

CONSTRUCTION AND OPERATIONS PLAN

Coastal Virginia Offshore Wind Commercial Project

Appendix G

Terrestrial Archaeological Resources Assessment

Prepared for:



707 East Main Street
Richmond, VA 23219

Prepared by:



Tetra Tech, Inc.
4101 Cox Road, Suite 120
Glen Allen, VA 23060

www.tetrattech.com

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APPENDIX G TERRESTRIAL ARCHAEOLOGICAL RESOURCES ASSESSMENT REVISION LOG			
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TABLE OF CONTENTS

G.1	Introduction.....	G-1
G.1.1	Purpose of Study.....	G-3
G.1.2	Proposed Project.....	G-3
	G.1.2.1 Offshore Project Components.....	G-4
	G.1.2.2 Onshore Project Components.....	G-4
G.2	Terrestrial Archaeological Resources Assessment.....	G-12
G.2.1	Consultations and Meetings.....	G-12
	G.2.1.1 Survey Plan.....	G-14
	G.2.1.2 NAS Oceana ARPA Permit.....	G-15
	G.2.1.3 SMR Consultation.....	G-16
G.2.2	Outreach and Engagement.....	G-16
G.2.3	Preliminary Area of Potential Effect.....	G-18
G.3	Environmental Setting, Cultural Contexts, and Previous Surveys.....	G-20
G.3.1	Environmental Setting.....	G-20
	G.3.1.1 Physiography and Geology.....	G-20
	G.3.1.2 Soils.....	G-21
	G.3.1.3 Hydrology.....	G-21
G.3.2	Pre-contact Context.....	G-21
	G.3.2.1 Paleoindian Period (14,950–9950 B.P.).....	G-22
	G.3.2.2 Archaic Period (9950–3150 B.P.).....	G-22
	G.3.2.3 Woodland Period (3150–350 B.P.).....	G-24
G.3.3	Post-Contact Context.....	G-25
	G.3.3.1 Settlement to Society (1607–1750).....	G-26
	G.3.3.2 Colony to Nation (1750–1789).....	G-27
	G.3.3.3 Early National Period (1789–1830).....	G-27
	G.3.3.4 Antebellum Period and Civil War (1830–1865).....	G-27
	G.3.3.5 Reconstruction (1870–1916).....	G-28
	G.3.3.6 World War I to World War II (1917–1945).....	G-28
	G.3.3.7 Native Peoples in the Twentieth Century.....	G-28
G.3.4	Previous Surveys.....	G-30
G.4	Assessments and Findings.....	G-47
G.4.1	Phase IA Assessment.....	G-47
G.4.2	Phase IB Reconnaissance.....	G-48
	G.4.2.1 Cable Landing Location.....	G-51
	G.4.2.2 Onshore Export Cable Route.....	G-52
	G.4.2.3 Switching Station.....	G-56
	G.4.2.4 Interconnection Cable Route.....	G-58
	G.4.2.5 Onshore Substation.....	G-66
	G.4.2.6 Laydown Yard.....	G-67
	G.4.2.7 Former Potential Interconnection Cable Routes.....	G-68

G.5	Summary and Recommendations	G-70
G.6	References	74

TABLES

Table G-1.	TARA-Related Consultation Meetings and Communications.....	G-13
Table G-2.	Summary of Previously Identified Archaeological Sites within 1 Mile of the PAPE	G-32
Table G-3.	Previously Identified Archaeological Sites within the PAPE.....	G-32
Table G-4.	Previously Identified Archaeological Sites within 1 Mile of the PAPE	G-33
Table G-5.	Previous Archaeological Surveys Within the PAPE	G-44
Table G-6.	Previously Identified Archaeological Sites, Onshore Export Cable Route.....	G-52
Table G-7.	Newly Identified Archaeological Resources, Onshore Export Cable Route	G-53
Table G-8.	Previously Identified Archaeological Sites, Interconnection Cable Route	G-58
Table G-9.	Newly Identified Archaeological Resources, Interconnection Cable Route.....	G-59
Table G-10.	Archaeological Sites Within Route 1 PAPE.....	G-71
Table G-11.	Archaeological Sites Surveyed Outside Route 1 PAPE	G-73

FIGURES

Figure G-1.	CVOW Commercial Project.....	G-2
Figure G-2.	Final Onshore Project Components and PAPE.....	G-6
Figure G-3.	Cable Landing Location	G-7
Figure G-4.	Onshore Export Cable Route	G-9
Figure G-5.	Preferred Interconnection Cable Route.....	G-11
Figure G-6.	Previously Identified Archaeological Sites Within 1 Mile of the Original PAPE	G-31

ATTACHMENTS

Attachment G-1	Draft Unanticipated Discoveries Plan, Terrestrial Archaeological Resources
Attachment G-2	Historic Maps and Aerial Photographs
Attachment G-3	Survey Units Table
Attachment G-4	Shovel Test Catalog
Attachment G-5	Artifact Catalog
Attachment G-6	Photographs
Attachment G-7	Phase IB Mapbook
Attachment G-8	Ground Penetrating Radar Survey Summary Memo
Attachment G-9	Avoidance, Minimization, and Monitoring Plan – Terrestrial Archaeological Resources

ACRONYMS AND ABBREVIATIONS

ac	acre
A.D.	Anno Domini
APE	Area of Potential Effect
ARPA	Archaeological Resources Protection Act
B.C.	before Christ
B.P.	before Present
BOEM	Bureau of Ocean Energy Management
CFR	Code of Federal Regulations
CHP	Cultural Heritage Partners
COP	Construction and Operations Plan
CVOW	Coastal Virginia Offshore Wind Commercial Project
Dominion Energy	Virginia Electric and Power Company, d/b/a Dominion Energy Virginia
DSPT	direct steerable pipe thrusting
ft	feet
GIS	geographic information system
GPR	Ground penetrating radar
ha	hectare
HDD	horizontal directional drilling
km	kilometer
kV	kilovolt
Lease Area	the OCS-A 0483 Lease, located approximately 27 mi (23.75 nautical miles, 43.99 kilometers) off the coast of Virginia and includes approximately 112,799 acres (45,658 hectares) of submerged lands
m	meter
mi	statute mile
MW	megawatt
NPS	National Park Service
NAS	Naval Air Station
the Nation	Nansemond Indian Nation
NED	National Elevation Dataset
NEPA	National Environmental Policy Act
NHD	National Hydrology Dataset
NHPA	National Historic Preservation Act
nm	nautical mile
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OCS	Outer Continental Shelf
OH	overhead
O&M	Operations & Maintenance
PAPE	Preliminary Area of Potential Effect
PDE	Project Design Envelope
PMT	Portsmouth Marine Terminal
POI	Point of Interconnection
Project	Coastal Virginia Offshore Wind Commercial Project

ROW	right-of-way
SCC	State Corporation Commission
SMR	State Military Reservation
ST	shovel test
Survey Plan	Terrestrial Archaeological Resources Assessment Survey Plan
TARA	Terrestrial Archaeological Resources Assessment
Tetra Tech	Tetra Tech, Inc.
UDP	Unanticipated Discoveries Plan
UG	underground
USDA	United States Department of Agriculture
VCRIS	Virginia Cultural Resources Information System
VDHR	Virginia Department of Historic Resources
VLR	Virginia Landmarks Register
VPA	Virginia Port Authority
WTG	wind turbine generator

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G.1 INTRODUCTION

Tetra Tech, Inc. (Tetra Tech) was retained by the Virginia Electric and Power Company, doing business as Dominion Energy Virginia (Dominion Energy), to undertake the Terrestrial Archaeological Resources Assessment (TARA) for the Coastal Virginia Offshore Wind (CVOW) Commercial Project (the Project), an offshore wind energy project within the area leased by Dominion Energy in the Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS) offshore Virginia (Lease No. OCS-A-0483, Lease Area) (Figure G-1) as well as in federal and state territorial waters of Virginia and onshore in Virginia Beach and Chesapeake, Virginia.

