



Draft Construction and Operations Plan Addendum for the Phase 2 Offshore Export Cable Corridor South Coast Variant

Appendices

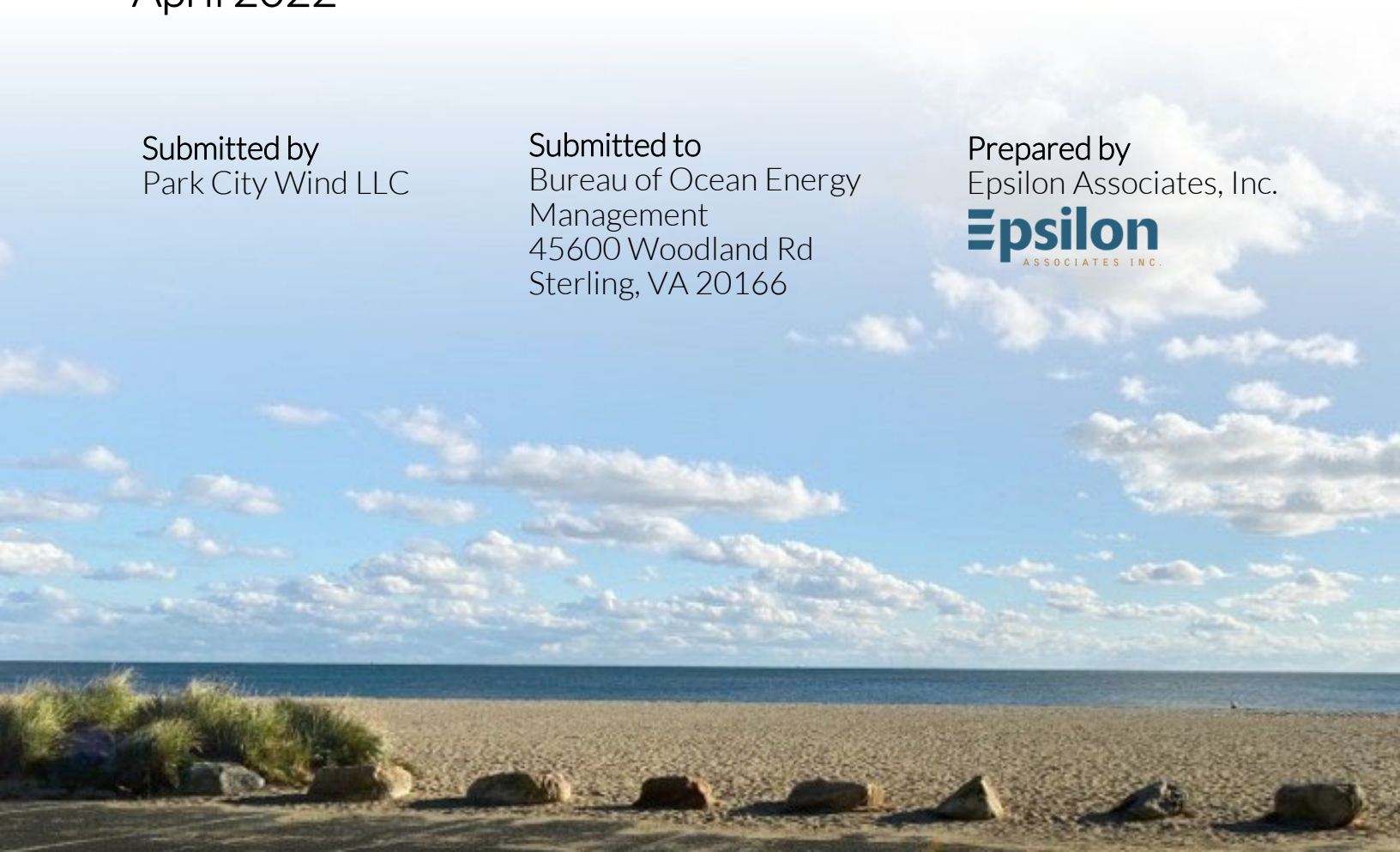
April 2022

Submitted by
Park City Wind LLC

Submitted to
Bureau of Ocean Energy
Management
45600 Woodland Rd
Sterling, VA 20166

Prepared by
Epsilon Associates, Inc.

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ASSOCIATES INC.





