4 (Woodman Cemetery)	Historic above. (cem.)	Undetermined
LC5 (Woodman Lot)	Historic above. (cem.)	Undetermined
LC6 (Irish Lot)	Historic above. (cem.)	Undetermined
LC10 (New Wilbur Lot)	Historic above. (cem.)	Undetermined
TV5 (William Gray Lot)	Historic above. (cem.)	Undetermined
TV6 (Hillside Cemetery)	Historic above. (cem.)	Undetermined
TV19 (Charles Durfee Lot)	Historic above. (cem.)	Undetermined
TV20 (Samuel Negus Lot)	Historic above. (cem.)	Undetermined
[redacted]	Terrestrial arch.	Undetermined
[redacted]	Terrestrial arch.	Undetermined
[redacted]	Terrestrial arch.	Undetermined

Notes: BOEM assumes resources with "undetermined" NRHP eligibility are potentially eligible for the purposes of this analysis. Terrestrial archaeological resources and cemeteries in this table are within 25 feet (7.62 meters) of the Alternative C cable routes options.
Source: PAL 2022.
above. = aboveground; cem. = cemetery; HD = historic district; ID = identification; Poten. = potentially

Alternative D would involve elimination of six WTGs in the northeastern portion of the Lease Area. No known marine cultural resources are located in the area from which WTGs would be eliminated. However, removal of these Offshore Project components would reduce potential impacts on currently undiscovered marine archaeological resources that may be present in these areas. In general, Alternative D is unlikely to minimize physical adverse effects on historic properties.

Alternative E includes three sub-alternatives (E-1, E-2, and E-3) to analyze the maximum design scenario for each of the three different foundation categories that could be used for WTGs and OSPs. Alternative E-1 involves the use of piled foundations for all WTGs and OSPs. Alternative E-2 involves the use of suction-bucket foundations for all WTGs and OSPs. Lastly, Alternative E-3 involves the use of GBS foundations for all WTGs and OSPs. Effects on marine archaeological resources and ASLFs may be reduced, the same, similar, or increased compared to those under the Proposed Action depending on the final foundation type(s) selected under the Proposed Action and specific locations of marine archaeological resources and ASLFs in relation to proposed WTGs and OSPs. The severity of effects on these historic properties increases with the size of the foundation type and anticipated seabed disturbance. However, overall, the nature and physical extent of proposed activities under this alternative would be largely comparable to those of the Proposed Action.

Alternative F would limit the number of cables installed in the Falmouth offshore export cable route to three, as opposed to five under the Proposed Action. Reduction of the number of installed cables would reduce the overall area subject to potential seabed disturbance, thereby minimizing potential adverse effects on marine cultural resources located within the Falmouth offshore ECC, including the Nantucket Sound TCP and any ASLFs that may be contributing elements to the TCP. BOEM would require Mayflower Wind to uphold the same applicable commitments to avoid specific marine archaeological resources (i.e., [redacted]) and ASLFs (i.e., [redacted]) located in the Falmouth Offshore ECC should this alternative be adopted (see Attachment A, the Draft MOA, for additional information). However, any historic properties for which there are no commitments to avoidance from Mayflower Wind (i.e., [redacted] would still be subject to physical adverse effects.

Overall, the potential reduced scale of Alternatives C, D, E, and F may minimize physical adverse effects on historic properties. However, the majority of historic properties subject to effect under the Proposed Action are located in other areas of the marine APE that are unchanged under Alternatives C, D, E, and F. As a result, these alternatives may reduce adverse effects on specific individual historic properties but would not avoid or substantially minimize adverse effects on historic properties in general. Because of all these factors, the only alternative that BOEM was able to identify that avoids any Project effects on these historic properties was the No Action Alternative.

Minimization of Visual and Cumulative Visual Effects on Historic Properties

The Proposed Action (Alternative B) is anticipated to have visual adverse effects on historic properties. Specifically, these are three historic aboveground resources, including one NHL, in the visual APE for Offshore Project components and one historic aboveground resources in the visual APE for Onshore Project components. A discussion specific to NHLs is provided in *National Historic Landmarks*.

Of all alternatives, only Alternative D involves the reduction in Project components that would reduce Project visibility that could cause visual adverse effects on historic properties. Alternative D would involve elimination of 6 WTGs in the northeastern portion of the Lease Area. However, the number of eliminated WTGs is not anticipated to result in a substantial minimization of visual adverse effects. As a

result, BOEM determined that all feasible alternatives, including all feasible WTG layouts, would result in visual adverse effects on aboveground historic properties. Because of all these factors, the only alternative that BOEM was able to identify that avoids any Project effects on these historic properties was the No Action Alternative.

Contributing to the potential 901 WTGs modeled in a maximum-case scenario for other future offshore wind activities, all the action alternatives (B through F) would result in visual adverse effects from offshore WTG structure visibility and lighting, including from navigational and aviation hazard lighting systems. Due to cumulative effects from other offshore wind activities, the same three historic properties in the visual APE for Offshore Project components would continue to be adversely affected by offshore structure and lighting visibility under Alternatives C through F as under the Proposed Action. The cumulative visual effects and lighting on historic properties in the visual APE associated with Alternatives C through F, when combined with past, present, and reasonably foreseeable activities, would be long-term and adverse, until decommissioning of the Project.

National Historic Landmarks

The implementing regulations for Section 106 of the NHPA at 36 CFR 800.10 provide special requirements for protecting NHLs and complying with the NHPA Section 110(f). NHPA Section 110(f) applies specifically to NHLs. NPS, which administers the NHL program for the Secretary of the Interior, describes NHLs and requirements for NHLs as follows:

> National Historic Landmarks (NHL) are designated by the Secretary under the authority of the Historic Sites Act of 1935, which authorizes the Secretary to identify historic and archaeological sites, buildings, and objects which "possess exceptional value as commemorating or illustrating the history of the United States" Section 110(f) of the NHPA requires that Federal agencies exercise a higher standard of care when considering undertakings that may directly and adversely affect NHLs. The law requires that agencies, "to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark." In those cases when an agency's undertaking directly and adversely affects an NHL, or when Federal permits, licenses, grants, and other programs and projects under its jurisdiction or carried out by a state or local government pursuant to a Federal delegation or approval so affect an NHL, the agency should consider all prudent and feasible alternatives to avoid an adverse effect on the NHL.

BOEM is implementing the special set of requirements for protecting NHLs and for compliance with NHPA Section 110(f) at 36 CFR 800.10, which, in summary:

- Requires the agency official, to the maximum extent possible, to undertake such planning and actions as may be necessary to minimize harm to any NHL that may be directly and adversely affected by an undertaking;
- Requires the agency official to request the participation of ACHP in any consultation conducted under 36 CFR 800.6 to resolve adverse effects on NHLs; and
- Further directs the agency to notify the Secretary of the Interior of any consultation involving an NHL and to invite the Secretary of the Interior to participate in consultation where there may be an adverse effect.

BOEM has planned, and is, taking action to avoid adverse effects on NHLs in accordance with NHPA 110(f) and pursuant to *The Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act* (NPS 2021). BOEM has determined that one NHL, the Nantucket Historic District, would be visually adversely affected by the Proposed Action. BOEM has notified the NPS (as the delegate of the Secretary of the Interior) and the ACHP of this determination with distribution of this Finding. The ACHP and NPS have been active consulting parties on the Project since BOEM invited them to consult at the initiation of the NHPA Section 106 process on the Project beginning on September 29, 2021. BOEM is fulfilling its responsibilities to give a higher level of consideration to minimizing harm to NHLs, as required by NHPA Section 110(f), through implementation of the special requirements outlined at 36 CFR 800.10.

In the Draft EIS and as described herein (Table I-8), BOEM has identified one alternative that reduces the number of WTGs from the maximum-case scenario of the Proposed Action (i.e., Alternative D). This alternative would reduce the visibility of the Project from the NHL. However, BOEM has determined that the Nantucket Historic District would still be adversely affected by the Project given the size, location, and number of proposed WTGs and distance of the Wind Farm Area to the shoreline under this alternative. As a result, BOEM determined that all feasible alternatives would result in visual adverse effects on this NHL. The only alternative that BOEM was able to identify that avoids any Project effects on this NHL was the No Action Alternative.

When prudent and feasible alternatives "appear to require undue cost or to compromise the undertaking's goals and objectives, the agency must balance those goals and objectives with the intent of section 110(f)" (NPS 2021). In this balancing, the NPS suggests that agencies should consider "(1) the magnitude of the undertaking's harm to the historical, archaeological and cultural qualities of the NHL; (2) the public interest in the NHL and in the undertaking as proposed, and (3) the effect a mitigation action would have on meeting the goals and objectives of the undertaking" (NPS 2021). For the Project, the magnitude of the visual effects on the Nantucket Historic District would be minimized by the distance between proposed offshore WTGs and NHL and through environmental factors, including weather and atmospheric conditions, that limit views of the Project WTGs from the NHL. Moreover, while the undertaking would affect the maritime setting of the NHL, it would not affect other character-defining features or aspects of the NHL's integrity. The Nantucket Historic District, should the undertaking proceed, would still illustrate its regional and national significance, and continue to exemplify its national importance.

Through consultation, BOEM will refine minimization measures to the maximum extent feasible and further develop mitigation measures to resolve adverse effects that remain at the Nantucket Historic District after the application of minimization efforts. BOEM would identify and finalize mitigation measures specific to the NHL with the consulting parties through development of the MOA. Mitigation measures for adverse effects on the NHL must be reasonable in cost and not be determined using inflexible criteria, as described by the NPS (2021). Mitigation of adverse effects on the NHL would meet the following requirements:

- Reflect the heightened, national importance of the property and be appropriate in magnitude, extent, nature, and location of the adverse effect.
- Focus on replacing lost historic resource values with outcomes that are in the public interest, such as through development of products that convey the important history of the property.
- Comply with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings* (NPS 2017).

In transmittal of this Finding of Adverse Effect document to the NPS, BOEM will specifically request to consult with the ACHP and the NPS's NHL Program pursuant to 36 CFR 800.10(c), to which the Secretary of the Interior has delegated consultation authority and will address this request to the NHL Program lead for the region.

I.4.2 Avoidance, Minimization, and Mitigation Measures

BOEM will consult with federally recognized tribes, ACHP, MHC, RIHPHC, Massachusetts Board of Underwater Archaeological Resources (BUAR) and consulting parties to develop AMM measures to resolve adverse effects to historic properties. Specifically, BOEM's consultation will develop measures to that prioritize avoidance of known marine cultural resources (i.e., marine archaeological resources and ASLFs) and terrestrial archaeological resources that are historic properties and minimize visual effects on aboveground historic properties. Adverse effects remaining after avoidance and minimization would be mitigated. Mitigation measures for historic properties will be stipulated in the MOA and detailed in Historic Property Treatment Plans attached to the MOA. BOEM will also consult to develop mitigation measures that would be triggered in cases where avoidance of known terrestrial archaeological or marine historic properties is not feasible. The Project's Post-Review or Unanticipated Discovery Plans (UDPs) created for marine and terrestrial archaeological resources, will include a consultation process to determine appropriate mitigation in cases where there is unanticipated discovery of a previously unknown marine or terrestrial archaeological resource that is not currently found to be subject to adverse effects from the Project.

As part of the NRHP Section 106 process, Mayflower Wind has proposed AMM measures as conditions for approval of issuance of BOEM's permit (COP Volume 2, Section 16; Mayflower Wind 2022)

BOEM has also proposed several AMM measures to minimize impacts on cultural resources and historic properties (Chapter 3, Section 3.6.2 *Cultural Resources*; Appendix G, Section G.2 *Agency-Proposed Mitigation Measures*) and anticipates that additional mitigation will be required to resolve adverse effects. The NHPA Section 106 consultation process is ongoing for the Project and BOEM will continue to consult in good faith with the Massachusetts and Rhode Island SHPOs and other consulting parties to resolve adverse effects. See Attachment A for the Draft MOA.

I.5 Phased Identification and Evaluation

In consultation with BOEM and the relevant SHPO, Mayflower Wind will be using a process of phased identification and evaluation of historic properties as defined in 36 CFR 800.4(b)(2). This includes any

presently unsurveyed areas of the terrestrial APE that would require phased identification of historic properties and any Project alternatives that may require phased identification of historic properties.

Mayflower Wind has developed a Section 106 PIP for the process of completing additional required cultural resource investigations (COP, Appendix R.2; Mayflower Wind 2022). As of January 2023, efforts to identify and evaluate terrestrial archaeological resources in the terrestrial APE have encompassed areas proposed for Onshore Project components in Massachusetts and Rhode Island. However, the identification and evaluation of historic properties for the entire terrestrial APE is incomplete. Additional archaeological surveys conducted during the phased process may lead to the identification of additional archaeological resources and historic properties in the terrestrial APE. Additionally, if any Project alternatives are approved or there are any changes to the current Project design for either onshore or Offshore Project components that result in project components falling outside of the previously assessed APE, updated technical studies and reports will be required. While additional information regarding the identification of historic properties may be obtained after the publication of the Draft EIS and presented in the Final EIS, additional information may not be available until after the Final EIS.

BOEM will use the MOA to establish commitments for reviewing the sufficiency of any updated studies and reports as phased identification and evaluation of historic properties in the APE, amending the APE per the final Project design, as necessary, and consulting on the post-ROD finding of effects (Attachment A, *Draft Memorandum of Agreement*). Information pertaining to identification of historic properties for some Project alternatives may not be available until after the ROD is issued and the COP is approved. For Alternative C, if either sub-alternative (i.e., C-1 and C-2) is selected, BOEM will use the MOA to establish commitments for phasing identification and evaluation of historic properties in the APE, amending the APE, assessing effects, and resolving adverse effects prior to construction. If Alternative C-1 is selected, previously unsurveyed areas associated with the use of a cable route located west of the Sakonnet River would need to be surveyed for marine cultural resources, terrestrial archaeological resources, and historic aboveground resources. If Alternative C-2 is selected, previously unsurveyed areas associated with the use of a cable route located east of the Sakonnet River would need to be surveyed for marine cultural resources, terrestrial archaeological resources, and historic aboveground resources. The approach for phased identification and evaluation will be in accordance with BOEM's existing *Guidelines for Providing Archaeological and Historic Property Information Pursuant to Title 30 Code of Federal Regulations Part 585* and ensure potential historic properties are identified, effects are assessed, and adverse effects are resolved prior to construction.

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ATTACHMENT A. DRAFT MEMORANDUM OF AGREEMENT

DRAFT
MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

WHEREAS, the Bureau of Ocean Energy Management (BOEM) plans to authorize construction and operation of the Mayflower Wind Project (Project) pursuant to Section 8(p)(1)(C) of the Outer Continental Shelf (OCS) Lands Act (43 United States Code [USC] 1337(p)(1)(C)), and in accordance with BOEM's renewable energy regulations at 30 Code of Federal Regulations (CFR) Part 585; and

WHEREAS, BOEM determined that the Project constitutes an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA), as amended (54 USC 306108), and its implementing regulations (36 CFR 800); and

WHEREAS, BOEM plans [to approve, approve with conditions, or disapprove (This clause is subject to change; BOEM will make the final decision by the Final Environmental Impact Statement [EIS] and before this Memorandum of Agreement [MOA] is executed.)] the Construction and Operations Plan (COP) submitted by Mayflower Wind Energy LLC (Mayflower Wind; applicant); and

WHEREAS, BOEM determined the construction, installation, operations and maintenance (O&M), and conceptual decommissioning of the Project, planned for up to 147 offshore wind turbine generators (WTGs), up to five offshore substations, one onshore substation, one onshore converter station, and offshore and onshore export cables, has the potential to adversely affect historic properties as defined under 36 CFR 800.16(l); and

WHEREAS, BOEM is preparing an Environmental Impact Statement (EIS) for the Project pursuant to the National Environmental Policy Act (42 USC 4321 et seq.) (NEPA) and elected to use the NEPA substitution process with its Section 106 consultation pursuant to 36 CFR 800.8(c); and

WHEREAS, BOEM notified the Massachusetts Historical Commission (MHC; the Massachusetts State Historic Preservation Officer [SHPO]), the Rhode Island Historical Preservation & Heritage Commission (RIHPHC; the Rhode Island SHPO), and the Advisory Council on Historic Preservation (ACHP) on September 29, 2021, of its decision to use NEPA substitution and follow the standards for developing environmental documents to comply with the Section 106 consultation for this Project pursuant to 36 CFR 800.8(c), and ACHP responded with acknowledgement on October 6, 2021; and

WHEREAS, in accordance with 36 CFR 800.3, on September 29, 2021, BOEM invited ACHP, MHC, and RIHPHC to consult on the Project and ACHP formally accepted on October 6, 2021, and MHC and RIHPHC accepted through participation in consultation after that date; and

WHEREAS, the Project is within a commercial lease area that was subject to previous NHPA Section 106 review by BOEM regarding the issuance of the commercial lease and approval of site assessment activities. Both Section 106 reviews, one for the lease issuance and the other for approval of the site assessment plan, were conducted pursuant to a Programmatic Agreement (PA) and concluded with a Finding of No Historic Properties Affected, consistent with the Finding of No Significant Impact for lease issuance on June 18, 2014, and site assessment approval on January 28, 2020, consistent with the PA regarding the review of OCS renewable energy activities offshore Massachusetts and Rhode Island (*Programmatic Agreement Among the U.S. Department of the Interior, Bureau of Ocean Energy Management; the State Historic Preservation Officers of Massachusetts and Rhode Island; the Mashpee Wampanoag Tribe; the Narragansett Indian Tribe; the Wampanoag Tribe of Gay Head [Aquinnah]; and*

the Advisory Council on Historic Preservation; Regarding the "Smart from the Start" Atlantic Wind Energy Initiative: Leasing and Site Assessment Activities offshore Massachusetts and Rhode Island); and

WHEREAS, consistent with 36 CFR 800.16(d) and BOEM's *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585* (May 27, 2020), BOEM defined the area of potential effects (APE) for the undertaking as the depth and breadth of the seabed potentially impacted by any bottom-disturbing activities, constituting the marine portion of the APE (marine APE); the depth and breadth of terrestrial areas potentially impacted by any ground-disturbing activities, constituting the terrestrial portion of the APE (terrestrial APE); the viewshed from which offshore or onshore renewable energy structures would be visible, constituting the visual portion of the APE (visual APE); and any temporary or permanent construction or staging areas that may fall into any of the aforementioned offshore or onshore portions of the APE (see Attachment 1, *APE Maps*); and

WHEREAS, BOEM identified the following historic properties in the APE: 32 marine archaeological resources and nine (9) ancient submerged landform features (ASLFs) in the marine APE; two (2) terrestrial archaeological resources and one (1) historic aboveground resource in the terrestrial APE; two (2) traditional cultural properties (TCPs) and 29 historic aboveground resources in the visual APE (16 in the visual APE for Offshore Project components and 13 in the visual APE for Onshore Project components); and one (1) TCP in both the marine and visual APEs; and

WHEREAS, BOEM identified one (1) National Historic Landmark (NHL) in the visual APE for offshore Project components, Nantucket Historic District; and

WHEREAS, BOEM determined that the implementation of the avoidance measures identified in this MOA will avoid adverse effects to certain historic properties: 11 marine archaeological resources (i.e., [redacted], and [redacted]) and two (2) ASLFs (i.e., [redacted] and [redacted]) in the marine APE; and 27 historic aboveground resources in the visual APE; and

WHEREAS, within the range of Project alternatives analyzed in the EIS, BOEM determined the following 21 marine archaeological resources may be adversely affected by physical disturbance from offshore Project construction within the avoidance buffers of these resources: Potential [redacted] (Known shipwreck [redacted]); Potential [redacted] (known shipwreck [redacted]); [redacted] (known shipwreck [redacted]); [redacted]; and [redacted]; and

WHEREAS, within the range of Project alternatives analyzed in the EIS, BOEM determined the following seven (7) ASLFs identified in the marine APE are eligible for listing in the NRHP under Criteria A and D and may be adversely affected by physical disturbance from offshore Project construction within the avoidance buffers of these resources: [redacted], and [redacted]; and

WHEREAS, within the range of Project alternatives analyzed in the EIS, BOEM determined the following two (2) terrestrial archaeological resources in the terrestrial APE in Rhode Island may be adversely affected by physical disturbance from onshore Project construction within the avoidance buffers of these resources: [redacted] and [redacted]; and

WHEREAS, within the range of Project alternatives analyzed in the EIS, BOEM determined the following three (3) historic aboveground resources in the visual APE in Massachusetts may be visually

adversely affected by the Project: Chappaquiddick Island TCP, Nantucket Historic District (NHL), and Oak Grove Cemetery in Falmouth; and

WHEREAS, within the range of Project alternatives analyzed in the EIS, BOEM determined one (1) historic aboveground resource eligible for listing in the NRHP may be physically and visually affected by the the Project: Nantucket Sound TCP; and

WHEREAS, within the range of Project alternatives analyzed in the EIS, BOEM determined there would be a visual adverse effect to the Nantucket Historic District NHL in the visual APE for offshore Project components; and

WHEREAS, MHC concurred with BOEM's finding of adverse effect on [insert date of SHPO concurrence]; and

WHEREAS, RIHPHC concurred with BOEM's finding of adverse effect on [insert date of SHPO concurrence]; and

WHEREAS, throughout this document the terms "Tribe" and "Tribal Nation" have the same meaning as "Indian Tribe" as defined at 36 CFR 800.16(m); and

WHEREAS, BOEM invited the following federally recognized Tribes to consult on this Project: Delaware Nation, Delaware Tribe of Indians, Mashantucket Pequot Tribal Nation, Mashpee Wampanoag Tribe, Mohegan Tribe of Connecticut, the Narragansett Indian Tribe, the Shinnecock Indian Nation, and Wampanoag Tribe of Gay Head (Aquinnah); and

WHEREAS, the Mashantucket Pequot Tribal Nation, Mashpee Wampanoag Tribe, the Narragansett Indian Tribe, the Shinnecock Indian Nation, and the Wampanoag Tribe of Gay Head (Aquinnah) accepted BOEM's invitation to consult and BOEM invited these Tribes to sign this MOA as concurring parties; and

WHEREAS, the Delaware Tribe of Indians and Mohegan Tribe of Connecticut did not respond to BOEM's initiation of consultation; however, BOEM has included these Tribal Nations in all consulting party communications, and BOEM invited these Tribes to sign this MOA as concurring parties; and

WHEREAS, in accordance with 36 CFR 800.3, BOEM invited other federal agencies, state and local governments, and additional consulting parties with a demonstrated interest in the undertaking to participate in this consultation; the list of those accepting participation and declining to participate by either written response or no response to direct invitations are listed in the *Lists of Invited and Participating Consulting Parties* (Attachment 2); and

WHEREAS, BOEM has consulted with Mayflower Wind in its capacity as the applicant seeking federal approval of the COP, and, because Mayflower Wind has responsibilities under the MOA, BOEM has invited the applicant to be an invited signatory to this MOA; and

WHEREAS, construction of the Project requires a Department of the Army permit from the United States Army Corps of Engineers (USACE) for activities that would result in the discharge of dredged or fill material into jurisdictional wetlands and/or other waters of the United States pursuant to Section 404 of the Clean Water Act, and activities occurring in or affecting navigable waters of the United States pursuant to Section 10 of the Rivers and Harbors Act; and

WHEREAS, BOEM invited USACE to consult since USACE will be issuing permits for this Project under Section 404 of the Clean Water Act (33 USC 1344) and Section 10 of the Rivers and Harbors Act (33 USC 403); and

[TBD: **WHEREAS,** USACE designated BOEM as the Lead Federal Agency pursuant to 36 CFR 800.2(a)(2) to act on its behalf for purposes of compliance with Section 106 for this Project (in a letter dated [Month XX, 20XX], BOEM invited USACE to sign this MOA as a concurring party, and USACE accepted the invitation to sign this MOA as a concurring party; and]

WHEREAS, BOEM notified and invited the Secretary of the Interior (represented by the National Park Service [NPS]) to consult regarding this Project pursuant to the Section 106 regulations, including consideration of the potential effects to the NHL as required under NHPA Section 110(f) (54 USC 306107) and 36 CFR 800.10, NPS accepted BOEM's invitation to consult, and BOEM invited NPS to sign this MOA as a concurring party; and

WHEREAS, BOEM has consulted with the signatories, invited signatories, and consulting parties participating in the development of this MOA regarding the definition of the undertaking, delineation of the APEs, identification and evaluation of historic properties, assessment of potential effects to the historic properties, and measures to avoid, minimize, and mitigate adverse effects to historic properties; and

WHEREAS, BOEM has planned and is taking action to minimize harm, as required by NHPA Section 110(f) at 36 CFR 800.10 to the one (1) adversely affected NHL in the visual APE, Nantucket Historic District, as explained in BOEM's 2023 *Finding of Adverse Effect for the Mayflower Wind Energy Construction and Operations Plan* (hereinafter, the Finding of Effect, and dated [Month 2023]); and

WHEREAS, pursuant to 36 CFR 800.6, BOEM invited Mayflower Wind to sign as an invited signatory and the consulting parties as listed in the *Lists of Invited and Participating Consulting Parties* (Attachment 2) to sign as concurring parties; however, the refusal of any consulting party to sign this MOA or otherwise concur does not invalidate or affect the effective date of this MOA, and consulting parties who choose not to sign this MOA will continue to receive information if requested and have an opportunity to participate in consultation as specified in this MOA; and

WHEREAS, the signatories agree, consistent with 36 CFR 800.6(b)(2), that adverse effects will be resolved in the manner set forth in this MOA; and

WHEREAS, BOEM sought and considered the views of the public regarding Section 106 for this Project through the NEPA process by holding virtual public scoping meetings when initiating the NEPA and NHPA Section 106 review on November 10, 15, and 18, 2021, and virtual public hearings related to the Draft EIS on [Date] and [Date]; and

WHEREAS, BOEM made the first Draft MOA available to the public for review and comment from February 17, 2023 to April 3, 2023, and made an updated version of the Draft MOA available to the public from [Date], to [Date], using BOEM's Project website, and BOEM [did or did not receive any comments from the public]; and

NOW, THEREFORE, BOEM, MHC, RIHPHC, and ACHP agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

BOEM, with the assistance of Mayflower Wind, shall ensure that the following measures are carried out as conditions of its approval of the undertaking:

I. MEASURES TO AVOID ADVERSE EFFECTS TO IDENTIFIED HISTORIC PROPERTIES

A. Marine APE

1. BOEM will include the following avoidance measures for adverse effects in the marine APE as conditions of approval of the Mayflower Wind COP:

   i. BOEM will ensure the measures as described in the *Historic Properties Treatment Plan for Ancient Submerged Landforms and Submerged Cultural Resources* (Attachment 7) to avoid adverse effects to historic properties in the marine APE are required as conditions of approval of the Mayflower Wind COP.

      a. Mayflower Wind will comply with protective buffers recommended by the QMA for 11 marine archaeological resources (i.e., [redacted], and [redacted] and two (2) ASLFs (i.e., [redacted]).[Other avoidance measures TBD]

B. Terrestrial APE

1. BOEM will include the following avoidance measures for adverse effects in the terrestrial APE as conditions of approval of the Mayflower Wind COP:

   i. Terrestrial archaeological resource avoidance or additional investigation. Mayflower Wind must avoid any identified terrestrial archaeological resource. If avoidance of a resource which has not yet been evaluated for listing in the NRHP is not feasible, additional investigations must be conducted for the purpose of determining eligibility for listing in the NRHP or BOEM will assume the resource to be eligible for listing in the NRHP. If any such resource is determined eligible for listing or if BOEM assumes the resource to be eligible for listing, Mayflower Wind must conduct Phase III data recovery investigations for the purposes of resolving adverse effects in accordance with 36 CFR 800.6. Mitigation is described under Stipulation III below.

   ii. Mayflower Wind will site the Onshore Project components in locations that minimize impacts on, or avoid, potential terrestrial archaeological resources, to the extent practicable.

C. Visual APE

1. BOEM will include the following avoidance measures for adverse effects in the visual APE as conditions of approval of the Mayflower Wind COP:

   i. To maintain avoidance of adverse effects to historic properties in the visual APE where BOEM determined no adverse effects or where no effects would occur, BOEM will require Mayflower Wind to ensure Project structures are within the design envelope, sizes, scale, locations, lighting prescriptions, and distances that were used by BOEM to inform the definition of the APE for the Project and for determining effects in the Finding of Effect (see the Mayflower Wind COP [2022]).

II. MEASURES TO MINIMIZE ADVERSE EFFECTS TO IDENTIFIED HISTORIC PROPERTIES

A. Marine APE

1. Mayflower Wind will establish and implement a monitoring program and post-review discovery plan to review impacts of construction or any seabed-disturbing activities on

ASLFs if such landforms will not be avoided and will be impacted. Implementation of a post-review discovery plan (Attachment 3), which would include procedures for the discovery of a potential cultural resource in federal, Rhode Island state, and Massachusetts state waters per federal and state laws and regulations, archaeological resource identification training for Project personnel, and guidance for supplemental archaeological investigations of post-review discoveries.

2. Mayflower Wind will develop, in consultation with Tribal Nations and applicable federal and state agencies, a post-review discovery plan in the event unidentified and an unanticipated underwater cultural heritage (marine cultural resources) is encountered.

3. Under the post-review discovery plan (Attachment 3) in the event that a potential cultural resource is discovered during construction activities, all bottom disturbing activities in the area of discovery will cease, every effort will be made to avoid or minimize damage to the potential marine cultural resource(s), and BOEM will be notified within 24 hours.

4. Should full avoidance not be feasible for known marine archaeological resources and ASLFs, Mayflower Wind in consultation with BOEM will minimize the extent of Project disturbance to these sites. Disturbed portions of marine archaeological resources and ASLFs will be addressed under mitigation measures at MOA Stipulation III below. Actions during minimization and mitigation at marine archaeological resources and ASLFs would require consultation with Tribal Nations.

B. Terrestrial APE

1. Mayflower Wind must conduct archaeological monitoring during onshore construction in areas identified as having high or moderate archaeological sensitivity (Attachments 5 and 6) and must prepare and implement a terrestrial archaeological post-review discoveries plan (Attachment 4). The post-review discovery plan will include procedures guiding the discovery of unanticipated terrestrial archaeological resources and human remains during construction in Massachusetts and Rhode Island per federal and state laws and regulations.

   i. Monitoring in Rhode Island. BOEM will include the procedures as described in the *Aquidneck Island Terrestrial Archaeological Monitoring Plan* (Attachment 5) and the related Stipulation XI as conditions of approval of the Mayflower Wind COP.

   ii. Monitoring in Massachusetts. BOEM will include the procedures as described in the Falmouth Terrestrial Archaeological Monitoring Plan (Attachment 6) and the related Stipulation XI as conditions of approval of the Mayflower Wind COP.

   iii. Unanticipated Discoveries. BOEM will include the procedures as described in the Unanticipated Discoveries Plan for Terrestrial Archaeology (Attachment 4) and the related Stipulation XI as conditions of approval of the Mayflower Wind COP

C. Visual APE

1. BOEM has undertaken planning and actions to minimize adverse effects to aboveground historic properties in the visual APE. BOEM will include these minimization measures for adverse effects in the visual APE as conditions of approval of the Mayflower Wind COP:

   i. Mayflower Wind will adhere to a 1 nm x 1 nm (1.9 km x 1.9 km) grid layout agreed upon with the United States Coast Guard to decrease visual clutter.

ii. Mayflower Wind will implement an Aircraft Detection Lighting System (ADLS) to reduce nighttime visual impacts to aboveground historic properties in the offshore visual APE.

iii. Mayflower Wind will implement the following measures to minimize adverse effects to aboveground historic properties in the onshore visual APE:

a. Mayflower Wind will design the onshore substation and converter station to minimize visual effects to the extent feasible, including height, location, color, improving site aesthetics by adhering to landscape codes and edge treatments, and improving building architecture to fit local context.

b. Mayflower Wind will work with the Towns of Falmouth, Somerset, and Portsmouth to ensure the lighting scheme complies with town requirements. Mayflower Wind will ensure the design of outdoor light fixtures at the onshore substation complies with night sky lighting standards to the extent practicable. Mayflower Wind will keep lighting at the onshore substation to a minimum; only a few lights will be illuminated for security reasons on dusk-to-dawn sensors and other lights will use motion-sensing switches. The majority of lights will be switched on for emergency situations only.

iv. [Other minimization measures TBD]

III. MEASURES TO MITIGATE ADVERSE EFFECTS TO IDENTIFIED HISTORIC PROPERTIES

[The Historic Property Treatment Plans described below and attached to this MOA are in draft form and are provided as potential mitigation measures that may be completed as conditions of approval of the Mayflower Wind COP. BOEM will develop mitigation measures based on the interests of federally-recognized Tribes and consulting parties and anticipates that additional mitigation will be required to resolve adverse effects to historic properties.]

A. Marine APE

1. If Mayflower Wind will encroach on the avoidance buffers for one or more marine archaeological resources and ASLFs, to resolve the adverse effects to these resources, BOEM will include the procedures as described in the *Historic Properties Treatment Plan for Ancient Submerged Landforms and Submerged Cultural Resources* (Attachment 7) as conditions of approval of the Mayflower Wind COP and require Mayflower Wind to fund and fulfill the following as mitigation measures prior to construction :

i. In the event Mayflower Wind cannot avoid one or more of the 21 marine archaeological resources that are historic properties (i.e., Potential [Known shipwreck]; Potential [known shipwreck]; [known shipwreck ; and); and

ii. In the event Mayflower Wind cannot avoid one or more of the seven (7) ASLFs (, and); then

iii. BOEM will include the following as conditions of approval of the Mayflower Wind COP and require fulfillment of the following measures to resolve the adverse effects to any of the 21 marine archaeological resources or seven (7) ASLFs:

a. If project related impacts to these historic properties is unavoidable, the Project will undergo a staged approach to mitigate adverse effects through consultations with BOEM, Native American tribes, and appropriate state agencies. The approach stages will be used in sequential order and may include [under development]: construction monitoring if historic property cannot be avoided, developed through consultation with Mayflower Wind, federally recognized tribes, and state agency representatives; site investigations that may include focused HRG surveys, targeted geotechnical investigations, and laboratory analysis, to optimize scientific research specific to the affected landform that cannot be avoided during installation; post construction inspection surveys to accurately delineate and characterize horizontal and vertical feature boundaries; targeted geotechnical investigations to ground-truth the seismic data and to potentially collect samples for understanding a feature's environmental context; use of Remote Operated Vehicle (ROV) systems for observation, inspection, and recovery operations with use of telepresence technologies to facilitate tribal engagement; or QMA diving operations for observation, inspection, and recovery operations in tandem with audio/video links in tandem to facilitate tribal engagement; draft reports for review by participating parties; final reporting; completion of an NRHP Multiple Property Documentation Form (NPS 10-900-b) for the applicable ASLF/s.

B. Terrestrial APE

1. BOEM will ensure the measures as described in the *Historic Properties Treatment Plan for* [redacted] *Archaeological Sites* (Attachment 8) to resolve adverse effects to historic properties ([redacted] and [redacted]) are required as conditions of approval of the Mayflower Wind COP and are funded and implemented by Mayflower Wind, unless otherwise specified.

i. Mayflower Wind will conduct archaeological excavation where historic properties were identified prior to construction in the APE of the cable conduit route; excavation under pavement, if necessary, will occur immediately prior to construction; mark sites [redacted] prior to construction; use an excavator with flat blading bucket to systematically remove asphalt and fills to underlying natural soils; excavate archaeological test units in 10-centimeter levels with excavated soils screened with ¼-inch hardware cloth; collect and label with provenience information the recovered cultural material and samples; map all test units onto Project plans; bisect, profile and collect soil samples from archaeological features; record feature profiles on measured graph paper; digitally photograph and take notes using standard excavation forms of all sites, cultural features, soil profiles, and fieldwork; process recovered material by archaeologists and tribal members; curate materials at a long-term curation facility agreed upon by tribal members and other participating parties

C. Visual APE

1. BOEM will ensure the following measures to resolve adverse visual effects to historic properties (Chappaquiddick Island TCP; Nantucket Historic District NHL; Nantucket Sound TCP; Oak Grove Cemetery) are required as conditions of approval of the Mayflower Wind COP and are funded and implemented by Mayflower Wind, unless otherwise specified.

i. Chappaquiddick Island TCP. The *Historic Properties Treatment Plan for Chappaquiddick Traditional Cultural Property* (Attachment 9) provides an example of mitigation measures that may be completed as conditions of approval of the Mayflower Wind COP. Mayflower Wind will fund and commence the following prior to constructing any part of this undertaking.

   a. Mayflower Wind will work with the [redacted] to develop a tribal study related to a tribal site placed in the larger context of local, state, and regional environmental and cultural history; oral history from [redacted] will be recorded and considered when designing the field and reporting components of the treatment plan; A draft of the treatment plan will be provided to the consulting parties for review and comment [these consulting parties will be identified through future consultation on this MOA and associated treatment plan]; develop final plan, incorporating comments from the consulting parties; and upon acceptance of documentation by MHC, implement the plan.

ii. Nantucket Historic District NHL. The *Historic Properties Treatment Plan for Nantucket Historic District (*Attachment 10) provides an example for mitigation measures to be completed as conditions of approval of the Mayflower Wind COP. Mayflower Wind will fund and commence the following prior to constructing any offshore project elements on the OCS as part of this undertaking.

   a. Mayflower Wind will survey areas of the NHL selected by the Town of Nantucket in consultation with the MHC, [redacted] and other participants; the survey will consist of new survey work and updating existing forms; all survey work will be recorded on large-scale maps and entered in the Town's GIS database; descriptions will include the overall characteristics of the area and key and representative resources; conduct research to supplement and update existing historical contexts; prepare National Register eligibility recommendations for individual properties and selected neighborhoods; prepare archaeological assessment and overview consisting of report and graphics summarizing background research and provide environmental and cultural frameworks for [redacted]; conduct surface examination of Nantucket to examine physical conditions of recorded archaeological sites and historically documented/mapped resources; develop site sensitivity model for pre-contact and historic archaeological site potential; prepare digital photographs and include GIS-based sensitivity maps in final report. A draft of the treatment plan will be provided to the consulting parties for review and comment [these consulting parties will be identified through future consultation on this MOA and associated treatment plan]; develop final plan, incorporating comments from the consulting parties; and upon acceptance of documentation by MHC, implement the plan.

iii. Nantucket Sound TCP. The *Historic Properties Treatment Plan for Nantucket Sound Traditional Cultural Property* (Attachment 11) provides an example of mitigation measures to be completed as conditions of approval of the Mayflower Wind COP. Mayflower Wind will fund and commence the following prior to constructing any offshore project elements on the OCS as part of this undertaking.

   a. Mayflower Wind will work with the RPS Group, an international, scientific technical consulting firm to set up Protected Species Observer (PSO) Certification Training, Offshore Wind Training, and Health Safety and Environment Training for the [redacted] communities; Mayflower Wind and RPS plan will hold at least one local training session annually; RPS shall coordinate the delivery of all training modules

and required physical examination to the enrolled Trainees; an RPS mentor will be provided to each trainee for the full course of the program; following successful completion of the PSO training program RPS will deploy the PSOs on an offshore program for surveys, construction activities; Mayflower Wind shall prepare and distributed to consulting parties annual summary reports until the Project is constructed detailing outreach measures taken to engage tribal members in the PSO program and how many members successfully completed the program. A draft of the treatment plan will be provided to the consulting parties for review and comment [these consulting parties will be identified through future consultation on this MOA and associated treatment plan]; develop final plan, incorporating comments from the consulting parties; and upon acceptance of documentation by MHC, implement the plan.

iv. Oak Grove Cemetery, Falmouth, Massachusetts. BOEM will include the following as described in the *Historic Properties Treatment Plan for Oak Grove Cemetery* (Attachment 12) as conditions of approval of the Mayflower Wind COP. Mayflower Wind will fund and commence the following prior to constructing any onshore project elements on the OCS as part of this undertaking.

a. Mayflower Wind will conduct an inventory of existing vegetation on the preferred site and within the cemetery where it abuts the substation site; identify vegetation on the preferred site to be protected during construction and retained following construction; develop a plan for protection of the cemetery during construction; implement protection measures for existing vegetation to be retained during construction; develop a landscape plan with hardscape and softscape improvements to reduce views of the substation from the cemetery; and implement the landscape plan. A draft of the protection plan and the landscape plan will be provided to the consulting parties for review and comment [these consulting parties will be identified through future consultation on this MOA and associated treatment plan]; develop final plans, incorporating comments from the consulting parties; and upon acceptance of documentation by MHC, implement the plans.

D. Any Portion of the Project APE

1. [TBD: Additional Mitigation measures identified by BOEM or through Section 106 consultation.]

IV. PHASED IDENTIFICATION AND EVALUATION OF HISTORIC PROPERTIES

A. The final identification and evaluation of historic properties within the terrestrial APE may occur after publication of the DEIS, but before the initiation of construction on the OCS lease. In this circumstance, the Signatories agree that the following describes how BOEM will conduct phased identification and evaluation of terrestrial archaeological resources, pursuant to 36 CFR § 800.4(b)(2) and consistent with the *Terrestrial Archaeology Phased Identification Plan* (Attachment 13):

1. For identification of historic properties within portions of the terrestrial APE, supplemental technical studies will be conducted by Mayflower Wind in accordance with state guidelines and recommendations presented in BOEM's most recent *Guidelines*. The developer will coordinate with MHC and RIHPHC prior to the initiation of any such identification efforts in their respective states.

i. BOEM will require that identification efforts be documented in a supplemental Terrestrial Archaeological Resources Assessment that addresses the identification of historic properties and includes an assessment of effects on historic properties due to the Project.

2. BOEM will consult on the results of historic property identification surveys for any portions of the APE that were not addressed in the pre-approval consultations.

3. If project impacts on identified terrestrial archaeological resources cannot be avoided, BOEM will evaluate the NRHP eligibility of the potentially affected resources, in accordance with 36 CFR § 800.4.

4. If BOEM identifies no additional historic properties or determines that no historic properties are adversely affected due to these identification efforts, BOEM, with the assistance of Mayflower Wind, will notify and consult with the signatories, invited signatories, and consulting parties following the consultation process set forth here in this stipulation.

    i. Mayflower Wind will notify all the signatories, invited signatories, and consulting parties about the surveys and BOEM's determination by providing a written summary of the surveys including any maps, a summary of the surveys and/or research conducted to identify historic properties and assess effects, and copies of the surveys.

    ii. BOEM and Mayflower Wind will allow the signatories, invited signatories, and consulting parties 30 calendar days to review and comment on the survey reports, the results of the surveys, BOEM's determination, and the documents.

    iii. After the 30-calendar review period has concluded and no comments require additional consultation, Mayflower Wind will notify the signatories and consulting parties that the MHC and/or the RIHPHC has concurred with BOEM's determination, if they received any comments, provide a summary of the comments and BOEM's responses.

    iv. BOEM, with the assistance of Mayflower Wind, will conduct any consultation meetings if requested by the signatories or consulting parties.

    v. This MOA will not need to be amended if no additional historic properties are identified and/or adversely affected.

5. If BOEM determines new adverse effects to historic properties will occur due to result of these surveys, BOEM with the assistance of Mayflower Wind will notify and consult with the signatories, invited signatories, and consulting parties regarding BOEM's finding and the proposed measures to resolve the adverse effect(s) including the development of a new treatment plan(s) following the consultation process set forth here in this stipulation.

    i. Mayflower Wind will notify all signatories, invited signatories, and consulting parties about the surveys and BOEM's determination by providing a written summary of the results including any maps, a summary of the surveys and/or research conducted to identify historic properties and assess effects, copies of the surveys, BOEM's determination, and the proposed resolution measures for the adverse effect(s).

    ii. The signatories, invited signatories, and consulting parties will have 30 calendar days to review and comment on the documents including the adverse effect finding and the proposed resolution of adverse effect(s), including a draft treatment plan(s).

iii. BOEM, with the assistance of Mayflower Wind, will conduct additional consultation meetings, if necessary, during consultation on the adverse effect finding and during drafting and finalization of the treatment plan(s).

iv. BOEM, with the assistance of Mayflower Wind, will respond to the comments and make necessary edits to the documents.

v. Mayflower Wind will send the revised draft final documents to the other signatories, invited signatories, and consulting parties for review and comment during a 30-calendar day review and comment period. With this same submittal of draft final documents, Mayflower Wind will provide a summary of all the comments received on the documents and BOEM's responses.

vi. BOEM, with the assistance of Mayflower Wind, will respond to the comments on the draft final documents and make necessary edits to the documents

vii. Mayflower Wind will notify all the signatories, invited signatories, and consulting parties and provide the final document(s) including the final treatment plan(s) and a summary of comments and BOEM's responses to comments, if they receive any on the draft final documents, after BOEM has received concurrence from the MHC and/or RIHPHC on the finding of new adverse effect(s), and BOEM has accepted the final treatment plan(s).

viii. The MOA will not need to be amended after the treatment plan(s) is accepted by BOEM.

6. If a SHPO disagrees with BOEM's determination regarding whether an affected property is eligible for inclusion in the NRHP, or if the ACHP or the Secretary so request, the agency official will obtain a determination of eligibility from the Secretary pursuant to 36 CFR Part 63 (36 CFR § 800.4(c)(2)).

V. REVIEW PROCESS FOR DOCUMENTS

A. The following process will be used for any document, report, or plan produced in accordance with Stipulations of this MOA:

1. Draft Document

i. Mayflower Wind shall provide the document to BOEM for technical review and approval

a. BOEM has 15 calendar days to complete its technical review.

b. If BOEM does not provide approval, it shall submit its comments back to Mayflower Wind, who will have 15 calendar days to address the comments.

ii. BOEM, with the assistance of Mayflower Wind, shall provide the draft document to consulting parties, except the ACHP, for review and comment.

a. Consulting parties shall have 30 calendar days to review and comment.

b. BOEM, with the assistance of Mayflower Wind, shall coordinate a meeting with consulting parties to facilitate comments on the document if requested by a consulting party.

c. BOEM shall consolidate comments received and provide them to Mayflower Wind within 15 calendar days of receiving comments from consulting parties.

d. BOEM with the assistance of Mayflower Wind, will respond to the comments and make necessary edits to the documents.

2. Draft Final Document

i. Mayflower Wind shall provide BOEM with the draft final document for technical review and approval

a. BOEM has 15 calendar days to complete its technical review.

b. If BOEM does not provide approval, it shall submit its comments back to Mayflower Wind, who will have 15 calendar days to address the comments.

ii. BOEM, with the assistance of Mayflower Wind, shall provide the final draft document to consulting parties, except the ACHP, for review and comment.

a. Consulting parties shall have 30 calendar days to review and comment.

b. BOEM, with the assistance of Mayflower Wind, shall coordinate a meeting with consulting parties to facilitate comments on the document if requested by a consulting party.

c. BOEM shall consolidate comments received and provide them to Mayflower Wind within 15 calendar days of receiving comments from consulting parties.

d. BOEM with the assistance of Mayflower Wind, will respond to the comments and make necessary edits to the documents.

3. Final Document

i. Mayflower Wind shall provide BOEM with the final document approval

a. BOEM has 15 calendar days to complete its technical review.

b. If BOEM does not provide approval, it shall submit its comments back to Mayflower Wind, who will have 15 calendar days to address the comments.

c. BOEM, with the assistance of Mayflower Wind, shall provide the final document to consulting parties, except the ACHP, within 30 calendar days of approving the final document. With this same submittal of final documents, Mayflower Wind will provide a summary of all the comments received on the documents and BOEM's responses.

VI. PROJECT MODIFICATIONS

A. If Mayflower Wind proposes any modifications to the Project that expands the Project beyond the Project Design Envelope included in the COP and/or occurs outside of the defined APEs, or if the proposed modifications change BOEM's final determinations and findings for this Project, Mayflower Wind shall notify and provide BOEM with information concerning the proposed modifications. BOEM will determine if these modifications require alteration of the conclusions reached in the Finding of Effect and, thus, will require additional consultation with the signatories, invited signatories, and consulting parties. If BOEM determines additional consultation is required, Mayflower Wind will provide the signatories, invited signatories, and consulting parties with the information concerning the proposed changes, and these parties will

have 30 calendar days from receipt of this information to comment on the proposed changes. BOEM shall take into account any comments from signatories, invited signatories, and consulting parties prior to agreeing to any proposed changes. Using the procedure below, BOEM will, as necessary, consult with the signatories, invited signatories, and consulting parties to identify and evaluate historic properties in any newly affected areas, assess the effects of the modification, and resolve any adverse effects.

1. If the Project is modified and BOEM identifies no additional historic properties or determines that no historic properties are adversely affected due to the modification, BOEM, with the assistance of Mayflower Wind, will notify and consult with the signatories, invited signatories, and consulting parties following the consultation process set forth in this Stipulation VI.A.1.

    i. Mayflower Wind will notify all the signatories, invited signatories, and consulting parties about this proposed change and BOEM's determination by providing a written summary of the project modification including any maps, a summary of any additional surveys and/or research conducted to identify historic properties and assess effects, and copies of the surveys.

    ii. BOEM and Mayflower Wind will allow the signatories, invited signatories, and consulting parties 30 calendar days to review and comment on the proposed change, BOEM's determination, and the documents.

    iii. After the 30-calendar review period has concluded and no comments require additional consultation, Mayflower Wind will notify the signatories and consulting parties that BOEM has approved the project modification and, if they received any comments, provide a summary of the comments and BOEM's responses.

    iv. BOEM, with the assistance of Mayflower Wind, will conduct any consultation meetings if requested by the signatories or consulting parties.

    v. This MOA will not need to be amended if no additional historic properties are identified and/or adversely affected.

2. If BOEM determines new adverse effects to historic properties will occur due to a Project Modification(s), BOEM with the assistance of Mayflower Wind will notify and consult with the signatories, invited signatories, and consulting parties regarding BOEM's finding and the proposed measures to resolve the adverse effect(s) including the development of a new treatment plan(s) following the consultation process set forth in this Stipulation VI.A.2.

    i. Mayflower Wind will notify all signatories, invited signatories, and consulting parties about this proposed modification, BOEM's determination, and the proposed resolution measures for the adverse effect(s).

    ii. The signatories, invited signatories, and consulting parties will have 30 calendar days to review and comment on the adverse effect finding and the proposed resolution of adverse effect(s), including a draft treatment plan(s).

    iii. BOEM, with the assistance of Mayflower Wind, will conduct additional consultation meetings, if necessary, during consultation on the adverse effect finding and during drafting and finalization of the treatment plan(s).

iv. BOEM, with the assistance of Mayflower Wind, will respond to the comments and make necessary edits to the documents.

v. Mayflower Wind will send the revised draft final documents to the other signatories, invited signatories, and consulting parties for review and comment during a 30-calendar day review and comment period. With this same submittal of draft final documents, Mayflower Wind will provide a summary of all the comments received on the documents and BOEM's responses.

vi. BOEM, with the assistance of Mayflower Wind, will respond to the comments on the draft final documents and make necessary edits to the documents.

vii. Mayflower Wind will notify all the signatories, invited signatories, and consulting parties that BOEM has approved the project modification and will provide the final document(s) including the final treatment plan(s) and a summary of comments and BOEM's responses to comments, if they receive any on the draft final documents, after BOEM has received concurrence from MHC and RIHPHC on the finding of new adverse effect(s), BOEM has accepted the final treatment plan(s), and BOEM has approved the Project modification.

B. If any of the signatories, invited signatories, or consulting parties object to determinations, findings, or resolutions made pursuant to these measures (Stipulation VII.A.1 and 2), BOEM will resolve any such objections pursuant to the dispute resolution process set forth Stipulation XIII.

VII. SUBMISSION OF DOCUMENTS

A. MHC, RIHPHC, ACHP, NPS, Tribes, and consulting parties:

1. All submittals to the RIHPHC, ACHP, NPS, Tribes, and consulting parties will be submitted electronically unless a specific request is made for the submittal to be provided in paper format.

2. MHC

i. All submittals to MHC, if required for any HPTP, will be in paper form and delivered by U.S. Mail, delivery service, or by hand.

ii. Plans and specifications submitted to MHC, if required for any HPTP, must measure no larger than 11 x 17-inch paper format (unless another format is agreed to in consultation); therefore, all documents that will be submitted to MHC under this MOA must meet this format.

VIII. CURATION

A. Collections from federal lands or the OCS:

1. Any archaeological materials removed from federal lands or the OCS as a result of the actions required by this MOA shall be curated in accordance with 36 CFR 79, "Curation of Federally Owned and Administered Archaeological Collections," ACHP's "Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites" published in the Federal Register (64 Fed. Reg. 27085-27087 (May 18, 1999)), or other provisions agreed to by the consulting parties and following applicable State guidelines. No excavation should be initiated before acceptance and approval of a curation plan.

B. Collections from state, local government, and private lands:

1. Archaeological materials from state or local government lands in the APE and the records and documentation associated with these materials shall be curated within the state of their origin at a repository preferred by the SHPO, or an approved and certified repository, in accordance with the standards and guidelines required by the MHC for materials collected in Massachusetts or required by the RIHPHC for materials collected in Rhode Island. Lands as described here may include the seafloor in state waters. No excavation should be initiated before acceptance and approval of a curation plan.

2. Collections from private lands that would remain private property: In cases where archaeological survey and testing are conducted on private land, any recovered collections remain the property of the land owner. In such instances, BOEM and Mayflower Wind, in coordination with the MHC or the RIHPHC as appropriate based on which state these materials are located, and affected Tribe(s), will encourage landowners to donate the collection(s) to an appropriate public or Tribal entity. To the extent a private landowner requests that the materials be removed from the site, Mayflower Wind will seek to have the materials donated to the repository identified under Stipulation VII.B.1 through a written donation agreement developed in consultation with the consulting parties. BOEM, assisted by Mayflower Wind, will seek to have all materials from each state curated together in the same curation facility within the state of origin. In cases where the property owner wishes to transfer ownership of the collection(s) to a public or Tribal entity, BOEM and Mayflower Wind will ensure that recovered artifacts and related documentation are curated in a suitable repository as agreed to by BOEM, the appropriate SHPO, and affected Tribe(s), and following applicable State guidelines. To the extent feasible, the materials and records resulting from the actions required by this MOA for private lands, shall be curated in accordance with 36 CFR 79. No excavation should be initiated before acceptance and approval of a curation.

IX. PROFESSIONAL QUALIFICATIONS

A. Secretary's Standards for Archaeology and Historic Preservation. Mayflower Wind will ensure that all work carried out pursuant to this MOA will meet the SOI Standards for Archaeology and Historic Preservation, 48 FR 44716 (September 29, 1983), taking into account the suggested approaches to new construction in the SOI's Standards for Rehabilitation.

B. SOI Professional Qualifications Standards. Mayflower Wind will ensure that all work carried out pursuant to this MOA is performed by or under the direct supervision of historic preservation professionals who meet the SOI's Professional Qualifications Standards (48 FR 44738-44739). A "qualified professional" is a person who meets the relevant standards outlined in such SOI's Standards. BOEM, or its designee, will ensure that consultants retained for services pursuant to the MOA meet these standards.

C. Investigations of Marine Archaeological Resources and ASLFs. Mayflower Wind will ensure that the additional investigations of marine archaeological resources and ASLFs will be conducted and reports and other materials produced by one or more QMAs and geological specialists who meet the SOI's Professional Qualifications Standards and has experience both in conducting HRG surveys and processing and interpreting the resulting data for archaeological potential, as well as collecting, subsampling, and analyzing cores.

D. Tribal Consultation Experience. Mayflower Wind will ensure that all work carried out pursuant to this MOA that requires consultation with Tribes is performed by professionals who have demonstrated professional experience consulting with federally recognized Tribes.

X. DURATION

A. This MOA will expire at (1) the decommissioning of the Project in the Lease Area, as defined in Mayflower Wind's lease with BOEM (Lease Number OCS-A 0498), or (2) 33 years from the date of COP approval, whichever occurs first. Prior to such time, BOEM may consult with the other signatories and invited signatories to reconsider the terms of the MOA and amend it in accordance with Amendment Stipulation (Stipulation XIV).

XI. POST-REVIEW DISCOVERIES

A. Implementation of Post-Review Discovery Plans. If properties are discovered that may be historically significant or unanticipated effects on historic properties found, BOEM shall implement the post-review discovery plans found in the *Unanticipated Discoveries Plan for Marine Archaeological Resources* (Attachment 3) and *Unanticipated Discoveries Plan for Terrestrial Archaeological Resources* (Attachment 4).

1. The signatories acknowledge and agree that it is possible that additional historic properties may be discovered during implementation of the Project, despite the completion of a good faith effort to identify historic properties throughout the APEs.

B. All Post-Review Discoveries. In the event of a post-review discovery of a property or unanticipated effects to a historic property prior to or during construction, operations, maintenance, or decommissioning of the Project, Mayflower Wind will implement the following actions which are consistent with the post-review discovery plan: [procedures under development and will be determined through consultation and revisions to Mayflower's marine and terrestrial archaeological UDPs]

1. Immediately halt all ground- or seafloor-disturbing activities within the area of discovery.

2. Notify BOEM in writing via report within 72 hours of the discovery.

3. Keep the location of the discovery confidential and take no action that may adversely affect the discovered property until BOEM or its designee has made an evaluation and instructs Mayflower Wind on how to proceed.

4. Conduct any additional investigations as directed by BOEM or its designee to determine, in consultation with the appropriate SHPO, if the resource is eligible for listing in the NRHP (30 CFR 585.802(b)). BOEM will direct Mayflower Wind to complete additional investigations, as BOEM deems appropriate, if:

    i. The site has been impacted by Project activities; or

    ii. Effects to the site from Project activities cannot be avoided.

5. If investigations indicate that the resource is eligible for listing in the NRHP, BOEM, with the assistance of Mayflower Wind, will work with the other relevant signatories, invited signatories, and consulting parties to this MOA who have a demonstrated interest in the affected historic property and on the further avoidance, minimization, or mitigation of adverse effects.

6. If there is any evidence that the discovery is from an indigenous society or appears to be a preserved burial site, Mayflower Wind will contact the Tribes as identified in the notification lists included in the post-review discovery plans within 72 hours of the discovery with details

of what is known about the discovery, and consult with the Tribes pursuant to the post-review discovery plan.

7. If BOEM incurs costs in addressing the discovery, under Section 110(g) of the NHPA, BOEM may charge Mayflower Wind reasonable costs for carrying out historic preservation responsibilities, pursuant to its delegated authority under the OCS Lands Act (30 CFR 585.802 (c-d)).

XII. MONITORING AND REPORTING

At the beginning of each calendar year by January 31, following the execution of this MOA until it expires or is terminated, Mayflower Wind will prepare and, following BOEM's review and agreement to share this summary report, provide all signatories, invited signatories, and consulting parties to this MOA a summary report detailing work undertaken pursuant to the MOA. Such report shall include a description of how the stipulations relating to avoidance and minimization measures (Stipulations I and II) were implemented; any scheduling changes proposed; any problems encountered; and any disputes and objections received in BOEM's efforts to carry out the terms of this MOA. Mayflower Wind can satisfy its reporting requirement under this stipulation by providing the relevant portions of the annual compliance certification required under 30 CFR 585.633.

XIII. DISPUTE RESOLUTION

A. Should any signatory, invited signatory, or consulting party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, they must notify BOEM in writing of their objection. BOEM shall consult with such party to resolve the objection. If BOEM determines that such objection cannot be resolved, BOEM:

   1. Will forward all documentation relevant to the dispute, including BOEM's proposed resolution, to ACHP. ACHP shall provide BOEM with its advice on the resolution of the objection within 30 calendar days of receiving adequate documentation. Prior to reaching a final decision on the dispute, BOEM shall prepare a written response that takes into account any timely advice or comments regarding the dispute from ACHP, signatories, invited signatories, and/or consulting parties, and provide them with a copy of this written response. BOEM will make a final decision and proceed accordingly.

   2. May make a final decision on the dispute and proceed accordingly, if ACHP does not provide its advice regarding the dispute within the 30 calendar-day time period. Prior to reaching such a final decision, BOEM shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories, invited signatories, or consulting parties to the MOA, and provide them and ACHP with a copy of such written response.

B. BOEM's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

C. At any time during the implementation of the measures stipulated in this MOA, should a member of the public object in writing to the signatories regarding the manner in which the measures stipulated in this MOA are being implemented, that signatory will notify BOEM. BOEM shall review the objection and may notify the other signatories as appropriate, and respond to the objector.

XIV. AMENDMENTS

A. This MOA may be amended when such an amendment is agreed to in writing by all signatories

and invited signatories. The amendment will be effective on the date a copy signed by all of the signatories and invited signatories is filed with ACHP.

B. Revisions to any attachment may be proposed by any signatory or invited signatory by submitting a draft of the proposed revisions to all signatories and invited signatories with a notification to the consulting parties. The signatories and invited signatories will consult for no more than 30 calendar days (or another time period agreed upon by all signatories and invited signatories) to consider the proposed revisions to the attachment. If the signatories and invited signatories unanimously agree to revise the attachment, BOEM will provide a copy of the revised attachment to the other signatories, invited signatories, and consulting parties. Revisions to any attachment to this MOA will not require an amendment to the MOA.

XV. TERMINATION

If any signatory or invited signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other signatories, invited signatories, and consulting parties to attempt to develop an amendment per Stipulation XIV. If within 30 calendar days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory or invited signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on the undertaking, BOEM must either (a) execute an MOA pursuant to 36 CFR 800.6; or (b) request, take into account, and respond to ACHP comments under 36 CFR 800.7. BOEM shall notify the signatories and invited signatories as to the course of action it will pursue.

XVI. COORDINATION WITH OTHER FEDERAL AGENCIES

A. In the event that another federal agency not initially a party to or subject to this MOA receives an application for funding/license/permit for the undertaking as described in this MOA, that agency may fulfill its Section 106 responsibilities by stating in writing it concurs with the terms of this MOA and notifying the signatories and invited signatories that it intends to do so. Such federal agency may become a signatory, invited signatory, or a concurring party (collectively referred to as signing party) to the MOA as a means of complying with its responsibilities under Section 106 and based on its level of involvement in the undertaking. To become a signing party to the MOA, the agency official must provide written notice to the signatories and invited signatories that the agency agrees to the terms of the MOA, specifying the extent of the agency's intent to participate in the MOA. The participation of the agency is subject to approval by the signatories and invited signatories who must respond to the written notice within 30 calendar days or the approval will be considered implicit. Any necessary amendments to the MOA as a result will be considered in accordance with the Amendment Stipulation (Stipulation XIV).

B. Should the signatories and invited signatories approve the federal agency's request to be a signing party to this MOA, an amendment under Stipulation XIV will not be necessary if the federal agency's participation does not change the undertaking in a manner that would require any modifications to the stipulations set forth in this MOA. BOEM will document these conditions and involvement of the federal agency in a written notification to the signatories, invited signatories, and consulting parties, and include a copy of the federal agency's executed signature page, which will codify the addition of the federal agency as a signing party in lieu of an amendment.

XVII. ANTI-DEFICIENCY ACT

Pursuant to 31 USC 1341(a)(1), nothing in this MOA will be construed as binding the United States to expend in any one fiscal year any sum in excess of appropriations made by Congress for this purpose, or to involve the United States in any contract or obligation for the further expenditure of money in excess of such appropriations.

Execution of this MOA by BOEM, MHC, RIHPHC, and ACHP, and implementation of its terms evidence that BOEM has taken into account the effects of this undertaking on historic properties and afforded ACHP an opportunity to comment.

[SIGNATURES COMMENCE ON FOLLOWING PAGE]

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Signatory:

Bureau of Ocean Energy Management (BOEM)

_____ Date:_____
Elizabeth Klein
Director
Bureau of Ocean Energy Management

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Signatory:

Massachusetts State Historic Preservation Officer (SHPO)

_____ Date:_____
Brona Simon
State Historic Preservation Officer & Executive Director
Massachusetts Historical Commission

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Signatory:

Rhode Island State Historic Preservation Officer (SHPO)

_____ Date:_____
Jeff Emidy
Interim State Historic Preservation Officer
Interim Executive Director
Rhode Island Historical Preservation & Heritage Commission

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Signatory:

Advisory Council on Historic Preservation (ACHP)

_____ Date:_____
Reid J. Nelson
Executive Director, Acting
Advisory Council on Historic Preservation

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Invited Signatory:

Mayflower Wind Energy LLC

_____ Date:_____

Name
Title
Mayflower Wind Energy LLC

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Concurring Party:

The Delaware Tribe of Indians

_____ Date:_____

Name
Title
The Delaware Tribe of Indians

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Concurring Party:

The Mashantucket Pequot Tribal Nation

_____ Date:_____

Name
Title
The Mashantucket Pequot Tribal Nation

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Concurring Party:

The Mashpee Wampanoag Tribe

_____ Date:_____

Name
Title
The Mashpee Wampanoag Tribe

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Concurring Party:

The Mohegan Tribe of Connecticut

_____ Date:_____

Name
Title
The Mohegan Tribe of Connecticut

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Concurring Party:

The Narragansett Indian Tribe

_____ Date:_____

Name
Title
The Narragansett Indian Tribe

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Concurring Party:

The Shinnecock Indian Nation

_____ Date:_____

Name
Title
The Shinnecock Indian Nation

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Concurring Party:

The Wampanoag Tribe of Gay Head (Aquinnah)

_____ Date:_____

Name
Title
The Wampanoag Tribe of Gay Head (Aquinnah)

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Concurring Party:

Organization

_____ Date:_____
Name
Title
Organization

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

Concurring Party:

Organization

_____ Date:_____
Name
Title
Organization

MEMORANDUM OF AGREEMENT
AMONG THE BUREAU OF OCEAN ENERGY MANAGEMENT,
THE STATE HISTORIC PRESERVATION OFFICERS OF MASSACHUSETTS AND RHODE ISLAND, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE MAYFLOWER WIND PROJECT

LIST OF ATTACHMENTS TO THE MOA

ATTACHMENT 1 – APE MAPS

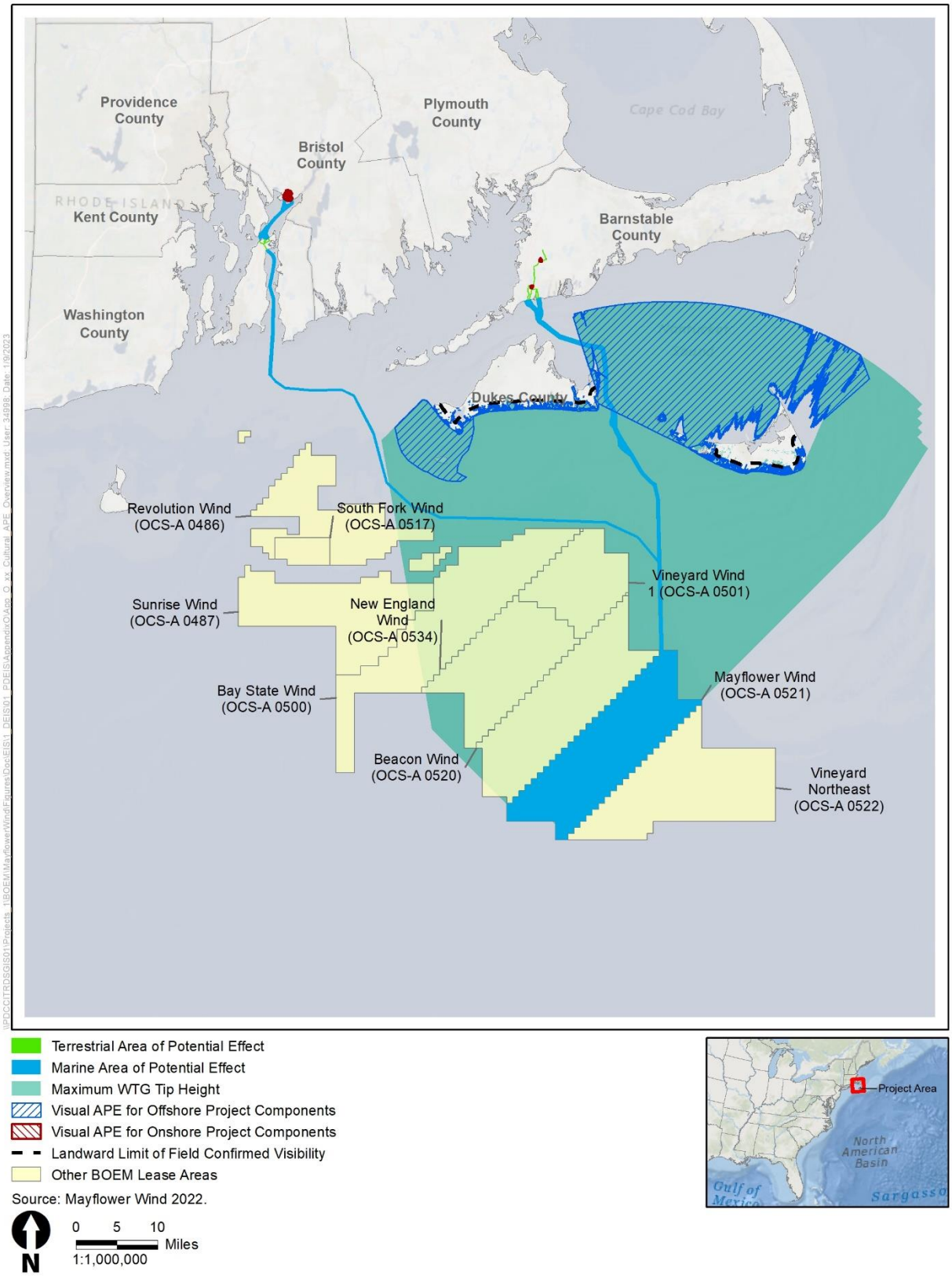

Figure 1. Project APE overview

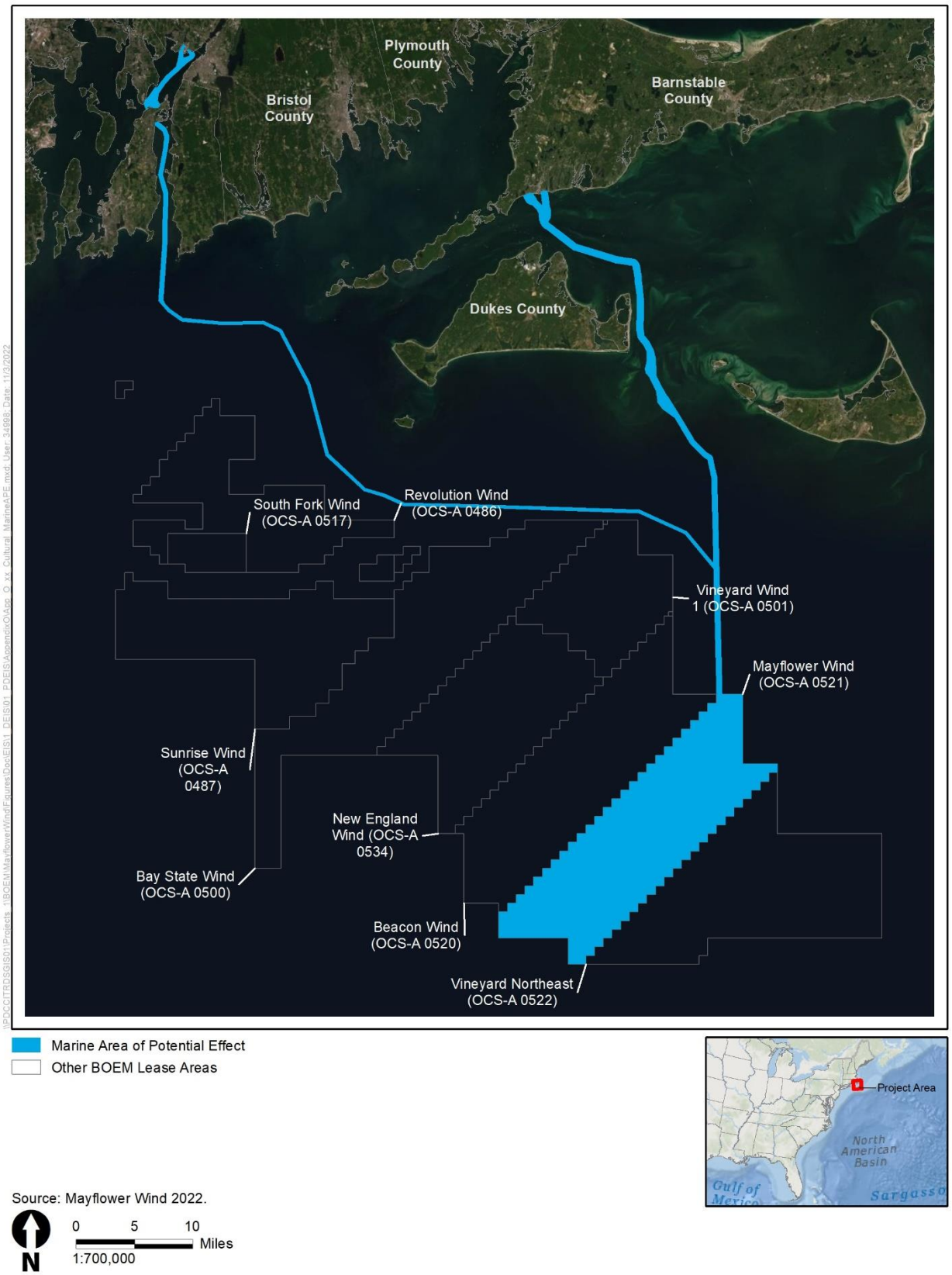

Figure 2-1. Marine APE

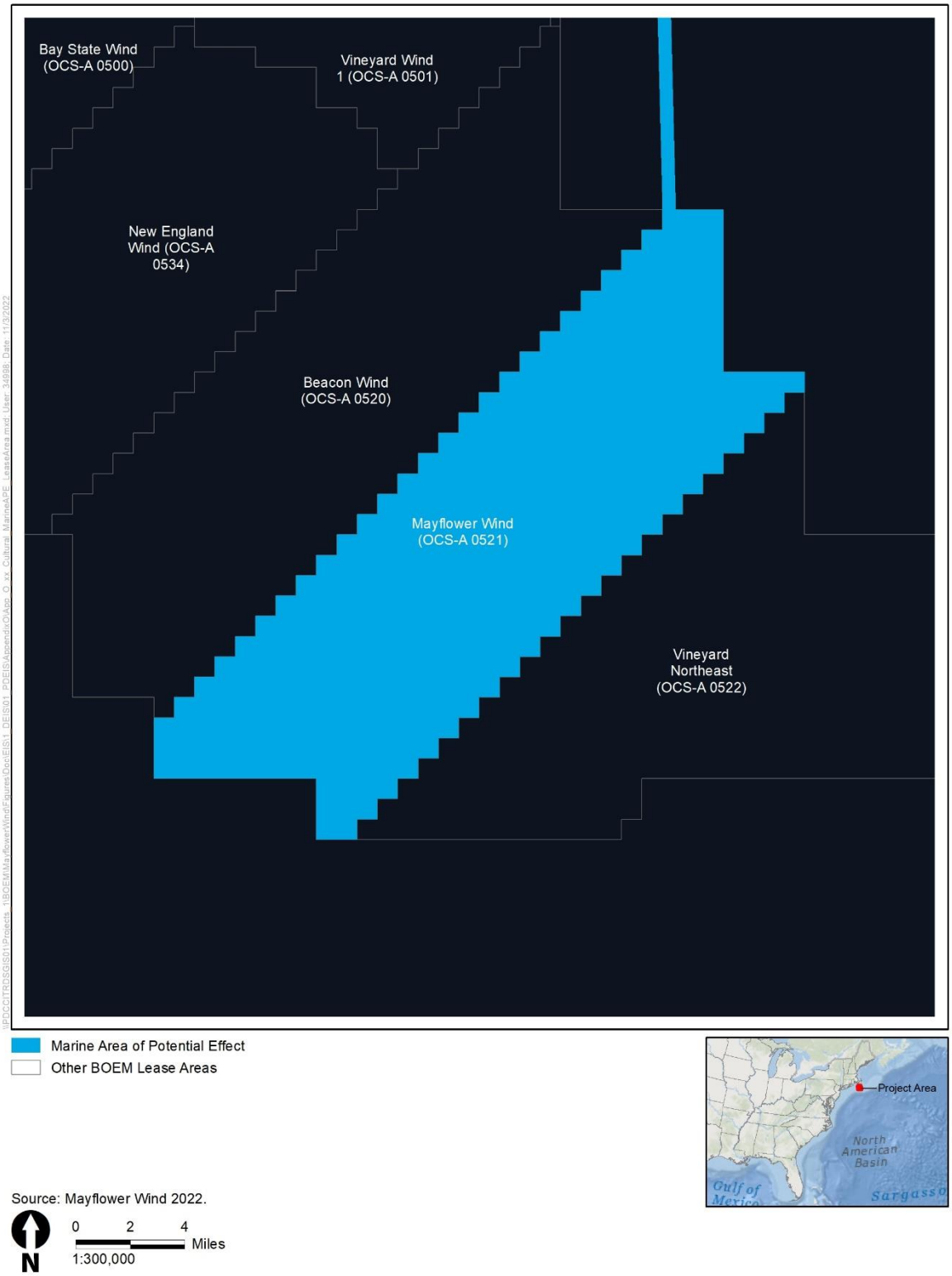

Figure 2-2. Detail of marine APE within the Lease Area

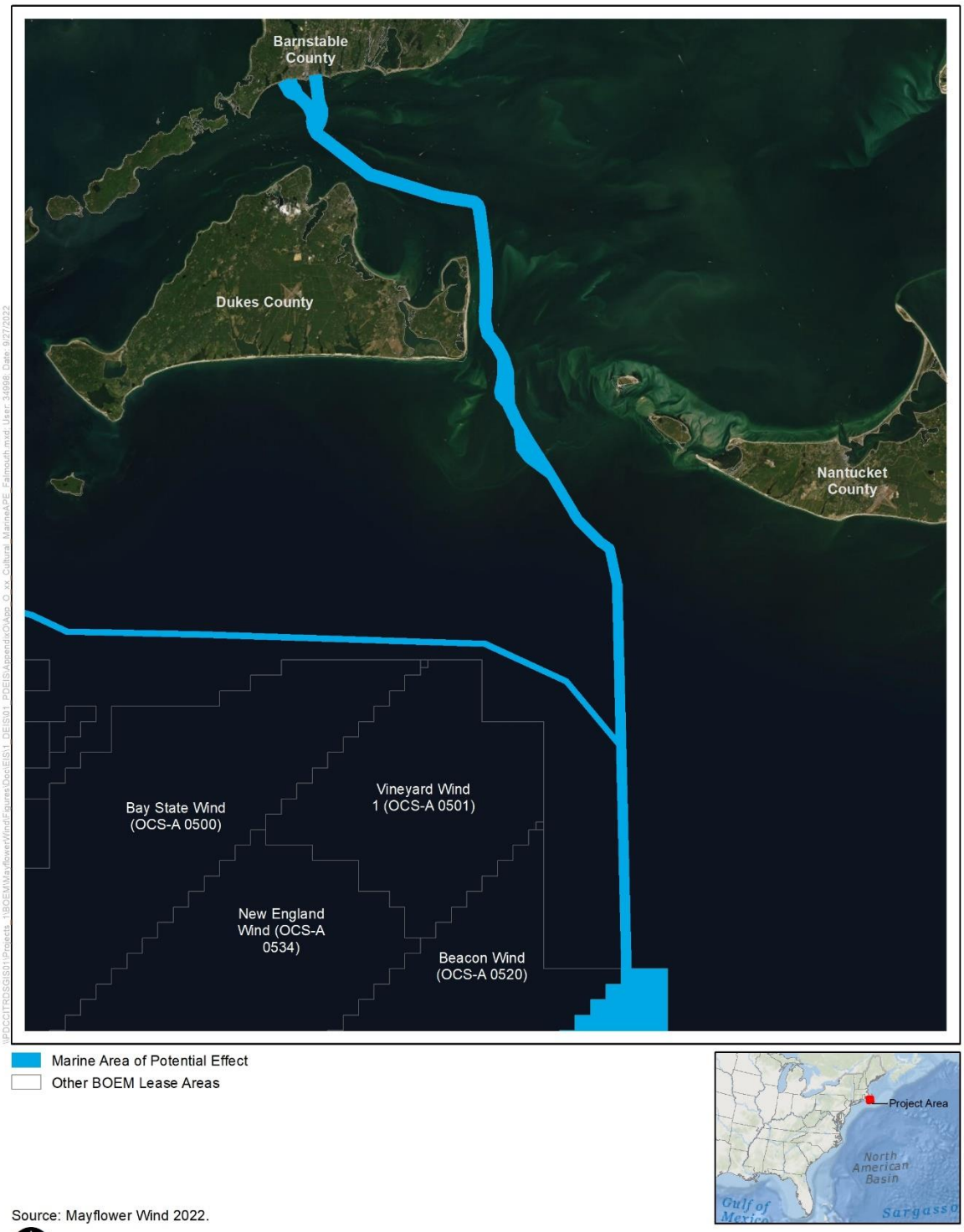

Figure 2-3. Detail of marine APE within the Falmouth Export Cable Route Corridor

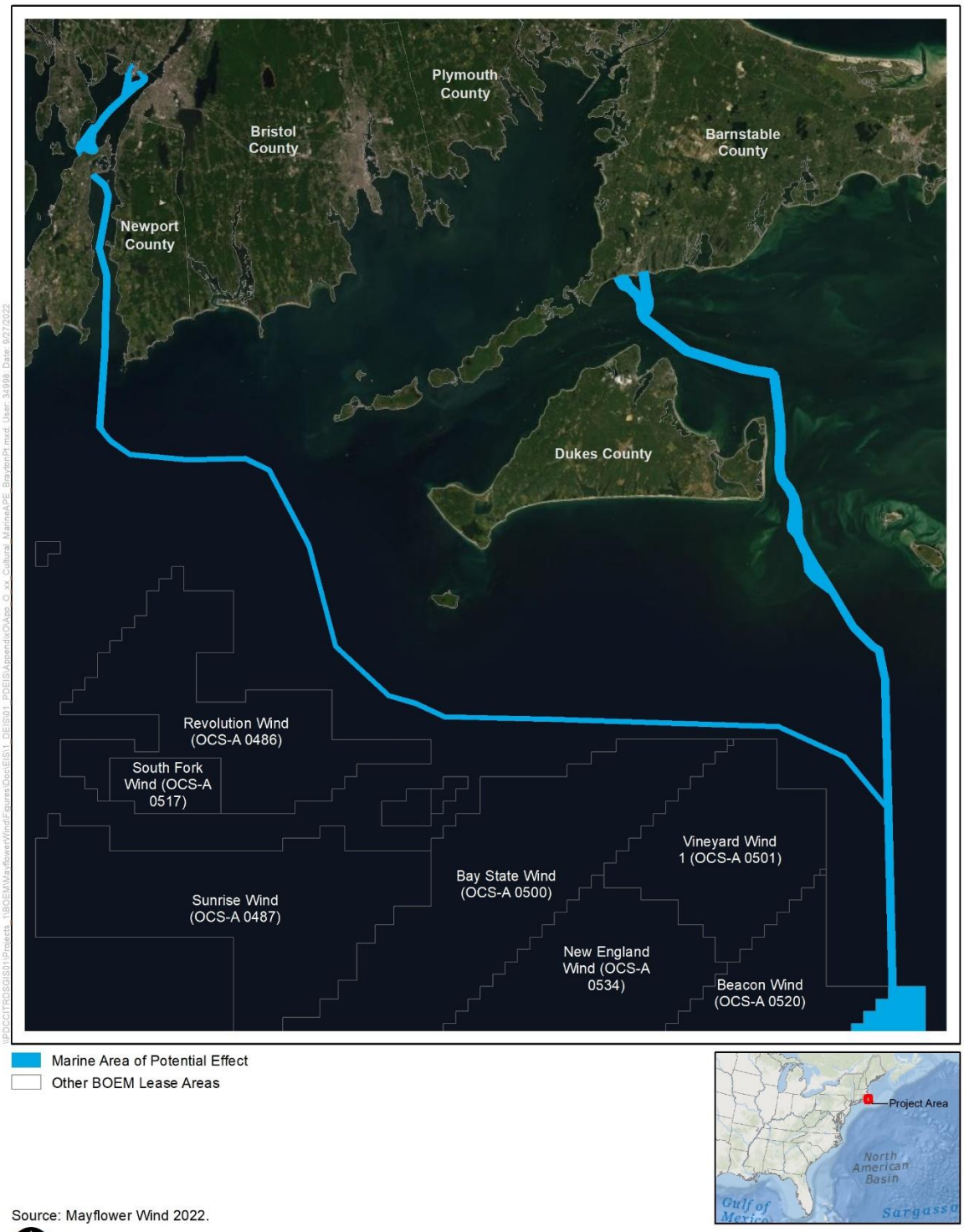

Figure 2-4. Detail of marine APE within the Brayton Point Export Cable Route Corridor