The TARA was undertaken in two phases: a Phase IA assessment and a Phase IB reconnaissance. Tetra Tech undertook a literature review, site reconnaissance, and archaeological sensitivity assessment for the Phase IA TARA. Between May 17 and May 21, 2021, Tetra Tech performed a field reconnaissance to assess the archaeological sensitivity of the Project's preliminary area of potential effect (PAPE). The results of the Phase IA assessment informed the strategy for the Phase IB survey. The Phase IB survey was carried out between July 2021 and August 2022.

Adam Maskevich, Ph.D., RPA serves as the principal investigator for the Project. Fieldwork was conducted by Dr. Maskevich, Sarah Haugh, Evan Robinson, Rachael Smith, Cara Pozo-Insuasti, Nate Matthews, Katelyn Hoisington, Kristen Walls, Zach Lourdon, Rory Wheaton, and Ryan Donnelly. This report was prepared by Dr. Maskevich, Ms. Haugh, Robert Jacoby, M.A., RPA, Christopher Borstel, Ph.D., RPA, and Gail Ostapczuk, M.A., RPA. Supervisory personnel for this survey exceeded the professional qualifications listed in the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 Fed. Reg. 44716) for principal investigators in archaeology. Key personnel have previous experience in coastal archaeology and the archaeology of Virginia.

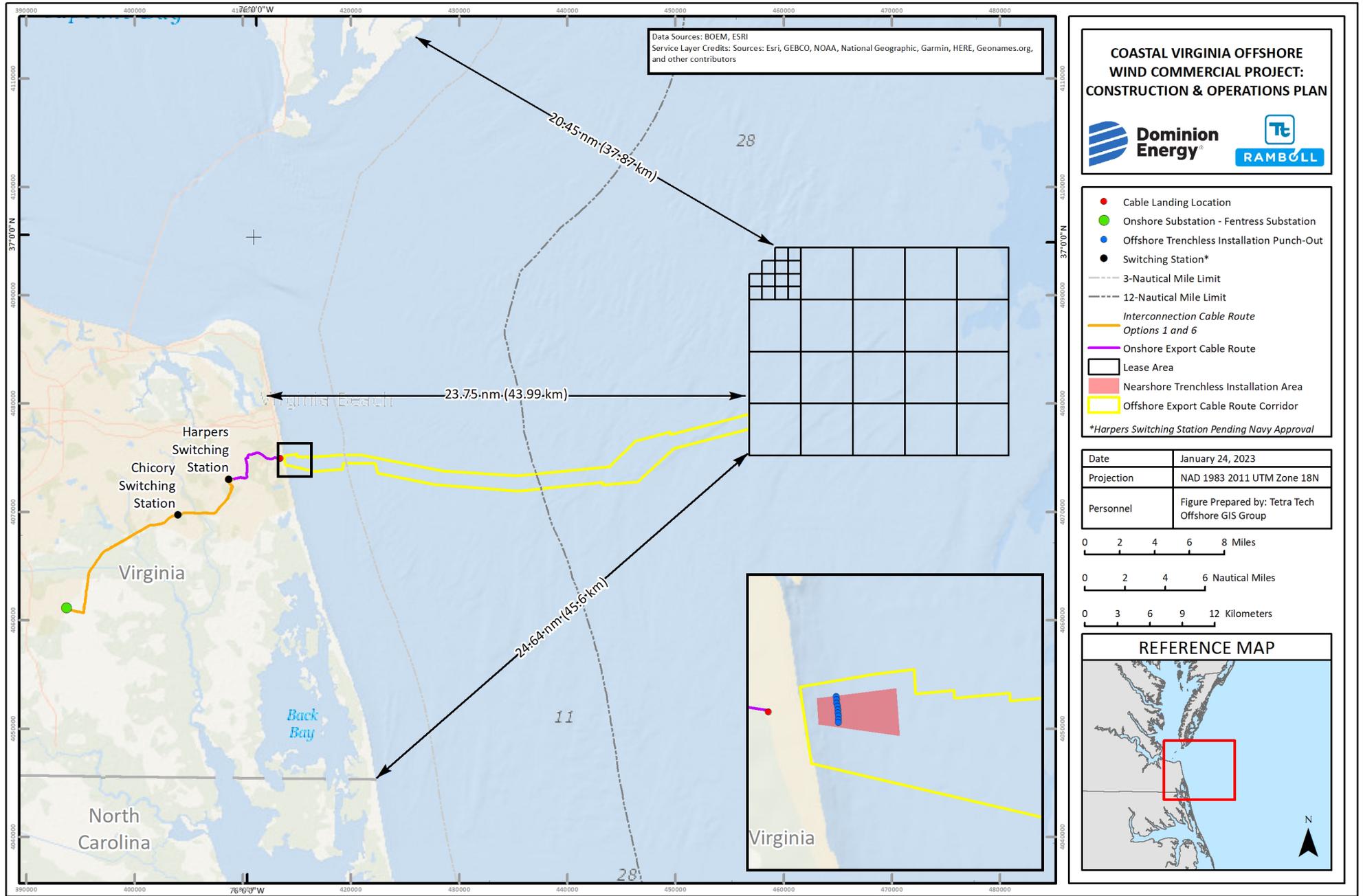


Figure G-1. CVOW Commercial Project

G.1.1 Purpose of Study

The purpose of the TARA is to determine the presence or absence of archaeological resources within the PAPE and to assess the Project's potential effects on archaeological resources listed on or eligible for listing on the National Register of Historic Places (NRHP). This TARA includes a description of archaeological resources identified during the Phase IB survey and an assessment of potential impacts and appropriate avoidance or mitigation measures for archaeological resources listed in or eligible for listing on the NRHP.

The TARA is required under the BOEM *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585* (BOEM 2020), and it is anticipated to support the integration of the Section 106 process (36 Code of Federal Regulations [CFR] Part 800) of the National Historic Preservation Act (NHPA) of 1966, as amended with analyses required under the National Environmental Policy Act (NEPA). Coordination of the Section 106 process and NEPA reflects longstanding agency practice and was most recently endorsed by BOEM in December 2020 as the federal agency's preferred approach. The TARA is conducted pursuant to Section 106 of the NHPA (54 United States Code § 306108), 36 CFR Part 800, and the Virginia Antiquities Act (§ 10.1-2300 Code of Virginia) and is performed in accordance with BOEM *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585* (BOEM 2020) and Virginia Department of Historic Resources (VDHR), which serves as the State Historic Preservation Office in Virginia, *Guidelines for Conducting Historic Resources Survey in Virginia* (VDHR 2011).

G.1.2 Proposed Project

The Project will be located in the OCS Lease Area, which was awarded to Dominion Energy through the BOEM competitive renewable energy lease auction of the Wind Energy Area offshore of Virginia in 2013. The Lease Area covers approximately 112,799 acres (ac; 45,648 hectares [ha]) and is approximately 27 miles (mi; 23.75 nautical miles [nm], 43.99 kilometers [km]) off the Virginia Beach coastline.