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April 2022

New England Wind
Benthic Habitat Monitoring Plan Framework
Phase 2 OECC South Coast Variant

Prepared for:

Park City Wind LLC

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April 2022

APPENDIX I BENTHIC HABITAT MONITORING PLAN FRAMEWORK

1.0 Overview

New England Wind is the proposal to develop offshore renewable wind energy facilities in Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0534 along with associated offshore and onshore cabling, onshore substations, and onshore operations and maintenance (O&M) facilities. New England Wind will be developed in two Phases: Phase 1 (also known as Park City Wind) and Phase 2 (also known as Commonwealth Wind). Four or five offshore export cables (two for Phase 1 and two or three for Phase 2) will transmit electricity generated by the wind turbine generators (WTGs) to onshore transmission systems (see Figure 1). Park City Wind LLC, a wholly owned subsidiary of Avangrid Renewables, LLC, is the Proponent and will be responsible for the construction, operation, and decommissioning of New England Wind.

The Proponent has identified an Offshore Export Cable Corridor (OECC) for the installation of the offshore export cables (see Figure 1). The OECC travels north from Lease Area OCS-A 0534 along the eastern side of Muskeget Channel towards landfall sites in the Town of Barnstable, Massachusetts. The expected grid interconnection point for both Phases of New England Wind is the West Barnstable Substation. While the Proponent intends to install all Phase 2 offshore export cables within this OECC, the Proponent has identified two variations of the OECC that may be employed for Phase 2: the Western Muskeget Variant (which passes along the western side of Muskeget Channel) and the South Coast Variant (which connects to a potential second grid interconnection point) (see Figure 1). These variations are necessary to provide the Proponent with commercial flexibility should technical, logistical, grid interconnection, or other unforeseen issues arise during the Construction and Operations Plan (COP) review and engineering processes.

The Proponent has submitted a draft benthic monitoring framework for the OECC in Appendix III-U of the New England Wind COP Volume III. The purpose of this appendix is to provide the benthic habitat monitoring framework for the South Coast Variant in federal waters for New England Wind. The South Coast Variant monitoring will largely follow the monitoring framework developed for the OECC as described in Appendix III-U of COP Volume III.

1.1 **Overview of the Phase 2 OECC South Coast Variant**

As shown in Figure 1, the South Coast Variant diverges from the OECC at the northern boundary of Lease Area OCS-A 0501 and travels west-northwest to the state waters boundary near Buzzards Bay. From the Southern Wind Development Area (SWDA)¹ boundary (excluding the two separate