Figure 3-1. Detail of terrestrial APE for Falmouth

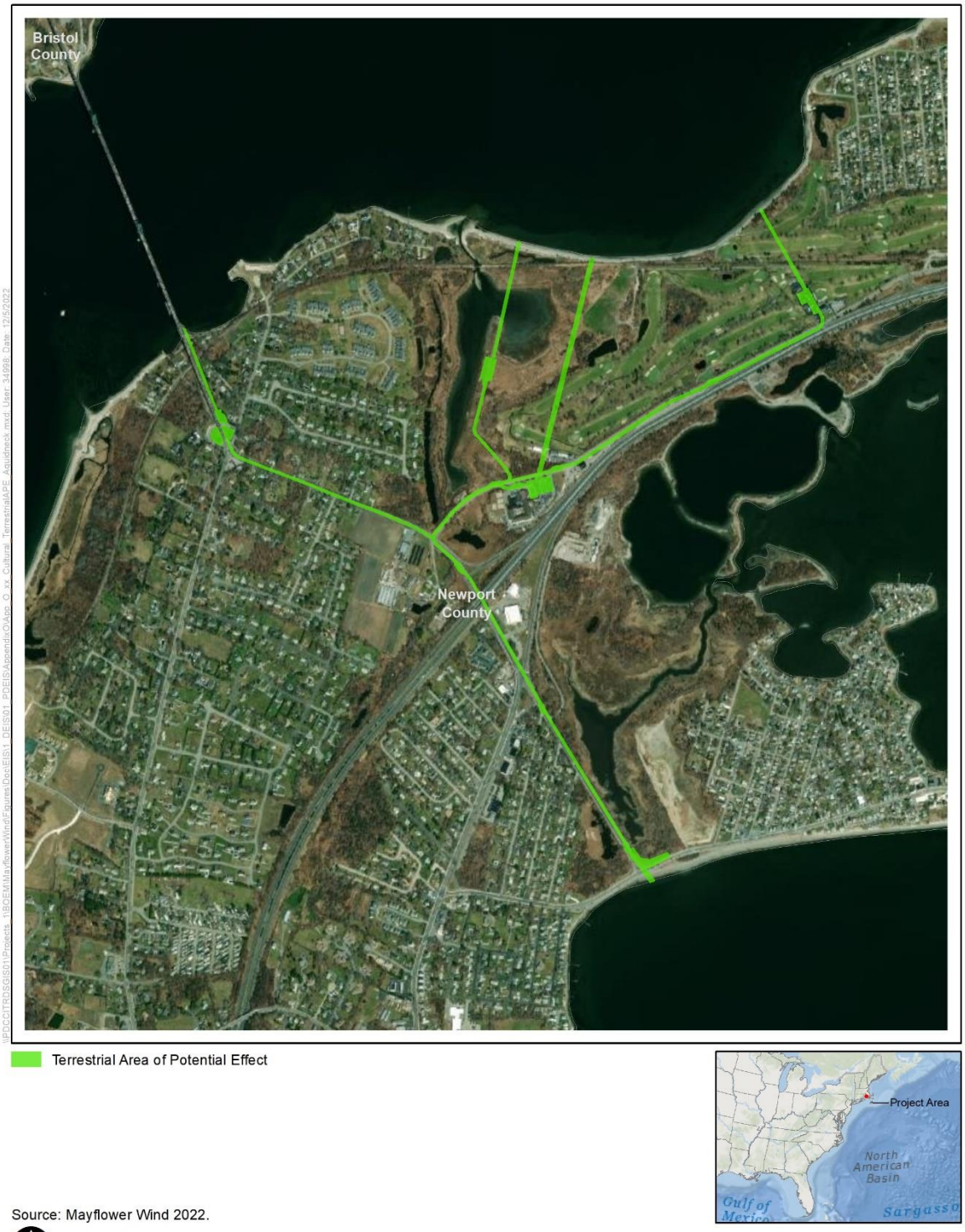

Figure 3-2. Detail of terrestrial APE for Aquidneck Island

Figure 3-3. Detail of terrestrial APE for Brayton Point

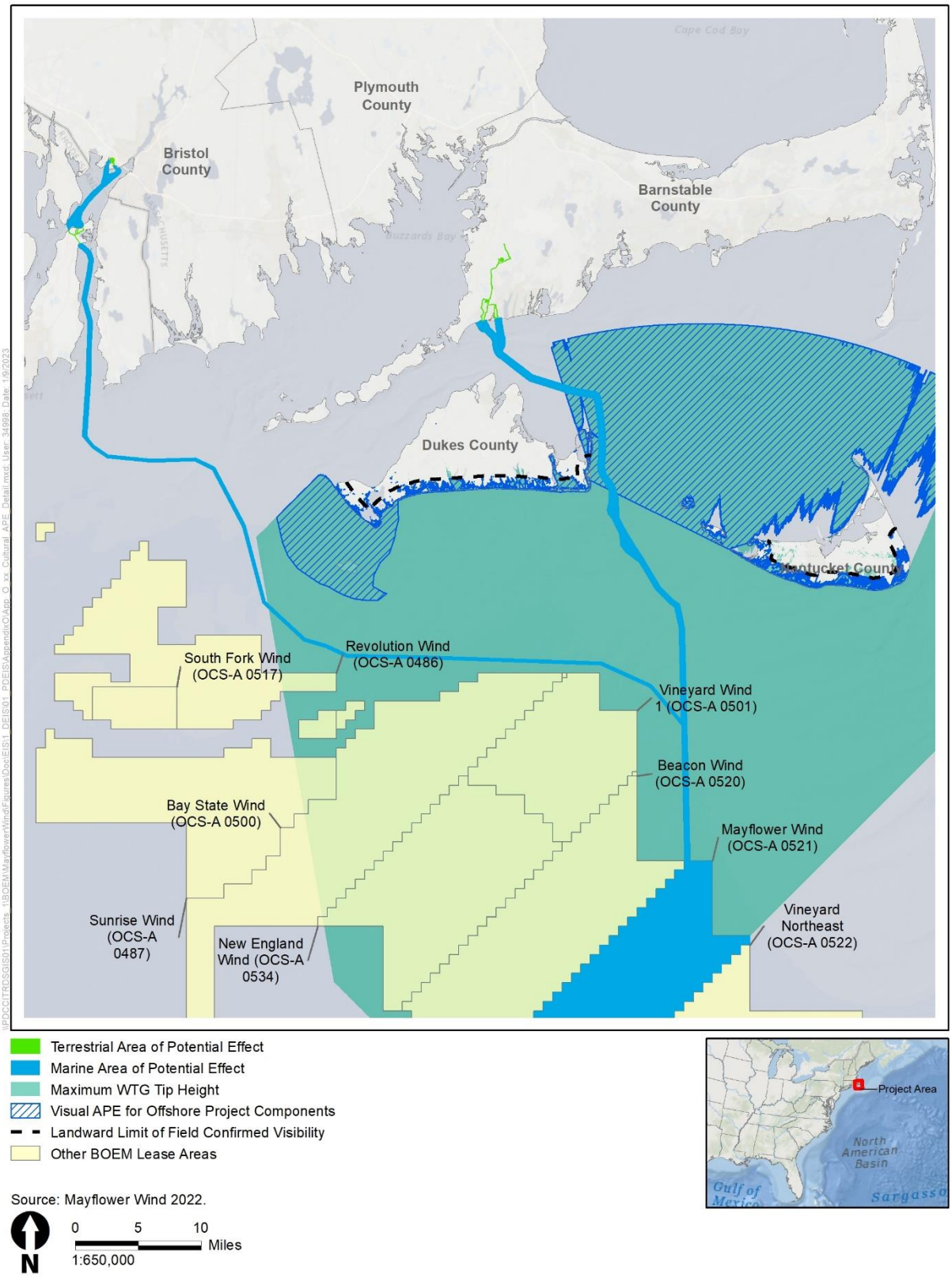

Figure 4-1. Visual APE for Offshore Project components

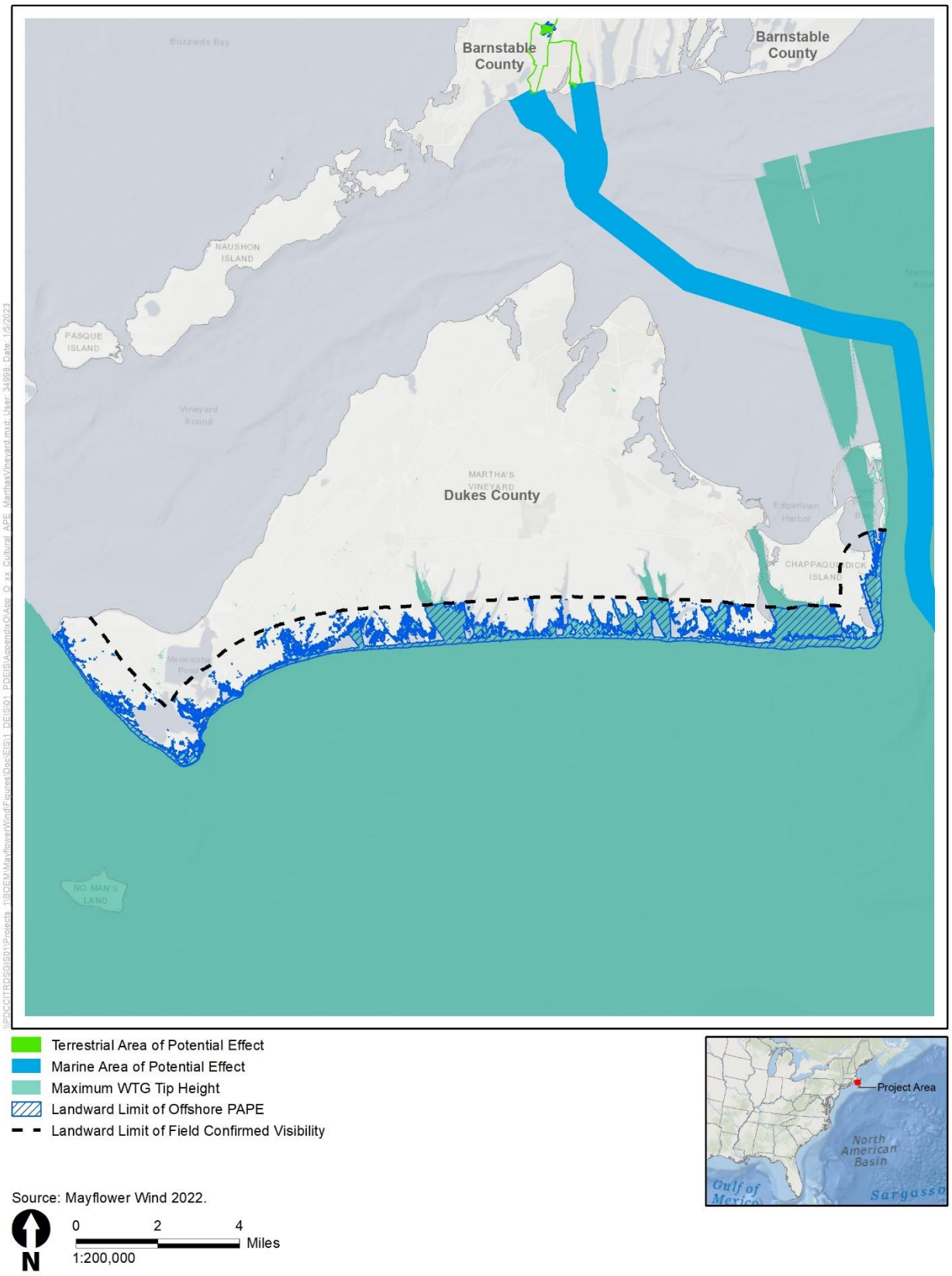

Figure 4-2. Detail of visual APE for Offshore Project components for Martha's Vineyard

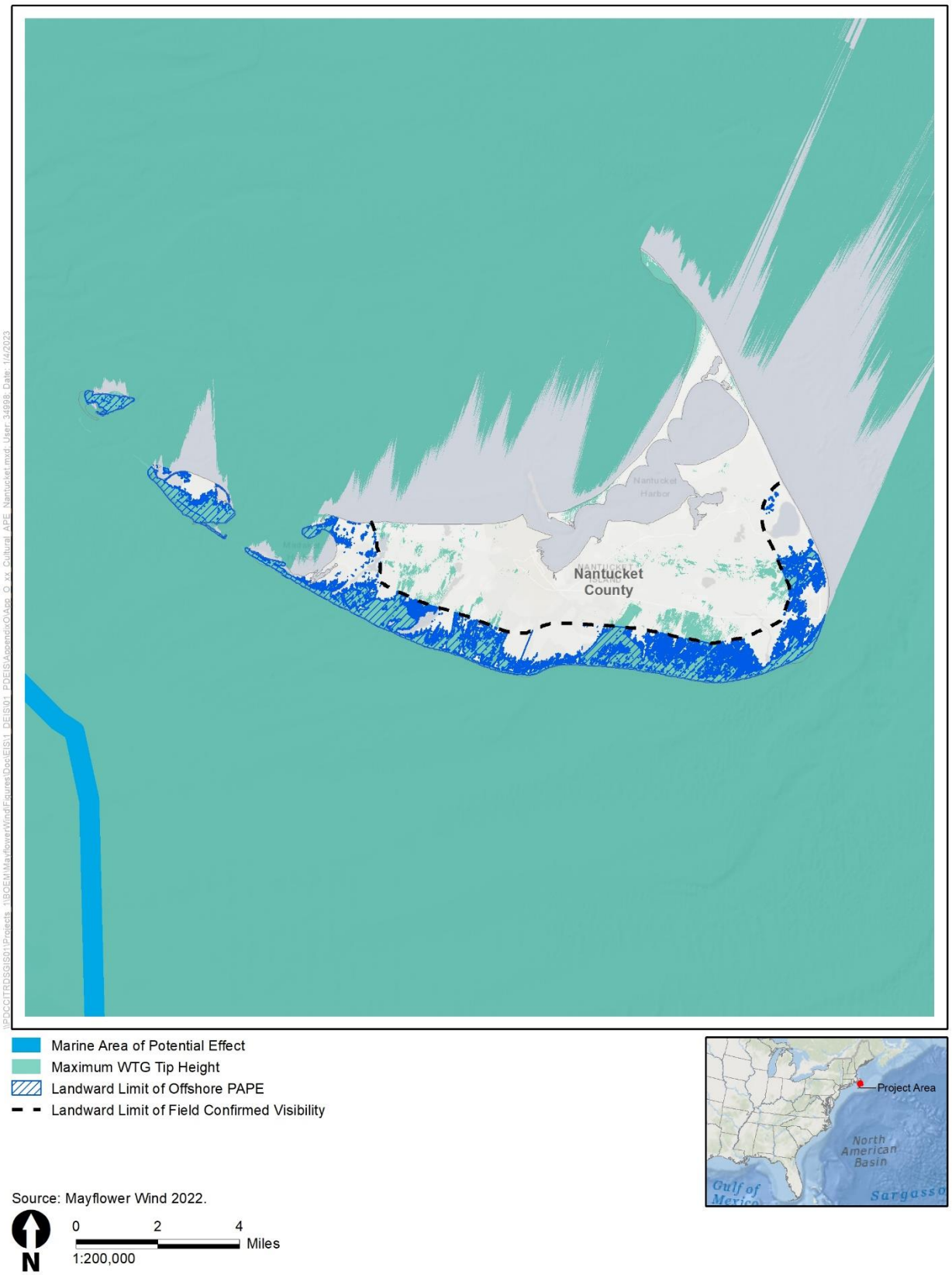

Figure 4-3. Detail of visual APE for Offshore Project components for Nantucket

Figure 4-4. Detail of visual APE for Onshore Project components for proposed Lawrence Lynch Preferred Substation in Falmouth

Figure 4-5. Detail of visual APE for Onshore Project components for proposed Cape Cod Aggregates Alternative Substation in Falmouth

Figure 4-6. Detail of visual APE for Onshore Project components for Brayton Point

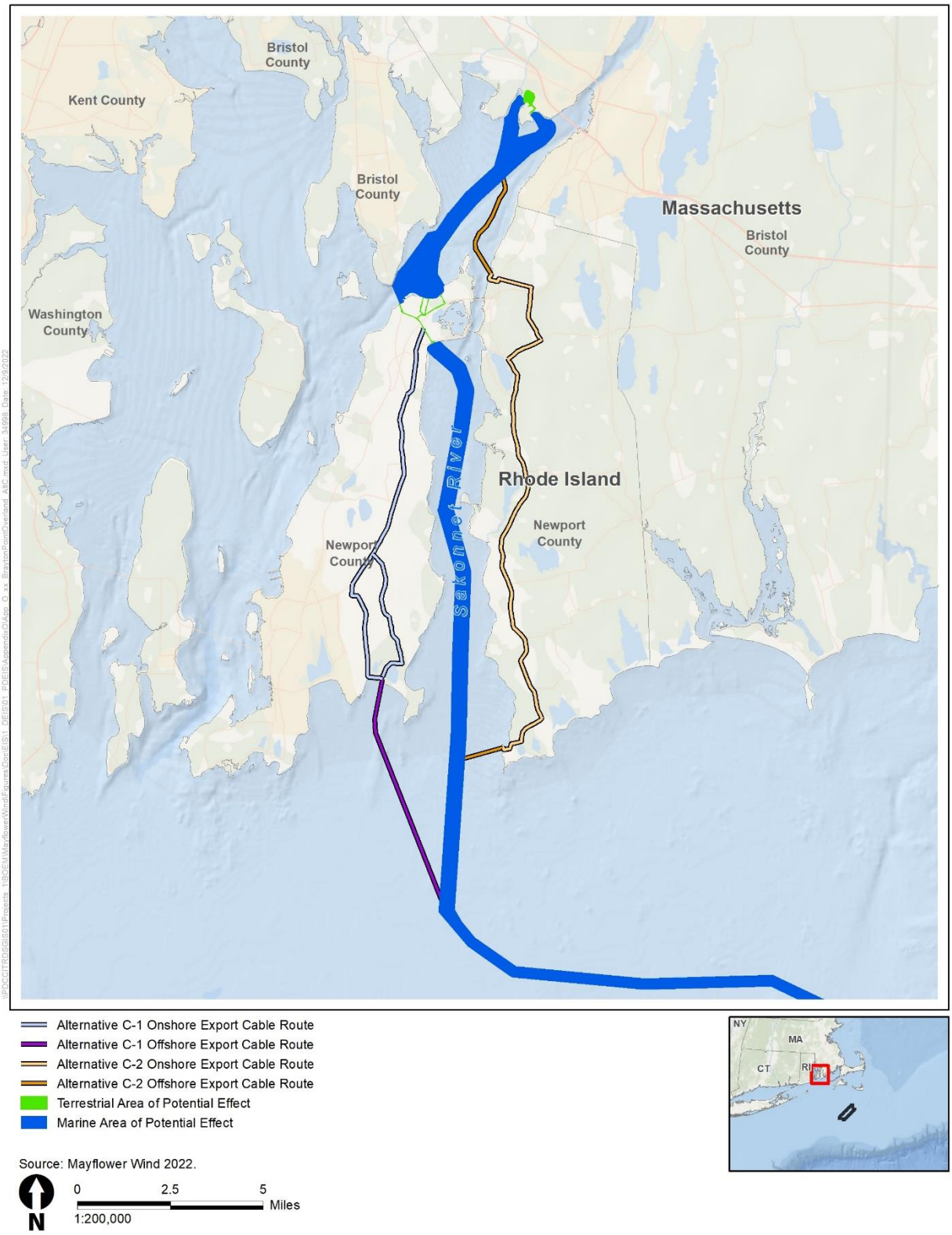

Figure 5. Alternative C route options in relation to the defined Project APE

ATTACHMENT 2 – LISTS OF INVITED AND PARTICIPATING CONSULTING PARTIES

Table 1. Parties Invited to Participate in NHPA Section 106 Consultation

Participants in the Section 106 Process	Participating Consulting Parties
SHPOs and State Agencies	Massachusetts Historical Commission
	Rhode Island Historical Preservation & Heritage Commission
	Massachusetts Board of Underwater Archaeological Resources
	Massachusetts Commission on Indian Affairs
Federal Agencies	Advisory Council on Historic Preservation (ACHP)
	Bureau of Safety and Environmental Enforcement (BSEE)
	National Park Service
	U.S. Army Corps of Engineers
Federally Recognized Tribes	Delaware Tribe of Indians
	Mashantucket Pequot Tribal Nation
	Mashpee Wampanoag Tribe
	Mohegan Tribe of Indians of Connecticut
	The Delaware Nation
	The Narragansett Indian Tribe
	The Shinnecock Indian Nation
	Wampanoag Tribe of Gay Head (Aquinnah)
Non-Federally Recognized Tribe	Chappaquiddick Tribe of Wampanoag Nation
Local Government	Barnstable County Board of Commissioners
	Cape Cod Commission
	City of Cranston, Rhode Island
	City of East Providence, Rhode Island
	City of Fall River, Massachusetts
	City of New Bedford, Massachusetts
	City of Pawtucket, Rhode Island
	City of Providence, Rhode Island
	City of Warwick, Rhode Island
	County of Edgartown, Massachusetts
	Dukes County Commission, Edgartown, Massachusetts
	Falmouth Historical Commission
	Martha's Vineyard Commission
	Nantucket (NPEDC) Planning Commission
	Nantucket Historic District Commission
	Nantucket Historical Commission
	Nantucket Planning and Economic Development Commission
	Town and County of Nantucket
	Town of Aquinnah, Massachusetts
	Town of Barnstable, Historical Commission
	Town of Barrington, Rhode Island
	Town of Bristol, Rhode Island
	Town of Charlestown, Rhode Island
	Town of Chilmark, Massachusetts
	Town of Dartmouth, Massachusetts

Participants in the Section 106 Process	Participating Consulting Parties
	Town of East Greenwich, Rhode Island
	Town of Falmouth, Massachusetts
	Town of Gosnold, Cuttyhunk Island, Massachusetts
	Town of Jamestown, Rhode Island
	Town of Little Compton, Rhode Island
	Town of Middletown, Rhode Island
	Town of Narragansett, Rhode Island
	Town of New Shoreham, Block Island, Rhode Island
	Town of Oak Bluffs, Massachusetts
	Town of Portsmouth, Rhode Island
	Town of Somerset, Massachusetts, Historical Commission
	Town of South Kingston, Wakefield, Rhode Island
	Town of Swansea, Massachusetts
	Town of Tisbury, Vineyard Haven, Massachusetts
	Town of Tiverton, Rhode Island
	Town of Warren, Rhode Island
	Town of Westerly, Rhode Island
	Town of Westport, Massachusetts
Nongovernmental Organizations or Groups	Alliance to Protect Nantucket Sound (APNS)
	Charlestown Historical Society
	Gay Head Lighthouse Advisory Board
	Martha's Vineyard Museum
	Massachusetts Historical Society
	Mayflower Wind Energy LLC
	Museum of African American History, Boston
	Museum of African American History, Nantucket
	Nantucket Conservation Foundation
	Nantucket Historical Association
	Nantucket Preservation Trust
	Preservation Massachusetts
	Rhode Island Historical Preservation & Heritage Commission
	Rhode Island Historical Society
	South County History Center, Kingston, Rhode Island
	The Maria Mitchell Association (Dark Skies Initiative)
	Trustees Martha's Vineyard and Nantucket
	Vineyard Power Cooperative

Table 2. Consulting Parties Participating in Section 106 Consultation

Participants in the Section 106 Process	Participating Consulting Parties
SHPOs and State Agencies	Massachusetts Historical Commission
	Rhode Island Historical Preservation & Heritage Commission
	Massachusetts Board of Underwater Archaeological Resources
Federal Agencies	Advisory Council on Historic Preservation
	Bureau of Safety and Environmental Enforcement (BSEE)
	National Park Service
	US Army Corps of Engineers
Federally Recognized Tribes	Delaware Tribe of Indians
	Mashantucket Pequot Tribal Nation
	Mashpee Wampanoag Tribe
	Mohegan Tribe of Indians of Connecticut
	The Narragansett Indian Tribe
	The Shinnecock Indian Nation
	Wampanoag Tribe of Gay Head (Aquinnah)
Non-Federally Recognized Tribes	Chappaquiddick Tribe of Wampanoag Nation
Local Government	Cape Cod Commission
	City of East Providence, Rhode Island
	City of New Bedford and New Bedford Port Authority
	Falmouth Historical Commission
	Martha's Vineyard Commission
	Nantucket Historic District Commission
	Nantucket Historical Commission
	Nantucket Planning & Economic Development Commission
	Town of Aquinnah, Massachusetts
	Town of Barnstable, Historical Commission
	Town of Bristol, Rhode Island
	Town of Jamestown, RI
	Town of Middletown, RI
	Town of Nantucket
	Town of Somerset, Historical Commission
	Town of South Kingstown
	Town of Swansea, MA
	Town of Warren, RI
	Town of Westport, MA
Non-governmental Organizations or Groups	Alliance to Protect Nantucket Sound (APNS)
	Cultural Heritage Partners, PLLC
	Gay Head Lighthouse Advisory Board
	Mayflower Wind Energy LLC
	Nantucket Preservation Trust

Participants in the Section 106 Process	Participating Consulting Parties
	The Maria Mitchell Association

Table 3. Parties Invited to Consult under Section 106 and that Did Not Participate in Consultation

Participants in the Section 106 Process	Participating Consulting Parties
State Agencies	Massachusetts Commission on Indian Affairs
Federally Recognized Tribes	The Delaware Nation
Local Government	Barnstable County Board of Commissioners
	City of Cranston, Rhode Island
	City of Fall River, Massachusetts
	City of Pawtucket, Rhode Island
	City of Providence, Rhode Island
	City of Warwick, Rhode Island
	County of Edgartown, Massachusetts
	Dukes County Commission, Edgartown, Massachusetts
	Nantucket (NPEDC) Planning Commission
	Town and County of Nantucket
	Town of Barrington, Rhode Island
	Town of Charlestown, Rhode Island
	Town of Chilmark, Massachusetts
	Town of Dartmouth, Massachusetts
	Town of East Greenwich, Rhode Island
	Town of Gosnold, Cuttyhunk Island, Massachusetts
	Town of Little Compton, Rhode Island
	Town of Narragansett, Rhode Island
	Town of New Shoreham, Block Island, Rhode Island
	Town of Oak Bluffs, Massachusetts
	Town of Portsmouth, Rhode Island
	Town of Tisbury, Vineyard Haven, Massachusetts
	Town of Tiverton, Rhode Island
	Town of Westerly, Rhode Island
Nongovernmental Organizations or Groups	Charlestown Historical Society
	Martha's Vineyard Museum
	Massachusetts Historical Society
	Museum of African American History, Boston
	Museum of African American History, Nantucket
	Nantucket Conservation Foundation
	Nantucket Historical Association
	Preservation Massachusetts
	Rhode Island Historical Preservation & Heritage Commission
	Rhode Island Historical Society
	South County History Center, Kingston, Rhode Island
	Trustees Martha's Vineyard and Nantucket
	Vineyard Power Cooperative

ATTACHMENT 3 – UNANTICIPATED DISCOVERIES PLAN FOR MARINE ARCHAEOLOGICAL RESOURCES

MAYFLOWER WIND

Appendix Q.1. Unanticipated Discoveries Plan

Document Revision	A
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FINAL JULY 29, 2022

PLANS AND PROCEDURES ADDRESSING UNANTICIPATED DISCOVERIES OF CULTURAL RESOURCES AND HUMAN REMAINS, IN SUPPORT OF THE MAYFLOWER WIND PROJECT LOCATED IN MASSACHUSETTS AND RHODE ISLAND STATE WATERS AND OCS-A 0521 OFFSHORE MASSACHUSETTS

PREPARED FOR:

MAYFLOWER WIND ENERGY LLC

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241 EAST FOURTH STREET, SUITE 100 FREDERICK, MD 21701

Plans And Procedures Addressing
Unanticipated Discoveries of Cultural Resources and Human Remains,
in Support of The Mayflower Wind Project Located in Massachusetts And Rhode Island State Waters And OCS-A 0521
Offshore Massachusetts

by

R. Christopher Goodwin & Associates, Inc.
241 East Fourth Street, Suite 100
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July 29, 2022

Prepared for:

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Boston, MA 02110

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List of Acronyms

Acronym	Definition
ACHP	Advisory Council on Historic Preservation
BOEM	Bureau of Ocean Energy Management
BUAR	Board of Underwater Archaeological Resources
COP	Construction and Operations Plan
HRG	High Resolution Geophysical
MARA	Marine Archaeological Resources Assessment
MHC	Massachusetts Historical Commission
NAGPRA	Native American Graves Protection and Repatriation Act
NRHP	National Register of Historic places
QMA	Qualified Marine Archaeologist
RCG&A	R. Christopher Goodwin & Associates, Inc.
RIHPHC	Rhode Island Historical Preservation & Heritage Commission
ROV	Remotely Operated Vehicle
SHPO	State Historic Preservation Office
THPO	Tribal Historic Preservation Office
UDP	Unanticipated Discoveries Plan
UXO	Unexploded Ordinances

1.0 INTRODUCTION

Despite intensive background research and remote sensing surveys, there is always the potential to encounter cultural resources such as shipwrecks and other archaeological sites during construction or bottom disturbing activities. In order to minimize the potential for the accidental discovery of cultural resources, systematic review of remote sensing data was conducted for the Mayflower Wind Project (Project). To ensure full and complete compliance with all federal and state regulations concerning the protection of cultural resources, an Unanticipated Discoveries Plan (UDP) was prepared for this Project. All inspectors have the responsibility to monitor construction sites for potential cultural resources throughout the construction process. R. Christopher Goodwin & Associates, Inc (RCG&A), acting as the approved Qualified Marine Archeological (QMA) consultant, will inspect the discovery and provide an immediate verbal report to Mayflower Wind. The UDP will include a stop-work order and coordination with Project and contractor personnel, the QMA, the Bureau of Ocean Energy Management (BOEM), and relevant stakeholders on the manner to proceed.

This plan has been written to support Mayflower Wind in its compliance to Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations (36 CFR 800) entitled "Protection of Historic Properties;" the Archaeological and Historic Preservation Act of 1974; the Abandoned Shipwreck Act of 1987; Title 36 of the CFR, Parts 60-66 and 800, as appropriate; standards set forth in the *Secretary of the Interior's Guidelines for Archaeology and Historic Preservation*; the Native American Graves Protection and Repatriation Act (NAGRPA); the Guidelines for Providing Geophysical, Geotechnical, and Geohazard Information Pursuant to 30 CFR Part 585 (May 27, 2020) and Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585 (May 27, 2020) set forth by BOEM; and with relevant laws, regulations, and directives of the States of Rhode Island and Massachusetts.

2.0 PROCEDURES FOR THE DISCOVERY OF A POTENTIAL CULTURAL RESOURCE

When a potential cultural resource is encountered during construction activities, the following steps should be taken:

- Consistent with post discovery clause OCS-A 0521 Lease stipulation 4.2.7 (1-5), all bottom disturbing activities in the area of discovery will cease and every effort will be made to avoid or minimize damage to the potential submerged cultural resource(s).
- The field/construction crew will immediately notify Mayflower Wind or Mayflower Wind's designated on-vessel representative of the discovery.
- Mayflower Wind will immediately notify the QMA and provide the QMA with relevant information concerning the potential find(s). The QMA will then initiate an assessment of the

find's (finds') potential significance. Information shared with the QMA will include, but not be limited to, coordinates, discernable characteristics, photographs, and survey data. If necessary to support an initial assessment, the QMA may request to visit the site to inspect the find. If the QMA determines the find represents a potential historic property, the QMA will immediately advise Mayflower Wind of their determination.

- If the QMA determines that the find (i.e., site, feature, or potential cultural resource) is not cultural and not associated with a potential historic property, the QMA will notify Mayflower Wind, who will then notify the relevant federal and state agencies. Work may then resume in the area of discovery.
- If the QMA determines that the find is associated with a potential cultural resource, the QMA will notify Mayflower Wind and work may not resume at the given location until the field/construction crew is notified by Mayflower Wind.
- If the discovery is made in federal waters, Mayflower Wind will notify BOEM of the discovery of a potential submerged cultural resource within 24 hours of such discovery. BOEM may then elect to notify the applicable State Historic Preservation Offices (SHPOs) of Rhode Island and/or Massachusetts, the Massachusetts Board of Underwater Archaeological Resources (BUAR), and the Tribal Historic Preservation Offices (THPOs) or other designated representatives of federally-recognized Native American Tribes listed below. In state waters, Mayflower Wind will notify BOEM and the applicable SHPOs, BUAR, and THPOs.

For Discoveries in Federal Waters

- Within 72 hours of the discovery of a potential submerged cultural resource, the QMA will prepare and Mayflower Wind will submit to BOEM, a report summarizing the available information concerning the nature and characteristics of the resource and observed attributes relevant to the resource's potential eligibility for listing in the National Register of Historic Places (NRHP). Mayflower Wind and the QMA will consult, as necessary, with BOEM during the preparation of the report and preliminary assessment of the resource's significance.
- If BOEM determines that the affected resource is eligible for listing in the NRHP, Mayflower Wind will prepare a mitigation plan and submit that plan to BOEM. The mitigation plan will prioritize avoidance and minimization measures to the extent practicable based on the specific location and circumstances of the discovery. Mayflower Wind will address any BOEM comments in a revised draft mitigation plan before re-submitting the document to BOEM and the Tribes, who may elect to send the mitigation plan to the SHPO's, when applicable. BOEM and the Tribes will

have one week from receipt of the mitigation plan to provide Mayflower Wind any comments or suggestions.

- Mayflower Wind will respond to all timely comments on the mitigation plan in preparing the final mitigation plan for submittal to BOEM. Work in the vicinity of the discovery may not resume until Mayflower Wind receives written authorization from BOEM. Mayflower Wind will be responsible for implementing the final mitigation plan in such circumstances.
- If BOEM determines the potential submerged cultural resource is not eligible for listing in the NRHP, Mayflower Wind may proceed with construction activities in the vicinity of the find upon receipt of BOEM's written authorization.

For Discoveries in Rhode Island State Waters

The Rhode Island Historical Preservation & Heritage Commission (RIHPHC) recognizes the potential to encounter cultural resources, such as shipwrecks, during construction or any other bottom disturbing activities, despite intensive background research and remote sensing surveys. Therefore, the Project will incorporate an UDP for any potential cultural resources discovered during construction or bottom disturbing activities that will include a stop-work order, coordination with the RIHPHC, Project and contractor personnel, the QMA, and relevant stakeholders:

- If potential cultural resources are encountered in Rhode Island state waters, construction work in that area of the Project must be halted to enable the QMA to adequately assess and document what has been discovered, and to consult with the RIHPHC and any THPO's that may be involved.
- The field/construction crew will immediately notify Project and contractor personnel that activities in the area of the discovery location have been halted and Project and contractor personnel will immediately notify the QMA for review. On site, personnel will provide any relevant information and data (including, but not limited to, coordinates, discernable characteristics, photographs, and survey data) to Project and contractor personnel, which will be forwarded to the QMA.
- If the QMA determines that the site, feature, or potential cultural resource is not cultural, the QMA will notify the RIHPHC, BOEM, and the Project of this determination. Work may then resume in the area of discovery.
- If the QMA determines that the site or feature is potentially cultural, the Project will be notified and work may not resume at the given location until field/construction crew is notified by Project and contractor personnel. The QMA will notify the RIHPHC as well as federal and other state review agencies as applicable within two working days.
- Potentially significant cultural resources may be investigated by archaeological divers or a remotely operated vehicle (ROV) to determine if the resource is eligible for listing in the NRHP.

The results of the investigation will be formally submitted to relevant federal agencies and the RIHPHC. If the QMA determines that the resource is not culturally significant and RIHPHC concurs, Project and contractor personnel will be notified in writing that work may resume. If a determination cannot be reached, further investigation may be undertaken or avoidance measures developed and executed.

- If the site is determined to be eligible for NRHP, avoidance measures must be developed and executed. If avoidance is not feasible, the resource may be excavated and/or removed under the direction of the RIHPHC and federal agencies, as applicable. The RIHPHC will outline an adequate data recovery plan that specifies an appropriate research design and qualified research team. All relevant permits must be secured from the RIHPHC prior to conducting further disturbance.
- The location of any unanticipated discovery will be kept confidential and the findings will be reported within a supplement to the Marine Archaeological Resources Assessment (MARA) and submitted to the RIHPHC.

For Discoveries in Massachusetts State Waters

BUAR recognizes the potential to encounter cultural resources such as shipwrecks during construction or any other bottom disturbing activities despite intensive background research and remote sensing surveys. Therefore, the Project will incorporate an UDP for any potential cultural resources discovered during construction or bottom disturbing activities that will include a stop-work order and coordination with the Massachusetts Historical Commission (MHC)/BUAR, Project and contractor personnel, the QMA, and relevant stakeholders on the manner to proceed, in accordance with BUAR's Policy Guidance for the Discovery of Unanticipated Underwater Archaeological Resources:

- In the event that a potential cultural resource is discovered in Massachusetts state waters during construction activities, all bottom disturbing activities in the area of discovery will be halted until further investigation determines whether the object is a shipwreck or other potentially significant archaeological feature or site.
- The field/construction crew will immediately notify Project and contractor personnel that activities in the area of the discovery location have been halted and Project and contractor personnel will immediately notify the QMA for review. On site personnel will provide any relevant information and data (including, but not limited to, coordinates, discernable characteristics, photographs, and survey data) to the Project, which will be forwarded to the QMA.

- If the QMA determines that the site, feature, or potential cultural resource is not cultural, the QMA will notify BUAR, BOEM, and Project and contractor personnel of this determination. If BUAR concurs, work may then resume in the area of discovery.
- If the QMA determines that the site or feature is potentially cultural, Project and contractor personnel will be notified and work may not resume at the given location until field/construction crew is notified by the Project. The QMA will notify the MHC as well as federal and state review agencies, BUAR, and the Advisory Council on Historic Preservation (if applicable) of this determination within two working days.
- Potentially significant cultural resources may be investigated by archaeological divers or a ROV to determine if the resource is eligible for listing in the NRHP. The results of the investigation will be formally submitted to relevant federal and state agencies, MHC/BUAR, and the Advisory Council (if applicable) for final review and comment. If the QMA determines that the resource is not culturally significant and the cognizant agencies concur, Project and contractor personnel will be notified in writing that work may resume. If a determination cannot be reached, further investigation may be undertaken or avoidance measures developed and executed.
- If the site is determined to be eligible for NRHP, avoidance measures must be developed and executed. If avoidance is not feasible, the resource may be excavated and/or removed under a Memorandum of Agreement with all interested parties including the State Archaeologist/Deputy SHPO, BUAR Director, BUAR permittee and/or Project and contractor personnel, and Advisory Council (if applicable) subject to state permits. The Memorandum of Agreement outlines an adequate data recovery plan that specifies an appropriate research design and qualified research team. All relevant permits must be secured from MHC and BUAR prior to conducting further disturbance.
- The location of any unanticipated discovery will be kept confidential and the findings will be reported within a supplement to the MARA, which will be attached to the COP and submitted to the MHC/BUAR.

3.0 POTENTIALLY SIGNIFICANT CULTURAL RESOURCES

Any of the following would be considered potentially significant submerged cultural resources:

- Prehistoric shell middens
- Lithic and ceramic artifacts
- Animal bone and human remains
- Wooden ship timbers or sections of iron or steel hulls
- Scattered cargo remains, such as ceramics, glass, wooden barrels or barrel staves

- Any distinct mound of stones indicative of a ballast pile
- Cannon and swivel guns and/or ammunition
- Debris comprised of ship rigging, gear, and fittings
- Groups of anchors or other objects that indicate the presence of a shipwreck

4.0 UNANTICIPATED DISCOVERY OF HUMAN REMAINS

If potential humans remain are encountered during Project construction activities, different procedures are to be followed depending on whether the remains were in federal or state waters.

For Discoveries in Federal Waters

If suspected human remains are encountered in federal waters, the below procedures, which comply with the Advisory Council on Historic Preservation's (ACHP) *Policy Statement Regarding Treatment of Burial Sites, Human Remains and Funerary Objects*, should be followed.

- All work in the near vicinity of the human remains will cease and reasonable efforts will be made to avoid and protect the remains from further damage. Potential remains shall be protected, which can include keeping the remains submerged in an onboard tank of sea water or other appropriate material.
- The vessel crew or authorized Project Representative will immediately notify Mayflower Wind of the discovery of potential human remains. Mayflower Wind will immediately notify BOEM and the QMA of the discovery. BOEM will notify the THPOs.
- If necessary, the QMA may request to visit the vessel to inspect the potential human remains. If the find is a cultural resource, the QMA will provide a preliminary assessment. The QMA will document and inventory the remains and any associated artifacts, and assist in coordinating with federal, tribal, state, and local officials, as necessary.
- A plan for the avoidance of any further impact to the human remains and/or mitigative excavation, reinternment, or a combination of these treatments will be developed in consultation with BOEM, the SHPOs, and Tribes or closest lineal descendants. All parties will be expected to respond with advice and guidance in an efficient time frame. Once the plan is agreed to by all parties, the plan will be implemented by Mayflower Wind. Mayflower Wind will not proceed with construction activities in the vicinity of the discovery until it has received written authorization from BOEM.

For Discoveries in Rhode Island State Waters

In the event human remains are encountered during construction activities in Rhode Island state waters, RIHPHC recommends implementing the following protocol:

- At all times human remains must be treated with the utmost dignity and respect. Should human remains be encountered, work/activities in the general area of the discovery will stop immediately.
- Human remains or associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.
- The QMA, the RIHPHC, the relevant THPOs, and Mayflower Wind will be immediately notified of the discovery. The Medical Examiner's Office, Rhode Island Division of Sheriffs, and other local law enforcement will make the official ruling on the nature of the remains, being either forensic or archaeological.
- If human remains are determined to be Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or repatriation can be generated. Please note that avoidance is the preferred choice of the RIHPHC and the Tribal Nations. The involved federal agency (BOEM) will consult with the RIHPHC and appropriate Tribal Nations to develop a plan of action that is consistent with NAGPRA guidance.
- If human remains are determined to be non-Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or repatriation can be generated.
- Within 24-hours of the notification, the RIHPHC shall notify any Native American tribe that has indicated interest in the area of the discovery. The Rhode Island Division of Sheriff's and local law enforcement officials shall assess the nature and age of the human skeletal remains. If the Medical Examiner's Office determine that the human skeletal remains are not a crime scene, the RIHPHC has jurisdiction over the remains and will work out appropriate plans with appropriate Tribes, living descendants, and other interested parties to ensure compliance with existing state laws. No remains will be repatriated until jurisdiction is established and the appropriate permits obtained from the RIHPHC.

For Discoveries in Massachusetts State Waters

In the event human remains are encountered during construction activities in Massachusetts state waters, MHC/BUAR recommends implementing the following protocol:

- At all times human remains must be treated with the utmost dignity and respect. Should human remains be encountered, work/activities in the general area of the discovery will stop immediately.

- Human remains or associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.
- The Project Director and, if applicable, the QMA, will be notified of the exact location of the remains.
- The Project Director/QMA will be responsible for immediately notifying the State Police Detectives at the local District Attorney's Office, Chief Medical Examiner, the MHC/BUAR, and the Environmental Police.
- If the Chief Medical Examiner determines that the remains are:
    - Older than 100 years; the Chief Medical Examiner will notify the MHC/BUAR.
    - Less than 100 years old; a criminal investigation may be warranted.
- For remains older than 100 years, the MHC/BUAR will conduct an examination to determine the identity, age, and cultural affiliation of the remains. If the remains are determined to be those of a Native American, the MHC will notify the Commission on Indian Affairs. A plan for avoidance or removal will be developed with the MHC/BUAR and the Commission on Indian Affairs that is consistent with NAGPRA guidance.
- The MHC/BUAR will determine feasible options for avoidance, mitigation, or minimization of impact for the human remains.
- Within 24-hours of the notification, the MHC/BUAR shall notify any Native American tribe that has indicated interest in the area of the discovery. The Office of the Chief Medical Examiner shall assess the nature and age of the human skeletal remains. If the Office of the Chief Medical Examiner determines that the human skeletal remains are not a crime scene and are older than 100 years of age, the MHC has jurisdiction over the remains. In consultation with BUAR, MHC will work out appropriate plans with appropriate Tribes, living descendants, and other interested parties to ensure compliance with existing state laws. No remains will be repatriated until jurisdiction is established and the appropriate permits obtained from the MHC and BUAR.

5.0 ARCHAEOLOGICAL RESOURCE IDENTIFICATION/TRAINING

The identification of archaeological resources requires basic training in order to recognize potential archaeological resources. Training will be provided by the QMA for resident engineers and contractor field supervisors prior to the implementation of Project and contractor personnel. The purpose of this training will be to review state and federal regulations concerning archaeological resource compliance and to provide an overview of the Project-specific resources within and in the vicinity of the Project Area, so that both Project contractor and personnel will be aware of the kinds of unanticipated archaeological resources

that may be encountered in the field. In addition, the training program will emphasize the exact procedures to be followed regarding actions to be taken and notification required if an unanticipated discovery is identified during Project implementation. The training will be designed to ensure that Project personnel and contractors understand the extent of the archaeological survey program that has been performed for the Project and are fully aware of the distinction between areas and archaeological sites that have been cleared (i.e., have previously been cleared for Project implementation activities by the Rhode Island and Massachusetts SHPO and BUAR [for state waters] and BOEM [for federal waters]) and new discoveries during the Project implementation process.

Possible Unanticipated Discoveries

Any potentially significant cultural resource or human remains not identified during survey activities prior to construction constitutes a possible Unanticipated Discovery. The most common potential cultural resources that may be discovered during construction are historical shipwrecks. Historical wrecks consist of wooden, iron, steel, concrete, or composite construction. Plastic or fiberglass wrecks are considered modern and are not eligible for registration to the National Register of Historic Places. Wooden wrecks are often broken up or deteriorated; often older wrecks will have severely broken up with wreckage scattered over a large area. Wreckage that may identify a wooden wreck include ribbing, stringers, planking, trunnels, and other sections of timber (Figures 1 and 2). Additional debris can include rigging pieces, mast beams, ship bells, or ballast piles. Transitional vessels may include steam boilers and other machinery.

Debris such as armaments may be encountered during construction. If armaments are discovered, it may require further Unexploded Ordnances (UXO) inspection. Armaments include historical cannons, naval guns, military cases, unexploded mines, shells, mortars, or missiles. Early cannons were brass, followed by cast iron, which became common by the 1700s (Figure 3). Naval guns include a variety of anti-aircraft weaponry and associated shells and projectiles.

Figure 1. Historic wooden ship timbers, planking, and stringer fragments

Figure 2. Historic wooden ship timbers

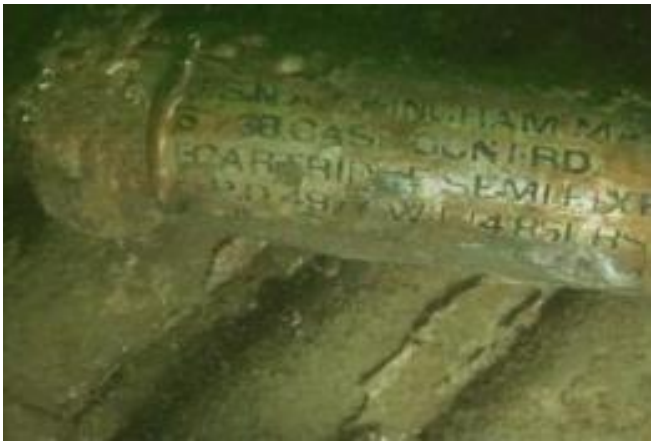

Figure 3. Historic armaments that may be encountered during construction (5”/38 CAL powder case)

Historic anchors are another type of debris that may be associated with culturally significant wrecks (Figures 4 and 5). Historic anchors are often identified as having wooden stocks and large diameter rings. The stock appears as the cross on top of the anchor to which the eye ring is attached. Large diameter rings (to accommodate large diameter natural fiber lines) averaged 12 to 24 inches in diameter. Iron bower anchors, which had iron stocks and anchor shackles, were used with the increased reliance of steam power.

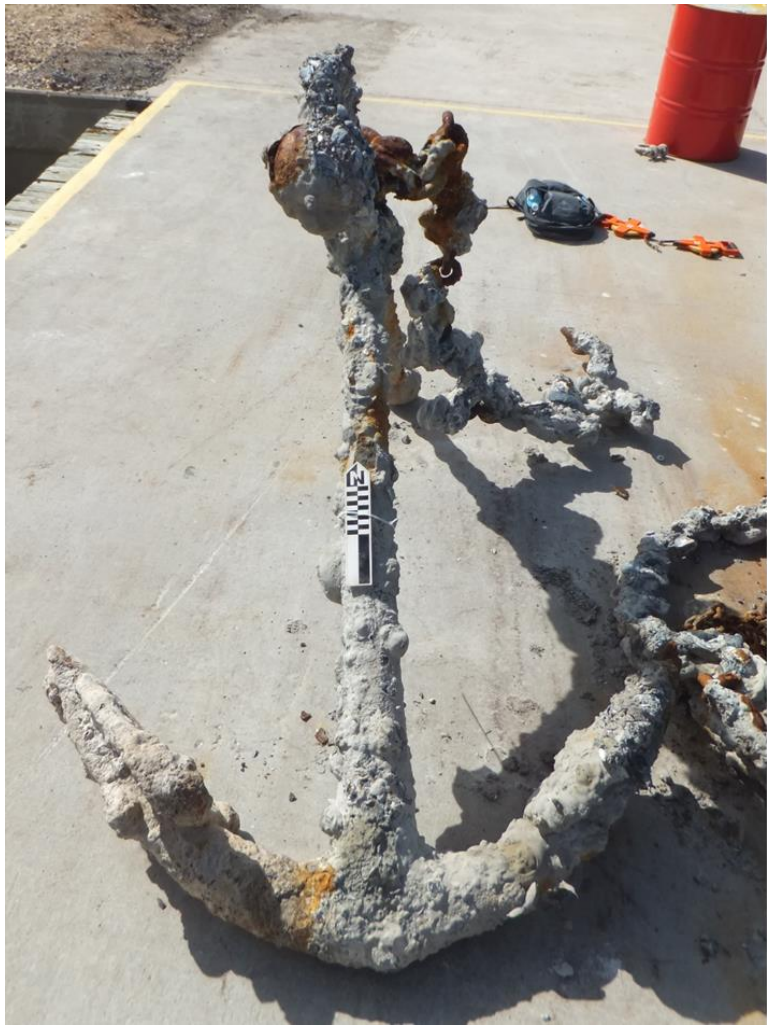

Figure 4. Historic anchor

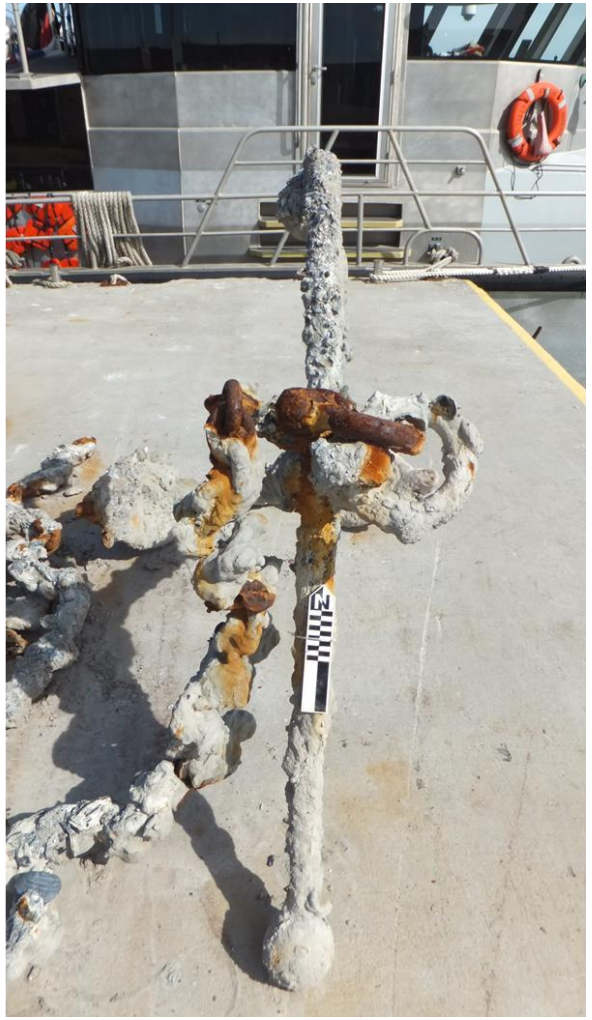

Figure 5. Historic anchor (top view)

Pre-contact cultural resources that may be discovered include ceramics, lithics, or shell middens. Lithics and ceramics (Figures 6 and 7) may be encountered during dredging activities. Other artifacts that may be encountered during dredging around possible paleolandforms include possible pre-contact fishing gear, fish traps, or weirs (Figure 8). Shell middens, decomposed remains of organic material scattered in a refuse heap that has accumulated over time and use, range in size from small accumulations to organic layers spread across a wide area, shell middens may also be encountered during dredging activities. Middens located nearshore are often marked by shell pieces (Figure 9). Lithics, ceramics, and shell middens, if encountered, should also be considered culturally significant.

Figure 6. Lithic in situ

Figure 8. Prehistoric fish weir in situ

Figure 7. Ceramic in situ

Figure 9. Shell midden along shoreline

6.0 GUIDANCE FOR SUPPLEMENTAL ARCHAEOLOGICAL INVESTIGATIONS OF POST-REVIEW DISCOVERIES

Targeted geophysical survey, ROV, and/or archaeological diver-assisted inspection may be necessary to evaluate and characterize a discovery to further gather sufficient information to support BOEM's determination of a find's National Register-eligibility. The following procedures were developed to provide for informed decision-making in the event of a post-review discovery during construction of the Mayflower Wind offshore facilities. The procedures account for appropriate decisions at each step in the event of a post-review discovery. Appropriate resolution of post-review discovery may not require completion of all the steps described below.

1. *Review available geophysical data in the vicinity of the discovery and determine if supplemental High Resolution Geophysical (HRG) survey or ROV inspection is needed and appropriate.*
    a. Conduct HRG survey or ROV inspection.
        i. QMA to evaluate potential significance of find in consultation with BOEM.
        ii. May result in BOEM's determination that the find is not associated with a National Register-eligible resource and no further consideration or protective measures are required.
        iii. May result in a recommendation for avoidance and/or further evaluations

2. *Determine appropriate avoidance area based on supplemental HRG survey or ROV inspections*.
    a. No seabed disturbance may occur within any avoidance area recommended by the QMA or determined by BOEM until BOEM provides Mayflower Wind written authorization to proceed with construction.
    b. Mayflower Wind should assess potential micro-siting of activities to avoid seabed disturbances within the avoidance area. If so, Mayflower Wind will submit to BOEM revised design parameters and/or construction methods demonstrating the feasibility of avoiding the find.

3. *Identify the source of the find, delineate any associated elements of a potential submerged historic property, and assess potential damage or disturbance to the resource.*
    a. May be accomplished by ROV inspections or archaeological diver inspections.
    b. May result in BOEM's determination that no further actions are warranted.

4. *NRHP-eligibility evaluation*

   a. May require supplemental archival research.
   b. Where feasible, will be supported by ROV inspection or archaeological diving.
   c. May require data recovery.
   d. Will require consultations among BOEM, Mayflower Wind, SHPOs (in Massachusetts's waters, also BUAR), and THPOs.

5. *Mitigation Plan development*

   a. Will draw upon data collected from all previous, relevant investigations and comments shared by the consulting parties to resolve adverse effects to a submerged historic property.
   b. Will prioritize feasible and practicable avoidance and minimization measures.
   c. May include on-site monitoring of seabed disturbing activities to avoid further damage to a submerged historic property.

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ATTACHMENT 4 – UNANTICIPATED DISCOVERIES PLAN FOR TERRESTRIAL ARCHAEOLOGICAL RESOURCES

MAYFLOWER WIND

Appendix R.1: Terrestrial Unanticipated Discoveries Plan

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Public Archaeology Laboratory

Mayflower Wind Project

Falmouth and Somerset, Massachusetts
and
Portsmouth, Rhode Island

Procedures Guiding the Discovery of Terrestrial Unanticipated Archaeological Resources and Human Remains during Construction

Submitted to:

September 2022

Mayflower Wind Energy LLC
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Boston, Massachusetts 02110

Mayflower Wind Energy LLC, a joint venture of Shell New Energies US LLC (Shell New Energies) and OW North America LLC (Ocean Winds), proposes to construct and operate the Mayflower Wind Project (Project). The Project includes construction of the Mayflower Wind turbine array in federal waters on the Atlantic Outer Continental Shelf (OCS) within the Bureau of Ocean Energy Management (BOEM) Renewable Energy Lease Area OCS-A 0521 (Lease Area) approximately 20 miles (32 kilometers) south of Nantucket Island; inter-array cables, offshore substation platforms, and export cables that traverse federal and state waters with landfalls at Falmouth and Somerset, Massachusetts; and onshore High Voltage Direct Current (HVDC) converter stations at Brayton Point in Somerset and in Falmouth, Massachusetts, points of interconnection, and onshore, underground transmission delivery systems. As a part of the onshore component of the Project, Mayflower Wind is also considering several cable duct bank route segment options and horizontal directional drilling (HDD) sites in Portsmouth, Newport County, Rhode Island.

Mayflower Wind is committed to the protection and preservation of cultural resources, in accordance with federal and state legislation, and is continuing that commitment as part of the onshore components of the Project including the upland cabling route and substations. Mayflower Wind recognizes that while sections of the onshore cabling route and substation parcels have previously been subject to archaeological investigations performed as part of its pre-planning permitting responsibilities it is possible that potentially significant archaeological resources and/or human remains could be discovered during onshore Project construction.

Mayflower Wind, recognizing its responsibility to comply with federal, state, and municipal laws and regulations pertaining to cultural resources and human remains, contracted with The Public Archaeology Laboratory, Inc. (PAL) to prepare this "Procedures Guiding the Discovery of Terrestrial Unanticipated Cultural Resources and Human Remains During Construction and Archaeological Monitoring of Construction" work plan and protocols document. The procedures outlined herein will be implemented for two separate phases of work. In areas where archaeological investigation has been completed, an archaeologist will not be present, and all the notification procedures outlined below will be in effect. These procedures were developed in consultation with the Massachusetts Historical Commission ("MHC") and Rhode Island Historical Preservation and Heritage Commission (RIHPHC), offices of the State Historic Preservation Officer ("SHPO") and federally

recognized Indian tribes. These procedures summarize the approach that the Proponent will use to address unanticipated discoveries of archaeological resources or human remains within the Project's Area of Potential Effect ("APE").

Standards/Guidelines and Laws/Regulations for Post-Review Discoveries of Archaeological Resources and Human Remains

Federal

- Section 106 of the National Historic Preservation Act of 1966, as amended (54 USC 300101) and Advisory Council on Historic Preservation implementing regulations (36 CFR 800).
- Secretary of the Interior's Standards for Archeology and Historic Preservation (48 CFR 44716-42).
- Advisory Council on Historic Preservation (ACHP): Policy Statement Regarding Treatment of Burial Sites, Human Remains, and Funerary Objects, Advisory Council February 23, 2007) (Appendix A).

Massachusetts

- Massachusetts Unmarked Burial Law (M.G.L. c. 7, s. 38A, c. 38, s.6, c. 9, ss. 26A & 27C, and c.114, s.17).
- Massachusetts SHPO: Know How #4 What to do when Human Burials are Accidentally Uncovered (no date) (Appendix B).
- Massachusetts Historical Commission Policy and Guidelines for Non-Native Human Remains Which Are Over 100 Years Old or Older (1990); M.G.L. Chapter 9, Section 26A (7) (Appendix C).

Rhode Island

- Antiquities Act of Rhode Island (Rhode Island General Law 42–45.1).
- Rhode Island Historic Cemeteries Act (Rhode Island General Law 23-18-11 *et seq.* (Appendix D)

Consultation with Federal and State Agencies and Indian Tribes

Mayflower Wind has been consulting with the Massachusetts and Rhode Island SHPOs, the federally recognized Indian tribes including the Mashpee Wampanoag, Wampanoag Tribe of Gay Head/Aquinnah, Narragansett Indian Tribal Historic Preservation Offices (THPOs), Mashantucket Pequot Tribal Nation, Mohegan Tribe of Connecticut, Shinnecock Indian Nation, Delaware Tribe of Indians, and other interested stakeholders. Contact information for the Massachusetts and Rhode Island SHPOs, THPOs, and other stakeholders is included in this Unanticipated Discovery Plan. In the event any archaeological resources and/or human remains are encountered during construction of the Project, Mayflower Wind will contact the relevant parties, as set forth in these Procedures.

Identification/Training

Mayflower Wind acknowledges the sensitivity of the Project and surrounding area to potentially contain significant archaeological sites including Native American burials. The identification of potential archaeological sites and significant resources requires basic training in recognition. All Project inspectors, Resident Engineers, and Construction Supervisors working on the Project's onshore excavation activities will be given basic training in archaeological site and burial identification by qualified PAL staff before the start of construction.

The purpose of this training will be to review Mayflower Wind's commitments to cultural resource compliance, review the results of the archaeological investigations conducted within the onshore portions of the Project APE, and to provide an overview of the general cultural history of the area so that Project proponents and their contractors are aware of the types of archaeological resources that may be encountered during construction. The training program will outline the protocols and notification procedures, outlined in this document, if a significant cultural resource is discovered during construction. The MHC's "Know How #4: What to Do When Human Burials are Uncovered" fact sheet and a contact distribution list distributed (Appendix B). Representatives of the Narragansett Indian, Mashpee Wampanoag, and Wampanoag Tribe of Gay Head (Aquinnah) Tribal Historic Preservation Offices (THPOs) will also be informed and invited to attend the contractor training and offer comment.

Notification Procedures

The procedures guiding the unanticipated discovery of cultural resources and human remains detailed below ("Procedures") summarize the approach that Mayflower Wind will use in the event that any unanticipated archaeological discoveries or human remains are encountered during Project construction (Figure 1).

Archaeological Discoveries

1. Contractor construction personnel have the potential to make possible archaeological discoveries during ground disturbing activities. If suspected archaeological resources (artifacts and/or features) are uncovered during a construction activity, that activity shall immediately cease in the vicinity of the discovery until it can be determined if the materials are cultural and whether they represent a potentially significant site.

2. The contractor will immediately notify the site foreman of the potential discovery, who will notify Mayflower Wind's Permitting Director. Notification will include the activity, specific work area including the street, HDD, substation, and/or cable route, etc. and provide digital photographs of the find.

3. Mayflower Wind will issue a Stop Work order and direct the contractor to secure the area by flagging or fencing off the area of the archaeological discovery. Any discovery made on a weekend or overnight hours will be protected until all appropriate parties are notified of the discovery. The contractor will not resume work in the vicinity of the find until Mayflower Wind's Permitting Director has granted clearance.

4. Upon discovery of a potential cultural resource, Mayflower Wind will provide their cultural resource consultant (CRC) with a location plan and digital photographs of the discovery. The CRC will review the provided materials and determine if a site visit is necessary.

    a. If the CRC determines a site visit is not required (the reported discovery is not potentially significant), then the CRC will notify Mayflower Wind's Permitting Director who will notify the contractor that work may resume.
    b. If a site visit is determined necessary, the CRC will conduct a site visit within 24 hours of notification.

5. The CRC will determine if the site is potentially significant and if on-site archaeological investigations are necessary. If so, the CRC with notify the appropriate SHPO, and, if the site is Native American, the Narragansett Indian, Wampanoag Tribe of Gay Head/Aquinnah, and Mashpee Wampanoag THPOs immediately by telephone and/or email. Mayflower Wind will notify BOEM. Mayflower Wind, their contractors, and the CRC will work with the SHPOs, THPOs, and BOEM (as necessary) to develop and implement a site treatment plan as quickly as possible.

6. Since the area of any potential discovery will have been partially disturbed by construction, the objective of an archaeological investigation will be to evaluate data as speedily as possible so that the appropriate notifications can be made and consultation can proceed. If archaeological investigations are required, Mayflower Wind will inform the construction supervisor that no construction work can proceed in the immediate vicinity of the discovery until archaeological fieldwork is complete. The area will be flagged as being off-limits for work but will not be identified as an archaeological site per se to protect the resource(s).

7. The duration of any work stoppages will be contingent upon the significance of the identified cultural resource(s) and consultation among Mayflower Wind, BOEM, the applicable SHPO, THPOs, and other parties, as appropriate and necessary, to determine treatment to avoid, minimize, or mitigate any adverse effects to the identified site. Necessary archaeological investigations will be conducted under archaeological permits issued by the MHC and/or RIHPHC.

8. Once all treatment measures are complete, Mayflower Wind will notify the contractor that construction work may proceed.

Discovery of Human Remains

If human remains are encountered during Project construction, they are likely be discovered in excavations, possibly below areas where previous ground disturbance (e.g., road construction, existing utilities) has occurred. Any discoveries of human remains will be handled in accordance with the appropriate state requirements and if they appear to be Native American will be guided by the policy statement adopted by the Advisory Council on Historic Preservation ([Advisory Council]; see Policy Statement Regarding Treatment of Burial Sites, Human Remains, and Funerary Objects, (Appendix A).

Human remains will be always treated with the utmost dignity and respect. No remains or associated materials will be collected or removed until all appropriate notifications have been made (Figure 2), consultation has taken place, and a plan of action has been determined. The procedures that will be followed if human remains are discovered during Project construction are:

1. If construction personnel identify human remains or suspected human remains, all construction work in the vicinity of the find that could affect the integrity of the remains will immediately cease in the vicinity of the discovery until it can be determined if the remains are human. Skeletal remains and any associated artifacts will not be touched, moved, or further disturbed. The construction supervisor will notify Mayflower Wind's Permitting Director and take measures to ensure site security.

2. The contractor will immediately notify the site foreman of the potential discovery, who will notify Mayflower Wind's Permitting Director. Notification will include the activity, the specific work area including the street, HDD, substation, cable route, etc., its time of discovery, and digital photographs of the find. Mayflower Wind will contact its CRC for an opinion as to whether or not the remains appear human, as necessary. If the remains do appear to be human, the CRC with assist Mayflower Wind with notifying law enforcement and municipal authorities in accordance with state regulations.

3. Law enforcement will notify the Office of the State Medical Examiner (OSME).

    a. If the OSME determines the remains are less than 100 years old, then their treatment becomes the responsibility of the police and the local municipality, who will inform Mayflower Wind when work may resume.
    b. If the OSME determines the remains are more than 100 years old, then Mayflower Wind will notify the CRC who will assist with notifying BOEM, the appropriate SHPO, and the THPOs, who will determine if the remains are Native American. The CRC and MHC will notify the Massachusetts Commission on Indian Affairs if the remains are determined to be Native American and are found in Massachusetts.

4. Mayflower Wind, BOEM, the SHPO, the THPOs, and the Massachusetts Commission on Indian Affairs (if the remains are found in Massachusetts) will discuss whether there are prudent and feasible alternatives to protect the remains. The results of this consultation will be made in writing. If it is not possible to protect the remains, they may be excavated only under a special permit issued by the appropriate SHPO after the review of a recovery plan that specifies a qualified research team, research design, and plan for the disposition of the remains consistent with the results of consultation.

5. If the remains are not Native American, the appropriate SHPO will determine whether a skeletal analysis of the remains will be conducted and whether the remains will be deposited in a curatorial facility or reinterred. These decisions will be made in consultation with interested parties as defined in the *Policy and Guidelines for Non-Native Human Remains which are Over 100 Years Old or Older* (MHC 1990) (Appendix C) or the Rhode Island Cemeteries Act (Appendix D).

6. In all cases, due care will be taken in the excavation, transport, and storage of any remains to ensure their security and respectful treatment.

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References Cited

Rhode Island Historical Preservation and Heritage Commission (RIHPHC)
2015 *Performance Standards and Guidelines for Archaeology in Rhode Island*. Rhode Island Historical Preservation and Heritage Commission, Providence, RI.

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2022 *Terrestrial Archaeological Resources Assessment Mayflower Wind Project Aquidneck Island (Portsmouth) Landfall, Portsmouth, Rhode Island.* PAL Report No. 4256, Submitted to Mayflower Wind Energy, LLC., Boston MA.

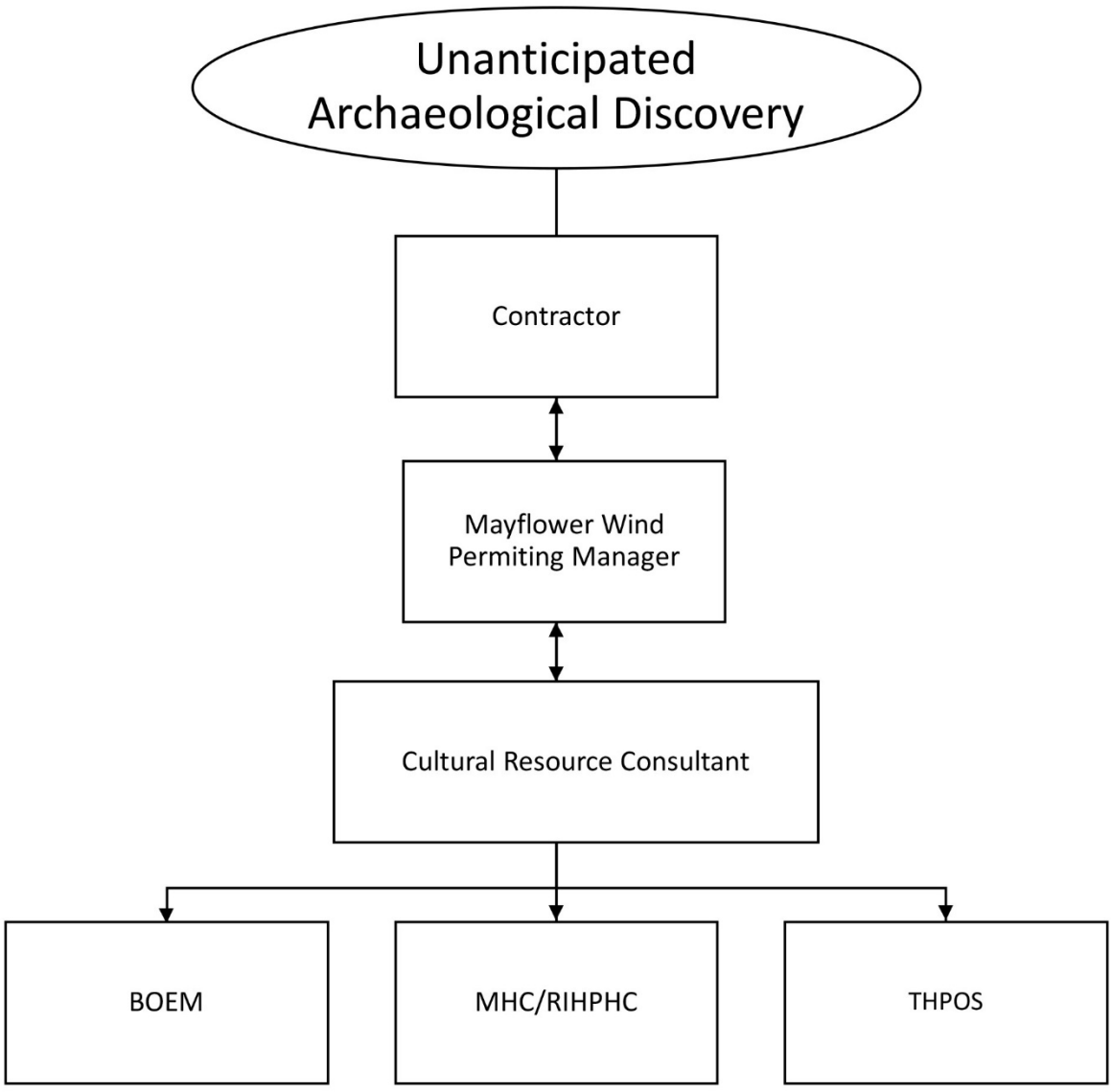

Figure 1. Communications and notifications plan for unanticipated archaeological discoveries during construction.

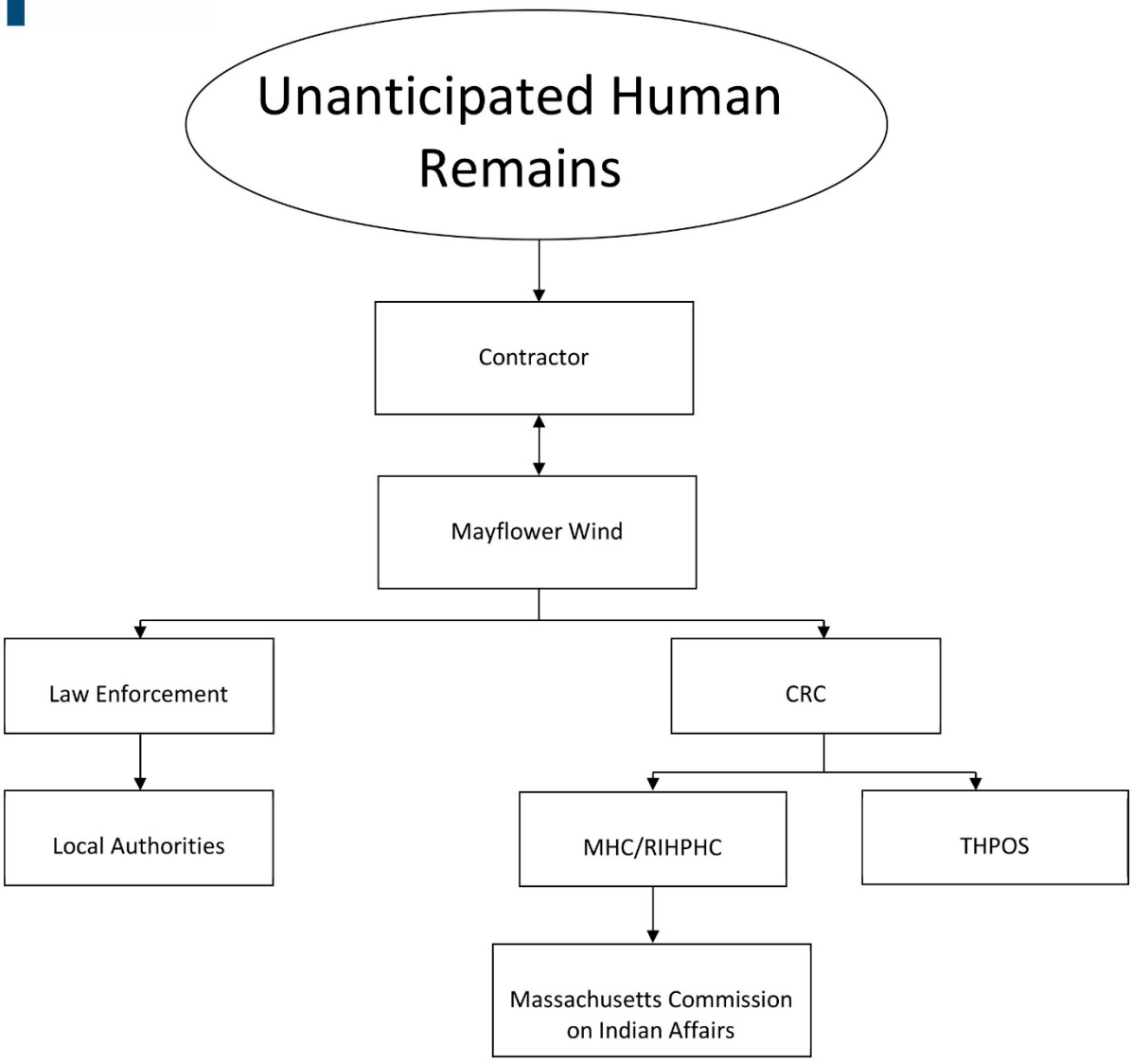

Figure 2. Communications and notifications plan for the unanticipated discovery of human remains during construction.

APPENDIX A

Preserving America s Heritage

ADVISORY COUNCIL ON HISTORIC PRESERVATION

POLICY STATEMENT
REGARDING
TREATMENT OF BURIAL SITES, HUMAN REMAINS AND FUNERARY OBJECTS

Preamble: This policy offers leadership in resolving how to treat burial sites, human remains, and funerary objects in a respectful and sensitive manner while acknowledging public interest in the past. As such, this policy is designed to guide federal agencies in making decisions about the identification and treatment of burial sites, human remains, and funerary objects encountered in the Section 106 process, in those instances where federal or state law **does not prescribe a course of action**.

This policy applies to all federal agencies with undertakings that are subject to review under Section 106 of the National Historic Preservation Act (NHPA; 16 U.S.C. § 470f), and its implementing regulations (36 CFR Part 800). To be considered under Section 106, the burial site must be or be a part of a historic property, meaning that it is listed, or eligible for listing, in the National Register of Historic Places.

The Advisory Council on Historic Preservation (ACHP) encourages federal agencies to apply this policy throughout the Section 106 process, including during the identification of those historic properties. In order to identify historic properties, federal agencies must assess the historic significance of burial sites and apply the National Register criteria to determine whether a property is eligible. Burial sites may have several possible areas of significance, such as those that relate to religious and cultural significance, as well as those that relate to scientific significance that can provide important information about the past. This policy does not proscribe any area of significance for burial sites and recognizes that the assessment must be completed on a case-by-case basis through consultation.

The policy is not bound by geography, ethnicity, nationality, or religious belief, but applies to the treatment of all burial sites, human remains, and funerary objects encountered in the Section 106 process, as the treatment and disposition of these sites, remains, and objects are a human rights concern shared by all.

This policy also recognizes the unique legal relationship between the federal government and tribal governments as set forth in the Constitution of the United States, treaties, statutes and court decisions, and acknowledges that, frequently, the remains encountered in Section 106 review are of significance to Indian tribes.

Section 106 requires agencies to seek agreement with consulting parties on measures to avoid, minimize, or mitigate adverse effects to historic properties. Accordingly, and consistent with Section 106, this policy does not recommend a specific outcome from the consultation process. Rather, it focuses on issues and perspectives that federal agencies ought to consider when making their Section 106 decisions. In many cases, federal agencies will be bound by other applicable federal, tribal, state, or local laws that do

prescribe a specific outcome, such as the Native American Graves Protection and Repatriation Act (NAGPRA). The federal agency must identify and follow applicable laws and implement any prescribed outcomes.

For undertakings on federal and tribal land that encounter Native American or Native Hawaiian human remains and funerary objects, NAGPRA applies. NHPA and NAGPRA are separate and distinct laws, with separate and distinct implementing regulations and categories of parties that must be consulted.[1] Compliance with one of these laws does not mean or equal compliance with the other. Implementation of this policy and its principles does not, in any way, change, modify, detract or add to NAGPRA or other applicable laws.

Principles: When burial sites, human remains, or funerary objects will be or are likely to be encountered in the course of Section 106 review, a federal agency should adhere to the following principles:

Principle 1: Participants in the Section 106 process should treat all burial sites, human remains and funerary objects with dignity and respect.

Principle 2: Only through consultation, which is the early and meaningful exchange of information, can a federal agency make an informed and defensible decision about the treatment of burial sites, human remains, and funerary objects.

Principle 3: Native Americans are descendants of original occupants of this country. Accordingly, in making decisions, federal agencies should be informed by and utilize the special expertise of Indian tribes and Native Hawaiian organizations in the documentation and treatment of their ancestors.

Principle 4: Burial sites, human remains and funerary objects should not be knowingly disturbed unless absolutely necessary, and only after the federal agency has consulted and fully considered avoidance of impact and whether it is feasible to preserve them in place.

Principle 5: When human remains or funerary objects must be disinterred, they should be removed carefully, respectfully, and in a manner developed in consultation.

Principle 6: The federal agency is ultimately responsible for making decisions regarding avoidance of impact to or treatment of burial sites, human remains, and funerary objects. In reaching its decisions, the federal agency must comply with applicable federal, tribal, state, or local laws**.**

Principle 7: Through consultation, federal agencies should develop and implement plans for the treatment of burial sites, human remains, and funerary objects that may be inadvertently discovered.

Principle 8: In cases where the disposition of human remains and funerary objects is not legally prescribed, federal agencies should proceed following a hierarchy that begins with the rights of lineal descendants, and if none, then the descendant community, which may include Indian tribes and Native Hawaiian organizations.

[1] The ACHP's publication *Consulting with Indian Tribes in the Section 106 Process* and the National Association of Tribal Historic Preservation Officers' publication *Tribal Consultation: Best Practices in Historic Preservation* provide additional guidance on this matter.

DISCUSSION:

Principle 1: Participants in the Section 106 process should treat all burial sites, human remains and funerary objects with dignity and respect.

Because the presence of human remains and funerary objects gives a historic property special importance as a burial site or cemetery, federal agencies need to consider fully the values associated with such sites. When working with human remains, the federal agency should maintain an appropriate deference for the dead and the funerary objects associated with them, and demonstrate respect for the customs and beliefs of those who may be descended from them.

Through consultation with descendants, culturally affiliated groups, descendant communities, and other parties, federal agencies should discuss and reach agreement on what constitutes respectful treatment.

Principle 2: Only through consultation, which is the early and meaningful exchange of information, can a federal agency make an informed and defensible decision about the treatment of burial sites, human remains, and funerary objects.

Consultation is the hallmark of the Section 106 process. Federal agencies must make a "reasonable and good faith" effort to identify consulting parties and begin consultation early in project planning, after the federal agency determines it has an undertaking and prior to making decisions about project design, location, or scope.

The NHPA, the ACHP's regulations, and Presidential Executive Orders set out basic steps, standards, and criteria in the consultation process, including:

- Federal agencies have an obligation to seek out all consulting parties [36 CFR § 800.2(a)(4)], including the State Historic Preservation Officer (SHPO)/Tribal Historic Preservation Officer (THPO) [36 CFR § 800.3(c)].

- Federal agencies must acknowledge the sovereign status of Indian tribes [36 CFR § 800.2(c)(2)(ii)]. Federal agencies are required to consult with Indian tribes on a government-to-government basis in recognition of the unique legal relationship between federal and tribal governments, as set forth in the Constitution of the United States, treaties, statutes, court decisions, and executive orders and memoranda.

- Consultation on a government-to-government level with Indian tribes cannot be delegated to non-federal entities, such as applicants and contractors.

- Federal agencies should solicit tribal views in a manner that is sensitive to the governmental structures of the tribes, recognizing their desire to keep certain kinds of information confidential, and that tribal lines of communication may argue for federal agencies to provide extra time for the exchange of information.

- Properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization may be determined eligible for inclusion on the National Register [16 U.S.C. § 470a(d)(6)(A)], and federal agencies must consult with any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to such historic properties [16 U.S.C. § 470a(d)(6)(B) and 36 CFR § 800.2(c)(2)(ii)(D)].

Principle 3: Native Americans are descendants of original occupants of this country. Accordingly, in making decisions, federal agencies should be informed by and utilize the special expertise of Indian tribes and Native Hawaiian organizations in the documentation and treatment of their ancestors.

This principle reiterates existing legal requirements found in federal law, regulation and executive orders, and is consistent with positions that the ACHP has taken over the years to facilitate enfranchisement and promote broad participation in the Section 106 process. Federal agencies must consult with Indian tribes on a government-to-government basis because they are sovereign nations.

Indian tribes and Native Hawaiian organizations bring a special perspective on how a property possesses religious and cultural significance to them. Accordingly, federal agencies should utilize their expertise about, and religious and cultural connection to, burial sites, human remains, and associated funerary objects to inform decision-making in the Section 106 process.

Principle 4: Burial sites, human remains and funerary objects should not be knowingly disturbed unless absolutely necessary, and only after the federal agency has consulted and fully considered avoidance of impact and whether it is feasible to preserve them in place.

As a matter of practice, federal agencies should avoid impacting burial sites, human remains, and funerary objects as they carry out their undertakings. If impact to the burial site can be avoided, this policy does not compel federal agencies to remove human remains or funerary objects just so they can be documented.

As this policy advocates, federal agencies should always plan to avoid burial sites, human remains, and funerary objects altogether. When a federal agency determines, based on consultation with Section 106 participants, that avoidance of impact is not appropriate, the agency should minimize disturbance to such sites, remains, and objects. Accordingly, removal of human remains or funerary objects should occur only when other alternatives have been considered and rejected.

When a federal agency determines, based on consultation with Section 106 participants, that avoidance of impact is not appropriate, the agency should then consider any active steps it may take to preserve the burial site in place, perhaps through the intentional covering of the affected area, placement of markers, or granting of restrictive or other legal protections. In many cases, preservation in place may mean that, to the extent allowed by law, the locations of burial sites, human remains, and funerary objects should not be disclosed publicly. Alternatively and consistent with the Section 106 regulations [36 CFR § 800.5(a)(2)(vi)], natural deterioration of the remains may be the acceptable or preferred outcome of the consultation process.