Dominion Energy has adopted a Project Design Envelope (PDE) approach to describe Project facilities and activities. A PDE is defined as “a reasonable range of project designs” associated with various components of the project (e.g., foundation and wind turbine generator [WTG, or wind turbine] options) (BOEM 2018). The PDE is then used to assess the potential impacts on key environmental and human use resources (e.g., marine mammals, fish, benthic habitats, commercial fisheries, navigation, etc.) focusing on the design parameter (within the defined range) that represents the greatest potential impact (i.e., the “maximum design scenario”) for each unique resource (Rowe et al. 2017). The primary goal of applying a design envelope is to allow for meaningful assessments by the jurisdictional agencies of the proposed project elements and activities while concurrently providing the Lessee reasonable flexibility to make prudent development and design decisions prior to construction. This conservative approach likely overstates the actual impact to environmental and human use resources from the ultimate Project following alternatives refinement and implementation of any selected avoidance, minimization, and mitigation measures. The following sections provide a brief review of the Offshore Project Components and details of the Onshore Project Components. While additional options for the Switching Station and Interconnection Cable Route were analyzed in the COP, the PAPE, for the purposes of the TARA, analyzes the Preferred Options only.

G.1.2.1 Offshore Project Components

Offshore components of the Project will comprise of:

- Up to 202 WTGs, with a maximum WTG capacity of 16 MW, and associated WTG Monopile Foundations; Preferred Layout is 176 WTGs, with a WTG capacity of 14.7 MW, with seven locations identified as spare positions;
- Three Offshore Substations and associated Offshore Substation Jacket Foundations;
- Up to 300 mi (484 km) total length of Inter-Array Cables (average Inter-Array Cable length of 5,868 feet (ft); 1,789 meters [m]) between turbines; and
- Up to nine buried, submarine, high-voltage alternating current Offshore Export Cables.

The maximum tip height of the WTGs would be 869 ft (265 m), the maximum rotor diameter would be 761 ft (232 m), and a corresponding hub height would be 489 ft (149 m). The PDE maximum design scenario under consideration for the Offshore Substations is three substations, each with a rated capacity of up to 900 MW and a height no greater than 177 ft (54 m).

Within the Lease Area, the WTGs will generate electricity that would be transferred to the Offshore Substations via a series of Inter-Array Cables. The Offshore Substations would then transform the power to a higher voltage for transmission and transport to shore by the Offshore Export Cables. The Offshore Export Cables will be brought ashore via trenchless installation (Direct Steerable Pipe Thrusting [DSPT]) at the Cable Landing Location, where they will transition into the Onshore Export Cables.

G.1.2.2 Onshore Project Components

Onshore Project Components are located within the City of Virginia Beach and the City of Chesapeake, Virginia (Figure G-2).

Onshore components of the Project will consist of the following as further detailed in this section:

- One Cable Landing Location;
- Up to 27 Onshore Export Cables along one route from the Cable Landing Location to a Common Location north of Harpers Road;
- A Switching Station to be located either north of Harpers Road (Harpers Switching Station; Preferred) or north of Princess Anne Road (Chicory Switching Station);
- Triple-circuit Interconnection Cables from the Harpers Switching Station or Chicory Switching Station to the Onshore Substation (Fentress Substation); and
- An existing Onshore Substation that will require facility expansion/upgrades to accommodate the power generated by the Project.

G.1.2.2.1 Cable Landing Location

The intersection of the Offshore Export Cables and Onshore Export Cables would occur at the Cable Landing Location, located west of the Firing Range at the State Military Reservation (SMR), in Virginia Beach, Virginia (Figure G-3). Dominion Energy plans to use Trenchless Installation to install the Offshore Export Cable under the beach and dune from the Offshore Trenchless Installation Punch-Out approximately 1,000 to 1,800 ft (305 to 549 m) offshore of the Cable Landing Location to a maximum depth of 125 ft (38

m) below grade. The Offshore Export Cables would be brought to shore through a series of conduits. Upon exiting the conduits, the nine 230-kilovolt (kV) Offshore Export Cables would be spliced to a series of nine separate single-circuit vaults laid in a single right-of-way (ROW) and transition to the Onshore Export Cables at the Cable Landing Location.