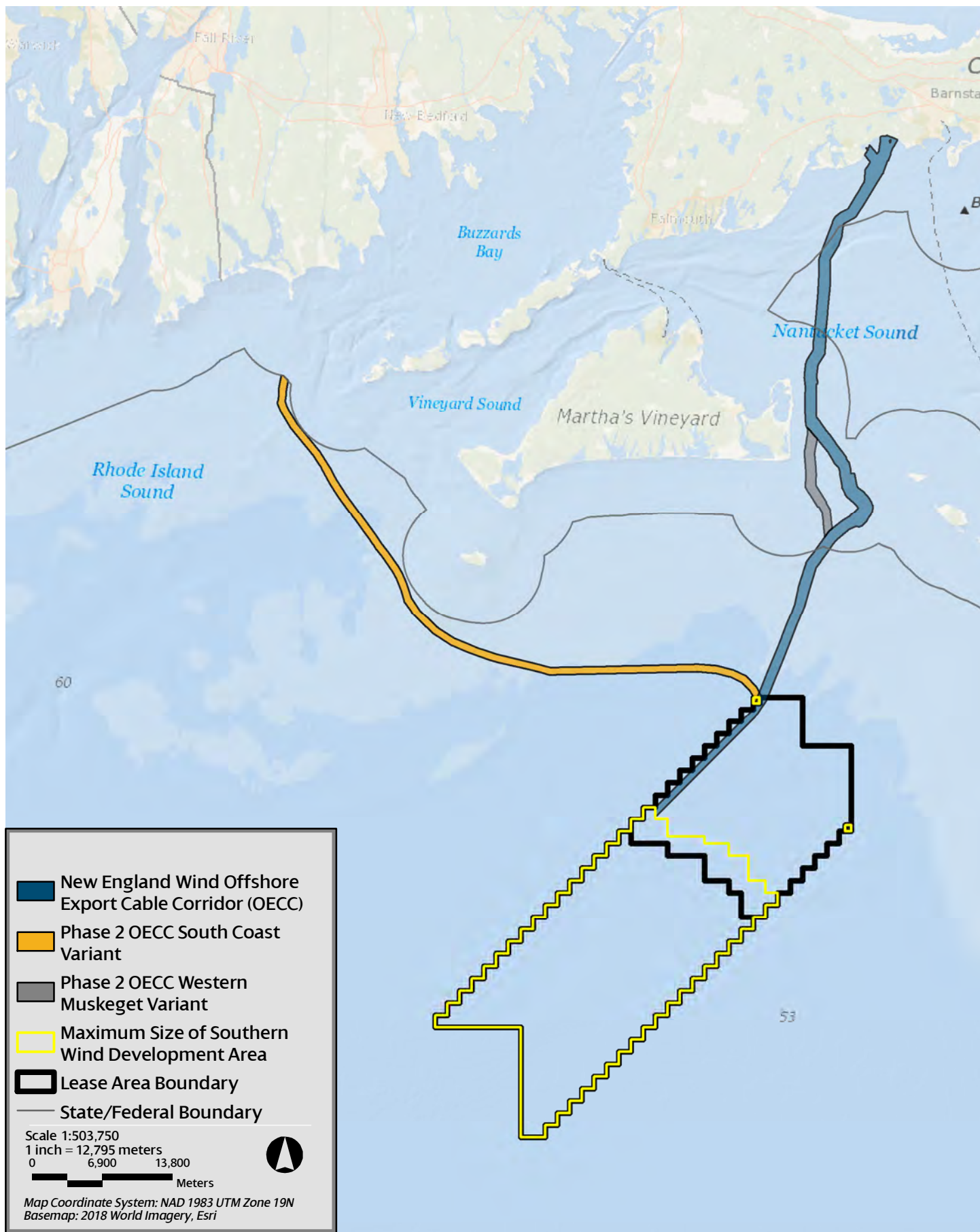
¹ New England Wind will occupy all of Lease Area OCS-A 0534 and potentially a portion of Lease Area OCS-A 0501 in the event that Vineyard Wind 1 does not develop “spare” or extra positions included in Lease Area OCS-A 0501 and Vineyard Wind 1 assigns those positions to Lease Area OCS-A 0534. For the purposes of the COP, the

aliquots that are closer to shore) through federal waters to the state waters boundary, the South Coast Variant is approximately 79 km (42 NM) in length and approximately 720 m (2,360 ft) in width.

At the state waters boundary, the South Coast Variant broadens to a “Phase 2 South Coast Variant Offshore Routing Envelope” that indicates a region within Buzzards Bay where the Phase 2 offshore export cable(s) may be installed before making landfall along the southwest coast of Massachusetts within the Offshore Routing Envelope. If it becomes necessary to employ the South Coast Variant and a second grid interconnection point is secured, the Proponent understands that BOEM would conduct a supplemental review of the South Coast Variant within state waters and the corresponding onshore route(s) to the second grid interconnection point.

The South Coast Variant is included in this COP Addendum to provide the Proponent with the commercial flexibility required should unforeseen issues arise that preclude one or more Phase 2 export cables from interconnecting at the West Barnstable Substation. If the South Coast Variant is used for Phase 2, there will either be: (1) one export cable installed in the South Coast Variant and two export cables installed in the OECC, (2) two export cables installed in the South Coast Variant and one export cable installed in the OECC, or (3) three export cables installed in the South Coast Variant.

SWDA is defined as all of Lease Area OCS-A 0534 and the southwest portion of Lease Area OCS-A 0501, as shown in Figure 1.



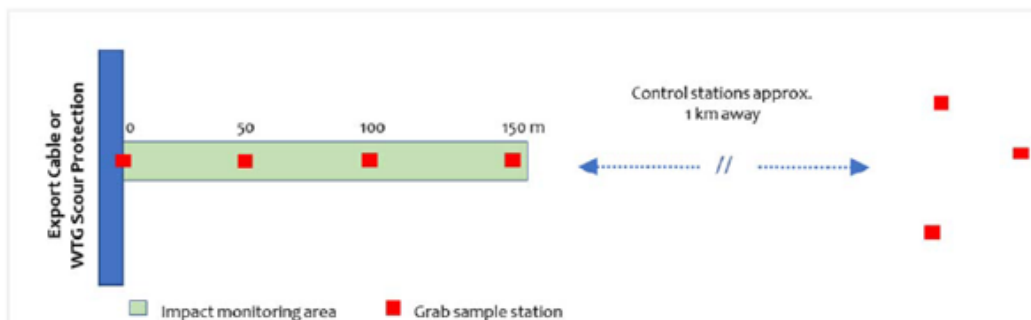
2.0 Benthic Habitat Monitoring

The Proponent is committed to developing an appropriate benthic habitat monitoring plan (BHMP) for the South Coast Variant in consultation with federal and state agencies. The plan will be implemented if the South Coast Variant is used. The framework for the plan, as presented herein, provides a guide for additional agency consultations. The Proponent also envisions that the current framework will be expanded in the future to include the state waters portion of the South Coast Variant.