Principle 5: When human remains or funerary objects must be disinterred, they should be removed carefully, respectfully, and in a manner developed in consultation.

When the federal agency decides that human remains or funerary objects must be disturbed, they should be removed respectfully and dealt with according to the plan developed by the federal agency in consultation. "Careful" disinterment means that those doing the work should have, or be supervised by people having, appropriate expertise in techniques for recognizing and disinterring human remains.

This policy does not endorse any specific treatment. However, federal agencies must make a reasonable and good faith effort to seek agreement through consultation before making its decision about how human remains and/or funerary objects shall be treated.

The plan for the disinterment and treatment of human remains and/or funerary objects should be negotiated by the federal agency during consultation on a case-by-case basis. However, the plan should provide for an accurate accounting of federal implementation. Depending on agreements reached through the Section 106 consultation process, disinterment may or may not include field recordation. In some instances, such recordation may be so abhorrent to consulting parties that the federal agency may decide it is inappropriate to carry it out. When dealing with Indian tribes, the federal agency must comply with its legal responsibilities regarding tribal consultation, including government-to-government and trust responsibilities, before concluding that human remains or funerary objects must be disinterred.

Principle 6: The federal agency is ultimately responsible for making decisions regarding avoidance of impact to or treatment of burial sites, human remains, and funerary objects. In reaching its decisions, the federal agency must comply with applicable federal, tribal, state, or local laws.

Federal agencies are responsible for making final decisions in the Section 106 process [36 CFR § 800.2(a)]. The consultation and documentation that are appropriate and necessary to inform and support federal agency decisions in the Section 106 process are set forth in the ACHP's regulations [36 CFR Part 800].

Other laws, however, may affect federal decision-making regarding the treatment of burial sites human remains, and funerary objects. Undertakings located on federal or tribal lands, for example, are subject to the provisions of NAGPRA and the Archaeological Resources Protection Act (ARPA). When burial sites, human remains, or funerary objects are encountered on state and private lands, federal agencies must identify and follow state law when it applies. Section 106 agreement documents should take into account the requirements of any of these applicable laws.

Principle 7: Through consultation, federal agencies should develop and implement plans for the treatment of burial sites, human remains, and funerary objects that may be inadvertently discovered.

Encountering burial sites, human remains, or funerary objects during the initial efforts to identify historic properties is not unheard of. Accordingly, the federal agency must determine the scope of the identification effort in consultation with the SHPO/THPO, Indian tribes and Native Hawaiian

organizations, and others before any archaeological testing has begun [36 CFR § 800.4(a)] to ensure the full consideration of avoidance of impact to burial sites, human remains, and funerary objects.

The ACHP's regulations provide federal agencies with the preferred option of reaching an agreement ahead of time to govern the actions to be taken when historic properties are discovered during the implementation of an undertaking. In the absence of prior planning, when the undertaking has been approved and construction has begun, the ACHP's post-review discovery provision [36 CFR § 800.13] requires the federal agency to carry out several actions:

(1) make reasonable efforts to avoid, minimize, or mitigate adverse effects to such discovered historic properties;
(2) notify consulting parties (including Indian tribes and Native Hawaiian organizations that might attach religious and cultural significance to the affected property) and the ACHP within 48 hours of the agency's proposed course of action;
(3) take into account the recommendations received; and then
(4) carry out appropriate actions.

NAGPRA prescribes a specific course of action when Native American and Native Hawaiian human remains and funerary objects are discovered on federal or tribal lands in the absence of a plan—cessation of the activity, protection of the material, notification of various parties, consultation on a course of action and its implementation, and then continuation of the activity. However, adherence to the plan under Principle 5 would cause new discoveries to be considered "intentional excavations" under NAGPRA because a plan has already been developed, and can be immediately implemented. Agencies then could avoid the otherwise mandated 30 day cessation of work for "inadvertent discoveries."

Principle 8: In cases where the disposition of human remains and funerary objects is not legally prescribed, federal agencies should proceed following a hierarchy that begins with the rights of lineal descendants, and if none, then the descendant community, which may include Indian tribes and Native Hawaiian organizations.

Under the ACHP's regulations, "descendants" are not identified as consulting parties by right. However, federal agencies shall consult with Indian tribes and Native Hawaiian organizations that attach religious and cultural significance to burial sites, human remains and associated funerary objects, and be cognizant of their expertise in, and religious and cultural connection to, them. In addition, federal agencies should recognize a biological or cultural relationship and invite that individual or community to be a consulting party [36 CFR § 800.3(f)(3)].

When federal or state law does not direct disposition of human remains or funerary objects, or when there is disagreement among claimants, the process set out in NAGPRA may be instructive. In NAGPRA, the "ownership or control" of human remains and associated funerary objects lies with the following in descending order: specific lineal descendants; then tribe on whose tribal lands the items were discovered; then tribe with the closest cultural affiliation; and then tribe aboriginally occupying the land, or with the closest "cultural relationship" to the material.

Definitions Used for the Principles

- **Burial Site**: Any natural or prepared physical location, whether originally below, on, or above the surface of the earth, into which as a part of the death rite or ceremony of a culture, individual human remains are deposited [25 U.S.C. 3001.2(1)].
- **Consultation:** The process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the Section 106 review process [36 CFR § 800.16(f)].
- **Consulting parties:** Persons or groups the federal agency consults with during the Section 106 process. They may include the State Historic Preservation Officer; the Tribal Historic Preservation Officer; Indian tribes and Native Hawaiian organizations; representatives of local governments; applicants for federal assistance, permits, licenses, and other approvals; and/or any additional consulting parties [based on 36 CFR § 800.2(c)]. Additional consulting parties may include individuals and organizations with a demonstrated interest in the undertaking due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties [36 CFR § 800.2(c)(6)].
- **Disturbance:** Disturbance of burial sites that are listed in or eligible for listing in the National Register of Historic Places will constitute an adverse effect under Section 106. An adverse effect occurs when "an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, setting, materials, workmanship, feeling, or association" [36 CFR § 800.5(a)(1)].
- **Federal land:** Lands under a federal agency's control. Mere federal funding or permitting of a project does not turn an otherwise non-federal land into federal land (see *Abenaki Nation of Mississquoi* v. *Hughes*, 805 F. Supp. 234 (D. Vt. 1992), aff'd, 990 F. 2d 729 (2d Cir. 1993) (where the court found that a Clean Water Act permit issued by the US Army Corps of Engineers did not place the relevant land under federal "control" for NAGPRA purposes).
- **Funerary objects:** "items that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed intentionally at the time of death or later with or near individual human remains" [25 U.S.C. 3001(3)(B)].
- **Historic property:** "Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. It includes artifacts, records, and remains that are related to and located within such properties, and it includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register of Historic Places criteria" [36 CFR § 800.16(1)].
- **Human remains:** The physical remains of a human body. The term does not include remains or portions of remains that may reasonably be determined to have been freely given or naturally shed by the individual from whose body they were obtained, such as hair made into ropes or nets [see 43 CFR § 10.2(d)(1)].
- **Indian Tribe**: "An Indian tribe, band, nation, or other organized group or community, including a Native village, Regional Corporation or Village Corporation, as those terms are defined in Section 3 of the Alaska Native Claims Settlement Act [43 U.S.C. 1602], which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians" [36 CFR § 800.16(m)].
- **Native American:** Of, or relating to, a tribe, people, or culture that is indigenous to the United States [25 U.S.C. 3001 (9)]. Of, or relating to, a tribe, people, or culture indigenous to the Unites States, including Alaska and Hawaii [43 CFR 10.2(d)].

- **Native Hawaiian:** Any individual who is a descendant of the aboriginal people who, prior to 1778, occupied and exercised sovereignty in the area that now constitutes the state of Hawaii [36 CFR § 800.16(s)(2)].
- **Native Hawaiian Organization:** Any organization which serves and represents the interests of Native Hawaiians; has as a primary and stated purpose the provision of services to Native Hawaiians; and has demonstrated expertise in aspects of historic preservation that are significant to Native Hawaiians [36 CFR § 800.16(s)].
- **Policy statement:** A formal statement, endorsed by the full ACHP membership, representing the membership's collective thinking about what to consider in reaching decisions about select issues, in this case, human remains and funerary objects encountered in undertakings on federal, tribal, state, or private lands. Such statements do not have the binding force of law.
- **Preservation in place:** Taking active steps to ensure the preservation of a property.
- **Protection of Historic Properties**: Regulations [36 CFR Part 800] implementing Section 106 of the National Historic Preservation Act.
- **Section 106**: That part of the National Historic Preservation Act which establishes a federal responsibility to take into account the effects of undertakings on historic properties and to provide the Advisory Council on Historic Preservation a reasonable opportunity to comment with regard to such action.
- **State Historic Preservation Officer:** The official appointed or designated pursuant to Section 101(b)(1) of NHPA to administer the state historic preservation program.
- **Tribal Historic Preservation Officer**: The official appointed by the tribe's chief governing authority or designated by a tribal ordinance or preservation program who has assumed the responsibilities of the SHPO for purposes of Section 106 compliance on tribal lands in accordance with Section 101(d)(2) of NHPA.
- **Treatment:** Under Section 106, "treatments" are measures developed and implemented through Section 106 agreement documents to avoid, minimize, or mitigate adverse effects to historic properties.

Acronyms Used for the Policy Statement
- **ACHP**: Advisory Council on Historic Preservation.
- **ARPA**: Archaeological Resources Protection Act [16 U.S.C. 470aa-mm].
- **NHPA**: National Historic Preservation Act [16 U.S.C. § 470f].
- **NAGPRA**: The Native American Graves Protection and Repatriation Act [25 U.S.C. 3001 et seq].
- **SHPO**: State Historic Preservation Officer
- **THPO**: Tribal Historic Preservation Officer

[The members of the Advisory Council on Historic Preservation unanimously adopted this policy on February 23, 2007]

APPENDIX B: MASSACHUSETTS HISTORICAL COMMISSION KNOW HOW #4: WHAT TO DO WHEN HUMAN BURIALS ARE ACCIDENTALLY UNCOVERED.

KnowHow #4

INFORMATION AND ASSISTANCE FROM THE MASSACHUSETTS HISTORICAL COMMISSION

What to Do When Human Burials are Accidentally Uncovered

1. Why are bones sometimes found?

In Massachusetts, many unmarked graves exist without gravestones, fences, tombstones, or other surface indications of their presence. These are chiefly the graves of prehistoric and historic Indians, which may never have been marked at all; and graves which had been identified at one time in the past, but the markings are no longer visible. As a result, bones are often found during ordinary ground disturbance activities such as the construction of new homes, utilities, or roads; in the agricultural or industrial use of a site; or the excavation of sand or gravel borrow. Bones are also sometimes found eroding out of areas exposed by natural erosion, floodwater scouring, or sand dune formation.

A new law has been enacted which establishes procedures to follow when human bones are accidentally discovered.

2. Who is involved?

Private citizens, State and Local Police, Medical Examiners, State Archaeologist, and the Commission on Indian Affairs.

3. What should you do if you discover bones?

Do not touch or disturb the bones. Notify the state or local police and the regional medical examiner about the discovery and location.

4. What does the Medical Examiner do?

The Medical Examiner investigates the discovery to determine whether the bones are human, and whether they are recent or more than 100 years old. If the bones are less than 100 years old, a criminal investigation may be warranted. If the bones are more than 100 years old, the Medical Examiner then notifies the State Archaeologist, who immediately conducts an archaeological investigation of the site. Throughout these investigations, the police authorities must insure that the site is protected from further damage.

5. What does the State Archaeologist do?

The State Archaeologist investigates the site to determine the age, cultural association and identity of the burial. If the State Archaeologist determines that the burial is that of a Native American, the Commission on Indian Affairs is notified. The State Archaeologist consults with the landowner to determine whether the burial can remain undisturbed. In the case of development projects, the owner and State Archaeologist discuss whether there are prudent and feasible steps the owner can take to protect the burial. If it is impossible to avoid future harm to the burial, the State Archaeologist removes the remains.

6. What does the Commission on Indian Affairs do?

The archaeological investigation of Indian burials is monitored by the Commission on Indian Affairs to insure that the remains are treated respectfully.

> Please remember: Once bones or artifacts are removed from the site, valuable information concerning the identity and age of the human remains is lost. Therefore, it is important not to disturb the site in any way until the State Archaeologist can conduct an investigation and record the discovery.

BIBLIOGRAPHY

Massachusetts General Laws, Chapter 38, section 6B; Chapter 9, sections 26A & 27C; Chapter 7, section 38A; Chapter 114, section 17; as amended by Chapter 659 of the Acts of 1983 and Chapter 386 of the Acts of 1989.

For Further Information:

Please contact the State Archaeologist at the Massachusetts Historical Commission.

William Francis Galvin
Secretary of the Commonwealth
Chairman, Massachusetts Historical Commission
Massachusetts Archives Building, 220 Morrissey Boulevard, Boston, MA 02125
Phone: (617) 727-8470 Fax: (617) 727-5128 TDD: 1-800-392-6090
Website: www.magnet.state.ma.us/sec/mhc

APPENDIX C: M.G.L. CHAPTER 9, SECTION 26A (7): MASSACHUSETTS HISTORICAL COMMISSION POLICY AND GUIDELINES FOR NON-NATIVE HUMAN REMAINS WHICH ARE OVER 100 YEARS OLD OR OLDER

Section 26A: State archeologist; duties; reservation of lands from sale; cooperation of governmental agencies

Section 26A. It shall be the duty of the state archeologist to:

(1) Compile and maintain an inventory of historical and archeological sites and specimens, which inventory shall not be a public record.

(2) Conduct surveys and field investigations relative to the recovery and preservation of scientific, historical or archeological information regarding specimens or sites, and analyze and publish said information. In the event that the site being investigated is an American Indian burial site, the survey and investigation shall be conducted in conjunction with the commission on Indian affairs.

(3) Recommend such sites within the commonwealth or its political subdivisions as the state archeologist deems necessary for the protection of historical or archeological resources to be considered for state archeological landmarks or for the execution of preservation or conservation restrictions.

(4) Issue permits for exploration or field investigations of archeological or historical sites pursuant to section twenty-seven C, notifying any applicant for such permit whether the permit has been granted or denied within sixty days from receipt of his application.

(5) Notify the commission on Indian affairs, established pursuant to the provisions of section thirty-eight of chapter seven, the discovery of and existence of an information pertaining to all American Indian burial sites in the commonwealth. Records of such sites shall not be made available to the public.

(6) Conduct, within a reasonable time, site evaluations, including limited subsurface testing, in accordance with generally accepted scientific and archaeological standards, of unmarked, human burial and skeletal remains suspected of being one hundred years old or more upon receiving notification pursuant to section six B of chapter thirty-eight, to determine the nature and extent of the site, and the cultural or biological character of the site and remains.

(7) Arrange for the disposition of non-native, human remains, suspected of being one hundred years old or more after conducting a site evaluation pursuant to paragraph six of section twenty-six A. The state archeologist shall consult with the site's owner and other interested persons to determine whether prudent and feasible alternatives exist to avoid, minimize or mitigate harm to the burial site. The final plan or agreement which shall be in writing, may include provisions for preservation *in situ*; the conducting of additional scientific and archeological research and investigation; and, with the consent of the site's owner, the execution of a preservation restriction pursuant to section thirty-two of chapter one hundred and eighty-four. If no prudent and feasible alternative is agreed to, the state archeologist or his or her designee may excavate the site and recover the remains in accordance with generally accepted scientific and archeological standards. The state archeologist shall determine whether a skeletal analysis of the remains shall be conducted. If he determines that such analysis shall be made after the completion of the said analysis, the state

archeologist shall determine whether the remains shall be deposited in a curatorial facility or reinterred in accordance with the provisions of section forty-three M of chapter one hundred and fourteen. It shall be the responsibility of the person, whose proposed action necessitates the removal of skeletal remains, to conduct and bear the financial costs of said skeletal analysis and reinterment.

The commission by written notice to the state secretary shall recommend the reservation from sale of any land owned by the commonwealth or a political subdivision, including any forfeited to a city or town for the nonpayment of taxes, on which sites or specimens are located or may be found, as designated by the state archeologist; provided, however, that the reservation of such lands from sale shall be confined to the actual location of the site or specimens. When said sites or specimens have been explored, excavated or otherwise examined to the extent desired by the state archeologist he shall file with the state secretary a statement that there is no longer cause for reserving such land from sale.

All agencies of the commonwealth or of any political subdivision thereof shall cooperate fully with the state archeologist in the preservation, protection, excavation and evaluation of specimens and sites.

APPENDIX D: RHODE ISLAND GENERAL LAWS TITLE 23 - HEALTH AND SAFETY - CHAPTER 23-18 CEMETERIES

SECTION 23-18-11

§ 23-18-11 Regulation of excavation around cemeteries. – (a) The city or town council of any municipality may by ordinance prescribe standards regulating any construction or excavation in the city or town, when those standards are reasonably necessary to prevent deterioration of or damage to any cemetery or burial ground, or to any structures or gravesites located in any cemetery or burial ground. The rules and regulations shall not apply to the ordinary installation of gravesites or of monuments, markers, or mausoleums.

(b) No city or town shall permit construction, excavation or other ground disturbing activity within twenty-five feet (25') of a recorded historic cemetery except in compliance with the following provisions:

(1) The boundaries of the cemetery are adequately documented and there is no reason to believe additional graves exist outside the recorded cemetery and the proposed construction or excavation activity will not damage or destructively alter the historic cemetery through erosion, flooding, filling, or encroachment; or

(2) The proposed construction or excavation activity has been reviewed and approved by the city or town in accordance with § 23-18-11.1.

(c) Whenever an unmarked cemetery or human skeletal material is inadvertently located during any construction, excavation, or other ground disturbing activity, including archaeological excavation, the building official of the city or town where the unmarked cemetery or human skeletal material is located shall be immediately notified. The building official shall, in turn, notify the state medical examiner and the Rhode Island historical preservation and heritage commission if the grave, cemetery, or skeletal material appears to be historic. Prior to the continuation of any further construction, excavation, or other ground disturbing activity, and unless the provisions of § 23-18-7 shall apply, the property owner shall undertake an archaeological investigation to determine the boundaries of the unmarked cemetery and shall so inform the building official. In the event that the cemetery meets the criteria for a historic cemetery, the building official shall so advise the recorder of deeds of the city or town who shall record and register the cemetery in accordance with the provisions of § 23-18-10.1.

SECTION 23-18-11.1

§ 23-18-11.1 Permit required to alter or remove historic cemetery – Powers of city or town council – Appeal. – (a) Before an agency or a property owner may authorize or commence alteration or removal of any historic cemetery, the agency or owner must apply to the city or town council where the historic cemetery is located for a permit to alter or remove. The city or town council shall prescribe by ordinance standards to regulate the alteration or removal of any historic cemetery within its municipal limits, but shall at a minimum provide that:

(1) The applicant will examine all alternatives, and demonstrate that no prudent or feasible alternative to the proposed alteration is possible;
(2) The city or town provide for notification and participation in the permitting process of parties which may be interested in the proposed alteration or removal by virtue of their status as a governmental health or historic preservation authority, or as a private or nonprofit historical, genealogical or civic organization, or, in the case of American Indian cemeteries and burial grounds, the appropriate tribal organization; and

(3) The city or town provide for due consideration of the rights of descendants in any application to substantially alter or remove a historic cemetery.

(b) When an application for alteration or removal of a historic cemetery has been made and the boundary is unknown or in doubt, the city or town may require that the applicant, at its own expense, conduct an archaeological investigation to determine the actual size of the cemetery prior to final consideration by the city or town of the application to alter or remove.

(c) After due consideration, the city or town council may grant the application to alter or remove the historic cemetery in whole or in part, under the supervision of an archaeologist and with any restrictions and stipulations that it deems necessary to effectuate the purposes of this section, or deny the application in its entirety. Any person or persons aggrieved by a decision of the city or town council shall have the right of appeal concerning the decision to the superior court and from the superior court to the supreme court by writ of certiorari.

(d) Nothing in this section shall be deemed to contravene the authority of municipal bodies under § 45-5-12 to hold, manage, repair, or maintain any neglected burial ground.

SECTION 23-18-11.2

§ 23-18-11.2 Regulation of excavation – Removal and transfer of graves and cemeteries – Penalties. – (a) The city or town council of any municipality may by ordinance prescribe standards, in addition to those required by § 23-18-10, regulating the excavation, removal, and transfer of any graves, grave sites, and cemeteries in the municipality so as to provide an accurate record of any activity and to ensure that any remains removed are properly re-interred and the location of the new interment is recorded. In the absence of a local ordinance establishing standards, regulations adopted by the historical preservation and heritage commission shall govern. A report of any grave removal and relocation from one cemetery or burial ground to another shall be filed in the clerk's office for each municipality and shall, to the extent permitted by law, be available for public inspection. In instances where there is a headstone or other burial marker identifying the original grave, the headstone or burial marker shall be erected on the site to which any remains are transferred.

(b) To the extent not promulgated pursuant to § 23-3-5.1, the state registrar of vital records shall promulgate regulations to establish a system of record-keeping to allow descendants to locate their ancestors' graves in Rhode Island.

(c) Any person convicted of violating this section shall be subject to a fine of not more than one thousand dollars ($1,000) and such fine shall be deemed civil in nature and not a criminal penalty.

(d) The provisions of this section shall be considered to be in addition to any other penalties provided for desecration or vandalism to cemeteries.

SECTION 23-18-13

§ 23-18-13 Notification of historical preservation and heritage commission. – The historical preservation and heritage commission shall be notified whenever an ancient burial place contains or is suspected to contain the remains of one or more persons.

ATTACHMENT 5 – AQUIDNECK ISLAND TERRESTRIAL ARCHAEOLOGICAL MONITORING PLAN

MAYFLOWER WIND

Appendix R.3. Aquidneck Island Terrestrial Archaeological Monitoring Plan

Document Revision	A
Issue Date	January 2023
Security Classification	Confidential
Disclosure	For Use by BOEM and Authorized Third Parties Approved for public distribution with redactions, as applicable.

Archaeological Monitoring Plan

for the

Mayflower Wind Project

Aquidneck Island Landfall

Portsmouth, Rhode Island

Submitted to:

Bureau of Ocean Energy Management

U.S. Department of the Interior

Prepared for:

Mayflower Wind Energy LLC

https://mayflowerwind.com/

Prepared by:

The Public Archaeology Laboratory, Inc.

https://www.palinc.com/

January 2023

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1.0 EXECUTIVE SUMMARY

This Archaeological Monitoring Plan provides background data, a summary of previous cultural resources investigations, and the detailed steps archaeological monitors will implement during construction of cable duct route segments and horizontal directional drilling (HDD) within archaeologically sensitive areas of the Aquidneck Island Landfall in Portsmouth, Rhode Island for the Mayflower Wind Project. This Archaeological Monitoring Plan identifies specific areas of proposed archaeological monitoring and outlines the notification process if construction or drilling exposes potentially significant archaeological properties. This plan is developed in accordance with Section 106 and Section 110(f) of the National Historic Preservation Act (NHPA) of 1966 (54 USC 300101, et seq.; United States Code, 2016), the Antiquities Act of Rhode Island [Rhode Island General Law (R.I.G.L.) 42–45.1], and the Rhode Island Cemeteries Act (R.I.G.L. 23-18-11 *et seq*.).

2.0 BACKGROUND INFORMATION

2.1 Project Overview

Mayflower Wind Energy LLC (Mayflower Wind), a joint venture of Shell New Energies LLC (Shell New Energies) and OW North America LLC (Ocean Winds), proposes to construct and operate the Mayflower Wind Project (Project). The Project includes construction of the Mayflower Wind turbine array, inter-array cables, and offshore substation platforms in federal waters on the Atlantic Outer Continental Shelf (OCS) within the Bureau of Ocean Energy Management (BOEM) Renewable Energy Lease Area OCS-A 0521 (Lease Area) approximately 20 miles (32 kilometers) south of Nantucket Island; export cables that traverse federal and state waters with landfalls at Falmouth and Somerset, Massachusetts; and onshore High Voltage Direct Current (HVDC) converter stations at Brayton Point in Somerset and another in Falmouth, Massachusetts, points of interconnection, and onshore, underground transmission delivery systems (Figure 2.1-1). As a part of the onshore components for the Brayton Point export cable corridor, Mayflower Wind is considering several cable duct route segment options and horizontal directional drilling (HDD) site options in Portsmouth, Rhode Island (Figure 2.1-2).

Figure 2.1-1. Mayflower Wind Project Overview

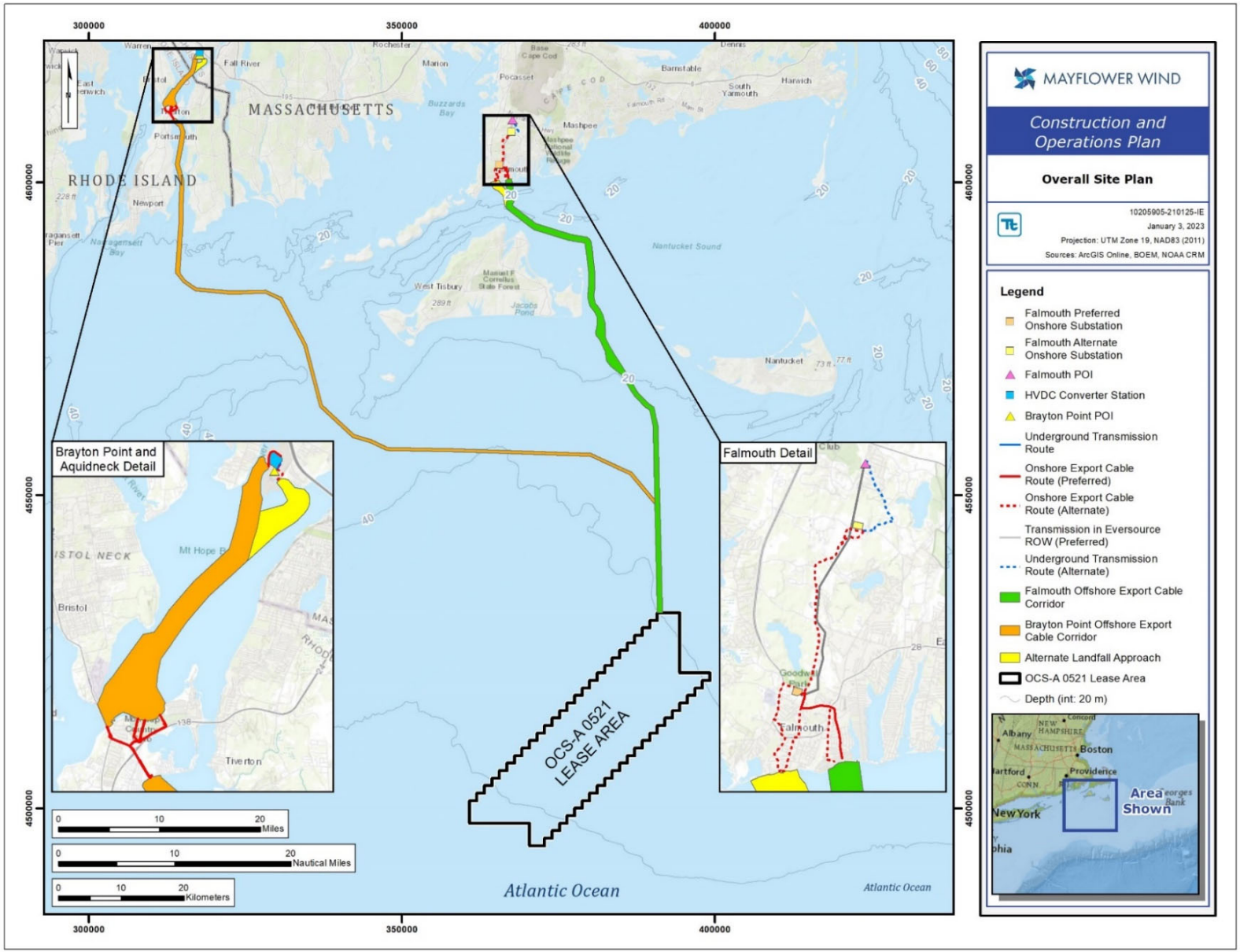


Figure 2.1-2. Proposed onshore cable routes and HDD locations for the Mayflower Wind Aquidneck Island Landfall in Portsmouth, RI.

2.2 Section 106 of the National Historic Preservation Act

As the Project requires approval from BOEM, the Project is considered a federal undertaking and as such, must comply with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), as amended, and the National Environmental Policy Act of 1970 (NEPA). Section 106 of the NHPA requires federal agencies to identify and assess the effects of undertakings on historic resources and to resolve adverse effects by developing and evaluating alternatives that could avoid, minimize, or mitigate these impacts. Section 110 of the NHPA requires federal agencies to establish a historic preservation program for the identification, evaluation, and protection of historic properties under their control or ownership within an Area of Potential Effect (APE). An APE, as defined by 36 CFR § 800.16(d), is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking".

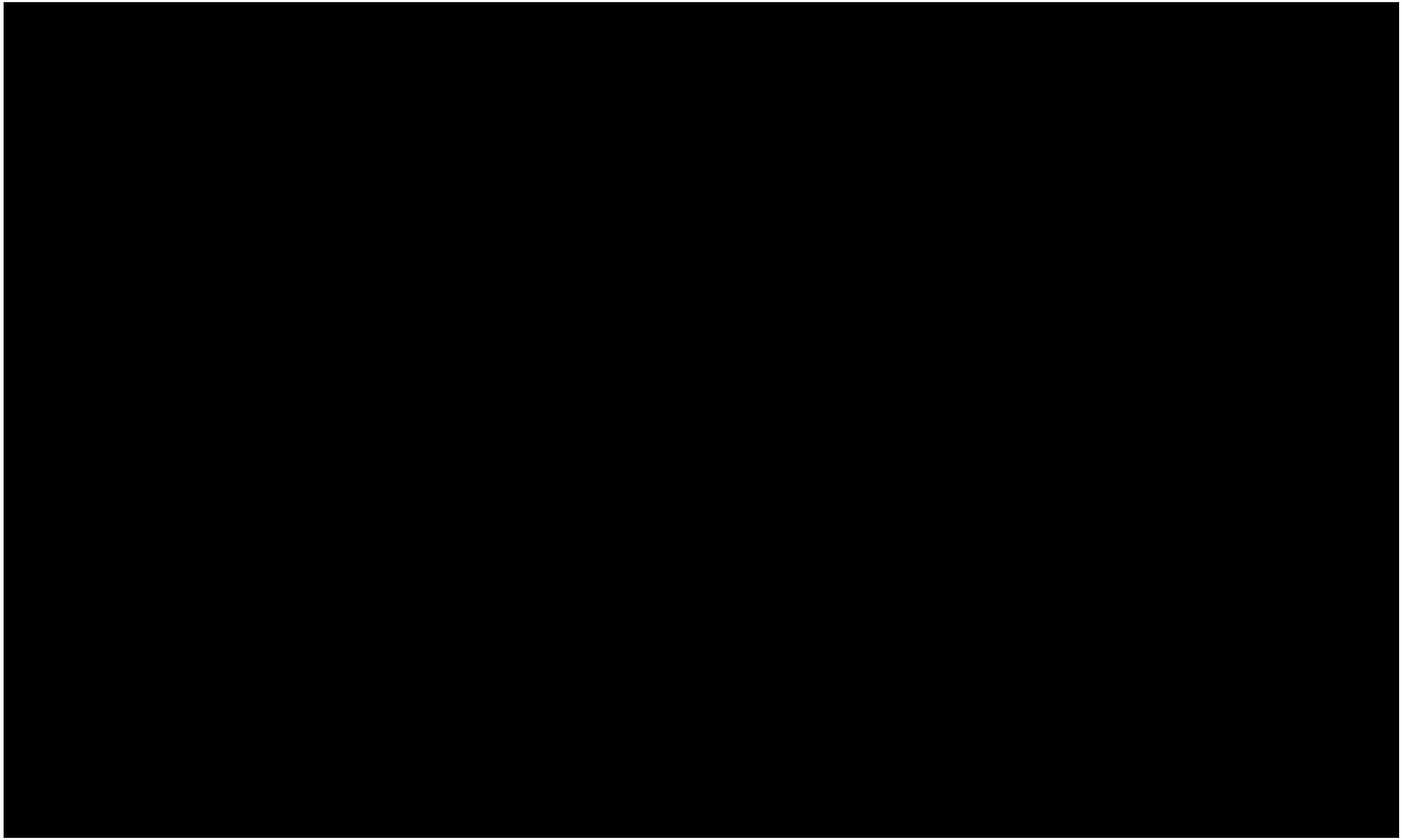
Regulations under Section 106 (36 Code of Federal Regulations [CFR] 800.8(c)) allow the substitution of the NEPA reviews for the Section 106 process. Under this subsection, an agency can use the NEPA process and the documents it produces to comply with Section 106 in lieu of the procedures set forth in 36 CFR 800.3-800.6. In 2020, BOEM announced its intention to implement the NEPA substitution process for Section 106 review for renewable energy Construction and Operations Plans (COPs). Per the available guidance (Advisory Council on Historic Preservation [ACHP] and Council on Environmental Quality, 2013), the NEPA substitution process provides an opportunity for an agency to streamline its overall environmental and historic preservation review process.

2.3 History of Archaeological Investigations

To support BOEM's efforts to identify historic properties within the Project's Preliminary Area of Potential Effects (PAPE), Mayflower Wind conducted a Terrestrial Archaeological Resources Assessment (TARA) including Phase I site identification archaeological testing for the Aquidneck Island landfall components of the proposed Mayflower Wind Project. The TARA included archival research, the development of Project-specific environmental and cultural contexts, a review of previous land use studies, a field review to evaluate the potential for undiscovered archaeological sites to be present within Project work areas, and Phase I site

identification subsurface archaeological testing in archaeologically sensitive areas along [redacted] (Figure 2.3-1) (Waller and Flynn 2022).

Figure 2.3-1. Mayflower Wind Aquidneck Island Landfall Cable Duct Route Alternates with Archaeological Sensitivity.



3.0 ARCHAEOLOGICAL MONITORING OF CONSTRUCTION

Mayflower Wind acknowledges the sensitivity of the Aquidneck Island Landfall portion of the Project and is committed to protecting and preserving cultural resources, in accordance with federal and state legislation. Mayflower Wind also recognizes that despite an archaeological sensitivity assessment and Phase I site identification archaeological testing performed as part of the TARA, it is still possible that potentially significant archaeological resources, including human remains, could be discovered during onshore Project construction.

HDD Options 1 and 3 are in Roger Williams University Baypoint Residence Hall and Conference Center and Montaup County Club parking lots, respectively. [redacted] Accordingly, Mayflower Wind has committed to archaeological and tribal monitoring of ground disturbing activities at the [redacted] to identify and document any pre- or post-Contact features or archaeological deposits that may be encountered during HDD boring and cable installation. The following outlines the tasks and processes that will be followed as part of the archaeological monitoring program for the Mayflower Wind Aquidneck Island Landfall.

3.1 Consultation and Archaeological Permit Application

Archaeological and tribal monitoring via their designated tribal monitors will be conducted in consultation with and under a permit issued by the Rhode Island Historical Preservation and Heritage Commission (RIHPHC)/office of the State Historic Preservation Officer (SHPO). Mayflower Wind will submit this document and a new archaeological permit application or request amendment and extension of Archaeological Permit No. 21-32 issued on December 17, 2021 to the RIHPHC to include the archaeological monitoring. The

RIHPHC will provide the Narragansett Indian, Mashpee Wampanoag, and Wampanoag Tribe of Gay Head (Aquinnah) Tribal Historic Preservation Offices (THPOs) with a copy of Archaeological Monitoring Plan and allow them 10 days to review and comment before issuing the new archaeological permit or permit amendment. Archaeological monitors will meet the Secretary of the Interior's Professional Qualifications Standards (36 CFR Appendix A to Part 61) for Archaeology and Historic Preservation.

Archaeological site files maintained by the RIHPHC will be reviewed for updated site information on known archaeological sites and historic properties on [redacted] locations that are selected. Upon a request from Mayflower Wind, archaeological monitors will also solicit the THPOs for any tribal information that they might be willing to share.

3.2 Contractor Training

Archaeological consultants and the tribes will prepare and give Mayflower Wind and its contractor construction supervisors cultural and archaeological sensitivity training before the start of construction. The purpose of this training will be to review Mayflower Wind's commitments to cultural resource compliance, review the general results of the archaeological investigations conducted within the onshore portions of the Project APE, provide an overview of the general and tribal cultural history of the area so that Mayflower Wind and their contractors are aware of the types of archaeological resources that may be encountered during construction, and introduce contractors to the archaeological and tribal monitors. The training program will outline the procedures that will be followed if a significant cultural resource or archaeological deposit is discovered during construction and a contact list (Appendix A).

Hard copies of this Archaeological Monitoring Plan will be printed and circulated to contractor supervisors at the contractor training for incorporation into reference construction documentation for future reference.

3.3 Construction Monitoring

Mayflower Wind will inform the Narragansett Indian, Mashpee Wampanoag, and Wampanoag Tribe of Gay Head (Aquinnah) THPOs of the construction schedule and allow them to monitor the construction. Project proponents will provide the THPOs with at least two weeks advance notice of the construction schedule so

that each THPO might designate their own tribal monitors to accompany the archaeological monitor. BOEM officials will be included in the notification chain. Tribal monitors will coordinate directly with Mayflower Wind and will communicate any questions or concerns to Mayflower Wind's Permitting Director. If none of the THPOs respond to the request to provide a monitor within 10 calendar days, Project proponents shall seek BOEM approval prior to proceeding with construction of the cable duct bank along [redacted] without tribal monitors.

Archaeological and tribal monitors will monitor excavation of the cable duct bank along [redacted] depending on final HDD site selection.

Archaeological and tribal monitors will monitor construction and document and record any archaeological features or other deposits (e.g. shell fragments, burned rock, chipping debris, pre-contact artifacts) visible in excavation trenches or at the drill sites. The following details the plan that Mayflower Wind and their contractors will follow if archaeological and tribal monitors identify archaeological deposits during construction.

Archaeological Discoveries

1. Possible archaeological remains may be discovered by archaeological and tribal monitors during construction. If suspected artifacts or archaeological features are exposed during construction, archaeological and tribal monitors will have stop work authority in the vicinity of the discovery until it can be determined if the materials are cultural and whether they represent a potentially significant site or archaeological deposit.

2. Archaeological monitors will immediately notify Mayflower Wind's Permitting Director. Notification will include the activity, specific work area including location/address and construction site [redacted] and provide digital photographs of the find.

3. Mayflower Wind will issue a Stop Work order and direct the contractor to secure the area by flagging or fencing off the area of the archaeological discovery. Any discovery made on a weekend or overnight hours will be protected until all necessary parties have been notified of the discovery. The contractor will not resume work in the vicinity of the find until Mayflower Wind's Permitting Director has granted clearance.

4. Archaeological and tribal monitors - will determine if the site is potentially significant and notify Mayflower Wind, the RIHPHC, and BOEM. Mayflower Wind, their contractors, and archaeologists will work with the RIHPHC and the THPOs (as necessary) and in consultation with BOEM, develop and implement a site treatment plan.

5. Since the area of any potential discovery will have been partially disturbed by construction, the objective of cultural resource investigations will be to evaluate data quickly so that notifications are made and consultation can proceed as soon as possible. If archaeological investigations are required, Mayflower Wind will inform the construction supervisor that no construction work in the immediate vicinity of the discovery can proceed until archaeological fieldwork is complete. The area will be flagged as being off-limits for work, but will not be identified as an archaeological site *per se* to protect the resource(s).

6. The duration of any work stoppages will be contingent upon the significance of the identified cultural resource(s) and consultation among Mayflower Wind, BOEM, RIHPHC, THPOs, and other relevant parties to determine treatment to avoid, minimize, or mitigate any adverse effects to the identified site.

7. Once all treatment measures are complete, Mayflower Wind will notify the contractor that construction work may proceed.

<u>Human Remains Discoveries</u>

If human remains are encountered during Project construction, they will be handled in accordance with the Rhode Island Historic Cemeteries Act (Appendix B) and guided by the policy statement adopted by the Advisory Council on Historic Preservation ([Advisory Council]; see *Policy Statement Regarding Treatment of*

Burial Sites, Human Remains, and Funerary Objects (Appendix C), and the RIHPHC's Rules and Regulations Pertaining to Registration and Protection of Historic Cemeteries (Appendix D).

Human remains will be treated with dignity and respect at all times. Skeletal remains and/or associated artifacts will be left in place and not disturbed. No remains or associated materials will be collected or removed until all notifications have been made, appropriate consultation has taken place, and a plan of action has been determined. The procedures that will be followed if human remains are unearthed during Project construction are:

1. If archaeological and/or tribal monitors identify human remains or possible human remains, all construction work in the vicinity of the find that could affect the integrity of the remains will cease. The remains will not be touched, moved, or further disturbed. Archaeological and tribal monitors will document any such finds and notify Mayflower Wind. No photographs or digital recording of human remains or associated funerary/ceremonial objects will be taken by construction contractors or construction personnel. Archeological and tribal monitors with the assistance of onsite contractors will take measures to ensure site security.

2. Archaeological monitors will record the location of the find, its time of discovery, and will immediately notify the RI State Police and the Town of Portsmouth's Building Inspector in accordance with Rhode Island Historic Cemeteries Act. BOEM will also be notified as soon as practicable.

3. The Town will notify the Office of the State Medical Examiner (OSME). If the OSME determines the remains are less than 100 years old, then their treatment becomes the responsibility of the State Police and the Town. If the OSME determines the remains are more than 100 years old, the OSME will notify the RIHPHC State Archaeologist. The State Archaeologist, archaeological, and tribal monitors will determine if the remains are Native American.

4. The Town of Portsmouth, State Archaeologist, and if the remains are Native American, the THPOs will discuss whether there are prudent and feasible alternatives to protect the remains. The results of this consultation will be made in writing. If it is not possible to protect the remains, they may be

excavated only under a permit issued by the RIHPHC after the review of a recovery plan that specifies a qualified research team, research design, and plan for the disposition of the remains consistent with the results of consultation and permission from the Portsmouth Town Council.

5. In all cases, due care will be taken in the excavation, transport, and storage of any remains to ensure their security and respectful treatment.

3.4 Laboratory Processing and Analyses

Any archaeological materials collected during monitoring activities will be processed. Processing activities include cleaning, identification, and cataloging of any recovered cultural materials; the preliminary analysis of spatial distributions of cultural materials; and artifact photography of diagnostic or representative artifact types.

Collected cultural materials will be stored in acid-free Hollinger boxes with box content lists and labels printed on acid-free paper. These boxes will be curated in accordance with the Secretary of the Interior's standards 36 CFR 79 *Curation of Federally-Owned and Administered Archeological Collections* and the RIHPHC's *Performance Standards and Guidelines for Archaeology in Rhode Island* (2021).

4.0 DOCUMENTATION AND REPORTING

Archaeological monitors will prepare daily logs that summarize the results of daily monitoring activities for submission to Mayflower Wind's Permitting Team. Recorded data will include the date, archaeological and tribal monitors, work location and activity, observations and finds, and any other relevant comments. Daily logs will be compiled and forwarded electronically by email to BOEM, the RIHPHC, and THPOs weekly or at some other agreed upon interval.

On completion of the construction monitoring, archaeological monitors will prepare an archaeological report that describes the results of the construction monitoring, discusses any archaeological deposits that were encountered during construction, and offers recommendations regarding the significance of any identified deposits and the need for additional work and consultation. Draft copies of the report will be submitted to Mayflower Wind for review and then to BOEM, the RIHPHC, and the THPOs. If necessary, archaeological site forms will be completed and submitted to RIHPHC. The report produced will meet the standards outlined in the Secretary of Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716 1983) and the RIHPHC's *Performance Standards and Guidelines for Archaeology in Rhode Island* (2021).

5.0 REFERENCES

National Park Service

1983 *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716–44742) National Park Service, U.S. Department of the Interior, Washington, D.C.

Rhode Island Historical Preservation and Heritage Commission (RIHPHC)

2012 *Rules and Regulations Pertaining to Registration and Protection of Historic Cemeteries*. Rhode Island Historical Preservation and Heritage Commission, Providence, RI.

2021 *Performance Standards and Guidelines for Archaeology in Rhode Island*. Rhode Island Historical Preservation and Heritage Commission, Providence, RI.

Waller, Jr., Joseph N. and Erin Flynn

2022 *Terrestrial Archaeological Resources Assessment Mayflower Wind Project Aquidneck Island (Portsmouth) Landfall, Portsmouth, Rhode Island*. PAL Report No. 4256, Submitted to Mayflower Wind Energy, LLC., Boston MA.

Applicable Regulations

Federal

- Section 106 of the National Historic Preservation Act of 1966, as amended (54 USC 306108) and its implementing regulations "Protection of Historic Properties" (36 CFR part 800).

Rhode Island

- Rhode Island Historic Cemeteries Act: Rhode Island General Law 23-18-11 *et seq*. (Appendix A)
- Antiquities Act of Rhode Island: Rhode Island General law 42-45.

LIST OF CONTACTS

Mayflower Wind Energy LLC

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Boston, Massachusetts 02110

Contact : Jennifer Flood, Permitting Director

Tel: (508) 395-6886

Email: Jennifer.Flood@mayflowerwind.com

Rhode Island Historical Preservation and Heritage Commission

150 Benefit Street

Providence, RI 02903-1209

Contact: Charlotte Taylor, Principal Archaeologist

Tel: (401) 222-4140

Email: Charlotte.Taylor@preservation.ri.gov

Jeffry Emidy, Executive Director, State Historic Preservation Officer

Tel: (401) 222-4134

Email: Jeffrey.Emidy@preservation.ri.gov

Rhode Island Department of Health/Office of the State Medical Examiners

48 Orms Street

Providence, RI 02904

Tel: 401-222-5500

Rhode Island State Police, Portsmouth Barracks

838 East Main Road

Portsmouth, RI 02871

Tel: (401) 444-1066

Portsmouth Police Department

2270 East Main Road

Portsmouth, RI 02871

Tel: (401) 683-0300

The Public Archaeology Laboratory, Inc.

26 Main Street

Pawtucket, RI 02860

Contact: Deborah Cox, President

Tel: (401) 728-8780 (office); (401) 487-4002 (mobile)

Email: dcox@palinc.com

Contact: Joseph (Jay) N. Waller, Jr., Senior Archaeologist

Tel: (401) 728-8780 (office); (401) 487-4309 (mobile)

Email: jwaller@palinc.com

TRIBAL HISTORIC PRESERVATION OFFICES

Narragansett Indian Tribe Tribal Historic Preservation Office

Post Office Box 268

Charlestown, RI 02813

Contact: John Brown, III, Tribal Historic Preservation Officer

Tel: (401) 585-0142

Email: tashtesook@aol.com

Cora Peirce, Deputy Tribal Historic Preservation Office

Tel: (774) 634-7959

Email: coradot@gmail.com

Mashpee Wampanoag Tribal Historic Preservation Office

483 Great Neck Road South

Mashpee, MA 02649

Contact: David Weeden, Tribal Historic Preservation Officer

Tel: (508) 477-0208, Ext. 102

Email: David.weeden@mwtribe-nsn.gov

Wampanoag Tribe of Gay Head/Aquinnah Tribal Historic Preservation Office

20 Black Brook Road

Aquinnah, MA 02535-1546

Contact: Bettina Washington, Tribal Historic Preservation Officer

Tel: (508) 560-9014

Email: bettina@wampanoagtribe.net

APPENDIX B:

RHODE ISLAND CEMETERIES ACT

Title 23Health and Safety

webserver.rilegislature.gov//Statutes/TITLE23/23-18/23-18-11.htm

Chapter 18
Cemeteries

R.I. Gen. Laws § 23-18-11

§ 23-18-11. Regulation of excavation around cemeteries.

(a)The city or town council of any municipality may by ordinance prescribe standards regulating any construction or excavation in the city or town, when those standards are reasonably necessary to prevent deterioration of or damage to any cemetery or burial ground, or to any structures or gravesites located in any cemetery or burial ground. The rules and regulations shall not apply to the ordinary installation of gravesites or of monuments, markers, or mausoleums.

(b)No city or town shall permit construction, excavation or other ground disturbing activity within twenty-five feet (25′) of a recorded historic cemetery except in compliance with the following provisions:

(1)The boundaries of the cemetery are adequately documented and there is no reason to believe additional graves exist outside the recorded cemetery and the proposed construction or excavation activity will not damage or destructively alter the historic cemetery through erosion, flooding, filling, or encroachment; or

(2)The proposed construction or excavation activity has been reviewed and approved by the city or town in accordance with § 23-18-11.1.

(c)Whenever an unmarked cemetery or human skeletal material is inadvertently located during any construction, excavation, or other ground disturbing activity, including archaeological excavation, the building official of the city or town where the unmarked cemetery or human skeletal material is located shall be immediately notified. The building official shall, in turn, notify the state medical examiner and the Rhode Island historical preservation and heritage commission if the grave, cemetery, or skeletal material appears to be historic. Prior to the continuation of any further construction, excavation, or other ground disturbing activity, and unless the provisions of § 23-18-7 shall apply, the property owner shall undertake an archaeological investigation to determine the boundaries of the unmarked cemetery and shall so inform the building official. In the event that the cemetery meets the criteria for a historic cemetery, the building official shall so advise the recorder of deeds of the city or town who shall record and register the cemetery in accordance with the provisions of § 23-18-10.1.

1/2

APPENDIX C

ACHP: POLICY STATEMENT REGARDING TREATMENT OF BURIAL SITES, HUMAN REMAINS AND FUNERARY OBJECTS

Preserving America s Heritage

ADVISORY COUNCIL ON HISTORIC PRESERVATION

POLICY STATEMENT
REGARDING
TREATMENT OF BURIAL SITES, HUMAN REMAINS AND FUNERARY OBJECTS

Preamble: This policy offers leadership in resolving how to treat burial sites, human remains, and funerary objects in a respectful and sensitive manner while acknowledging public interest in the past. As such, this policy is designed to guide federal agencies in making decisions about the identification and treatment of burial sites, human remains, and funerary objects encountered in the Section 106 process, in those instances where federal or state law **does not prescribe a course of action**.

This policy applies to all federal agencies with undertakings that are subject to review under Section 106 of the National Historic Preservation Act (NHPA; 16 U.S.C. § 470f), and its implementing regulations (36 CFR Part 800). To be considered under Section 106, the burial site must be or be a part of a historic property, meaning that it is listed, or eligible for listing, in the National Register of Historic Places.

The Advisory Council on Historic Preservation (ACHP) encourages federal agencies to apply this policy throughout the Section 106 process, including during the identification of those historic properties. In order to identify historic properties, federal agencies must assess the historic significance of burial sites and apply the National Register criteria to determine whether a property is eligible. Burial sites may have several possible areas of significance, such as those that relate to religious and cultural significance, as well as those that relate to scientific significance that can provide important information about the past. This policy does not proscribe any area of significance for burial sites and recognizes that the assessment must be completed on a case-by-case basis through consultation.

The policy is not bound by geography, ethnicity, nationality, or religious belief, but applies to the treatment of all burial sites, human remains, and funerary objects encountered in the Section 106 process, as the treatment and disposition of these sites, remains, and objects are a human rights concern shared by all.

This policy also recognizes the unique legal relationship between the federal government and tribal governments as set forth in the Constitution of the United States, treaties, statutes and court decisions, and acknowledges that, frequently, the remains encountered in Section 106 review are of significance to Indian tribes.

Section 106 requires agencies to seek agreement with consulting parties on measures to avoid, minimize, or mitigate adverse effects to historic properties. Accordingly, and consistent with Section 106, this policy does not recommend a specific outcome from the consultation process. Rather, it focuses on issues and perspectives that federal agencies ought to consider when making their Section 106 decisions. In many cases, federal agencies will be bound by other applicable federal, tribal, state, or local laws that do

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prescribe a specific outcome, such as the Native American Graves Protection and Repatriation Act (NAGPRA). The federal agency must identify and follow applicable laws and implement any prescribed outcomes.

For undertakings on federal and tribal land that encounter Native American or Native Hawaiian human remains and funerary objects, NAGPRA applies. NHPA and NAGPRA are separate and distinct laws, with separate and distinct implementing regulations and categories of parties that must be consulted.[1] Compliance with one of these laws does not mean or equal compliance with the other. Implementation of this policy and its principles does not, in any way, change, modify, detract or add to NAGPRA or other applicable laws.

Principles: When burial sites, human remains, or funerary objects will be or are likely to be encountered in the course of Section 106 review, a federal agency should adhere to the following principles:

Principle 1: Participants in the Section 106 process should treat all burial sites, human remains and funerary objects with dignity and respect.

Principle 2: Only through consultation, which is the early and meaningful exchange of information, can a federal agency make an informed and defensible decision about the treatment of burial sites, human remains, and funerary objects.

Principle 3: Native Americans are descendants of original occupants of this country. Accordingly, in making decisions, federal agencies should be informed by and utilize the special expertise of Indian tribes and Native Hawaiian organizations in the documentation and treatment of their ancestors.

Principle 4: Burial sites, human remains and funerary objects should not be knowingly disturbed unless absolutely necessary, and only after the federal agency has consulted and fully considered avoidance of impact and whether it is feasible to preserve them in place.

Principle 5: When human remains or funerary objects must be disinterred, they should be removed carefully, respectfully, and in a manner developed in consultation.

Principle 6: The federal agency is ultimately responsible for making decisions regarding avoidance of impact to or treatment of burial sites, human remains, and funerary objects. In reaching its decisions, the federal agency must comply with applicable federal, tribal, state, or local laws**.**

Principle 7: Through consultation, federal agencies should develop and implement plans for the treatment of burial sites, human remains, and funerary objects that may be inadvertently discovered.

Principle 8: In cases where the disposition of human remains and funerary objects is not legally prescribed, federal agencies should proceed following a hierarchy that begins with the rights of lineal descendants, and if none, then the descendant community, which may include Indian tribes and Native Hawaiian organizations.

[1] The ACHP's publication *Consulting with Indian Tribes in the Section 106 Process* and the National Association of Tribal Historic Preservation Officers' publication *Tribal Consultation: Best Practices in Historic Preservation* provide additional guidance on this matter.

DISCUSSION:

Principle 1: Participants in the Section 106 process should treat all burial sites, human remains and funerary objects with dignity and respect.

Because the presence of human remains and funerary objects gives a historic property special importance as a burial site or cemetery, federal agencies need to consider fully the values associated with such sites. When working with human remains, the federal agency should maintain an appropriate deference for the dead and the funerary objects associated with them, and demonstrate respect for the customs and beliefs of those who may be descended from them.

Through consultation with descendants, culturally affiliated groups, descendant communities, and other parties, federal agencies should discuss and reach agreement on what constitutes respectful treatment.

Principle 2: Only through consultation, which is the early and meaningful exchange of information, can a federal agency make an informed and defensible decision about the treatment of burial sites, human remains, and funerary objects.

Consultation is the hallmark of the Section 106 process. Federal agencies must make a "reasonable and good faith" effort to identify consulting parties and begin consultation early in project planning, after the federal agency determines it has an undertaking and prior to making decisions about project design, location, or scope.

The NHPA, the ACHP's regulations, and Presidential Executive Orders set out basic steps, standards, and criteria in the consultation process, including:

- Federal agencies have an obligation to seek out all consulting parties [36 CFR § 800.2(a)(4)], including the State Historic Preservation Officer (SHPO)/Tribal Historic Preservation Officer (THPO) [36 CFR § 800.3(c)].

- Federal agencies must acknowledge the sovereign status of Indian tribes [36 CFR § 800.2(c)(2)(ii)]. Federal agencies are required to consult with Indian tribes on a government-to-government basis in recognition of the unique legal relationship between federal and tribal governments, as set forth in the Constitution of the United States, treaties, statutes, court decisions, and executive orders and memoranda.

- Consultation on a government-to-government level with Indian tribes cannot be delegated to non-federal entities, such as applicants and contractors.

- Federal agencies should solicit tribal views in a manner that is sensitive to the governmental structures of the tribes, recognizing their desire to keep certain kinds of information confidential, and that tribal lines of communication may argue for federal agencies to provide extra time for the exchange of information.

- Properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization may be determined eligible for inclusion on the National Register [16 U.S.C. § 470a(d)(6)(A)], and federal agencies must consult with any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to such historic properties [16 U.S.C. § 470a(d)(6)(B) and 36 CFR § 800.2(c)(2)(ii)(D)].

Principle 3: Native Americans are descendants of original occupants of this country. Accordingly, in making decisions, federal agencies should be informed by and utilize the special expertise of Indian tribes and Native Hawaiian organizations in the documentation and treatment of their ancestors.

This principle reiterates existing legal requirements found in federal law, regulation and executive orders, and is consistent with positions that the ACHP has taken over the years to facilitate enfranchisement and promote broad participation in the Section 106 process. Federal agencies must consult with Indian tribes on a government-to-government basis because they are sovereign nations.

Indian tribes and Native Hawaiian organizations bring a special perspective on how a property possesses religious and cultural significance to them. Accordingly, federal agencies should utilize their expertise about, and religious and cultural connection to, burial sites, human remains, and associated funerary objects to inform decision-making in the Section 106 process.

Principle 4: Burial sites, human remains and funerary objects should not be knowingly disturbed unless absolutely necessary, and only after the federal agency has consulted and fully considered avoidance of impact and whether it is feasible to preserve them in place.

As a matter of practice, federal agencies should avoid impacting burial sites, human remains, and funerary objects as they carry out their undertakings. If impact to the burial site can be avoided, this policy does not compel federal agencies to remove human remains or funerary objects just so they can be documented.

As this policy advocates, federal agencies should always plan to avoid burial sites, human remains, and funerary objects altogether. When a federal agency determines, based on consultation with Section 106 participants, that avoidance of impact is not appropriate, the agency should minimize disturbance to such sites, remains, and objects. Accordingly, removal of human remains or funerary objects should occur only when other alternatives have been considered and rejected.

When a federal agency determines, based on consultation with Section 106 participants, that avoidance of impact is not appropriate, the agency should then consider any active steps it may take to preserve the burial site in place, perhaps through the intentional covering of the affected area, placement of markers, or granting of restrictive or other legal protections. In many cases, preservation in place may mean that, to the extent allowed by law, the locations of burial sites, human remains, and funerary objects should not be disclosed publicly. Alternatively and consistent with the Section 106 regulations [36 CFR § 800.5(a)(2)(vi)], natural deterioration of the remains may be the acceptable or preferred outcome of the consultation process.

Principle 5: When human remains or funerary objects must be disinterred, they should be removed carefully, respectfully, and in a manner developed in consultation.

When the federal agency decides that human remains or funerary objects must be disturbed, they should be removed respectfully and dealt with according to the plan developed by the federal agency in consultation. "Careful" disinterment means that those doing the work should have, or be supervised by people having, appropriate expertise in techniques for recognizing and disinterring human remains.

This policy does not endorse any specific treatment. However, federal agencies must make a reasonable and good faith effort to seek agreement through consultation before making its decision about how human remains and/or funerary objects shall be treated.

The plan for the disinterment and treatment of human remains and/or funerary objects should be negotiated by the federal agency during consultation on a case-by-case basis. However, the plan should provide for an accurate accounting of federal implementation. Depending on agreements reached through the Section 106 consultation process, disinterment may or may not include field recordation. In some instances, such recordation may be so abhorrent to consulting parties that the federal agency may decide it is inappropriate to carry it out. When dealing with Indian tribes, the federal agency must comply with its legal responsibilities regarding tribal consultation, including government-to-government and trust responsibilities, before concluding that human remains or funerary objects must be disinterred.

Principle 6: The federal agency is ultimately responsible for making decisions regarding avoidance of impact to or treatment of burial sites, human remains, and funerary objects. In reaching its decisions, the federal agency must comply with applicable federal, tribal, state, or local laws.

Federal agencies are responsible for making final decisions in the Section 106 process [36 CFR § 800.2(a)]. The consultation and documentation that are appropriate and necessary to inform and support federal agency decisions in the Section 106 process are set forth in the ACHP's regulations [36 CFR Part 800].

Other laws, however, may affect federal decision-making regarding the treatment of burial sites human remains, and funerary objects. Undertakings located on federal or tribal lands, for example, are subject to the provisions of NAGPRA and the Archaeological Resources Protection Act (ARPA). When burial sites, human remains, or funerary objects are encountered on state and private lands, federal agencies must identify and follow state law when it applies. Section 106 agreement documents should take into account the requirements of any of these applicable laws.

Principle 7: Through consultation, federal agencies should develop and implement plans for the treatment of burial sites, human remains, and funerary objects that may be inadvertently discovered.

Encountering burial sites, human remains, or funerary objects during the initial efforts to identify historic properties is not unheard of. Accordingly, the federal agency must determine the scope of the identification effort in consultation with the SHPO/THPO, Indian tribes and Native Hawaiian

organizations, and others before any archaeological testing has begun [36 CFR § 800.4(a)] to ensure the full consideration of avoidance of impact to burial sites, human remains, and funerary objects.

The ACHP's regulations provide federal agencies with the preferred option of reaching an agreement ahead of time to govern the actions to be taken when historic properties are discovered during the implementation of an undertaking. In the absence of prior planning, when the undertaking has been approved and construction has begun, the ACHP's post-review discovery provision [36 CFR § 800.13] requires the federal agency to carry out several actions:

(1) make reasonable efforts to avoid, minimize, or mitigate adverse effects to such discovered historic properties;
(2) notify consulting parties (including Indian tribes and Native Hawaiian organizations that might attach religious and cultural significance to the affected property) and the ACHP within 48 hours of the agency's proposed course of action;
(3) take into account the recommendations received; and then
(4) carry out appropriate actions.

NAGPRA prescribes a specific course of action when Native American and Native Hawaiian human remains and funerary objects are discovered on federal or tribal lands in the absence of a plan—cessation of the activity, protection of the material, notification of various parties, consultation on a course of action and its implementation, and then continuation of the activity. However, adherence to the plan under Principle 5 would cause new discoveries to be considered "intentional excavations" under NAGPRA because a plan has already been developed, and can be immediately implemented. Agencies then could avoid the otherwise mandated 30 day cessation of work for "inadvertent discoveries."

Principle 8: In cases where the disposition of human remains and funerary objects is not legally prescribed, federal agencies should proceed following a hierarchy that begins with the rights of lineal descendants, and if none, then the descendant community, which may include Indian tribes and Native Hawaiian organizations.

Under the ACHP's regulations, "descendants" are not identified as consulting parties by right. However, federal agencies shall consult with Indian tribes and Native Hawaiian organizations that attach religious and cultural significance to burial sites, human remains and associated funerary objects, and be cognizant of their expertise in, and religious and cultural connection to, them. In addition, federal agencies should recognize a biological or cultural relationship and invite that individual or community to be a consulting party [36 CFR § 800.3(f)(3)].

When federal or state law does not direct disposition of human remains or funerary objects, or when there is disagreement among claimants, the process set out in NAGPRA may be instructive. In NAGPRA, the "ownership or control" of human remains and associated funerary objects lies with the following in descending order: specific lineal descendants; then tribe on whose tribal lands the items were discovered; then tribe with the closest cultural affiliation; and then tribe aboriginally occupying the land, or with the closest "cultural relationship" to the material.

Definitions Used for the Principles

- **Burial Site**: Any natural or prepared physical location, whether originally below, on, or above the surface of the earth, into which as a part of the death rite or ceremony of a culture, individual human remains are deposited [25 U.S.C. 3001.2(1)].
- **Consultation:** The process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the Section 106 review process [36 CFR § 800.16(f)].
- **Consulting parties:** Persons or groups the federal agency consults with during the Section 106 process. They may include the State Historic Preservation Officer; the Tribal Historic Preservation Officer; Indian tribes and Native Hawaiian organizations; representatives of local governments; applicants for federal assistance, permits, licenses, and other approvals; and/or any additional consulting parties [based on 36 CFR § 800.2(c)]. Additional consulting parties may include individuals and organizations with a demonstrated interest in the undertaking due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties [36 CFR § 800.2(c)(6)].
- **Disturbance:** Disturbance of burial sites that are listed in or eligible for listing in the National Register of Historic Places will constitute an adverse effect under Section 106. An adverse effect occurs when "an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, setting, materials, workmanship, feeling, or association" [36 CFR § 800.5(a)(1)].
- **Federal land:** Lands under a federal agency's control. Mere federal funding or permitting of a project does not turn an otherwise non-federal land into federal land (see *Abenaki Nation of Mississquoi* v. *Hughes*, 805 F. Supp. 234 (D. Vt. 1992), aff'd, 990 F. 2d 729 (2d Cir. 1993) (where the court found that a Clean Water Act permit issued by the US Army Corps of Engineers did not place the relevant land under federal "control" for NAGPRA purposes).
- **Funerary objects:** "items that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed intentionally at the time of death or later with or near individual human remains" [25 U.S.C. 3001(3)(B)].
- **Historic property:** "Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. It includes artifacts, records, and remains that are related to and located within such properties, and it includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register of Historic Places criteria" [36 CFR § 800.16(1)].
- **Human remains:** The physical remains of a human body. The term does not include remains or portions of remains that may reasonably be determined to have been freely given or naturally shed by the individual from whose body they were obtained, such as hair made into ropes or nets [see 43 CFR § 10.2(d)(1)].
- **Indian Tribe**: "An Indian tribe, band, nation, or other organized group or community, including a Native village, Regional Corporation or Village Corporation, as those terms are defined in Section 3 of the Alaska Native Claims Settlement Act [43 U.S.C. 1602], which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians" [36 CFR § 800.16(m)].
- **Native American:** Of, or relating to, a tribe, people, or culture that is indigenous to the United States [25 U.S.C. 3001 (9)]. Of, or relating to, a tribe, people, or culture indigenous to the Unites States, including Alaska and Hawaii [43 CFR 10.2(d)].

- **Native Hawaiian:** Any individual who is a descendant of the aboriginal people who, prior to 1778, occupied and exercised sovereignty in the area that now constitutes the state of Hawaii [36 CFR § 800.16(s)(2)].
- **Native Hawaiian Organization:** Any organization which serves and represents the interests of Native Hawaiians; has as a primary and stated purpose the provision of services to Native Hawaiians; and has demonstrated expertise in aspects of historic preservation that are significant to Native Hawaiians [36 CFR § 800.16(s)].
- **Policy statement:** A formal statement, endorsed by the full ACHP membership, representing the membership's collective thinking about what to consider in reaching decisions about select issues, in this case, human remains and funerary objects encountered in undertakings on federal, tribal, state, or private lands. Such statements do not have the binding force of law.
- **Preservation in place:** Taking active steps to ensure the preservation of a property.
- **Protection of Historic Properties**: Regulations [36 CFR Part 800] implementing Section 106 of the National Historic Preservation Act.
- **Section 106**: That part of the National Historic Preservation Act which establishes a federal responsibility to take into account the effects of undertakings on historic properties and to provide the Advisory Council on Historic Preservation a reasonable opportunity to comment with regard to such action.
- **State Historic Preservation Officer:** The official appointed or designated pursuant to Section 101(b)(1) of NHPA to administer the state historic preservation program.
- **Tribal Historic Preservation Officer**: The official appointed by the tribe's chief governing authority or designated by a tribal ordinance or preservation program who has assumed the responsibilities of the SHPO for purposes of Section 106 compliance on tribal lands in accordance with Section 101(d)(2) of NHPA.
- **Treatment:** Under Section 106, "treatments" are measures developed and implemented through Section 106 agreement documents to avoid, minimize, or mitigate adverse effects to historic properties.

Acronyms Used for the Policy Statement
- **ACHP**: Advisory Council on Historic Preservation.
- **ARPA**: Archaeological Resources Protection Act [16 U.S.C. 470aa-mm].
- **NHPA**: National Historic Preservation Act [16 U.S.C. § 470f].
- **NAGPRA**: The Native American Graves Protection and Repatriation Act [25 U.S.C. 3001 et seq].
- **SHPO**: State Historic Preservation Officer
- **THPO**: Tribal Historic Preservation Officer

[The members of the Advisory Council on Historic Preservation unanimously adopted this policy on February 23, 2007]

APPENDIX D

RIHPHC RULES AND REGULATIONS PERTAINING TO REGISTRATION AND PROTECTION OF HISTORIC CEMETERIES

RULES AND REGULATIONS PERTAINING TO

Registration and Protection of Historic Cemeteries

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
Historical Preservation & Heritage Commission Adopted May 9, 2012

Rhode Island Historical Preservation & Heritage Commission The Old State House
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STATE OF RHODE ISLAND

HISTORICAL PRESERVATION & HERITAGE COMMISSION

RULES FOR THE REGISTRATION AND PROTECTION OF HISTORIC CEMETERIES

Adopted May 9, 2012

INTRODUCTION

These regulations are promulgated pursuant to the authority conferred under Title 23 Chapter 18-11.2 of the General Laws of Rhode Island, as amended, and are proposed for the purpose of establishing standards for cities and towns to register and regulate historic cemeteries in the absence of a local ordinance.

Furthermore, pursuant to the provisions of section 42-35-3(c) of the General Laws of Rhode Island, as amended, the following issues have been given consideration in arriving at the amended regulations: (a) alternative approaches to the regulations; and (b) duplication or overlap with other state regulations.

No alternative approaches or overlap was identified. Consequently, the rules and regulations are adopted in the best interest of the public health, safety and welfare.

The Commission, at this time, has determined that the requirements are the minimum necessary to accomplish its purpose and will not negatively impact small businesses.

1. Authority

Rhode Island General Laws Title 23, Chapter 18 authorizes City and Town Councils to prescribe standards regulating historic cemeteries in order to prevent any construction or excavation that might cause deterioration of or damage to any cemetery or burial ground, or to any structures or gravesites located in any cemetery or burial ground or any historic cemetery. In addition, the statute specifies that the city or town recorder of deeds shall maintain a register of all historical cemeteries located within

the city or town and shall note the location of each historical cemetery so registered on the appropriate tax assessor's map. [23-18-11 and 23-18-10.1]

Rhode Island General Laws Title 23 Chapter 18-11.2 authorizes that in the absence of a local ordinance establishing standards regulating historic cemeteries, regulations adopted by the Historical Preservation & Heritage Commission shall govern.

Rhode Island General Laws Title 42 Chapter 45 established the Historical Preservation & Heritage Commission as an independent state agency within the executive department with responsibility to identify and protect historic properties and to advise municipal governments regarding their activities which may affect historic properties.

2. Purpose

The Rhode Island Historical Preservation & Heritage Commission finds that historic cemeteries have archaeological and scientific value, often are of great artistic, cultural and religious significance, and represent for all cultures a respect for the sanctity of human life. It is, therefore, the policy of the Historical Preservation & Heritage Commission (RIHPHC) that marked or unmarked historic cemeteries are to be preserved and are not to be altered or removed except as provided for in this regulation.

3. Definitions

a) "Applicant" means the person who seeks approval from the city or town council to alter or remove a historic burial or grave or structure located within a historic cemetery or to undertake excavation within twenty-five (25) feet of a historic cemetery.

b) "Archaeological burial site" means an area of land that has been used for interment of human remains for more than one hundred (100) years, including burial of Native American or other ethnic groups. An archaeological burial site may be unmarked and unrecorded prior to discovery.

c) "Archaeological Investigation" means the examination of a physical land area, including subsurface deposits, for the purpose of obtaining information on the archaeological resources located on, in, or under the land, using the methods and techniques of archaeology, as specified in the RIHPHC Performance Standards And Guidelines For Archaeological Projects (Standards for Archaeological Survey). Archaeological investigations carried out to comply with 23-18 should be conducted under a permit from the RIHPHC.

d) "Family cemetery" means an historic cemetery that is not associated with a specific religious organization but that is the site of burial for persons related by blood, marriage or household.

e) "Historic cemetery" or "historical cemetery" means any tract of land which has been for more than one hundred (100) years used as a burial place for human remains, whether or not marked with an historic marker or gravestone, including, but not limited to, ancient burial places known or suspected to contain the remains of one or more Native Americans. A historic cemetery may contain one or more graves or burial sites. In order to meet the requirement of 23- 18-11(b), the term "historic cemetery" also refers to an area twenty-five (25) feet in width around the perimeter of the cemetery. [23-18-1(5) and 23-18-11(b)]

f) "Human remains" means any parts or remains of deceased persons, including skeletal remains or cremated ashes.

g) "Grave" means any site where human remains have been interred. The term grave includes grave markers, funerary objects, and cultural remains and artifacts associated with the interment. A grave shall include mausoleums, crypts or other structures designed to house human remains.

h) "Least disruptive" means a method of construction, excavation, removal or any other activity that has the least destructive impact on the historic cemetery, grave, or human remains.

i) "Owner" means the owner of a parcel of land.

j) "Religious cemetery" means any cemetery owned or maintained by a religious organization.

k) "Religious organization" means an organization representing the adherents of any religious society.

l) "Site alteration plan" means a document showing in written text and graphic plan the proposed alteration of an historic cemetery, archaeological burial site or family cemetery, including detailed specifications for alteration, removal and reinterment of human remains.

4. Registering Historic Cemeteries [23-18-10.1]

a) The recorder of deeds in every city and town shall maintain a register of all historic cemeteries located within the city or town. The register of historic cemeteries shall include information that documents the historic cemetery. A historic cemetery may be registered on the basis of currently available information.

b) The recorder of deeds shall provide information about the location of each registered historic cemetery to the tax assessor, and the tax assessor shall record each registered historic cemetery on the appropriate tax assessor's map with a symbol consisting of the letters "CEM" inside a rectangle.

c) It shall be the responsibility of the owner to provide information about the historic cemetery to the recorder of deeds. Every deed presented for recording a transfer in ownership of property that has an historic cemetery located on it shall have endorsed upon the deed, in capital letters, a notation that a historic cemetery is located on the property. Failure to comply with this section shall not affect the validity of any deed. [34-11-1.5]

d) When registering a historic cemetery, the recorder of deeds should give consideration to the following information and may consult with the RIHPHC.

(1) Religious, Institutional, and Public Historic Cemeteries. Historic cemeteries owned or maintained by religious, private, or public institutions typically have good documentation of their boundaries and their interments. They are highly visible; their boundaries generally are well- defined; they are recorded in local records; and there may be records and plans of interments. Many have perpetual care and maintenance programs. For registration purposes, documentation should include mapping and visual evidence of individual grave markers and of a fence or wall enclosing the cemetery (if present); a written description of the cemetery, its age and condition and historical importance; a

listing of names and vital dates of those interred; and a cemetery plan indicating position of graves. Adequate documentation may consist of summary information and reference to the location of additional records.

(2) Family Cemetery. Family historic cemeteries may be documented in town land records. Physically they often have a readily apparent form with burials arranged in rows or organized by family groupings, and sometimes enclosed by a stone wall or iron fence. Graves generally are marked by headstones; some have headstones and footstones. Typically, gravestones are shaped and inscribed. Plain fieldstone markers with minimal shaping and no inscriptions are also common, especially from the colonial period, and some historic cemeteries consist entirely of uninscribed markers.

For registration purposes, documentation should include a summary of any relevant land evidence records, a location map, a cemetery plan indicating position of graves and a visual record of individual grave markers and of any fence or wall, whole or remnant, enclosing the cemetery; a written description of the cemetery, its age and condition and historical importance; and a listing of names and vital dates of those interred. Whether enclosed or not by a fence or wall, Family Cemeteries are usually spatially discrete. However, boundary definition generally requires a study of the twenty-five (25) foot buffer area outside and adjacent to the enclosure because unrecorded and unmarked graves sometimes occur outside the enclosure.

Some Family Cemeteries are unmarked and difficult to see. Cemeteries without enclosures, marked only by rough fieldstones, or those whose grave markers have been removed may be discovered inadvertently when graves are disturbed during a construction project.

Archaeological documentation generally is of two kinds: non-intrusive and intrusive. In an area of a suspected grave or graves, non-intrusive archaeological testing can be used to expose just the top of a grave shaft or burial feature without exposing a burial container or human remains. This limited testing may provide sufficient documentation when other graves are known to exist nearby. Alternatively, in some situations it may be necessary to excavate a suspected grave or burial feature to determine if human remains or associated cultural remains or artifacts are present. Archaeological investigation should be performed by a qualified archaeologist working under a permit issued by the Historical Preservation & Heritage Commission. Examination of human remains should be performed by a qualified physical anthropologist, paleopathologist, or a forensic specialist. Intrusive investigation should occur only when absolutely necessary, as exposing or removing human remains damages the integrity of the burial and is considered an act of desecration by many people. The Historical Preservation & Heritage Commission's Performance Standards for Archaeological Survey provide guidance on archaeological verification.

(3) Archaeological Burial Site. Native American historic cemeteries and burials frequently are unmarked and unrecorded. An archaeological burial site may be hundreds or even thousands of years old. Since the beginning of European settlement in the 1600s, many Native American burial places have been lost as the land was developed. However, many Indian cemeteries and burials still exist, and some have been re-discovered during construction projects and archaeological investigations.

Native American historic cemeteries vary greatly in form and complexity, but generally they can be described by three sub-types: (a) single isolated burials; (b) tightly-organized, spatially compact cemeteries that contain multiple graves; (c) one or more groups of burials of various sizes that can be spread across a large area. As an example of the latter, the West Ferry Narragansett Indian Cemetery in Jamestown contains grave clusters as much as seventy-five (75) feet apart from each other. Within each of these subtypes, the specific kind of burial may include individual graves, cremation burials,

ossuaries, or a combination of the three. Native American graves frequently contain associated cultural remains or artifacts that were buried with the deceased person.

Documentation of an archaeological burial site may require written historical evidence, tribal oral history, or archaeological evidence. For registration purposes, documentation should include mapping of known graves; and a written description of the cemetery, its age, condition and historical importance. Deed records may include information about grave sites. Newspaper articles, published papers and unpublished manuscripts sometimes provide accounts of graves that were unearthed in the past during construction or other ground-disturbing activities. Tribal oral history and traditional knowledge may indicate the location of a historic cemetery, and may provide information about previous disturbance of graves by vandals or construction activities. Accounts of previous collecting of Indian artifacts may suggest the possible location of Indian graves.

The definition of "historic cemetery" includes “ancient burial places known or suspected to contain the remains of one or more American Indians.” Places may be suspected to contain graves when historical or archaeological contextual information strongly suggests that graves might be present. For example, when unmarked Indian graves are found, additional graves may be dispersed in small or large groupings over a larger area. Contextual evidence may justify a strong suspicion that additional graves are present in areas that have not been examined.

Registration and Protection of Historic Cemeteries (5/9/2012) Archaeological documentation generally is of two kinds: non-intrusive and intrusive. In an area of a suspected grave or graves, non-intrusive archaeological testing can be used to expose just the top of a grave shaft or burial feature without exposing a burial container or human remains. This limited testing may be sufficient documentation when other graves are known to exist nearby. Alternatively, in some situations it may be necessary to excavate a suspected grave or burial feature to determine if human remains or associated cultural remains or artifacts are present. Archaeological investigation should be performed by a qualified archaeologist working under a permit issued by the historical preservation & heritage commission. Examination of human remains should be performed by a qualified physical anthropologist, paleopathologist, or a forensic specialist. Intrusive investigation should occur only when absolutely necessary, as exposing or removing human remains damages the integrity of the burial and is considered an act of desecration by many people. The Historical Preservation & Heritage Commission’s Performance Standards for Archaeological Survey provide guidance on archaeological verification.

Stone piles are suspected by some people to mark Native American burials. In Rhode Island there is no documentary or archaeological evidence linking stone piles to human burials. However, Narragansett Tribal history holds that some stone piles indicate the location of graves or have ceremonial importance. In Connecticut, there is archaeological evidence that links stone piles with human burials at the Long Pond Pequot Indian cemetery. In the Canadian Maritimes, there are many examples of stone pile burial markers that have been studied and documented by professional archaeologists.

While stone piles can vary greatly in shape and size, those most often suspected to be Indian burial or ceremonial features generally have an oval, round or conical appearance. Some of these stone piles rise just above the surface of the ground, consisting of one or more courses of cobblestones; others, constructed of cobbles and fieldstones of various shapes and sizes, rise several feet above the surface of the ground. Before conducting any archaeological verification that would require disturbing a stone pile, consideration should be given to its possible ceremonial nature and spiritual significance and the feasibility of leaving the feature intact.

5. Regulation of Excavation or Construction at Historic Cemeteries [23-18-11 & 11.1]

(a) It shall be unlawful for any person to disturb, excavate, deposit fill, remove or destroy buried human remains, grave markers, funerary objects or associated cultural remains and artifacts, or conduct any other activities that would damage or diminish the integrity of any historic cemetery or any historic structure or gravesite located in a historic cemetery without first obtaining a permit from the city or town council to alter or remove said historic cemetery.

(b) This requirement shall not apply to the ordinary installation of gravesites or monuments, markers, or mausoleums. Nothing in this regulation shall be deemed to prohibit the routine maintenance and repair of historical gravesites, nor shall it contravene the authority of municipal bodies under § 45-5-12 to hold, manage, repair, or maintain any neglected burial ground.

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(c) No construction, excavation or other ground disturbing activity is allowed within twenty- five (25) feet of a recorded historic cemetery without first obtaining a permit from the city or town in accordance with section 5(d) or in accordance with sections 5(e), 5(f), and 5(g) of this regulation.

(d) The city or town building official may issue a permit to allow excavation or construction within twenty-five (25) feet of a historic cemetery when the boundaries of the cemetery are adequately documented and there is no reason to believe additional graves exist outside the recorded cemetery and the proposed construction or excavation activity will not damage or destructively alter the historic cemetery through erosion, flooding, filling, or encroachment. In order to assure adequate documentation for the purposes of this section, the building official may require the property owner at his or her expense to undertake an archaeological investigation which is conducted under a permit issued by the Historical Preservation & Heritage Commission to determine the boundaries of the unmarked cemetery and to establish that additional graves do not exist in an area twenty-five (25) feet in width along the perimeter of any cemetery, grave or archaeological burial site. A written report shall be produced incorporating the findings of the archaeological investigation in text and graphic form. A copy of the report shall be provided to the building official and to the Historical Preservation & Heritage Commission. In the event the building official denies a request for a permit, the owner may apply for approval by the city or town council in accordance with sections 5(e), 5(f), and 5(g) of this regulation.

(e) The city or town council may issue a permit to allow the alteration or removal of a historic cemetery or excavation or construction within twenty-five (25) feet of a historic cemetery only after concluding, based on evidence submitted to the council at a public hearing, that all alternatives to the proposed activity have been examined and that no prudent and feasible alternative to the proposed activity is possible.

(f) In order for the city or town council to clearly assess the proposed project, the following information should be submitted unless otherwise required by the city or town council. When evaluating the information submitted, the city or town council shall consult the register of historic cemeteries maintained by the recorder of deeds and should give consideration to the types of information described in section 4.d "Registering Historic Cemeteries." The city or town council may request and consider comments of the Historical Preservation & Heritage Commission regarding documentation of the historic cemetery or gravesite.

(1) Detailed site plans drawn to scale and stamped by a registered land surveyor at a minimum scale of one (1) inch equals forty (40) feet, showing the boundaries of the property in question, topographical contour intervals of no more than one foot, a surveyed boundary of the

cemetery and a setback area of no less than twenty-five (25) feet, and a plan of all improvements proposed on the site that necessitate disturbance of the cemetery;

(2) (i) A written description of the cemetery; its age and condition; historical importance; whether the cemetery is religious, family, publicly owned or other kind of cemetery; Registration and Protection of Historic Cemeteries (5/9/2012) a listing of names and vital dates of those interred as may be determined from grave markers on site; and a cemetery plan indicating position of graves, and to the extent possible, the identities of those interred;

(ii) When an application has been made for alteration, construction, or excavation at a historic cemetery and the boundary is unknown or in doubt, the applicant, at his or her own expense, shall conduct an archaeological investigation to determine the actual boundaries of the cemetery prior to final consideration by the city or town council of the application to alter or remove it. Archaeological investigation shall be performed by a qualified archaeologist working under a permit issued by the Historical Preservation & Heritage Commission and a report shall be submitted to the city or town council.

Alternatively, when the applicant proposes to preserve the historic cemetery, grave, or archaeological burial site, the city or town council may accept the results of an archaeological investigation of the proposed site alteration area that demonstrates that no graves or archaeological burial sites are affected. The archaeological investigation shall be performed by a qualified archaeologist working under a permit issued by the Historical Preservation & Heritage Commission and a report shall be submitted to the city or town council.

(iii) When an application has been made for alteration, construction, or excavation at a historic cemetery that is suspected to contain graves or archaeological burial sites based on historical or archaeological contextual information and the boundary is unknown or in doubt, the applicant, at his or her own expense, shall conduct an archaeological investigation of the proposed site alteration area that demonstrates that no graves or archaeological burial sites are affected. The archaeological investigation shall be performed by a qualified archaeologist working under a permit issued by the Historical Preservation & Heritage Commission and a report shall be submitted to the city or town council.