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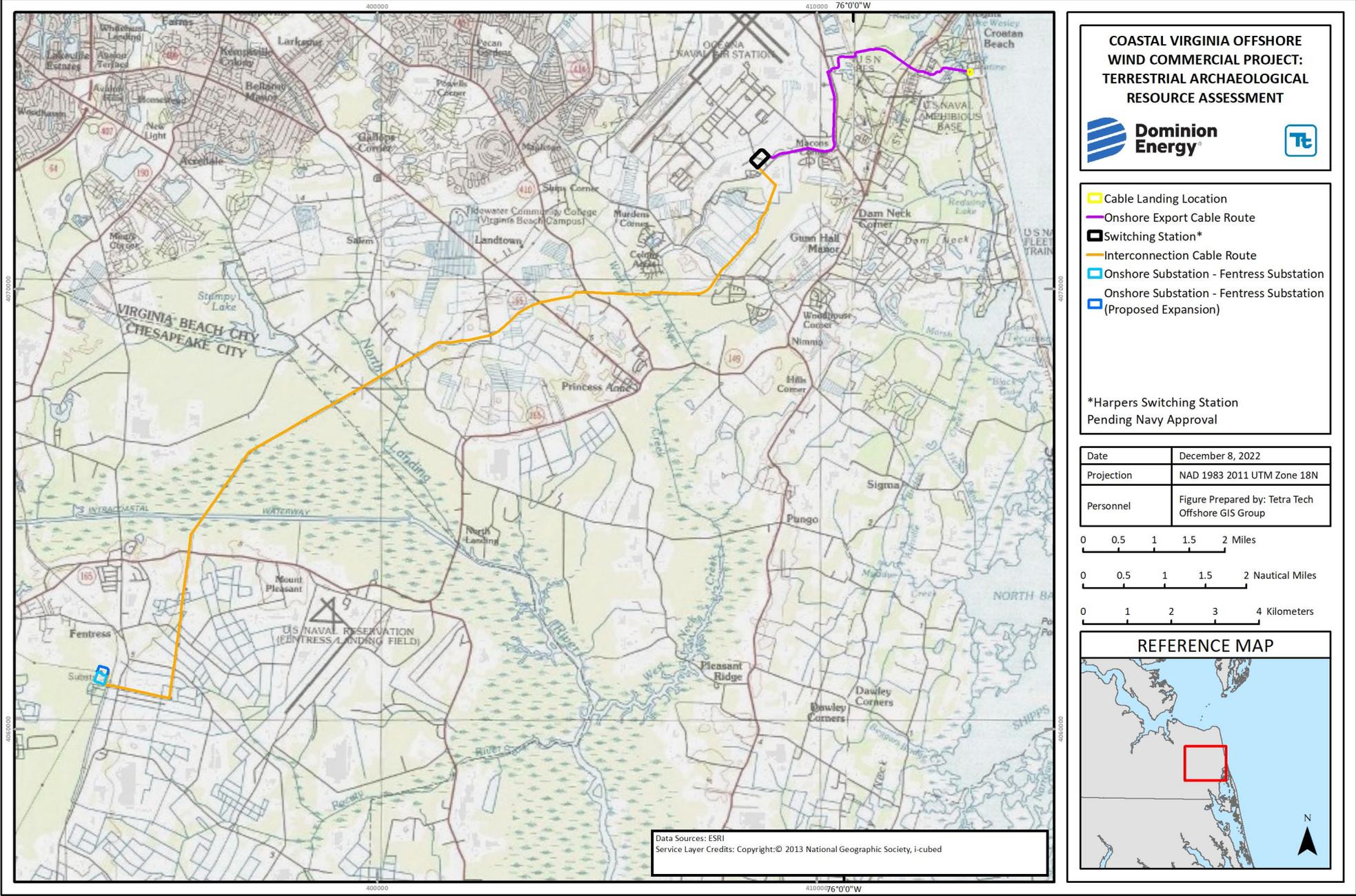
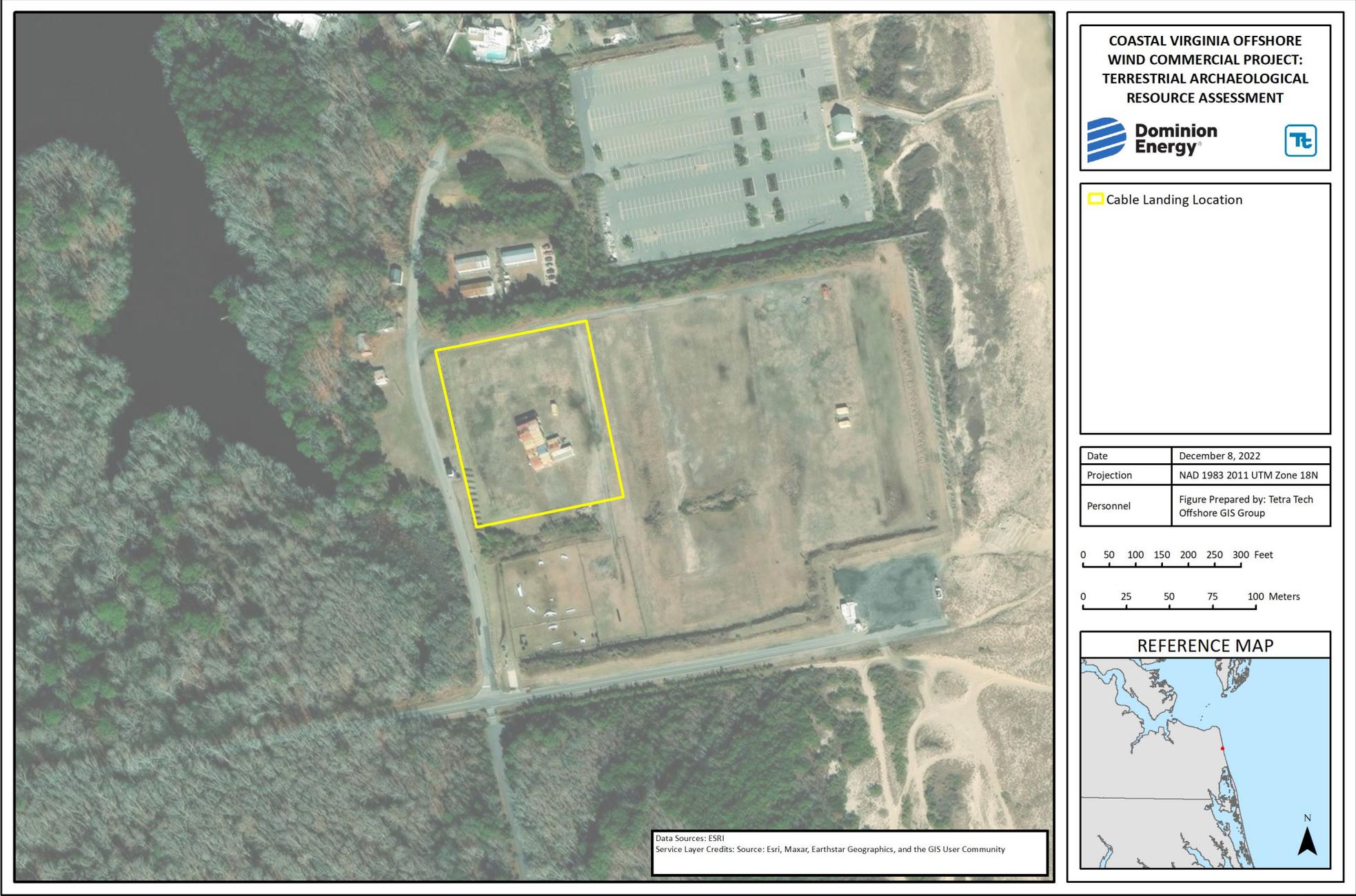


Figure G-2. Final Onshore Project Components and PAPE



NOT FOR CONSTRUCTION
Figure G-3. Cable Landing Location

G.1.2.2.2 Onshore Export Cable Route

The Onshore Export Cables will transfer the electricity from the Cable Landing Location at the Proposed Parking Lot west of the Firing Range at SMR, in Virginia Beach, Virginia to a Common Location north of Harpers Road and would be comprised of 27 single-phase Onshore Export Cables with an operating voltage of 230 kV (maximum of 241.5 kV) installed underground within the Onshore Export Cable Route Corridor (Figure G-4). The Onshore Export Cable Route will Horizontal Directionally Drill (HDD) below Lake Christine, running northwest through SMR land, then crossing to General Booth Boulevard just south of the Virginia Aquarium with an HDD below Owl's Creek and following Bells Road, then crossing to South Birdneck Road and, pending U.S. Navy (Navy) approval, onto the Naval Air Station (NAS) Oceana Parcel from the east. From the NAS Oceana Parcel, the route proceeds south along Oceana Boulevard, then west along Harpers Road to a Common Location north of Harpers Road.

The Onshore Export Cable Route is approximately 4.41 mi (7.10 km) long and the operational corridor will be approximately 49 ac (20 ha). The maximum proposed depth of disturbance for a typical open trench ductbank is 13 ft (4 m) below grade. The Onshore Export Cable will be installed within three separate ductbanks, each ranging from 5 to 10 ft (1.5 to 3 m) wide. The maximum area of temporary disturbance for the Onshore Export Cable is anticipated to be approximately 26.6 ac (10.8 ha).

G.1.2.2.3 Switching Station

The Preferred Switching Station is proposed to be constructed either north of Harpers Road (Harpers Switching Station, Preferred) in Virginia Beach, Virginia (Figure G-2). Only one switching station will be constructed. The Switching Station will collect power and convert an underground cable configuration to an overhead configuration. The power will then be transmitted to the existing Onshore Substation location for distribution to the grid.

The Switching Station will be an aboveground, fenced facility containing electrical components and associated site development stormwater management facilities/storage ponds. The facility and its components will generally have the appearance of a typical larger Dominion Energy substation.

The operational footprint of the Harpers Switching Station is anticipated to be approximately 31.4 ac (12.7 ha), which includes 7.1 ac (2.9 ha) for stormwater management facilities, 6.1 ac (2.5 ha) for relocation of fairways and a maintenance building associated with the adjacent golf course, and 0.8 ac (0.3 ha) for relocation of Dewey Drive.

The Switching Station will serve as a transition point where the power transmitted through 27 230-kV Onshore Export Cables with an operating voltage of 230 kV coming from the Cable Landing Location will be collected to three Interconnection Cables with an operating voltage of 230 kV that will connect to the expanded Onshore Substation at Fentress, to be finally stepped up to 500 kV.

The Switching Station will contain both static pole steel structures and backbone foundations. The maximum depth for vibrated/driven pipe piles is anticipated to be 30 ft (9 m) for the static pole steel structures and 50 ft (15 m) for the backbone structures. The maximum areas of land disturbance associated with construction activities at the Switching Station is anticipated to be approximately 45.4 ac (18.4 ha), inclusive of stormwater management facilities.