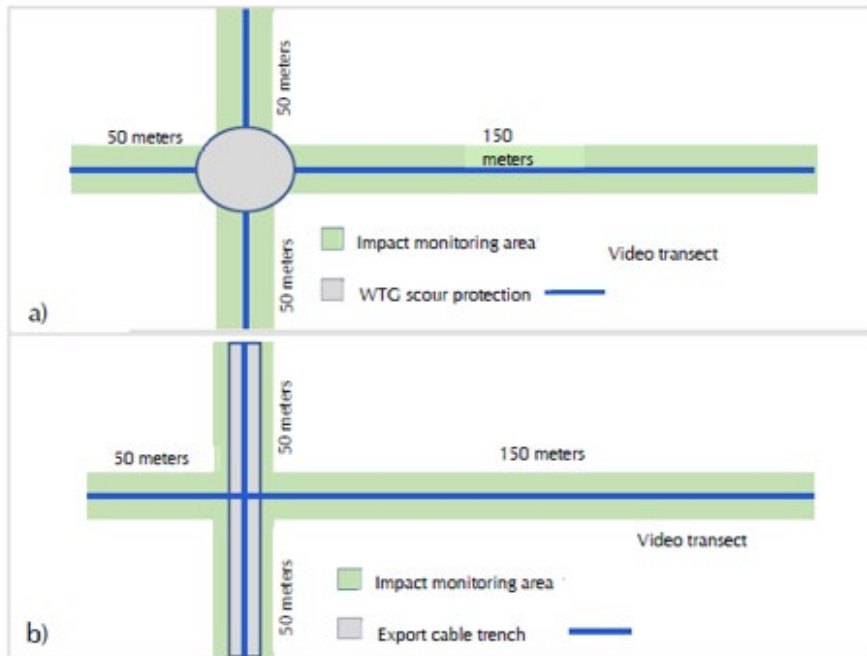
2.1 Background

The South Coast Variant monitoring will largely follow the monitoring framework developed for the OECC as described in Appendix III-U of COP Volume III, which is based on the approved BHMP for Vineyard Wind 1 (Figure 2 and Figure 3). The BHMP will utilize a combination Before-After-Control-Impact (BACI) and gradient design.

Figure 2. Infauna Benthic Grab Sampling for Vineyard Wind I.