(3) A detailed site alteration plan indicating the extent of proposed disruption of the cemetery, methods of construction or removal of human remains, reburial plan, including in text and plan the relocation of graves;

(4) In the event of a religious, institutional, or public historic cemetery, identification of the owner and reference to additional records;

(5) In the event of a family cemetery, a genealogical study to identify whether descendants of the families of the interred can be identified and if any descendants still reside in Rhode Island;

(6) In the event of an archaeological burial site or Native American historic cemetery, the results of archival research and professional archaeological investigation performed by a qualified archaeologist working under a permit issued by the Historical Preservation & Heritage Commission, and a listing of the Indian Tribe or Tribes whose ancestral lands included the property;

(7)

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(7) Whether the cemetery or burial place has significant archaeological, artistic, or historical value and if further studies will be completed as part of its alteration or removal; and

(8) Any further information and study the city or town council deems reasonably necessary to complete its consideration of the request to alter a historic cemetery or gravesite in compliance with RIGL 23-18, including whether the alteration or removal serves the interests, health, welfare and safety of the public and is not for commercial or personal expediency.

(g) Hearing by the city or town council.

(1) Public Notice. Upon receipt of the required documentation, the city or town council shall set the date of hearing and cause the matter to be publicly advertised at the applicant's expense in a local newspaper not less than two weeks prior to the hearing. The Historical Preservation & Heritage Commission shall simultaneously be notified and an advisory opinion shall be requested of the city or townplanner.

(2) Notice to Interested Parties. Interested Parties shall be provided with reasonable notice of the hearing and shall be permitted to provide written and oral testimony.

(i) In the event of archaeological burials and historic Native American graves, the city or town shall provide notice by regular mail of the subject, date and time of the public hearing to the Narragansett Tribal Historic Preservation Officer, the Tribal Council of the Aquinnah Wampanoag Indian Tribe, the Tribal Council of the Mashpee Wampanoag Indian Tribe, and the Tribal Council of the Mashantucket Pequot Indian Tribe.

(ii) In the event an application involves the cemetery of an extant religious society, an extant institution, or a public body, notice of the hearing shall be provided by regular mail.

(iii) In the event the application involves a family cemetery, the interred of which have living lineal descendants, the applicant, at his or her expense, shall make all reasonable efforts to notify lineal descendants, including sending notice to descendants via certified mail, or publication of the notice in a daily newspaper of statewide circulation at least once per week for three successive weeks prior to thehearing.

(iv) In the event the city or town has established a historic district commission in accordance with Rhode Island General Laws 45-24.1, a copy of the application shall be submitted to the historic district commission for deliberation whether to issue a certificate ofappropriateness.

(3) Burden of Proof. At the hearing, the applicant shall prove to the satisfaction of the city or town council that:

Registration and Protection of Historic Cemeteries (5/9/2012) (i) The applicant has examined all alternatives and conclusively demonstrated that no prudent or feasible alternative to the proposed alteration is possible, including redesign of the proposed site alteration, construction, or excavation in order to preserve the historic cemetery, grave, or archaeological burial site; or [23-18-11.1(1)]

(ii) That the proposed alteration serves the interests of health, welfare and safety of the public.

(4) Final Action. The city or town council shall conduct a public hearing on the proposed project and shall render a decision approving, denying or approving with reasonable conditions, the proposed site alteration plan, and may set other requirements of the applicant deemed sufficient to carry out the purposes of RIGL 23-18 including but not limited to:

(i) The city or town council may require that the alteration or removal of a historic cemetery or gravesite be carried out under the supervision of a professional archaeologist acting under a permit issued by the Historical Preservation & Heritage Commission. [23-18-11.1(c)]

(ii) The city or town council may require that the applicant file an accurate record with the recorder of deeds of any relocation of a historic grave or archaeological burial site to insure that any remains removed are properly re-interred and the location of the new interment is recorded. A report of any grave removal and relocation from one cemetery or burial ground to another shall be filed in the clerk's office for each municipality and shall, to the extent permitted by law, be available for public inspection. In instances where there is a headstone or other burial marker identifying the original grave, the headstone or burial marker shall be erected on the site to which any remains are transferred. [23-18-11.2]

6. Previously Unknown Historic Cemeteries or Archaeological Burial Sites [23-18-11(c)]

(a) Discovery. Whenever a previously unknown cemetery, unmarked cemetery, archaeological burial site, or human skeletal material is inadvertently located during any construction, excavation, or other ground disturbing activity, including archaeological excavation, the building official of the city or town where the discovery is located shall be immediately notified. The building official shall, in turn, notify the state medical examiner and the Historical Preservation & Heritage Commission if the grave, cemetery, or skeletal material appears to be historic.

(b) Cessation of Construction or Excavation Activity. The city or town building official shall require the cessation of construction or excavation activity.

(c) Archaeological Investigation. Prior to the continuation of any further construction, excavation, or other ground disturbing activity, and unless the provisions of § 23-18-7 shall apply, the property owner at his or her expense shall undertake an archaeological investigation which should be conducted under a permit issued by the Historical Preservation & Heritage Registration and Protection of Historic Cemeteries (5/9/2012)
Commission to determine the boundaries of the unmarked cemetery. In addition, the archaeological boundary investigation shall establish an area twenty-five (25) feet in width along the perimeter of any grave or archaeological burial site. A written report shall be produced incorporating the findings of the archaeological investigation in text and graphic form. A copy of the report shall be provided to the building official and to the Historical Preservation & Heritage Commission. [25-18-11(c)]

Alternatively, in order to avoid historic graves or archaeological burial sites, the property owner may redesign the proposed site alteration plan and conduct an archaeological investigation under a permit issued by the Historical Preservation & Heritage Commission to demonstrate that no graves or archaeological burial sites will be affected and that at least twenty-five (25) feet separates the proposed project from any grave or archaeological burial site. A written report shall be produced incorporating the findings of the archaeological investigation in text and graphic form. A copy of the report shall be provided to the building official and to the Historical Preservation & Heritage Commission.

(d) Recording as a Historic Cemetery. In the event that the cemetery meets the criteria for a historic cemetery, the building official shall so advise the recorder of deeds of the city or town who shall record and register the cemetery in accordance with the provisions of this regulation.

(e) Continuing Construction or Excavation Activity. The building official may allow the construction or excavation activity to continue provided that the requirements of this regulation are met with regard to a historic cemetery or archaeological burial site, and in conformance with any other city or town regulations.

7. Penalties.

(a) Any person convicted of violating the provisions of 23-18 shall be subject to a fine of not more than one thousand dollars ($1,000) and such fine shall be deemed civil in nature and not a criminal penalty. Each day that a violation remains unresolved shall be deemed to be a separate and distinct violation. [23-18-11.2]

(b) The provisions of this section shall be considered to be in addition to any other penalties provided for desecration or vandalism to cemeteries.

8. Abatement from taxation. In accordance with Rhode Island General Laws 44-3-63, city and town councils are authorized to provide by ordinance an abatement from taxation for any real property on which is located a historical cemetery registered in accordance with this regulation and to provide by ordinance for full or partial reimbursement of expenses incurred in repairing and maintaining such historical cemeteries, including walls or fences surrounding such cemeteries.

Registration and Protection of Historic Cemeteries (5/9/2012)
Registration and Protection of Historic Cemeteries (5/9/2012)

ATTACHMENT 6 – FALMOUTH TERRESTRIAL ARCHAEOLOGICAL MONITORING PLAN

MAYFLOWER WIND

Falmouth Phase 1B Work Plan

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AECOM Imagine it. Delivered.

Mayflower Wind Project

Intensive (Locational) Archaeological Survey and Archaeological Construction Monitoring Plan

Mayflower Wind Energy LLC

August 3, 2022

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1. Introduction

Mayflower Wind Energy LLC (Mayflower Wind) proposes an offshore wind renewable energy generation resource (Clean Energy Resource) located in federal waters off the southern coast of Massachusetts in the Outer Continental Shelf (OCS) Lease Area OCS-A 0521 (Lease Area). To deliver energy from the Clean Energy Resource, Mayflower Wind is proposing transmission facilities, including transmission facilities in state waters and onshore (Project). The proposed Project will deliver electricity to the regionally administered transmission system via export cables landing in Falmouth, Massachusetts and an onshore transmission system interconnecting at a point of interconnection (POI) expected to be in Falmouth, Massachusetts.

The export cable landing locations in Falmouth and terrestrial portions of the Project as they extend north to the POI will involve subsurface construction activities (Figure 1-1). In order to meet the Bureau of Ocean Energy Management (BOEM) requirements and to meet its obligations under Section 106 of the National Historic Preservation Act (NHPA) (36 CFR 800), the Archeological Resources Protection Act (AGPRA), and the National Environmental Policy Act (NEPA), Mayflower Wind conducted an archaeological field assessment in accordance with Massachusetts General Laws Chapter 9, Sections 26-27C and 950 CMR 70 and 71 under permit #4080 issued by the Massachusetts Historical Commission (MHC) on April 9, 2021.

Project Description

The following sections describe the proposed Mayflower Wind Project including the POI and terrestrial portions of the transmission system.

Point of Interconnection

Although the POI for Mayflower Wind's interconnection requests in the ISO New England Inc. (ISO-NE) interconnection queue seeking interconnection on Cape Cod is currently stated as in Bourne, Mayflower Wind expects that ISO-NE will move the queue position to a POI in Falmouth. This move will be the result of the ISO-NE Tariff-driven interconnection cluster process.

On October 21, 2020, ISO-NE initiated the Cape Cod Resource Integration Study (Cluster Study). The Cluster Study was triggered under the ISO-NE Tariff because there are multiple projects proposing to interconnect in the same electrical area of the transmission system and such projects cannot interconnect without the use of common significant new transmission infrastructure rated at or above 115 kV AC or high voltage DC. In the Cluster Study process, ISO-NE can relocate a Project's POI to facilitate the interconnection of the projects in the cluster and meet reliability requirements. ISO-NE determined that certain Mayflower Wind interconnection queue positions on Cape Cod were eligible to enter the cluster, subject to availability of capacity in the cluster after higher queued positions enter.

The location of the new POI is expected to be at a new substation in Falmouth in the immediate vicinity of existing electrical infrastructure located at or near the Eversource Falmouth Tap substation. The required upgrades to facilitate the relocation of the POI, and to interconnect up to 1,200 MW from Mayflower Wind, would be determined and managed through the interconnection cluster process by ISO-NE and the interconnecting transmission owner (NSTAR

Electric Co. d/b/a Eversource). Mayflower Wind expects that, for its preferred route, its responsibility for permitting, engineering, and construction would end at the point of change of ownership (POCO) between its transmission facilities and those of Eversource near Mayflower Wind's substation in Falmouth, with Eversource responsible for permitting and building the facilities needed to interconnect the Project to the POI.

Transmission System

Portions of the Project within state geographic jurisdiction include the entire onshore transmission route, the proposed onshore substation, and the portion of the offshore export cable corridor (ECC) in state waters (Figure 1-1). After crossing into state waters to the south of Martha's Vineyard and Nantucket, the ECC continues north to the landfall in Falmouth. The sea-to-shore transition of the offshore export cables will be accomplished with horizontal directional drilling (HDD) at a potential landing location in Falmouth. The preferred landfall location is within Worcester Park between Grand Avenue and Nantucket Avenue at their intersection with Worcester Avenue (for detailed views of project components, see attachment "Proposed Intensive (Locational) Archaeological Survey Strategy). An alternative landfall location within Central Park remains under consideration. The offshore ECC is the subject of separate studies undertaken by R. Christopher Goodwin & Associates, Inc. (RCG&A) which is currently being reviewed by the Massachusetts Board of Underwater Archaeological Resources (BUAR).

The underground onshore export cables between the landfall location and an onshore substation to be built in Falmouth will be installed within existing roadways with the exception of portions buried within Worcester Park, a landscaped strip of land that separates opposing traffic lanes of Worcester Avenue. The new Lawrence Lynch onshore substation (preferred) in Falmouth will transform the voltage to 345 kV. An alternate substation location at Cape Cod Aggregates in Falmouth remains under consideration.

As noted, interconnection transmission from the Mayflower Wind substation to the POI (preferred) would be permitted, designed, and constructed by the interconnection transmission owner in the utility right-of-way (ROW). The Project transmission alternative would construct an underground transmission cable (up to 345 kV) within the local roadway to a POI determined based on the cluster study. Mayflower Wind would be responsible for the construction of the underground transmission cable up to the POI within the roadway.

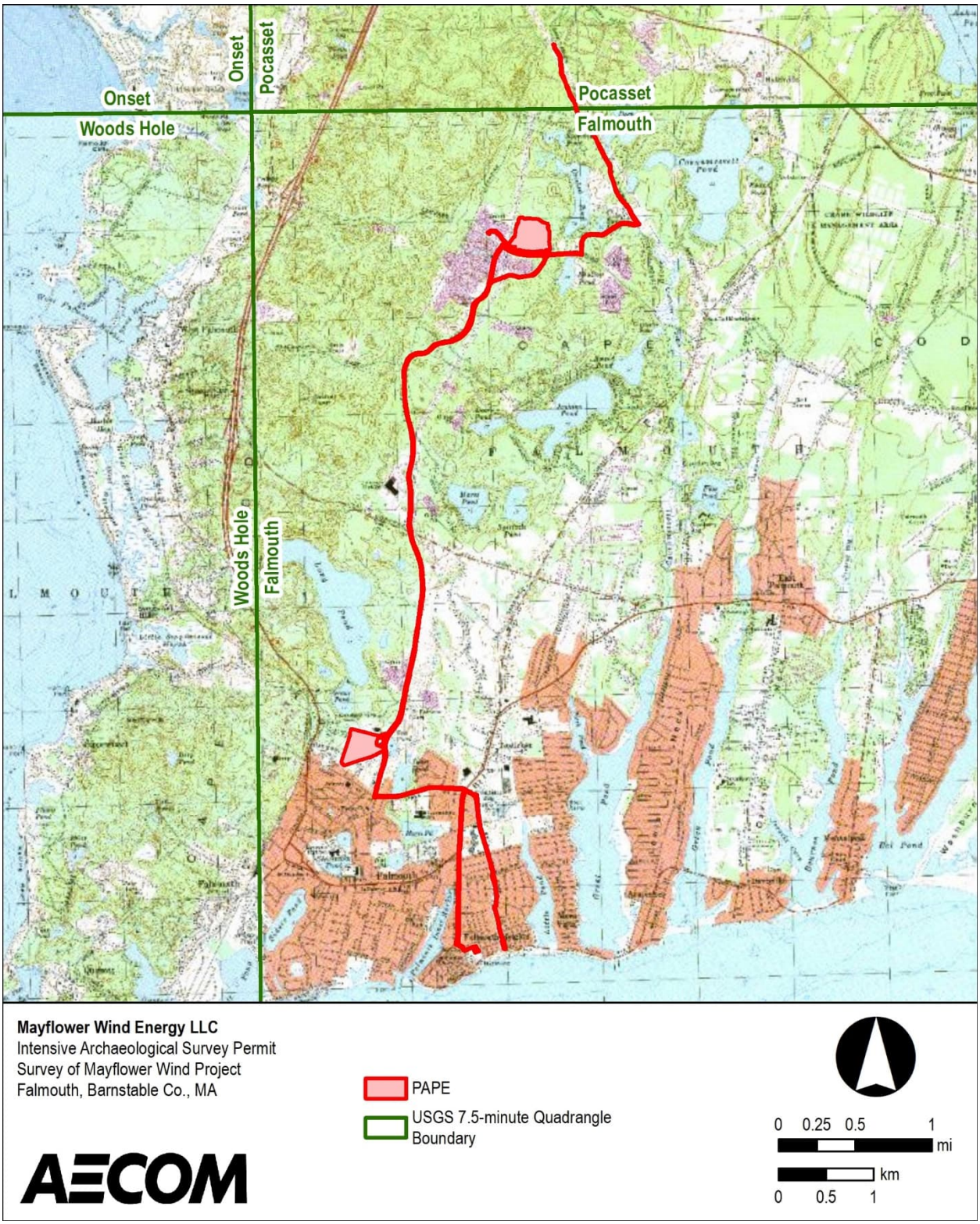

Figure 1-1 Indicative Onshore portions of the Project to be considered in this permit

Table 1-1 provides a summary of pertinent Project details associated with the Project Area relevant to this application.

Table 1-1. Key Project Details for Areas Included in the Phase 1A Study

Project Attribute	Description
Sea-to-Shore Transition	To be accomplished with HDD Approximate Length of HDD: up to 4,920 feet (1.5 km) Target depth for HDD entry pit: 5 ft (1.52 m) Maximum depth for HDD entry pit: 10 ft (3.04 m) Target depth - excavation to install Transition Joint Bay (TJB): 16.75 ft (5.11 m) Maximum depth - excavation to install TJB: 28.75 ft (8.76 m) Target depth rage for HDD boring: 10 – 75 ft (3-23 m) Maximum depth for HDD boring: 100 ft (30.5 m)
Landfall Location(s)	Falmouth, MA Two landfall locations remain under consideration: Worcester Avenue (Preferred Alternative) and Central Park (Noticed Alternative),
Onshore Substation	Two locations remain under consideration: Lawrence Lynch (Preferred) and Cape Cod Aggregates (Alternative) Approximate substation development area: Up to 26 acres (10.5 hectares [ha]) Transformed voltage: 345-kV
Onshore Export Cables	Nominal underground onshore export cable voltage: 200 – 345 kV Up to 3 underground onshore export power circuits (with 3 single phase power cables per circuit) plus associated communications and grounding cables Length (Preferred): Up to 2.0 mi (3.2 km) Length (Alternative with variants): Up to 8.1 mi (13 km) Target depth of excavation for duct bank: 5.75 ft (1.75 m) Maximum depth of excavation for duct bank: 19.75 ft (6.02 m) Maximum number of locations with splice vault installations (Alternative with variants): 17 Target depth of excavation for splice vaults: 12.75 ft (3.89 m) Maximum depth of excavation for splice vaults: 24.75 ft (7.54 m) Width of Limit of Disturbance: 35 ft (10.7 m) (typical) – located within roadway layout Width of Limit of Disturbance at Splice Vault Locations: 50 ft (15.2 m) (typical) Area of Limit of Disturbance at Splice Vault Locations:0.46 ac (0.19 ha) (typical)
Substation and POI	New substation near or at the location of Falmouth Tap (an existing Eversource substation)
Transmission from Onshore Substation to POI	New, 345-kV overhead transmission line along existing utility ROW (Preferred Alternative) (Up to 5.1 mi [8.2 km] in length) to be designed, permitted and constructed by interconnecting transmission owner. New, 345-kV underground transmission cable(s) from Cape Cod Aggregates to Falmouth Tap Via Geggatt Rd to Turner Rd (Alternative) to be designed, permitted, and constructed by Mayflower Wind Up to 2.1 mi (3.4 km) in length Target depth of excavation for duct bank: 5.75 ft (1.75 m) Maximum depth of excavation for duct bank: 19.75 ft (6.02 m) Maximum number of locations with splice vault installations: 4 Target depth of excavation for splice vaults: 12.75 ft (3.89 m) Maximum depth of excavation for splice vaults: 24.75 ft (7.54 m) Width of Limit of Disturbance: 35 ft (10.7 m) (typical) – located within roadway layout

Project Attribute	Description
	Width of Limit of Disturbance at Splice Vault Locations: 50 ft (15.2 m) (typical) Area of Limit of Disturbance at Splice Vault Locations:0.46 ac (0.19 ha) (typical)

Purpose and Need

The proposed Project, as defined above, is required in order for BOEM as the lead federal permitting agency to meet its obligations under Section 106 of the National Historic Preservation Act (NHPA) (36 CFR 800), and the Archeological Resources Protection Act (AGPRA), and the National Environmental Policy Act (NEPA). All work will follow the Secretary of the Interior's *Standards and Guidelines for Archaeological Documentation* (48 FR 44734-37), as well as the Massachusetts Historical Commission's (MHC's) *Cultural Resources in Massachusetts: A Model for Management* (1979) and *Public Planning and Environmental Review: Archaeology and Historic Preservation Research Design and Survey* (1985a).

Preliminary Area of Potential Effects

The Project's preliminary area of potential effects (PAPE) is defined as the geographic area within which an undertaking may directly or indirectly cause alterations to the character or use of historic properties, if any such properties exist. A historic property is defined as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register maintained by the Secretary of the Interior (36 CFR 800.16[1]). The APE is defined by the potential for effect, based on an understanding of the type of proposed project and the physical and visual elements of the project that have the potential to effect historic properties. The archaeological PAPE is recommended to include all areas of possible temporary and permanent physical disturbances as presented in the Project Description of the Onshore Project Area (Figure 1-2). These areas include the two potential upland landfall sites and corresponding HDD entry pit and vault, either of the alternate onshore substation locations, and all onshore underground export and transmission cables. Given the early design stage and the complexity of the Project in considering a range of potential Project design and construction techniques associated with various Project components, this PAPE has the potential to change (e.g., smaller PAPE footprint). Since these locations and construction activities are preliminary and have the potential to change, along with the PAPE, AECOM and Mayflower Wind will consult with, and provide updated information to the Massachusetts Historical Commission (MHC), the BOEM, and the Tribes as the Project matures.

The current Project components under consideration have resulted in a much smaller PAPE footprint than that depicted in the permit application submitted on February 26, 2021 and approved on April 9, 2021 (Permit #4080). Overall, the PAPE changes have resulted in a significant reduction in the area covered. Principally, the Project is no longer using the 0.5-mile buffer as described on page 10 of that application. Instead, the PAPE has been refined to more specific potential limits of disturbance for each component. In addition to this overall reduction of the PAPE, specific components of the Project itself have changed. The Mill Road and Shore Street landfall locations and HDD sites have been removed. Instead, an alternative location at Central Park is being considered. The export cable routes associated with Mill Road and Shore Street have also been removed from consideration. An additional export cable route connecting the Central Park HDD site to the Jones Road portion of the Worcester Ave export cable route is being considered. The Yardwaste and Composting Site has also been removed from consideration as an option for the substation location. Current designs have moved the POI from a switching station in Bourne to Falmouth Tap – resulting in a huge PAPE footprint reduction. The above ground transmission line between the substations and Falmouth Tap

within the existing transmission line right of way is no longer being permitted or built as part of the Project. Lastly, the alternative underground transmission line following Route 28 has also been removed from the PAPE.

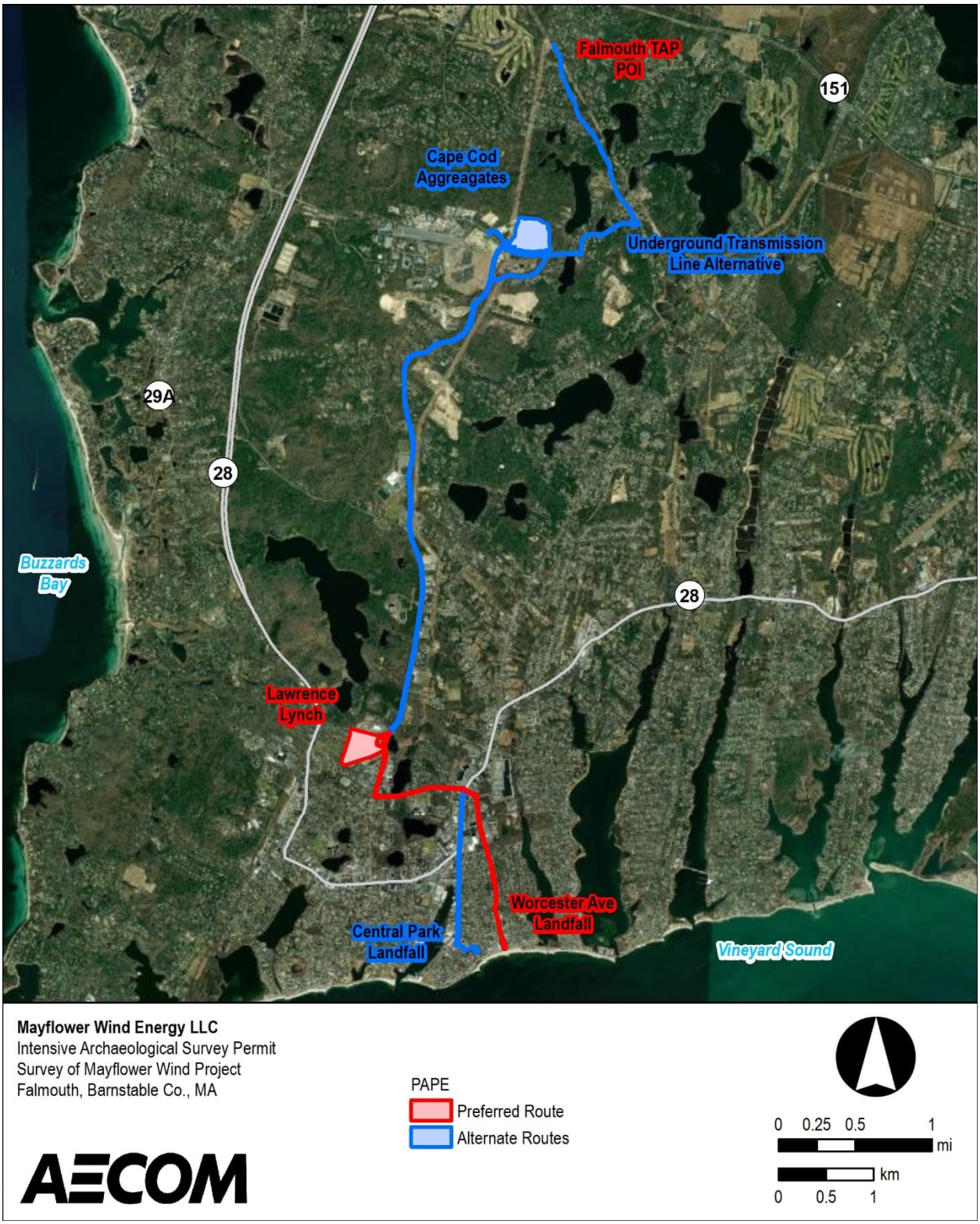

Figure 1-2 Preliminary Area of Potential Effects shown on Aerial Imagery

2. Research Design/Questions

The following is a brief summary of the ancient and historical contexts and references cited for the Project Area based on the preliminary background research conducted by AECOM. A more comprehensive context, as well as a list of references cited, will be included in the reconnaissance survey report submitted to MHC.

Human occupation of Inner Cape Cod extends back into the Paleoindian Period (12500-10000 BP). Retreating glaciers exposed habitable coastline and interiors featuring numerous wetland resources of varying salinity. Despite most characterizations of Paleoindian subsistence practices focused primarily on the hunting of megafauna, it is likely that inhabitants of Cape Cod exploited myriad facets of this emerging landscape (Dincauze and Curran 1984). Paleoindian sites are uncommon on Cape Cod, possibly due to changes wrought over successive millennia, not just through human development, but also erosion and inundation resulting from sea level rise caused by the continued retreat of glaciers (Holmes et al. 1998). While many potential sites would have been destroyed by these forces, there still exists potential for some submerged within Nantucket Sound around what would have been once ponds and rivers (Robinson et al. 2004).

Evidence for the Archaic Period (10000-3000 BP) on Cape Cod is primarily limited to the Late Archaic with sites from the Early and Middle Archaic mostly represented by projectile points stylistically similar to those identified elsewhere (McManamon 1984). However, the hallmarks of the Late Archaic are increasing intensification of practices that developed throughout the entire period. Population densities increased relative to the Paleoindian period and groups began to exploit a wider variety of resources across narrower swaths of territory. Rather than moving from locality to locality, more regular residences were established in order to take advantage of consistently productive resources on seasonal bases (Gardner 1974, 1989; Binford 1980, McManamon 1984).

Increasing population densities continued into the Woodland Period (3000-450 BP) which is similarly subdivided into Early, Middle, and Late sub-periods. Sedentism generally increased during this period as changes in technology allowed for increased exploitation of resources in any given vicinity supporting larger groups of people. Despite this decrease in mobility, economic and social networks continued to expand and develop; linking groups across Cape Cod to one another and those beyond the peninsula. While broadly it is assumed that people during the Woodland period relied increasingly on the cultivation of Maize, this has not consistently been supported in the archaeology of New England (Donta and Kelly 2002). Instead, the rich ecology of Cape Cod and similar coastal environments allowed larger groups of people to support themselves through the management of naturally occurring resources, particularly shellfish beds, and may have only supplemented this successful strategy with Maize agriculture (Snow, 1980, Barber 1982, Johnson 1997).

Archaeologically, the transition from the Woodland Period into the Contact Period is marked by the introduction of European goods into assemblages. While groups indigenous to the area would have continued to use tools and practices that had been successful, they also began to incorporate these foreign technologies in ways that suited them. Because of the extensive trade networks established between groups, Native Americans were often familiar with European goods before being introduced to Europeans themselves. Cape Cod was first documented by the English during Bartholomew Gosnold's 1602 expedition, though by that time several other European nations had documented the people living there who already would have been familiar with would-be European colonists (Deyo 1890, Holmes et al. 1998). It is estimated that at European contact, Cape Cod was home to thousands of Native Americans occupying all portions of the Cape (MHC, 1986). This was likely only a fraction of earlier populations as

European disease had previously killed large portions of the community, destroying entire families and villages. Despite this early catastrophic depopulation of Native Americans in the region, they engaged in economic exchange with European explorers, leveraging their access to desirable resources and information as commodities.

Permanent settlement by Europeans in the Project Area did not occur until 1660 when a group of settlers from Barnstable relocated to the area between Salt Pond and Siders Pond concurrent with that has been referred to as the Plantation Period (1620-1675) (MHC 1995, Dray et al. 2013). At that time there were already members of the Wampanoag living in the vicinity who were part of a broader group that were centralized in the Mashpee area (MHC 1995). It is likely that these early Europeans practiced a mixed economy combining animal husbandry, agriculture, and the exploitation of marine resources.

European expansion in the Project Area continued to grow during the Colonial Period (1675-1775) with over 1000 people identified in 1764 (MHC 1995). Additional peripheral settlements were established throughout the region, expanding from the initial locus in Falmouth. Much of this expansion and development was at the expense of the Wampanoags living within the area. Predatory land-acquisition practices that were endorsed by the colonial government and supported by the English monarchy restricted Native use of the land. Conflict over the use of land and the colonial agenda at both the local level and broader in the form of King Phillips War limited the Wampanoag's ability to maintain economic autonomy from the European colonists. According to Holmes et al. (1998), after King Philip's War, Native Americans seemingly disappear from historical narratives, with some older histories claiming that the natives had simply disappeared. For example, Deyo (1890) wrote "From his [King Philip's] death the extinction of his tribe may de dated." However, the Wampanoags persist to the present-day. The lack of Native American recordation within historical accounts hinders archaeological research and alters the narrative dramatically. According to Holmes et al. (1998) "They [archaeologists] often perceive pre-Contact history of Native Americans to be directly followed by either annihilation or complete assimilation into Anglo-American culture. Indeed, at least 62 Native Americans continued to live in Falmouth as documented in 1764 (MHC 1995). It is, therefore, important to keep in mind that, while historical discussions of Native Americans significantly decrease following King Phillips War, Native Americans continued to live on the Cape and throughout New England to this day, having an outsized influence on its growth and development. Indeed, subsequent legislation allowing whaling ventures on Cape Cod and the Islands to continue exploiting Native labor is an implicit acknowledgement that indigenous people were paramount to the success of these industries upon which much of the Colonial economy relied (Nicholas 2002). In addition to an ever growing mercantile and whaling fleet, the economic success of the Falmouth-area relied on large herds of sheep and cattle, their requisite salt hay, and growing fishing and shell fishing industries (MHC 1985a1985aa, Dray et al. 2013).

Federal Period (1775-1830) Falmouth saw an expansion of industrial activities, though the cornerstones of maritime trade and animal husbandry remained crucial. The establishment of saltworks became one of Falmouth's most profitable industries, spurred on by the British embargo of salt during the Revolutionary War (Dray et al. 2013). After the war, Falmouth's dependence on maritime shipping and trade increased, though it was still supplemented by extensive herds of sheep and newly established mills for the production of grain and wool (MHC 1985a). The War of 1812 and British naval blockades of New England proved disruptive not only to the primacy of maritime industries, but Falmouth itself was bombarded during the conflict (Deyo 1890).

In the Early Industrial Period (1830-1870) the population of Falmouth and the Project Area overall began to plateau and even decline slightly. The previously established pillar of Falmouth's economy, maritime trade and its adjacent industries, continued to support the region;

supplemented by sheep-raising, agriculture, and salt manufacturing. Large-scale managed cranberry cultivation began in this period and continued to be a staple of the Cape Cod economy. New industries began to emerge as well. A pair of wool mills, taking advantage of the local supply of wool and favorable tariffs, were established. The most successful industrial enterprise to emerge during the Early Industrial Period was the Pacific Guano Company producing fertilizer from a number of disparate ingredients all shipped into the busy Falmouth port (MHC 1985a, Dray et al. 2013).

The Woods Hole Branch Railroad opened in 1872, corresponding with the Late Industrial Period (1870-1915). This connected Falmouth to a broader rail system facilitating easy overland transportation of goods and people. The arrival of the railroad coincided with, and likely helped precipitate, a sea change in the economic and overall character of Falmouth and the greater Project Area. During this time the number of people, both seasonal and full-time, increased dramatically. The tourism economy became a major driving force for the region's development, particularly in Falmouth which not only was a destination itself but served as a gateway to Nantucket and Martha's Vineyard. It was during this period that the neighborhood of Falmouth Heights, one of the earliest speculative summer resort projects, was developed. In competition for real estate, tourism began to replace some of Falmouth's older industrial activities including both the salt works and guano factory. While industrial activities began to decrease in scope, agricultural ones continued to be a sustaining force as berry farming continued to develop in the area. Much of this growth in berry production was driven by newly arrived Portuguese-speaking residents (MHC 1985a).

The remainder of the twentieth century saw the continued advance of the tourist economy at the expense of other major industries, apart from agriculture. Residential development along the waterfronts continued to intensify and expand inward away from the coast. With the expansion of highway systems and increasing accessibility of automobiles, the reliance on the railway for access to Cape Cod decreased. Route 28, improved in the 1920s, allowed easy access directly from mainland Massachusetts to Falmouth, through Bourne (MHC 1985a). Once a barrier to terrestrial access, the Cape Cod Canal was purchased by the United States government in 1928. During the 1930s, the canal was widened and the Bourne and Sagamore bridges were constructed, thus connecting the Cape to the mainland (Holmes et al.,1998).

Prior to World War II, Cape Cod was identified as a viable candidate for a new National Guard camp and in September of 1933, 200,000 acres of land on Cape Cod was approved for military training. Between 1935 and 1940, the Commonwealth of Massachusetts and federal government constructed 63 buildings and two 500-ft runways. The area was named "Camp Edwards" and was used during World War II for housing and training of 30,000 men. After the war, Camp Edwards was changed to caretaker status by the Army, and it was primarily used for Army National Guard and Air National Guard. Throughout the latter half of the twentieth century, the facility changed hands from the Army to the Army National Guard, who uses it today (Massachusetts National Guard, 2018). The Commonwealth of Massachusetts owns the land.

Considering the broad horizontal extent of the PAPE, the research questions posited below are similarly broad in their scope, covering both local historical phenomena and regional ones. Additionally, considering the potential for changes to the overall Project design and thus the PAPE, these questions serve only to direct initial intensive survey investigations with the understanding that more pertinent questions may be considered as the Project develops.

- Seasonal movement of populations marks the Archaic period in eastern Massachusetts. What biological resources did native populations use? Is there evidence relating to exploitation of the extensive nearby water sources? During what season of the year were

these resources exploited? How did this change through time? How intensive was the exploitation of the resources within the area?

- The Woodland period in eastern Massachusetts witnessed the concentration of settlements in coastal areas. Is there any evidence for the concentration of population within the Project Area during the Woodland period? How does the Project Area compare with similar locations in eastern Massachusetts and the Northeast Atlantic for evidence of resource exploitation, such as fishing?
- How have site formation processes such as historic development affected evidence for pre-contact occupation?
- During the Contact and early Colonial periods, interaction between native populations and European settlers was often complex. What was the nature of interaction between Native Americans and Europeans? What goods were being traded between groups that can be archeologically documented? How had disease affected the native population?
- Falmouth's diverse agricultural, maritime, industrial, recreational, and military histories have created a mosaic of occupation throughout the historic period. Are all or any of these histories evidenced within the Project Area and if so; how are they distributed across space and time?

3. Work Plan for Archaeological Investigations

As requested in MHC's response to the Project Notification Form dated March 9, 2020, AECOM submitted a permit application to conduct a reconnaissance survey for the Project components described in Section 1. The objective of this effort was to identify areas having archaeological potential within the PAPE based on the developed sensitivity model as well as to identify specific resources that may lie within the path of proposed Project impacts. This approach began with an assessment to develop a model of archaeological sensitivity based on background research, similar archaeological studies in the vicinity, and a field reconnaissance survey of the PAPE. All work was performed by or under the direct supervision of individuals meeting the Secretary of the Interior's professional qualifications standards (36 CFR 61). Mayflower Wind and AECOM are committed to clear and consistent communication with MHC, BOEM, and the Tribes throughout this consultation process.

In accordance with Section 106 of the Historic Preservation Act of 1966 (as amended) (NPS 2020) and 950 CMR 70, AECOM, on behalf of Mayflower Wind, initiated a program of archaeological reconnaissance designed to establish the archaeological sensitivity of areas of ground disturbance associated with the Project. These areas included permanent alterations (onshore landfall, underground export cables installation, transmission poles installations, alternate underground transmission cabling, and substation) as well as areas of temporary impacts such as access roads, construction staging and laydown areas, and other non-permanent disturbances. AECOM performed research on relevant prior studies and available environmental data to develop cultural contexts that allowed AECOM to begin the process of identifying archaeological properties.

Background Research

AECOM will identify gaps in the prehistoric and historic research conducted to date based on the results of intensive (locational) survey and will undertake additional documentary research to fill in these gaps and to expand the prehistoric historic context presented in the Phase IA report. AECOM will review the MHC's files, including the Bibliography of Archaeological Survey Mitigation Reports to ensure that the investigation considers the most current relevant previous research reported to the MHC for Falmouth. Relevant marine cultural geotechnical core analysis results and data included in the Project marine archaeological resource assessment (Wright 1021) related to the intertidal and shoreline portions of the project area will be reviewed and presented in the draft report to assist in the discussion and interpretation of the survey results. In addition, AECOM will consult with the following knowledgeable groups and individuals, including but not limited to the Tribal Historic Preservation Officers of the Mashpee Wampanoag Tribe, Wampanoag Tribe of Gay Head (Aquinnah), Massachusetts Commission on Indian Affairs, Herring Pond Wampanoag Tribe, Falmouth Historical Commission, and the Massachusetts Historical Society. Tribal and local historical commission representatives will be invited to be present during fieldwork.

Field Investigations

AECOM has conducted a reconnaissance level survey of the two potential landfall and HDD pit locations, the alternate export cables route options between the landfall sites and two of the onshore substation locations in accordance with MHC archaeological guidelines. The walkover inspection consisted of a thorough examination of the entire study area to examine visibility conditions, topographical and geomorphological characteristics, vegetation, present land use, and if evident, levels of prior disturbance. Existing conditions were documented with digital photographs. In addition, systematic soil coring, using a hand-held auger, was utilized to assist in identifying areas of disturbance and in the development of the archaeological sensitivity assessment. The coring results were located on archaeological testing maps and presented in a report appendix. All fieldwork was conducted in accordance with the MHC archaeological guidelines and per the accepted terms of the MHC permit.

An assessment of archaeological resources was conducted for Mayflower Wind's proposed terrestrial facilities associated with the PAPE located in Falmouth, MA. These onshore facilities include the landfall location(s), the onshore export cable routes within Worcester Park and area roadways, preferred and alternate substation sites, underground transmission route, and the POI site. AECOM conducted record research on historic and archaeological resources within and in the vicinity of the Onshore Project Area, surveying records on file with the MHC. This research was used to develop a model of archaeological sensitivity for the PAPE that included factors from the environment, previous archaeological surveys, and areas likely to have been disturbed by intensive modern development. This resulted in portions of the PAPE being assigned designations of either "Sensitive" or "Not Sensitive" by the model based on these variable inputs (Table 3-1). Though a brief summary of the model's structure is furnished below, a more detailed explanation of individual variables and the methodology employed can be found in the original reconnaissance report (Roy 2021).

The model is inductive in nature. It is based on the idea that certain known aspects of the modern and historic environment are more likely than others to have archaeological sites and to be more conducive to their preservation. The model tends towards a more inclusive interpretation of what might be considered sensitive areas by privileging proximity to any of the landscape features listed below, rather than varying combinations and weights of them. By doing so the model avoids being over specific, and likely incorrect as to the exact relevance a given feature or combination of features might have for any number of varying site types throughout the human habitation of the PAPE.

The model is an indication of a given location's proximity to aspects of the landscape that have historically tended to correlate with both pre-Contact and post-Contact archaeological sites. This model is modified based on areas of known disturbance that would have had the potential to affect archaeological sites, and the locations of previously identified sites based on a survey of the MHC's archaeological site files. In this way, the model is able to capture locations that might have high potential for occurrence of previously unknown sites from a variety of time periods and cultural occupations, rather than being finely tuned to one period or another. The environs of Cape Cod that might have made it attractive to one people, often similarly lent itself to another. Gentle topography, well-drained soils, and access to both estuarine and freshwater resources are present throughout much of Cape Cod and would have been valued by most peoples for the last 10,000 years. Furthermore, the fact that the area had been intensively used itself would have predisposed it to continued use and occupation as the infrastructure required for participating in local and extra-local economies would already exist.

Proximity to well-drained soils on relatively flat or gentle slopes, waterbodies (e.g., wetlands, ponds, rivers, streams, or the coast), and known areas of historic land use (as represented by existing and previously documented historic structures) were considered. Areas that are proximal (within 150 m [492 ft]) to these factors were deemed to be "Sensitive" with those that were not relegated to "Not Sensitive". This primary assessment of sensitivity based on proximity to desirable features was then modified based on a preliminary judgment of existing disturbance. Sensitive Areas potentially disturbed due to significant subsequent development were adjusted to a "Not Sensitive" ranking. This determination was based on a review of historic aerial imagery (NETR 1966, 1971, 1994). Lastly, regardless of previous determination based on proximity to specific resources, if an archaeological site had been identified within the Onshore Project Area, that portion was considered "Sensitive" regardless of proximity to other factors. It is an acknowledgement that this model only acts in a general and predictive way and that the presence of confirmed archaeological sites must supersede the model's assumptions.

Unfortunately for the model's specificity there is an overall lack of data regarding intact archaeological deposits recovered within the vicinity of the PAPE. This is particularly true with regard to sites including pre-contact components. While 14 pre-contact archaeological sites were identified within one mile (1.6 km) of the PAPE, most of these lacked documentation of what was encountered during excavation and what material may have been recovered. Nine of the sites were identified from the Goulding maps, a record of one individual's alleged find spots throughout the area without any additional notes or associated material. Three others were reported as identified by avocational collectors. The remaining two sites are comprised of a single projectile point find spot, and two ceramic sherds identified during the course of data recovery on a post-contact site in downtown Falmouth.

All portions of the Onshore Project Area, including landfall locations, onshore export cable routes, and substation sites, were investigated during walkover and windshield surveys. Additional assessments of the sensitivity were based on the results of these field visits, both affirming and/or modifying the previous determination by the sensitivity assessment model.

Table 3-1. Results of Combined Model and Field Reconnaissance Archaeological Resources Assessment

Project Component	Function	Archaeological Sensitivity	Potential Expected Site Types	Recommended Investigation
Worcester Ave	Landfall Locations and HDD Sites (Preferred)	[redacted]		
Central Park	Landfall Locations and HDD Sites			
Route from Worcester Ave	Onshore Export Cable Routes (Preferred)			
Route from Central Park	Onshore Export Cable Routes			
Route from Gifford Street to Cape Cod Aggregates	Onshore Export Cable Routes			
Lawrence Lynch	Substation (Preferred)			
Cape Cod Aggregates	Substation			
Underground Transmission Line	Underground Transmission Route and Falmouth Tap			

[redacted]

Confidential/Business Sensitive

Different levels of additional investigation are recommended for the purposes of assessing the potential presence of eligible archaeological sites based on the modeled sensitivity, the results of the walkover survey, and the current condition of the ground surface. Portions of the PAPE identified as not sensitive are not recommended for additional survey. [redacted]

Worcester Ave Landfall Location

[redacted]

Central Park Landfall Location

[redacted]

Route from Worcester Ave

[redacted]

Route from Central Park

[redacted]

[redacted]

Route from Gifford Street to Cape Cod Aggregates

[redacted]

Lawrence Lynch

[redacted]

Cape Cod Aggregates

[redacted]

Underground Transmission Line

[redacted]

Advanced Archaeological Testing

A program of subsurface testing is recommended in advance of construction for previously identified archaeologically sensitive locations [redacted]

[redacted] The testing plan is to ascertain the presence/absence, type and extent or archaeological resources within these sensitive areas.

Subsurface testing plans as they relate to Project construction, like those recommended here, will be coordinated with, and approved through, continued consultation with the MHC. Subsurface testing will conform to the guidelines in *Public Planning and Environmental Review: Archaeology and Historic Preservation* (MHC 1985b) and per the accepted terms of the MHC permit. Testing will consist of hand-excavated shovel test pits (STPs). STPs will measure 50 by 50 centimeters square (1.6 feet) and will be excavated at 10-meter (33-foot) intervals along parallel offset transects. If important cultural materials are found in isolated test pits, additional testing will be completed at 2.5-m (8-foot) and 5-m (16-foot) intervals around the positive STP in cardinal directions. If individual STPs along the transect are not feasible to excavate, judgmental placement of STPs will be utilized in the vicinity of the proposed location. In addition, judgmental test pits will be utilized to determine the boundaries of an encountered feature. Soils will be removed in 10-centimeter (cm) arbitrary levels. Where breaks in stratigraphy occur within an arbitrary 10-cm level, a new level will be established, in order to preserve the vertical provenience of recovered materials. STPs will be excavated well into the C horizon. All soils will be screened through 1/4-inch (in) hardware mesh screens to recover artifacts. Quantitative and qualitative characteristics for each stratum will be recorded in the field. Data will include depth in centimeters, soil texture, horizon designation, soil color using a Munsell chart, stratum/level information, and type/number of artifacts recovered, as well as relevant comments on the location of the STP (landform, vegetative cover, etc.). Stratigraphic soil interfaces will be closely observed and recorded for the presence of archaeological features. If an intact archaeological feature is encountered and its boundaries have been assessed through the expansion of STPs, the feature will be covered with filter fabric and backfilled for later evaluation during an archaeological site examination. Selected soil profiles and cultural features identified will be photographed in digital format. A handheld global positioning system (GPS) unit capable of sub-meter accuracy will be used to document the location of all judgmental and radial STPs. All field photography will be conducted consistent with the State Archaeologist's memorandum on photography and cartography (MHC 2014). Field photographs of shovel test pits and construction trenches will be posed to minimize shadow, the parallax effect, and ensure visible stratigraphy and include readable horizontal and vertical scales, north arrows, and locational signboards. Following excavation, STPs will be completely backfilled, compacted and the sod replaced, if present. Recovered artifacts will be bagged immediately and labelled with provenience information (project information, STP number, stratum and level, depth, date, and initials of the excavator) and transported in secure plastic tote containers to AECOM's archaeological laboratory located in Burlington, New Jersey for processing and analysis on a weekly basis.

Archaeological Construction Monitoring

For those portions of the PAPE identified as sensitive but currently buried beneath impermeable road surfaces (like parking lots, roadways, and sidewalks) archaeological monitoring is recommended during construction. This includes those areas of the onshore underground export cable routes where effects will be exclusively within the roadway, as well as those similarly situated associated along the underground transmission route. The goal of the archaeological monitoring plan is to provide protocols for observing and documenting potentially significant archaeological deposits encountered during trenching activities. A copy of the plan will be included in any construction documents. In addition, a copy of the plan will also be kept and be available at the construction contractor's on-site trailer.

All fieldwork will be conducted in accordance with the MHC archaeological guidelines and per the accepted terms of the MHC permit.

Prior to the initiation of construction activities, all construction contractors' and subcontractors' personnel will receive on-site archaeological awareness training. As part of this training, project personnel will be made aware of the potential archaeological resources that may be encountered during construction activities that include man-made objects (pre-contact and post-contact period artifacts such as stone tools, pottery, glass, nails, bones, etc.) and features (e.g., stone or brick walls or pavements, pits, fireplaces, other evidence of burning, or other remnants of human activity). They will be apprised of their responsibilities, procedures, and obligations during archaeological monitoring by a qualified archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards, (36 CFR 61) and who is familiar with the Phase 1A sensitivity study previously conducted by AECOM for the Project.

Archaeological monitoring will entail having an archaeologist present during all ground-disturbing activities within previously identified archaeological sensitive areas that may intersect native soils to observe subsurface conditions and identify any buried archaeological materials that may be encountered. The Archaeological Monitor(s) will stand in close proximity to removal equipment (but in compliance with all OSHA safety requirements) in order to view subsurface deposits as they are exposed and will be in close communication with equipment operators to ensure adequate opportunity for observation and documentation. Monitoring will seek to identify potential buried surfaces, anthropogenic sediments, and archaeological features such as shell middens, hearths, structural walls, artifact-bearing strata, etc. The archaeologist will inspect the removal locations and the recovered soil or sediment for indications of such archaeological resources.

The Archaeological Monitor(s) will be given the authority to temporarily halt construction to ensure that potential resources are not disturbed, and this will be conveyed to all levels of contractors on the site excavation team, including equipment operators. If excavations are halted by the Archaeological Monitor(s), time will then be given to investigate subsurface conditions, as needed. The Archaeological Monitor(s) will be provided the opportunity to screen excavated soil or sediment and matrix samples when this is judged useful to the identification process. It is not expected that modern fill or glacial till sediments would be included in screening procedures. The Archaeological Monitor(s) will also be allowed to halt the removal process when needed to safely inspect and document potential archaeological resources if identified.

In the event that archaeological deposits are encountered, the Archaeological Monitor(s) will be permitted to halt excavations for a period of up to 24 hours to allow time for photography, drawing of profiles, screening of removed soil for artifacts, removal of soil samples, hand excavation, and any other actions deemed necessary to determine the nature, extent, and potential significance of the discovery. If the resources encountered do not appear significant and do not appear to meet criteria for listing on the National Register (NR), the on-site Archaeological Monitor(s) will notify the appropriate construction personnel, and construction may resume once recordation of the resources has been completed. The construction contractor should plan, schedule, and execute his work in a manner such that work stoppages will not result in a total shutdown of any construction work.

If resources are encountered that are determined by the on-site Archaeological Monitor(s) to be potentially significant, e.g., appearing to meet eligibility criteria for listing on the National Register of Historic Places (NR-eligible), the construction team, engineering team, SHPO, and BOEM will be immediately notified according to the following sequence. A member of the on-site construction team will be designated as the on-site contact person. The Archaeological Monitor(s) is responsible for notifying the designated on-site person/coordinator of any potentially significant finds, and he/she in turn is responsible for notifying the point of contact at Mayflower Wind. Mayflower Wind will then be responsible for notifying MHC/SHPO and BOEM

of the find. MHC/SHPO will be consulted regarding the potential significance of the find, i.e., whether MHC/SHPO determines it meets or does not meet NR eligibility criteria.

After these parties have been consulted regarding the presence of potentially significant resources, and if the MHC/SHPO determines that the resource(s) are NR-eligible, the Archaeological Monitor(s) will be given an agreed upon amount of time to properly recover the resource(s) if the resource cannot be avoided, in consultation with MHC/SHPO. The period of time allowed for these actions will be dependent on the size and location of the resource and will be determined in the field by the archaeologist and the consulting parties. The period of time to complete this will be no less than two days per resource identified, if needed, and may extend to up to five days if indicated. The construction team will cease excavations in the potentially sensitive area while archaeologists recover the resource. However, excavations may continue in another part of the site simultaneously, provided that they will have no harmful effects on the data recovery efforts and will continue to be monitored by an archaeologist. The objective of the archaeologists will be to remove and record potential features or deposits. The MHC standards for excavation, screening, recording of features and stratigraphy, labeling, mapping, photographing, and cataloging will be applied.

During all excavations, assistance will be provided to the archaeological team by the construction personnel, if needed. This could include, but will not be limited to, pumping water from excavation areas, shoring trenches, meeting all OSHA regulations, and machine excavating non-sensitive levels to further reveal the resource(s).

Monitoring will proceed until it can be determined with a greater level of confidence that cultural resources will not be impacted by construction. The Archaeological Monitor(s) will conduct monitoring until native and fill deposits can be confidently isolated and identified based on observed sedimentary exposures.

Further areas requiring intensive archaeological survey may be identified in addition to a more detailed PAPE as the Project design develops and the footprint of the necessary Project route and facilities are determined and are subject to refinement based on the elimination of landing or substation alternatives and/or where design advances allow for a reduction in the necessary limits of project disturbances. Likewise, additional information regarding the location of buried subsurface utilities may necessitate monitoring in areas unsafe to dig. In sensitive areas where impacts are within the area previously disturbed by utilities, it may no longer be necessary for any additional archaeological survey. Mayflower Wind will work with MHC, BOEM, and the affected Tribes to thoroughly identify potential effects to terrestrial archaeological resources, as well as appropriate avoidance, minimization, and mitigation measures.

Unanticipated Discovery Procedures

Cultural Resources

AECOM and Mayflower Wind recognize that despite intensive background research and field investigations, it is always possible that cultural resource deposits may still be discovered during the course of construction activities, particularly during excavation in previously identified non-sensitive areas. The procedures that will be followed in the event that new or additional cultural resources be found after construction has begun on the Project during construction activities permitted are outlined below as part of an Unanticipated Cultural Resources Discovery Plan. Termed “unanticipated discovery” or “post-review discovery,” the identification of new or additional cultural resources during implementation of an undertaking can occur in the case of projects that involve excavation or ground-disturbing activities. This Plan will be implemented by Mayflower Wind if previously undiscovered archaeological resources and/or human remains are

identified. Archaeological resources include man-made objects (prehistoric and historic period artifacts such as stone tools, pottery, glass, nails, bones, etc.) and features (e.g., stone or brick walls or pavements, pits, fireplaces, other evidence of burning, or other remnants of human activity).

Construction contractors and subcontractors will receive training regarding the identification and preliminary treatment of unanticipated discoveries and their responsibilities for protecting discoveries and initiating implementation of the plan. Training will occur as part of the pre-construction on-site training program for foremen, company inspectors, and construction supervisors and will be given by a qualified cultural resource specialist. During construction, the construction supervisor (CS) will be responsible for advising construction contractor personnel on the procedure to follow in the event that an unanticipated discovery is made. The CS will advise all operators of equipment involved in trenching activities to stop work immediately if they observe any indications of the presence of cultural materials, contact the CS as soon as possible, comply with unanticipated discovery procedures (outlined below), and treat human remains with dignity and respect.

1. In the event that a suspected site is uncovered during construction activity, that activity will immediately be halted in the area of the find until it can be determined whether the object is an archaeological resource and if it represents a potentially significant feature or site.
2. The project field staff will immediately notify the Mayflower Wind upon the suspension of work activities in the area of the find. Notification will include the specific location in which the potential feature or site is located.
3. Mayflower Wind will immediately contact its cultural resource management consultant to review the information. On-site personnel will provide information on the location and any discernable characteristics of the potential cultural resource (the target), and any survey data depicting the find. This information will be forwarded for review by the Project Archaeologist for the cultural resource management consultant.
4. If the project archaeologist determines that the site, feature, or target is not potentially cultural, the project field staff through Mayflower Wind will be notified by the project archaeologist that work may resume. The Project Archaeologist will also notify MHC/SHPO and BOEM of this determination.
5. If, based upon both previously acquired and current data, or other indications, it is determined that the new target is possibly a potential cultural resource, the Project Archaeologist will inform Mayflower Wind, who will inform the project field staff that work may not resume at the given location until notified in writing by Mayflower Wind. The cognizant federal and state review agencies, MHC/SHPO (State Historic Preservation Officer), BOEM, and Advisory Council (if applicable) will be notified of this determination within 3 working days.
6. A visual inspection by archaeologists will be conducted to determine if the site is potentially eligible for listing in the National Register. The results of the survey will be formally submitted to cognizant federal and state review agencies, MHC/SHPO, BOEM and the Advisory Council (if applicable) for final review and comment. The SHPO will endeavor to respond within 3 working days of receiving the inspection results and recommendations.
    a. If it is determined that the target, feature, or site does not represent a potentially significant resource, and Mayflower Wind is in receipt of written comment from the review agency(s), work may resume in that area.

b. If a National Register determination cannot be made in accordance with Step 6, Mayflower Wind may either undertake additional research to satisfy Step 6 or exercise Step 8 (avoidance).

7. If agency review concurs or concludes that the site may be important and is potentially National Register eligible, Mayflower Wind will develop avoidance measures to eliminate the site from the Area of Potential Effects. Any proposed avoidance measures will be made available to the cognizant federal and state review agencies, SHPO/MHC, BOEM and Advisory Council for review and comment.
8. If avoidance measures cannot be developed and executed, the resource may be excavated and/or removed only under a memorandum of agreement with all interested parties including the State Archaeologist/Deputy SHPO, MHC, BOEM, THPOs, AECOM, and Mayflower Wind (the Project proponent), and, if applicable, the Advisory Council subject to appropriate state permits. This memorandum will outline an adequate data recovery plan that specifies a qualified research team and an appropriate research design. The appropriate permits must also be secured from MHC prior to conducting any further disturbance to the site. In the event that human remains are identified as being associated with other cultural resources, see the section on the Discovery of Unanticipated Human Remains for required procedures.

Applicable State and Federal Laws

- M.G.L. Chapter 9, §26-27C – MHC review of state projects, State Archaeologist's Permits
- 950 CMR 70.00: Massachusetts Historical Commission
- Section 106 of the National Historic Preservation Act of 1966 (16 USC 470f), as amended (1976, 1980, 1992, 1999)
- National Environmental Policy Act of 1969 ("NEPA")

List of Contacts

Federal

To be named based on applicable federal jurisdiction.

State

State Archaeologist/Massachusetts Historical Commission/SHPO
220 Morrissey Boulevard
Boston, Massachusetts 02125
Contact: Brona Simon, State Archaeologist/Executive Director
(617) 727-8470; FAX: (617) 727-5128
mhc@sec.state.ma.us; Brona.simon@state.ma.us

Others to be named based on applicable state jurisdiction, such as Commission on Indian Affairs and Tribal Historic Preservation Officers.

Discovery of Unanticipated Human Remains

In the event suspected human remains are encountered, AECOM proposes to follow all relevant state and federal law and recommendations regarding treatment of human remains. AECOM and Mayflower Wind recognize the importance of providing careful and respectful treatment for human remains recovered as an unanticipated discovery or as part of this archaeological

investigation. In the event of an unanticipated discovery of human remains, AECOM, Mayflower Wind, and its contractors will follow the following protocol outlined below (in accordance with the applicable sections of Massachusetts General laws listed in this policy guidance) based on MHC's Know How #4: Human Remains.

1. In the event that suspected human remains are encountered, any activity in the general area of the discovery that might affect those remains will stop immediately and the location will be immediately secured and protected from damage and disturbance.
2. Human remains or associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.
3. The Principal Investigator and, if applicable, the Project Archaeologist will be informed and notified of the exact location of the remains. *
4. The Project Archaeologist and the Principal Investigator will be responsible for immediately notifying the State Police Detectives at the local District Attorney's Office, the Chief Medical Examiner, the State Archaeologist (contact information provided below) and Mayflower Wind.
5. If the Chief Medical Examiner determines that the human remains are less than 100 years old, a criminal investigation may be warranted. If the remains are determined to be older than 100 years, the Chief Medical Examiner will notify the State Archaeologist at the Massachusetts Historical Commission. The State Archaeologist, assisted by AECOM staff (if requested), will conduct an examination to determine the age, cultural affiliation, and identity of the remains. If human remains are determined to be Native American, the State Archaeologist will notify the Commission on Indian Affairs. The State Archaeologist will determine whether any prudent and feasible alternatives exist to avoid, minimize or mitigate impacts to the site. The results of this consultation will be made available in writing.
6. If human remains are determined to be non-Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated in accordance with MHC's "Policy and Guidelines for Non-Native Human Remains Which are Over 100 Years Old or Older" and in a manner consistent with the ACHP Policy Statement Regarding Treatment of Burial Sites, Human Remains and Funerary Objects (February 23, 2007). Avoidance is the preferred choice of the MHC. Consultation with the MHC and other appropriate parties will be required to determine a plan of action.
7. If it is not possible to protect the remains in situ, they may be excavated and/or removed only under a memorandum of agreement with all interested parties including the State Archaeologist/Deputy SHPO (State Historic Preservation Officer, AECOM, and project proponent Mayflower Wind Energy LLC, and if applicable, the Commission on Indian Affairs. The memorandum will outline an adequate data recovery plan that specifies a qualified research team and an appropriate research design (including a proposal for disposition of the remains). Any excavation of said human remains will be conducted under a Special Permit (CMR 70.20) issued by the State Archaeologist.

NOTE: * Under state law, the finder is responsible to ensure that the proper authority is notified when suspected human remains are encountered.

Applicable Massachusetts General Laws (M.G.L.):

- M.G.L. Chapter 38, §6, as amended – Discovery of Unmarked Human Skeletal Remains

- M.G.L. Chapter 9, §26A – State Archaeologist's duties
- M.G.L. Chapter 9, §27C – Cessation of Activities
- M.G.L. Chapter 7, §38A – Preservation, Excavation and Analysis of Native American Human Remains
- M.G.L. Chapter 114, §17 – Preservation of Ancient Burial Places
- M.G.L. Chapter 272, §71 – Crimes and Punishment: Disinterring Bodies
- M.G.L. Chapter 272, §73, as amended – Crimes and Punishment: Injuring or Removal of Burial Markers

List of Contacts

District Attorney's Office State Police Detectives Unit
Contact: State Police Communications Section
(who will contact detectives at local district attorney's office)
(508) 820-2121

State Office of the Chief Medical Examiner
720 Albany Street
Boston, Massachusetts 02118
Contact: Dr. James Pokines, Forensic Anthropologist
(617) 267-6767; Fax (617) 266-6763
James.Pokines@state.ma.us

State Archaeologist/Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, Massachusetts 02125
Contact: Brona Simon, State Archaeologist/Executive Director
(617) 727-8470; FAX: (617) 727-5128
mhc@sec.state.ma.us; Brona.simon@state.ma.us

Commission on Indian Affairs
100 Cambridge Street, Suite 300
Boston, MA 02114
Contact: Jim Peters, Executive Director
(617) 573-1291; FAX: (617) 573-1515
Indian_Affairs@hotmail.com

Laboratory Processing, Analysis and Curation

The AECOM Burlington laboratory is operated by a full-time staff of 14 cultural resources professionals who routinely process and analyze prehistoric and historical artifact assemblages for reports and publications. The fully equipped laboratory contains 6,500 square feet of space dedicated to areas for washing, labeling, cataloging, analysis, photography, soil flotation, and the basic conservation of artifact collections. The AECOM laboratory staff has extensive experience with precontact artifacts from sites spanning 12,000 years of human habitation in North America, from the Paleoindian period through the Contact period. The staff's work with historic-period assemblages recovered from domestic sites, large urban areas, industrial sites, military battlefields, and cemeteries has revealed aspects of everyday life and industrial operations dating from the late 17th to the mid-20th century.

AECOM's in-house professional staff also includes highly trained and experienced material culture specialists who are nationally recognized through their publications and presentations at

professional conferences. They include Thomas Kutys, Archaeology Laboratory Manager; Carolyn Horlacher, Deputy Archaeology Laboratory Manager, Mary Cheek Mills, glass and museum studies, Meta Janowitz, post-contact ceramics; Alexandra Crowder, macrobotanical; Jeremy Koch, precontact; Richard Roy, Teagan Schweitzer, and Marie-Lorraine Pipes, faunal; and Thomas Crist and Kimberly Morrell, human remains.

All recovered artifacts will be hand delivered to the to the laboratory for proper analysis and cataloging on a weekly basis. Artifacts will be cleaned and labeled. Any artifact needing conservation will be removed from the collection for separate processing and evaluation. After the artifacts are dry, they will be separated by class and placed in individual 4-ml polyethylene bags labeled with provenience information in permanent marker. The individual bags will be placed within a large bag(s) for the entire provenience. All bags will be labeled and will be pierced for air circulation.

Any artifact needing conservation will be removed from the collection for separate processing and evaluation. If conservation is required, AECOM Burlington works with the Maryland Archaeological Conservation Laboratory. After the artifacts are dry, they will be separated by class and placed in individual 4-ml polyethylene bags. The individual bags will be placed within a large bag(s) for the entire provenience. All bags will be labeled and will be pierced for air circulation.

Each artifact will be individually catalogued, including its site provenience, and analyzed by a variety of categories including, but not limited to, class, material, type, variety, technology, size, date, and comments. All artifacts recovered from the investigation will be fully inventoried and cataloged. This information will be used to establish the contemporaneity of contexts and strata, as well as to determine whether assemblages represent primary or secondary deposits. At a minimum, basic analyses performed on these artifacts from any given archeological context will include the identification of key characteristics for each object, including general form and function (e.g., nail – architectural), material composition (ceramic, glass, metal, etc.), manufacturing technique, date of manufacture, maker's marks (if present), and the total number of artifacts with such characteristic within a specific context. Artifacts may undergo more extensive analyses as needed to facilitate interpretation of the material and the contexts in which they were found.

Initial precontact lithic analysis will focus on sorting artifacts into tool and debitage classes and tabulating them by raw materials according to the MHC's Artifact Classification System for lithic materials and artifact types (MHC 1984). Detailed analysis of lithics will commence after preliminary sorting of the assemblage by raw material and tool/artifact class has been completed. Diagnostic projectile points will be identified based on established typologies for the region. Precontact ceramics will be analyzed based on various characteristics such as paste, temper, interior and exterior surface treatments and decorations, rim form, and vessel shape or type as applicable. Ceramics will be typed according to established typologies for the region.

Historic artifacts will be analyzed in terms of material type, form, function, and temporal attributes following established procedures. Dating of artifacts will reference the materials included in the bibliography in this document. Additional sources will be used where appropriate. Research on the manufacturing date ranges of ceramic, glass, and other types of datable artifacts will be included and date ranges for assemblages and TPQs can be generated as needed.

At the conclusion of the project, artifacts and project records will be prepared for permanent curation with the Public Archaeology Laboratory (PAL) facility in accordance with MHC standards and PAL's collection management policy (see attached agreement and collections management policy). The artifact and record collection will be hand delivered to the curation

facility. All artifacts will be delivered in Hollinger Record Storage Boxes or an equivalent. Artifacts within the boxes will be packaged in labeled, vented, zipper-sealed polyethylene bags. Along with the artifact collection and a paper catalog, an electronic format copy of the final catalog will be provided. In addition, all notes, photographs, drawings, maps, and both original and duplicate copies (photo-reproduced onto acid-free paper) of all field documentation and notes will be curated. All archaeological project-related digital files, including artifact catalogs, photographs, geospatial data, and project reports will be submitted to PAL on either a flash drive or compact disc or transferred electronically upon arrangement. All digital data will be reviewed prior to submittal and a consistent file naming convention will be used with only final versions of digital files submitted for permanent curation. Standard file formats, acceptable by PAL tor archiving digital records include:

- Documents: PDF Documents (.pdf), Microsoft Word (.doc, .docx), Rich Text Documents (.rtf), or Plain Text Documents (.txt).

- Data Sets: Comma Separated Values (.csv), Tab Separated Values (.tab), Microsoft Excel (.xls, .xlsx), or Microsoft Access (.accdb, .mdb).

- Images: Tagged Image File Format (.tiff, .tif), JPEG Image (.jpg, .jpeg), Portable Network Graphics (.png), or other image file types (. bmp. gif, pict).

- Geospatial Data, Shapefiles, Geodatabases, Georectified images, or (GeoTiff & GeoJPG).

- Virtual: Remote Sensing Files or 3D Scans (OBJ & E57).

To preserve the integrity and usability of the digital data, PAL's, as well as AECOM's, data servers have cloud backup and recovery. AECOM will provide the MHC with a copy of the transmittal documentation for the archaeological collection to PAL curation.

Selected Reference Material to be Used in Laboratory Procedures

The following are a selection of reference material used by the AECOM laboratory in the processing of material culture recovered from archaeological sites, with specific attention given to sources geographically relevant to the Project. With each item is offered a brief annotation describing the use or necessity of that item.

Andrefsky, William Jr.
2005 *Lithics: Macroscopic Approaches to Analysis*. Cambridge Manuals in Archaeology. Cambridge University Press. Cambridge, United Kingdom.
Reference text reviewing lithic artifact types, terminology, and various approaches to analyzing lithic artifacts and archaeological assemblages.

Azizi, Sharla, Diane Dallal, Mallory A. Gordon, Meta F. Janowitz, Nadia N.S. Maczaj, Marie-Lorraine Pipes
1996 *Analytical Coding System for Historic Period Artifacts.* The Cultural Resource Group, Louis Berger and Associates, East Orange, N.J.
This source outlines a coding system developed by Louis Berger and Associates as well as a resource used to identify and date historical period artifacts. The AECOM Burlington lab uses this document to date historic ceramics.

Barlow, Raymond E., and Joan E. Kaiser

1987 *A Guide to Sandwich Glass: Vases, Colognes and Stoppers*. Schiffer Publishing Ltd., West Chester, PA.
The AECOM archaeology laboratory's library contains a wide range of regionally specific references related to glass history. This is one of four New England and Boston-specific publications listed in the reference library. It will be consulted where needed in processing glass artifacts recovered in Massachusetts.

Barlow, Raymond E., and Joan E. Kaiser
1989 *A Guide to Sandwich Glass: Kerosene Lamps and Accessories*. Schiffer Publishing Ltd., West Chester, PA.
The AECOM archaeology laboratory's library contains a wide range of regionally specific references related to glass history. This is one of four New England and Boston-specific publications listed in the reference library. It will be consulted where needed in processing glass artifacts recovered in Massachusetts.

Callahan, Errett
2000 *The Basics of Biface Knapping in the Eastern Fluted Point Tradition: A Manual for Flintknappers and Lithic Analysts, 4th edition*. Piltdown Productions, Lynchburg.
Reference text describing flintknapping methods and terminology, bifacial lithic reduction, and stages involved in biface manufacture.

Dincauze, Dena F.
1974 An Introduction to Archaeology in the Greater Boston Area. *Archaeology of Eastern North America* 2(1): 39-67
Background research text reviewing the archaeology of the Greater Boston Area including diagnostic artifacts, site distributions, and prehistoric cultural periods.

Jefferson Patterson Park and Museum: State Museum of Archaeology
2002 Diagnostic Artifacts in Maryland, https://apps.jefpat.maryland.gov/diagnostic/.
This website was created to provide an introduction to some of the most significant typical types of dated artifacts recovered in Maryland; however, most of the information is applicable to historical sites throughout the Mid-Atlantic and New England. The site references many printed sources, most of which are present in hard copy at the AECOM Burlington lab. Lab staff use this website to aid in the identification and dating of historical ceramics and small finds.

Johnson, Eric S. and Thomas F. Mahlstedt
1982 Prehistoric Archaeological Collections from Massachusetts: A Report on the Peabody Museum of Salem. MS on file at Massachusetts Historical Commission, Boston.
Overview of various prehistoric archaeological assemblages from Massachusetts. Explores past research, lithic material types, and diagnostic artifacts associated with various prehistoric cultural periods.

Jones, Olive R.
2000 A Guide to Dating Glass Tableware: 1800 to 1940. In *Studies in Material Culture Research*, edited by Karlis Karklins, pp. 141-232. Society for Historical Archaeology, California, PA.
The AECOM archaeology laboratory uses "A Guide to Dating Glass Tableware" and "The Parks Canada Glass Glossary" as its primary references for dating and identifying most common forms of glass tableware, particularly those dating from the second quarter of the 19th century into the first half of the 20th century.

Jones, Oliver R., Catherine Sullivan, George L. Miller, E. Ann Smith, Jane E. Harris, and Kevin Lunn
1985 *The Parks Canada Glass Glossary*. Parks Canada, Ottawa.
The AECOM archaeology laboratory uses "A Guide to Dating Glass Tableware" and "The Parks Canada Glass Glossary" as its primary references for dating and identifying most common forms of glass tableware, particularly those dating from the second quarter of the 19th century into the first half of the 20th century.

Jones, Oliver R., and E. Ann Smith
1985 *Glass of the British Military, ca. 1755-1820*. Parks Canada, Ottawa.
The AECOM archaeology laboratory uses "Glass of the British Military" as its primary source for identifying and dating colonial- and federal-period bottles and glass tableware forms.

Justice, Noel D.
1987 *Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States: A Modern Survey and Reference*. Bloomington, Indiana: Indiana University Press.
Reference text describing the morphology, chronology, cultural affiliation, and distribution of diagnostic projectile points from the Midcontinental and Eastern United States.

Kaiser, Joan E.
2009 *The Glass Industry in South Boston*. University Press of New England, Lebanon, NH
The AECOM archaeology laboratory's library contains a wide range of regionally specific references related to glass history. This is one of four New England and Boston-specific publications listed in the reference library. It will be consulted where needed in processing glass artifacts recovered in Massachusetts.

Lindsey, Bill
2020 Historic Glass Bottle Identification & Information Website. Society for Historical Archaeology and Bureau of Land Management. http://www.sha.org/bottle/index.htm.
As the most comprehensive synthesis on historic glass bottles found, AECOM uses the "Historic Glass Bottle Identification & Information Website" as its primary source for identifying and dating 19th- and early 20th-century glass bottles.

Massachusetts Historical Commission (MHC)
1984 Guide to Prehistoric Site Files and Artifact Classification System. Massachusetts Historical Commission, Office of Massachusetts Secretary of the State, Boston.
Guide describing Massachusetts prehistoric artifact classification system including terminology, raw material types, and artifact types.

Miller, George L., with contributions by Patricia Sanford, Ellen Shlasko, and Andrew Madsen
2000 Telling Time for Archaeologists. *Northeast Historical Archaeology* 29: 1-22.
This source presents dates for common types of artifacts found on historical period archaeological sites. The AECOM Burlington lab primarily uses this document for ceramic and small finds dates.

Odell, George H.
2003 *Lithic Analysis*. Manuals in Archaeological Method, Theory, and Technique. Springer Science+Business Media, LLC. New York, NY.
Reference text reviewing lithic artifact types, terminology, and various approaches to analyzing lithic artifacts and archaeological assemblages.

Ritchie, William A

1971 *A Typology and Nomenclature for New York Projectile Points*. New York State Museum and Science Service Bulletin 384. Albany.
Reference text describing the morphology and chronology of various New York diagnostic projectile point types applicable throughout the Middle Atlantic and Northeast regions.

Snow, Dean R.
1980 *The Archaeology of New England*. Academic Press, New York.
Background research text reviewing New England's archaeological record including diagnostic artifacts, radiocarbon data, and prehistoric cultural periods.

Williams, Petra.
1978 *Staffordshire Romantic Transfer Patterns, Cup Plates and Early Victorian China*. Fountain House East, Jeffersontown, Kentucky.
This book identifies and dates (where possible) transfer printed patterns produced in England. The AECOM Burlington lab uses it for identification and dating transfer printed patterns on historical earthenwares.

Williams, Petra, and Marguerite R. Weber
1986 *Staffordshire II Romantic Transfer Patterns, Cup Plates and Early Victorian China.* Fountain House East, Jeffersontown, Kentucky.
This book is a sequel to Staffordshire Romantic Transfer Patterns, Cup Plates and Early Victorian China. The AECOM Burlington lab uses it for identification and dating transfer printed patterns on historical earthwares

Wilson, Kenneth M.
1972 *New England Glass & Glassmaking*. Thomas Y. Crowell Company, New York.
The AECOM archaeology laboratory's library contains a wide range of regionally specific references related to glass history. This is one of four New England and Boston-specific publications listed in the reference library. It will be consulted where needed in processing glass artifacts recovered in Massachusetts.

Project Schedule

AECOM and Mayflower Wind propose the following schedule for the Intensive Locational Archaeological Survey and Archaeological Monitoring:

1. Additional Background Research conducted currently with fieldwork
2. Intensive (Locational) Archaeological Survey completed in September 2022
3. Archaeological Monitoring completed concurrent with construction
4. Laboratory Processing and Analysis completed October 2022
5. Draft Report submitted to MHC for review November 2022
6. Final Report addressing MHC review comments submitted February 2023

4. Reporting

Following research and fieldwork analysis, AECOM will produce a draft report presenting the results of the intensive level survey. The report will be prepared to meet the standards of the MHC reporting guidelines (950 CMR 70.14). At a minimum, the report will include the following: an abstract (consistent with the State Archaeologist's memorandum on archaeological

abstracts), introduction, description and justification of the research design, field testing methods, field results, laboratory procedures and analyses and discussion, conclusions, and recommendations for further work (if any), bibliography, and lists of tables, figures, and photographs. AECOM will include maps created in GIS depicting the Project location, Project PAPE, and field results. All figures and field photographs will be prepared consistent with professional practices and the State Archaeologist's memorandum on cartography and photography (MHC 2014). During the evaluation and interpretation of the results of the terrestrial investigation, AECOM will also consider the results of the marine survey, to ensure that any identified archaeological resources, including intact paleosols that may contain significant ancient Native American archaeological resources, are considered in appropriate historical contexts within the cultural history of Massachusetts. Recommendations and justifications will be made as to whether additional archaeological investigations are needed based on the data generated from the terrestrial investigation.

AECOM will provide a draft report to Mayflower Wind for review and approval prior to submission to MHC, BOEM, and the Tribal Historic Preservation Officers. AECOM will address comments and edits from the agencies. Data generated from the archaeological survey will include maps, GIS data, and field notes detailing the soil characteristics and site conditions. Two bound paper copies of the final report addressing MHC's comments on the draft report will be submitted along with a CD-ROM containing a word processing file with the report author(s), date, title, page count, and the archaeological abstract, prepared in accordance with the State Archaeologist's report abstracting guidelines. In addition, if applicable, new MHC inventory forms (Form D) with USGS locus maps with the archaeological site clearly bounded, and smaller scale site maps showing the boundaries of the site attached.

5. Key Personnel and Qualifications

Edward M. Morin will serve as Co-**Principal Investigator,** and will coordinate the background research, fieldwork, data and laboratory analyses, and report preparation tasks. Mr. Morin has over 40 years of experience in conducting and supervising archaeological investigations. His responsibilities include scheduling of office staff and projects; project management; federal, state, and local agency and client coordination; budgeting and design of research; and direction of fieldwork, laboratory analysis, and report preparation. Mr. Morin has managed and directed archaeological and historical assessments, National Register evaluations, and archaeological data-recovery efforts. He has also managed numerous open-end contracts involving general cultural resource services and has managed multi-million-dollar archaeological data-recovery programs. Prior to joining AECOM, Mr. Morin served as Principal Archaeologist for the URS Corporation, Staff Archaeologist with the National Park Service, Denver Service Center, Applied Archeology Center, Senior Archaeologist for Louis Berger & Associates, and Staff Historical Archaeologist for American Resources Group, Inc. In those positions, his responsibilities included conducting and contracting archaeological investigations at historic and industrial sites within the Northeast, Mid-Atlantic and Midwest states; budgeting and design of research; direction of fieldwork, laboratory analysis, and report preparation; and project management. Mr. Morin's project experience in Massachusetts includes serving as the Principal Investigator for the terrestrial portion of the Water Main Saugus River Crossing Project in Lynn and Revere. Mr. Morin was also the Project Archaeologist for on-call environmental/cultural resource services for the Massachusetts Army National Guard associated with Camp Curtis Guild, Methuen Readiness Center, and the Joint Force Headquarters in Milford; he also served as Project Manager for the Phase I and II investigations at the Saugus Iron Works National Historic Site for the National Park Service and archaeological investigations at Faneuil Hall in Boston. Other projects included a

Phase I survey of the Heath Brook Plaza project in Tewksbury and serving as the Project Historical Archaeologist for the cultural resource assessment of the Quabbin, Ware, and Wachusett Watershed lands and for the cultural resource management plan for the Boston Metropolitan Park System, both for the Metropolitan District Commission. Comparable experience in adjacent portions of New England includes a statewide on-call cultural resource contract with the New Hampshire Department of Transportation. Mr. Morin is a Registered Professional Archaeologist and meets the Secretary of the Interior's professional qualifications standards for archaeologists.

Richard A. Roy, Co-Principal Investigator, will be responsible for overseeing the field investigation, data and laboratory analysis and will serve as the lead author on the report**.** He joined AECOM in 2016 and has 8 years of experience in archaeology and cultural resources management. He is a Historical Archaeologist who has been engaged in projects spanning North America, from the Canadian Maritimes, south to the Great Dismal Swamp of North Carolina, and west to Santa Fe, New Mexico. At AECOM, his duties primarily include GIS management for archaeological fieldwork, archaeological report production, faunal analysis, GPS support, and both geophysical and total station survey. Prior to working at AECOM, Mr. Roy attended the Master's Program in Historical Archaeology at the University of Massachusetts Boston. There his work focused on GIS support for the department and attached Fiske Center for Archaeological Research, in addition to field excavation, archaeological monitoring, and teaching. His Master's thesis explores the ecological implications of a faunal assemblage from a 17th-18th century house on Martha's Vineyard. Additionally, during this time, he worked for the Massachusetts Historical Commission as part of their disaster planning project inventorying cultural resources in coastal Massachusetts within a GIS framework. Mr. Roy is a Registered Professional Archaeologist and meets the Secretary of the Interior's professional qualifications standards for archaeologists.

Alex Flick, Field Supervisor, will provide onsite supervision of the day-to-day field investigations. He has ten years of experience in all phases of archaeological investigation throughout the Northeast and Mid-Atlantic regions of the United States. In his current role at AECOM, Mr. Flick serves as a Junior Principal Investigator, conducting archaeological investigations, undertaking fieldwork and monitoring tasks, performing research and analysis, and preparing technical reports. Prior to joining AECOM in 2021, Mr. Flick spent several years working in cultural resource management, state historic preservation office, and academic research settings. He has worked on archaeological sites in numerous states and has authored or co-authored more than 60 technical reports.

Thomas Kutys, Archaeology Laboratory Manager, joined URS Corporation/AECOM in 2009 and has over 15 years' experience in archaeological investigations and artifact analysis within the Mid-Atlantic, New England, and Southeast regions of the United States. As the laboratory manager at AECOM, Mr. Kutys manages the day-to-day operations of the archaeology laboratory and develops strategies for the cleaning, identification, and cataloging of both prehistoric and historic artifact assemblages. He is also responsible for identifying, researching, and preparing interpretive materials for historic period artifact assemblages, and has helped design a variety of public outreach programs, artifact displays, and museum exhibits. Mr. Kutys is a Registered Professional Archaeologist and meets the Secretary of the Interior's professional qualifications standards for archaeologists.

Carolyn Horlacher, Deputy Archaeology Laboratory Manager, will be responsible for the management of the project's daily laboratory processing and analyzing activities. She is also experienced in historical artifact cataloging, research, analysis, and report writing. Ms. Horlacher joined AECOM in 2014 and has 11 years of experience in archaeology and cultural resources management. She is a Historical Archaeologist who has participated in projects in the Mid-Atlantic, New England, and the Southwest. Prior to working at AECOM Ms. Horlacher attended the Master's program in Historical Archaeology at the University of Massachusetts Boston. There her work focused on collections management and general archaeological lab tasks and lab

supervision for the Anthropology Department and attached Fiske Center for Archaeological Research. Additionally, she participated in field excavation and field school teaching. Her Master's thesis explores the relationship between Black Feminist Thought and the Domestic Reform Movement of the early 20th century through the analysis of an assemblage of food preparation artifacts dating to the late 19th through early 20th century. The artifacts were recovered from the Seneca Boston-Florence Higginbotham House, located on Nantucket, MA. Before graduate school, Carolyn was employed by URS Corporation as a laboratory and field technician. Ms. Horlacher is a Registered Professional Archaeologist and meets the Secretary of the Interior's professional qualifications standards for archaeologists.