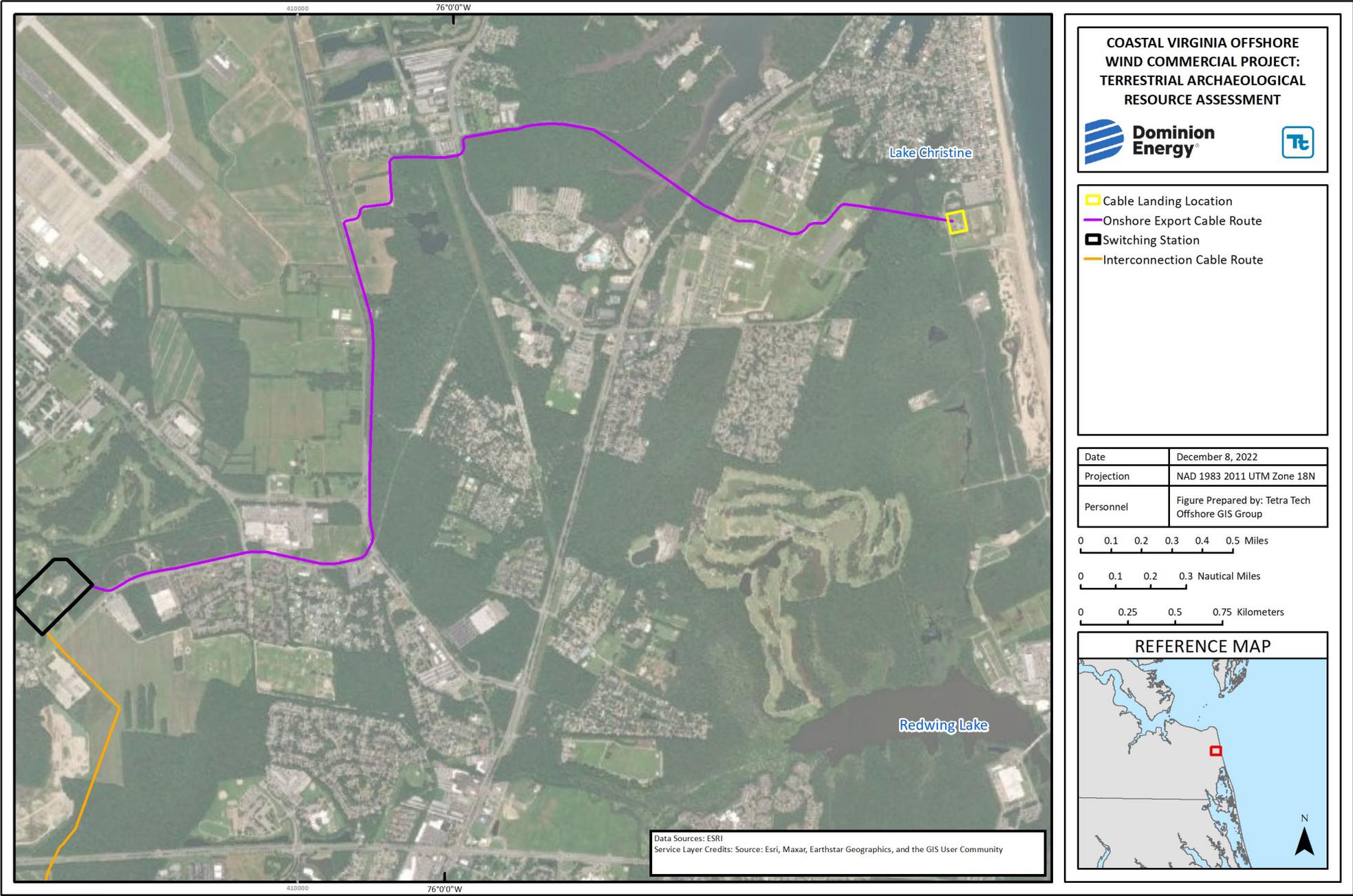


Figure G-4. Onshore Export Cable Route

G.1.2.2.4 Interconnection Cable Route

A triple-circuit transmission line with an operating voltage of 230 kV will be constructed from the Harpers Switching Station along the Interconnection Cable Route Corridor to the expanded/upgraded Onshore Substation at Fentress (Figure G-5). The Preferred Alternative for the Interconnection Cable will be installed as all overhead transmission facilities.

Dominion Energy anticipates that a maximum construction and operational corridor width of 250 ft (76.2 m) will be needed for the overhead cables. Existing ROWs will be utilized to the extent practical. Maximum vertical disturbance depth for the overhead Interconnection Cable Route, which will be associated with the vibrated/driven pipe piles for engineered steel monopole structures, is anticipated to be 60 ft (18 m) to 80 ft (24 m).

G.1.2.2.5 Onshore Substation

The Onshore Substation (Fentress Substation) will be expanded/upgraded and is located northwest of the intersection at Centerville Turnpike and Etheridge Manor Boulevard in Chesapeake, Virginia. The Onshore Substation will serve as the final Point of Intersection (POI) for power distribution to the Pennsylvania-New Jersey-Maryland Interconnection grid.

The Onshore Substation will require expansion/upgrades to accommodate the electricity from the Project. The current footprint of the Onshore Substation is approximately 11.7 ac (4.7 ha). The expansion/upgrades to the Onshore Substation footprint are anticipated to require an additional 15.2 ac (6.2 ha), which includes 6.2 ac (2.5 ha) associated with stormwater management facilities, for a total of 26.9 ac (10.9 ha). The Onshore Substation expansions/upgrades will serve as the POI for the three 230/500-kV transformers for connection into the grid.

The deepest foundations for the Onshore Substation will be the backbone foundations. The maximum depth for vibrated/driven pipe piles is anticipated to be 50 ft (15 m) for the backbone structures. The maximum areas of land disturbance associated with construction activities at the Onshore Substation is anticipated to be approximately 21.4 ac (8.7 ha).