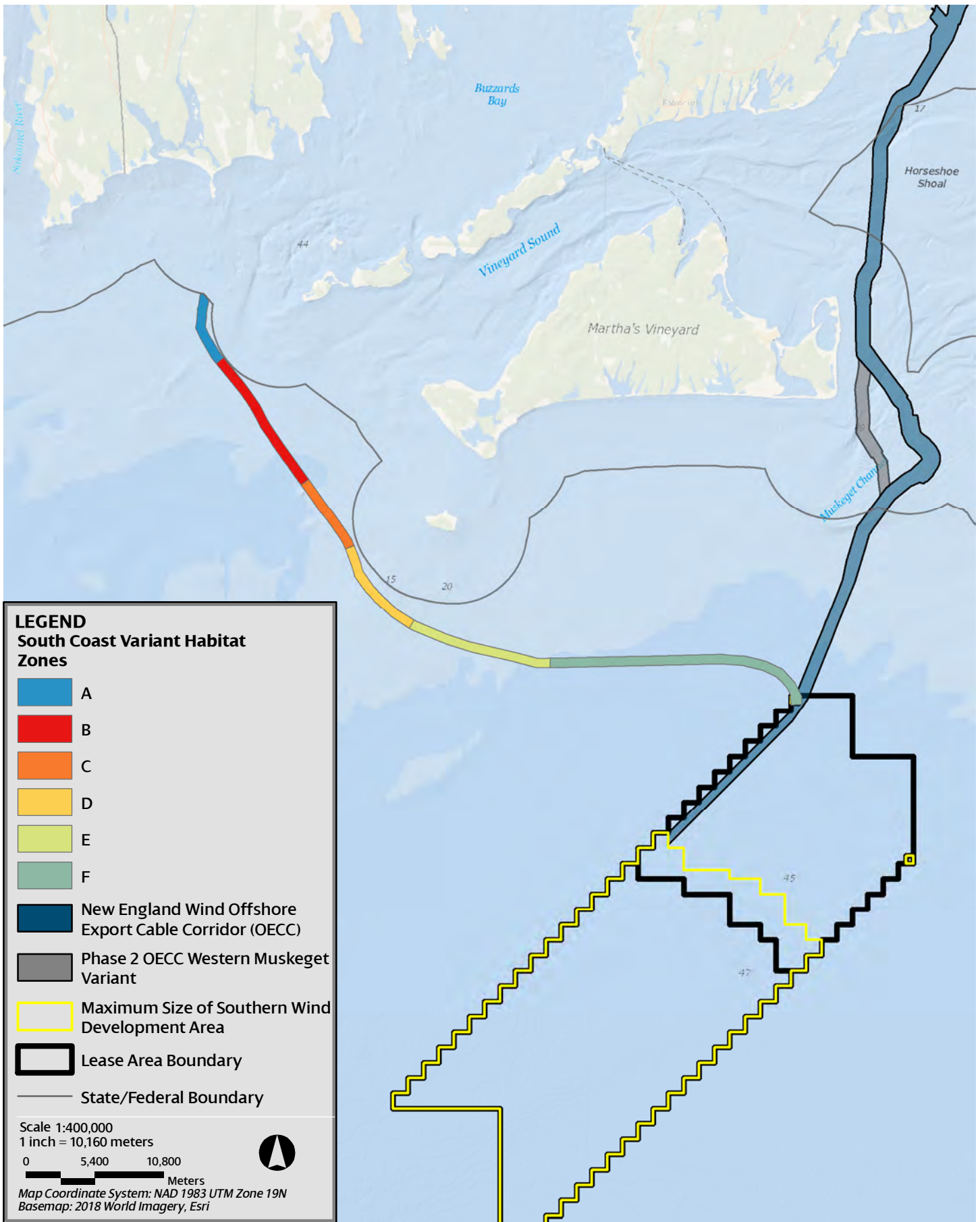
Schematic of infauna benthic grab sampling layout. The expected potential impact area covers approximately 150 m out from the base of the wind turbine generator WTG scour protection or export cable. Each red square represents a sample station at which three replicate benthic grab samples will be obtained. Control stations will be placed 1 km away for all OECC transects, with WDA control stations placed outside the WDA boundary.



Schematic of epifauna/benthic habitat video survey layout. One transect extends 150 m out from the base of the wind turbine generator WTG scour protection (a) or export cable trench (b) over the same locations where grab sampling occurs. Shorter transects (50 m) will radiate from the WTG and along/ across the export cable to capture a more complete picture of the area of disturbance.

Figure 3. Epifauna/Benthic Habitat Video Survey Layout for Vineyard Wind I.

The South Coast Variant traverses six habitat zones (A – F), which are used to stratify sampling based on site-specific survey data (Figure 4). For additional information on the six habitat zones, see Table 2.1-1 of Appendix A of the COP Addendum. Sampling transects will be placed within the habitat zones and the specific number of sampling transect required will be assessed based on a power analysis using site-specific survey data. Sampling transects will extend up to 820 feet (250 m) from the direct impact location (i.e., the cable trench). This distance is slightly longer than used for the OECC and Vineyard Wind 1 and is based on sediment transport modeling completed for the South Coast Variant, which predicted deposition above 1 mm thickness would occur at a maximum distance of 655 feet (200 m) of the route centerline.



Each selected monitoring site will include grab sample stations spaced evenly apart, with three replicate grabs collected at each station. The number of grab sample stations and the distances between them will be determined after the power analysis. For illustrative purposes, Figure 5 displays six grab sample stations per transect, spaced 50 m apart. Underwater video and multibeam data would be collected for 330 feet (100 m) along the cable route and 984 feet (300 m) perpendicular to the cable in a “t” shape mirroring the approved design from the Vineyard Wind 1 BHMP (Figure 5).