Jeremy Koch, Senior Material Specialist, will be responsible for the cataloging and analysis of recovered prehistoric artifacts from the project. He joined AECOM in 2011 and has 12 years of archaeological experience including historic, contact, prehistoric, urban, and geoarchaeological investigations. He received his PH.D. in anthropology from temple University in 2017. Dr. Koch's background includes extensive experience teaching and applying archaeological field and laboratory methods in diverse settings, with specializations in micro- and macroscopic lithic analysis, ceramic analysis, geomorphology, and experimental archaeology. The focus of Dr. Koch's dissertation was Terminal Pleistocene-Early Holocene hunter-gatherer technology, mobility patterns, and lithic resource procurement in the Middle Atlantic and Northeast regions of North America. Dr. Koch is the author or co-author of several peer-reviewed publications, technical reports, and professional papers. He is a Registered Professional Archaeologist and meets the Secretary of the Interior's professional qualifications standards for archaeologists.

References

Barber, R. J.
1982 The Wheeler Site: A Specialized Shellfish Processing Station on the Merrimack River. *Peabody Museum Monographs* No. 7. Peabody Museum, Harvard University, Cambridge, Massachusetts.

Binford, L. R.
1980 Willow-Smoke and Dogs' Tails: Hunter-gatherer Settlement Systems and Archaeological Site Formation. *American Antiquity* 45(1): 1-20.

Boyden, E., & Son (Boyden & Son)
1873. *Plan of Falmouth Heights, Falmouth Mass., April 1st, 1873*. J. H. Bufford's Lith. Boston, MA. Electronic document, accessed October 26, 2020 from https://collections.leventhalmap.org/search/commonwealth:1257bd014

Deyo, S.L. (editor)
1890 *History of Barnstable County, Massachusetts 1620-1890.* Blake: New York. Retrieved on February 20, 2020 from https://archive.org/details/historyofbarnsta00deyo/page/n5/mode/2up.

Dincauze, D. F. and M. L. Curran
1984 *Paleoindians as Flexible Generalists: An Ecological Perspective*. Paper presented at the 24th Annual Meeting of the Northeastern Anthropological Association, Hartford, Conn.

Donta, C. L., and M. Kelly
2002 *Archaeological Intensive (Locational) Survey for the Proposed Vinegar Hill Estates, Saugus, Massachusetts*. Report prepared for Procopio Construction Company, Inc. Saugus, MA. Archaeological Services, University of Massachusetts, Amherst.

Dray, E., M. Cirbus, C. McNeill, and H. Wilcox
2013 Falmouth Reconnaissance Report Heritage Landscape Inventory Program. Prepared for Town of Falmouth and Cape Cod Commission. Boston University, Boston, MA. Retrieved on October 26, 2020 from https://www.mass.gov/doc/falmouth/download.

Fahey, E., and H. Herbster
2015 Intensive (Locational) Archaeological Survey Mid Cape Reliability Project, ROWs 342 and 343 and Bourne Switching Station, Bourne, Sandwich, and Barnstable, Massachusetts. Prepared for Epsilon Associates, Inc. Prepared by The Public Archaeology Laboratory, Inc., Pawtucket, RI.

Gardner, W. H
1974 The Flint Run Paleo-Indian Complex: Pattern and Process during the Paleo-Indian to Early Archaic. In *The Flint Run Paleo-Indian Complex: A Preliminary Report, 1971-1973 Seasons*, edited by William Gardner, pp. 5-47. Occasional Papers of the Catholic University Archaeology Laboratory No. 1, Washington.

1989 An Examination of Culture Change in the Late Pleistocene and Early Holocene (ca. 9200 to 6800 B.C.). In *Paleoindian Research in Virginia: A Synthesis*, edited by J. Mark

Wittkofski and Theodore R. Reinhart, pp. 5-51. Archaeological Society of Virginia, Special Publication #19.

Herbster, H.
2005 Intensive (Locational) Archaeological Survey Northeast Corner, A-3, A-5 and B-8 Parcels, Camp Edwards, Bourne and Sandwich, Massachusetts. Prepared for Comprehensive Environmental, Inc. and Massachusetts Army National Guard. Prepared by PAL, Pawtucket, RI.

Herbster, H. and M. Duffin
2006 Intensive (Locational) Archaeological Survey B-9 and C-14 Training Areas, Camp Edwards, Bourne and Sandwich, Massachusetts. Prepared for Comprehensive Environmental, Inc. and Massachusetts Army National Guard. Prepared by PAL, Pawtucket, RI.

Heitert, K. and J. Horn.
2018 Intensive (Locational) Archaeological Survey Bourne Switch Station Re-Build Project, Bourne, Massachusetts. Prepared for Epsilon Associates, Inc. Prepared by The Public Archaeology Laboratory, Inc. Pawtucket, RI.

Holmes, R.D., C.D. Hertz, and M.T. Mulholland
1998 *Historic Cultural Land Use Study of Lower Cape Cod: A Study of the Historical Archeology and History of the Cape Cod National Seashore and the Surrounding Region.* The University of Massachusetts Archaeological Services, The Environmental Institute. Amherst, Massachusetts. Electronic document, accessed February 20, 2020 and available at https://archive.org/details/historiccultural00holm/page/n1/mode/2up.

Johnson, E.S.
1997 *Archeological Overview and Assessment of the Saugus Iron Works National Historic Site, Saugus, Massachusetts.* Report prepared for the New England System Support Office, National Park Service, U.S. Department of the Interior, Boston, MA.

Macomber, G.M.
1991 Intensive Archaeological Survey of the Proposed Wastewater Treatment Facilities Project at Otis ANG Base in Bourne and Sandwich, Massachusetts. Office of Public Archaeology. Boston University, Boston, MA.

McManamon, F.P.
1984 *Chapters in the Archeology of Cape Cod: Results of the Cape Cod National Seashore Archaeological Survey, 1979-1981.* Report prepared by Division of Cultural Resources National Park Service, North Atlantic Regional Office. Retrieved on February 21, 2020 from https://irma.nps.gov/Datastore/Reference/Profile/2245857.

Massachusetts Historical Commission (MHC)
1985a*MHC Reconnaissance Survey Town Report: Falmouth*. Office of the Secretary of the State, Massachusetts Historical Commission, Boston, MA.

1985b Subsurface testing will conform to the guidelines in *Public Planning and Environmental Review: Archaeology and Historic Preservation,* Boston, MA.

1986 *Historic and Archaeological Resources of Cape Cod and the Islands*. Office of the Secretary of the State, Massachusetts Historical Commission, Boston, MA.

2014 Improving Technical Photography & Cartography. Memorandum dated August 14, 2014>

Massachusetts National Guard
2018 Camp Edwards History. Retrieved on June 11, 2020 from https://www.massnationalguard.org/index.php/history/camp-edwards-history.html

National Environmental Title Research (NETR)
1966 Historic Aerial Photograph. https://www.historicaerials.com/viewer, Electronic document accessed August 24, 2021.
1971 Historic Aerial Photograph. https://www.historicaerials.com/viewer, Electronic document accessed on August 24, 2021.
1994 Historic Aerial Photograph. https://www.historicaerials.com/viewer, Electronic document accessed on August 24, 2021.

Robinson, D.S., B. Ford, H. Herbster, and J.N. Walker, Jr.
2004 Marine Archaeological Reconnaissance Survey, Cape Wind Energy Project. Prepared for Cape Wind Associates, LLC. Prepared by PAL, Pawtucket, RI.

Roy, Richard
2021 Archaeological Reconnaissance Survey of Mayflower Wind Project, Falmouth, Barnstable County, Massachusetts. Prepared for Mayflower Wind Energy, LLC. Prepared by AECOM, Burlington, NJ.

Snow, D.R.
1980 *The Archaeology of New England*. Academic Press: New York.

Wright, O., J.S. Schmidt, J. Cook Hale, M. Perrin, A. Himmeistein, K. May, and M. Williams
2021 Marine Archaeological Resources Assessment for the Mayflower offshore Wind Farm Project and Export Cable Located in Massachusetts State Waters and OCS Block OCS-A-0521 Offshore Massachusetts, Interim Report. Prepared for Mayflower Wind Energy, LLC., Cambridge, MA. Prepared by R. Christopher Goodwin & Associates, LLC., Frederick, MD under contract to Fugro USA Marine, Inc. Houston, TX.

Resumes of Key Personnel

Edward M. Morin, MS, RPA

Principal Archaeologist

Areas of Expertise

National Historic Preservation Act Section 106 and 110 Consultation

Historical and Industrial Archaeology

Cultural Resource Management Studies

Archaeological Surveys and Investigations

Historic Preservation

Regulatory Agency Liaison and Coordination

Public Outreach

Education

MS, Archaeology, Rensselaer Polytechnic Institute, 1980

MA, American Studies, Saint Louis University, 1978

BA, History, Westfield State University, 1975

Licenses/Registrations

Register of Professional Archaeologists (#10066), 1987-Present

36 CFR Part 61

(Archaeology and History)

Certified Project Manager

Amtrak Railroad Worker Safety and Security Training

Years of Experience

With AECOM	6
With URS	16
With Other Firms	20

Professional Associations

Professional Archaeologists of New York City, 1983-Present

Society for Historical Archaeology, 1979-Present

Society for Industrial Archeology, 1981-Present

Summary

Mr. Morin has over 40 years of experience in conducting and supervising archaeological investigations. His responsibilities include scheduling of office staff and projects; project management; federal, state, local agency and client coordination; budgeting and design of research; and direction of fieldwork, laboratory analysis and report preparation. Mr. Morin has managed and directed archaeological and historical assessments, National Register evaluation and archaeological data recovery efforts. He has also managed numerous open-end contracts involving general cultural resource services and has managed multi-million-dollar archaeological data recovery programs. Prior to joining AECOM, Mr. Morin served as Principal Archaeologist for URS Corporation, Staff Archaeologist with the National Park Service, Denver Service Center, Applied Archeology Center, Senior Archaeologist for Louis Berger & Associates, and Staff Historical Archaeologist for American Resources Group, Inc. In those positions, his responsibilities included conducting and contracting archaeological investigations at historic and industrial sites within the Northeast, Mid-Atlantic and Midwest states; budgeting and design of research; direction of fieldwork, laboratory analysis, and report preparation; and project management. Project experience in Massachusetts includes serving as Project Archaeologist for on call environmental/cultural resources services for the Massachusetts Army National Guard associated with Camp Curtis Guild, Methuen Readiness Center and the Joint Force Headquarters in Milford; Project Manager for the Phase I and Phase II investigations at the Saugus Iron Works National Historic Site for the National Park Service and archaeological investigations at Faneuil Hall in Boston. Other projects included a Phase I survey of the Heath Brook Plaza project in Tewksbury and serving as the Project Historical Archaeologist for the cultural resource assessment of the Quabbin, Ware and Wachusett Watershed lands and for the cultural resource management plan for the Boston Metropolitan Park System both for the Metropolitan District Commission. Comparable experience in adjacent portions of New England includes a statewide on call cultural resources contract with the New Hampshire and Vermont Departments of Transportation. Mr. Morin served as Principal Historical Archaeologist for a variety of archaeological surveys and testing projects. In addition, while with the National Park Service, he supervised several archaeological assessments and testing investigations at Acadia National Park in Maine and at Saint-Gaudens National Historic Site in New Hampshire.

Experience

Phase IA Archaeological Investigations for the Falmouth to Bourne Mayflower Wind Project, conducted for Mayflower Wind Energy, LLC. Principal Archaeologist responsible for project oversight in the production of a cohesive Phase IA assessment of proposed impacts pertaining to the terrestrial portion of an offshore wind installation. Included the synthesis of contextualizing background research, walkover survey, and GIS-based landscape analysis into a comprehensive model of archaeological sensitivity within the project area.

Council for Northeast Historical Archaeology, 1979-Present

Training and Certifications

Annually, OSHA 8-Hour Annual Refresher Course (10/29/20)

2019, Amtrak Railroad Worker Safety and Security Training

2019, OSHA 10-hour Construction Safety and Health Course

AECOM, Field Safety Training (7/16/20)

I-195 Washington North Bridge Phase 2 Project, Providence and East Providence, Rhode Island, conducted for the Rhode Island Department of Transportation. Principal Archaeologist for authoring the programmatic agreement for outlining the archeological monitoring requirements during the construction of the Washington Bridge North.

Phase IA Archaeological Assessment, State Pier Facility Improvements, New London, Connecticut, conducted for Connecticut State Pier Authority. Principal Archaeologist for conducting a background data collection and archaeological sensitivity assessment of the proposed construction area of potential effects (APE) for the Connecticut State Pier Authority (SPA). The assessment determined that the prehistoric terrestrial archaeological potential for the APE is moderate to high and that the project APE retains a moderate to high archaeologically sensitive for historic archaeological resources. Therefore, it was recommended that further examination of terrestrial portions of the APE is necessary in order to assess the integrity of the soils; depth and nature of soil stratigraphy; and identification of areas suitable for archaeological testing.

Phase IB Archaeological Survey, Downtown Crossing CATEX, New Haven, Connecticut, conducted for the City of New Haven. Principal Archaeologist for a Phase IB archaeological survey of a proposed realignment and expansion of I-34 in downtown New Haven Connecticut performed on behalf of the Connecticut DOT. Report presented the archaeological and historical background, results of exploratory testing as well as recommendations about the need for future cultural resource work.

Phase IA Archaeological Assessment, Downtown Crossing CATEX, New Haven, Connecticut, conducted for the City of New Haven. Principal Archaeologist for an archaeological assessment of a proposed realignment and expansion of I-34 in downtown New Haven Connecticut performed on behalf of the Connecticut DOT. Final report presented the archaeological and historical background and archaeological sensitivity assessments, GIS palimpsest analysis, as well as recommendations about the need for future cultural resource work.

Archeological Investigations in Support of the Transportation and Information Hub Project, Faneuil Hall, Boston, Massachusetts, conducted for the National Park Service, Denver Service Center. Project Manager and Principal Archaeologist responsible for project oversight and agency coordination with the National Park Service, the Boston City Landmarks Commission and the Massachusetts Historical Commission for the investigation within the footprint of proposed impacts associated with the installation of a stairway for access to the lower level of Faneuil Hall. Fieldwork exposed successive layers of historical fill atop latticed timber cribbing associated with the early 18th century Town Dock wharf.

New Hampshire Department of Transportation Open End Contract for Archaeological Resources Statewide. Project Manager and Principal Archaeologist responsible for cultural resources surveys to identify archaeological resources within projects' area of potential effect (APE) and determine if more detailed investigations were required. Contract also included mitigation efforts and public outreach.

Vermont Department of Transportation Open End Contract for Archaeological Resources Statewide. Project Manager and Principal Archaeologist responsible for cultural resources surveys to identify archaeological resources within projects' area of potential effect (APE) and

determine if more detailed investigations were required. Contract also included mitigation efforts and public outreach.

Environmental Assessment/Assessment of Effect for the Georges Island Pier Improvement Project, Boston Harbor Islands National Park Area, Boston, Massachusetts, conducted for the National Park Service. Principal Investigator responsible for conducting background research and authoring the cultural resources sections of the report.

Phase II Archeological Investigations in Area 7 of the Saugus Iron Works National Historic Site, Saugus, Massachusetts, conducted for the Denver Service Center. Project Manager responsible for project oversight for the investigation within the footprint of proposed impacts associated with a connector building between two park structures. Fieldwork recovered a substantial sample of prehistoric artifacts and documented a number or prehistoric cultural features.

Archeological Investigations for the Accessibility Project, Saugus Iron Works National Historic Site, Saugus, Massachusetts, conducted for the Denver Service Center. Project Manager for conducting investigations to provide sufficient information on the nature, condition, location, and integrity of possible below ground archeological resources that might be impacted by proposed ground-disturbing modifications to make the site accessible for the physically disabled and associated utility installation. The delineation of subsurface resources provided the information needed to ensure that the final design was developed to avoid, to the maximum feasible extent, impacts to significant archeological remains.

Environmental Consulting Services Contract - Massachusetts, Statewide, conducted for the Massachusetts Army National Guard. Project Archaeologist responsible for preparing cultural resource studies for Environmental Assessments (EA) and Environmental Notification Forms (ENF) for proposed National Guard projects. Conducting EAs and ENFs will enable the Guard to follow the National Environmental Policy Act of 1969 (NEPA) and the Massachusetts Environmental Policy Act (MEPA) requirements as they apply to proposed projects.

Phase I Archaeological Survey for Replacement of I-89 Bridges 81N & 81S, Milton, Vermont, conducted for Tetra Tech Construction, Inc., Principal Archaeologist for conducting Phase I investigations of the North and South banks of the Lamoille River at its intersection with I-89. A methodology of shovel testing and pedestrian survey was employed to establish the presence or absence of cultural material within the proposed area of potential effects (APE). A total of 18 shovel test units (STU) excavated in the project area revealed that it was disturbed by the initial construction of the I-89 Bridge. No archaeological deposits were identified.

Preliminary Draft Environmental Assessment for the Proposed Field Maintenance Shop, Camp Curtis Guild, Reading, Wakefield, Lynnfield, and North Reading, Massachusetts, conducted for the Massachusetts Army National Guard. Principal Investigator responsible for conducting background research and authoring the cultural resources sections of the report.

Methuen Facility Improvements Project, Methuen Armory, Methuen, Massachusetts, conducted for the Massachusetts Army National Guard. Principal Investigator for cultural resources support for the Methuen Facility Improvements Project, which involved the construction of a new Readiness Center adjacent to the existing Armory Building in Methuen. The Armory Building and the Motor Vehicles Storage Building (MVSB) on the property of the new Readiness Center were eligible for the National Register of Historic Places. Section 106 of the National Historic Preservation Act required that the effect of

the project on the eligible resources be assessed. Since the MVSB had to be demolished for the construction of a Readiness Center that met the current security guidelines, the project had an adverse effect upon the MVSB. A memorandum of agreement (MOA) was drafted in order to outline stipulations that would be carried out for the mitigation of the adverse effect.

Intensive Phase I Cultural Resource Survey of the Heath Brook Plaza Project, Town of Tewksbury, Middlesex County, Massachusetts, conducted for Quincy & Company, Boston, Massachusetts. Principal Investigator for conducting investigations that identified and evaluated an Archaic through Middle Woodland habitation site, in addition to late-nineteenth century domestic deposit

Preliminary Cultural Resource Assessment of the Quabbin, Ware and Wachusett Watershed Lands, conducted for the Watershed Management Division, Metropolitan District Commission, Boston, Massachusetts. Co-Principal Investigator responsible for the survey and identification of eighteenth to twentieth century sites, in addition to developing sensitivity maps for potential archeological sites.

Cultural Resource Management Plan for the Boston Metropolitan Park System, conducted for the Metropolitan District Commission, Parks and Recreation Division, Boston, Massachusetts. Principal Investigator, for developing a management plan for archaeological sites from the Archaic through twentieth century periods.

Chronology

01/01/2021 to Present: Associate Vice President/Principal Archaeologist, Department Manager/New England-New York, East Cultural Resources Department, AECOM, Rocky Hill, CT

01/2019 to 12/30/2020: Principal Archaeologist/Deputy Department Manager/New England, Archaeology, AECOM, Rocky Hill, CT

01/2017-01/2019: Principal Archaeologist/Deputy Department Manager, Archaeology, AECOM, Burlington, NJ

10/2015-Present: Principal Archaeologist/Deputy Department Manager, Archaeology, AECOM

01/1999-10/2015: Principal Archaeologist/Program Manager, URS Corporation, Burlington, New Jersey

10/1991-01/1999: Staff Archeologist, National Park Service, Denver Service Center, Applied Archeology Center, Silver Spring, Maryland

08/1983-10/1991: Senior Archaeologist, Louis Berger & Associates, Inc., East Orange, New Jersey

08/1980-08/1983: Staff Historic Archaeologist, American Resources Group, Inc., Carbondale, Illinois

06/1980-08/1980: Staff Archaeologist, Macon County Conservation District, Decatur, Illinois

03/1980-06/1980: Archaeologist, Center for Archaeological Investigations, Southern Illinois University, Carbondale, Illinois

09/1979-09/1980: Archaeologist, Turner Construction Company, New York, New York

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Rocky Hill, CT 06067
Direct: 860.263.5788
Cell: 609.529.9736

Email address: ed.morin@aecom.com

AECOM

Richard A. Roy, MA, RPA

Archaeologist

Areas of Expertise

National Historic Preservation Act Section 106 and 110 Consultation

Cultural Resource Management Studies

Archaeological Surveys and Investigations

Geophysical Studies

GIS Analysis

Education

MA, Historical Archaeology, University of Massachusetts Boston, 2016

BA, Anthropology, American University, 2012

Years of Experience

With AECOM	4.5
With Other Firms	4

Professional Associations

Register of Professional Archaeologists (#17268)

Training and Certifications

36 CFR Part 61, Appendix A

OSHA 10 Hour General Industry Outreach Training, 2016

AECOM 2-Hour Field Safety, 2020

CPR/AED Trained, 2019

AECOM COVID-19 Safety Suite, 2020

GSSI Advanced GPR Interpretation Class, 2019

AMDA Metal Detecting for Archaeologists Workshop, 2018

AMTRAK Roadway Worker Protection Program, 2018

CSX Roadway Worker Protection Contractor Safety, 2018

Summary

Richard Roy joined AECOM in 2016 and has 8 years of experience in archaeology and cultural resources management. He is a Historical Archaeologist who has been engaged in projects spanning North America; from the Canadian Maritimes, south to the Great Dismal Swamp of North Carolina, and west to Santa Fe, New Mexico. At AECOM, his duties primarily include GIS management for archaeological fieldwork, report production, faunal analysis, GPS support, and both geophysical and total station survey. Prior to working at AECOM, Mr. Roy attended the Master's Program in Historical Archaeology at the University of Massachusetts Boston. There his work focused on GIS support for the department and attached Fiske Center for Archaeological Research, in addition to field excavation, archaeological monitoring, and teaching. His Master's thesis explores the ecological implications of a faunal assemblage from a 17th-18th century house on Martha's Vineyard. Additionally, during this time, he worked for the Massachusetts Historical Commission as part of their disaster planning project inventorying cultural resources in coastal Massachusetts within a GIS framework.

Selected Project Experience

Mayflower Wind Project, Mayflower Wind Energy, LLC., Falmouth, and Bourne, MA. Produced a cohesive Phase IA assessment of proposed impacts pertaining to the terrestrial portion of an offshore wind installation. Included the synthesis of contextualizing background research, walkover survey, and GIS-based landscape analysis into a comprehensive model of archaeological sensitivity within the project area.

First Bank of the United State Archaeology Sensitivity Study, Independence Historical Trust, Philadelphia, PA. Authored Phase IA Sensitivity Study for improvements around the First Bank of the United States in the Independence National Historical Park. Included development of archaeological context, alternative-based sensitivity study, and recommendations for mitigations of impacts to potential archaeological resources.

2020 K105 Structure Replacement Project, Eversource Energy, LLC., Bedford and Merrimack, NH. Compiled materials required for reporting to NH-DHR on field activities related to improvements made along an existing transmission line. These submissions included both a Request for Project Review as well as Form Report summarizing the findings of both walkover and sub-surface testing.

2020 367 Transmission Line Structure Replacement Project, Eversource Energy, LLC., Fitzwilliam, Greenville, and Mason, NH. Assembled components for reporting to NH-DHR on field activities related to improvements made along an existing transmission line. Submissions included both a Request for Project Review as well as Form Report summarizing the findings of both walkover and sub-surface testing. Additionally, an existing sensitivity model previously established for use in

the corridor was adapted and expanded to cover an additional proposed access road through a more formal Phase IA Archaeological Assessment

Fort Benning Heavy Off-Road Mounted Maneuver Training Area Phase II Archaeological Evaluations of Five Cemeteries, USACE, Fort Benning, GA. Developed survey plans and conducted ground-penetrating radar surveys of five historic cemeteries at Fort Benning, Georgia in order to better delineate their extent. Surveys also included detailed site plan development using high-accuracy GPS. These findings were reported in an appendix to the larger Phase II study and were integral to alternative selection prior to the commencement of on-base activities.

Phase II Archaeological Investigation and Cemetery Delineation of Sites 44HE0387, 44HE0692, and 44HE0706, Henrico County, VA. A Ground-penetrating radar investigation was undertaken at two 18th-19th century cemeteries. Survey was conducted in order to assist in delineation efforts as well as potentially asses the number of burials requiring relocation.

Archaeological Monitoring, Scudders Falls Bridge Replacement, Delaware River Joint Toll Bridge Commission, Mercer County, NJ. Conducted archaeological monitoring for pier construction activities at the prism for the Trenton Water Power Canal. Documented soil profiles near the Delaware River and otherwise recorded.

I-95 Girard Interchange Archaeological Data Recovery, Philadelphia, PA. GIS Specialist and Archaeologist. Large-scale multi-year data recovery project. Construct maps and analyze spatial data from Phases I-III of myriad sites. Survey on-going excavations using a total station. Responsible for writing zooarchaeological analyses from Cambria-Ann and Somerset Cambria Sites.

Seneca Boston-Florence Higginbotham House, Nantucket, MA. Excavation on the grounds of an 18th-20th century house museum. Worked in conjunction with the Boston and Nantucket Museums of African American History. Conducted archaeological monitoring during subsequent construction.

Plymouth 400 Project, Fiske Center for Archaeological Research, Plymouth, MA. Managed project GIS data. Renovated the project artifact database created in FileMaker Pro. Developed Plymouth County sensitivity models for, and authored GIS sections of the Plymouth 400 Site Report in 2014. Assisted in ground-penetrating radar survey of historic burial ground in Plymouth, MA.

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AECOM

Thomas J. Kutys, MA, RPA

Archaeology Laboratory Manager

Areas of Expertise

Archaeological Laboratory Management/Operations

Artifact Analysis and Interpretation

Archaeological Collection Curation

Creation and Manipulation of Databases

General Archaeological Laboratory Tasks

Archaeological Surveys and Excavations

Public Outreach

Education

MA, Historical Archaeology, University of Massachusetts Boston, 2013

Postbaccalaureate Certificate, Geographic Information Systems, Pennsylvania State University, 2007

BS, Archaeological Science, Pennsylvania State University, 2005

Years of Experience

AECOM	12
Other Firms	5

Professional Associations

Council for Northeast Historical Archaeology

Register of Professional Archaeologists

Society for Historical Archaeology

Summary

Mr. Kutys joined URS Corporation/AECOM in 2009 and has 17 years' experience in archaeological investigations and artifact analysis within the Mid-Atlantic, New England, and Southeast regions of the United States. As the laboratory manager at AECOM, Mr. Kutys manages the day-to-day operations of the archaeology laboratory and develops strategies for the cleaning, identification, and cataloging of both prehistoric and historic artifact assemblages. He is also responsible for identifying, researching, and preparing interpretive materials for historic period artifact assemblages, and has helped design a variety of public outreach programs, artifact displays, and museum exhibits.

Selected Experience

Archaeological Investigations for the I-95/Girard Ave. Improvements Project, Pennsylvania Department of Transportation, Philadelphia, PA. Work performed for Engineering District 6-0. Archaeology Laboratory Manager, report co-author, and previously an Archaeological Technician during the ongoing Phase II/III archaeological investigations along a three mile long project area through the Old City, Northern Liberties, Kensington/Fishtown, and Port Richmond neighborhoods of Philadelphia. Investigations to date have resulted in the identification and study of multiple National Register-eligible historic sites, including portions of the former Aramingo Canal prism, multiple 18th, 19th, and 20th century domestic sites, the Dyottville Glassworks, as well as the discovery of nine previously unknown Native American sites. Over one million artifacts have been cataloged to date.

Archaeological Investigations to Locate the Site of the 1876 Centennial Japanese Bazaar, Philadelphia, PA. Conducted historical and artifact research, and co-authored report on investigations at the site of the Japanese Bazaar. Phase I excavations conducted for the Friends of the Shofuso Japanese House. The bazaar was constructed as the souvenir shop for the Japanese Exhibit at the Centennial Exhibition of 1876 in Philadelphia. Over 2,000 artifacts were recovered the majority consisted of Japanese ceramics for sale in the shop.

Rain Garden Trench, William Dick Elementary School, 2498 W. Diamond Street, Philadelphia, PA. Archaeological technician and Deputy Laboratory Manager during the documentation and exhumation of 17 intact or partially intact burials from the Odd Fellows Cemetery in North Philadelphia (ca. 1849-1950). Burials were impacted during machine excavation of a planned rain garden trench and dated from the mid-late 19th century through the early 1920s.

National Constitution Center Site, Independence National Historical Park, Philadelphia, PA. Cataloged artifacts from archaeological excavations of an entire city block, including 115 historic house lots and nearly 300 features. Excavations resulted in the recovery of approximately one million artifacts. Investigations also documented an intact Native American encampment and the recovery of artifacts

associated with several intact 18th-century African American home sites. Artifacts consists of 18th through 19th-century household assemblages that reflect the daily lives of citizens from a variety of backgrounds and economic classes.

Archaeological Investigation for the Cooper Street Development Project, Camden, NJ. Archaeological technician and report co-author involved in the processing, research and analysis of over 19,000 artifacts recovered from Phase II/III Data Recovery excavations undertaken for the Camden County Improvement Authority. Artifacts from wood lined box privies, barrel privies, a brick lined shaft, dated occupation of the two properties from the late 18th through late 19th century.

New York City Hall Park Archaeological Investigations. Supervised processing of over 22,000 artifacts excavated in conjunction with renovations to New York City Hall. Conducted for Chrysalis Archaeology. Recovered artifacts are associated with the various uses of the property: First Almshouse (1735-1797), Military Barracks (1757-1783), Crolius and Remmey stoneware pottery dump (circa 1740's-1814), Horse Market (circa 1798), and the construction of City Hall (1803-1812).

Archaeological Investigations in Support of the Transportation and Information Hub Project, Faneuil Hall, Boston, MA. Archaeological technician involved in the archaeological data recovery adjacent to the north wall of Faneuil Hall, a National Historic Landmark owned and managed by the city of Boston and operated by the NPS as part of the Boston National Historical Park. Supervised the cataloging of the recovered artifacts by University of Massachusetts Boston graduate students at the National Park Service's Northeast Region Archaeology office in Lowell, MA.

Phase II Archaeological Testing of Site 1MA639, Parcel A, Redstone Gateway Project, Redstone Arsenal, Madison County, AL. Archaeological technician involved in the Phase II excavation of the southern portion of the 19th-century Oakendale Plantation. Field methods included controlled surface collections, test unit excavation, and mechanical removal of disturbed plowzone deposits for feature identification.

Buffalo City Honors School Cemetery Relocation Project, Buffalo, Erie County, NY. Archaeological technician during the cemetery relocation activities on Buffalo School District property prior to school improvements. The historic Potters Field Cemetery was created by the city of Buffalo in 1832 in anticipation of a cholera epidemic and was in use through the mid-nineteenth century. Despite historical relocation efforts in the 1870's, the current project resulted in the removal of nearly 500 sets of human remains. The relocation was conducted while school was in session without disruption to learning activities and emphasized public outreach and the involvement of the nearby students.

Museum Exhibits and Displays

Co-curator historic period artifact exhibits: I-95 Girard Avenue Interchange Archaeology Center Philadelphia, PA, 2019 – present. Artifact selection, display design, mounts, interpretive text and installation. "Themes of Everyday Life," "Philadelphia Queensware," and "Artifacts of Childhood" cases.

Co-Curator: *From the Ground Up: Archaeology, Artisans, Everyday Life* prehistoric exhibit at Wheaton Arts and Cultural Center, Millville, New Jersey, 2016. Involved in curating over 600 artifacts from the I-95 Girard Avenue excavations on exhibit. Responsibilities included: design, interpretive text, object selection, mounts, installation, and loan

agreements. Our exhibit was featured in an article in *Maine Antique Digest* October 2016 Vol XLIV No 10.

Member of exhibit team: *Digging the City: Archaeological Discoveries from the Philadelphia Waterfront*, Independence Seaport Museum, Philadelphia, PA. Responsible for historic object selection, design, interpretive labels, and installation.

Chronology

2015-Present: Archaeology Laboratory Manager, AECOM/URS Corporation, Burlington, NJ

2012-2014: Deputy Archaeology Laboratory Manager, URS Corporation, Burlington, NJ

2009-2012: Archaeological Technician, URS Corporation, Burlington, NJ

2007-2009: Archaeological Technician, Fiske Center for Archaeological Research, Boston, MA

2006: Archaeological Technician, Conservation Management Institute, Blackstone, VA

2006: Archaeological Technician, Maser Consulting P. A., Red Bank, NJ

2005-2007, 2009: Archaeological Technician, A. D. Marble & Company, Conshohocken, PA

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AECOM

Carolyn Horlacher, RPA

Deputy Archaeology Laboratory Manager

Areas of Expertise

Historical Archaeology

Database Management

Collections Management

Artifact Research, Analysis, and Interpretation

Section 106 of the NHPA and NEPA

Phase I, II, and III Archaeological Surveys, Excavations, and Analysis

Education

MA, Historical Archaeology, University of Boston, 2016

BA, Anthropology, Temple University, 2011

Years of Experience

AECOM	8

Professional Associations

Register of Professional Archaeologists

Society for Historical Archaeology

Council for Northeast Historical Archaeology

Summary

Carolyn Horlacher joined AECOM in 2014 and has 12 years of experience in archaeology and cultural resources management. She is a Historical Archaeologist who has participated in projects in the Mid-Atlantic, New England, and the Southwest. At AECOM, her duties primarily include management of daily lab activities and supervision and training of archaeological lab technicians, as well as historical artifact cataloging, research, analysis, and report writing. Prior to working at AECOM Ms. Horlacher attended the Master's program in Historical Archaeology at the University of Massachusetts Boston. There her work focused on collections management and general archaeological lab tasks and lab supervision for the Anthropology Department and attached Fiske Center for Archaeological Research. Additionally she participated in field excavation and field school teaching. Her Master's thesis explores the relationship between Black Feminist Thought and the Domestic Reform Movement of the early 20th century through the analysis of an assemblage of food preparation artifacts dating to the late 19th through early 20th century. The artifacts were recovered from the Seneca Boston-Florence Higginbotham House, located on Nantucket, MA. Before graduate school, Carolyn was employed by URS Corporation as a laboratory and field technician.

Selected AECOM Project Specific Experience

Archaeological Investigations of the I-95/Girard Ave. Improvements Project, PennDOT: Philadelphia, PA. Manages the processing, research, and analysis of the artifacts recovered from the I-95 archaeological project. Also responsible for the organization and collections management of the assemblage of artifacts that have been excavated over the last 9 years. Trains archaeological technicians in lab methods, artifact identification, and analysis.

Woodlands/Hamilton Phase I: Philadelphia, PA. Cataloged the artifacts recovered from the project. Completed the research, analysis, and interpretation of the assemblage as well as wrote the lab analysis for the project report. The historic Woodlands property is a designated National Historic Landmark District and contains 18th and 19th century components of the estate as well as the later Woodlands Cemetery.

US 35 Improvement Project, WV 869 to Mason Co. 40, Putnam and Mason Counties, West Virginia Phase I Archaeological Investigation. Cataloged the artifacts recovered from the project. Completed the research, analysis, and interpretation of the assemblage as well as wrote the lab analysis for the project report.

Museum Exhibit at Wheaton Arts, Millville, NJ. Cataloged objects, labeled them with the appropriate context information, and glued them in preparation for the museum exhibit. Also participated in the installation of the exhibit as well as activities at the exhibit opening.

Archaeological Monitoring of Carr Garden, Philadelphia, PA. Cataloged, organized, and prepared the archaeological assemblage for storage. The site was located in between Columbus Blvd. and Second Streets in the Old City section of Philadelphia.

Race Street Connector Project, Philadelphia, PA. Cataloged, organized, and prepared the archaeological assemblage for storage. The site was located in between Columbus Blvd. and Second Streets in the Old City section of Philadelphia.

Deepwater Retermination Project, Phase I, II, and III, Salem County, NJ. Cataloged, organized, and prepared the archaeological assemblage for storage.

GE Hudson River Phase I and II, New York. Participated in fieldwork for Phase I and II sites as well as processed the artifacts in the lab.

Publications

2017 "*Worker's Whimsies: Class Canes at Dyottville"* River Chronicles, AECOM Vol. 2, 49.

2016 "Measured Resistance: A Black Feminist Perspective on the Domestic Reform Movement". *Graduate Masters Theses*.

Professional Papers and Presentations

Presenter, Council for Northeast Historical Archaeology, Fall 2021

Presenter, Society for Historical Archaeology, Winter 2020

Presenter, Council for Northeast Historical Archaeology, Fall 2014

Presenter, Philadelphia Archaeological Forum, Fall 2011 and Fall 2012

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AECOM

Jeremy W. Koch, PhD, RPA

Senior Prehistoric Material Specialist

Areas of Expertise

Archaeological Research and Report Preparation

Database Creation and Management

Museum Exhibit Design and Installation

Graduate, Undergraduate, and Professional Education and Mentoring

Archaeological Surveys and Excavations

Prehistoric Archaeology and First American Studies

Geomorphology and Geoarchaeology

Experimental Archaeology

Education

PhD, Anthropology, Temple University, 2017

MA, Anthropology, Temple University, 2014

BA, Anthropology and Sociology, Ursinus College, 2006

Years of Experience

AECOM	10
Temple University	15

Professional Associations

Register of Professional Archaeologists

Society for American Archaeology

Summary

Dr. Koch has 15 years of archaeological experience including prehistoric, contact, historic, urban, and geoarchaeological investigations. His background includes extensive experience teaching and applying archaeological field and laboratory methods in diverse settings, with specializations in lithic analysis, ceramic analysis, geomorphology, and experimental archaeology. The focus of Dr. Koch's dissertation was Terminal Pleistocene-Early Holocene hunter-gatherer technology, mobility patterns, and lithic resource procurement in the Middle Atlantic and Northeast regions of North America. As an archaeologist at AECOM his responsibilities include researching, analyzing, and interpreting prehistoric archaeological materials and sites, managing archaeological staff, and report preparation. Dr. Koch is the author or co-author of several peer-reviewed publications, technical reports, and professional papers.

Selected Experience

PennDOT's I-95/Girard Avenue Highway Improvement Project, Phase I – III Archaeological Investigations, Philadelphia County, Pennsylvania. Report Author, Prehistoric Analyst, and Field Supervisor. Phase I-III archaeological investigations along Interstate 95 highway corridor in Philadelphia, Pennsylvania. Investigations resulted in the identification and detailed study of multiple National Register-eligible historic sites including portions of the former Aramingo Canal prism, multiple 18th and 19th century domestic historic sites, 19th century Dyottville Glassworks, as well as the discovery of Native American encampments. Collaborator on several public outreach events, museum displays, and content contributor for: http://diggingi95.com/

Pennsylvania Turnpike Northeast Extension Project, Phase III Archaeological Investigations, Montgomery County and Bucks County, Pennsylvania. Report Author and Prehistoric Analyst. Phase III archaeological investigations at Split Site East (36BU0449) and Unami Creek Open Site (36BU0445). Data-recovery excavations to mitigate the adverse effects on buried cultural resources from the proposed Pennsylvania Turnpike Northeast Extension Project Full Depth Roadway Reconstruction on behalf of the Pennsylvania Turnpike Commission.

Phase I/II/III Deepwater Reterminations Project, Atlantic City Electric, Salem County, NJ. Report Author and Prehistoric Analyst. A historic period site (28Sa216) and Native American site (28Sa117) were investigated during the Phase I archaeological survey. The Phase II/III archaeological survey was completed at 28Sa117.

First Baptist Church Cemetery, Philadelphia County, Pennsylvania. Field Archaeologist. Archaeological exhumation and relocation of burials from First Baptist Church in Philadelphia, Pennsylvania. Excavations revealed hundreds of burials, including adults, sub-adults, and infants, associated with a cemetery established in 1707.

Hagerstown Regional Airport. Report Contributor and Prehistoric Analyst. Phase I-III archaeological investigations at the Brumbaugh Kendall Grove Farmstead in Washington County Maryland. Excavations were performed in advance of demolition of historic structure.

North Carolina Department of Transportation 31YC31, Phase III Archaeological Investigations, North Carolina. Prehistoric Analyst. Recorded, cataloged, and analyzed lithic raw materials, flaking debris, pottery, and fire-cracked rock artifacts recovered from the site.

Tennessee Department of Transportation, TDOT SR317 Phase I, Morrisville, Tennessee. Prehistoric Analyst. Recorded, cataloged, and analyzed projectile points, flaking debris, pottery, and fire-cracked rock recovered from the site.

SCANA Corporation, Transco to Charleston Pipeline Project, Various Locations, South Carolina. Prehistoric Analyst. Recorded, cataloged, and analyzed projectile points, flaking debris, pottery, and fire-cracked rock artifacts recovered from the site.

Shell Appalachia, LLC proposed Petrochemicals Plant, Phase IA/B and Phase II Archaeological Evaluation and Investigations, Beaver County, Pennsylvania. Prehistoric Analyst and Field Archaeologist. Phase I archaeological evaluation and Phase II excavation of nine archaeological sites. The newly discovered sites include 19-20th century home- and farmsteads, 19th century Almshouse, and several Native American habitation sites on the high bluffs and floodplain of the Ohio River.

Nesquehoning Creek Site Archaeological Investigations, Carbon County, Pennsylvania. Co-Director and field school instructor for Temple University. Directed archaeological and geomorphological investigations of a stratified archaeological site located in Lehigh Gorge State Park. Instructed large to small groups of college students and volunteers on the basics of archaeological excavation, artifact identification, geomorphology, experimental archaeology, and survey techniques. Controlled excavations revealed a long sedimentary sequence extending approximately 2.5 m below the existing ground surface with evidence of Colonial, Woodland, Archaic, and Paleoindian occupations.

Depue Island Site Archaeological Investigations, Monroe County, Pennsylvania. Field Supervisor for Temple University. Oversaw the planning and excavation of a stratified archaeological site along the Delaware River. A previously recorded Early Archaic deposit was located and tested based on a detailed analysis of site stratigraphy and geomorphology. Created site maps for the project using ArcGIS.

Quaker Hills Quarry Site Archaeological Investigations, Lancaster County, Pennsylvania. Field Archaeologist for the Pennsylvania Historical and Museum Commission and Temple University. Excavations involved exposing, mapping, and excavating features associated with a Shenk's Ferry palisade village. Archaeological investigations included the recovery of human remains from adult, sub-adult, and infant burials.

Publications

Walker, Jesse, Elisabeth LaVigne, and Jeremy W. Koch
2019 Prehistoric Archaeology at 28Sa117, Pennsville, Salem County. *Bulletin of the Archaeological Society of New Jersey 74:* 65-88.

Stewart, R. Michael, Jeremy W. Koch, Kurt Carr, Del Beck, Gary Stinchcomb, Steven G. Driese, and Frank Vento
2018 The Paleoindian Occupation at Nesquehoning Creek (36CR142) Carbon County, Pennsylvania. In *In the Eastern Fluted Point Tradition Vol. II*, edited by J.A.M. Gingerich, 68-92. The University of Utah Press, Salt Lake City.

Koch, Jeremy W.
2017 Paleoindian Chronology, Technology, and Lithic Resource Procurement at Nesquehoning Creek. Ph.D. dissertation Department of Anthropology, Temple University, Philadelphia.

Koch, Jeremy W.
2017 Digging Deeper: Native American Archaeology Beneath Dyottville. *River Chronicles* 2:6-7.

Koch, Jeremy W.
2016 Hot Out of the (Rock) Oven: An Example of Prehistoric Earth Oven Technology at the I. P. Morris Site in Philadelphia, Pennsylvania. *River Chronicles* 1:19.

Schindler, William and Jeremy W. Koch
2012 Flakes Giving You Lip? Let Them Speak: An Examination of the Relationship Between Percussor Type and Lipped Platforms. *Archaeology of Eastern North America* 40:99-106.

Professional Papers and Presentations

Koch, Jeremy W. and Kristen LaPorte
2020 An Argillite Stone Tool Cache at the Tumanarananaming 3 Site, Philadelphia, Pennsylvania. Poster presented at the Middle Atlantic Archaeology Conference, cancelled due to COVID.

Koch, Jeremy W.
2015 Prehistoric Archaeological Investigations along the Delaware River in Philadelphia, Pennsylvania. Paper presented at the Archaeological Society of New Jersey, Trenton, NJ.

Koch, Jeremy W. and Matthew G. Olson
2014 Native American Life along the Delaware River. Paper presented at the Philadelphia Archaeological Forum, Philadelphia, PA.

Stewart, R. Michael, Jeremy W. Koch, Kurt Carr, Del Beck, Gary Stinchcomb, and Frank Vento
2012 The Paleoindian Occupation at Nesquehoning Creek (36CR142), Carbon County, Pennsylvania. Paper presented at the Society for American Archaeology conference, Memphis, TN.

Koch, Jeremy W.
2011 Preliminary Analysis of the Paleoindian Occupation at the Nesquehoning Creek Site in Northeast Pennsylvania. Paper presented at the Eastern States Archaeological Federation Conference, Mt. Laurel, NJ.

Stewart, R. Michael, Kurt Carr, Jeremy W. Koch, Gary Stinchcomb, Del Beck, Tom Davies
2011 The Battle for the Past at Nesquehoning Creek. Paper presented at the Middle Atlantic Archaeology conference, Ocean City, MD.

Koch, Jeremy W., Joseph Blondino and R. Michael Stewart
2007 Depue Island, Pennsylvania: A Stratigraphically Isolated Early Archaic Deposit. Paper presented at the Middle Atlantic Archaeology conference, Ocean City, MD.

Museum Exhibits and Displays

Co-Curator: I-95 Girard Avenue Interchange Project Archaeology Center in Philadelphia, Pennsylvania, 2019-present. Developed, designed, and installed prehistoric exhibition with an emphasize on Philadelphia prehistory, artifact displays, and artifact reproductions.

Co-Curator: *From the Ground Up: Archaeology, Artisans, Everyday Life* prehistoric exhibit at Wheaton Arts and Cultural Center, Millville, New Jersey, 2016. Developed, designed, and installed prehistoric exhibition with an emphasize on the significance of regional resources for the development of life along the Delaware River. Exhibit was featured in an article in *Maine Antique Digest* October 2016 Vol XLIV No 10.

Chronology

2021-Present: Senior Prehistoric Material Specialist and Archaeologist, AECOM, Burlington, New Jersey.

2015-2021: Prehistoric Material Specialist and Archaeologist, AECOM, Burlington, New Jersey.

2011-2015: Archaeologist, AECOM/URS, Burlington, New Jersey.

2010-2015: Adjunct Instructor, Temple University, Philadelphia, Pennsylvania.

2008-2010: Teaching Assistant, Temple University, Philadelphia, Pennsylvania.

2008: Laboratory Assistant, Temple University, Philadelphia, Pennsylvania.

2006-2008: Archaeologist, Temple University, Philadelphia, Pennsylvania.

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Curation Agreement

Public Archaeology Laboratory

LETTER OF AGREEMENT FOR CURATION OF ARCHAEOLOGICAL MATERIALS

It is hereby agreed and understood by **The Public Archaeology Laboratory, Inc. (PAL)** and the Depositor, Mayflower Wind Energy, LLC, that PAL will receive collections of archaeological materials from the Depositor which collection is to be or was obtained as follows:

Project Name:	Mayflower Wind, BOEM OCS-A 521 Massachusetts Wind Energy Area, Offshore Massachusetts	**Project Year:**	2022-2023
		MHC Permit #:	
Report Title:	Phase I Archaeological Investigation and Archaeological Monitoring		
Phase of Work:	Intensive Locational Archaeological Survey and Archaeological Construction Monitoring		
Site(s):			

Conditions:

1. All associated artifacts, specimens, and documentation are considered part of the collection and must be transferred to The Public Archaeology Laboratory, Pawtucket, Rhode Island at the same time as the cultural material.

2. Collections will meet the curatorial standards and guidelines of the Massachusetts Historical Commission and the National Park Service (as outlined in 36 CFR 79.9). The regulation states that the facility must:

    - store and maintain the collection on a long-term basis in accordance with professional museum and archival standards;
    - have adequate equipment and space for storage and study;
    - maintain complete and accurate records of the collection including acquisition, loan, and accession records; field records, photographs, negatives, and slides; catalog and artifact inventory lists; locational information, including maps; collection inventories, and condition reports; and records on lost/destroyed documentation, deaccessions, transfers, repatriations, or discards as approved by the State Archaeologist.
    - keep physically secure conditions within storage, laboratory, and study areas by meeting fire, building, health, and safety codes with appropriate fire systems, intrusion systems, and an emergency management plan;

Public Archaeology Laboratory

LETTER OF AGREEMENT FOR CURATION OF ARCHAEOLOGICAL MATERIALS

- have qualified professional staff and consultants;
- handle, store, clean, conserve, and exhibit collections in a manner appropriate to the condition and the nature of the material remains;
- regularly inspect and inventory collections; and
- not allow loans without a written agreement detailing the object or collection to be loaned, the purpose and length of loan, restrictions, insurance, and handling requirements; and
- treat all human remains with dignity and respect, if present in the collection, and shall not be displayed. Human remains may be subject to the provisions of the Native American Graves Protection and Repatriation Act (P.L. 101-601; Stat. 3048).

3. The State Archaeologist or his/her designee will:
   - retain the right to cancel or modify this curation agreement or custody permit for just cause;
   - be notified immediately of any changes in the location or condition of the collection;
   - have access to the collection to inspect its condition and to ensure compliance with all stipulations; and
   - grant permission for any requests to access sensitive locational information found in archaeological records and reports associated with the collection, pursuant to M.G.L. Ch. 9 s. 26A (1).

We hereby attest by our signatures that we understand and agree to the purposes and conditions of this agreement.

PAL: _____ **Date:** 1/10/2022

Title: Archaeology Laboratory Manager

Depositor: DocuSigned by: _____ **Date:** 1/7/2022
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Title: Director, Permitting/Mayflower Wind Energy, LLC

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palinc.com

Public Archaeology Laboratory Collections Management Policy

Collections Management Policy

Collections

The Public Archaeology Laboratory, Inc. (PAL) has held archaeological collections[1] generated through Cultural Resource Management (CRM) projects since 1982. Our laboratory is the designated long-term curatorial facility for the RI Army National Guard and the United States Air Force; an approved curation facility by the St. Louis District of the U.S. Army Corps of Engineers for artifacts recovered on USACE projects; and an approved curatorial facility under specific project permits issued by the Rhode Island Historical Preservation & Heritage Commission (RIHPHC) and the Massachusetts Historical Commission (MHC) for collections originating in Rhode Island and Massachusetts. PAL also serves as the repository for all Rhode Island Department of Transportation (RIDOT) archaeological collections. The facility is a short-term repository for collections originating in Connecticut, New York, Pennsylvania, New Jersey, New Hampshire, and Vermont and for materials collected under contract with various other state and federal agencies. The curation section of the laboratory is inspected regularly by state and federal agencies to ensure the proper maintenance of the cultural materials entrusted to PAL's care.

PAL Curation Facility

PAL's 4,450-sq ft laboratory facility houses all functions related to the processing, analysis, cataloging, conservation, and curation of artifacts recovered during archaeological field investigations. The curation facility is capable of storing more than 7,700 cu ft of cultural materials in a climate-controlled, pest-free, and secure environment. It includes a state-of-the-art archive room with a high-density mobile shelving system, a large laboratory for artifact processing and a separate smaller laboratory for soils analysis and artifact conservation. PAL's laboratory staff includes a full-time laboratory manager, laboratory analyst, and assistant, as well as archaeological technicians who work on a project basis.

PAL is an approved institution for curating cultural materials and project-related documentation according to the Code of Federal Regulations 36 CFR 79 (*Curation of Federally-Owned and Administered Archeological Collections*). Laboratory employees are experienced with the curation protocols of many states and federal agencies and the current standards for curation practices as set forth in the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 Federal Register 44716–44742, 1983). The Laboratory Manager is a Registered Professional Archaeologist (RPA) and follows the Code of Conduct for that organization as well as the principles of archaeological ethics specified by the Society of American Archaeology and the Society for Historical Archaeology.

[1] A "collection" includes both the physical artifacts as well as the associated physical and electronic records.

Collections Access and Use

Education is an essential part of PAL's mission. As such, PAL provides access[2] to and use of the collections under PAL's care. The PAL Laboratory Manager serves as the facility's collections manager and is responsible for the security and safety of the collections. PAL encourages use of the collections and associated documentation by both scholarly and professional researchers as well as the general public. However, PAL may restrict access to certain collections or information for reasons of confidentiality, security, and preservation of the collections. Access to collections held on behalf of a state or federal agency must be approved by the agency's representative prior to granting access. Requests for access to the collections should be made at least 48 hours in advance. PAL makes every effort to accommodate access requests, but appointments are contingent on available laboratory and curation staff resources and other scheduling constraints. In addition, all visitors will be required to review PAL's Health and Safety protocols prior to visitation and adhere to all protocols while visiting.

Scholarly and Professional Access

Researchers, scholars, and students may request access to the collections at PAL. The researcher must submit a written request for access that explains their planned research project, the collections and data to be examined, the objectives of their research program, and the amount of time needed to study the collections. Photocopying, scanning, and photography of the collections is permitted unless there are issues concerning confidentiality, security, or preservation for specific collections.

Public Access

Public access to the collections and resources of PAL through educational programs may be supplemented by individual or group tours by appointment at the discretion of the President or Public Education Manager.

Researchers should request access to the collections at least 48 hours in advance of their visit. All appointments are subject to PAL staff availability and may vary depending on staff scheduling. The Laboratory Manager or designated PAL staff member will be present to help with collections access and any questions the researcher may have. A specific workplace will be arranged for all researchers and the following guidelines will apply:

- Laboratory hours are 9 a.m. to 4:00 p.m., Monday through Friday (unless closed for holidays).
- The Laboratory Manager or designated staff member will be responsible for retrieving requested collections and reshelving them after use.

[2] "Access" includes both physical access to artifacts as well as the electronic or physical access to data and information about the collections.

- A copy of any final product (thesis, dissertation, publication, etc.) resulting from collection use will be submitted to PAL's library.
- The researcher will acknowledge PAL in any publication or presentation using the collections.

Loans

Researchers or museum curators may request the loan of archaeological material from the PAL collections. Requests for loans are subject to approval by the collection owner, and/or governing state or federal agency for that particular collection or group of collections. Loans must follow standard procedures for maintaining provenience and other identification information for the artifacts. Any collections loaned to other entities will be subject to a loan agreement ensuring appropriate treatment of artifacts and information and a specified duration of temporary custody.

Destructive Sampling

Destructive sampling is an essential part of archaeological research and analysis. Permission to conduct destructive sampling must be given by the collection owner and/or responsible state or federal agency. Requests should:

- be made in writing;
- identify specific research questions and methods; and
- include a schedule for completion of the research.

PAL will require a written report summarizing the results of the destructive sampling for our library and archives. That report may be a copy of a scholarly article, thesis, or a stand-alone summary, as appropriate to the circumstances.

Accessions

PAL will accept archaeological collections generated through CRM projects on behalf of the project's governing state or federal agency. Other non-CRM archaeological collections—such as those generated by avocational collectors—may be accepted into PAL's teaching collections on a case-by-case basis. All incoming archaeological collections must *at a minimum* meet the facility's material packaging standards and the required documentation listing outlined below. *Please note: collections accepted on behalf of a project's governing state or federal agency first must meet the curation and material packaging standards of that agency if they differ from PAL's standards.*

Material Packaging Standards

PAL accepts collections from other institutions and agencies for curation provided that materials are packaged according to the following standards:

- All cultural materials must be washed, dried, and bagged in clean, re-sealable, polyethylene bags at least 2 mm thick. **Direct labeling of artifacts is not required.**
- Each bag must contain a computer-generated tag printed on archival quality paper. The tag must include project and/or site name, artifact provenience, and artifact description.
- All artifact bags must be arranged inside archival file boxes (12-x-6.125-x-4.125-inch gray acid-free boxes) or gray archival artifact trays (14.5-x-11.5-x-4.875-inch). Each archival file box or artifact tray must be placed inside a large (15-x-12.5-x-10-inch) white Hollinger record storage box. *The interior boxes are to prevent damage due to crushing over time.*
- All artifact boxes must have a box inventory listing its contents. The box inventory can be a general summary list of the contents or, preferably, a full catalog listing of all materials contained within the box. A second, archival copy of the box inventories should be included with the curation documentation.
- Two computer-generated box labels must be affixed, using archival quality adhesive, to each box containing cultural materials. One label should be placed on the short end of the box exterior and the second label should be placed on the underside of the box lid. Each box label must contain the following:
    - Name of Agency/Institution and contact information
    - Project name, year, and phase of archaeological investigation
    - Archaeological site(s) and unit(s) where the materials in the box originated
    - Description of materials (box contents)
    - City/Town and State where the project was located
    - Box Number in the collection written as "Box _#_ of total _#_ boxes"

Required Documentation and Digital Data

PAL requires archival copies of all project documentation, both hard copy and/or born-digital data files. These include:

- field forms;
- field maps;
- photographs;
- laboratory forms and inventories;
- artifact catalogs;
- geospatial data; and
- project reports.

The documentation must be packaged in letter-sized acid-free archival folders labeled with the project name, year of project, and folder contents in pencil or archival pen. The documents should not include metal staples, paper clips, or other non-archival fasteners

(vinyl-coated or plastic clips can be used). The folders must be packaged in 12.25-x-10.25-inch archival quality document storage boxes that are 2.5 inches or 5 inches deep. The document boxes can be placed inside one of the large (15-x-12.5-x-10-inch) white Hollinger record storage boxes associated with the collection if there is room in the box. Otherwise, the document box should be submitted as a separate box type at a pro-rated curation cost (see below).

PAL accepts digital data files from archaeological projects for long-term curation. PAL's data servers have cloud backup and recovery capabilities. All archaeological project-related digital files—including artifact catalogs, photographs, geospatial data, and project reports—can be submitted on a flash drive or compact disc or may be transferred electronically upon arrangement. All digital data should be reviewed prior to submittal, and consistent file naming conventions must be used. Only final versions of digital files—no draft documents, for example—should be submitted for permanent curation.

Standard file formats are required for archiving digital records[3], including the following:

- Documents: PDF Documents (.pdf), Microsoft Word (.doc, .docx), Rich Text Documents (.rtf), or Plain Text Documents (.txt).
- Data Sets: Comma Separated Values (.csv), Tab Separated Values (.tab), Microsoft Excel (.xls, .xlsx), or Microsoft Access (.accdb, .mdb).
- Images: Tagged Image File Format (.tiff, .tif), JPEG Image (.jpg, .jpeg), Portable Network Graphics (.png), or other image file types (.bmp, .gif, .pict).
- Geospatial Data; Shapefiles, Geodatabases, Georectified images, or (GeoTIFF & GeoJPG).
- Virtual: Remote Sensing Files or 3D Scans (OBJ & E57).

PAL Curation Fees

PAL charges a one-time curation fee of $400 for each standard box submitted for curation. Oversized items that will not fit in a large (15-x-12.5-x-10-inch) white Hollinger record storage box will be assessed an additional fee to be determined for each additional item. For document box-only submissions, curation fees are pro-rated by document box size: $100 for each 2.5-inches-deep box and $175 for each 5-inches-deep box. Documents stored in large white Hollinger record storage boxes will be levied the full $400 per box fee.

Archival Material Resources

PAL uses the following vendors to purchase the archival materials listed. Substitutions may be permitted (subject to PAL approval) provided the materials meet standard archival

[3] PAL follows standard digital data archiving conventions and models the contribution guidelines on those set out by The Digital Archaeological Record. For more information, see https://core.tdar.org/contribute.

practices. Please contact the PAL Laboratory Manager for more information.

- Hollinger Metal-Edge (www.hollingermetaledge.com): gray archival interior boxes (#11720hg), white archival storage boxes (#10760), archival folders (#11144), and archival paper (#11560)
- Gaylord Archival (www.gaylord.com): archival artifact trays (#AT755) and Sakura Pigma Micron archival pens (#SXDK01-49)
- US Plastics (www.usplastics.com): polyethylene re-closeable storage bags (e.g. #48731 for 3-x-5-inch 2 mil bags)
- University Products (http://www.archivalsuppliers.com/): archival adhesive (#901-1008)

For further information or to arrange for curation or access to collections, please contact Heather Olson, PAL Laboratory Manager, at holson@palinc.com or (401) 728-8780, ext. 304.

Revised 9/29/2021

Proposed Intensive (Locational) Archaeological Survey Strategy

[redacted]

[redacted]

ATTACHMENT 7 – HISTORIC PROPERTIES TREATMENT PLAN FOR ANCIENT SUBMERGED LANDFORMS AND SUBMERGED CULTURAL RESOURCES

MAYFLOWER WIND

Appendix Q.4. Draft Historic Properties Treatment Plan for Ancient Submerged Landforms and Submerged Cultural Resources

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Disclosure:	For use by BOEM and Authorized Third Parties Approved for public distribution with redactions, as applicable.

APPENDIX Q.4

DRAFT HISTORIC PROPTERTIES TREATMENT PLAN FOR ANCIENT SUBMERGED LANDFORMS AND SUBMERGED CULTURAL RESOURCES

Confidential Document

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Abbreviations

Abbreviations	Definition
ac	acres
Alpine	Alpine Ocean Seismic Survey, Inc.
ASLF	Ancient Submerged Landforms
APE	Area of Potential Effects
BOEM	Bureau of Ocean Energy Management
bsb	below seabed
BUAR	Board of Underwater Archaeological Resources
CFR	Code of Federal Regulations
COP	Construction and Operations Plan
CPT	cone penetration test
ECC	Export Cable Corridor
ft	feet
Fugro	Fugro USA Marine, Inc.
Geoquip	Geoquip Marine Operations AG
ha	hectares
HPTP	Historic Properties Treatment Plan
HRG	high-resolution geophysical
IAC	inter-array cable
km	kilometers
m	meters
Mayflower	Mayflower Wind Energy LLC
MARA	Marine Archaeological Resource Assessment
MA SHPO	Massachusetts State Historic Preservation Office
MHC	Massachusetts Historic Commission
mi	miles
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
nm	nautical miles
NRHP	National Register of Historic Places
OCS	Outer Continental Shelf
OSP	offshore substation platform
OW	Ocean Winds North America LLC
PFR	Preliminary Feature Report
QMA	Qualified Marine Archaeologist
RCG&A	R. Christopher Goodwin & Associates
RIHP&HC	The Rhode Island Historical Preservation & Heritage Commission
RI SHPO	Rhode Island State Historic Preservation Office
ROV	Remoted Operated Vehicle
SCPT	seismic cone penetration test
Shell	Shell Renewables and Energy Solutions LLC
SUP	Special Use Permit
WTG	wind turbine generators

EXECUTIVE SUMMARY

This draft Historic Properties Treatment Plan (HPTP) for Ancient Submerged Landforms (ASLFs) and submerged cultural resources (Targets) adversely affected by the Mayflower Wind Energy LLC (Mayflower Wind) (Project) project provides background data, historic property information and steps to carry out the mitigation. The mitigation plans are based on Section 106 of the National Historic Preservation Act of 1966 (NHPA) and in consultation with the Bureau of Ocean Energy Management (BOEM), Tribal Historic Preservation Offices, Massachusetts Historic Commission (MHC), which serves as the Massachusetts State Historic Preservation Office (MA SHPO), the Massachusetts Board of Underwater Archaeological Resources (BUAR), and The Rhode Island Historical Preservation & Heritage Commission (RIHPHC) which serves as the Rhode Island Historic Preservation Office (RI SHPO).

Mitigation measures will be outlined in this plan, with satisfaction to the requirements of Section 106 of the NHPA of 1966, as amended regulations 36 Code of Federal Regulations (CFR) 800, entitled "Protection of Historic Properties." The Project must also work in accordance with the National Environmental Policy Act of 1969 (NEPA), Archaeological and Historic Preservation Act of 1974, the Abandoned Shipwreck Act of 1988 (43 U.S.C. 2101-2106), Title 36 of the CFR, Parts 60-66 and 800. Studies within the Lease Area and in federal waters were pursuant to BOEM (2020a and 2020b) guidelines for renewable energy projects. Surveys in states waters were coordinated at the state level with MHC, MA SHPO, BUAR, and RIHPHC.

The timelines for the mitigation measures will be based on the consultation with the parties listed above and in Section 4 Implementation. After agreeing on measures that will be implemented for mitigation, the final version of the HPTP will be review by BOEM and relevant Participating Parties.

The following draft of the HPTP is organized in the sections as listed below:

Executive Summary

Section 1 Background Information

This section outlines the Project conducted by Mayflower Wind Energy LLC and the general information of the HPTP.

Section 2 Summary of Historic Property

This section summarized the Targets and the ASLFs that may be affected in the development of the Mayflower Wind Project. This section specifically focuses on the findings in the Marine Archaeological Resource Assessment (MARA) report that is located in the full version of the Construction and Operations Plan (COP) under Appendix Q.

Section 3 Mitigation Measures

This section reviews the mitigation measures that can be proposed based on the findings of the MARA, and the consultation with BOEM, and relevant Participating Parties.

Section 4 Implementation

This section goes over how to complete the mitigation measures that were proposed in Section 3. This section presents an overview of the timelines, and requirements of the interested Participating Parties.

Section 5 References

This section is a work cited page for the references used during the HPTP.

1. BACKGROUND INFORMATION

1.1 Project Overview

Mayflower Wind is a joint venture between Shell New Energies US LLC (Shell) and Ocean Winds North America LLC (OW). The Project consists of three major sections; the Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS) (OCS-A 0521) (Lease Area), and two Export Cable Corridors (ECCs) to two points of interconnection, located at Falmouth, Massachusetts and Brayton Point in Somerset, Massachusetts (Figure 1.1-1). The Project Area of Potential Effects (APE) includes these components stated above as well as a 1-kilometer (km) (1-mile [mi]) buffer around each area. The vertical APE for the two ECCs is approximately 5 meters (m) (16.4 feet [ft]) below seabed (bsb).

The Lease Area is located approximately 48 km (26 nautical miles [nm]) south of Martha's Vineyard, Massachusetts and over 37 km (20 nm) from Nantucket, Massachusetts. The Lease Area is approximately 48 km (26 nm) in length and 14 km (8 nm) in width resulting in an area of approximately 51,552 hectares (ha) (127,388 acres [ac]). The Lease Area has an APE of 12,991.60 ha (32,102.94 ac) and will have two submarine ECCs, which will connect to the landfall locations in Falmouth, Massachusetts and Brayton Point, in Somerset, Massachusetts. Mayflower Wind's Project Design Envelope consists of up to 147 wind turbine generators (WTGs) at a total of 149 positions on a one-by-one nautical mile grid layout within the Lease Area.

The Falmouth ECC exits the Lease Area and travels north along the Muskeget Channel between Martha's Vineyard and Nantucket before turning northwest to the landing in Falmouth. The Brayton Point ECC will run north and west from the Lease Area traveling through Rhode Island Sound, the Sakonnet River, and Mount Hope Bay, reaching landfall at Brayton Point, in Somerset, Massachusetts. The Brayton Point ECC is planned to route north up the Sakonnet River to a point south of the Old Stone Bridge in Tiverton, RI before crossing over Aquidneck Island, in Portsmouth, RI to Mount Hope Bay, and running north to Brayton Point, in Somerset, MA. There are currently two landings under consideration for the Brayton Point ECC; one heading northwest through the Lee River to the western side of Brayton Point (preferred) and the other traveling northeast through Mount Hope Bay before heading northwest to a landfall via the Taunton River (alternate).

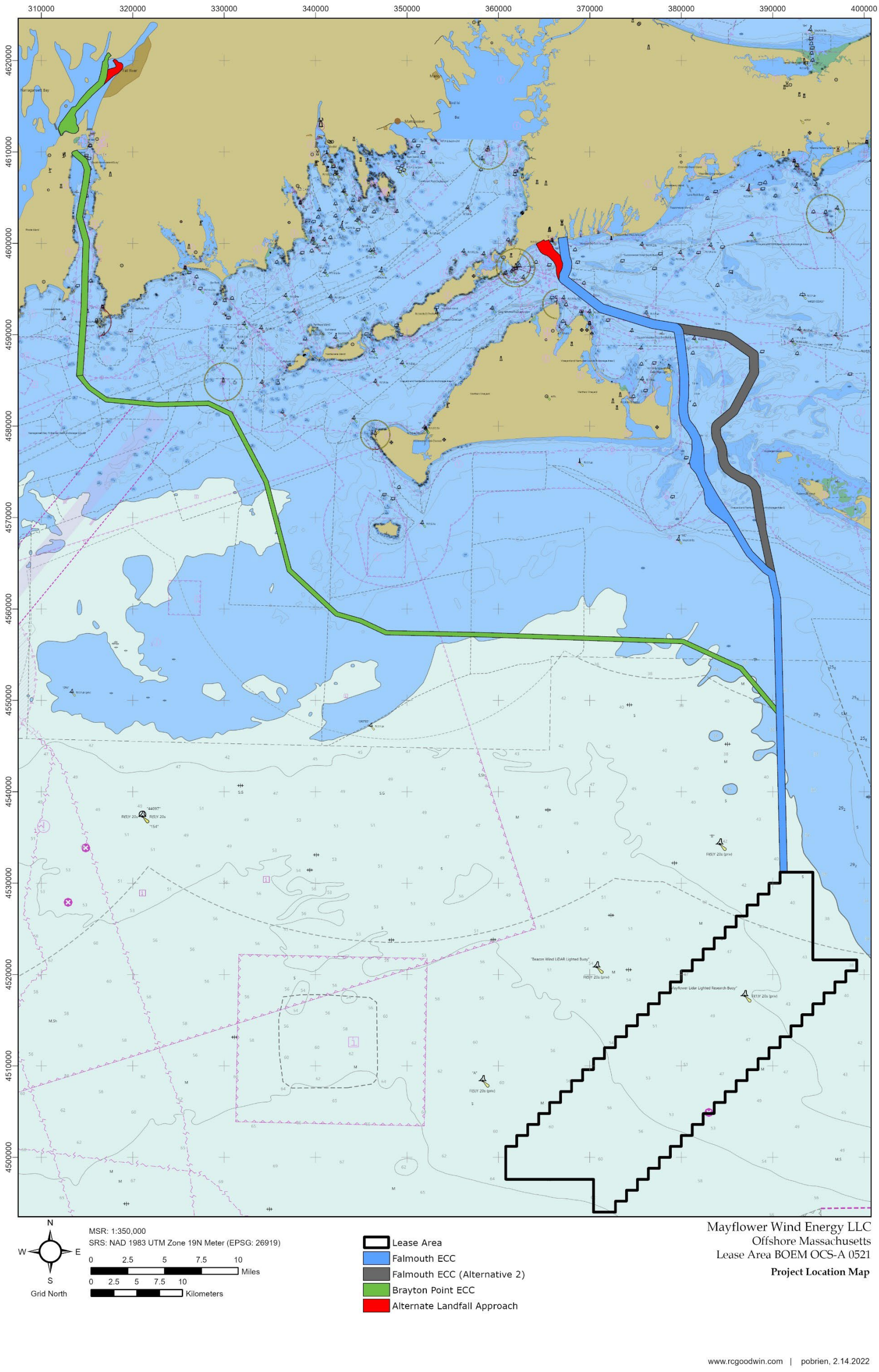

Figure 1.1-1. Mayflower Wind Locator Map

1.1.1 Bottom Disturbing Activities

The seabed of the APE will be impacted by the construction of the foundations, WTGs, offshore substation platforms (OSPs), and inter-array cables. Seafloor disturbance during installation of a WTG typically results from jacking and/or anchoring activities associated with vessel operations; the type and number of vessels required for the installation is determined by the foundation design selected (e.g., monopile, piled jacket, suction bucket, gravity base, etc.) and the complexity of the installation process. To resist pressure from strong currents or destabilization from undercutting, an engineering design plan will determine the appropriate scour protection for WTG/OSP foundations.

The inter-array cable system connects the WTGs to the OSPs through a series of submarine inter-array cables (IACs). Each IAC will be installed within a construction corridor and buried to a target depth determined by seabed conditions. Within the Falmouth ECC, up to five submarine offshore export cables, including up to four power cables and up to one dedicated communications cable, will be installed. Within the Brayton Point ECC, up to six submarine offshore export cables, including up to four power cables and up to two dedicated communications cables, will be installed, from one or more OSP(s) within the Lease Area. The installation methodology for all sea-to-shore transitions will be horizontal directional drilling (HDD).

For both IACs and offshore ECCs, if the appropriate cable depth is not achieved during installation or where a cable crossing is required, secondary cable protection in the form of rock placement, concrete mattress placement, or other protection methods may be used.

1.2 Historic Property Treatment Plan (HPTP) and Section 106 of the National Historic Preservation Act (NHPA)

This HPTP is designed to comply with Section 106 and provides background data, historic property information, and information on how to proceed with the mitigation plan during the consultation with BOEM and other relevant Participating Parties.

1.3 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 the mitigation measure implementation processes described herein. Participating Parties with an interest in the potential adversely affected historic properties as summarized in the list below.

- The Massachusetts Historical Commission

- The Massachusetts Board of Underwater Archaeological Resources
- Rhode Island Historical Preservation & Heritage Commission
- Mashpee Wampanoag Tribe
- Narragansett Indian Tribe
- Wampanoag Tribe of Gay Head (Aquinnah)
- Mashantucket Pequot Tribal Nation
- Mohegan Tribe of Connecticut
- Delaware Tribe of Indians
- Shinnecock Indian Tribe of New York

2. SUMMARY OF HISTORIC PROPERTY

Both targets and ASLFs were found in the Lease Area and in ECCs. There was a total of 16 ASLFs identified within the APE, one in the Lease Area, 11 in Falmouth ECC, and four in Brayton Point ECC. There was a total of 46 targets found in the APE, five in the Lease Area, 16 in Falmouth ECC, and 25 in Brayton Point ECC. Targets and ASLFs were given an avoidance area if deemed necessary by the QMA. Avoidance areas differed depending on the cultural remains of either the targets or the ASLFs, but not all targets and ASLFs were given an avoidance area due to their lack in cultural integrity. Further details on the targets and ASLFs are included in the MARA (COP Appendix Q).

2.1 Ancient Submerged Landforms

There was a total of 16 ASLFs located within the APE, and 15 of those ASLFs were given an avoidance area. The 15 ASLFs that were given an avoidance area fell within the Falmouth ECC (Figure 2.1-1) and the Brayton Point ECC (Figure 2.1-2).

2.1.1 Physical Description and Existing Conditions

ASLFs are preserved landforms that have the potential to contain cultural resources. Features that were given an avoidance area have the potential for preservation and were sub-aerially exposed during a period of potential human habitation. The one ASLF within the Lease Area underwent sediment testing from a core sample taken within the feature. Analysis found that the sediments within the sample were heavily reworked and is, as such, unlikely to contain intact and in situ cultural materials, and no avoidance buffer was recommended. Eleven ASLFs located within the Falmouth ECC and four located within the Brayton Point ECC were assigned avoidance areas based on the extents of the features observed within the seismic data, with an additional 50 m (164 ft) buffer off the horizontal extents.

Table 2.1.1-1 shows the 16 ASLFs, their avoidance areas, and their minimum depth bsb. The table also denotes exactly which Project component, if any, the ASLF would have the potential by which to be impacted. Within the Falmouth ECC, four ASLFs have the potential to be impacted by project components. Within the Brayton Point ECC, four ASLFs have the potential to be impacted by Project components. Other ASLFs either do not overlap with planned Project components or are located at a depth which is below the component's APE and is not expected to be impacted.

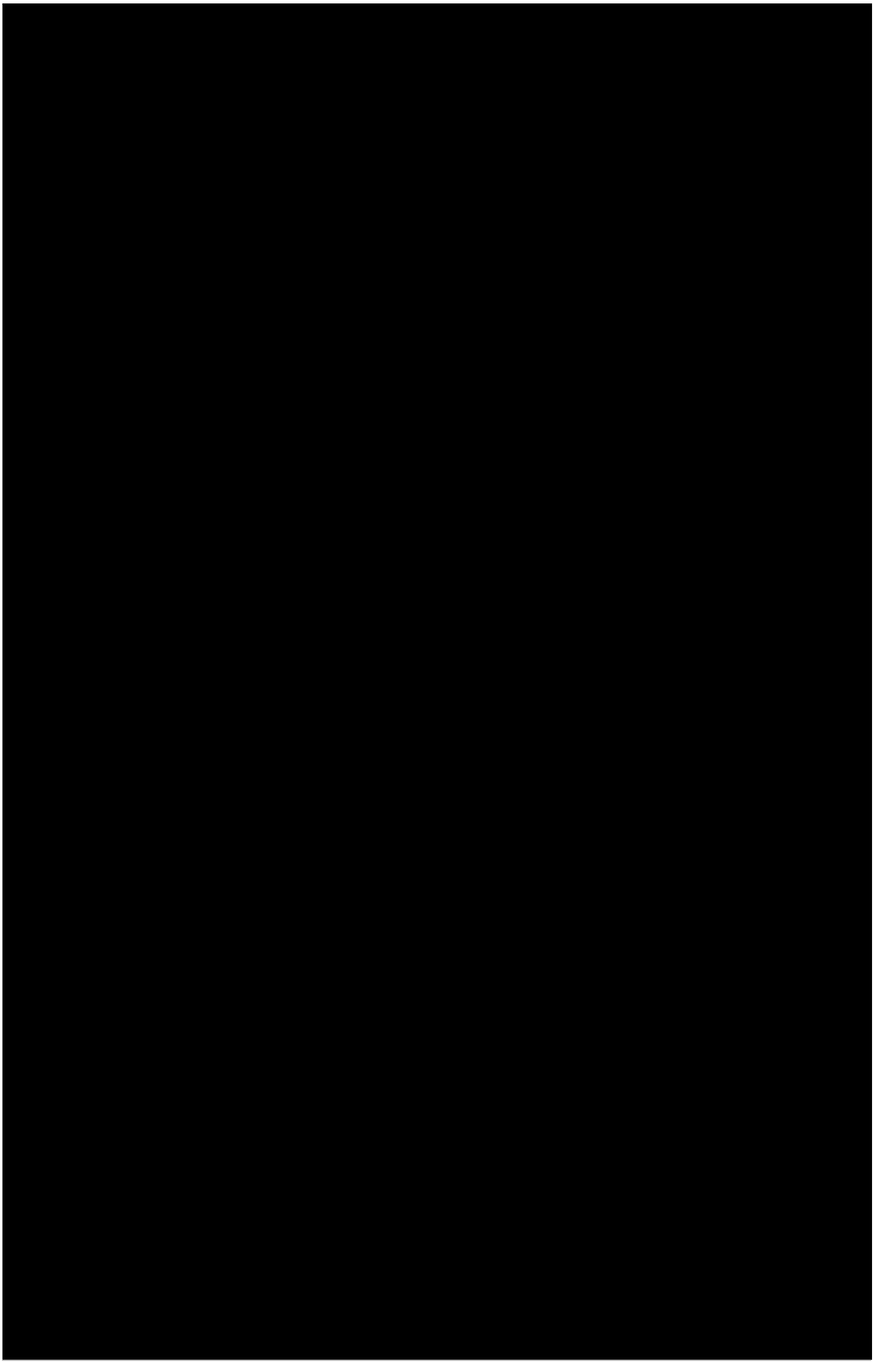

Figure 2.1-1 Locator map of ASLFs marked for avoidance along the Falmouth ECC

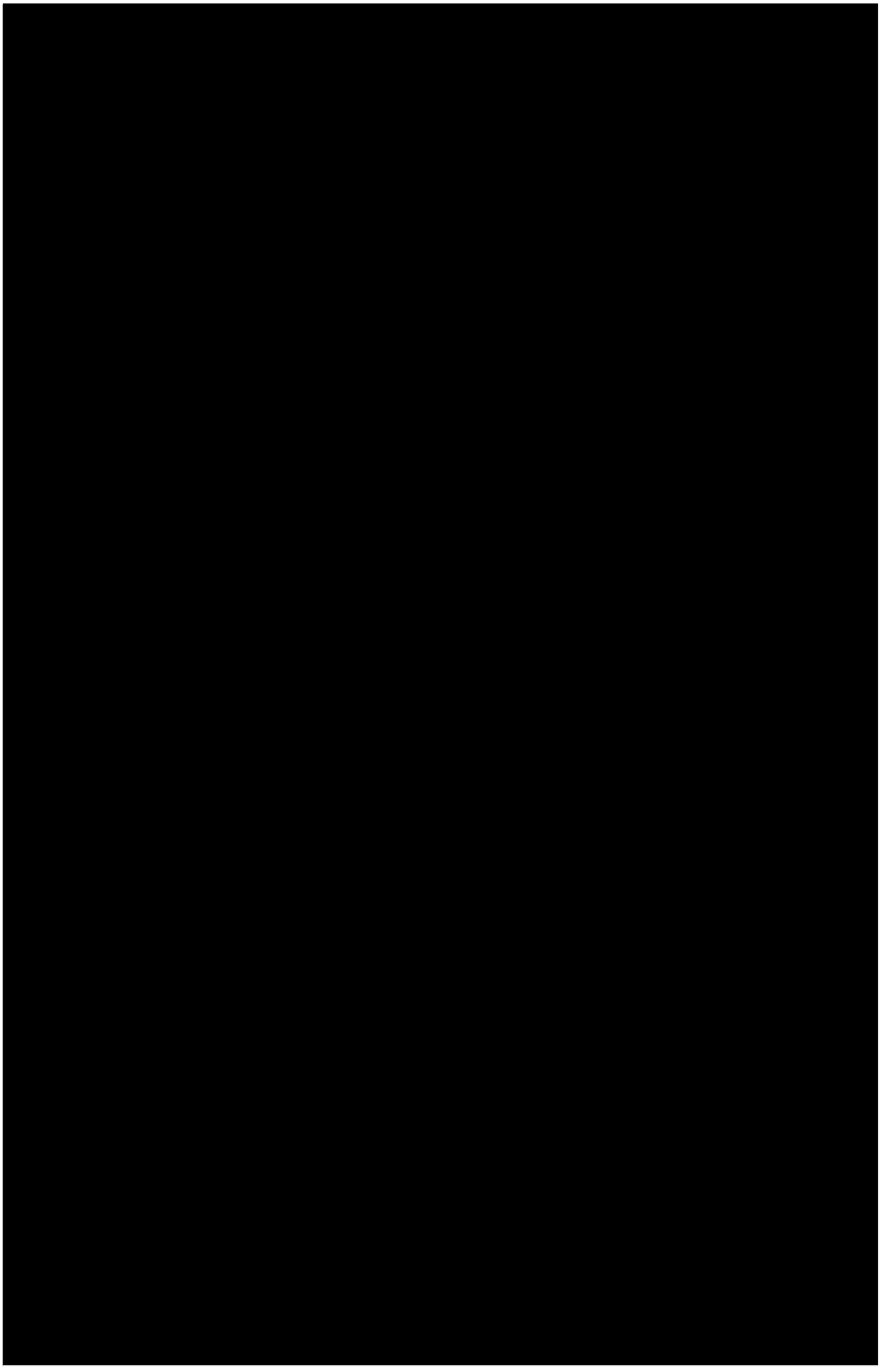

Figure 2.1-2. Locator map of ASLFs marked for avoidance along the Brayton Point ECC

Table 2.1.1-1. Possibly preserved ASLFs within the Mayflower Wind APE

ASLF ID	Centroid Easting (X)[1]	Centroid Northing (Y)[1]	Centroid Longitude[2]	Centroid Latitude[2]	Depth m (minimum bsb)	Recommended Avoidance ha (ac)	Within APE of Project Component	Mayflower Wind Avoidance Commitment
Lease Area 2020								
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	No avoidance recommended	-	N/A
Falmouth ECC 2020								
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10.27 (25.39)	-	N/A
Falmouth ECC 2021								
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.44 (8.50)	-	N/A
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.97 (9.81)	-	N/A
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	6.62 (43.00)	-	N/A
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.53 (8.73)	-	N/A
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	2.68 (6.62)	-	N/A
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	2.36 (5.83)	ECC	Avoid
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	7.90 (19.51)	ECC	Avoid
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4.88 (12.06)	ECC	TBD[4]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	13.71 (33.87)	-	N/A
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	2.16 (5.35)	ECC	TBD[4]
Brayton Point ECC 2021								
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5.72 (14.13)	ECC	TBD[4]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4.75 (11.74)	ECC	TBD[4]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	7.41 (18.30)	ECC	TBD[4]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5.59 (13.82)	ECC	TBD[4]

[1]Project coordinates are referenced to UTM Zone 19N, NAD83 (EPSG:26919), (m).
[2]Geographic coordinates are in decimal degrees referenced to NAD83 (EPSG:26919)
[3]Determined not to be preserved, no avoidance recommended
[4] Mayflower Wind is still evaluating the feasibility to micro-route around these features.

2.1.2 Historic Context

The location of ASLFs is important because they are used to establish the locations of potential settlements by pre-contact peoples. The paleolandscape reconstruction suggests that it may retain deposits that supported human occupation from the terminal Pleistocene until submergence. Evidence for such occupation is dependent on the preservation potentials of the Study Area. Overall, the Lease Area has a low to moderate probability for preserved landforms with the potential to contain cultural resources. The Falmouth ECC is also recognized to have a low probability for preserved landforms with the potential to contain cultural resources, with the exception of Nantucket Sound (Robinson et al 2004). All of the targets along the Falmouth ECC appear to be possibly part of the same channel feature extending from Chappaquiddick into the Nantucket Sound. Nearshore to Chappaquiddick, also contains areas of preservation. Therefore, the Nantucket Sound should be considered as having a moderate probability for preserved landforms with the potential to contain cultural resources. The Brayton Point ECC has a low probability for preserved landforms with the potential to contain cultural resources.