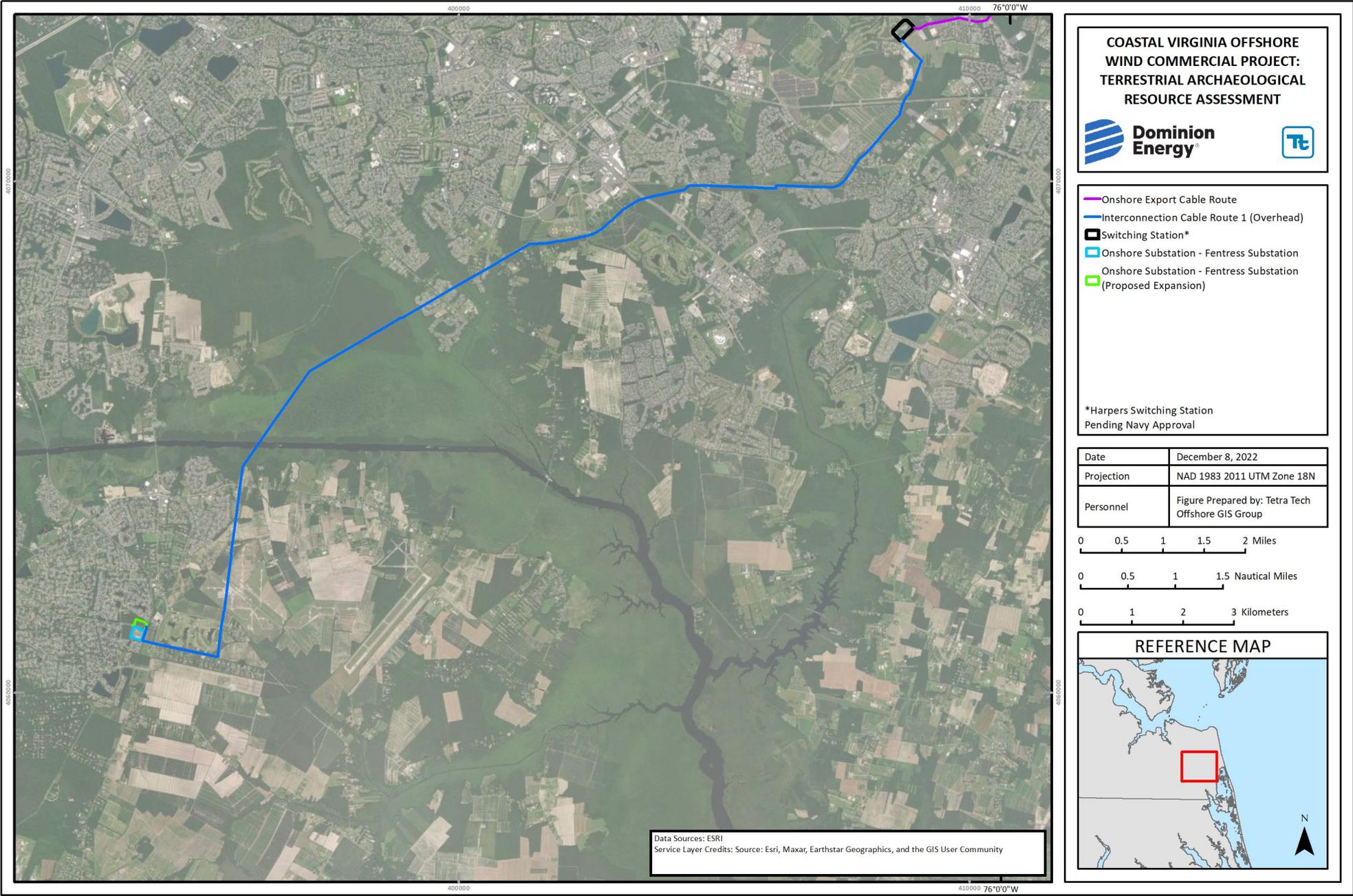


Figure G-5. Preferred Interconnection Cable Route

G.1.2.2.6 Construction and Operations and Maintenance Ports

Dominion Energy and the Port of Virginia have executed a lease agreement for a portion of the existing Portsmouth Marine Terminal (PMT) facility in the City of Portsmouth, Virginia, to serve as a Construction Port. The Construction Port will be used to store monopiles and transition pieces and to store and pre-assemble WTG components. Dominion Energy understands that the Virginia Port Authority (VPA) is planning to improve PMT to support broad-scale offshore wind development. Dominion Energy anticipates that the port upgrades will meet the needs of Dominion Energy's efforts to construct an offshore wind farm off the coast of Virginia.

Dominion Energy has evaluated several options to lease portions of existing facilities in the Hampton Roads, Virginia Region for an Operations & Maintenance (O&M) Facility for the Project. After completing a Request for Proposal process, the selected lease location for the O&M Facility is Lambert's Point, now named Fairwinds Landing, which is located on a brownfield site in Norfolk, Virginia. Sublease discussions are ongoing in parallel with architecture and engineering designs with an anticipated completion date in first quarter 2023. Dominion Energy anticipates that they will require approximately 8 ac (3 ha) consisting of a building with an area of up to approximately 0.8 ac (0.3 ha), and a height of up to approximately 45 ft (13.7 m), a 16,000 square ft (1,486 square m) warehouse, and pier-side access for vessels (two crew transfer vessels [CTVs] and one Service Operation Vessel) in order to meet the needs of an O&M Facility for an offshore wind farm off the coast of Virginia.

For both PMT and the O&M Facility, in the event that upgrades or a new, build to suit facility is needed for any purpose, construction would be undertaken by the lessor and would be separately authorized, as needed.

G.2 TERRESTRIAL ARCHAEOLOGICAL RESOURCES ASSESSMENT

Preliminary steps in planning and undertaking the TARA included consultation and meetings with BOEM, VDHR, SMR, and the Navy, outreach and engagement with tribes, definition of the PAPE for the undertaking and developing a survey plan/research design for the TARA. These steps are discussed in more detail below.

G.2.1 Consultations and Meetings

The Project was first introduced to the VDHR on July 7, 2020, through a phone conversation between Roger Kirchen, VDHR Director, Division of Review and Compliance, and Sarah Haugh, Tetra Tech Cultural Resources Coordinator and Archaeologist. The conversation included discussion of the consultation process, coordination with the SMR, consulting parties, tribal consultation, and assessing visual impacts.

The Project was submitted to VDHR's Electronic Project Information Exchange system on November 16, 2020. The Project was assigned DHR File No. 2020-4849.

Since the introduction of the Project, Dominion Energy has hosted numerous cultural resources planning or engagement meetings. Communications and meetings held to date relative to the TARA are detailed in Table G-1.

Table G-1. TARA-Related Consultation Meetings and Communications

Date	Topic	Attendees
Meetings		
December 3, 2020	Cultural Resources Planning Call	BOEM, VDHR, other stakeholders and consultants
January 29, 2021	Terrestrial Archaeology Planning Call	VDHR and consultants
April 15, 2021	Tribal Engagement Groups Meeting	Tribes and consultants
July 16, 2021	Terrestrial Archaeology Planning Call	VDHR and consultants
August 6, 2021	NEPA/SCC Alignment Discussion	BOEM, VDHR, and consultants
September 2, 2021	Terrestrial Archaeology Planning Call	BOEM and consultants
September 23, 2021	Terrestrial Archaeology Planning Call	SMR, VDHR, and consultants
September 28, 2021	Cultural Resources Planning Call	SMR and consultants
October 6, 2021	Phased Identification Process Document Planning Call	BOEM and consultants
March 30, 2022	Section 106 Consultation Discussion	BOEM and consultants
April 19, 2022	Phased Identification Document Discussion	BOEM and consultants
June 22, 2022	Terrestrial Archaeology Planning Call	VDHR and consultants
June 22, 2022	Terrestrial Archaeology Planning Call	BOEM and consultants
July 14, 2022	Nansemond Indian Nation (Nation) Cultural Resources Meeting	Nation and consultants
July 27, 2022	Cultural Resources Workshop	BOEM and consultants
July 28, 2022	Tribal Nations Cultural Resources Meeting	Tribes and consultants
August 2, 2022	Tribal Nations Cultural Resources Meeting	Tribes and consultants
August 9, 2022	Cultural Resources Planning Call	BOEM and consultants
December 15, 2022	Section 106 Consultation Discussion	BOEM and consultants
Communications		
Date	Topic	Correspondents
November 16, 2020	Project Introduction and Preliminary Project Information	Dominion; NC SHPO
April 18, 2021	Data Needs for Section 106 Comments	BOEM; Dominion and Consultants
April 20, 2021	Environmental and Cultural Resources Field Surveys	Dominion; Landowners
April 21, 2021	Applicability of Previous Archaeological Investigations	VDHR; Tetra Tech
June 24, 2021	Route Selection in SMR Camp Pendleton	VDMA; Dominion
June 25, 2021	NOI Readiness Analysis	BOEM; Dominion and Consultants