Data collected along the South Coast Variant cable would assess recovery by comparing conditions at various distances from the impact source to the community metrics at control sites located a minimum of 1 km from the route centerline. Statistical analyses would be performed to determine the significance of any changes to benthic community metrics (e.g., abundance, diversity, or other indicator). Grain size, epibenthic species composition, and seafloor morphology and structure would also be monitored and qualitatively compared.

Sampling would occur pre-construction and following construction Year 1, Year 3, and possibly Year 5. Year 5 sampling would occur if recovery is not documented in Year 3.

New England Wind Phase 2 (Commonwealth Wind) SCV

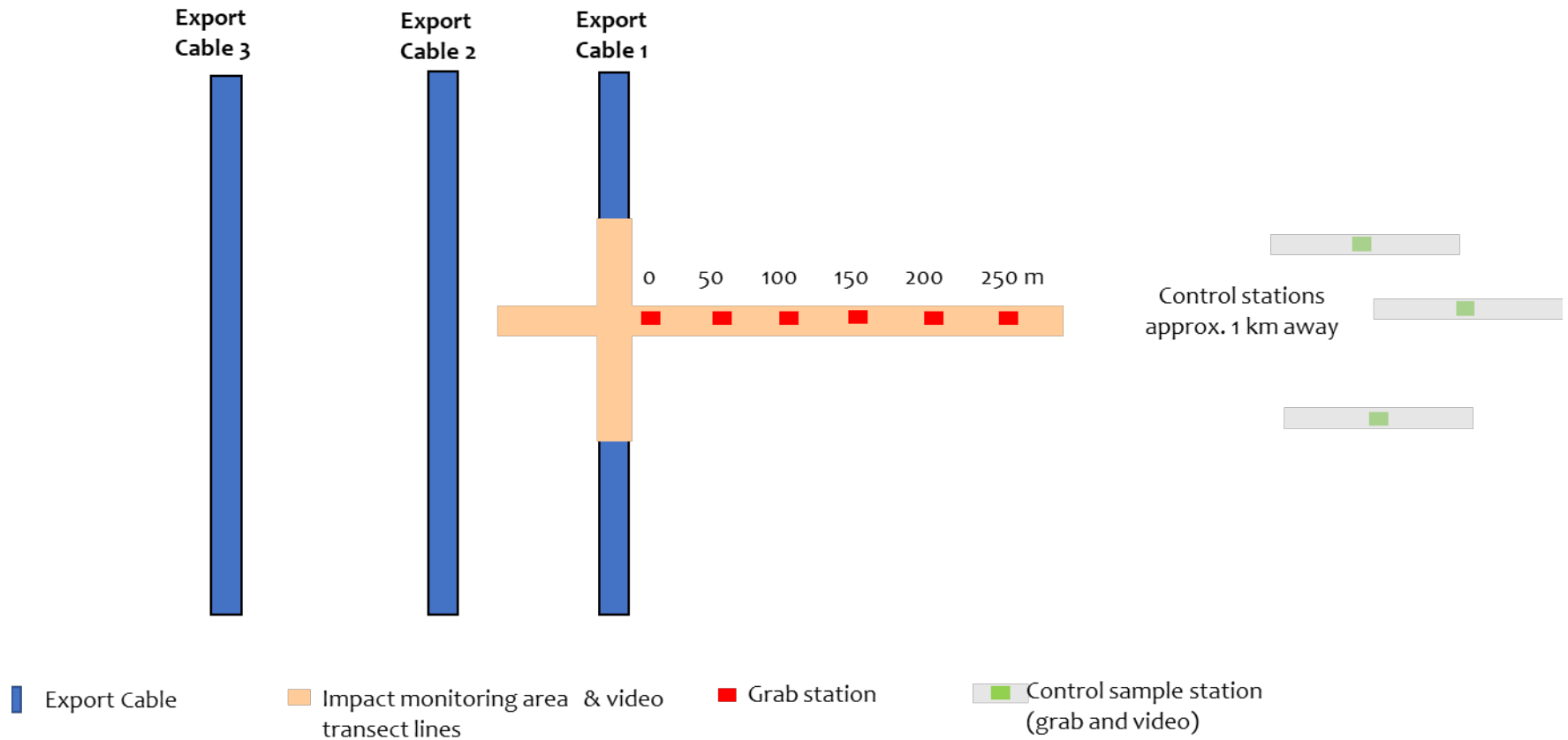


Figure 5. Proposed Benthic Habitat Sampling Framework for the South Coast Variant Route