2.1.3 National Register of Historic Places (NRHP) Criteria

ASLFs are imperative to understanding pre-contact people and therefore fall under the NRHP under Criterion D. ASLFs are also considered archaeologically sensitive due to the potential for undiscovered archaeological materials to be present and retains sufficient integrity that could be eligible for listing on the NRHP.

2.2 Submerged Cultural Resources

There was a total of 46 targets found in the APE: five in the Lease Area (Figure 2.2-1); 16 in Falmouth ECC (Figure 2.2-2); and 25 in Brayton Point ECC (Figure 2.2-3, Figure 2.2-4, Figure 2.2-5 and Figure 2.2.-6). Of the 26 targets within the Brayton Point ECC, 13 targets were not considered for in the National Register of Historic Places. The archaeological avoidance areas are determined using several factors. Targets with a small visual footprint (i.e., <5 m [16.4 ft]), are protected by a recommended minimum 50-m (164-ft) radius (7,853.98 m^2 [84,539.54 ft^2]) extending from the target's centroid. For targets having a larger visual footprint, a minimum 50-m (164-ft) buffer is established off all extant features, typically creating an ellipsoid or polygon-shaped avoidance area. Targets that were originally marked by Preliminary Feature Report (PFR) but determined to not be culturally significant, were assigned a target area (avoidance not recommended). For each target, the QMA ensures that all associated magnetic responses, which are visualized in the magnetic contour mapping, are encompassed within the avoidance area to adequately protect possible buried features. The target coordinates reported are based on the centroid coordinates, whether a radius, elliptical or polygon-shaped avoidance area.

2.2.1 Physical Description and Existing Conditions

Three criteria are applied to the targets that are described in this section. The first criteria are those objects and features submitted in a PFR to BOEM, which the QMA reviewed, and determined did not possess the qualities of historic properties as defined under Section 106 of the NHPA. These targets were not given a designated target area.

The second criteria are objects and features submitted in a PFR to BOEM, which the QMA reviewed, and determined did not possess the qualities of a historic properties as defined under Section 106 of the NHPA. However, these targets were mapped with a target area designed to focus attention and assist Mayflower Wind with their review.

The third criteria are objects and features that were determined by the QMA to be a historic property of potential archaeological significance. These targets have been identified by a PFR or were discovered during post-survey data analysis and interpretation. To protect these archaeological targets from seabed impacts, the QMA established an avoidance area. Table 2.2.1-1, Table 2.2.1-2 and Table 2.2.1-3 summarize the targets located within the APE, and their recommended avoidance area.

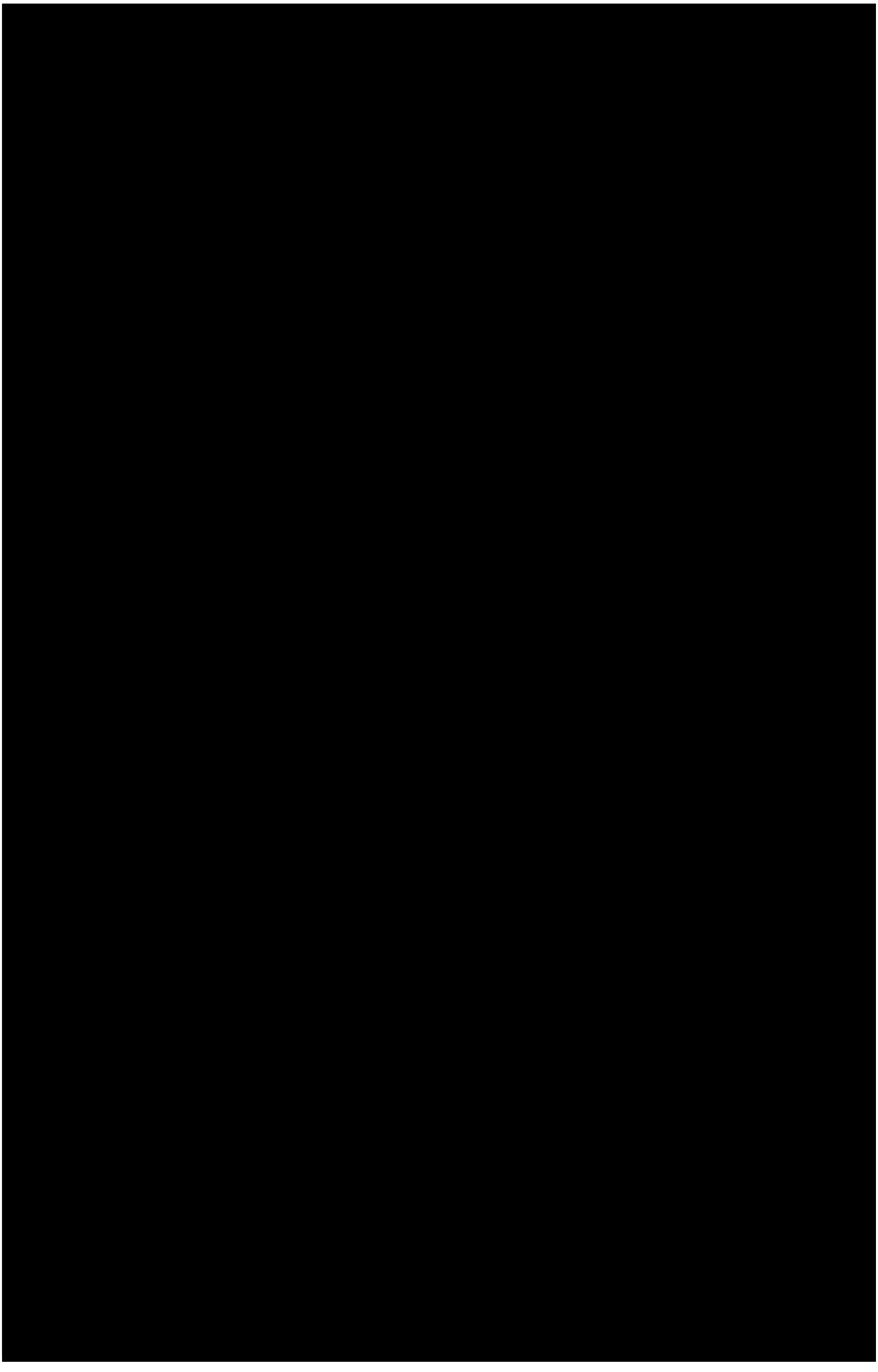

Figure 2.2-1. Locator map of targets in the Lease Area

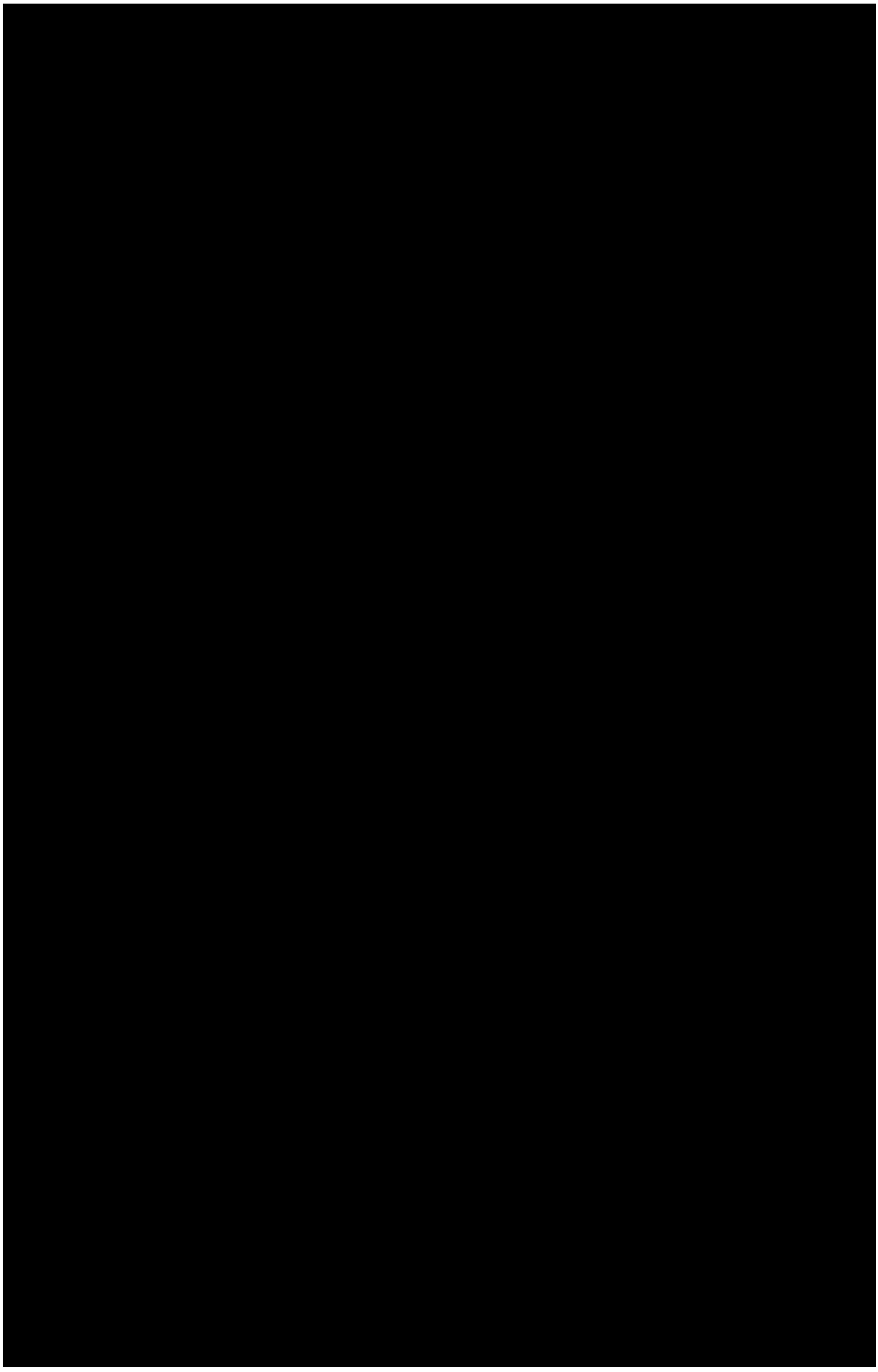

Figure 2.2- 2. Locator map of targets in the Falmouth ECC

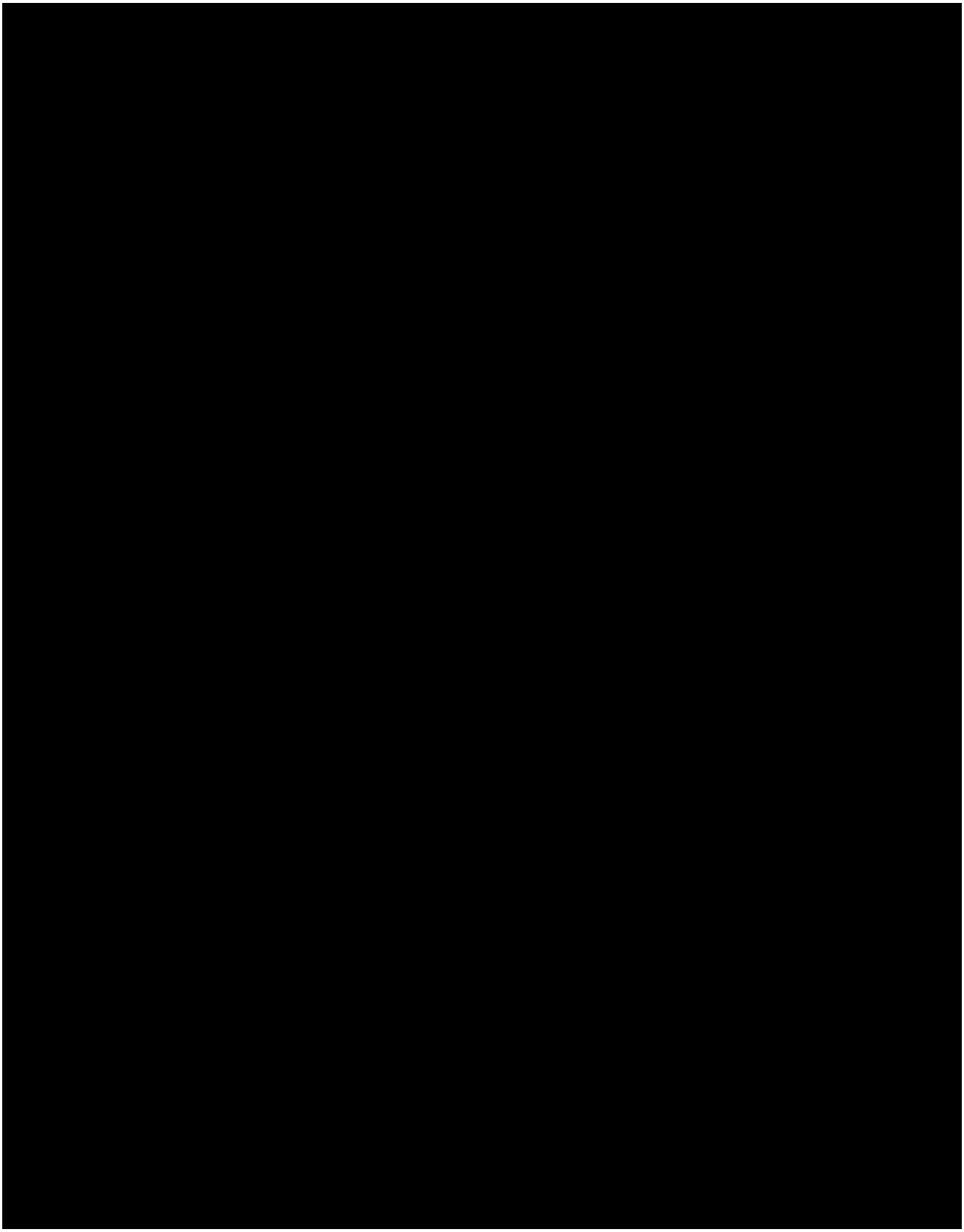

Figure 2.2-3. Locator map of targets in segment of Brayton Point ECC

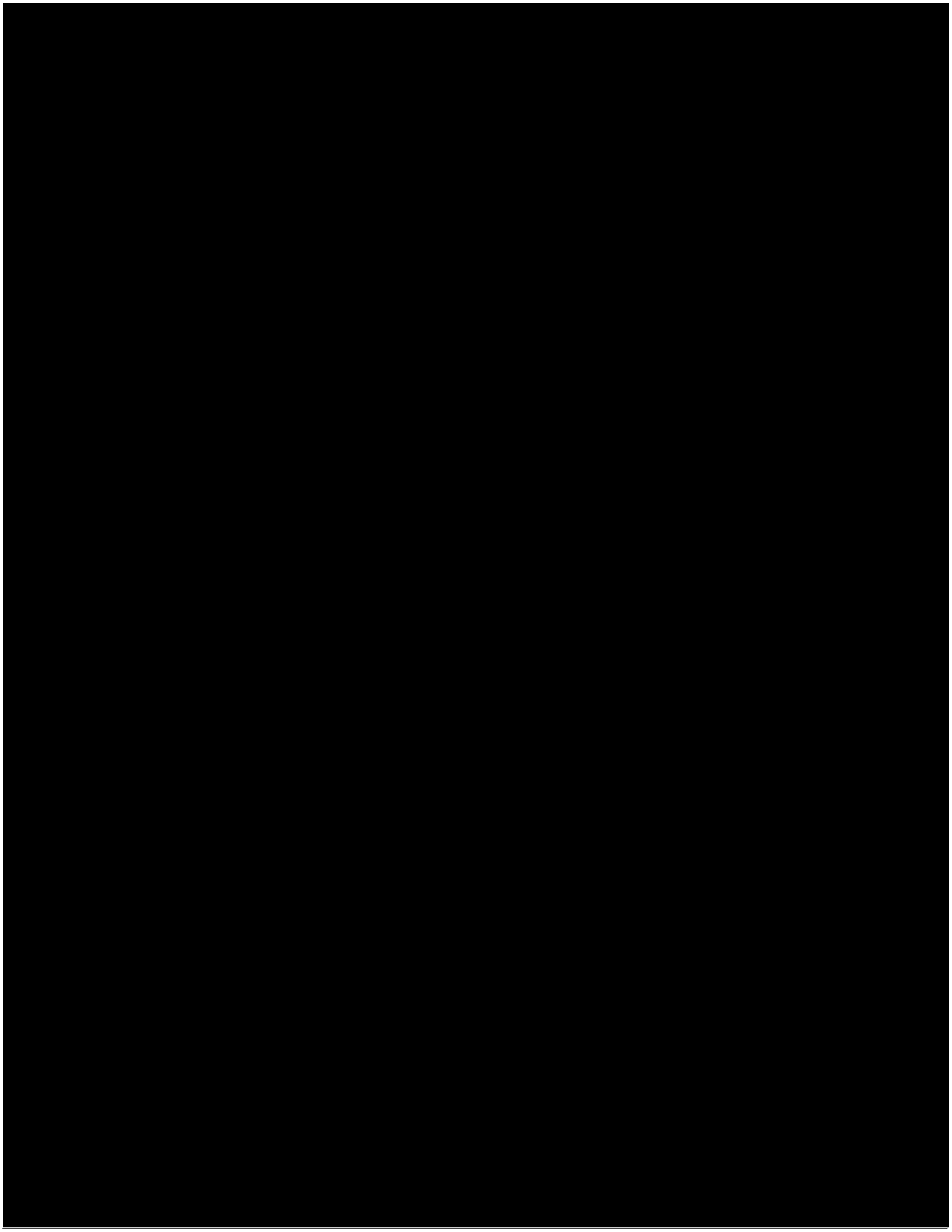

Figure. 2.2-4. Locator map of targets in segment of Brayton Point ECC

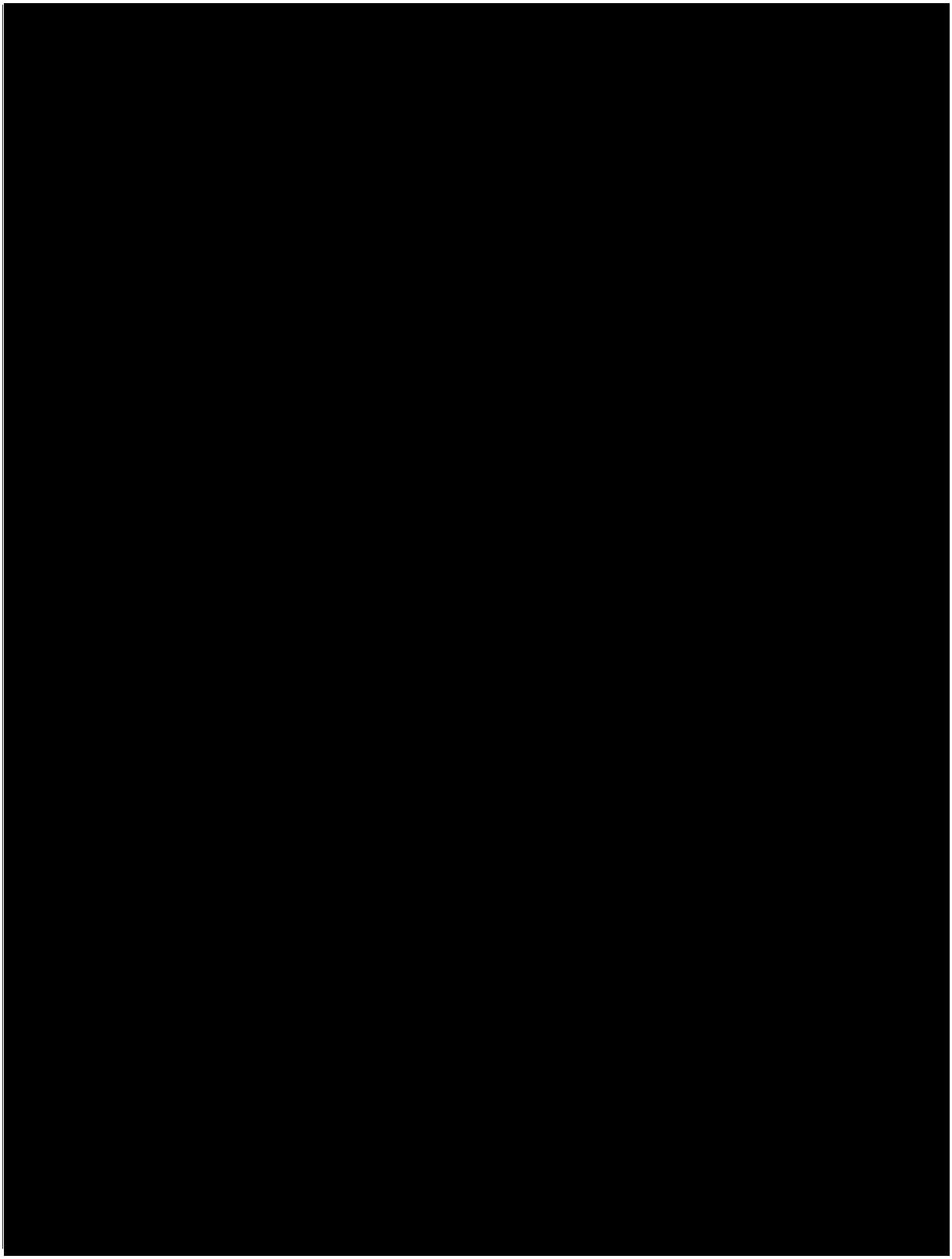

Figure 2.2-5. Locator map of targets in segment of Brayton Point ECC

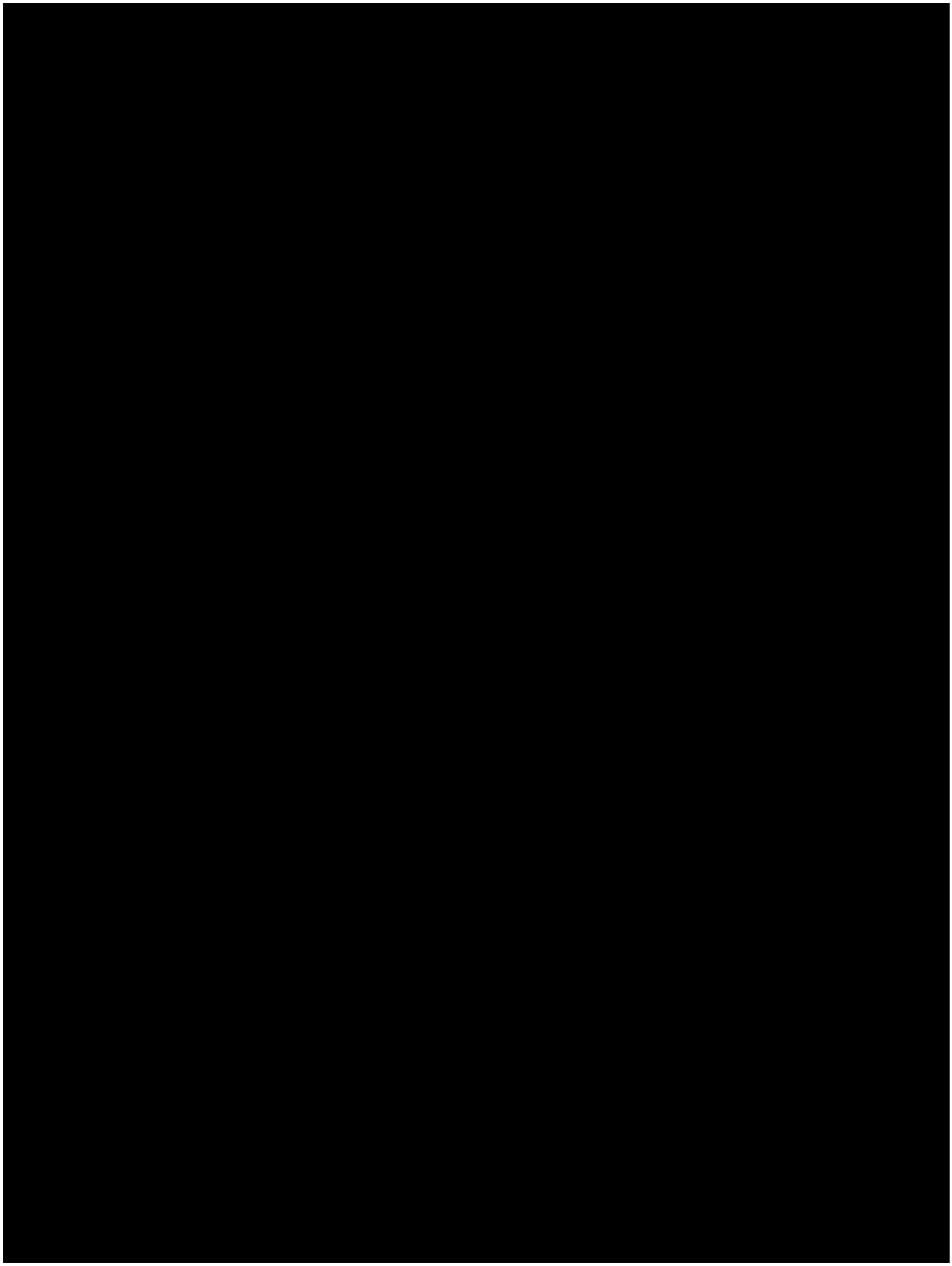

Figure 2.2-6. Locator map of targets in segment of Brayton Point ECC

Table 2.2.1-1. Identified targets within the Lease Area APE

Target Name	APE	Cultural Resources Recommended Avoidance m^2 (ft^2)	Mayflower Wind Avoidance Commitment
[redacted]	Lease Area 2020	7,853.98 (84,539.54)	TBD[1]
[redacted]	Lease Area 2021	7,853.98 (84,539.54)	TBD[1]
[redacted]	Lease Area 2021	7,853.98 (84,539.54)	TBD[1]
[redacted]	Lease Area 2021	7,853.98 (84,539.54)	TBD[1]
[redacted]	Lease Area 2021	No avoidance recommended	N/A

[1] Mayflower Wind is still evaluating the feasibility to micro-route around these features.

Table 2.2.1-2. Identified targets within the Falmouth ECC APE

Target Name	APE	Cultural Resources Recommended Avoidance m^2 (ft^2)	Mayflower Wind Avoidance Commitment
[redacted]	Falmouth ECC 2020	7,853.98 (84,539.54)	Avoid
[redacted]	Falmouth ECC 2020	-[1]	TBD[2]
[redacted]	Falmouth ECC 2020	7,853.98 (84,539.54)	Avoid
[redacted]	Falmouth ECC 2020	7,853.98 (84,539.54)	Avoid
[redacted]	Falmouth ECC 2020	20,544.93 (221,143.79)	TBD[2]
[redacted]	Falmouth ECC 2020	7,853.98 (84,539.54)	TBD[2]
[redacted]	Falmouth ECC 2020	7,853.98 (84,539.54)	TBD[2]
[redacted]	Falmouth ECC 2020	7,853.98 (84,539.54)	TBD[2]
[redacted]	Falmouth ECC 2020	7,853.98 (84,539.54)	TBD[2]
[redacted]	Falmouth ECC 2020	17,910.37 (192,785.61)	TBD[2]
[redacted]	Falmouth ECC 2020	15,092.57 (162,455.07)	TBD[2]
[redacted]	Falmouth ECC 2020	7,853.98 (84,539.54)	Avoid
[redacted]	Falmouth ECC 2020	7,853.98 (84,539.54)	TBD[2]
[redacted]	Falmouth ECC 2021	7,853.98 (84,539.54)	TBD[2]
[redacted]	Falmouth ECC 2021	7,853.98 (84,539.54)	TBD[2]
[redacted]	Falmouth ECC 2021	14,406.71 (155,072.54)	TBD[2]

[1]Site classified as Exempted by BUAR; not considered for archaeological avoidance.
[2] Mayflower Wind is still evaluating the feasibility to micro-route around these features.

Table 2.2.1-3. Identified targets within the Brayton Point ECC APE

Target Name	APE	Cultural Resources Recommended Avoidance m^2 (ft^2)	Mayflower Wind Avoidance Commitment
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A
[redacted]	Brayton Point ECC 2021	16,127.41 (173,594.64)	TBD[1]
[redacted]	Brayton Point ECC 2021	10,497.55 (112,994.69)	TBD[1]
[redacted]	Brayton Point ECC 2021	9,536.65 (102,651.65)	TBD[1]
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A
[redacted]	Brayton Point ECC 2021	14,122.52 (152,013.54)	Avoid
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A
[redacted]	Brayton Point ECC 2021	7,853.98 (84,539.54)	TBD[1]
[redacted]	Brayton Point ECC 2021	11,717.78 (126,129.13)	Avoid
[redacted]	Brayton Point ECC 2021	7,853.98 (84,539.54)	Avoid
[redacted]	Brayton Point ECC 2021	11,561.61 (124,448.13)	Avoid
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A
[redacted]	Brayton Point ECC 2021	9,661.82 (103,998.96)	Avoid
[redacted]	Brayton Point ECC 2021	11,347.59 (122,144.44)	Avoid
[redacted]	Brayton Point ECC 2021	12,722.44 (136,943.20)	TBD[1]
[redacted]	Brayton Point ECC 2021	12,540.73 (134,987.29)	Avoid
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A
[redacted]	Brayton Point ECC 2021	No avoidance recommended	N/A

[1] Mayflower Wind is still evaluating the feasibility to micro-route around these features.

2.2.2 Historic Context

The precontact occupation of southern New England extends from ca. 12,000 to 350 cal BP, and is characterized by numerous changes in tool types, subsistence patterns, and land use strategies. For most of the era, precontact groups practiced a subsistence pattern based on a mixed economy of hunting and gathering wild plant and animal resources. It was not until the Late Woodland period that incontrovertible evidence for the use of maize horticulture appeared as an important subsistence pursuit. Furthermore, settlement patterns throughout the era shifted from seasonal occupations of small co-residential groups to large aggregations of people in riverine, estuarine, and coastal ecozones. In consideration that the residents within those "riverine, estuarine, and coastal ecozones" almost certainly (at least according to early European accounts) would have engaged in maritime ventures, the potential exists not only for terrestrial sites and cultural resources, but also for submerged ones.

During the contact period the indigenous peoples of southern New England first interacted with Europeans between 1500 and 1630. There was intermittent direct contact between Native Americans and Europeans during this period can be assumed, given the presence of both groups of people in the general area, although evidence for that contact is limited (MHC 1985). Once Europeans settled permanently in the region, agriculture constituted their primary mode of subsistence but, marine resources continued to be important components of the subsistence regime for the region's indigenous populations (Nantucket Historical Association [NHA] 2016).

Most colonists, especially in the interior, sought to make a living from agriculture (Cirbus et al. 2013:9). The fur trade, at first a considerable source of revenue, soon failed, and fish and lumber could not easily compete with European and English sources. In contrast, all types of marine resources, including shellfish, finfish, and even beached whales, continued to be important components of the subsistence regime for indigenous peoples who lived on or near the coast (NHA 2016).

During the Colonial Period (1675-1775) economic growth directly affected the nature and amount of maritime traffic that plied the waters adjacent to Falmouth, Nantucket, and Martha's Vineyard, and the approaches to Narragansett Bay and its tributaries. However, the American Revolution and the War of 1812 acutely impacted southeastern New England because these events introduced large numbers of military vessels into regional waters and drastically curtailed pre-war vessel traffic. After maritime traffic through area waters increased exponentially during the Early Industrial Period (1830-1870). In the Late Industrial Period (1870-1930) New England's industrial capacity expanded steadily through the last half of the nineteenth century and into the early decades of the twentieth. Improvements in the region's transportation infrastructure kept pace with its industrial growth. During the modern age despite some overall regional

negative trends, post-war navigation charts indicate significant modifications were initiated to facilitate maritime access.

The waters encompassing the Mayflower Wind Study Area, including the Lease Area and two proposed ECCs, have been utilized intensively by mariners for centuries. The earliest settlers in the region introduced European vessels and adopted and modified indigenous craft to suit their purposes (Hall 1884). Since that time, all types of vessels, from small to medium sized seventeenth through nineteenth century sail-powered merchant and military ships to larger, late twentieth century steam- and diesel-propelled vessels, have transited the waters of the APE.

2.2.3 NRHP Criteria

The targets that qualify under NRHP (Title 36 of the CFR, Part 60.4) are to be avoided during construction. Wrecks or other structures that are less than 50 years old do not meet the criteria for listing to NRHP. The relevant Participating Parties will be involved in mitigation plans if a target meets the NRHP Criteria.

3. MITIGATION MEASURES

This section provides detail on the mitigation measures for the submerged historic properties and/or ASLFs located within the APE. This section will address the effects that may be caused by the Project.

3.1. Purpose and Intended Outcome

The purpose of this HPTP is to outline the steps taken to identify possible cultural resources within the APE, how the potential resources were delineated from the survey data, and the potential impacts from construction by the Project to these resources. Mayflower Wind is currently committed to mitigation of all cultural resources via avoidance to the extent practicable. If avoidance is not feasible, this plan further outlines a staged approach to gather additional data within the Project Area, including environmental and archaeological data, and consideration for alternative mitigation measures.

3.1.1. Pre-Construction Geoarchaeology

Mayflower Wind completed geotechnical surveys in 2019 by Geoquip Marine Operations AG (Geoquip), in 2020 by Fugro and Alpine, and in 2021 by Fugro and Alpine. Samples that were taken included vibracores, boreholes, seismic cone penetration tests (SCPTs), and cone penetration tests (CPTs) (Alpine 2020, Alpine 2021a, Alpine 2021b, Geoquip 2019, Fugro 2022a, and Fugro 2022b). Subsequent to the geotechnical campaign, Mayflower Wind conducted additional testing and surveys to better characterize and define the paleolandscape and potential ASLFs within the APE.

3.1.2. Core Analysis Methodology

The coring acted as ground-truthing for the seismic interpretation providing information regarding sediment compositions, radiometric dates, and pollen analysis. In 2019 Geoquip collected three boreholes, five CPTs and two SCPTs (Geoquip 2019). In 2020 Fugro collected 17 boreholes with a combination of sampling and downhole CPT/SCPT, 18 CPTs, five SCPTs and eight vibracores (Fugro 2022a). In 2020 Alpine collected 161 cores which includes, 55 vibracores 3 m long, 64 vibracores 6 m long, and 42 CPTs (Alpine 2020). In 2021 Fugro collected 127 CPTs (Fugro 2021b). In 2021, Alpine collected 138 vibracores and 13 CPTs (Alpine 2021a and Alpine 2021b).

A combined total of 230 geotechnical liner samples (including 5 bag samples) from 40 geotechnical vibracore locations, and a total of 37 archaeological liner samples (including 1 bag sample) from 7 archeological vibracore locations were collected in 2020 and 2021 (Fugro 2022a). Recovery depths for the vibracore locations range from no recovery to 6.30 m (20.67 ft), with an average of 4.07 m (13.35 ft). No offshore laboratory tests were conducted on the recovered archaeological vibracore samples; however, field soil description was noted and was based on field observations of the material present in liner ends. Archaeological core segments were then immediately capped, labelled, and stored upright in wire baskets

located in a temperature-controlled (4°-8°Celsius) (39.2°-46.4°Farenheit) refrigerated container onboard the vessel (Fugro 2022a).

Prior to splitting, the QMA prioritized geoarchaeological core runs according to archaeological potential. In preparation for splitting, vibracore characterization included the Project name, date, core number, and run designation; those data were placed on an archaeological letterboard during each session to facilitate identification in visual records. Visual records included the placement of a metric scale and the letter board. Mayflower Wind launched a web-based Geographic Information Systems map viewer with photos of cores for review by Tribes. In addition to standard practices for photography pertaining to laboratory analyses, live videography streamed via the internet was carried out in 2020 to support stakeholder inclusion during analyses, and especially tribal engagement in the process. Live stream videos of vibracore analysis streamed at 1080P and were followed by an open conference call held to allow tribal representatives and other stakeholders, to ask questions and offer comments on the analysis.

Once split, the core sections were delineated stratigraphically, logged, and subsequently placed in climate-controlled storage at R. Christopher Goodwin & Associates' (RCG&A's) laboratory facilities. One half of each core run was retained unsampled to support future analyses, while the other half was sampled where appropriate to obtain radiometric and palynological data. A Marine Geologist/Nautical Archaeologist and laboratory analysts (archaeologists) conducted vibracore sampling for potential radiocarbon dating to characterize the geochronology of the area, and for palynological examination to support archaeological interpretations and paleoenvironmental reconstruction. RCG&A's core-splitter was operated by two laboratory analysts (Figure IV-20). Upon completion of sampling, both halves of each vibracore were placed back into climate-controlled storage.

3.2. Recommended Mitigation Measures

3.2.1 Ancient Submerged Landforms

If Project-related impacts to an ASLF is unavoidable, the Project proposes a staged approach to mitigate adverse effects through consultations with BOEM, Native American Tribes and appropriate state agencies. The approach stages are briefly described below in sequential order.

- If an ASLF feature(s) cannot be avoided, as an initial approach, BOEM often recommends construction monitoring as a mitigation measure. This measure would need to be agreed-upon and developed through consultation with Mayflower Wind, the federally recognized Tribes, and state representatives.
- Research methods and protocols for site investigations may include focused HRG surveys, targeted geotechnical investigations, and laboratory analysis, to optimize scientific research specific to the affected landform that cannot be avoided during installation.

- Post construction/inspection surveys may be focused and designed to include high resolution multibeam echo sounder, side scan sonar, and seismic survey to accurately delineate and characterize feature boundaries, horizontally and vertically, and impacts in the area encompassing the affected feature(s).
- Targeted geotechnical investigations could be utilized to ground-truth the seismic data and to potentially collect samples for understanding a feature's environmental context using accelerator mass spectrometer dating, pollen analysis, archaeobotanical analysis, or other specific testing (i.e., collagen analysis).
- Remoted Operated Vehicle (ROV) systems may be configured for observation, inspection and recovery operations. The type/class of ROV and its support equipment and instrumentation payloads would be customized to the task. Telepresence technologies could be utilized to provide the QMA real-time observations and interactions with the ROV. This would also provide real-time tribal engagement in understanding the ASLF.
- QMA diving operations will only be considered if alternative means of achieving the Project objectives are unsuccessful and if, following a formal operational risk assessment and management process, it has been determined that diving operations can be safely conducted to achieve the desired objectives. Specialized audio/video links may be used if feasible to facilitate tribal engagement.

3.2.2 Shipwrecks

The Project continues to evaluate feasible design and construction options that would avoid or minimize adverse effects to the potential known and historic shipwrecks identified within the marine APE. These evaluations are ongoing and include micro-siting and cable realignments to avoid seabed disturbance within the QMA-recommended avoidance area surrounding each resource. The Project proposes implementing the following measures to avoid or minimize adverse effects to the potential known and historic shipwrecks:

- Adherence to the recommended avoidance areas established at each potential and known historic shipwreck based on the HRG survey data. Dissemination of the avoidance areas as shapefiles or other suitable formats to engineering and construction personnel before activities commence.
- If through micro-siting opportunities, avoidance is not feasible, then the Project will consult and coordinate with BOEM to develop appropriate mitigation measures. The mitigation of impacts may include the following:
- Remoted Operated Vehicle (ROV) systems may be configured for observation, inspection and recovery operations. The type/class of ROV and its support equipment and instrumentation payloads would be customized to the task. Telepresence technologies could be utilized to provide the QMA real-time observations and interactions with the ROV. This would also provide real-time tribal engagement in understanding the ASLF.
- QMA diving operations will only be considered if alternative means of achieving the Project objectives are unsuccessful and if, following a formal operational risk assessment and management process, it has been determined that diving operations can be safely conducted to achieve the

desired objectives. Specialized audio/video links may be used if feasible to facilitate tribal engagement.

The mitigation reports for all historic properties will follow regulatory (e.g., BOEM and SHPO; in MA, also BUAR) guidelines for cultural resources investigations.

4. IMPLEMENTATION

Construction that may negatively affect historic properties cannot begin until the HPTP has been accepted by BOEM. Historic properties that have been specifically listed in the HPTP must be avoided until approval, but construction can start before the acceptance of the HPTP if there is no affect to historic properties.

4.1 Timeline

Mayflower Wind will agree on a timeline and organizational responsibilities with BOEM and Participating Parties.

4.2 Organizational Responsibilities

4.2.1 Bureau of Ocean Energy Management (BOEM)

BOEM is responsible for the following during the construction and completion of the Project:

- Serving as the lead agency
- Making federal decisions and determine compliance with Section 106.
- Ensuring that the mitigation measure adequately resolves adverse effects, consistent with the NHPA, and in consultation with the Participating Parties.
- Consulting with Mayflower Wind, MASHPO, relevant federally recognized tribes, and other Participating Parties with demonstrated interest in the affected historic property.
- Distributing the annual summary report to all parties involved.

4.2.2 Mayflower Wind Energy LLC (Mayflower Wind)

Mayflower Wind is responsible for the following during the construction and completion of the Project:

- Execution of the HPTP.
- Examining and reviewing comments made from Participating Parties involved and identified in the HPTP.
- Reporting annually to BOEM on the progress of the HPTP.
- Funding the mitigation measures necessary, up to a reasonable amount, outlined in Section 3.
- Completing the mitigation measures necessary outlined in Section 3.
- Meeting correct standards.
- Providing correct documentation to all necessary Participating Parties involved for them to review and comment.

4.2.3 Massachusetts Historical Commission (MHC/SHPO); Massachusetts Board of Underwater Archaeological Resources (BUAR)

- Consult, when necessary, on implementation of this HPTP.
- Ensure compliance with applicable state laws, regulations, and guidelines.
- Confirm that proper mitigation measures are being undertaken in conformance with state permitting requirements.

4.2.4 Rhode Island State Historic Preservation Office (RI SHPO); The Rhode Island Historical Preservation & Heritage Commission (RIHP&HC)

- Consult, when necessary, on implementation of this HPTP.
- Ensure compliance with applicable state laws, regulations, and guidelines.
- Confirm that proper mitigation measures are being undertaken in conformance with state permitting requirements.

4.2.5 Other Relevant Participating Parties

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

Resources

Alpine Ocean Seismic Survey, Inc. (Alpine)

2020 *Mayflower Shallow Water Geotechnical ECR Campaign*. Submitted to Mayflower Wind Energy LLC, Boston.

2021a *Mayflower 2021 Shallow Geotechnical Campaign: Falmouth ECR & Lease Area*. Operations Report, Rev. 3. Prepared for Mayflower Wind Energy LLC, Boston.

2021b *Mayflower 2021 Shallow Geotechnical Project: Brayton Point ECC*. Operations Report, Rev. 2. Prepared for Mayflower Wind Energy LLC, Boston.

Bureau of Ocean Energy Management (BOEM), Office of Offshore Renewable Energy Programs

2020a *Guidelines for Submission of Spatial Data for Atlantic Offshore Renewable Energy Development Site Characterization Surveys and the Guidelines for Providing Geophysical, Geotechnical, and Geohazard Information Pursuant to 30 CFR Part 585.*

2020b *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585.*

Cirbus, Mary, Casey MacNeill, Haley Wilcox, and Eric Dray

2013 *Falmouth Reconnaissance Report: Heritage Landscape Inventory Program*. Prepared for the Town of Falmouth and Cape Cod Commission. Boston University Preservation Program, Boston.

Fugro

2022a *Marine Site Investigation Report, Mayflower Wind Project, Offshore Massachusetts, 02.21010076 MSIR 02* (Draft). February 15, 2022.

2022b *Field Operations and Field Results Report: Mayflower Wind Offshore Windfarm Geotechnical Investigation 2021 – Brayton Point Export Cable Route, Offshore New England, 02.21020071-1 02* (Final Report). January 11, 2022.

Geoquip Marine Operations AG

2019 *Volume I: Field Operations and Preliminary Results, Mayflower Project - Reconnaissance Geotechnical Investigation, Geoquip Ref.: GMOP19-G-013-Fld-01, Revision: B1*. Prepared For Shell New Energies US LLC.

Hall, Henry

1884 *Report on the Shipbuilding Industry of the United States*. United States Department of the Interior, Census Office, Washington, D.C.

Massachusetts Historical Commission (MHC)

1985 *MHC Reconnaissance Survey Town Report: Falmouth*. Massachusetts Historical Commission, Boston.

Nantucket Historical Association (NHA)

2016 *Nantucket's First People of Color: The Ancient Proprietors: Wampanoags*. Electronic document, https://nha.org/wp-content/uploads/PUB-Other-Islanders-1aWamp1o2.pdf, accessed November 29, 2021.

Robinson, D.S., Ford B., Herbster H., and Waller J.N.

2004 *Marine Archaeological Reconnaissance Survey Cape Wind Energy Project, Nantucket Sound, Massachusetts, PAL Report No. 1485.*

ATTACHMENT 8 – HISTORIC PROPERTIES TREATMENT PLAN FOR [redacted] ARCHAEOLOGICAL SITES

MAYFLOWER WIND

Appendix R.4. Draft Historic Properties Treatment Plan for [redacted] Archaeological Sites

Document Revision	B
Issue Date	January 2023
Security Classification	Confidential
Disclosure	For Use by BOEM and Authorized Third Parties Approved for public distribution with redactions, as applicable.

Historic Properties Treatment Plan

for the

Mayflower Wind Project

Historic Properties Subject to Adverse Effect

[redacted] Archaeological Sites, Portsmouth, Rhode Island

Submitted to:

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

Prepared for:

Mayflower Wind Energy LLC
https://mayflowerwind.com/

Prepared by:

The Public Archaeology Laboratory, Inc.
https://www.palinc.com/

January 2023

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LIST OF ACRONYMS

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
APVI	Area of Potential Visual Impact
BOEM	Bureau of Ocean Energy Management
CFR	Code of Federal Regulations
COP	Construction and Operations Plan
FR	Federal Regulation
HRVEA	Historic Resources Visual Effects Assessment
HDD	Horizontal Directional Drilling
HPTP	Historic Preservation Treatment Plan
HVDC	High Voltage Direct Current
MARA	Marine Archaeological Resource Assessment
MOA	Memorandum of Agreement
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NEPA	National Environmental Policy Act
OCS	Outer Continental Shelf
PAPE	Preliminary Area of Potential Effects
RFP	Request for Proposal
RIHP&HC	Rhode Island Historic Preservation & Heritage Commission
RISHPO	Rhode Island State Historic Preservation Office(r)
ROD	Record of Decision
SOI	Secretary of the Interior
TARA	Terrestrial Archaeological Resource Assessment

1.0 EXECUTIVE SUMMARY

This Historic Property Treatment Plan (HPTP) provides background data, historic property information, and detailed steps that will be implemented to resolve the potential adverse effects to [redacted] sites in Portsmouth, Rhode Island (RI) resulting from the construction of the Mayflower Wind Project (the Undertaking or Project) to satisfy requirements of Section 106 and Section 110(f) of the National Historic Preservation Act (NHPA) of 1966 (54 USC 300101; United States Code, 2016). This HPTP outlines the implementation steps and timeline for these mitigation actions.

Section 1.0, Executive Summary, outlines the content of this HPTP.

Section 2.0, Background Information, briefly summarizes the Undertaking while focusing on cultural resources regulatory contexts (federal, state, and local), identifies the archaeological properties discussed in this HPTP that will be adversely affected by the Undertaking, and summarizes the pertinent report that guided the development of this document.

Section 3.0, Existing Conditions and Historic Significance, provides a physical description of the Antony Road archaeological sites.

Section 4.0, Mitigation Measures, presents specific steps to carry out mitigation to minimize adverse Project impacts. The mitigation measures include the proposed treatment, purpose and intended outcomes, scope of work, methodology, standards, reporting requirements, and accounting.

Section 5.0, Implementation, establishes the process for executing mitigation measures for [redacted] sites as identified in Section 4.0 of this HPTP.

Section 6.0, Finalization, establishes when the mitigation will be finalized, unless a different timeline is agreed upon by the Section 106 Consulting Parties and accepted by BOEM.

Section 7.0, References, is a list of works referenced and/or cited in preparing this HPTP.

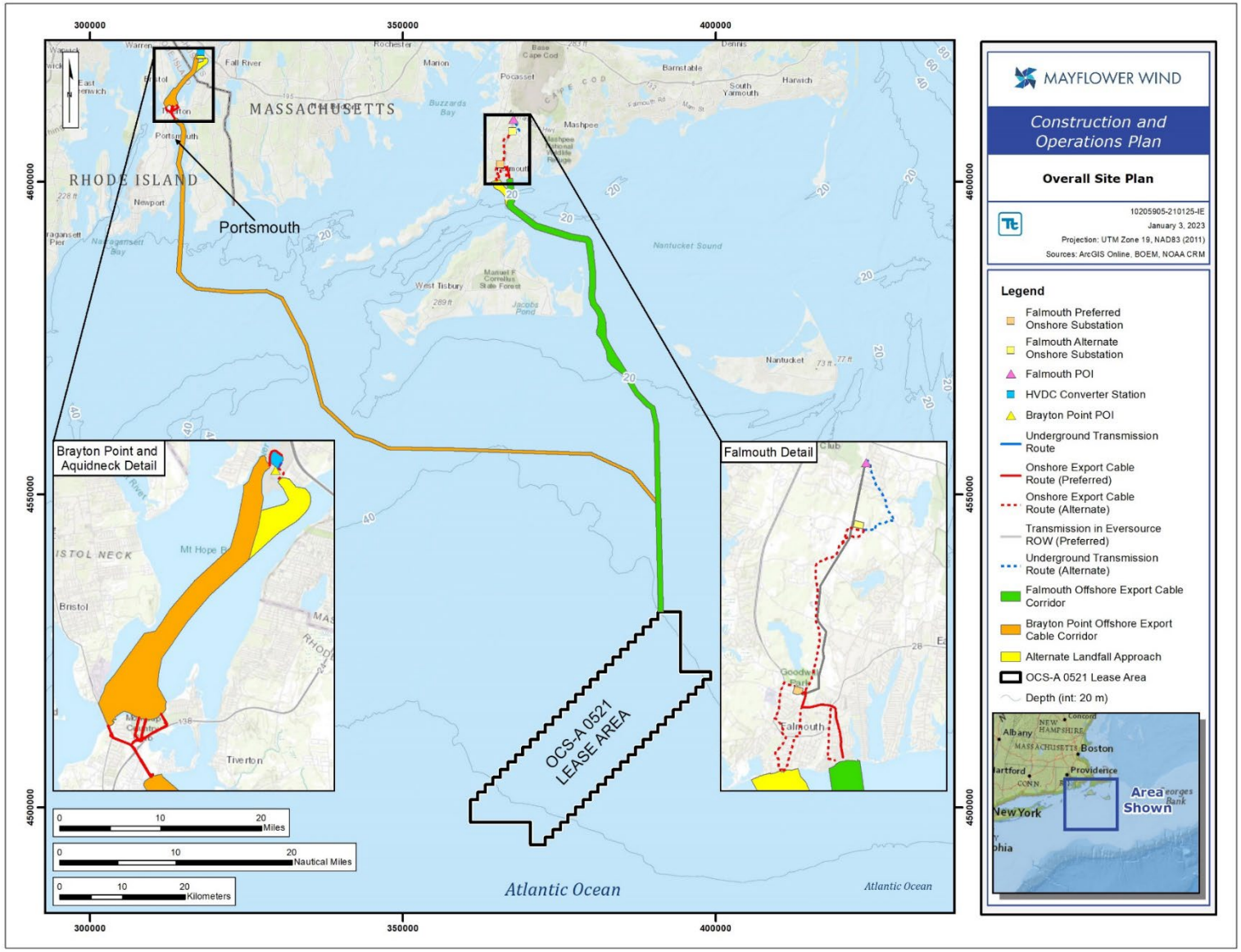
2.0 BACKGROUND INFORMATION

2.1 Project Overview

Mayflower Wind Energy LLC (Mayflower Wind), a joint venture of Shell New Energies US LLC (Shell New Energies) and OW North America LLC (Ocean Winds), proposes to construct and operate the Mayflower Wind Project (Project). The Project includes construction of the Mayflower Wind turbine array, inter-array cables, and offshore substation platforms in federal waters on the Atlantic Outer Continental Shelf (OCS) within the Bureau of Ocean Energy Management (BOEM) Renewable Energy Lease Area OCS-A 0521 (Lease Area); export cables that traverse federal and state waters with landfalls in Falmouth and Somerset, Massachusetts; and onshore High Voltage Direct Current (HVDC) converter stations at Brayton Point in Somerset and in Falmouth, Massachusetts, points of interconnection, and onshore, underground transmission delivery systems (see Figure 2.1-1). As a part of the onshore components for the Brayton Point export cable corridor, Mayflower Wind is considering several cable duct bank route segment options and horizontal directional drilling (HDD) site options in Portsmouth, Rhode Island.

This Historic Properties Treatment Plan (HPTP) addresses the potential for adverse effects to [redacted] archaeological sites located in present-day Portsmouth, Rhode Island. These sites were located during archaeological identification [redacted] (Waller and Flynn 2023).

Figure 2.1-1. Mayflower Wind Project Overview



2.2 Section 106 of the National Historic Preservation Act

As a project that requires approval from BOEM, the Project is considered a federal undertaking and as such, must comply with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), as amended, and the National Environmental Policy Act of 1970 (NEPA). This report addresses adverse impacts to a historic property in compliance with Section 106 and Section 110 of the NHPA.

Section 106 of the NHPA requires federal agencies to identify and assess the effects of undertakings on historic resources and to resolve adverse effects by developing and evaluating alternatives that could avoid, minimize, or mitigate these impacts. Section 110 of the NHPA requires federal agencies to establish a historic preservation program for the identification, evaluation, and protection of historic properties under their control or ownership within an Area of Potential Effect (APE). An APE, as defined by 36 CFR § 800.16(d), is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist".

Regulations under Section 106 (36 Code of Federal Regulations [CFR] 800.8(c)) allow the substitution of the NEPA reviews for the Section 106 process. Under this subsection, an agency can use the NEPA process and the documents it produces to comply with Section 106 in lieu of the procedures set forth in 36 CFR 800.3-800.6. In 2020, BOEM announced its intention to implement the NEPA substitution process for Section 106 review for renewable energy Construction and Operations Plans (COPs). Per the available guidance (Advisory Council on Historic Preservation [ACHP] and Council on Environmental Quality, 2013), the NEPA substitution process provides an opportunity for an agency to streamline its overall environmental and historic preservation review process.

2.2.1 Municipal Regulations

Pursuant to Section 106 requirements, any on-site mitigation measures will be coordinated with the Town of Portsmouth and the Rhode Island Historical Preservation & Heritage Commission (RIHPHC) office of the Rhode Island State Historic Preservation Office (RISHPO) to obtain approvals, as appropriate. Additional information regarding compliance with local requirements appears below in Section 5.2 – Organizational Responsibilities.

Table 2.2.1–1. Municipal Departments Requiring On-Site Mitigation Coordination

Name	Municipality	Departments
[redacted]	Town of Portsmouth	Public Works 2200 East Main Road Portsmouth, RI 02871

2.3 Resolution of Adverse Effects Measures

To support BOEM's efforts to identify historic properties within the Project's Preliminary Area of Potential Effects (PAPE), Mayflower Wind conducted an Analysis of Visual Effects to Historic Properties (AVEHP) assessment, terrestrial archaeological resources assessment (TARA), and a marine archaeological resources assessment (MARA). The results of these investigations can be found in the Mayflower Wind COP, Volume II, Section 7, Appendix S, Appendix S.1, Appendix R, and Appendix Q.

Pursuant to 36 CFR § 800.6 (a), Mayflower Wind will be required to mitigate any adverse effects in accordance with requirements laid out by BOEM in a forthcoming Record of Decision (ROD). BOEM will be executing a Memorandum of Agreement (MOA) with the RISHPO and other Participating Parties, which will outline the mitigation stipulations. This HPTP will be referenced in an attachment to the MOA.

This HPTP provides background data, and steps that may be implemented to carry out any mitigation measures. Mitigation measures implemented under this HPTP will be conducted in consultation with the Town of Portsmouth, and other Participating Parties, as appropriate, and in accordance 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.

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 the mitigation measure implementation processes described herein. Participating Parties with an interest in the adversely affected historic properties as summarized in Table 2.3-1.

Table 2.3-1. Participating Parties Potentially involved with [redacted] Archaeological Sites, Portsmouth, Rhode Island

Name	Relationship to Historic Property	Address
Advisory Council on Historic Preservation	Federal Agency	Federal Property Management Section, 401 F St NW, Suite 308, Washington DC 20001
RISHPO/RIHP&HC	State Historic Preservation Office / State Historical Commission	150 Benefit Street Providence, RI 02903
Town of Portsmouth, RI	Municipality	2200 East Main Road Portsmouth, RI 02871
Narragansett Indian Tribe	Traditional Homeland	4533 South County Trail Charlestown, RI 02813
Wampanoag Tribe of Gay Head (Aquinnah)	Traditional Homeland	20 Black Brook Road Aquinnah, MA 02535-1546
Mashpee Wampanoag Tribe	Traditional Homeland	483 Great Neck Road South Mashpee, MA 02649

Figure 2.3-1. Location of [redacted] Sites, Aquidneck Island, Rhode Island

3.0 HISTORIC SIGNIFICANCE OF THE HISTORIC PROPERTY

3.1 Historic Property

This HPTP involves the [redacted] Archaeological Sites on town property in the Town of Portsmouth, Newport County, Rhode Island.

3.2 Historic Context and Significance

The investigated portion of [redacted] within the Project PAPE is a small, short-duration and low-density locus of Native American chipped-stone tool manufacture of unknown age. The portion of [redacted] within the PAPE is locus of Native American chipped-stone tool maintenance and manufacture, lithic tool kit retooling, and perhaps resource processing or camping (Waller and Flynn 2023). Pre-contact settlement of the area is consistent with archaeological models that predict Native American archaeological sites in areas of high resource diversity that include tidal saltmarsh margins.

[redacted] Archaeological materials associated with each of these sites likely continue outside the PAPE, [redacted] Project construction will include the excavation of an approximate 5 ft (1.5 m) wide linear trench 1.5 to 2.0 m deep through [redacted] to install the buried cable duct. Construction trenching may potentially impact archaeological deposits associated with one or both of the [redacted] sites.

The [redacted] sites could potentially contribute new information about Native American resource use, settlement preference, and Transitional Archaic and Middle Woodland occupation around Portsmouth's "The Cove" and the traditional homeland of the Pocasset/Wampanoag Indian people and the seventeenth century core village settlement of Ousemequin (a.k.a. Massasoit) on Mount Hope Bay. These sites are potentially eligible for listing in the National Register under Criteria A (associated with events

that have made a significant contribution to the broad patterns of our history) and D (have yielded, or may be likely to yield, information important to prehistory or history).

4.0 MITIGATION MEASURES

This section details the proposed mitigation measures to resolve potential adverse effects to historic properties as described in the Mayflower Wind COP, and describes the purpose and intended outcome, scope of work, methodology, standards, deliverables, and funds and accounting for the measure. The content of this section was developed on behalf of Mayflower Wind by individuals who meet the Secretary of the Interior (SOI) Qualifications Standards for Archaeology, 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 adverse physical effect. Fulfillment of the mitigation measures will be led by personnel with demonstrated experience working in historic preservation, in coordination with individuals who meet SOI Qualifications.

4.1 Mitigation Measure

4.1.1 Purpose and Intended Outcome

Mayflower Wind is committed to minimizing impacts to [redacted] sites to the extent feasible. Complete site avoidance is however unlikely. The purpose of the mitigation will be to offset adverse effects from the Project on the [redacted] Sites. These effects may occur during the installation of cable duct banks. The proposed mitigation will provide a benefit to the through documentation of archaeological sites that may contribute to historic cultural practices. Archaeological investigations may, through recovery of cultural material, add to our knowledge of traditions from the Middle and Late Archaic time periods, when the land was occupied solely by the Native tribes.

4.1.2 Scope of Work

The scope of work for the archaeological investigations will consist of excavation where possible in the unpaved strip of land adjacent [redacted] where cultural material was recovered. This excavation will occur prior to construction in the PAPE of the cable conduit route. Excavation under pavement, if necessary, will occur immediately prior to construction. The methods for excavation are described below.

4.1.3 Methodology

Coordination:

The area subject to investigation and the schedule for that investigation will be determined in consultation with the tribes. The investigations will be conducted under State Archaeologist's permit issued by the Rhode Island State Archaeologist. The archaeological principal investigator also will coordinate the deliverables for the treatment plan with the Rhode Island SHPO/State Archaeologist, and other participating parties.

Research:

Background information specific to Aquidneck Island will be reviewed, placed in the larger context of local, state, and regional environmental and cultural history. A comprehensive review of primary and secondary sources of information and previous archaeological reports will be conducted. Most importantly, oral history from Aquidneck Island tribal members will be recorded and considered when designing the field and reporting components of the treatment plan.

Fieldwork:

All field investigations will be coordinated with and carried out with tribal members. The principal investigator will conduct a surface examination of area for hand excavation, which will be determined with tribal members. The proposed data recovery plan will be implemented immediately prior to construction and will include:

- Marking the [redacted] sites in the field prior to construction.
- The systematic removal of asphalt and fills to underlying natural soils using an excavator equipped with a flat blade grading bucket within the construction impact areas.
- Cultural resource consultants will excavate 20% of the [redacted] site's impact areas.
    - 50-x-50-cm test pits will be excavated beneath the roadway to identify artifact concentrations and/or archaeological features.
    - Excavation Units (EUs) measuring 0.5-x-1 or 1-x-1 sq m will supplement test pit excavation to collect additional information on site contents.
- Archaeological test units will be excavated in 10-cm levels with the excavated soils screened through ¼-inch hardware cloth.
- Recovered cultural material and samples will be collected and labeled with provenience (unit, stratum, depth, feature, etc.) information.

- All test units will be mapped onto Project plans.
- If archaeological features are found, they will be bisected with one half of the feature excavated to view and record its profile; soil samples will be taken of the remaining feature portion.
- Feature profiles and plans will be recorded on measured graph paper.
- Excavators will record notes on standard excavation forms added and digital photographs will be taken of the sites, cultural features, soil profiles, and fieldwork.

Laboratory Processing ad Curation

Any recovered cultural material will be processed by archaeologists and tribal members in order to compile an accurate catalogue of material essential to interpretation and reporting standards. Long term curation of the material will be at place agreed upon by the tribal members and other participating parties.

4.1.4 Standards

The Project will comply with the following standards:

- The Secretary of the Interior's Standards for the Treatment of Historic Properties (1983).
- The Secretary of the Interior's Standards and Guidelines: Archeology and Historic Preservation (1983).
- RIHPHC (2021) Performance and Standards and Guidelines for Archaeology in Rhode Island.

4.1.5 Documentation / Deliverables

The following draft and final documents will be provided for review and comment by the Participating Parties:

- Archaeological report on the results of the archaeological investigations at the designated areas.
- RIHPHC archaeological site forms for newly identified sites.

4.1.6 Reporting

Following Project approval, Mayflower Wind shall prepare a summary report detailing the mitigation measures undertaken pursuant to the HPTP. The report will be provided to the Participating Parties. The report will be prepared, reviewed, and distributed by January 31 of each calendar year until the HPTP is complete. The report will summarize the work undertaken during the previous year.

4.1.7 Funds and Accounting

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

5.0 IMPLEMENTATION

5.1 Timeline

The mitigation measure identified in this HPTP may be implemented prior to the commencement of, or during construction for the Undertaking.

5.2 Organizational Responsibilities

5.2.1 Bureau of Ocean Energy Management

- Will be the lead federal agency
- 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 Mayflower Wind, RISHPO, relevant tribes, and other Participating Parties with demonstrated interest in the affected historic properties.
- Review and approve all deliverables prepared and distributed to the Participating Parties.

5.2.2 Mayflower Wind

- Fund and implement the mitigation measure described in Section 4.0 of this HPTP.
- Prepare a summary report, submit report to BOEM for review and approval, and distribute to Participating Parties per Section 4.1.6.
- Submit information for Participating Parties review per Sections 4.1.2, 4.1.3, and 5.1.
- Creation and distribution of RFP to solicit consultant support for mitigation measure fulfillment.
- Selection of a consultant who meets the Secretary of the Interior's Professional Qualifications Standards for History, Architectural History and Archeology (36 CFR Part 61). Initial review of documentation for compliance with the Scope of Work, Methodology and Standards.
- Distribution of documentation to Participating Parties for their review.
- Review and comment on deliverables.

5.2.3 Rhode Island State Historic Preservation Office

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

5.2.4 Rhode Island State Archaeologist

- Consult on research design and methodology to receive a State Archaeologist's permit in order to implement this HPTP.

5.2.4 Advisory Council on Historic Preservation

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

6.0 FINALIZATION

The HPTP will be finalized with the execution of the MOA. Mitigation measures within this HPTP will be completed within five years of execution of the MOA, unless a different timeline is agreed upon by Participating Parties and accepted by BOEM. Mitigation measures may be completed simultaneously, as applicable.

7.0 REFERENCES

Works Cited

Advisory Council on Historic Preservation and Council on Environmental Quality. 2013. *NEPA and NHPA: A Handbook for Integrating NEPA and Section 106*. March 2013.

AECOM, Tetra Tech, Inc., and DNV Energy USA, Inc. 2021. *Construction and Operations Plan, Mayflower Wind Energy*. Mayflower Wind Energy, LLC, Boston, MA.

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Waller and Flynn (2023) *Terrestrial Archaeological Resources Assessment Mayflower Wind Project Aquidneck Island (Portsmouth) Landfall*, Portsmouth, Rhode Island. The Public Archaeology Laboratory, Inc., Pawtucket, RI.

Federal Regulations

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

Code of Federal Regulations (CFR). 2022b. 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. Accessed September 12, 2022.

CFR. 2022d. 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). Accessed September 12, 2022.

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.

State Regulations

Antiquities Act of Rhode Island G.L. 42-45, Procedures for Registration and Protection of Historic Properties

ATTACHMENT 9 – HISTORIC PROPERTIES TREATMENT PLAN FOR CHAPPAQUIDDICK TRADITIONAL CULTURAL PROPERTY

MAYFLOWER WIND

Appendix S.5. Draft Historic Properties Treatment Plan for Chappaquiddick Traditional Cultural Property

Document Revision:	B
Issue Date:	January 2023
Security Classification:	Confidential
Disclosure:	For use by BOEM and Authorized Third Parties Approved for public distribution with redactions, as applicable.

Draft Historic Properties Treatment Plan

for the

Mayflower Wind Project

Historic Properties Subject to Adverse Visual Effect

Chappaquiddick Traditional Cultural Property, [redacted] Massachusetts

Submitted to:

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

Prepared for:

Mayflower Wind Energy LLC
https://mayflowerwind.com/

Prepared by:

The Public Archaeology Laboratory, Inc.
https://www.palinc.com/

January 2023

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LIST OF ACRONYMS

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
APVI	Area of Potential Visual Impact
BOEM	Bureau of Ocean Energy Management
CFR	Code of Federal Regulations
COP	Construction and Operations Plan
FR	Federal Regulation
HRVEA	Historic Resources Visual Effects Assessment
HDD	Horizontal Directional Drilling
HPTP	Historic Preservation Treatment Plan
HVDC	High Voltage Direct Current
MA	Massachusetts
MARA	Marine Archaeological Resource Assessment
MASHPO	Massachusetts State Historic Preservation Office(r)
MGL	Massachusetts General Laws
MHC	Massachusetts Historic Commission
MOA	Memorandum of Agreement
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NEPA	National Environmental Policy Act
OCS	Outer Continental Shelf
PAPE	Preliminary Area of Potential Effects
RFP	Request for Proposal
ROD	Record of Decision
SOI	Secretary of the Interior
TARA	Terrestrial Archaeological Resource Assessment
TCP	Traditional Cultural Property

1.0 EXECUTIVE SUMMARY

This Historic Property Treatment Plan (HPTP) provides background data, historic property information, and detailed steps that will be implemented to resolve the potential adverse visual effects to the Chappaquiddick Traditional Cultural Property (TCP) in [redacted] Massachusetts (MA) resulting from the construction and operation of the Mayflower Wind Project (the Undertaking or Project) to satisfy requirements of Section 106 and Section 110(f) of the National Historic Preservation Act (NHPA) of 1966 (54 USC 300101; United States Code, 2016). This HPTP outlines the implementation steps and timeline for these mitigation actions.

Section 1.0, Executive Summary, outlines the content of this HPTP.

Section 2.0, Background Information, briefly summarizes the Undertaking while focusing on cultural resources regulatory contexts (federal, state, and local), identifies the single historic property discussed in this HPTP that will be adversely affected by the Undertaking, and summarizes the pertinent report that guided the development of this document.

Section 3.0, Existing Conditions and Historic Significance, provides a physical description of the Chappaquiddick TCP (the historic property). Set within its historic context, the applicable National Register of Historic Places (NRHP) criteria for the Chappaquiddick TCP are discussed with a focus on its overall significance and integrity.

Section 4.0, Mitigation Measures, presents specific steps to carry out mitigation to minimize adverse Project impacts. The mitigation measures include the proposed treatment, purpose and intended outcomes, scope of work, methodology, standards, reporting requirements, and accounting.

Section 5.0, Implementation, establishes the process for executing mitigation measures for the Chappaquiddick TCP as identified in Section 4.0 of this HPTP.

Section 6.0, Finalization, establishes when the mitigation will be finalized, unless a different timeline is agreed upon by the Section 106 Consulting Parties and accepted by BOEM.

Section 7.0, References, is a list of works referenced and/or cited in preparing this HPTP.

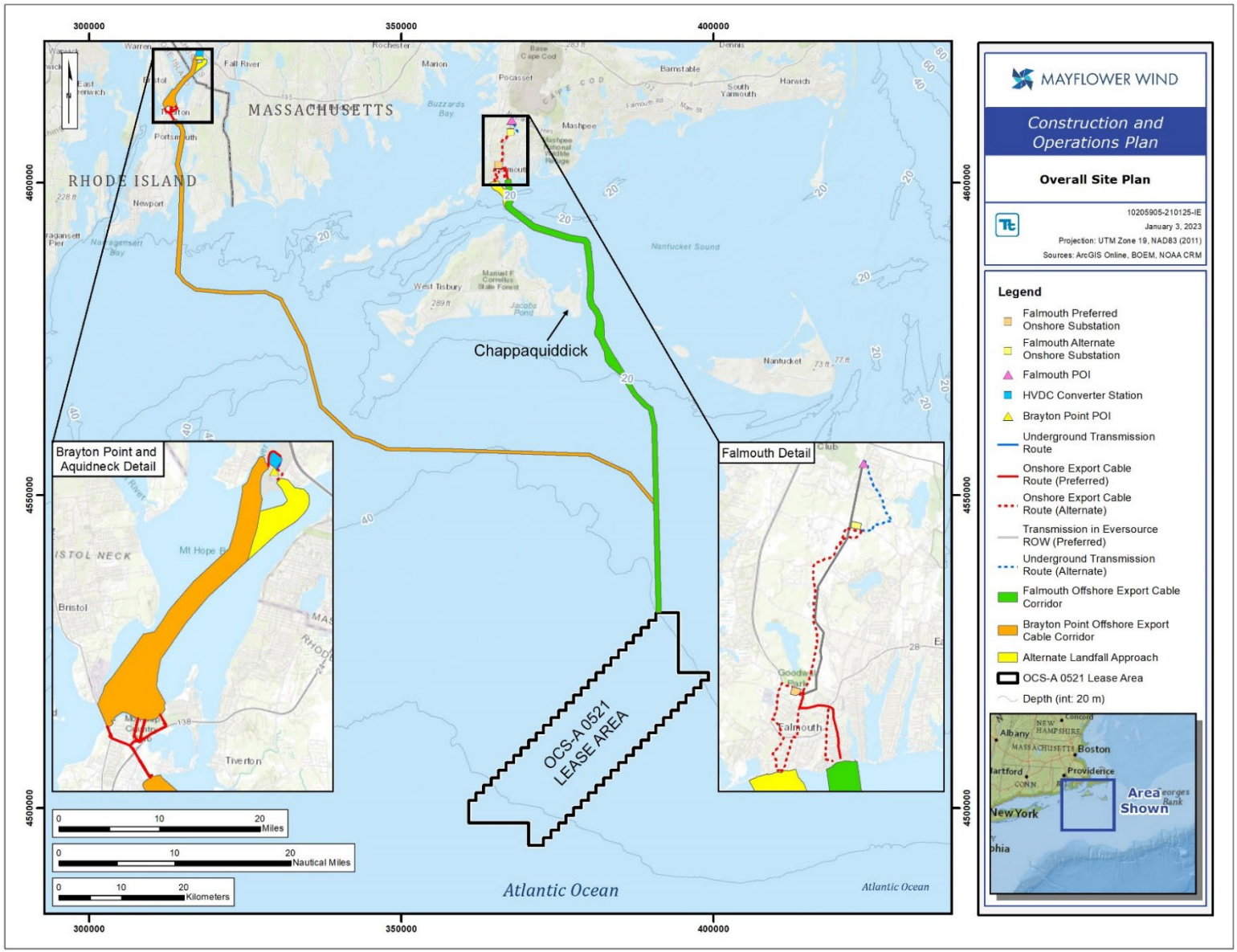
2.0 BACKGROUND INFORMATION

2.1 Project Overview

Mayflower Wind Energy LLC (Mayflower Wind), a joint venture of Shell New Energies US LLC (Shell New Energies) and OW North America LLC (Ocean Winds), proposes to construct and operate the Mayflower Wind Project (Project). The Project includes construction of the Mayflower Wind turbine array, inter-array cables, and offshore substation platforms in federal waters on the Atlantic Outer Continental Shelf (OCS) within the Bureau of Ocean Energy Management (BOEM) Renewable Energy Lease Area OCS-A 0521 (Lease Area) approximately 27 nautical miles (50 kilometers) south of Chappaquiddick Island, export cables that traverse federal and state waters with landfalls in Falmouth and Somerset, Massachusetts; and onshore High Voltage Direct Current (HVDC) converter stations at Brayton Point in Somerset and in Falmouth, Massachusetts, points of interconnection, and onshore, underground transmission delivery systems (see Figure 2.1-1). As a part of the onshore components for the Brayton Point export cable corridor, Mayflower Wind is considering several cable duct bank route segment options and horizontal directional drilling (HDD) site options in Portsmouth, Rhode Island.

This Historic Property Treatment Plan (HPTP) addresses the potential for adverse effects to the Chappaquiddick TCP, located in present-day [redacted] Massachusetts.

Figure 2.1-1. Mayflower Wind Project Overview



2.2 Section 106 of the National Historic Preservation Act

As a project that requires approval from BOEM, the Project is considered a federal undertaking and as such, must comply with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), as amended, and the National Environmental Policy Act of 1970 (NEPA). This report addresses potential adverse impacts to a historic property in compliance with Section 106 and Section 110 of the NHPA.

Section 106 of the NHPA requires federal agencies to identify and assess the effects of undertakings on historic resources and to resolve adverse effects by developing and evaluating alternatives that could avoid, minimize, or mitigate these impacts. Section 110 of the NHPA requires federal agencies to establish a historic preservation program for the identification, evaluation, and protection of historic properties under their control or ownership within an Area of Potential Effect (APE). An APE, as defined by 36 CFR § 800.16(d), is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist".

Regulations under Section 106 (36 Code of Federal Regulations [CFR] 800.8(c)) allow the substitution of the NEPA reviews for the Section 106 process. Under this subsection, an agency can use the NEPA process and the documents it produces to comply with Section 106 in lieu of the procedures set forth in 36 CFR 800.3-800.6. In 2020, BOEM announced its intention to implement the NEPA substitution process for Section 106 review for renewable energy Construction and Operations Plans (COPs). Per the available guidance (Advisory Council on Historic Preservation [ACHP] and Council on Environmental Quality, 2013), the NEPA substitution process provides an opportunity for an agency to streamline its overall environmental and historic preservation review process. A Project Notification Form containing a preliminary Project description, general schedule, and recommended cultural resources studies was submitted to the Massachusetts State Historic Preservation Office (MASHPO, Office of the Massachusetts Historical Commission [MHC]) on February 14, 2020. MASHPO issued a response to the submittal on March 9, 2020. Consultation with MASHPO, and other Participating Parties is ongoing. Section 106 and Section 110 of the NHPA was initiated with the issuance of a Notice of Intent (NOI) by BOEM on November 1, 2021.

2.2.1 Municipal Regulations

Pursuant to Section 106 requirements, any on-site mitigation measures will be coordinated with the [redacted] to obtain approvals, as appropriate. Additional information regarding compliance with local requirements appears below in Section 5.2 – Organizational Responsibilities.

Table 2.2.1–1. Municipal Departments Requiring On-Site Mitigation Coordination

Name	Municipality	Departments
Chappaquiddick TCP	[redacted]	[redacted]

2.3 Resolution of Adverse Effects Measures

To support BOEM's efforts to identify historic properties within the Project's Preliminary Area of Potential Effects (PAPE), Mayflower Wind conducted an Analysis of Visual Effects to Historic Properties (AVEHP) assessment, terrestrial archaeological resources assessment (TARA), and a marine archaeological resources assessment (MARA). The results of these investigations can be found in the Mayflower Wind COP, Volume II, Section 7, Appendix S, Appendix S.1, Appendix R, and Appendix Q. Based on a review of these documents and consultation with Participating Parties, BOEM may issue a Finding of Adverse Effect for the proposed Project on the Chappaquiddick TCP in [redacted] MA.

Pursuant to 36 CFR § 800.6 (a), Mayflower Wind will be required to mitigate the potential adverse effect in accordance with requirements laid out by BOEM in a forthcoming Record of Decision (ROD). BOEM will be executing a Memorandum of Agreement (MOA) with the MASHPO and other Participating Parties, which will outline the mitigation stipulations. This HPTP will be referenced in an attachment to the MOA.

This HPTP provides background data, and steps that may be implemented to carry out any mitigation measures. Standard minimization measures for visual impacts that have been taken into consideration include the color of the turbine and blades that will allow them to blend in with their setting, as well as implementing Aircraft Detection Lighting System (ADLS) which will reduce impacts in twilight and nighttime hours (see COP Appendix T, Visual Impact Assessment, and Appendix Y3, Aircraft Detection Lighting System Efficacy Analysis). Alternative mitigation measures implemented under this HPTP will be conducted in

consultation with the [redacted] and other Participating Parties, as appropriate, and in accordance 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.

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 the mitigation measure implementation processes described herein. Participating Parties with an interest in the adversely affected historic properties as summarized in Table 2.3-1.

Table 2.3-1. Participating Parties Potentially involved with the Chappaquiddick TCP, National Historic Landmark Historic Property

Name	**Relationship to Historic Property**	**Address**
Advisory Council on Historic Preservation	Federal Agency	Federal Property Management Section, 401 F St NW, Suite 308, Washington DC 20001
Massachusetts State Historic Preservation Office/ Massachusetts Historical Commission	State Historic Preservation Office / State Historical Commission	220 Morrissey Boulevard, Boston, MA 02125
Chappaquiddick Wampanoag Tribe	Traditional Homeland	P.O. Box 2659 Edgartown, MA 025394
[redacted]	Local Government / Local Historical Commission	[redacted]
Wampanoag Tribe of Gay Head (Aquinnah)	Traditional Homeland	20 Black Brook Road Aquinnah, MA 02535-1546
Mashpee Wampanoag Tribe	Traditional Homeland	483 Great Neck Road South Mashpee, MA 02649

3.0 HISTORIC SIGNIFICANCE OF THE HISTORIC PROPERTY

3.1 Historic Property

This HPTP involves one historic property, the Chappaquiddick TCP in the [redacted] Massachusetts. [redacted] (Figure 2.3-1). This TCP was identified by BOEM it its *Adverse Effect Finding for Vineyard Wind 1* (BOEM 2020). The information below was communicated to BOEM by Chappaquiddick tribal members during consultation for the Vineyard Wind 1 Wind Project. Prior to that time this information had not been published or compiled in one place. The information below is taken from the BOEM adverse effect finding for the Vineyard Wind 1 project.

3.2 Historic Context and Significance

The historic context for Chappaquiddick is based on information from the state-recognized Chappaquiddick Wampanoag Tribe. [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted] three documented historic properties: two are included in the Inventory (the Chappaquiddick Schoolhouse [EDG.506] and the Captain William Martin House [EDG.505]) and one, the Cape Poge Light (EDG.900), is listed in the National Register (National Park Service 2020).

3.3 National Register of Historic Places and National Historic Landmark Criteria

BOEM has agreed with the Chappaquiddick Tribe that Chappaquiddick Island is a TCP as defined by the National Park Service in *Guidelines for Evaluating and Documenting Traditional Cultural Properties, Bulletin #38.:* "… traditional cultural property … defined generally as one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that a) are rooted in that community's history and b) are important in maintaining the cultural identity of the community."

BOEM has considered the locations identified by the Tribe to be contributing elements of the Chappaquiddick Island TCP significant under National Register Criterion A [redacted] (BOEM 2020). [redacted] (Figure 2.3-1).

4.0 MITIGATION MEASURES

This section details the proposed mitigation measures to resolve adverse effects to historic properties as described in the Mayflower Wind COP, and describes the purpose and intended outcome, scope of work, methodology, standards, deliverables, and funds and accounting for the measure. The content of this section was developed on behalf of Mayflower Wind by individuals who meet the Secretary of the Interior (SOI) Qualifications Standards for Archaeology, 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 adverse visual effect. Fulfillment of the mitigation measures will be led by personnel with demonstrated experience working in historic preservation, in coordination with individuals who meet SOI Qualifications.

4.1 Mitigation Measure – Chappaquiddick TCP

Members of the Chappaquiddick Tribe have expressed interest in documenting the location of their historic meeting house. Mayflower Wind is prepared to fund a historic meeting house study of the area believed to contain remains of the meeting house in coordination with the Tribe and the property owner.

4.1.1 Purpose and Intended Outcome

The purpose of the mitigation will be to offset potential adverse effects from the Project on the Chappaquiddick TCP. These effects involve the presence of visual infrastructure, i.e., the WTGs and OSPs in the Lease Area, and their lighting. Some visual effects will be minimized by the color of the towers and turbines, and the proposed ADLS. Other proposed mitigation will provide a benefit to the Chappaquiddick Wampanoag Tribe through documentation of a property that is important to the community; a property that was once an important meeting place for the community contributing to historic cultural practices. Archival and evidence research, tribal oral history, and non-invasive geophysical investigations may help identify the exact location of the meeting house and gather more information about its history and functions as a Chappaquiddick community resource.

4.1.2 Scope of Work

The scope of work for the meeting house study will consist of the following:

4.1.3 Methodology

Coordination:

The tasks associated with the implementation of this HPTP will be developed in consultation with Chappaquiddick tribal members and the property owner. The archaeological principal investigator also will coordinate the deliverables for the treatment plan with the Chappaquiddick Tribe, the [redacted] the Massachusetts SHPO/State Archaeologist, and other participating parties, as necessary.

Archival, Land Evidence, and Oral History Research:

Background information specific to Chappaquiddick will be reviewed, placed in the larger context of local, state, and regional environmental and cultural history. A comprehensive review of primary and secondary sources of information about the meeting house will be conducted. These will include (but not be limited to): legislative and court records related to the Chappaquiddick Indian reservation, land evidence records and deeds for the meeting house parcel, LiDAR imagery as available, and historic maps and plans of the Chappaquiddick Reservation lands and Chappaquiddick Island. Most importantly, oral history from Chappaquiddick tribal members regarding the meeting house, its physical form and functions, and its importance in community cohesion will be recorded.

Geophysical Survey Fieldwork:

All field investigations will be coordinated with and carried out with members of the Chappaquiddick Tribe. The principal investigator will conduct a surface examination of general area identified by tribal members and through archival research as the location of their historic meeting house to examine the current physical condition of the presumed site of the meeting house. The goal of the field investigations will be to identify, if possible, the location of the meeting house and its relationship to the surrounding historic landscape. Using the results of the research and oral history, a geophysical survey will be conducted within the general meeting house location. The purpose of the survey, which will not include any ground disturbance, will be to determine if potential historic features such as foundations are present and if the specific location of the meeting house can be identified. The method of geophysical survey (e.g. ground penetrating radar [GPR], electrical resistivity, magnetic gradiometry) will be determined by the existing conditions at the site and in consultation with the Chappaquiddick Tribe and property owner. Recommendations for future research and/or archaeological investigations will be part of the final study report.