August 2, 2021	Initial Scoping Comments	Nation; BOEM
August 24, 2021	Subsurface Shovel Testing Intervals in Moderate and Low Archaeological Sensitivity Areas	VDHR; Tetra Tech
August 26, 2021	Identification of Historic Cultural Properties	Dominion; VDMA
September 30, 2021	NOI Readiness Analysis	BOEM; Dominion and Consultants
March 24, 2022	Nation Notice of Participation	Nation; Dominion
June 13, 2022	Draft EIS Request for Information	BOEM; Dominion and Consultants
July 8, 2022	Section 106 Comments	BOEM; Dominion and Consultants
July 29, 2022	Phased Identification Plan Comments	BOEM; Dominion and Consultants
October 7, 2022	Approval of Site Forms	VDHR; Consultants
January 18, 2023	TARA UDP Comments	Kenah Consulting, Dominion and Consultants
February 17, 2023	TARA Comments	BOEM; Dominion and Consultants
February 24, 2023	TARA Comments	BOEM; Dominion and Consultants

These discussions aided in the development of and revisions to the TARA methodology and Survey Plan (Survey Plan), as well as the prior Section 106 Phased Identification Plan.

G.2.1.1 Survey Plan

The Survey Plan, which serves as the required VDHR Research Design, was submitted to BOEM and VDHR on April 1, 2021. BOEM comments on the Survey Plan were received on April 13, 2021. Comments concerned:

- Providing additional Project details relative to the horizontal and vertical limits of disturbance from construction of the Onshore Project Components;
- That all Onshore Project Components presented are considered part of the PDE and as a result will be considered part of the PAPE; and
- That the six sites previously determined potentially eligible and the 12 sites with undetermined NRHP eligibility (sites were based on a previous layout of the Onshore Project Components; current count is four potentially eligible and three with undetermined eligibility) are considered by BOEM as eligible for the NRHP, and thus historic properties, until VDHR has formally determined their eligibility. As a result, if the Project cannot avoid these resources, archaeological investigations may be required to determine their NRHP eligibility. BOEM requested that Dominion Energy's response to comments include a description of the archaeological investigation methods that will be used (i.e., Phase II evaluations) if these resources cannot be avoided, and detailed that if the routes (as described in the Survey Plan) will be considered as part of the PDE, and thus the PAPE, BOEM will require commitments to avoid these resources or detailed plans to evaluate these sites. Furthermore, if these resources are determined to be historic properties, BOEM

will require commitments to mitigate adverse effects in the anticipated terrestrial archaeology reports.

VDHR comments on the Survey Plan were received on May 12, 2021, and included:

- All archaeological and architectural surveys should conform to the VDHR Guidelines for Conducting Historic Resources Survey in Virginia (September 2017), identified resources recorded in the VDHR Virginia Cultural Resource Information System (VCRIS), and all necessary hardcopy survey materials and resulting reports submitted to VDHR for approval;
- Any probability model guiding Phase IB archaeological survey that proposes shovel testing at a substantially greater interval than 50 ft (15.2 m) should be approved by VDHR prior to implementation;
- Terrestrial archaeological investigations should include archaeological monitoring of the excavation of bore pits for Trenchless Installation; and
- Any archaeological investigations, including archaeological monitoring, on state-controlled land must be permitted by VDHR.

Dominion Energy revised the Survey Plan to address comments received from BOEM, to detail additional consultation with VDHR and the Navy including the Archaeological Resources Protection Act (ARPA) permit application, and to provide updated details of the Onshore Project Components that had been further refined since the original submittal in April 2021. The revised Survey Plan was submitted to BOEM and VDHR on September 27, 2021. Details of the Survey Plan methodology are discussed in Section 0 Objectives and Methodology.

A separate Mitigation Plan will be prepared as part of the Construction and Operations Plan (COP) to aid BOEM and VDHR in making decisions about the treatment and potential mitigation of terrestrial archaeological resources located within the PAPE. This Mitigation Plan is required under BOEM's *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585* (BOEM 2020) and is intended to support the integration of Section 106 and NEPA.

Additionally, in keeping with standard practices, an Unanticipated Discoveries Plan (UDP) for terrestrial archaeological resources will be in place during the construction and operation of the Project. The UDP outlines the procedures to follow in the event that cultural resources and/or human remains are encountered during construction of the Onshore Project Components. A revised draft UDP has been developed and is included as Attachment G-1 of this TARA. The UDP will be provided to BOEM, BOEM's Tribal Partners, VDHR, the Navy, and SMR for review and comment. The UDP will be updated following agency and stakeholder reviews and prior to construction.

G.2.1.2 NAS Oceana ARPA Permit

An ARPA Permit application for portions of the PAPE that fall within NAS Oceana was submitted to the Navy on September 15, 2021. The permit application was developed based on VDHR's *Guidelines* (2011), guidance provided during Navy and Dominion Energy Project conference calls on August 26, 2021 and September 2, 2021, and comments received from the Navy during draft permit application reviews. The ARPA Permit was approved on September 17, 2021 and was effective October 1, 2021 through August 30, 2022.

G.2.1.3 SMR Consultation

Consultation with SMR determined that neither a Phase I nor a Phase IB archaeological survey is necessary for portions of the PAPE within SMR property (Smead 2022). This is due to extensive previous surveys on the SMR, which have been submitted to VDHR and provide near full coverage of the property and the Project PAPE. A UDP for terrestrial archaeological resources will be in place during the construction and operation of the Project and will apply to the entire Project, including portions located within SMR.

G.2.2 Outreach and Engagement

Dominion Energy has contacted Native American tribes to invite them to be a part of the CVOW Commercial Project process and has hosted roundtables and provided periodic updates on the Project and the status of cultural resources investigations. Dominion Energy intends to continue tribal coordination and anticipates that this early and ongoing consultation will lead to a more streamlined and effective permitting process for the Project.

Relative to the TARA, federally and state-recognized Native American tribes were invited to a tribal engagement meeting on April 15, 2021. The purpose of the meeting was to review the survey plans and associated methodologies for the TARA, the Historic Resources Visual Effects Analysis, and the Visual Impacts Assessment, and request feedback relative to the plans and input regarding any cultural resources of concern.

Tribal inquiries related to cultural resources included a question on standard practices for finding marine archaeological resources, and a second question regarding whether Dominion Energy had considered the possibility of finding resources beneath existing roads. Dominion Energy relayed that they have a notification process for when cultural resources are found, a full Marine Archaeological Resources Assessment has been completed and a report of the findings and opportunity to discuss the assessment will take place in the future, archaeological monitoring is planned during construction within existing roadways, and a UDP will be in place for the Project that will outline the protocol to follow in case archaeological materials are encountered during construction, operation, or decommissioning of the Project.

Additional questions and discussion topics included plans for hurricanes and other severe weather, risks for offshore bird/bat strikes, and fishing habitat in the vicinity of the turbines. During the engagement meeting, attendees expressed appreciation for the early and thorough inclusion of tribes in Project planning.

The following Native American tribes attended the engagement meeting held on April 15, 2021:

- Chickahominy Indians Eastern Division,
- Chickahominy Indian Tribe,
- Upper Mattaponi Indian Tribe,
- Rappahannock Indian Tribe, and
- Nansemond Indian Nation.