4.1.4 Standards

The Project will comply with the following standards:

- The Secretary of the Interior's Standards for the Treatment of Historic Properties (1983).
- The Secretary of the Interior's Standards and Guidelines: Archeology and Historic Preservation (1983).
- The Massachusetts State Archaeologists Standards and Guidelines (950 CMR 70).

4.1.5 Documentation / Deliverables

The following draft and final documents will be provided for review and comment by the Participating Parties:

- Study report on the results of the archival and oral history research and geophysical study of the designated area.
- GIS mapping of historic plans, LiDAR, and geophysical survey results.
- MHC archaeological site forms for newly identified sites, if applicable.
- Publication(s) reviewed by the Chappaquiddick Tribe and suitable for public distribution by Mayflower Wind.

4.1.6 Reporting

Following Project approval, Mayflower Wind shall prepare a summary report detailing the mitigation measures undertaken pursuant to the HPTP. The report will be provided to the Chappaquiddick Tribe, and all other Participating Parties, as applicable. The report will be prepared, reviewed, and distributed by January 31 of each calendar year until the HPTP is complete. The report will summarize the work undertaken during the previous year.

4.1.7 Funds and Accounting

Mayflower Wind will be responsible for funding, up to a reasonable and agreed upon amount, and implementation of this mitigation measure.

5.0 IMPLEMENTATION

5.1 Timeline

The mitigation measure identified in this HPTP may be implemented prior to the commencement of, during, or after construction for the Undertaking.

5.2 Organizational Responsibilities

5.2.1 Bureau of Ocean Energy Management

- Will be the lead federal agency.
- 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 Mayflower Wind, MASHPO, relevant tribes, and other Participating Parties with demonstrated interest in the affected historic properties.
- Review and approve all deliverables prepared and distributed to the Participating Parties.

5.2.2 Mayflower Wind

- Fund, up to a reasonable and agreed upon amount, and implement the mitigation measure described in Section 4.0 of this HPTP.
- Prepare a summary report, submit report to BOEM for review and approval, and distribute to Participating Parties per Section 4.1.6.
- Submit information for Participating Parties review per Sections 4.1.2, 4.1.3, and 5.1.
- Creation and distribution of RFP to solicit consultant support for mitigation measure fulfillment.
- Selection of a consultant who meets the Secretary of the Interior's Professional Qualifications Standards for History, Architectural History and Archeology (36 CFR Part 61).
- Initial review of documentation for compliance with the Scope of Work, Methodology and Standards.
- Distribution of documentation to Participating Parties for their review.
- Review and comment on deliverables.

5.2.3 Massachusetts State Historic Preservation Office

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

5.2.4 Massachusetts State Archaeologist

- Consult on research design and methodology to receive a State Archaeologist's permit in order to implement this HPTP.

5.2.4 Advisory Council on Historic Preservation

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

5.2.5 Chappaquiddick Wampanoag Tribe

- Consult on research design and methodology, and report preparation and publications to ensure tribal perspective is clearly articulated.

6.0 FINALIZATION

The HPTP will be finalized with the execution of the MOA. Mitigation measures within this HPTP will be completed within five years of execution of the MOA, unless a different timeline is agreed upon by Participating Parties and accepted by BOEM. Mitigation measures may be completed simultaneously, as applicable.

7.0 REFERENCES

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MGL 950 CMR 70.00 Office of the Secretary of State

ATTACHMENT 10 – HISTORIC PROPERTIES TREATMENT PLAN FOR NANTUCKET HISTORIC DISTRICT

MAYFLOWER WIND

Appendix S.3. Historic Properties Treatment Plan for Nantucket Historic District

Document Revision:	A
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Historic Properties Treatment Plan

for the

Mayflower Wind Project

Historic Properties Subject to Adverse Visual Effect

Nantucket, Massachusetts

Submitted to:

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

Prepared for:

Mayflower Wind Energy LLC
https://mayflowerwind.com/

Prepared by:

The Public Archaeology Laboratory, Inc.
https://www.palinc.com/

December 2022

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LIST OF ACRONYMS

ACHP	Advisory Council on Historic Preservation
ADLS	Advanced Detection Lighting System
APE	Area of Potential Effects
APVI	Area of Potential Visual Impact
BOEM	Bureau of Ocean Energy Management
CFR	Code of Federal Regulations
COP	Construction and Operations Plan
FR	Federal Regulation
HRVEA	Historic Resources Visual Effects Assessment
HDD	Horizontal Directional Drilling
HPTP	Historic Preservation Treatment Plan
HVDC	High Voltage Direct Current
MA	Massachusetts
MARA	Marine Archaeological Resource Assessment
MASHPO	Massachusetts State Historic Preservation Office(r)
MGL	Massachusetts General Laws
MHC	Massachusetts Historic Commission
MOA	Memorandum of Agreement
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NEPA	National Environmental Policy Act
OCS	Outer Continental Shelf
PAPE	Preliminary Area of Potential Effects
RFP	Request for Proposal
ROD	Record of Decision
SOI	Secretary of the Interior
TARA	Terrestrial Archaeological Resource Assessment

1.0 EXECUTIVE SUMMARY

This Historic Property Treatment Plan (HPTP) provides background data, historic property information, and detailed steps that will be implemented to resolve the adverse visual effects to the Nantucket Historic District in Nantucket, Massachusetts (MA) resulting from the construction and operation of the Mayflower Wind Project (the Undertaking or Project) to satisfy requirements of Section 106 and Section 110(f) of the National Historic Preservation Act (NHPA) of 1966 (54 USC 300101; United States Code, 2016). This HPTP outlines the implementation steps and timeline for these mitigation actions.

Section 1.0, Executive Summary, outlines the content of this HPTP.

Section 2.0, Background Information, briefly summarizes the Undertaking while focusing on cultural resources regulatory contexts (federal, state, and local), identifies the single historic property discussed in this HPTP that will be adversely affected by the Undertaking, and summarizes the pertinent report that guided the development of this document (prepared by AECOM).

Section 3.0, Existing Conditions and Historic Significance, provides a physical description of the Nantucket Historic District (the historic property). Set within its historic context, the applicable National Register of Historic Places (NRHP) criteria for the Nantucket Historic District are discussed with a focus on its overall significance and integrity.

Section 4.0, Mitigation Measures, presents specific steps to carry out mitigation to minimize adverse Project impacts. The mitigation measures include the proposed treatment, purpose and intended outcomes, scope of work, methodology, standards, reporting requirements, and accounting.

Section 5.0, Implementation, establishes the process for executing mitigation measures for the Nantucket Historic District as identified in Section 4.0 of this HPTP.

Section 6.0, Finalization, establishes when the mitigation will be finalized, unless a different timeline is agreed upon by the Section 106 Consulting Parties and accepted by BOEM.

Section 7.0, References, is a list of works referenced and/or cited in preparing this HPTP.

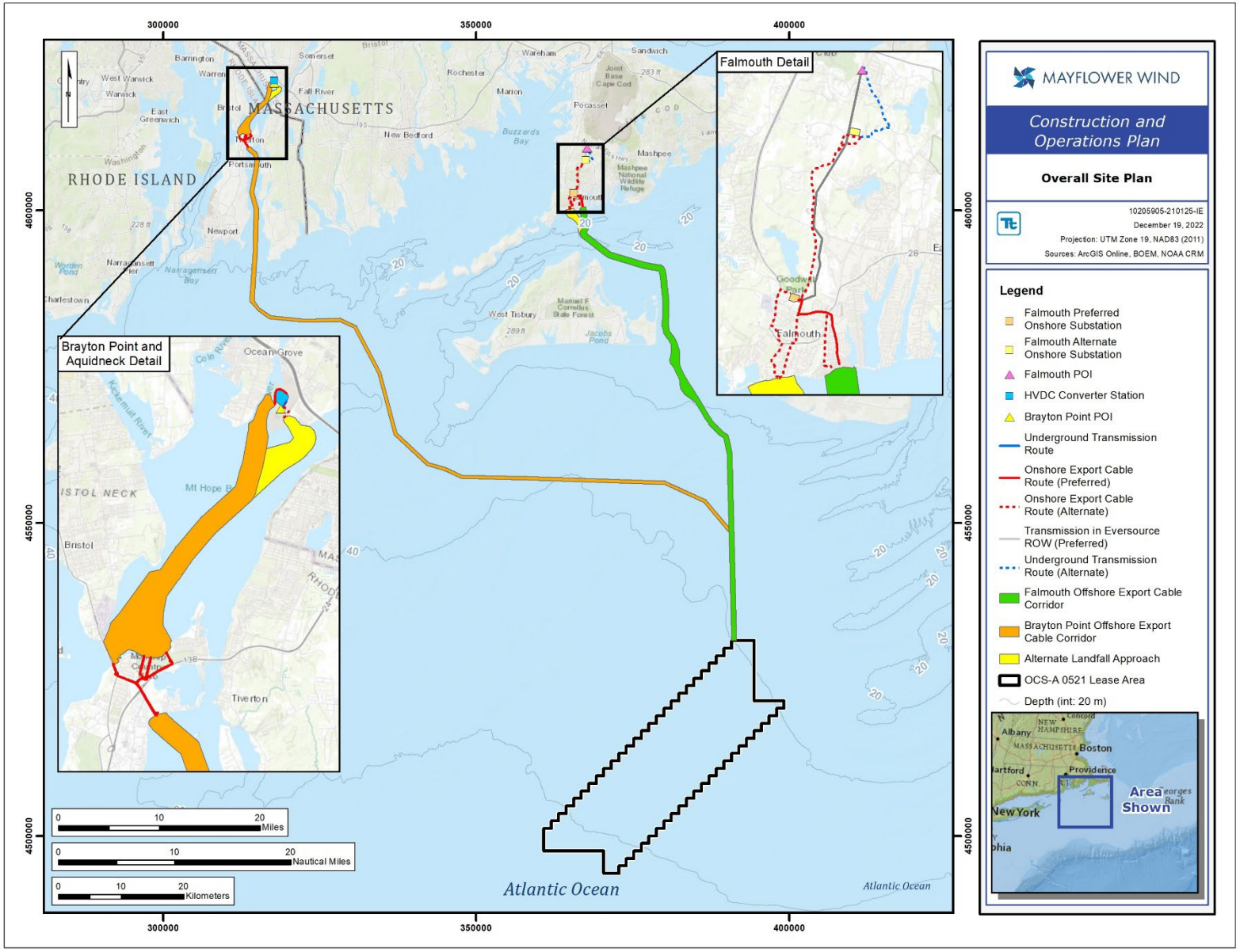
2.0 BACKGROUND INFORMATION

2.1 Project Overview

Mayflower Wind Energy LLC (Mayflower Wind), a joint venture of Shell New Energies US LLC (Shell New Energies) and OW North America LLC (Ocean Winds), proposes to construct and operate the Mayflower Wind Project (Project). The Project includes construction of the Mayflower Wind turbine array inter-array cables, and offshore substation platforms in federal waters on the Atlantic Outer Continental Shelf (OCS) within the Bureau of Ocean Energy Management (BOEM) Renewable Energy Lease Area OCS-A 0521 (Lease Area) approximately 20 nautical miles (37 kilometers) south of Nantucket Island; export cables that traverse federal and state waters with landfalls in Falmouth and Somerset, Massachusetts; and onshore High Voltage Direct Current (HVDC) converter stations at Brayton Point in Somerset and in Falmouth, Massachusetts, points of interconnection, and onshore, underground transmission delivery systems (see Figure 2.1-1). As a part of the onshore components for the Brayton Point export cable corridor, Mayflower Wind is considering several cable duct bank route segment options and horizontal directional drilling (HDD) site options in Portsmouth, Rhode Island.

This Historic Properties Treatment Plan (HPTP) addresses the potential for adverse effects to the Nantucket Historic District, which is comprised of the entire island of Nantucket.

Figure 2.1-1. Mayflower Wind Project Overview



2.2 Section 106 of the National Historic Preservation Act

As a project that requires approval from BOEM, the Project is considered a federal undertaking and as such, must comply with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), as amended, and the National Environmental Policy Act of 1970 (NEPA). This report addresses adverse visual impacts to historic properties in compliance with Section 106 and Section 110 of the NHPA.

Section 106 of the NHPA requires federal agencies to identify and assess the effects of undertakings on historic resources and to resolve adverse effects by developing and evaluating alternatives that could avoid, minimize, or mitigate these impacts. Section 110 of the NHPA requires federal agencies to establish a historic preservation program for the identification, evaluation, and protection of historic properties under their control or ownership within an Area of Potential Effect (APE). An APE, as defined by 36 CFR § 800.16(d), is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist".

Regulations under Section 106 (36 Code of Federal Regulations [CFR] 800.8(c)) allow the substitution of the NEPA reviews for the Section 106 process. Under this subsection, an agency can use the NEPA process and the documents it produces to comply with Section 106 in lieu of the procedures set forth in 36 CFR 800.3-800.6. In 2020, BOEM announced its intention to implement the NEPA substitution process for Section 106 review for renewable energy Construction and Operations Plans (COPs). Per the available guidance (Advisory Council on Historic Preservation [ACHP] and Council on Environmental Quality, 2013), the NEPA substitution process provides an opportunity for an agency to streamline its overall environmental and historic preservation review process. A Project Notification Form containing a preliminary Project description, general schedule, and recommended cultural resources studies was submitted to the Massachusetts State Historic Preservation Office (MASHPO, Office of the Massachusetts Historical Commission [MHC]) on February 14, 2020. MASHPO issued a response to the submittal on March 9, 2020. Consultation with MASHPO, the Town of Nantucket, and other Participating Parties is ongoing. Section 106 and Section 110 of the NHPA was initiated with the issuance of a Notice of Intent (NOI) by BOEM on November 1, 2021.

2.2.1 Municipal Regulations

Pursuant to Section 106 requirements, any on-site mitigation measures will be coordinated with the Town of Nantucket and the Nantucket Historical Commission to obtain approvals, as appropriate. Additional information regarding compliance with local requirements appears below in Section 5.2 – Organizational Responsibilities.

Table 2.2.1–1. Municipal Departments Requiring On-Site Mitigation Coordination

Name	Municipality	Departments
Nantucket Historic District	Town of Nantucket	Planning Department Nantucket Historic District of Nantucket, Inc. Nantucket Historical Commission

2.3 Resolution of Adverse Effects Measures

To support BOEM's efforts to identify historic properties within the Project's Preliminary Area of Potential Effects (PAPE), Mayflower Wind conducted an Analysis of Visual Effects to Historic Properties (AVEHP) assessment, terrestrial archaeological resources assessment (TARA), and a marine archaeological resources assessment (MARA). The results of these investigations can be found in the Mayflower Wind COP, Volume II, Section 7, Appendix S, Appendix S.1, Appendix R, and Appendix Q. Based on a review of these documents and consultation with Participating Parties, BOEM is expected to issue a Finding of Adverse Effect for the proposed Project on the Nantucket Historic District in Nantucket, MA.

Pursuant to 36 CFR § 800.6 (a), Mayflower Wind will be required to mitigate the adverse effect in accordance with requirements laid out by BOEM in a forthcoming Record of Decision (ROD). BOEM will be executing a Memorandum of Agreement (MOA) with the MASHPO and other Participating Parties, which will outline the mitigation stipulations. This HPTP will be referenced in an attachment to the MOA.

This HPTP provides background data, and steps that may be implemented to carry out any mitigation measures. Standard mitigation measures for visual impacts that have been taken into consideration include the color of the turbines and blades that will allow them to blend in with their setting, as well as implementing Aircraft Detection Lighting System (ADLS) which will significantly reduce impacts in twilight and nighttime hours (see COP Appendix Y.3, Aircraft Detection Lighting System Efficacy Analysis). Alternative mitigation measures implemented under this HPTP will be conducted in consultation with the Town of Nantucket, and other Participating Parties, as appropriate, and in accordance 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.

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 the mitigation measure implementation processes described herein. Participating Parties with an interest in the adversely affected historic properties as summarized in Table 2.3-1.

Table 2.3-1. Participating Parties Potentially involved with the Nantucket Historic District, National Historic Landmark Historic Property

Name	**Relationship to Historic Property**	**Address**
Advisory Council on Historic Preservation	Federal Agency	Federal Property Management Section, 401 F St NW, Suite 308, Washington DC 20001
Massachusetts State Historic Preservation Office/ Massachusetts Historical Commission	State Historic Preservation Office / State Historical Commission	220 Morrissey Boulevard, Boston, MA 02125
Town of Nantucket/Nantucket Historical Commission	Local Government / Local Historical Commission	59 Town Hall Square, Town Hall, Nantucket, MA 02540
Nantucket Historic District of Nantucket, Inc.	Property Owner	46 Jones Road, Nantucket, MA 02540
Wampanoag Tribe of Gay Head (Aquinnah)	Traditional Homeland	20 Black Brook Road Aquinnah, MA 02535-1546
Mashpee Wampanoag Tribe	Traditional Homeland	483 Great Neck Road South Mashpee, MA 02649

Figure 2.3-1. Nantucket Historic District Location (and NAN.C and NAN.D), Nantucket, Massachusetts

3.0 HISTORIC SIGNIFICANCE OF THE HISTORIC PROPERTY

3.1 Historic Property

This HPTP involves one historic property, the Town of Nantucket, Nantucket County. The Nantucket Historic District, designated a National Historic Landmark (NHL) (NRIS 66000772) in 1966, now encompasses the entire island of Nantucket and contains 27,207 acres and approximately 13,000 historic resources built before or in 1975. In 1966 the Historic District NHL did not include the entire island; the boundaries were expanded in 1975 to include the entire island. An update to the NRHP Form/NHL was completed in 2012 and definitively included the islands of Tuckernuck (878 acres) and Muskeget (296 acres). *The following sections on historic context and significance are excerpted from the 2012 National Park Service (NPS) National Register of Historic Places (NRHP) Registration Form.*

3.2 Historic Context and Significance

The historic context for Nantucket spans its history from 1659 when Thomas Macy and his family together with Edward Starbuck, James Coffin and Isaac Coleman sailed from Salisbury, Massachusetts to Nantucket and spent the winter in a hut near Madaket Harbor at the southwest corner of the island. The context extends through the Settlement Period until 1722, continuing through the Colonial and Revolutionary Periods (1723-1791), the Federal and Classic Periods (1791 – 1860), and including Tourism (1835 -1935) and Preservation & Revivalist Architecture (ca. 1880-1955) and finally the Modern Period from 1955 -1975. For an extensive history of Nantucket please refer to the 2012 NPS Registration Form.

Nantucket retains two exceptionally well-preserved village centers (Nantucket Town and Siasconset) which retain nationally important examples of architecture from the Colonial, Federal, Greek Revival and Victorian periods, as well as from the 20th century when architectural preservation and architectural revivals based upon Nantucket's past became the dominant themes of local architecture because of the island's nationally significant historic preservation movement. Three historic properties in Nantucket have individual historic listing designations. The Jethro Coffin House, built in 1686 and likely the oldest Nantucket house on its original site, was designated an NHL in 1966. Brant Point Light Station and Sankaty Light Station were listed separately in the National Register in 1987. Brant Point Light, built in 1901, is the tenth light on the point. Sankaty Head Light, built in 1850, was one of the first lighthouses in the country to receive a Fresnel lens. Both lighthouses were automated in 1965.

The period of significance of the NHL, as listed in the 2012 update extends from 1659 to 1975 in the areas of architecture, commerce, conservation, entertainment/recreation, ethnic heritage of Black and Native Americans, maritime history, and social history.

3.3 National Register of Historic Places and National Historic Landmark Criteria

Nantucket, including the islands of Tuckernuck and Muskeget, is eligible at the National level to the NRHP under Criteria A, B, C, and D.

A. Associated with events that have made a significant contribution to the broad patterns of history.
B. Associated with the lives of persons significant in our past.
C. Embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.
D. That have yielded or may be likely to yield information important in prehistory or history.

Nantucket is a nationally significant property under Criteria 1 through 4 of the six NHL criteria:

Criterion 1: Properties that are associated with events that have made a significant contribution to, and are identified with, or that outstandingly represent, the broad national patterns of United States history and from which an understanding and appreciation of those patterns may be gained.

Criterion 2: Properties that are associated importantly with the lives of persons nationally significant in the history of the United States.

Criterion 3: Properties that represent some great idea or ideal of the American people.

Criterion 4: Properties that embody the distinguishing characteristics of an architectural type specimen exceptionally valuable for a study of a period, style, or method of construction, or that represent a significant, distinctive, and exceptional entity whose components may lack individual distinction.

Criterion 5: Properties that are composed of integral parts of the environment not sufficiently significant by reason of historical association or artistic merit to warrant individual recognition but collectively

compose an entity of exceptional historical or artistic significance, or outstandingly commemorate or illustrate a way of life or culture.

Criterion 6: Properties that have yielded or may be likely to yield information of major scientific importance by revealing new cultures, or by shedding light upon periods of occupation over large areas of the United States. Such sites are those which have yielded, or which may reasonably be expected to yield, data affecting theories, concepts and ideas to a major degree.

4.0 MITIGATION MEASURES

This section details the proposed mitigation measures to resolve adverse effects to historic properties as described in the Mayflower Wind COP, and describes the purpose and intended outcome, scope of work, methodology, standards, deliverables, and funds and accounting for the measure. The content of this section was developed on behalf of Mayflower Wind by individuals who meet the Secretary of the Interior (SOI) Qualifications Standards for Archaeology, 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 adverse visual effect. Fulfillment of the mitigation measures will be led by personnel with demonstrated experience working in historic preservation, in coordination with individuals who meet SOI Qualifications Standards for Archaeology, History, Architectural History, and/or Architecture. This document identifies which mitigation measures are likely to trigger the need for compliance with the identified state/local level legislation.

4.1 Mitigation Measure – Nantucket Historic District

Mayflower Wind is prepared to fund historic property surveys of neighborhoods along the south coast depicted on Figure 2-3.1, specifically in the Southwest and, South neighborhoods in consultation with the Town and the Nantucket Historical Commission.

Mayflower Wind also may fund an Archaeological Overview and Assessment of these same neighborhoods. This assessment will concentrate on the [redacted], a period that has not been recognized in the NRHP/NHL designation. [redacted]

4.1.1 Purpose and Intended Outcome

The purpose of the mitigation will be to offset the visual effects that may affect Nantucket. These effects involve the presence of visual infrastructure, i.e., the WTGs and OSPs in the Lease Area, and their lighting. Some visual effects will be minimized by the color of the towers and turbines, and the proposed ADLS to be implemented on all turbines. Other proposed mitigation will provide a benefit to the public and Native American tribes that are affected by elements of the wind farm through documentation of properties that are important to the communities.

4.1.2 Scope of Work

The scopes of work for the historic surveys and the Archaeological Overview and Assessment will consist of the following:

4.1.3 Methodology

4.1.3.1 Historic Properties Survey

Coordination:

Areas subject to survey will be selected by the Town of Nantucket in consultation with the Massachusetts SHPO, Wampanoag THPOs, and other participating parties as necessary. All surveys will follow the MHC's *Historic Properties Survey Manual: Guidelines for the Identification of Historic and Archaeological Resources in Massachusetts* (1992), *Survey Technical Bulletin #1* (1993), *MHC Interim Survey Guidelines* (March 1999, et seq.), *MHC Interim Guidelines for Inventory Form Photographs* (2009), MHC's *Guidelines for Inventory Form Locational Information* (2013), and related technical guidance. The survey will include new survey work and updating existing forms. All survey work will be recorded on large-scale maps and entered in the Town's GIS data. Most historic resources on Nantucket are buildings, and the Nantucket Historic District is a local historic district, therefore, the individual **Form B** – **Building** will be the most used form. Other types of individual resources are found on Nantucket and will be documented on specific forms as follows: Monuments and markers on **Form C – Objects**; cemeteries on **Form E – Burial Grounds and Cemeteries**; bridges, walls, piers on **Form F – Structures**; and parks and landscapes on **Form H – Parks and Landscapes**. The **Form A - Area** is used to document a collection of adjacent and related historic resources that share a design or event history, such as in a neighborhood, cottage colony or other building complex, or streetscape resources within a given work effort. Descriptions will include the overall characteristics of the area and key and representative resources.

Research:

Research will be conducted to supplement and update existing historical contexts for a comprehensive understanding of the history and potential significance of individual surveyed resources. The Nantucket Island-wide historical contexts are generally well developed in the 1966 NHL nomination and the 2012 NHL Nomination Update and other past research and publications. Research conducted by local historians and

students under the Nantucket Historical Association, Nantucket Atheneum, Nantucket Historic Preservation Trust, and Preservation Institute: Nantucket will be reviewed.

Fieldwork:

Most locations are accessible on foot and by car. Data collected will include the built resource, its property characteristics, and its town or natural settings. Survey updates will record changes that have occurred since the original survey. Buildings with existing survey information that have been demolished or moved will be noted. The surveyors will use GIS mapping to locate properties, handheld devices or paper for field notes, and high-resolution digital color photography.

National Register of Historic Places Eligibility Evaluations:

National Register nomination eligibility recommendations and other related recommendations will be made for individual properties as well as the selected neighborhoods. The recommendations will be based on the NRHP criteria listed in Section 3.3.

4.1.3.2 Archaeological Overview and Assessment

The Archaeological Assessment and Overview may consist of a narrative report and graphics that summarize background research and provide environmental and cultural frameworks for [redacted]

Coordination:

The principal investigator will coordinate the project schedule and deliverables for the overview and assessment project with the Town of Nantucket and the Massachusetts SHPO and other participating parties, as necessary, including the Native American Tribes.

Research:

Background information specific to Nantucket will be reviewed, placed in the larger context of local, state, and regional environmental and cultural history, and tied to the predictive models for archaeological pre-contact and post-contact site potential. A comprehensive review of primary and secondary sources of

information including published and unpublished paleoenvironmental and geological studies, paleo ecological studies, informant interviews, and previous archaeological reports will be conducted.

Archaeological site files maintained at the MHC and in MACRIS will be reviewed and site locational data and information will be included in the report text and on scaled USGS maps of Nantucket. Town and county histories, historical maps, and archaeological reports from nearby surveys and from those surveys previously conducted on Nantucket also will be reviewed for information pertinent to the study area. Research will be conducted at the NHS and coordinated with NHS staff.

Fieldwork:

The principal investigator will conduct a surface examination (walkover/drive over) of Nantucket to examine the current physical condition of recorded archaeological sites and historically documented/mapped resources on the island. Information collected during the fieldwork will be used to assist in the development of the site sensitivity model for pre-contact and historic site potential within each refuge. Digital photographs of representative environmental zones and site locations will be taken. GIS-based sensitivity maps will be produced and include I the final report.

4.1.4 Standards

The Project will comply with the following standards:

- The Secretary of the Interior's Standards for the Treatment of Historic Properties (1983).
- The Secretary of the Interior's Standards and Guidelines: Archeology and Historic Preservation (1983).

4.1.5 Documentation / Deliverables

The following draft and final documents will be provided for review and comment by the Participating Parties:

- Historic survey reports for selected neighborhood areas of the island of Nantucket.
- Appropriate MHC Forms (A, B, C, F, H) for all inventoried properties in the selected neighborhoods.
- Archaeological Overview and Assessment report of the southwest and south neighborhoods of Nantucket as depicted on Figure 2.3-1.
- MHC archaeological site forms for newly identified sites.
- Updates, where warranted, to existing MHC forms.

- Publication(s) suitable for public distribution by Mayflower Wind

4.1.6 Reporting

Following Project approval, Mayflower Wind shall prepare a summary report detailing the mitigation measures undertaken pursuant to the HPTP. The report will be provided to the Town of Nantucket and all other Participating Parties. The report will be prepared, reviewed, and distributed by January 31 of each calendar year until the HPTP is complete. The report will summarize the work undertaken during the previous year.

4.1.7 Funds and Accounting

Mayflower Wind will be responsible for funding and implementation of these mitigation measures.

5.0 IMPLEMENTATION

5.1 Timeline

The mitigation measures identified within this HPTP may be implemented prior to the commencement of, during, or after construction for the Undertaking.

5.2 Organizational Responsibilities

5.2.1 Bureau of Ocean Energy Management

- Will be the lead federal agency
- Make all federal decisions and determine compliance with Section 106.
- Consult with Mayflower Wind, MASHPO, relevant federally recognized tribes, and other Participating Parties with demonstrated interest in the affected historic properties.
- Review and approve all deliverables prepared and distributed to the Participating Parties.

5.2.2 Mayflower Wind

- Fund and implement the mitigation measures described in Section 4.0 of this HPTP.
- Prepare a summary report, submit report to BOEM for review and approval, and distribute to Participating Parties per Section 4.1.6.
- Submit information for Participating Parties review per Sections 4.1.2, 4.1.3, and 5.1.
- Creation and distribution of RFP to solicit consultant support for mitigation measure fulfillment.
- Selection of a consultant who meets the Secretary of the Interior's Professional Qualifications Standards for History, Architectural History and Archeology (36 CFR Part 61).Initial review of documentation for compliance with the Scope of Work, Methodology and Standards.
- Distribution of documentation to Participating Parties for their review.
- Review and comment on deliverables.

5.2.3 Massachusetts State Historic Preservation Office

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

5.2.4 Advisory Council on Historic Preservation

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

6.0 FINALIZATION

The HPTP will be finalized with the execution of the MOA. Mitigation measures within this HPTP will be completed within five years of execution of the MOA, unless a different timeline is agreed upon by Participating Parties and accepted by BOEM. Mitigation measures may be completed simultaneously, as applicable.

7.0 REFERENCES

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ATTACHMENT 11 – HISTORIC PROPERTIES TREATMENT PLAN FOR NANTUCKET SOUND TRADITIONAL CULTURAL PROPERTY

MAYFLOWER WIND

Appendix S.4. Draft Historic Properties Treatment Plan for Nantucket Sound Traditional Cultural Property

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Historic Properties Treatment Plan

for the

Mayflower Wind Project

Historic Properties Subject to Adverse Effects

Nantucket Sound, Massachusetts

Submitted to:

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

Prepared for:

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January 2023

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LIST OF ACRONYMS

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
APVI	Area of Potential Visual Impact
BOEM	Bureau of Ocean Energy Management
CFR	Code of Federal Regulations
COP	Construction and Operations Plan
FR	Federal Regulation
HRVEA	Historic Resources Visual Effects Assessment
HDD	Horizontal Directional Drilling
HPTP	Historic Preservation Treatment Plan
HVDC	High Voltage Direct Current
MA	Massachusetts
MARA	Marine Archaeological Resource Assessment
MASHPO	Massachusetts State Historic Preservation Office(r)
MGL	Massachusetts General Laws
MHC	Massachusetts Historic Commission
MOA	Memorandum of Agreement
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NEPA	National Environmental Policy Act
OCS	Outer Continental Shelf
PAPE	Preliminary Area of Potential Effects
PSO	Protected Species Observer
RFP	Request for Proposal
ROD	Record of Decision
SOI	Secretary of the Interior
TARA	Terrestrial Archaeological Resource Assessment
TCP	Traditional Cultural Property

1.0 EXECUTIVE SUMMARY

This Historic Property Treatment Plan (HPTP) provides background data, historic property information, and detailed steps that will be implemented to resolve the potential adverse visual effects to the Nantucket Sound Traditional Cultural Property (TCP) in the state waters of Massachusetts (MA) and the federal waters of the United States resulting from the construction and operation of the Mayflower Wind Project (the Undertaking or Project) to satisfy requirements of Section 106 and Section 110(f) of the National Historic Preservation Act (NHPA) of 1966 (54 USC 300101; United States Code, 2016). This HPTP outlines the implementation steps and timeline for these mitigation actions.

Section 1.0, Executive Summary, outlines the content of this HPTP.

Section 2.0, Background Information, briefly summarizes the Undertaking while focusing on cultural resources regulatory contexts (federal, state, and local), identifies the single historic property discussed in this HPTP that may be adversely affected by the Undertaking, and summarizes the pertinent report that guided the development of this document (COP Appendix S, Analysis of Visual Effects to Historic Properties, prepared by AECOM).

Section 3.0, Existing Conditions and Historic Significance, provides a physical description of the Nantucket Sound TCP (the historic property). Set within its historic context, the applicable National Register of Historic Places (NRHP) criteria for the Nantucket Sound TCP are discussed with a focus on its overall significance and integrity.

Section 4.0, Mitigation Measures, presents specific steps to carry out mitigation to minimize adverse Project impacts. The mitigation measures include the proposed treatment, purpose and intended outcomes, scope of work, methodology, standards, reporting requirements, and accounting.

Section 5.0, Implementation, establishes the process for executing mitigation measures for the Nantucket Sound TCP as identified in Section 4.0 of this HPTP.

Section 6.0, Finalization, establishes when the mitigation will be finalized, unless a different timeline is agreed upon by the Section 106 Consulting Parties and accepted by BOEM.

Section 7.0, References, is a list of works referenced and/or cited in preparing this HPTP.

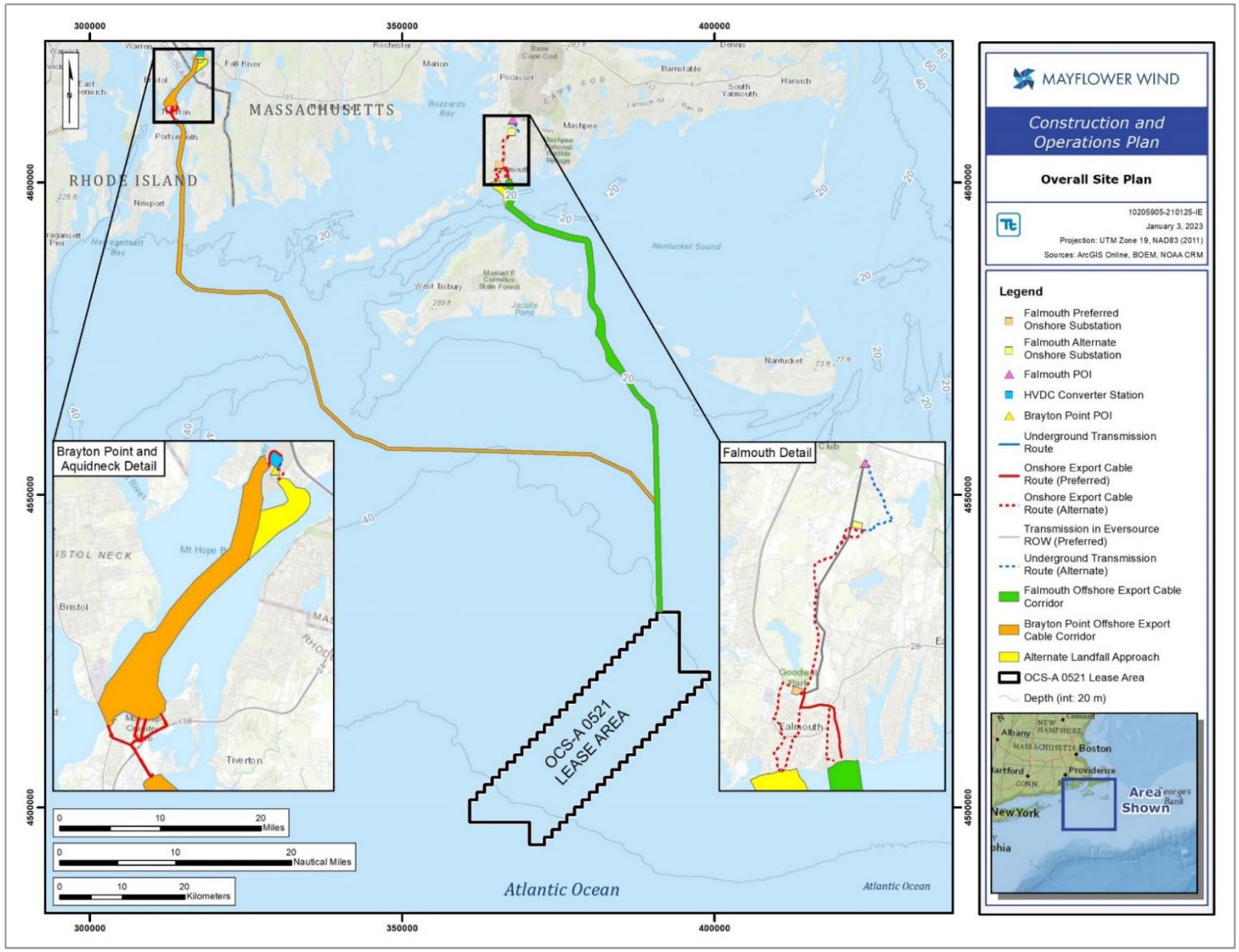
2.0 BACKGROUND INFORMATION

2.1 Project Overview

Mayflower Wind Energy LLC (Mayflower Wind), a joint venture of Shell New Energies US LLC (Shell New Energies) and OW North America LLC (Ocean Winds), proposes to construct and operate the Mayflower Wind Project (Project). The Project includes construction of the Mayflower Wind turbine array, inter-array cables, and offshore substation platforms in federal waters on the Atlantic Outer Continental Shelf (OCS) within the Bureau of Ocean Energy Management (BOEM) Renewable Energy Lease Area OCS-A 0521 (Lease Area) approximately 20 nautical miles (37 kilometers) south of Nantucket Island; export cables that traverse federal and state waters with landfalls in Falmouth and Somerset, Massachusetts; and onshore High Voltage Direct Current (HVDC) converter stations at Brayton Point in Somerset and another in Falmouth, Massachusetts, points of interconnection, and onshore, underground transmission delivery systems (see Figure 2.1-1). As a part of the onshore components for the Brayton Point export cable corridor, Mayflower Wind is considering several cable duct bank route segment options and horizontal directional drilling (HDD) site options in Portsmouth, Rhode Island.

This Historic Property Treatment Plan (HPTP) addresses the potential for adverse effects to the Nantucket Sound TCP located in state (MA) and federal waters.

Figure 2.1-1. Mayflower Wind Project Overview



2.2 Section 106 of the National Historic Preservation Act

The Project, requiring approval from BOEM, is considered a federal undertaking and as such, must comply with Sections 106 and 110 of the National Historic Preservation Act of 1966 (NHPA), as amended, and the National Environmental Policy Act of 1970 (NEPA). This report addresses potential adverse impacts to a historic property in compliance with Section 106 and Section 110 of the NHPA.

Section 106 of the NHPA requires federal agencies to identify and assess the effects of undertakings on historic resources and to resolve adverse effects by developing and evaluating alternatives that could avoid, minimize, or mitigate these impacts. Section 110 of the NHPA requires federal agencies to establish a historic preservation program for the identification, evaluation, and protection of historic properties under their control or ownership within an Area of Potential Effect (APE). An APE, as defined by 36 CFR § 800.16(d), is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist".

Regulations under Section 106 (36 Code of Federal Regulations [CFR] 800.8(c)) allow the substitution of the NEPA reviews for the Section 106 process. Under this subsection, an agency can use the NEPA process and the documents it produces to comply with Section 106 in lieu of the procedures set forth in 36 CFR 800.3-800.6. In 2020, BOEM announced its intention to implement the NEPA substitution process for Section 106 review for renewable energy Construction and Operations Plans (COPs). Per the available guidance (Advisory Council on Historic Preservation [ACHP] and Council on Environmental Quality, 2013), the NEPA substitution process provides an opportunity for an agency to streamline its overall environmental and historic preservation review process. A Project Notification Form containing a preliminary Project description, general schedule, and recommended cultural resources studies was submitted to the Massachusetts State Historic Preservation Office (MASHPO, Office of the Massachusetts Historical Commission [MHC]) on February 14, 2020. MASHPO issued a response to the submittal on March 9, 2020. Consultation with MASHPO, the Town of Nantucket, and other Participating Parties is ongoing. Consultation under Sections 106 and 110 of the NHPA was initiated with the issuance of a Notice of Intent (NOI) by BOEM on November 1, 2021.

2.3 Resolution of Adverse Effects Measures

To support BOEM's efforts to identify historic properties within the Project's Preliminary Area of Potential Effects (PAPE), Mayflower Wind conducted an Analysis of Visual Effects to Historic Properties (AVEHP) assessment, terrestrial archaeological resources assessment (TARA), and a marine archaeological resources assessment (MARA). The results of these investigations can be found in the Mayflower Wind COP, Volume II, Section 7, Appendix S, Appendix S.1, Appendix R, and Appendix Q. Based on a review of these documents and consultation with Participating Parties, BOEM may issue a Finding of Adverse Effect from the proposed Project on the Nantucket Sound TCP in state and federal waters off of. Nantucket, MA.

Pursuant to 36 CFR § 800.6 (a), Mayflower Wind will be required to mitigate the adverse effect in accordance with requirements laid out by BOEM in a forthcoming Record of Decision (ROD). BOEM will be executing a Memorandum of Agreement (MOA) with the MASHPO and other Participating Parties, which will outline the mitigation stipulations. This HPTP will be referenced in an attachment to the MOA.

This HPTP provides background data and steps that may be implemented to carry out any minimization and mitigation measures. Standard minimization measures for visual impacts that have been taken into consideration include the color of the turbine and blades that will allow them to blend in with their setting, as well as implementing Aircraft Detection Lighting System (ADLS) which will reduce impacts in twilight and nighttime hours (see COP Appendix T, Visual Impact Assessment, and Appendix Y3, Aircraft Detection Lighting System Efficacy Analysis). Alternative mitigation measures implemented under this HPTP will be conducted in consultation with the Participating Parties, as appropriate, and in accordance 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.

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 the mitigation measure implementation processes described herein. Participating Parties with an interest in the potential adversely affected historic properties as summarized in Table 2.3-1.

Table 2.3-1. Participating Parties Potentially involved with the Nantucket Sound TCP, National Historic Landmark Historic Property

Name	Relationship to Historic Property	Address
Advisory Council on Historic Preservation	Federal Agency	Federal Property Management Section, 401 F St NW, Suite 308, Washington DC 20001
Massachusetts State Historic Preservation Office/ Massachusetts Historical Commission	State Historic Preservation Office / State Historical Commission	220 Morrissey Boulevard, Boston, MA 02125
Massachusetts Board of Underwater Archaeological Resources	State Agency	100 Cambridge Street Suite 900 Boston, MA 02114
Town of Nantucket/Nantucket Historical Commission	Local Government / Local Historical Commission	59 Town Hall Square, Town Hall, Nantucket, MA 02540
Wampanoag Tribe of Gay Head (Aquinnah)	Traditional Homeland	20 Black Brook Road Aquinnah, MA 02535-1546
Mashpee Wampanoag Tribe	Traditional Homeland	483 Great Neck Road South Mashpee, MA 02649

3.0 HISTORIC SIGNIFICANCE OF THE HISTORIC PROPERTY

3.1 Historic Property

This HPTP involves one historic property, Nantucket Sound, Massachusetts. The Nantucket Sound TCP was determined eligible for listing in the NRHP under Criteria A, B, D, and D (36 CFR Part 60 and pursuant to 36 CFR Part 63) on January 4, 2010 by the Keeper of the NRHP. Nantucket Sound is eligible for listing as both a traditional cultural property and as a historic and archaeological property. [redacted]

National Register Criteria are defined as follows:

A. Associated with events that have made a significant contribution to the broad patterns of history.
B. Associated with the lives of persons significant in our past.
C. Embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.
D. That have yielded or may be likely to yield information important in prehistory or history.

The following section on historic context and significance are excerpted from the 2010 National Park Service (NPS) National Register of Historic Places Determination of Eligibility.

3.2 Historic Context and Significance

Nantucket Sound is part of a large culturally significant landscape that is treasured by the Wampanoag tribes and is part of their history and traditional cultural practices and beliefs. The tribes have maintained a continuous relationship with Nantucket Sound [redacted] The Tribes identify the Sound as a direct link to their ancestral origins, and [redacted] The narratives around them have been part of oral tradition for generations. The cultural identity of the Wampanoag Tribes cannot be separated from the natural environment of the Sound, Cape Cod, and the

Islands. [redacted]

The resilience of the Wampanoag people and their oral traditions continue today as they also have a relationship to the Sound for economic purposes, including shell fishing, fishing, recreation, and tourism.

The period of significance of the Sound extends from thousands of years ago through the current day. The specific items under each criteria of eligibility are listed below.

3.3 National Register of Historic Places Criteria

Nantucket Sound is eligible at the National level to the NRHP under Criteria A, B, C, and D, as follows:.

[redacted]

3.4 Physical Description

The US Department of Commerce, Coast and Geodetic Survey has defined the geographical boundaries of Nantucket Sound as follows: [redacted]

[redacted]

4.0 MITIGATION MEASURES

This section details the proposed mitigation measures to resolve potentially adverse effects to the Nantucket Sound TCP and describes the purpose and intended outcome, scope of work, methodology, standards, deliverables, and funds and accounting for the measure. The content of this section was developed on behalf of Mayflower Wind by individuals who meet the Secretary of the Interior (SOI) Qualifications Standards for Archaeology, 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 potential adverse effect.

4.1 Mitigation Measure – Nantucket Sound TCP

Mayflower Wind is prepared to continue with and expand upon the Protected Species Observer (PSO) training program for tribal members. Mayflower Wind and its consultant, RPS, are working together to sponsor and provide local Native American communities with cost-free training and all certifications required to work as a PSO. The Native American Wampanoag communities will have the opportunity to be trained and certified to monitor for the presence of protected species in the Sound. Once graduated from the program, they will be able to implement mitigation measures to ensure animal species, including endangered marine mammal and other protected species, are not impacted by marine activities, such as site characterization surveys and construction activities, of the Mayflower Wind Project.

4.1.1 Purpose and Intended Outcome

The purpose of the mitigation will be to offset effects that may affect Nantucket Sound during the Mayflower Wind Project development and construction activities. This mitigation measure will be invaluable for the protection of marine species in the Sound, not just during Project construction activities, but year-round for other industrial and recreational activities that may take place in the Sound. Mayflower Wind also recognizes the traditional ecological knowledge that local Tribal members hold and the value that this insight can bring to the Project and offshore wind industry generally.

The proposed mitigation will provide a benefit to the public and Native American tribes through monitoring and promotion of the health of the ecosystem of Nantucket Sound as well as integrate tribal knowledge to protect the TCP. Additionally, a benefit to the Native American community will be increased opportunities for employment during the Project development, construction, operation, decommissioning, and for other

industries travelling through and operating in the waters of the Sound. Once Tribal members have been trained under the Mayflower Wind PSO Training Program, they will be able to use their BOEM and NMFS-approved certifications and new skills to be employed as PSOs on Mayflower Wind vessels as well as other offshore wind projects and other offshore industries as well.

4.1.2 Scope of Work

Mayflower Wind will work with the RPS Group, an international, scientific technical consulting firm to set up PSO Certification Training, Offshore Wind Training, and Health Safety and Environment Training for the Wampanoag communities. Mayflower Wind is committed to actively recruiting from those communities to provide this certification as well as support post-certification employment applications with both Mayflower Wind and RPS Group. Mayflower Wind and RPS plan to hold at least one local training session annually.

4.1.3 Methodology

RPS will coordinate the delivery of all training modules and required physical examination to the enrolled trainees. An RPS mentor will be provided to each trainee for the full course of the program. Following successful completion of the PSO training program RPS will deploy the PSOs on an offshore program for surveys, construction activities, etc.

4.1.4 Standards

The PSO program will meet the international standards approved by BOEM and the National Marine Fisheries Service.

4.1.5 Reporting

Following Project approval, Mayflower Wind shall prepare a summary report detailing the mitigation measure undertaken pursuant to the HPTP. The report will be provided to the Participating Parties and detail the outreach measures taken to engage tribal members in the PSO certification program and how many individuals have successfully completed the program. The report will be prepared, reviewed, and distributed by January 31 of each calendar year until the wind farm is constructed. The report will summarize the work undertaken during the previous year.

4.1.6 Funds and Accounting

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

5.0 IMPLEMENTATION

5.1 Timeline

The mitigation measure identified within this HPTP will be implemented prior to the commencement of construction for the Undertaking. It will likely continue throughout the construction period of the Undertaking, and into the lifetime of the operational Mayflower Wind Project

As of late 2022, two graduates from the Mashpee Wampanoag Tribe and Pocasset Wampanoag Tribe have completed the program and have deployed on Mayflower Wind's offshore survey program with RPS. The next training program is scheduled in Fall River, Massachusetts for January 2023.

5.2 Organizational Responsibilities

5.2.1 Bureau of Ocean Energy Management

- Will be the lead federal agency
- Make all federal decisions and determine compliance with Section 106.
- Ensure that the mitigation measure adequately resolves adverse effects, consistent with the NHPA, and in consultation with the Participating Parties.
- Consult with Mayflower Wind, MASHPO, relevant federally recognized tribes, and other Participating Parties with demonstrated interest in the affected historic property.

5.2.2 Mayflower Wind

- Fund and implement the mitigation measures described in Section 4.0 of this HPTP.
- Prepare a summary report, submit report to BOEM for review and approval, and distribute to Participating Parties per Section 4.1.5.
- Submit information for Participating Parties review per Sections 4.1.2, 4.1.3, and 5.1.
- Work with RPS Group, the PSO training vendor, to ensure mitigation measure fulfillment.
- Coordinate with Tribal Historic Preservation Officers (THPOs) to notify the Tribes of the training program
- Review and comment on deliverables.

5.2.3 Massachusetts State Historic Preservation Office

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

5.2.4 Advisory Council on Historic Preservation

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

6.0 FINALIZATION

The HPTP will be finalized with the execution of the MOA. Mitigation measures within this HPTP will be completed within five years of execution of the MOA, unless a different timeline is agreed upon by Participating Parties and accepted by BOEM. Mitigation measures may be completed simultaneously, as applicable.

7.0 REFERENCES

Works Cited

Advisory Council on Historic Preservation and Council on Environmental Quality. 2013. *NEPA and NHPA: A Handbook for Integrating NEPA and Section 106*. March 2013.

AECOM, Tetra Tech, Inc., and DNV Energy USA, Inc. 2021. *Construction and Operations Plan, Mayflower Wind Energy*. Mayflower Wind Energy, LLC, Boston, MA.

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National Park Service 2010 *Determination of Eligibility Notification Nantucket Sound, Massachusetts*. U.S. Department of the Interior, Washington, D.C.

National Park Service 2022 *National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties*. Draft Update. U.S. Department of the Interior, Washington, D.C.

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

Code of Federal Regulations (CFR). 2022b. 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. Accessed September 12, 2022.

CFR. 2022d. 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). Accessed September 12, 2022.

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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. Accessed September 12, 2022.

ATTACHMENT 12 – HISTORIC PROPERTIES TREATMENT PLAN FOR OAK GROVE CEMETERY

MAYFLOWER WIND

Appendix S.2. Historic Properties Treatment Plan for Oak Grove Cemetery

Document Revision:	C
Issue Date:	January 2023
Security Classification:	Confidential
Disclosure:	For use by BOEM and Authorized Third Parties Approved for public distribution with redactions, as applicable.

Historic Properties Treatment Plan

for the

Mayflower Wind Project

Historic Properties Subject to Adverse Visual Effect

Falmouth, Massachusetts

Submitted to:

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

Prepared for:

Mayflower Wind Energy LLC
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APE	Area of Potential Effects
APVI	Area of Potential Visual Impact
ASLA	American Society of Landscape Architects
BOEM	Bureau of Ocean Energy Management
CFR	Code of Federal Regulations
COP	Construction and Operations Plan
FR	Federal Regulation
HRVEA	Historic Resources Visual Effects Assessment
HDD	Horizontal Directional Drilling
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HVDC	High Voltage Direct Current
MA	Massachusetts
MARA	Marine Archaeological Resource Assessment
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MOA	Memorandum of Agreement
NHPA	National Historic Preservation Act
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NEPA	National Environmental Policy Act
OCS	Outer Continental Shelf
PAPE	Preliminary Area of Potential Effects
RFP	Request for Proposal
ROD	Record of Decision
SOI	Secretary of the Interior
TARA	Terrestrial Archaeological Resource Assessment

1.0 EXECUTIVE SUMMARY

This Historic Property Treatment Plan (HPTP) provides background data, historic property information, and detailed steps that will be implemented to resolve the adverse visual effects to the Oak Grove Cemetery in Falmouth, Massachusetts (MA) resulting from the construction and operation of the Mayflower Wind Project (the Undertaking or Project) to satisfy requirements of Section 106 and Section 110(f) of the National Historic Preservation Act (NHPA) of 1966 (54 USC 300101; United States Code, 2016). This HPTP outlines the implementation steps and timeline for these mitigation actions.

Section 1.0, Executive Summary, outlines the content of this HPTP.

Section 2.0, Background Information, briefly summarizes the Undertaking while focusing on cultural resources regulatory contexts (federal, state, and local), identifies the single historic property discussed in this HPTP that will be adversely affected by the Undertaking, and summarizes the pertinent report that guided the development of this document (prepared by AECOM and Tetra Tech, Inc.).

Section 3.0, Existing Conditions and Historic Significance, provides a physical description of the Oak Grove Cemetery (the historic property). Set within its historic context, the applicable National Register of Historic Places (NRHP) criteria for the Oak Grove Cemetery are discussed with a focus on the contribution of its setting to its overall significance and integrity.

Section 4.0, Mitigation Measures, presents specific steps to carry out mitigation to minimize adverse project impacts. The mitigation measures include the proposed treatment, purpose and intended outcomes, scope of work, methodology, standards, reporting requirements, and accounting.

Section 5.0, Implementation, establishes the process for executing mitigation measures at the Oak Grove Cemetery as identified in Section 4.0 of this HPTP. For the measures, a timeline is provided, and organizational responsibilities are outlined.

Section 6.0, Finalization, establishes when the mitigation will be finalized, unless a different timeline is agreed upon by the Section 106 Consulting Parties and accepted by BOEM.

Section 7.0, References, is a list of works referenced and/or cited in preparing this HPTP.

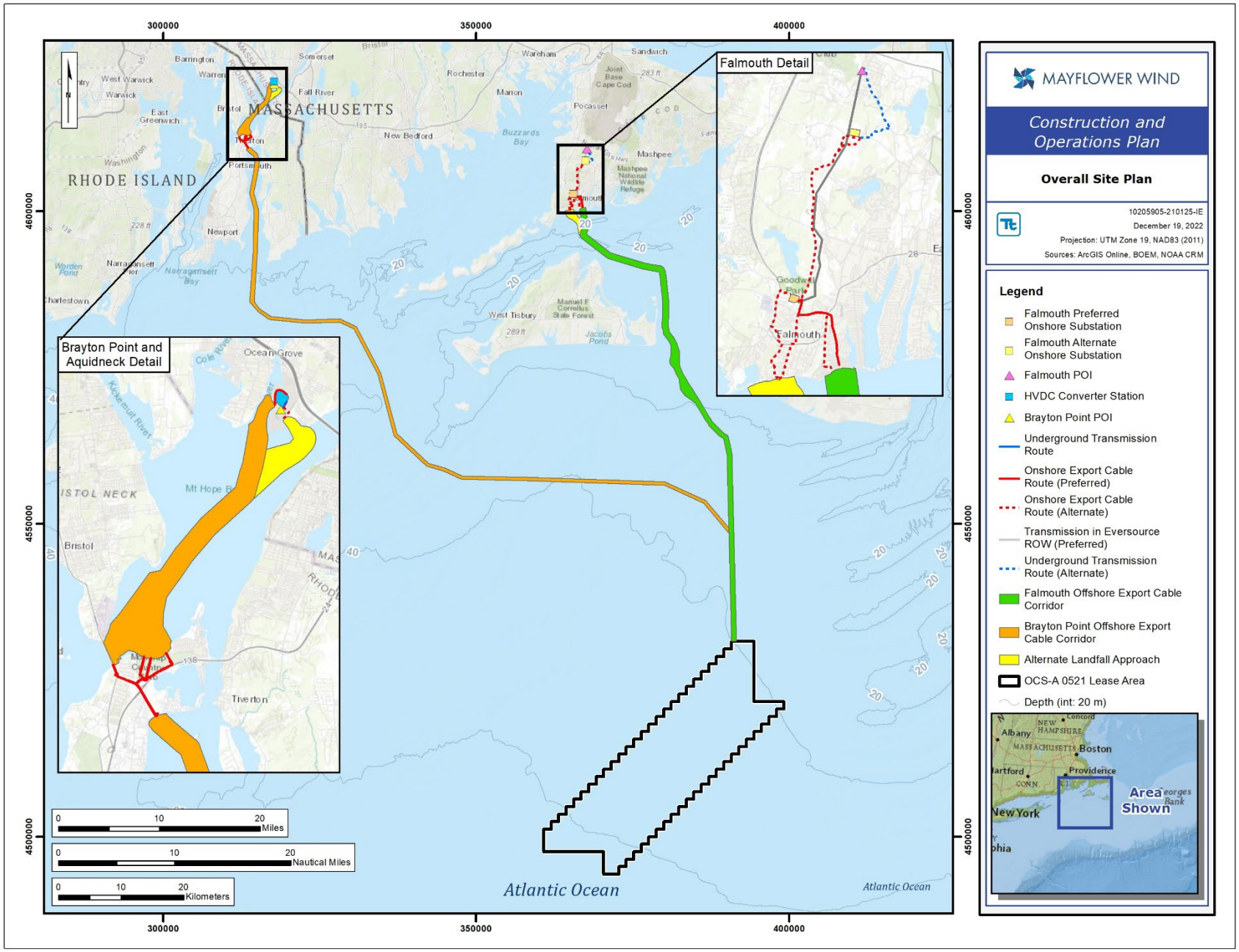
2.0 BACKGROUND INFORMATION

2.1 Project Overview

Mayflower Wind Energy LLC (Mayflower Wind), a joint venture of Shell New Energies US LLC (Shell New Energies) and OW North America LLC (Ocean Winds), proposes to construct and operate the Mayflower Offshore Wind Project (Project). The Project includes construction of the Mayflower Wind turbine array in federal waters on the Atlantic Outer Continental Shelf (OCS) within the Bureau of Ocean Energy Management (BOEM) Renewable Energy Lease Area OCS-A 0521 (Lease Area) approximately 20 miles (32 kilometers) south of Nantucket Island; inter-array cables, offshore substation platforms, and export cables that traverse federal and state waters with landfalls at Falmouth and Somerset, Massachusetts; and onshore High Voltage Direct Current (HVDC) converter stations at Brayton Point in Somerset and in Falmouth, Massachusetts, points of interconnection, and onshore, underground transmission delivery systems (see Figure 2.1-1). As a part of the onshore component of the Project, Mayflower Wind is considering several cable duct bank route segment options and horizontal directional drilling (HDD) sites in Portsmouth, Newport County, Rhode Island.

In Falmouth, Massachusetts, there are two HVDC onshore converter station locations under consideration, referred to as the Lawrence Lynch and the Cape Cod Aggregates sites. This Historic Properties Treatment Plan (HPTP) addresses the potential for adverse effects to the Oak Grove Cemetery, located near the Lawrence Lynch site in Falmouth. If the Cape Cod Aggregates site is selected for construction of the substation, the substation would not be constructed at the Lawrence Lynch site. As a result, the Oak Grove Cemetery would not be adversely affected, and this HPTP would not be implemented.

Figure 2.1-1. Project Location



2.2 Section 106 of the National Historic Preservation Act

As a project that requires approval from BOEM, the Project is considered a federal undertaking and as such, must comply with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), as amended, and the National Environmental Policy Act of 1970 (NEPA). This report addresses adverse visual impacts to historic properties in compliance with Section 106 and Section 110 of the NHPA.

Section 106 of the NHPA requires federal agencies to identify and assess the effects of undertakings on historic resources and to resolve adverse effects by developing and evaluating alternatives that could avoid, minimize, or mitigate these impacts. Section 110 of the NHPA requires federal agencies to establish a historic preservation program for the identification, evaluation, and protection of historic properties under their control or ownership.

Regulations under Section 106 (36 Code of Federal Regulations [CFR] 800.8(c)) allow the substitution of the NEPA reviews for the Section 106 process. Under this subsection, an agency can use the NEPA process and the documents it produces to comply with Section 106 in lieu of the procedures set forth in 36 CFR 800.3-800.6. In 2020, BOEM announced its intention to implement the NEPA substitution process for Section 106 review for renewable energy Construction and Operations Plans (COPs). Per the available guidance (Advisory Council on Historic Preservation [ACHP] and Council on Environmental Quality, 2013), the NEPA substitution process provides an opportunity for an agency to streamline its overall environmental and historic preservation review process. A Project Notification Form containing a preliminary Project description, general schedule, and recommended cultural resources studies was submitted to the Massachusetts State Historic Preservation Office (MASHPO, Office of the Massachusetts Historical Commission [MHC]) on February 14, 2020. MASHPO issued a response to the submittal on March 9, 2020. Consultation with MASHPO and other Participating Parties is ongoing. Section 106 and Section 110 of the NHPA was initiated with the issuance of a Notice of Intent (NOI) by BOEM on November 1, 2021.

2.2.1 Municipal Regulations

Pursuant to Section 106 requirements, any on-site mitigation measures will be coordinated with local municipalities and commissions to obtain approvals, as appropriate. These may include, but are not limited to building permits, zoning, land use, planning, historical commissions, and design review boards. See Table 2.2-1 for local government administrative departments that will be contacted as part of mitigation planning at the Oak Grove Cemetery. Additional information regarding compliance with local requirements appears below in Section 5.2 – Organizational Responsibilities.

Table 2.2.1–1. Municipal Departments Requiring On-Site Mitigation Coordination

Name	Municipality	Departments
Oak Grove Cemetery	Town of Falmouth	Planning Department Oak Grove Cemetery of Falmouth, Inc. Falmouth Historical Commission

2.3 Resolution of Adverse Effects Measures

To support BOEM's efforts to identify historic properties within the Project Preliminary Area of Potential Effects (PAPE), Mayflower Wind conducted an Analysis of Visual Effects to Historic Properties (AVEHP) assessment, terrestrial archaeological resources assessment (TARA), and a marine archaeological resources assessment (MARA).). The results of these investigations can be found in the Mayflower Wind COP, Volume II, Section 7, Appendix S, Appendix S.1, and Appendix R. Based on a review of these documents and consultation with Participating Parties, BOEM is expected to issue a Finding of Adverse Effect for the proposed Project on, the Oak Grove Cemetery in Falmouth, MA. The Lawrence Lynch site Area of Potential Visual Impact (APVI)/Viewshed, Preliminary Area of Potential Effects (PAPE), Lawrence Lynch site, and Oak Grove Cemetery are depicted on Figures 2.3-1 and 2.3-2.

Pursuant to 36 CFR § 800.6 (a), Mayflower Wind will be required to mitigate the adverse effect in accordance with requirements laid out by BOEM in a forthcoming Record of Decision (ROD). BOEM will be executing a Memorandum of Agreement (MOA) with the MASHPO and other Participating Parties, which will outline the mitigation stipulations. This HPTP will be referenced in and attached to the MOA.

This HPTP provides background data, historic property information, and detailed steps that will be implemented to carry out the mitigation measures. Mitigation measures implemented under this HPTP will be conducted in consultation with Participating Parties 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.

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 the mitigation measure implementation processes described herein. Participating Parties with a demonstrated interest in the adversely affected historic properties are summarized in Table 2.3-1.

Figure 2.3-1. Oak Grove Cemetery Location (FAL.BF), Falmouth, Massachusetts

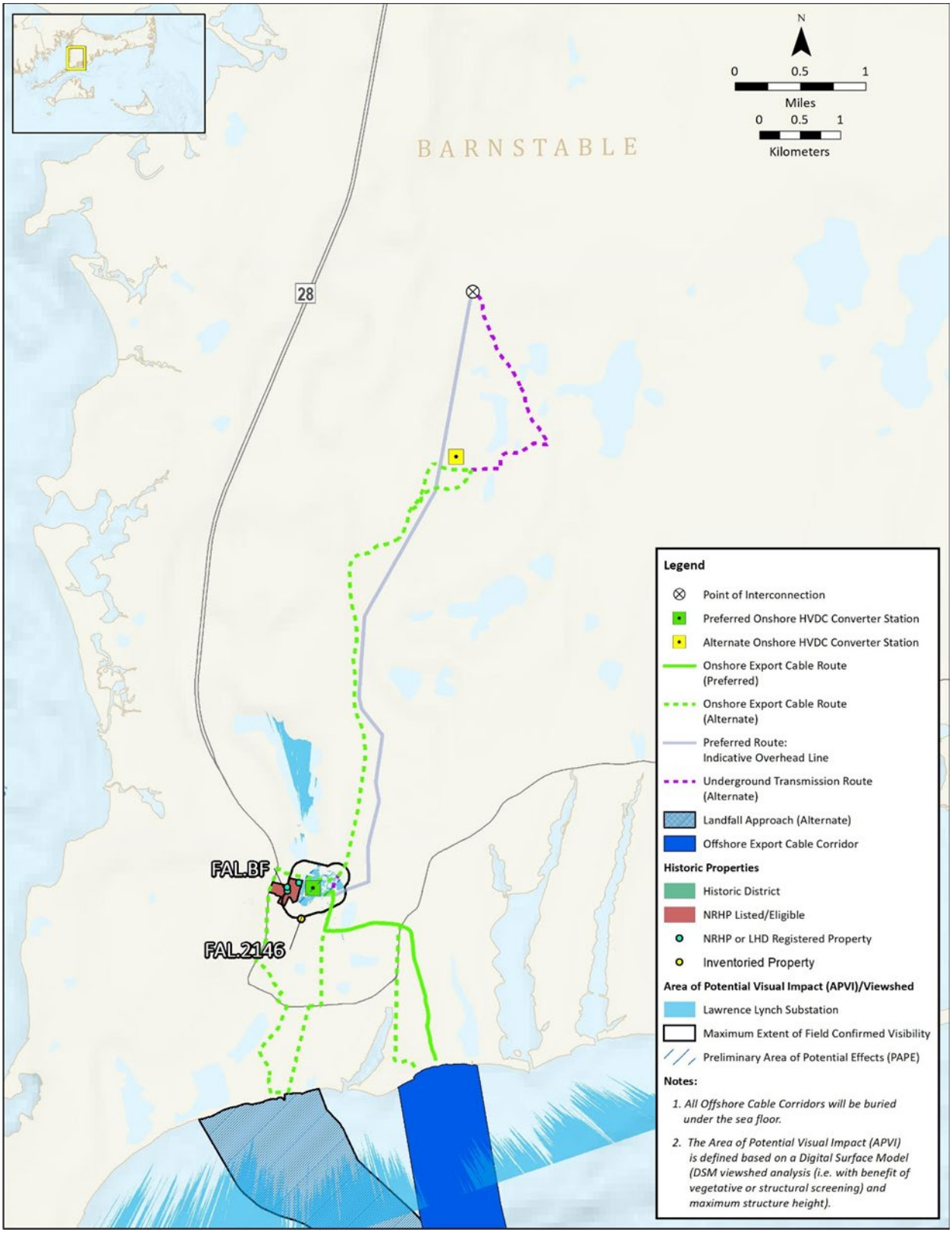


Figure 2.3-2. Lawrence Lynch Site APVI and PAPE, Falmouth, Massachusetts

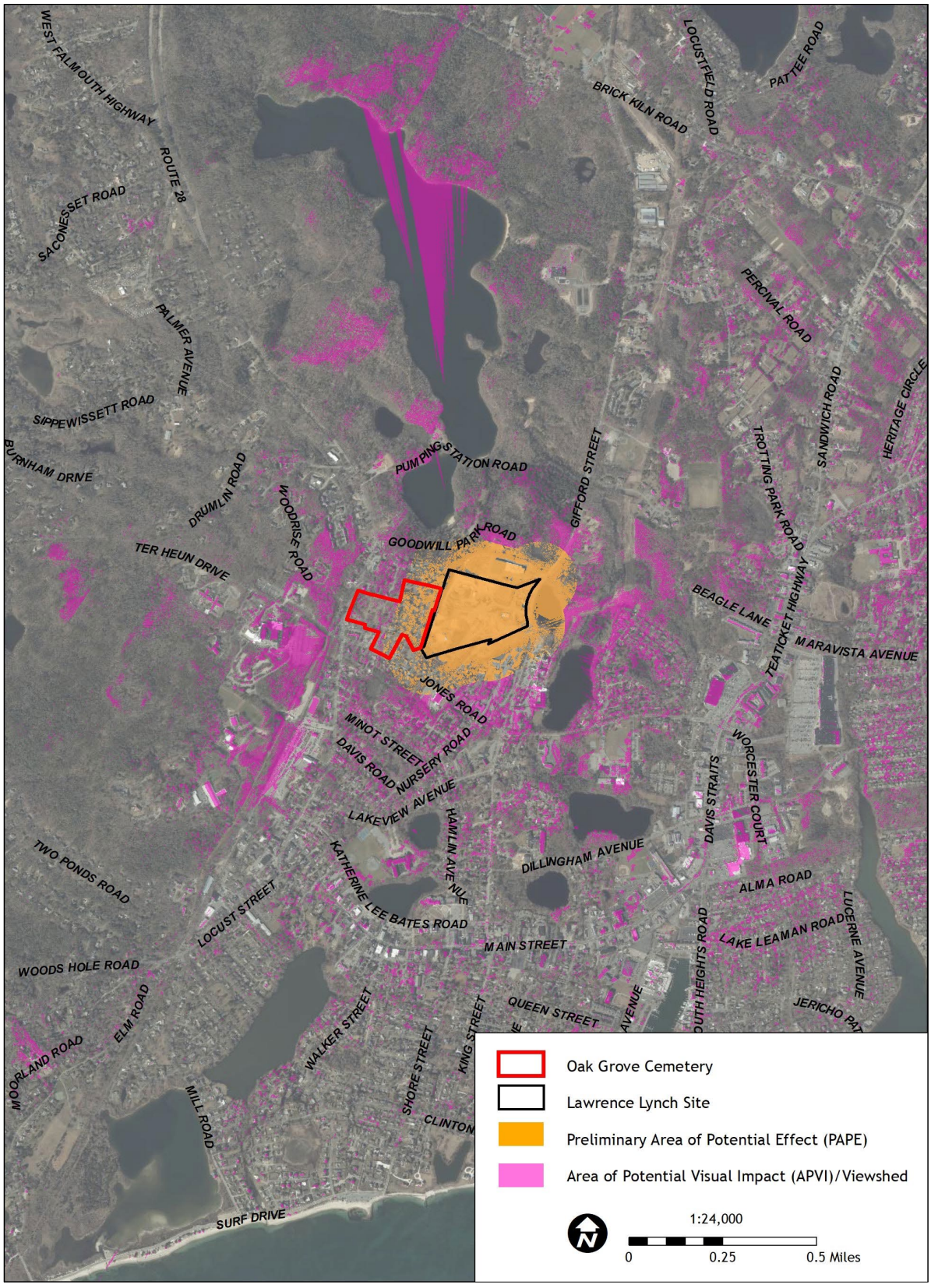


Table 2.3-1. Participating Parties Potentially involved with the Oak Grove Cemetery Historic Property

Name	Relationship to Historic Property	Address
Advisory Council on Historic Preservation	Federal Agency	Federal Property Management Section, 401 F St NW, Suite 308, Washington DC 20001
Massachusetts State Historic Preservation Office/ Massachusetts Historical Commission	State Historic Preservation Office / State Historical Commission	220 Morrissey Boulevard, Boston, MA 02125
Town of Falmouth/Falmouth Historical Commission	Local Government / Local Historical Commission	59 Town Hall Square, Town Hall, Falmouth, MA 02540
Oak Grove Cemetery of Falmouth, Inc.	Property Owner	46 Jones Road, Falmouth, MA 02540

3.0 HISTORIC SIGNIFICANCE AND EXISTING CONDITIONS OF THE HISTORIC PROPERTY

3.1 Historic Property

This HPTP involves one historic property, as identified in Table 3.1-1.

Table 3.1-1. Historic Properties included in the HPTP

Name	Municipality	State	Site No. (Agency)	Ownership
Oak Grove Cemetery	Town of Falmouth	MA	MHC # FAL.BF (MHC); 14000560 (NRHP)	Private

In this section the historic property is described both physically and within its historic context.

3.2 Historic Context and Significance

Oak Grove Cemetery is a 19th-century community cemetery organized by a voluntary association, the Oak Grove Cemetery Association. While there is no direct evidence, it appears the founding of Oak Grove Cemetery was associated with a desire on the part of prominent Falmouth citizens to have a cemetery that would provide space for burial practices fashionable at the time, including the ability to establish large family plots with marble and granite monuments. This claim may be supported by the fact that more than 195 markers were transferred from other cemeteries to family plots in Oak Grove, the majority having been relocated from the Old Town Burying Ground in Falmouth Village (Day and Friedberg 2014).

The idea for a new community cemetery was first publicly presented in 1849. It was voted to appoint a committee of five members to find a suitable piece of land, and the committee was instructed to procure subscribers for burial lots. The committee consisted of Erasmus Gould, William Nye, Jr., Thomas L. Swift (d. 1860), Silas Jones (1814-1896), and Rufus Swift. At a subsequent meeting in January 1850, it was reported that a wood lot had been located. The property (Section A) contained approximately five acres and was officially purchased in February 1850 using funds provided by Elijah and Oliver C. Swift (1797-1874) (Day and Friedberg 2014).

In addition to the money used to purchase the land, funds were also allocated for gateposts and the building of a "Public Tomb" – a receiving tomb for temporary interments, which was a common practice, especially

during the winter months. This tomb was located in the "valley" above the entrance, and the tomb was constructed of locally quarried pink granite. A storage shed for carriages was also constructed next to this tomb. The tomb was removed in the 1960s, and some of the stones were sent to be incorporated into the John F. Kennedy Memorial in Washington, D.C. The shed has also been demolished, and this area now consists of lawn and ground cover (Day and Friedberg 2014).

In 1851, the constitution of the cemetery was adopted, and the first trustees and officers of the association elected. These included Oliver C. Swift, Aaron Cornish (1794-1864), Stephen C. Dillingham, Samuel P. Bourne, Erasmus Gould, William Nye. Jr., and T. S. Swift. All of these individuals were prominent Falmouth businessmen involved in many of Falmouth's enterprises and all, with the exception of William Nye, Jr. and Stephen Dillingham, are buried in family plots at Oak Grove Cemetery (Day and Friedberg 2014).

By 1886, the original five acres sold out and the Trustees appointed a committee, consisting of George E. Clarke (1822-1898), Silas Jones, and Solomon D. Robinson (1828-1913), to purchase additional land. Each of these men were prominent Falmouth citizens and are all buried in family plots at Oak Grove. Solomon Robinson, a descendant of Rev. Isaac Robinson, one of Falmouth's first settlers in 1660, was the superintendent of Oak Grove Cemetery at that time. Between 1886 and 1892, approximately five more acres were purchased. These additions consisted of what is now the middle sections (Section B and C) of the cemetery that extend south to Jones Road. By this time, according to Samuel Deyo's 1890 History of Falmouth County, Massachusetts, Oak Grove Cemetery had become the fashionable spot for Falmouth burials (Day and Friedberg 2014).

Oak Grove Cemetery remained a private cemetery, but by 1907 the cemetery had developed a relationship with the Town of Falmouth whereby certain sums of money, which had been transferred to the town for the perpetual care of cemetery grounds, were periodically distributed to this and other town cemeteries, a practice that continues to this day. In 1915, the will of Elizabeth G. Parke (1841-1915) bequeathed $4,000 for the erection of a mortuary chapel on the cemetery grounds. Elizabeth Parke was the wife of George W. Parke (d. 1901), who owned the Spring Cove Wharf Company located at the present site of the town dock at West Falmouth Harbor. The Parkes maintained a burial plot in Oak Grove, where Elizabeth Parke is buried, northwest of the chapel site. In 1917, the cemetery association made a purchase of land that became the site for the chapel. Construction of the chapel was delayed until 1935, due to protracted heir lawsuits and insufficient funds (Day and Friedberg 2014).

The Oak Grove Cemetery Association began another series of land purchases to expand the cemetery in 1939, when the central section of the cemetery was extended eastwards to its current east boundary with a purchase of 3.36 acres (Section E). In 1952, the final expansion of the cemetery was made with the purchase of a 3.94-acre parcel, creating the addition to the northeast (Section F). Portions of Sections E and F continue to be laid out and utilized for new burial plots (Day and Friedberg 2014).

In 1988, Oak Grove Cemetery Association officially incorporated as a nonprofit organization in Massachusetts, the Oak Grove Cemetery of Falmouth, Inc. The most recent improvements to the cemetery are the expansion of a concrete-block work shed into a brick-clad, L-shaped garage and office space in 2006, and construction of a low, fieldstone and mortar wall along the Jones Street perimeter in 2010 (Day and Friedberg 2014).

3.3 National Register of Historic Places Criteria and Aspects of Integrity Affected by the Undertaking

The Oak Grove Cemetery was individually listed in the NRHP in 2014 (Day and Friedberg 2014). It is significant at the local level under NRHP Criteria A and C. The cemetery is significant under Criterion A for its strong association with the history of the town of Falmouth. Oak Grove Cemetery became Falmouth's largest 19th-century cemetery and was an important civic undertaking, becoming the most popular site for 19th-century Falmouth families to own burial plots. As a result, a large number of prominent Falmouth citizens from the mid-19th century into the 20th century are buried at Oak Grove including, most notably, Katherine Lee Bates, author of "America the Beautiful." Oak Grove Cemetery is also the site of the only cemetery monument in Falmouth to veterans of the Civil War, which was erected in the late 19th century by the Falmouth chapter of the Grand Army of the Republic. The cemetery is significant under Criterion C as a well-preserved local example of both a 19th-century rural cemetery and a more formal community cemetery. It reflects the evolving design of burial grounds and funerary monuments. Oak Grove Cemetery also includes an excellent example of religious Colonial Revival architecture designed by Falmouth architect Ernest Gunnar Peterson (Day and Friedberg 2014).

3.4 Physical Description and Existing Conditions

Located in the southwest section of Cape Cod just north of Falmouth Village (NRDIS 1996), the Oak Grove Cemetery was originally established in 1850 by a private association, the Oak Grove Cemetery Association, and developed in several phases. The cemetery encompasses 18.9 acres (7.6 hectares) and has 35

contributing resources. The original five acres comprise the westmost rectangular section bordering on Palmer Avenue. The cemetery was expanded in the late 19th century with the purchase of approximately six acres of land, extending it to the east and connecting to Jones Road to the south. The cemetery reached its current size and configuration in the mid-20th century, when eight acres of land to the north and east were purchased. A system of paved, gravel, and grass pathways divide the cemetery into subsections, which have been sold as family plots. The landscape of the space includes manicured lawns and native plantings under an open canopy of deciduous and evergreen trees that are up to 40 ft (12.2 m) tall. The cemetery exhibits a mix of the ideals of the rural/garden cemetery movement and the more geometric configuration of formal 19th-century community cemeteries (Day and Friedberg 2014).

4.0 MITIGATION MEASURES

This section details the proposed mitigation measures to resolve adverse effects to historic properties as described in the Mayflower Wind COP, and describes the purpose and intended outcome, scope of work, methodology, standards, deliverables, and funds and accounting for the measure. The content of this section was developed on behalf of Mayflower Wind by individuals who meet the 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 adverse visual effect. Fulfillment of the mitigation measures will be led by landscape architects with demonstrated experience working in historic preservation, in coordination with 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.

4.1 Mitigation Measure – Oak Grove Cemetery Visual Screening

4.1.1 Purpose and Intended Outcome

The setting of Oak Grove Cemetery is a character-defining feature that qualifies the property for individual listing in the NRHP. Construction of the Lawrence Lynch substation (preferred) would introduce a new visual element that is not compatible with the historic character of the historic property. As such, the Project would result in an adverse effect to the Oak Grove Cemetery. Mitigation measures are proposed to reduce undesirable views within and from the cemetery. These measures include maintaining existing vegetation, supplementing existing vegetation to create a vegetated buffer between the substation and the cemetery, and hardscape and softscape improvements.

4.1.2 Scope of Work

The scope of work will consist of the following:

- Conduct an inventory of existing vegetation on the preferred site, likely the portion of the Oak Grove Cemetery with views of the substation at the Lawrence Lynch site, and within the cemetery where it abuts the substation site. The inventory will identify significant, character-defining elements within the cemetery.

- Identify vegetation on the preferred site to be protected during construction and retained following construction.
- Develop a plan for protection of the entire cemetery boundary adjacent to the preferred site during construction.
- Submit a draft and final landscape inventory and landscape and cemetery protection plan for review and comment by the Participating Parties.
- Upon acceptance of the landscape inventory and landscape and cemetery protection plan, implement protection measures for existing vegetation on the preferred site to be retained during construction.
- Upon acceptance of the landscape inventory and landscape and cemetery protection plan, implement protection measures of the entire cemetery boundary adjacent to the preferred side during construction.
- Develop a draft and final landscape vegetation and screening plan with hardscape and softscape improvements to reduce views of the substation from the cemetery.
- Submit landscape vegetation and screening plan for review and comment by the Participating Parties.
- Upon acceptance of landscape vegetation and screening plan, implement plan.

4.1.3 Methodology

Mayflower Wind will release a Request for Proposals (RFP) for landscape architect and certified arborist consultant services and select these consultants to perform the Scope of Work listed in Section 4.1.2. The chosen consultants should have staff that meet American Society of Landscape Architects (ASLA) professional standards and SOI Professional Qualifications for Architecture, Architectural History, or History and the arborist will have an International Society of Arboriculture (ISA) certification. The consultant team will include a landscape historian to assist in conducting a landscape inventory to identify culturally significant and character-defining elements within the cemetery. The inventory will provide sufficient historical context for the landscape design of the cemetery to provide justification for which cemetery landscape elements are protected in place during construction and for the compatibility of any proposed new landscape elements used for screening. A draft of the documents will be provided to the Participating Parties for review and comment. The final landscape plan will be developed incorporating comments from the Participating Parties, following which it will be implemented.

4.1.4 Standards

The Project will comply with the following standards:

- The Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes (1996) https://irma.nps.gov/DataStore/Reference/Profile/2218736
- National Park Service Landscape Architecture Standards https://www.nps.gov/subjects/culturallandscapes/references.htm

4.1.5 Documentation / Deliverables

The following draft and final documents are to be provided for review and comment by the Participating Parties:

- Landscape Inventory
- Landscape and Cemetery Protection Plan
- Landscape Vegetation and Screening Plan

4.1.6 Reporting

Following Project approval, Mayflower Wind shall prepare a summary report detailing mitigation measures undertaken pursuant to the HPTP. The report will be provided to the Participating Parties. The report will be prepared, reviewed, and distributed by January 31 of each calendar year until the HPTP is complete. The report will summarize the work undertaken during the previous year.

4.1.7 Funds and Accounting

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

5.0 IMPLEMENTATION

5.1 Timeline

This section of the HPTP identifies which mitigation measures identified within this HPTP must be implemented prior to the commencement of, during, and after construction for the Undertaking. It is noted that plans for hardscape improvements on cemetery property that require ground disturbance may also require approval/monitoring by a qualified archeologist.

The following measures must be undertaken by the landscape architect, landscape historian, and certified arborist prior to construction commencing:

- Conduct an inventory of existing vegetation on the preferred site and within the cemetery where it abuts the substation site.
- Identify vegetation on the preferred site to be protected during construction and retained following construction.
- Identify protection measures for the cemetery during construction.
- Submit draft and final landscape inventory and landscape and cemetery protection plan to the Participating Parties, who will have 30 days to review and comment.
- Implement protection measures for existing vegetation and entire cemetery boundary where it abuts the preferred site.

The following measures may be undertaken during construction:

- Develop a landscape vegetation and screening plan with hardscape and softscape improvements to reduce views of the substation from the cemetery.
- Submit draft and final landscape vegetation and screening plan for review and comment by the Participating Parties, who will have 30 days to review and comment.

The following measure must be undertaken following construction:

- Upon acceptance of landscape vegetation and screening plan by the Participating Parties the landscape vegetation and screening will be planted within 120 days of the completion of construction.

5.2 Organizational Responsibilities

5.2.1 Bureau of Ocean Energy Management

- Will be the lead federal agency
- 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 Mayflower Wind, MASHPO, ACHP, and other Participating Parties with demonstrated interest in the affected historic properties.
- Review and approve all deliverables prepared and distributed to the Participating Parties.

5.2.2 Mayflower Wind

- Fund and implement the mitigation measures described in Section 4.0 of this HPTP.
- Prepare a summary report, submit report to BOEM for review and approval, and distribute to Participating Parties per Section 4.1.6.
- Submit information for Participating Parties review per Sections 4.1.2, 4.1.3, and 5.1.
- Creation and distribution of RFP to solicit consultant support for mitigation measure fulfillment
- Selection of a consultant who meets the qualifications specified in the ASLA professional standards and 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.
- Review and comment on deliverables.

5.2.3 Massachusetts State Historic Preservation Office

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

5.2.4 Advisory Council on Historic Preservation

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

6.0 FINALIZATION

This section outlines a timeline for completing mitigation measures.

The HPTP will be finalized with the execution of the MOA. Mitigation measures within this HPTP will be completed within one year of execution of the MOA, unless a different timeline is agreed upon by Participating Parties and accepted by BOEM. Mitigation measures may be completed simultaneously, as applicable.

7.0 REFERENCES

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ATTACHMENT 13 – TERRESTRIAL ARCHAEOLOGY PHASED IDENTIFICATION PLAN

MAYFLOWER WIND

Appendix R.2. Terrestrial Archaeology Phased Identification Plan

Document Revision	C
Issue Date	January 2023
Security Classification	Confidential
Disclosure	For Use by BOEM and Authorized Third Parties Approved for public distribution with redactions, as applicable.

Applicant Proposed Draft

Phased Identification and Evaluation Plan for Terrestrial Archaeological Sites

for the

Mayflower Wind Energy Project

Falmouth Massachusetts and Portsmouth, Rhode Island

Submitted to:

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

Prepared for:

Mayflower Wind Energy LLC
www.mayflowerwind.com

Prepared by:

The Public Archaeology Laboratory, Inc.
https://www.palinc.com/

January 2023

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The following document is a supplement to the Mayflower Wind Project Falmouth, Massachusetts and Portsmouth, Rhode Island Terrestrial Archaeological Resources Assessments (TARA) prepared by AECOM and The Public Archaeology Laboratory Inc. (PAL) and distributed for NHPA Section 106 Consultation. Preparation and finalization of the TARAs are ongoing while Project designs are being finalized and property access permissions are acquired to conduct Phase IB site identification archaeological investigations for potential substation locations, landfalls, and associated cable routes. In accordance with Section 106 regulations (36 CFR § 800.4 (b)(2), BOEM has determined that a Phased Identification approach is appropriate for the survey, reporting, and consultation related to the outstanding archaeological investigations. The Phased Identification Plan below serves as a process document detailing the areas where phased identification survey will be conducted, the steps Mayflower Wind will take to complete the required cultural resources surveys, and a schedule of associated milestones.

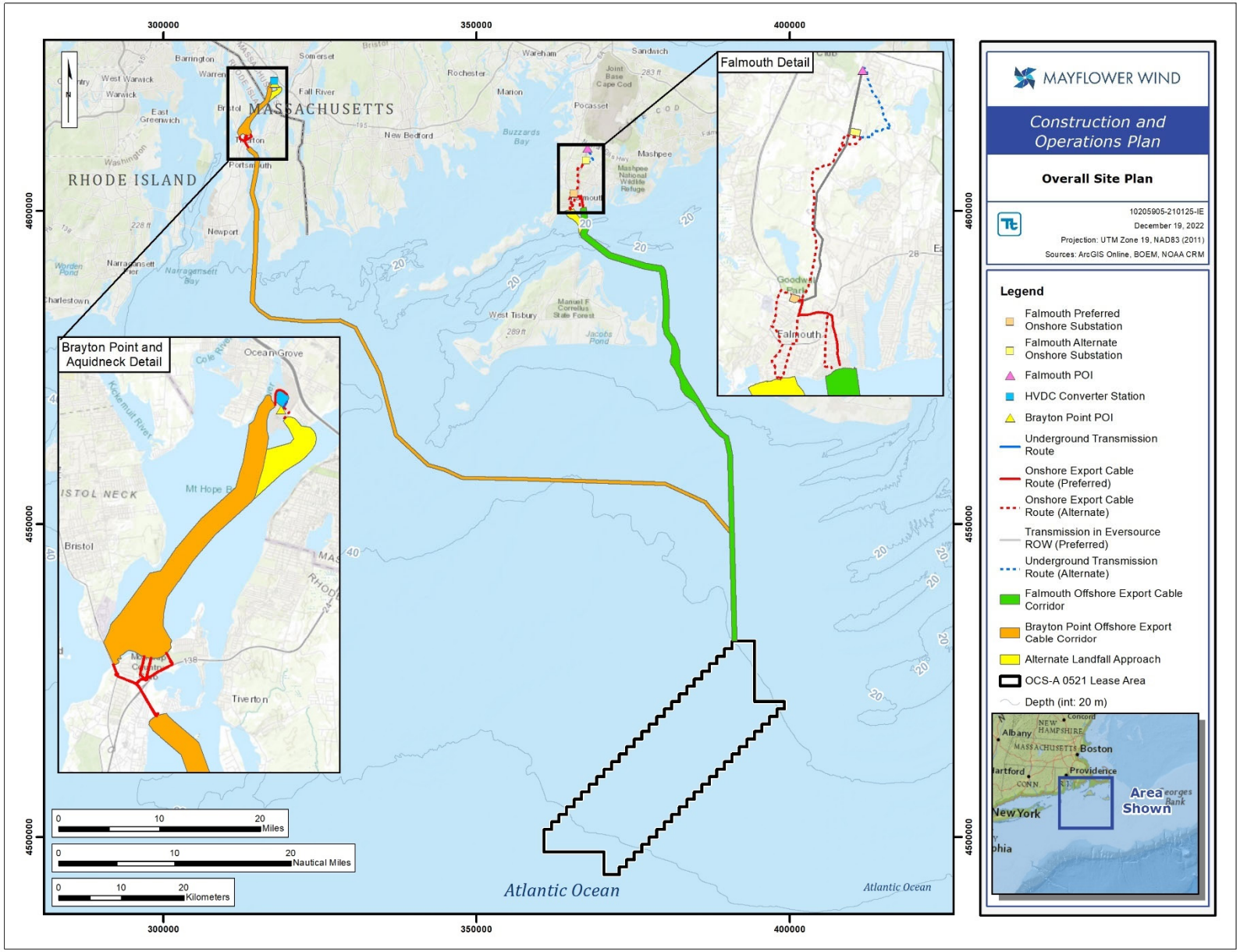
1.0 INTRODUCTION

Mayflower Wind Energy LLC, a joint venture of Shell New Energies US LLC (Shell New Energies) and OW North America LLC (Ocean Winds) (hereafter Mayflower Wind), is proposing to construct, own, and operate the Mayflower Wind Project (hereafter the Project) (Figure 1.0-1). The Project will be in the Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS) within the Renewable Energy Lease Area OCS-A 0521 (Lease Area) awarded to Mayflower Wind (Lessee) through the Bureau of Ocean Energy Management (BOEM) competitive renewable energy lease auction in December 2018. The Lease Area covers encompasses 127,388 acres (ac; 51,552 hectares [ha]) and is approximately 30 statute miles (mi; 26 nautical miles [nm], 48 kilometers [km]) south of Martha's Vineyard and 23 mi (20 nm, 37 km) south of Nantucket, Massachusetts (Figure 1 [note: figures are at the back of this document]).

Mayflower Wind, recognizing its responsibility to comply with federal, state, and municipal laws and regulations pertaining to cultural resources and human remains, contracted with AECOM and The Public Archaeology Laboratory, Inc. (PAL) to conduct separate TARAs for the Onshore Project Areas in Falmouth, Massachusetts (Roy 2022), Brayton Point in Somerset, Massachusetts (Waller 2022), and Aquidneck Island in Portsmouth, Rhode Island (Waller and Flynn 2022). Mayflower Wind is committed to the protection and preservation of cultural resources and is continuing that commitment as part of all onshore components of the Project associated with each point of interconnection.

Archaeological assessments were conducted of the various cable routing options (see Roy 2022; Waller and Flynn 2022), which will be down selected to final preferred routes. To date, Phase IB site identification archaeological testing has not been conducted for the archaeologically sensitive portions of [redacted] (see Figure 2.1-2). Site identification survey has been conducted in archaeologically sensitive areas [redacted] (see Figure 2.1-1). Phase IB site identification testing on [redacted]. Phase IB survey in these areas is pending Project design refinements and/or landowner property access approvals. All outstanding survey recommended for archaeologically sensitive areas in the final terrestrial Area of Potential Effects will be conducted by, and all associated reporting and Section 106 Consultation will be completed prior to, construction.

Figure 1.0-1. Proposed Mayflower Wind Project.



2.0 PHASED IDENTIFICATION PLAN

Section 106 regulations (36 CFR § 800.4 (b)(2) provide for phased identification of historic properties when circumstances may incumber the completion of identification and evaluation efforts prior to project approval. Mayflower Wind, in consultation with the BOEM, has proposed a phased approach to the identification and evaluation of historic properties within the terrestrial portion of the Project's APE where final design selection may occur after approval of the COP and for areas that had not been surveyed for historic properties.

Mayflower Wind commits to implementing this Phased Identification Plan prior to Project construction to identify and evaluate archaeological resources within uninvestigated areas of the terrestrial (onshore) portions of the Mayflower Wind Project. Additional studies will be undertaken in accordance with:

- BOEM's *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585* (BOEM 2020);
- The Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation*, as amended (48 Federal Register 44716);
- MHC's *Public Planning and Environmental Review: Archaeology and Historic Preservation* (MHC 1979); and
- RIHPHC's *Performance Standards and Guidelines for Archaeology in Rhode Island* (RIHPHC 2021).

The Massachusetts and Rhode Island TARAs will proceed under the current Terrestrial Archaeology Survey Plan submitted to the MHC, RIHPHC, and BOEM and summarized below. Any proposed changes to the current methodology would be submitted in a revised survey plan for approval by the MHC/RIHPHC prior to implementation.

2.1 Site Identification Archaeological Hand Testing

Following permitting approval and Mayflower Wind's notification process to access properties not yet subject to survey, Phase IB site identification archaeological surveys (a.k.a. intensive [locational] survey MA; Phase I site identification RI) will be undertaken in archaeologically sensitive areas that have yet to be surveyed for archaeological sites. Areas of proposed archaeological hand testing are summarized in Table 2.1-1 and include Mayflower Wind Aquidneck Island Landfall Route Segment F and Mouth Hope Bridge HDD Option 4 (Figure 2.1-1) and sensitive portions of the Mayflower Wind Falmouth Onshore Project area (Figure 2.1-2). The subsurface testing program will include the following:

- Phase IB site identification archaeological testing will involve the hand excavation of 50-x-50-centimeter (cm) test pits organized in linear test pit transects along road edges or within parklands or woodlands.
- Transect testing will involve the excavation of 50-x-50-cm test pits at 10-m intervals along transect lines.
- Test pits will be excavated by shovel in arbitrary levels to sterile subsoils unless otherwise obstructed with excavated soil screened through ¼-inch hardware cloth to recover cultural materials.
- If isolated cultural material is found, additional bracket test pits will be excavated around the originating test pit that produced the cultural material to further explore and assess the nature of the deposit.
- Test pit profiles will be recorded on standard forms, and color digital photographs will be taken of the work areas, identified cultural features, and fieldwork.
- Aboveground features such as stone walls, historic structures or foundations, cemeteries, or other features will be recorded.

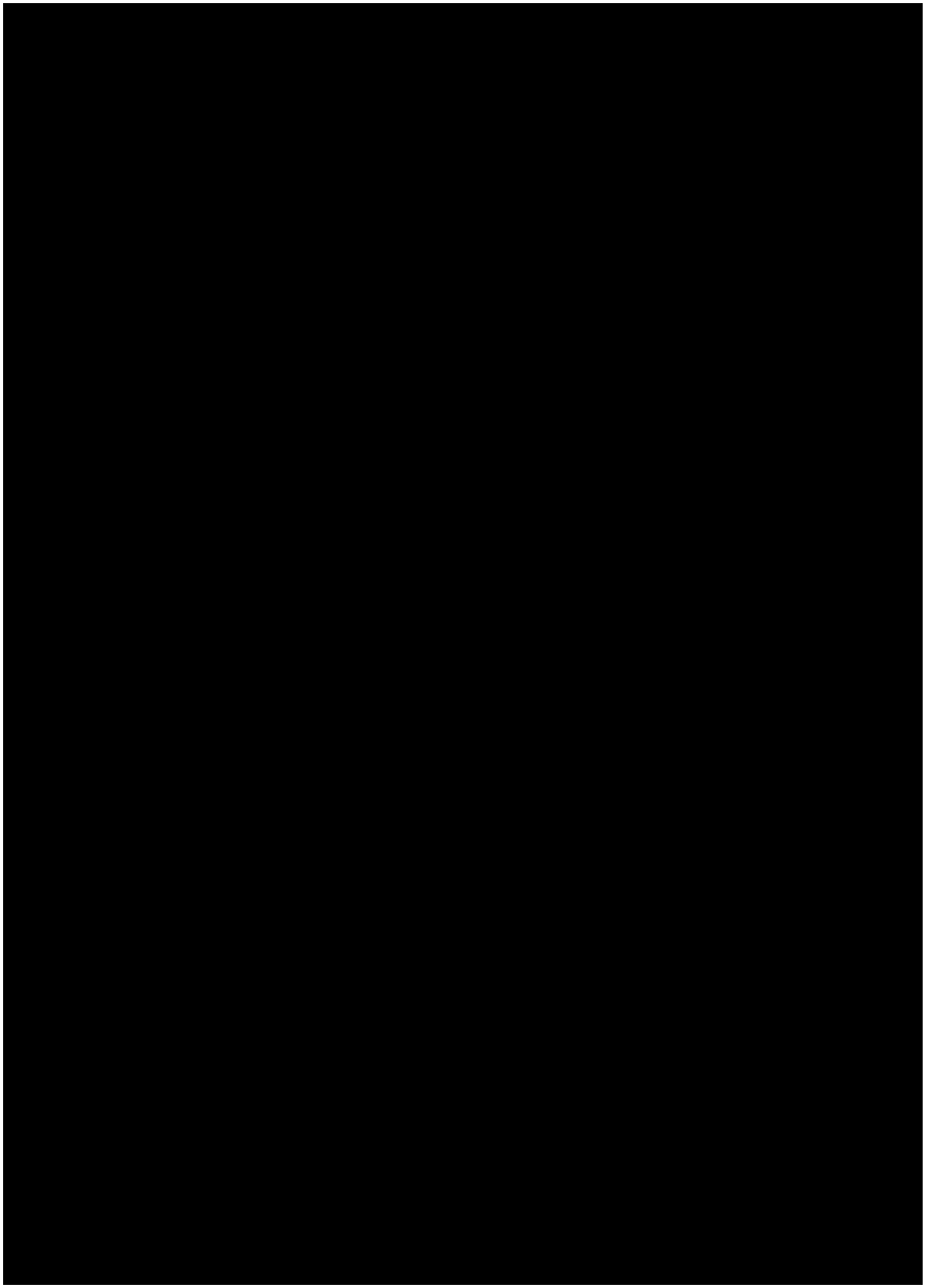
Table 2.1-1. Outstanding Areas of Proposed Subsurface Phase IB Site Identification Archaeological Hand Testing.*

State	Town	Component	Use	Figure Reference
MA	Falmouth	[redacted]	Landfall and HDD sites and Export Cable route segment	Figure 2.1-2
		[redacted]	Landfall and HDD sites	Figure 2.1-2
RI	Portsmouth	[redacted]	Landfall and HDD sites	Figure 2.1-1.
		[redacted]	Onshore Export Cable routes	Figure 2.1-1.

**Site identification archaeological testing may be necessary in additional areas as the Project design and plans are further developed and revised.*

Figure 2.1-1. Proposed onshore cable routes and HDD locations for Mayflower Wind Aquidneck Island (Portsmouth) in Portsmouth, RI

Figure 2.1-2. Mayflower Wind Falmouth Onshore Project overview with areas of proposed construction monitoring and Phase IB site identification archaeological testing.



2.2 Additional Studies

If archaeological sites that exhibit a potential for listing in the NRHP are identified during supplemental TARA site identification archaeological testing surveys for either the Falmouth, MA or the Portsmouth, RI onshore components of the Project, then additional site-specific site evaluation (a.k.a. site examination survey MA; Phase II RI) and site mitigation (a.k.a. data recovery MA; Phase III RI) archaeological surveys may be warranted. Site evaluation surveys include a more intensive level of excavation consisting of both shovel tests and larger test units to collect sufficient archaeological data to evaluate a site's eligibility for inclusion in the NRHP. If sites are identified but determined not potentially eligible for listing in the NRHP, typically the project can proceed as designed. If a site is determined eligible for listing in the NRHP and cannot be avoided by project redesign, a site mitigation plan to include archaeological data recovery might be implemented to mitigate adverse impacts that Project construction might have on the site. Within the Section 106 process, data recovery is defined as an adverse effect and require development of a memorandum of agreement in consultation with BOEM, MHC/RIHPHC, and consulting parties.

In circumstances where site evaluation and mitigation are determined to be needed in either Falmouth, MA or Portsmouth RI, the investigations will be tailored to the specific sites to be evaluated. Appropriate research designs will be developed and submitted to BOEM and MHC/RIHPHC for review and comment prior to fieldwork and will be performed in accordance with current standards and consultation with the MHC and RIHPHC.

3.0 SCHEDULE

Mayflower Wind has developed the following schedule of anticipated permitting timeframes and associated tasks required to complete the Phased Identification Plan.

Table 3.0-1. Schedule for Phased Identification Surveys and Reporting and NEPA Milestones

Task/NEPA Milestone	Anticipated Date
Completion of Terrestrial Archaeological Survey at Cape Cod Aggregates Substation site	December 2022
Cultural Resources Survey Reports Distributed for Consulting Party Review	February 2, 2023
Draft Environmental Impact Statement	February 17, 2023
Cape Cod Aggregates Site TARA Addendum Submitted to BOEM	~February 2023
Comment period for Draft Environmental Impact Statement and Cultural Resources Survey Reports Closes	April 2, 2023
TARA Addendum Submitted to Section 106 Consulting Parties	~April 2023
Potential TARA Addendum Consultation Meetings	To be Determined
Section 106 Consulting Party Review of TARA Addendum Closes	~May 2023 (30 day review period)
Final Environmental Impact Statement	October 27, 2023
Record of Decision	December 8, 2023

The following measures will be undertaken prior to construction:

- Mayflower Wind Aquidneck Island Revised Archaeological Sensitivity Assessment.
- Site Identification Terrestrial Archaeological Survey of all Project work areas.
- Site evaluation archaeological testing for identified archaeological resources (as necessary).
- Implement site protection measures or archaeological site mitigation for any identified resources (as necessary).

The following measures will be undertaken immediately before construction if impacts to the sites cannot be avoided:

- Implementation of the [redacted] Site Phase III data recovery program.
- Implementation of the [redacted] Site Phase III data recovery program.

The following measures may/will be undertaken during construction:

- Archaeological monitoring of construction with Tribal monitors.
- Archaeological data collection of exposed deposits (as necessary).
- Ongoing consultation with BOEM, SHPOs, and THPOs pertaining to identified archaeological deposits (as necessary).

The following measure will be undertaken, as necessary, following construction:

- Laboratory processing of recovered cultural materials.
- Curation of archaeological collections.
- Final reporting on the results and interpretations of the various archaeological studies.

Mayflower Wind commits to implementing this Phased Identification Plan prior to Project construction to identify archaeological resources within uninvestigated areas of the terrestrial (onshore) portions of the Mayflower Wind Project. If the onshore Project design is modified throughout the federal and state permitting process to include additional areas beyond the previously assessed APE, addenda TARA surveys, reports, and associated Section 106 Consultation will be completed as necessary in a timeline agreed upon by Mayflower Wind, BOEM, and applicable Section 106 Participating Parties.

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ATTACHMENT B. FIGURES

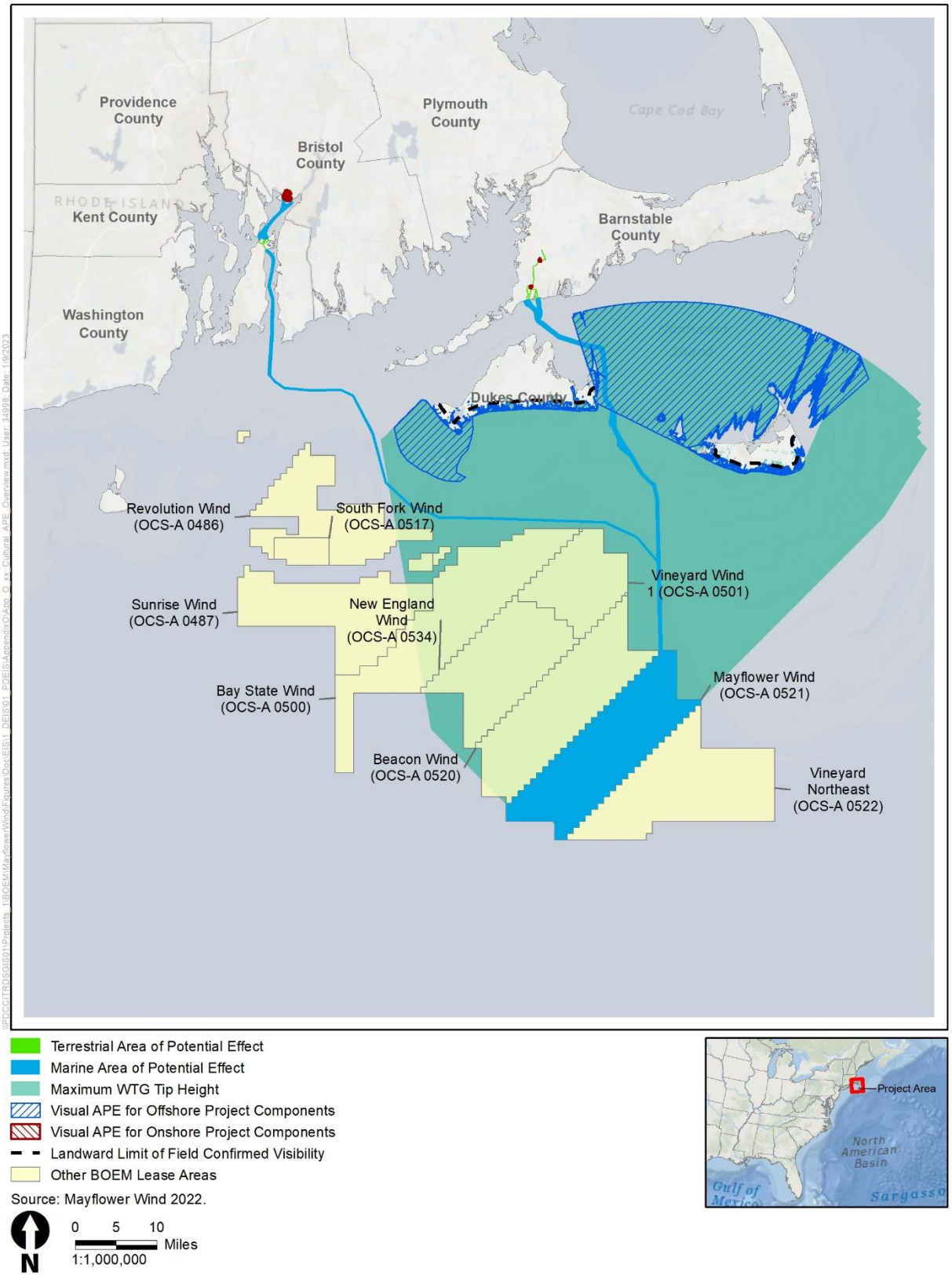

Figure I.B-1. Project APE overview

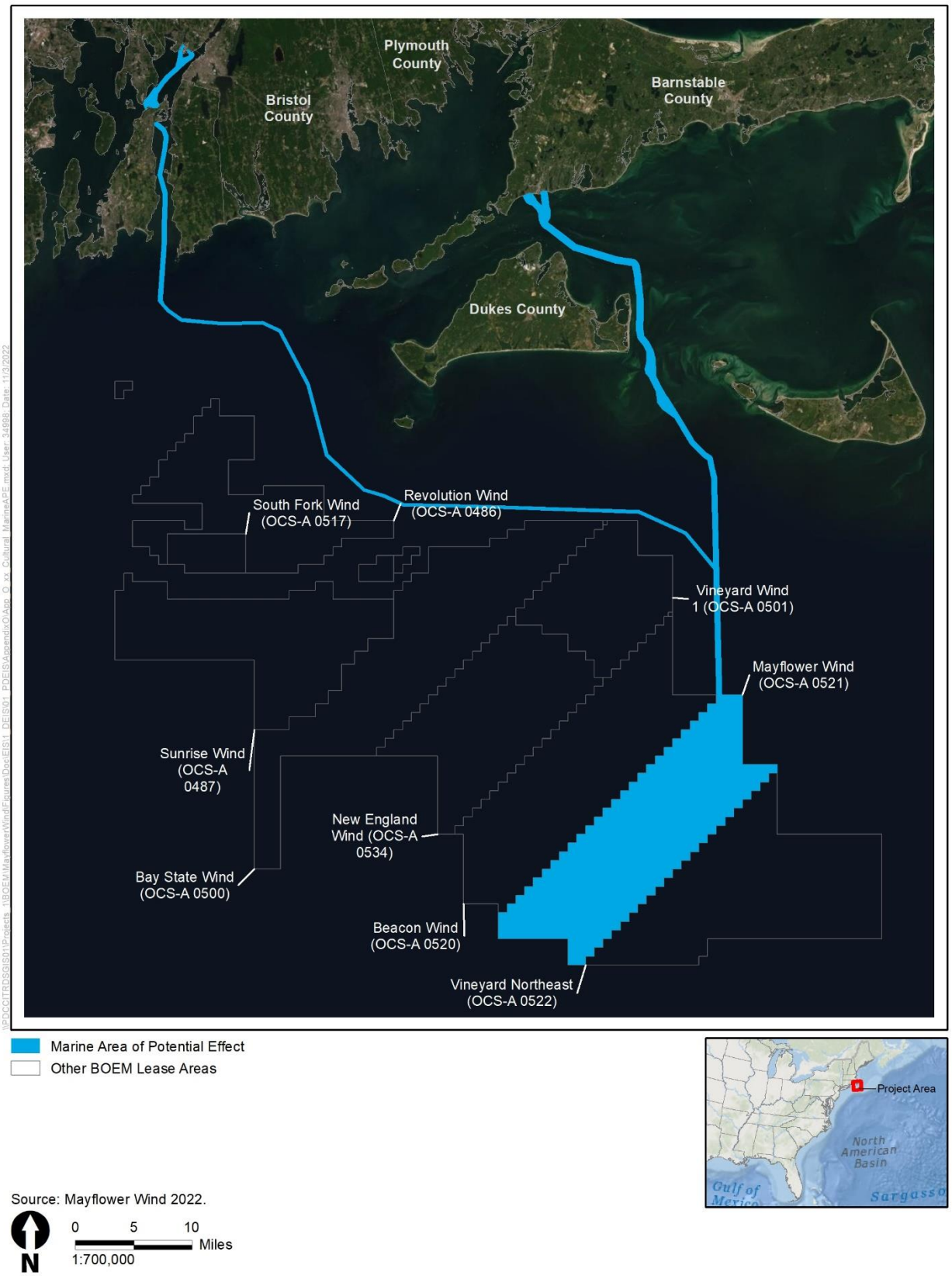

Figure I.B-2. Marine APE

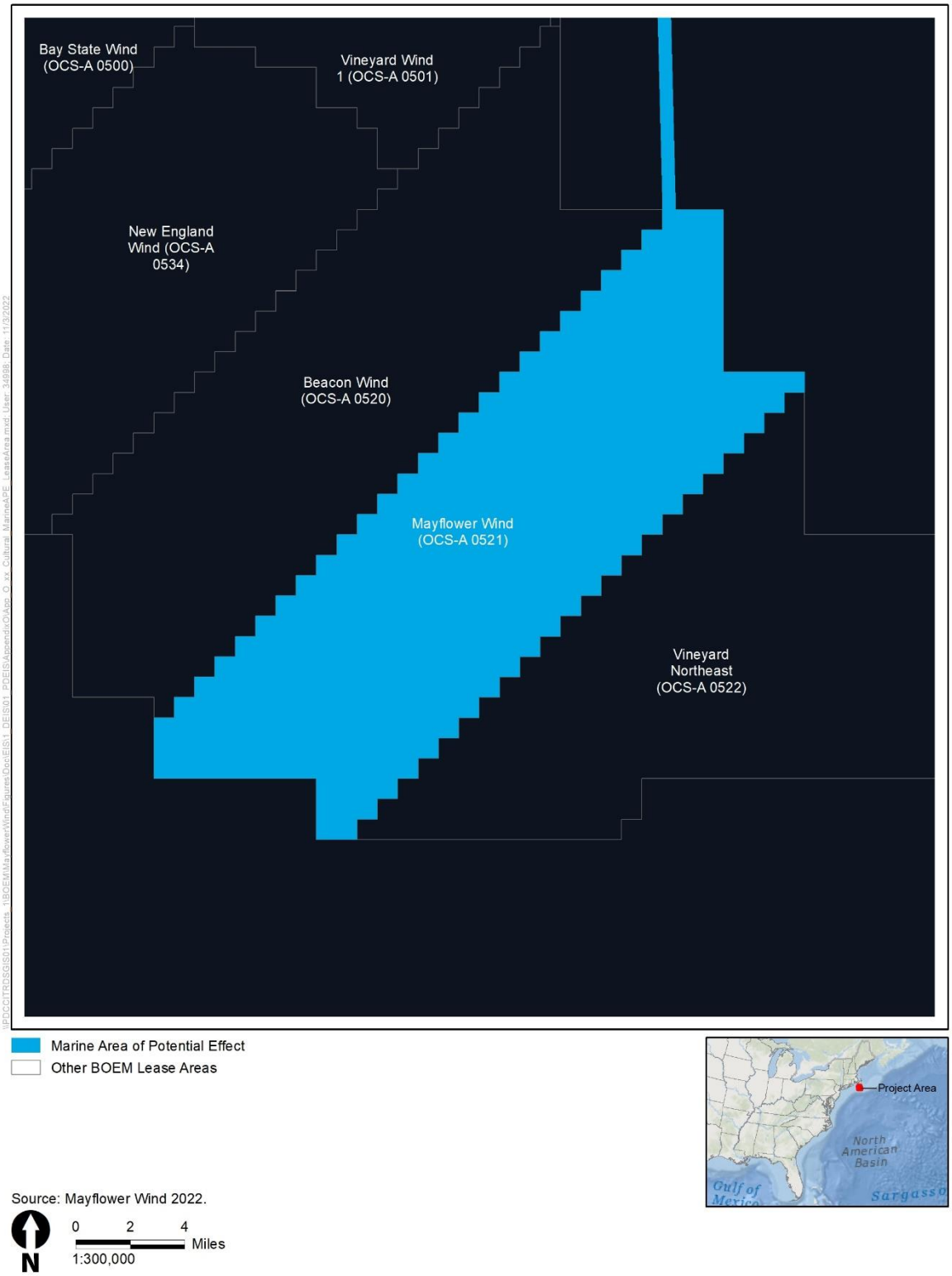

Figure I.B-3. Detail of marine APE within the Lease Area

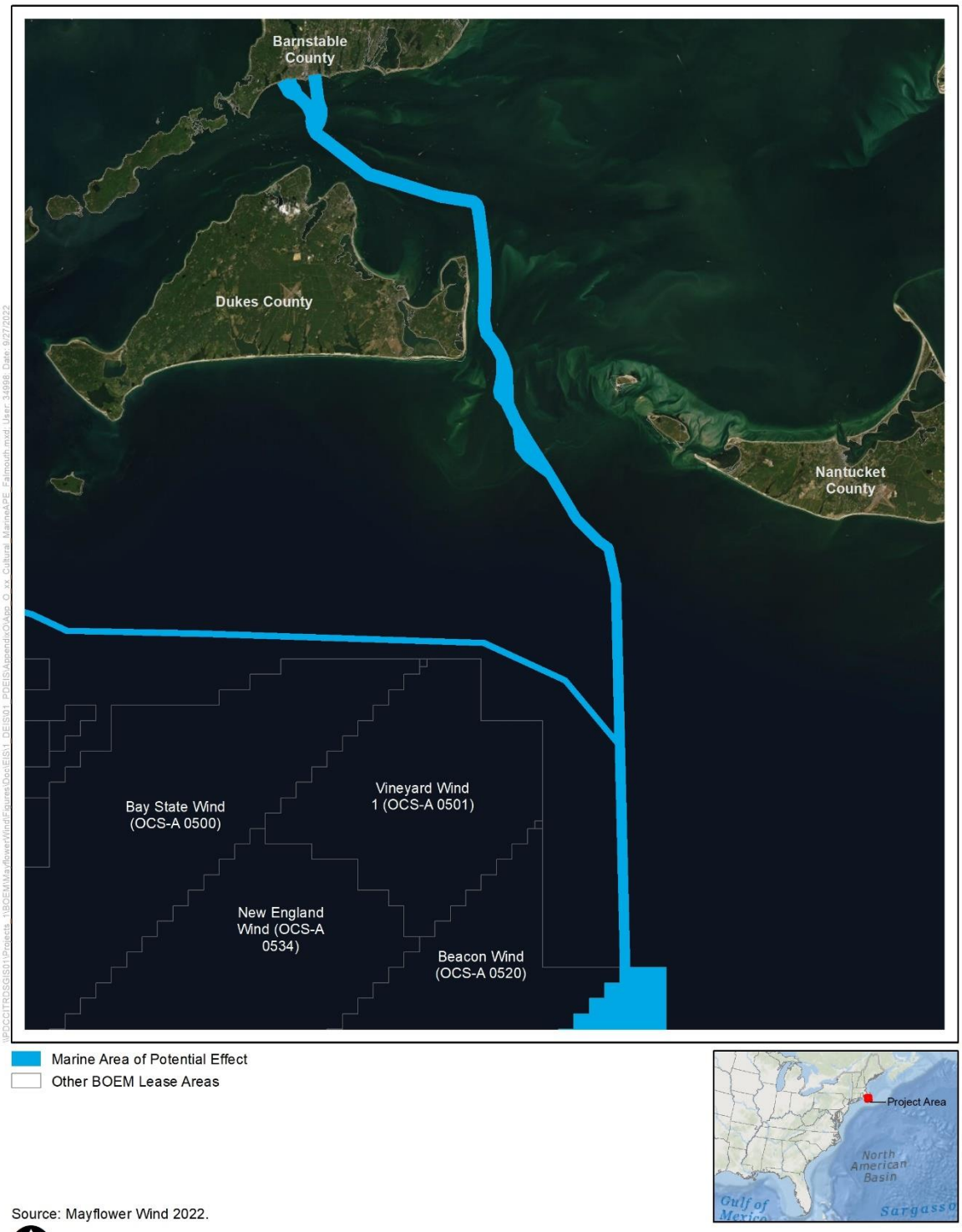

Figure I.B-4. Detail of marine APE within the Falmouth Export Cable Route Corridor

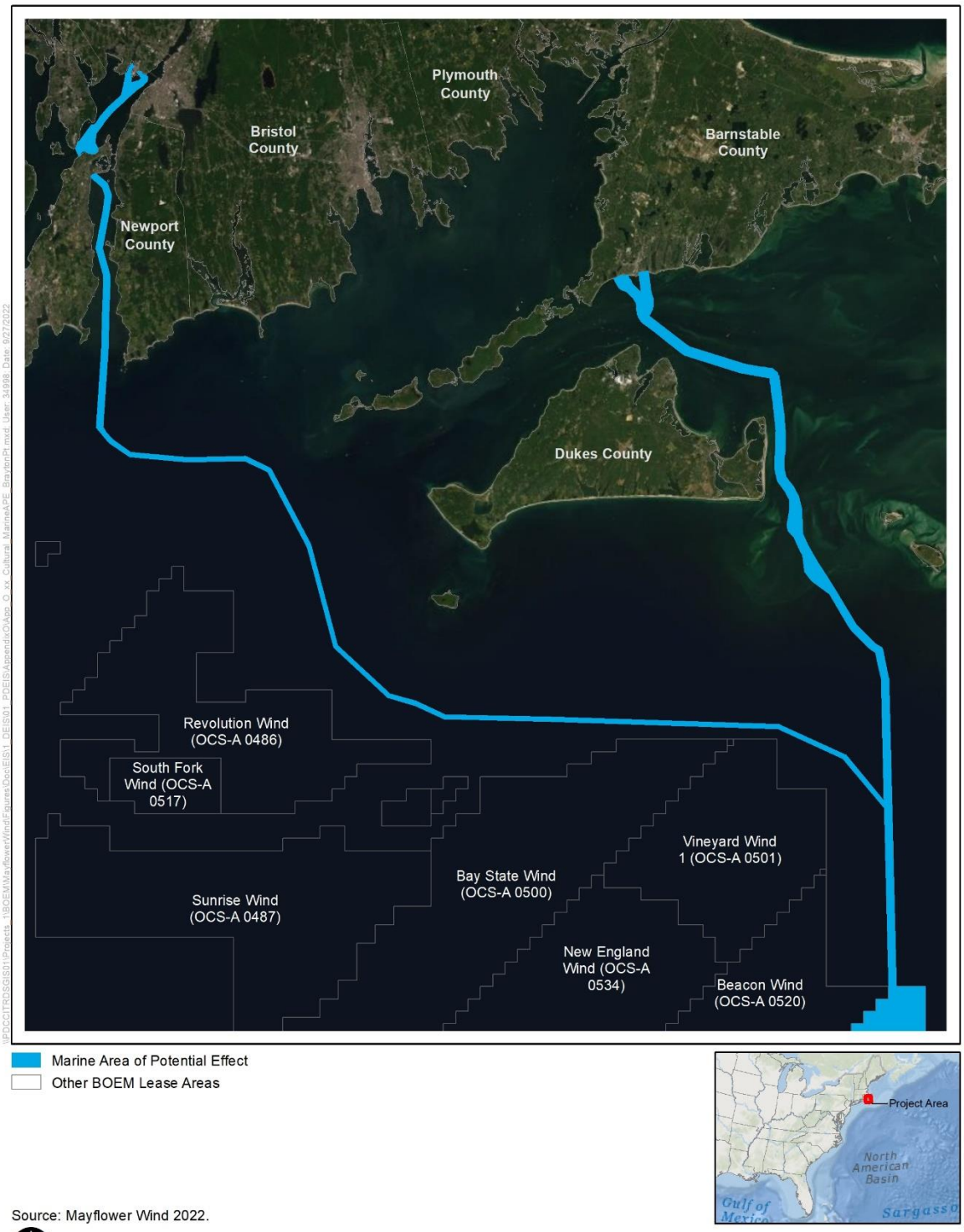

Figure I.B-5. Detail of marine APE within the Brayton Point Export Cable Route Corridor

Figure I.B-6. Detail of terrestrial APE for Falmouth

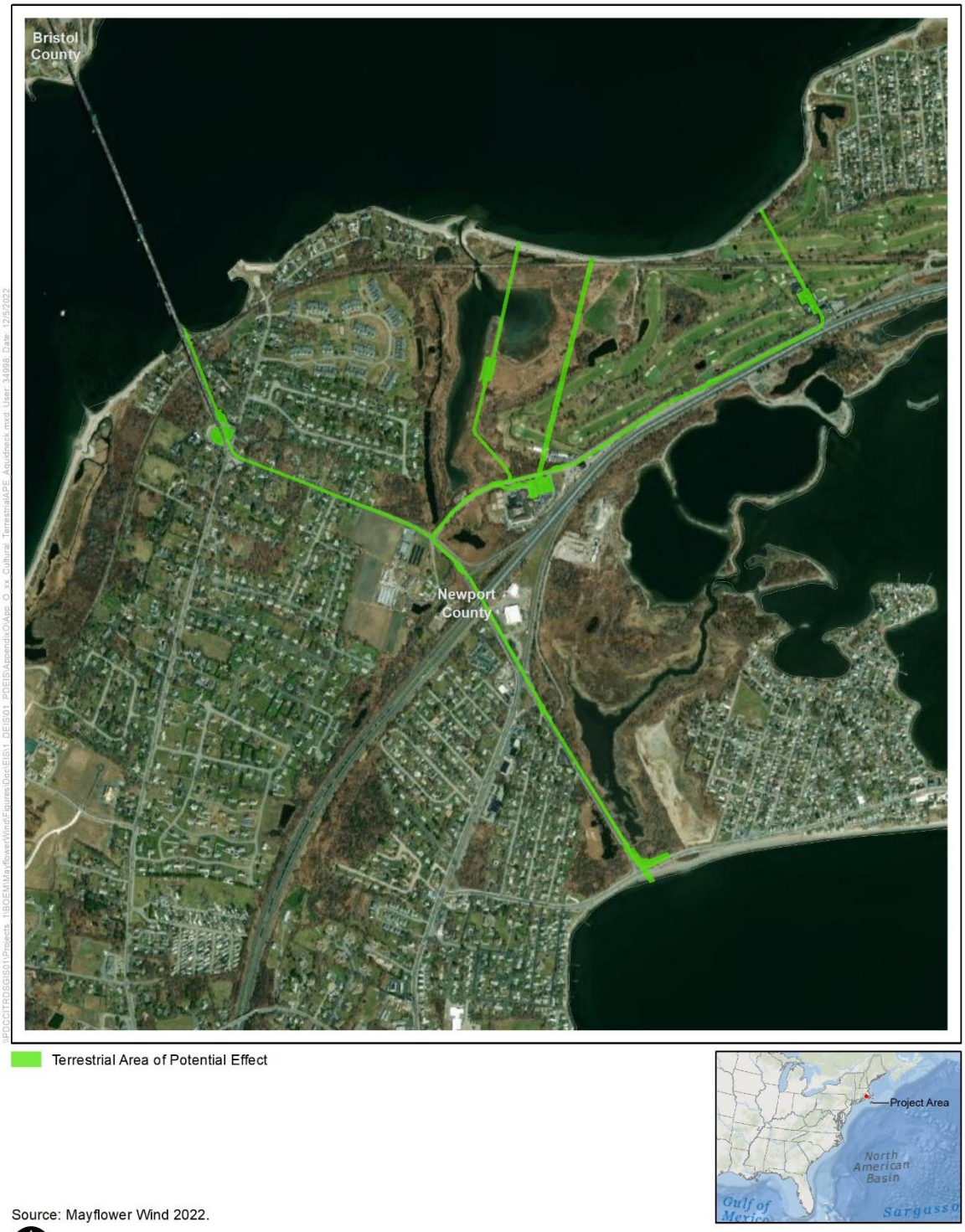

Figure I.B-7. Detail of terrestrial APE for Aquidneck Island

Figure I.B-8. Detail of terrestrial APE for Brayton Point

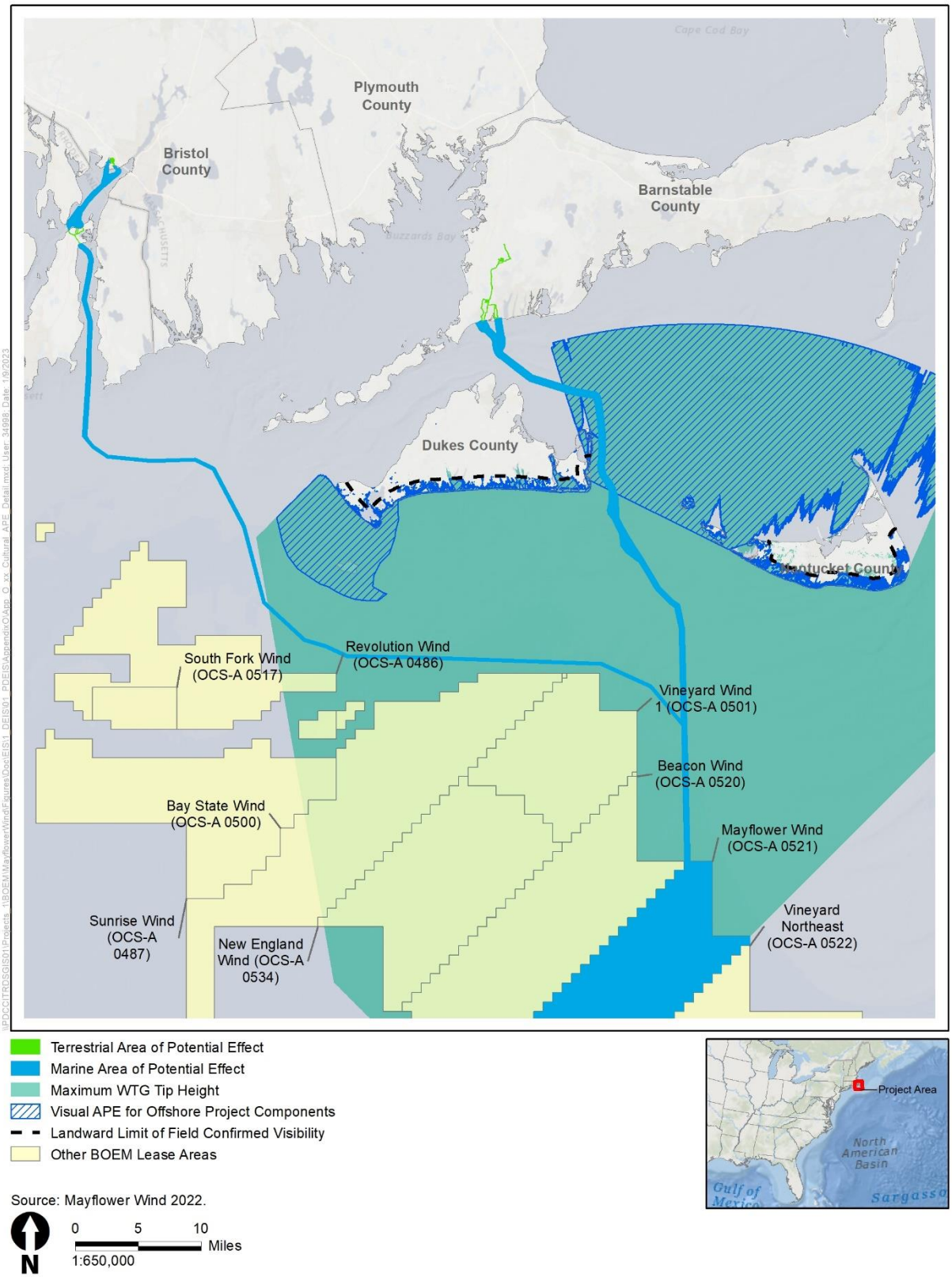

Figure I.B-9. Visual APE for Offshore Project components

Figure I.B-10. Detail of visual APE for Offshore Project components for Martha's Vineyard

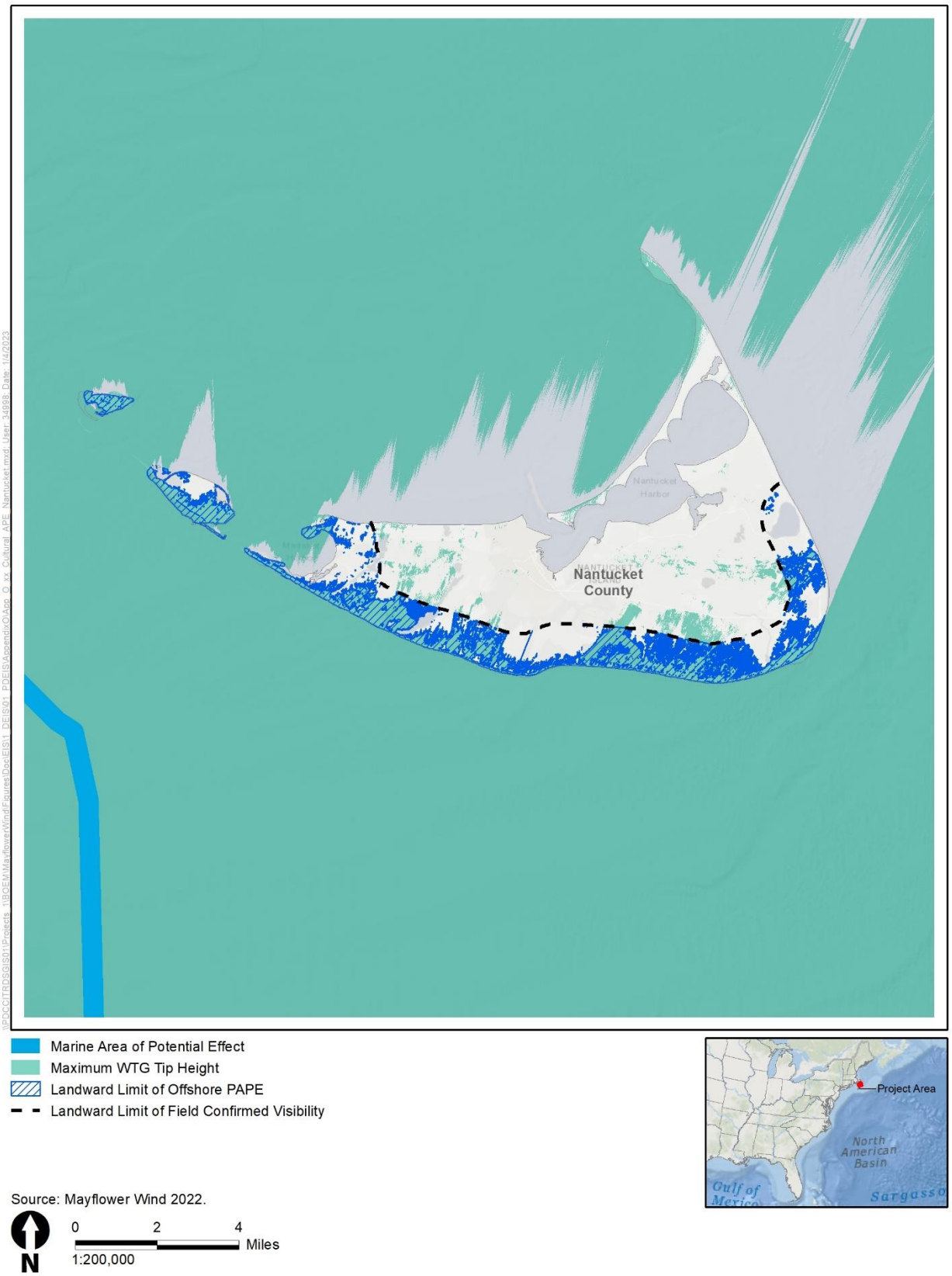

Figure I.B-11. Detail of visual APE for Offshore Project components for Nantucket

Figure I.B-12. Detail of visual APE for Onshore Project components for proposed Lawrence Lynch Preferred Substation in Falmouth

Figure I.B-13. Detail of visual APE for Onshore Project components for proposed Cape Cod Aggregates Alternative Substation in Falmouth

Figure I.B-14. Detail of visual APE for Onshore Project components for Brayton Point

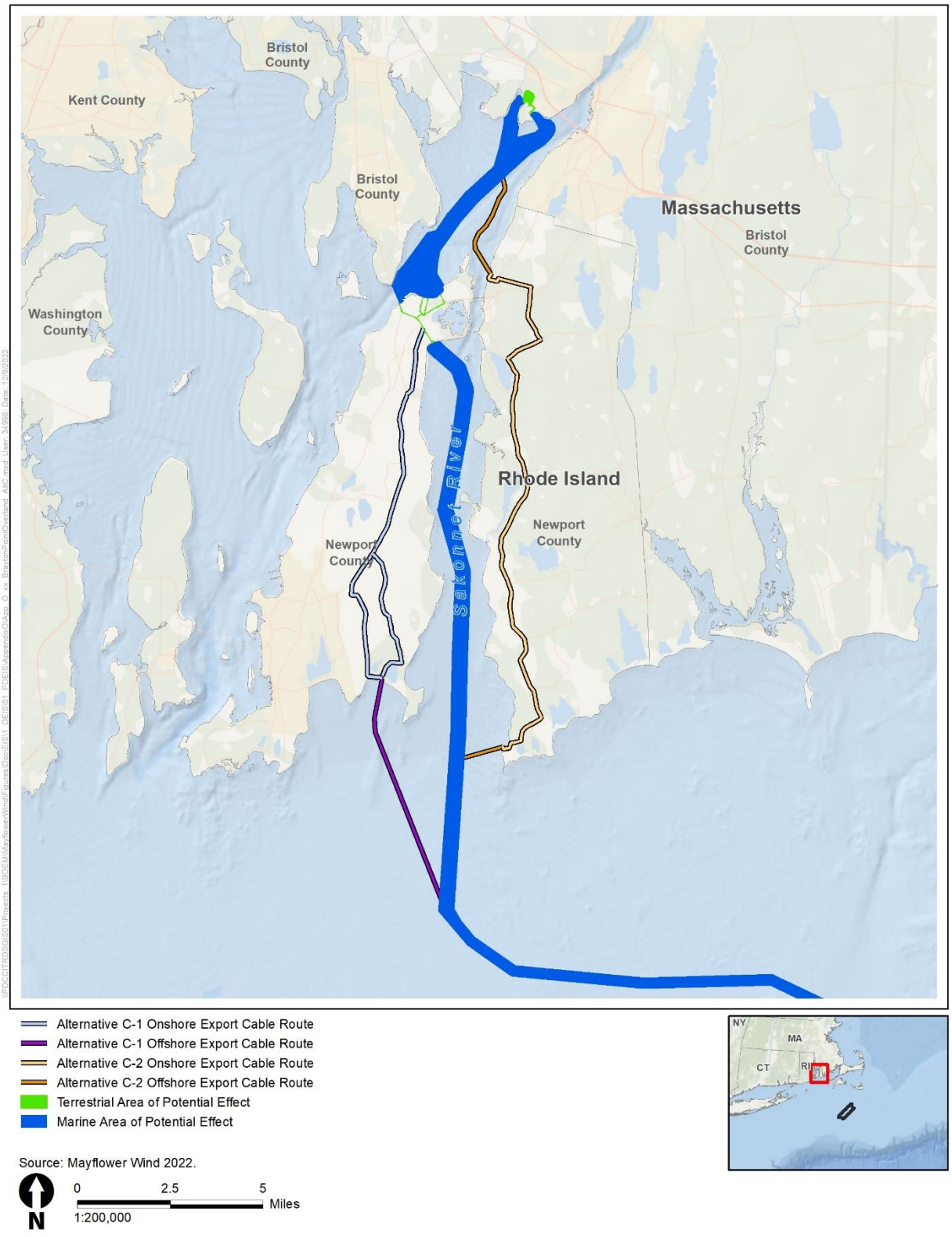

Figure I.B-15. Alternative C route options in relation to the defined Project APE

ATTACHMENT C. ENTITIES INVITED TO BE CONSULTING PARTIES

The following is a list of governments and organizations that BOEM contacted and invited to be a consulting party to the NHPA Section 106 review of the Mayflower Wind Project, in September and October 2021. During the consultations, additional parties were made known to BOEM and were added as they were identified; these additional parties are included in this list.

Government or Organization
Advisory Council on Historic Preservation (ACHP)
Alliance to Protect Nantucket Sound (APNS)
Barnstable County Board of Commissioners
Bureau of Safety and Environmental Enforcement (BSEE)
Cape Cod Commission
Chappaquiddick Tribe of Wampanoag Nation
Charlestown Historical Society
City of Cranston, Rhode Island
City of East Providence, Rhode Island
City of Fall River, Massachusetts
City of New Bedford, Massachusetts
City of Pawtucket, Rhode Island
City of Providence, Rhode Island
City of Warwick, Rhode Island
County of Edgartown, Massachusetts
Delaware Tribe of Indians
Dukes County Commission, Edgartown, Massachusetts
Falmouth Historical Commission
Gay Head Lighthouse Advisory Board
Martha's Vineyard Commission
Martha's Vineyard Museum
Mashantucket Pequot Tribal Nation
Mashpee Wampanoag Tribe
Massachusetts Board of Underwater Archaeological Resources
Massachusetts Commission on Indian Affairs
Massachusetts Historical Commission
Massachusetts Historical Society
Mayflower Wind, LLC

Government or Organization
Mohegan Tribe of Indians of Connecticut
Museum of African American History, Boston
Museum of African American History, Nantucket
Nantucket (NPEDC) Planning Commission
Nantucket Conservation Foundation
Nantucket Historic District Commission
Nantucket Historical Association
Nantucket Historical Commission
Nantucket Planning and Economic Development Commission
Nantucket Preservation Trust
National Park Service
Preservation Massachusetts
Rhode Island Historical Preservation & Heritage Commission
Rhode Island Historical Society
South County History Center, Kingston, Rhode Island
The Delaware Nation
The Maria Mitchell Association (Dark Skies Initiative)
The Narragansett Indian Tribe
The Shinnecock Indian Nation
Town and County of Nantucket
Town of Aquinnah, Massachusetts
Town of Barnstable, Historical Commission
Town of Barrington, Rhode Island
Town of Bristol, Rhode Island
Town of Charlestown, Rhode Island
Town of Chilmark, Massachusetts
Town of Dartmouth, Massachusetts
Town of East Greenwich, Rhode Island
Town of Falmouth, Massachusetts
Town of Gosnold, Cuttyhunk Island, Massachusetts
Town of Jamestown, Rhode Island
Town of Little Compton, Rhode Island
Town of Middletown, Rhode Island
Town of Narragansett, Rhode Island
Town of New Shoreham, Block Island, Rhode Island
Town of Oak Bluffs, Massachusetts
Town of Portsmouth, Rhode Island

Government or Organization
Town of Somerset, Massachusetts, Historical Commission
Town of South Kingston, Wakefield, Rhode Island
Town of Swansea, Massachusetts
Town of Tisbury, Vineyard Haven, Massachusetts
Town of Tiverton, Rhode Island
Town of Warren, Rhode Island
Town of Westerly, Rhode Island
Town of Westport, Massachusetts
Trustees Martha's Vineyard and Nantucket
U.S. Army Corps of Engineers
Vineyard Power Cooperative
Wampanoag Tribe of Gay Head (Aquinnah)

ATTACHMENT D. CONSULTING PARTIES TO THE MAYFLOWER WIND PROJECT

The following is a current list of consulting parties to the NHPA Section 106 review of the Mayflower Wind Project as of January 2023. During the consultations, additional parties were made known to BOEM and were added as they were identified; these additional parties are included in this list.

Government or Organization	Contact Person
Advisory Council on Historic Preservation (ACHP)	Christopher Daniel
Alliance to Protect Nantucket Sound (APNS)	Audra Parker Sandy Taylor
Bureau of Safety and Environmental Enforcement (BSEE)	W. Shawn Arnold
Cape Cod Commission	Sarah Korjeff Jordan Velozo
Chappaquiddick Tribe of Wampanoag Nation	Penny Gamble-Williams Alexis Moreis
City of East Providence, Rhode Island	Roberto DaSilva
City of New Bedford and New Bedford Port Authority, Massachusetts	Blair Bailey
Cultural Heritage Partners (CHP), PLLC (representing Nantucket Planning & Economic Development Commission and Town of Nantucket, Massachusetts)	Will Cook
Delaware Tribe of Indians	Susan Bachor Brad KillsCrow
Falmouth Historical Commission	Ed Haddad
Gay Head Lighthouse Advisory Board	Richard Skidmore Len Butler
Martha's Vineyard Commission	Bill Veno Dan Doyle
Mashantucket Pequot Tribal Nation	Michael Kickingbear Johnson Rodney Butler Crystal Whipple
Mashpee Wampanoag Tribe	David Weeden Jessie Baird
Massachusetts Board of Underwater Archaeological Resources (BUAR)	David S. Robinson
Massachusetts Historical Commission (MHC)	Ed Bell Brona Simon
Mayflower Wind, LLC	Jennifer Flood
Mohegan Tribe of Indians of Connecticut	James Quinn James Gessner
Nantucket Historic District Commission	Diane Coombs
Nantucket Historical Commission	Hillary Hedges Rayport Tom Montgomery

Government or Organization	Contact Person
Nantucket Planning & Economic Development Commission (represented by CHP)	Holly Backus Will Cook
Nantucket Preservation Trust	Mary Bergman
National Park Service (NPS)	Kathy Schlegel Mary Krueger Sherry Freer
Rhode Island Historical Preservation & Heritage Commission (RIHPHC)	Elizabeth Totten Jeffrey Emidy
The Maria Mitchell Association	Joanna Roche
The Narragansett Indian Tribe	John Brown Dinalyn Spears Anthony Dean Stanton
The Shinnecock Indian Nation	Rebecca Genia Shavonne Smith Jeremy Dennis Bryan Polite Kelly Dennis
Town of Aquinnah, Massachusetts	Jeffrey Madison Gisele Gauthier
Town of Barnstable, Historical Commission, Massachusetts	Cheryl Powell George Jessop
Town of Bristol, Rhode Island	Gregg Marsili
Town of Falmouth, Massachusetts	Jed Cornock
Town of Jamestown, Rhode Island	Lisa Bryer Jamie Hainsworth
Town of Middletown, Rhode Island	Wendy Marshall
Town of Nantucket, Massachusetts (represented by CHP)	Lauren Sinatra Will Cook
Town of Somerset, Massachusetts, Historical Commission	James O'Rourke
Town of South Kingstown, Rhode Island	Lucas Murray Theresa Murphy
Town of Swansea, Massachusetts	Mallory Aronstein
Town of Warren, Rhode Island	Anthony DeSisto Kate Michaud
Town of Westport, Massachusetts	Jim Hartnett
U.S. Army Corps of Engineers (USACE)	Christine Jacek
Wampanoag Tribe of Gay Head (Aquinnah)	Bettina Washington Cheryl Andrews-Maltais Lael Echo-Hawk Barbara Spain Al Clark Kevin Devine

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J.1.4 Chapter 4, Other Required Impact Analysis

None.

Appendix K: Glossary

Term	Definition
affected environment	Environment as it exists today that could be potentially affected by the proposed Project
algal blooms	Rapid growth of the population of algae, also known as *algae bloom*
allision	A moving ship running into a stationary ship
anthropogenic	Generated by human activity
archaeological resource	Historical place, site, building, shipwreck, or other archaeological site on the landscape
below grade	Below ground level
benthic	Related to the bottom of a body of water
benthic resources	The seafloor surface, the substrate itself, and the communities of bottom-dwelling organisms that live within these habitats
Cetacea	Order of aquatic mammals made up of whales, dolphins, porpoises, and related lifeforms
coastal habitat	Coastal areas where flora and fauna live, including salt marshes and aquatic habitats
coastal waters	Waters in nearshore areas where bottom depth is less than 98.4 feet (30 meters)
coastal zone	The lands and waters starting at 3 nautical mile (nm) from the land and ending at the first major land transportation route
commercial fisheries	Areas or entities raising and catching fish for commercial profit
commercial-scale wind energy facility	Wind energy facility usually greater than 1 megawatt (MW) that sells the produced electricity
criteria pollutant	One of six common air pollutants for which the United States Environmental Protection Agency sets National Ambient Air Quality Standards: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, or sulfur dioxide
critical habitat	Geographic area containing features essential to the conservation of threated or endangered species
cultural resource	Historical districts, objects, places, sites, buildings, shipwrecks, and archaeological sites on the American landscape, as well as sites of traditional, religious, or cultural significance to cultural groups, including Native American tribes
culvert	structure, usually a tunnel, allowing water to flow under an obstruction (e.g., road, trail)
demersal	Living close to the ocean floor
design envelope	The range of proposed project characteristics defined by the applicant and used by Bureau of Ocean Energy Management (BOEM) for purposes of environmental review and permitting
dredging	Removal of sediments and debris from the bottom of lakes, rivers, harbors, and other waterbodies
duct bank	Underground structure that houses the onshore export cables, which consists of polyvinyl chloride pipes encased in concrete

Term	Definition
ecosystem	Community of interacting living organisms and nonliving components (such as air, water, soil)
electromagnetic field	A field of force produced by electrically charged objects and containing both electric and magnetic components
embayment	Recessed part of a shoreline
endangered species	A species that is in danger of extinction in all or a significant portion of its range
Endangered Species Act–listed species	Species listed under the Endangered Species Act (ESA) of 1973 (as amended)
environmental protection measure	Measure proposed to avoid or minimize potential impacts
ensonification	The process of filling with sound
environmental consequences	The potential direct, indirect, and cumulative impacts that the construction, operations and maintenance (O&M), and decommissioning of a proposed project would have on the environment
environmental justice communities	Minority and low-income populations affected by a proposed project
epifauna	Fauna that lives on the surface of a seabed (or riverbed), or is attached to underwater objects or aquatic plants or animals
essential fish habitat	"Those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" (50 code of federal regulations [CFR] 600)
export cables	Cables connecting the wind facility to the onshore electrical grid power
export cable corridor	Area identified for routing the entire length of the onshore and offshore export cables
federal aids to navigation	Visual references operated and maintained by the United States Coast Guard (USCG), including radar transponders, lights, sound signals, buoys, and lighthouses, that support safe maritime navigation
finfish	Vertebrate and cartilaginous fishery species, not including crustaceans, cephalopods, or other mollusks
for-hire commercial fishing	Commercial fishing on a for-hire vessel (i.e., a vessel on which the passengers make a contribution to a person having an interest in the vessel in exchange for carriage)
for-hire recreational fishing	Fishing from a vessel carrying a passenger for hire who is engaged in recreational fishing
foundation	The bases to which the wind turbine generators (WTGs) and offshore substation platforms (OSPs) are installed on the seabed; four types of foundations have been considered and reviewed for the Project: monopile, piled jacket, suction bucket, and gravity based
geomagnetic	Relating to the magnetism of the Earth
gravity-based structure	Typically constructed of steel, concrete, or a combination of both, gravity-based structures sit on top of the sea floor and are not pile driven
hard-bottom habitat	Benthic habitats composed of hard-bottom (e.g., cobble, rock, and ledge) substrates

Term	Definition
historic property	Prehistoric or historic district, site, building, structure, or object that is eligible for or already listed in the National Register of Historic Places (NRHP); also includes any artifacts, records, and remains (surface or subsurface) related to and located within such a resource
historical resource	Prehistoric or historic district, site, building, structure, or object that is eligible for or already listed in the NRHP; also includes any artifacts, records, and remains (surface or subsurface) related to and located within such a resource
horizontal directional drilling	Trenchless technique for installing underground cables, pipes, and conduits using a surface-launched drilling rig
hull	Watertight frame or body of a ship
infauna	Fauna living in the sediments of the ocean floor (or river or lake beds)
interarray cables	Cables connecting the wind turbine generators to the electrical service platforms
invertebrate	Animal with no backbone
jacket foundation	Latticed steel frame with three or four supporting piles driven into the seabed
jack-up vessel	Mobile and self-elevating platform with buoyant hull
jet excavation	Process of moving or removing soil with a jet
jet plowing	Plowing in which the jet plow, with an adjustable blade, or plow, rests on the seafloor and is towed by a surface vessel; the jet plow creates a narrow trench at the designated depth, while water jets fluidize the sediment within the trench; in the case of the proposed Project, the cables would then be fed through the plow and laid into the trench as it moves forward; the fluidized sediments then settle back down into the trench and bury the cable
knot	Unit of speed equaling 1 nm (1.8 kilometer) per hour
landfall site	The shoreline landing site at which the offshore cable transitions to onshore
marine mammal	Aquatic vertebrate distinguished by the presence of mammary glands, hair, three middle ear bones, and a neocortex (a region of the brain)
marine waters	Waters in offshore areas where bottom depth is more than 98.4 feet (30 meters)
mechanical cutter	Method of submarine cable installation equipment that involves a cutting wheel or excavation chain to cut a narrow trench into the seabed allowing the cable to sink under its own weight or be pushed to the bottom of the trench via a cable depressor
mechanical plow	Method of submarine cable installation equipment that involves pulling a plow along the cable route to lay and bury the cable; the plow's share cuts into the soil, opening a temporary trench, which is held open by the side walls of the share, while the cable is lowered to the base of the trench via a depressor; some plows may use additional jets to fluidize the soil in front of the share
monopile or monopile foundation	A long steel tube driven into the seabed that supports a tower
nautical mile	A unit used to measure sea distances and equivalent to approximately 1.15 miles (1.85 kilometers)
offshore substation	The interconnection point between the WTGs and the export cable; the necessary electrical equipment needed to connect the inter-array cables to the offshore export cables
onshore substation	Substation connecting the proposed Project to the existing bulk power grid system

Term	Definition
operations and maintenance facilities	Would include offices, control rooms, warehouses, shop space, and pier space
Outer Continental Shelf	All submerged land, subsoil, and seabed belonging to the United States but outside of states' jurisdiction
pile	A type a foundation akin to a pole
pile driving	Installing foundation piles by driving them into the seafloor
pinnipeds	Carnivorous, semiaquatic marine mammals with fins, also known as seals
pin pile	Small-diameter pipe driven into the ground as foundation support
plume	Column of fluid moving through another fluid
private aids to navigation	Visual references on structures positioned in or near navigable waters of the U.S., including radar transponders, lights, sound signals, buoys, and lighthouses, that support safe maritime navigation; permits for the aids are administered by USCG
Project area	The combined onshore and offshore area where proposed Project components would be located
protected species	Endangered or threatened species that receive federal protection under the ESA of 1973 (as amended)
scour protection	Protection consisting of rock and stone that would be placed around all foundations to stabilize the seabed near the foundations as well as the foundations themselves
scrublands	Plant community dominated by shrubs and often also including grasses and herbs
sessile	Attached directly by the base
silt substrate	Substrate made of a granular material originating from quartz and feldspar, and whose size is between sand and clay
soft-bottom habitat	Benthic habitats include soft-bottom (i.e., unconsolidated sediments) and hard-bottom (e.g., cobble, rock, ledge) substrates, as well as biogenic habitat (e.g., eelgrass, mussel beds, worm tubes) created by structure-forming species
substrate	Earthy material at the bottom of a marine habitat; the natural environment that an organism lives in
suction-bucket jacket	Latticed steel frame with three to four supporting suction-bucket foundations securing the structure to the seabed
suspended sediments	Very fine soil particles that remain in suspension in water for a considerable period of time without contact with the bottom; such material remains in suspension due to the upward components of turbulence and currents, or by suspension
threatened species	A species that is likely to become endangered within the foreseeable future
tidal energy project	Project related to the conversion of the energy of tides into usable energy, usually electricity
tidal flushing	Replacement of water in an estuary or bay because of tidal flow
trawl	A large fishing net dragged by a vessel at the bottom or in the middle of sea or lake water
turbidity	A measure of water clarity
utility right-of-way	Registered easement on private land that allows utility companies to access the utilities or services located there

Term	Definition
vibracore	Technology/technique for collecting core samples of underwater sediments and wetland soils
viewshed	Area visible from a specific location
visual resource	The visible physical features on a landscape, including natural elements such as topography, landforms, water, vegetation, and anthropogenic structures
wetland	Land saturated with water; marshes; swamps
wind energy	Electricity from naturally occurring wind
wind energy area	Areas with significant wind energy potential and defined by BOEM
wind turbine generator	Component that puts out electricity in a structure that converts kinetic energy from wind into electricity

Appendix L: List of Preparers and Reviewers

L.1 List of Preparer and Reviews

Table L-1. Bureau of Ocean Energy Management contributors

Name	Role/Resource Area
National Environmental Policy Act (NEPA) Coordinator	
Brune, Genevieve	Environmental Protection Specialist
Resource Scientists and Contributors	
Ajilore, Ololade	Navigation and Vessel Traffic
Baker, Arianna	Navigation and Vessel Traffic
Baker, Kyle	Marine Mammals; Sea Turtles
Bigger, David	Birds; Bats; Coastal Habitat and Fauna
Browning, Jeffrey	Project Coordinator
Brune, Genevieve	Land Use and Coastal Infrastructure
Bucatari, Jennifer	Other Uses – Marine Minerals
Conrad, Alex	Finfish, Invertebrates, and Essential Fish Habitat; Marine Mammals; Sea Turtles
Cornelison, Meghan	Environmental Justice
Draher, Jennifer	Water Quality
Fulling, Gregory	Marine Mammals; Sea Turtles
Horrell, Christopher	Cultural Resources
Jensen, Brandon	Benthic Resources; Coastal Habitat and Fauna; Finfish, Invertebrates, and Essential Fish Habitat; Wetlands; Commercial Fisheries and For-Hire Recreational Fishing; Other Uses
Jensen, Mark	Commercial Fisheries and For-Hire Recreational Fishing; Demographics, Employment, and Economics; Recreation and Tourism
McCarty, John	Scenic and Visual Resources; Recreation and Tourism
McGuffin, Andrew	Geophysicist
Miller, Jennifer	Other Uses
Moshier, Marissa	Cultural Resources and Section 106 Lead
O'Connell, Daniel	Technical Design Elements
Oliver, Elizabeth	Tribal Liaison
Richards, Renee	Other Uses
Schnitzer, Laura	Cultural Resources
Slayton, Ian	Air Quality; Cumulative

Name	Role/Resource Area
Stokely, Sarah	Cultural Resources
Sullivan, Kimberly	Environmental Justice
McCoy, Angel	Meteorologist
Wolf, Jacob	Air Quality

Table L-2. Reviewers

Name	Title	Agency
Bureau of Ocean Energy Management (BOEM) and U.S. Department of the Interior (DOI) Reviewers		
Brown, William Y.	Chief Environmental Officer	BOEM
Hildreth, Emily	Policy Analyst	BOEM
Krevor, Brian	Lead Environmental Protection Specialist	BOEM
Melendez-Arreaga, Pedro	Lead Attorney-Advisor, Office of the Solicitor	DOI
Morin, Michelle	Chief, Environmental Branch for Renewable Energy	BOEM
Ottman, Noel	Attorney-Advisor, Office of the Solicitor	DOI
Sebastian, Robert	Attorney-Advisor, Office of the Solicitor	DOI
Stromberg, Jessica	Deputy Chief, Environmental Branch for Renewable Energy	DOI
Cooperating and Participating Agency Reviewers		
Boeri, Robert	Project Review Coordinator/Dredging Coordinator	Massachusetts Office of Coastal Zone Management
Brien, Ruthann	Regulatory Project Manager	U.S. Army Corps of Engineers (USACE)
Butler, Ryan	Lieutenant Commander	U.S. Coast Guard (USCG)
DeMeo, Sharon	Region 1 Staff	Environmental Protection Agency (USEPA)
Desautels, Michele	District 1 Staff	USCG
Gaito, Danielle	Region 1 Staff	USEPA
Haight, Terra	Ocean and Lakes Policy Analyst	New York State Department of State
Heckman, Andrea	Lead Environmental Protection Specialist	Bureau of Safety and Environmental Enforcement (BSEE)
Krueger, Mary	Energy Specialist, Interior Region 1, North Atlantic-Appalachian	National Park Service

Name	Title	Agency
McLean, Laura	Ocean and Lakes Policy Analyst	New York State Department of State
Pentony, Michael	Regional Administrator	National Marine Fisheries Service
Sinclair, Jim	Marine Ecologist	BSEE
Sparkman, Christopher	Marine Information Specialist	USCG
Teixeira, Stacy	Coast Guard Officer/Emergency Management	USCG
Timmermann, Timothy	Director, Office of Environmental Review, New England-Region 1	USEPA
Tuttle, Graham	Marine Protected Species Program National Lead	BSEE
West, Stephen	Commander	USCG

Table L-3. Consultants

Name	Company	Role/Resource Area
Ackerman, Caitlyn	ICF	Environmental Justice
Bartlett, Alex	ICF	Wetlands
Borgida, Julia	ICF	Demographics, Employment, and Economics
Coleman, Randall	ICF	Project Manager
Crawford, Karen	ICF	Cultural Resources and Section 106 Lead
Diller, Elizabeth	ICF	Project Director
Ernst, David	ICF	Air Quality
Gleaton, Soniya	ICF	Comment Processing
Ha, Anthony	ICF	Publications Specialist
Hatfield, Teresa	ICF	Navigation and Vessel Traffic
Johnson, David	ICF	Deputy Project Manager
Jost, Rebecca	ICF	Other Uses
Lanza, Robert	ICF	Planned Activities Scenario
Lundstrom, Kristen	ICF	Editor
Mendoza, Tiffany	ICF	Public Involvement
McCoy, Maureen	ICF	Cultural Resources and Section 106 Support
Muntz, Alice	ICF	Cultural Resources and Section 106 Support
Neidhart, Anna	ICF	Land Use and Coastal Infrastructure
Panter, Dara	ICF	Recreation and Tourism
Paulson, Merlyn	ICF	Scenic and Visual Resources
Schanel, Pam	ICF	Public Involvement

Name	Company	Role/Resource Area
Slankard, Scott	ICF	Water Quality
Thoene, Jason	ICF	Geographic Information Systems
Weaver, Alexis	ICF	Project Coordinator
Berkman, Stephanie	RPS (formerly)	Sea Turtles
Dauksis, Russell	RPS	Benthic Resources, Sea Turtles
Davies, Stephen	RPS	Commercial Fisheries, Finfish and Invertebrates, Marine Mammals
DiPreta, Gabrielle	RPS	Bats, Birds, Marine Mammals, Benthic Resources
Garvey, Derek	RPS	Finfish and Invertebrates, Sea Turtles
McMahon, Adrianna	RPS (formerly)	Coastal Habitats and Fauna
Morandi, Alicia	RPS	Project Manager, Reviewer, Sea Turtles, Marine Mammals, Coastal Habitats and Fauna
Rowe, Jill	RPS	Project Manager, Reviewer, Coastal Habitats and Fauna, Benthic Resources
Zottoli, Joe	RPS (formerly)	Finfish and Invertebrates, Commercial Fisheries

Appendix M: Distribution List

This Draft Environmental Impact Statement (EIS) is available in electronic form for public viewing at https://www.boem.gov/mayflower-wind. Hard copies and digital copies of the EIS can be requested by contacting the Program Manager, Office of Renewable Energy in Sterling, Virginia. Publication of this draft EIS initiates a 45-day comment period where government agencies, members of the public, and interested stakeholders can provide comments and input. The Bureau of Ocean Energy Management (BOEM) will accept comments in any of the following ways:

- In hard copy form, delivered by hand or by mail, enclosed in an envelope labeled "Mayflower Wind COP EIS" and addressed to Program Manager, Office of Renewable Energy, Bureau of Ocean Energy Management, 45600 Woodland Road, Sterling, Virginia 20166.
- Through the regulations.gov web portal by navigating to http://www.regulations.gov and searching for docket number "BOEM-2023-0011." Click the "Comment" button to the right of the document link. Enter your information and comment, then click "Submit Comment."
- By attending one of the EIS public meetings on the dates listed in the notice of availability and providing written or verbal comments.

BOEM will use comments received during the public comment period to inform its preparation of the final EIS, as appropriate. EIS notification lists for the Project are provided in Table M-1 through Table M-5.

M.1 Notification List

Table M-1. Federal agencies

Agency	Contact
Cooperating Federal Agencies	
Army Corps of Engineers	Naomi Handell, Regulatory Program Manager, USACE North Atlantic Division Ruthann Brien, Regulatory Division, New England District
Bureau of Safety and Environmental Enforcement	Jordan Creed, FAST-41 Coordinator Andrea Heckman, Office of Environmental Compliance
Environmental Protection Agency	Timothy Timmerman, NEPA Program Manager, Region 1
National Marine Fisheries Service	Sue Tuxbury, Fishery Biologist/Wind Coordinator, Greater Atlantic Regional Fisheries Office, Habitat and Ecosystems Services Division
United States Coast Guard	Michele Desautels, District 1
Participating Federal Agencies	
Fish and Wildlife Service	Audrey Mayer, Field Supervisor, New England Field Office Jane Ledwin, Infrastructure Streamlining Coordinator
National Park Service	Mary Krueger, Energy Specialist, Project Lead

Agency	Contact
Department of Navy	Matt Senska, Director, Marine Resources and At-Sea Policy
Department of Defense	Steven Sample, Executive Director, Department of Defense Siting Clearinghouse
Advisory Council on Historic Preservation	Blythe Semmer, Assistant Director for Special Initiatives

Table M-2. State agencies

Agency	Contact
Cooperating State Agencies	
Massachusetts Office of Coastal Zone Management	Lisa Engler, Director
Rhode Island Coastal Resources Management Council	Jeffrey Willis, Executive Director
State of New York Department of State	Michael Snyder, Ocean and Great Lakes Program Manager Terra Haight, Ocean and Lakes Policy Analyst

Table M-3. Tribes and Native organizations

Tribal	Contact
Delaware Tribe of Indians	Brad KillsCrow, Chief Susan Bachor, Archaeologist, Deputy Tribal Historic Preservation Officer Representative
Mashantucket Pequot Tribal Nation	Rodney Butler, Chairman Michael Kickingbear Johnson, Acting Tribal Historic Preservation Officer
Mashpee Wampanoag Tribe	David Weeden, Tribal Historic Preservation Officer Jessie Baird, Vice Chairwoman
Mohegan Tribe of Indians of Connecticut	James Gessner, Chairman James Quinn, Tribal Historic Preservation Officer
The Narragansett Indian Tribe	John Brown, Tribal Historic Preservation Officer Dinalyn Spears, Natural Resource Manager Anthony Dean Stanton, Sachem
The Shinnecock Indian Nation	Bryan Polite, Chairman Jeremy Dennis, Acting Tribal Historic Preservation Officer
Wampanoag Tribe of Gay Head (Aquinnah)	Cheryl Andrews-Maltais, Chairwoman Bettina Washington, Tribal Historic Preservation Officer Al Clark, Vice-Chair Kevin Devine, Tribal Councilperson
Chappaquiddick Tribe of Wampanoag Nation	Alexis Moreis, Tribal Historic Preservation Officer Penny Gamble-Williams, Tribal Councilwoman

Table M-4. Public libraries

Public Library	Address
Falmouth Public Library	300 Main St, Falmouth, MA 02540
Somerset Public Library	1464 County St, Somerset, MA 02726
Portsmouth Free Public Library	2658 E Main Rd, Portsmouth, RI 02871
Middletown Public Library	700 W Main Rd, Middletown, RI 02842
Tiverton Public Library	34 Roosevelt Ave, Tiverton, RI 02878
Brownell Library	44 Commons St, Little Compton, RI 02837
Nantucket Atheneum	1 India St, Nantucket, MA 02554
Vineyard Haven Public Library	200 Main St, Vineyard Haven, MA 02568

Table M-5. Section 106 consulting parties

Government or Organization	Participating Consulting Parties	Contact
SHPOs and State Agencies	Massachusetts Historical Commission	Brona Simon, SHPO Ed Bell, Deputy SHPO
	Rhode Island Historical Preservation & Heritage Commission	Jeffrey Emidy, Deputy SHPO Elizabeth Totten, Project Review Coordinator
	Massachusetts Board of Underwater Archaeological Resources	David S. Robinson, Chief Archaeologist/State Underwater Archaeologist
Federal Agencies	Advisory Council on Historic Preservation	Christopher Daniel, Program Analyst
	Bureau of Safety and Environmental Enforcement (BSEE)	W. Shawn Arnold, Federal Preservation Officer/Senior Marine Archaeologist
	National Park Service	Kathy Schlegel, Historical Landscape Architect Sherry Freer, Chief of the National Register and NHL Program Mary Krueger, Energy Specialist
	US Army Corps of Engineers	Christine Jacek, Regulatory Division
Federally Recognized Tribes	See Table M-3	See Table M-3
Local Government	Cape Cod Commission	Jordan Velozo, Chief Regulatory Officer Sarah Korjeff, Historic Preservation Specialist
	City of East Providence, Rhode Island	Roberto DaSilva, Mayor
	City of New Bedford and New Bedford Port Authority	Blair Bailey, General Counsel
	Cultural Heritage Partners, PLLC (Representing Town of Nantucket;	Will Cook, Counsel

Government or Organization	Participating Consulting Parties	Contact
	Nantucket Planning & Economic Development Commission)	
	Martha's Vineyard Commission	Bill Veno, Senior Planner Dan Doyle, Special Projects Planner
	Nantucket Historic District Commission	Diane Coombs, District Section 106 Representative
	Nantucket Historical Commission	Hillary Hedges Rayport, Chair Tom Montgomery, Representative
	Nantucket Planning & Economic Development Commission	Holly Backus, Preservation Planner
	Town of Aquinnah, Massachusetts	Jeffrey Madison, Town Administrator Gisele Gauthier, Consultant
	Town of Barnstable, Historical Commission	George Jessop, Member Cheryl Powell, Member
	Town of Bristol, Rhode Island	Greg Marsili, Harbor Master
	Town of Falmouth	Jed Cornock, Town Planner
	Town of Falmouth Historical Commission	Ed Haddad, Chairman
	Town of Jamestown, RI	Lisa Bryer, Town Planner Jaimie Hainsworth, Town Administrator
	Town of Middletown, RI	Wendy Marshall, Town Clerk
	Town of Nantucket	Lauren Sinatra, Energy Coordinator
	Town of South Kingstown	Theresa Murphy, Interim Town Manager Lucas Murray, Director of Administrative Services
	Town of Somerset, Historical Commission	James O'Rourke, Chairman
	Town of Swansea, MA	Mallory Aronstein, Town Administrator
	Town of Warren, RI	Anthony DeSisto, Town Solicitor Kate Michaud, Town Manager
	Town of Westport, MA	Jim Hartnett, Town Administrator
Nongovernmental Organizations or Groups	Alliance to Protect Nantucket Sound (APNS)	Audra Parker, President and CEO Sandy Taylor, Executive Assistant
	Gay Head Lighthouse Advisory Board	Len Butler, Chairman Richard Skidmore, Co-Chairman
	Mayflower Wind, LLC	Jennifer Flood, Offshore Permitting Manager
	Nantucket Preservation Trust	Mary Bergman, Executive Director
	The Maria Mitchell Association	Joanna Roche, Executive Director