Tribes who were invited but did not attend the engagement meeting include:

- Cheroenhaka Nottoway Indian Tribe,
- Eastern Shawnee Tribe of Oklahoma,

- Lenape Indian Tribe of Delaware,
- Mattaponi Tribe,
- Monacan Indian Nation,
- Narragansett Indian Tribe,
- Nottoway Indian Tribe of Virginia,
- Pamunkey Indian Tribe,
- Patawomeck Indian Tribe of Virginia,
- Shinnecock Indian Nation,
- Meherrin Indian Nation,
- Delaware Tribe of Indians,
- Delaware Nation, and
- Absentee Shawnee Tribe of Oklahoma.

Additional comments from the Nation related to the TARA have been submitted by Cultural Heritage Partners (CHP) on behalf of the Nansemond Indian Nation to BOEM and the State Corporation Commission (SCC) through federal and state review processes for the Project (CHP 2021, 2022a, 2022b).

BOEM received initial scoping comments in response to the July 2, 2021 Notice of Intent to Prepare an Environmental Impact Statement from CHP on August 2, 2021 (CHP 2021). Comments related to the TARA included:

- The Nansemond Indian Nation requests that the TARA, the MARA, and the cultural resources reports associated with the Site Assessment Plan (SAP) be provided to the Nation as soon as they are available to assist with their review of this project, and that when sensitive or non-public cultural resources documents are produced for this project in the future, that the Nation be provided with these documents promptly for review and comment.
- The Nansemond Indian Nation requests that evaluation of historic properties along the onshore route include an evaluation of whether properties might have associations with Nansemond families. This analysis should also include a review of literature from Frank Speck and James Mooney's visits with the Nansemond people in the late nineteenth and early twentieth centuries, as well as more recent scholarship focused on the tribe by Rountree, Albert Bell, Danielle Moretti-Langholtz, Nikki Bass, and others.

In response to the SCC's December 9, 2021 Order of Notice and Comment, the CHP filed a Notice of Participation on behalf of the Nation on February 25, 2022 and later filed testimony on March 25, 2022 (CHP 2022a). As it relates to the TARA, the Nation's filings stated

- The Nansemond Indian Nation has an interest in the onshore impacts of the Coastal Virginia Offshore Wind Project ("Project"), as the preferred transmission route and alternatives go through the Nation's ancestral lands. There are approximately fifteen (15) known Indigenous sites along or near the preferred route and alternatives in the Gum Swamp area, many of them from the Archaic period. These sites have historical significance and have the potential to be of cultural and religious significance to the Nation. The Nation has concerns regarding the prior surveys conducted at certain of these sites.

- The Nansemond Indian Nation also has an interest in any sites, artifacts, and human remains that may be discovered through future surveys done as part of the Project.
- The Nansemond Indian Nation requests that the State Corporation Commission and Dominion Energy coordinate with the Nation prior to conducting any Phase I or Phase II surveys or doing any construction.
- The Nansemond Indian Nation also requests that Dominion adopt an unanticipated discoveries plan for the Project survey and construction.
- The Nansemond Indian Nation stated that it prefers Route 1 as the route for the Project.
- Following receipt of the Nansemond Indian Nation's filings, Dominion Energy coordinated with the Nation to discuss its interests. Thereafter, Dominion Energy filed rebuttal testimony on April 22, 2022, thanking the Nation for its cooperation, agreeing with the Nation that Route 1 is the best route, and agreeing to continue to coordinate with the Nation regarding the archeological sites in which it has interests during the federal permitting process and during construction.

Subsequently, on March 25, 2022, the CHP communicated the direct testimony of Dr. Elizabeth T. Horton to Dominion Energy, also in response to the SCC's December 9, 2021 Order of Notice and Comment (CHP 2022b). Dr. Horton testified regarding terrestrial archaeological resources of concern to the Nansemond Indian Nation, specifically sites 44VB0274, 44CS0250, 44VB0162, 44CS0016, 44CS0156, and 44VB0290. Of these six previously recorded sites, three (44VB0274, 44CS0250, 44VB0162) are within the PAPE, and the concerns of the Nation via Dr. Horton's testimony were incorporated into the reevaluation of these sites carried out as part of the Phase IB survey.

Background research for the TARA has incorporated information gained from a literature review of the sources provided by the Nation. The TARA also assessed if survey findings have associations with Nansemond Indian Nation families using these sources, particularly Nikki Bass' research on the Deep Creek community and her approach of using land as foundation of identity (Bass 2017a).

G.2.3 Preliminary Area of Potential Effect

The TARA PAPE includes the Onshore Project Components (hereinafter referred to as the Project Area) and any associated construction ROW, work areas, and access roads (as shown in overview Figure G-2 through Figure G-5 and in detail in Attachment G-7, Pages 1 – 157). The PAPE was designed to include onshore portions of the Project where terrestrial archaeological resources may be subject to direct effects from construction, operations and maintenance, and decommissioning of the Project. The PAPE has included multiple Interconnection Cable route options and associated facilities that earlier were under consideration during the course of Project planning. Since October 2021, the TARA Phase IB excavations have focused on a single Onshore Interconnection Cable Route Alternative (Interconnection Cable Route Alternative 1, Preferred Alternative), which was selected by the SCC as the preferred route.

As detailed in Appendix DD, Section 106 Phased Identification Plan, the final PAPE was determined following SCC approval of the alignment of Onshore Project Components in August 2022, as well as any engineering or design changes. The SCC approved Alternative 1 as the preferred Interconnection Cable Route for the Project. The current PAPE has been updated to reflect Alternative Route 1 as the preferred

Interconnection Cable Route and the Harpers Switching Station as the preferred Switching Station. However, all Onshore Project Components were subject to terrestrial archaeological investigations unless the components were removed from consideration prior to initiating or during the investigations. If components were removed while the survey was taking place, any subsurface excavations that had been completed prior to the design change were included in the analysis and reporting for the Project.

To date, the PAPE has been refined three times through the course of TARA surveys. The original May 2021 Phase IA PAPE was subject to minor revision prior to commencing the Phase IB survey in July 2021. The July 2021 PAPE was refined in August 2021 and is the PAPE presented in the former version of the TARA submitted with the October 2021 COP. The current PAPE presented in this current TARA accounts for changes made to the Onshore Project Components since August 2022.

Objectives and Methodology

The purpose of the TARA is to aid BOEM and VDHR in making planning decisions about the significance and treatment of resources located within the PAPE. The survey is required under BOEM's *Guidelines* (2020) and is intended to support the integration of the Section 106 process (36 CFR 800) of the NHPA of 1966, as amended with analyses required under the NEPA.

Goals of the TARA are to perform an identification (Phase I) level of survey that will locate and identify archaeological sites within the PAPE, estimate the size and boundaries of identified sites as practicable, assess the need for further investigation of identified sites, and make recommendations for avoidance, minimization, and mitigation measures.

The TARA methodology detailed in the Survey Plan generally includes background research, tribal engagement, field surveys including visual reconnaissance and subsurface testing, data analysis, and reporting. The methods proposed are in accordance with VDHR's *Guidelines* (2011). Two additions to the methodology presented in the Survey Plan were agreed to during the July 16, 2021 Terrestrial Archaeology Planning call with VDHR, Dominion Energy, and Tetra Tech, and an email communication between VDHR and Tetra Tech on August 24, 2021. These additions include specific predictive modeling parameters that, paired with field verification, will inform a stratified subsurface testing strategy and a modification to the standard 50-ft (15-m) shovel testing interval in areas of low to moderate archaeological sensitivity.

The following parameters were used for predictive modeling:

- High archaeological sensitivity, full coverage subsurface testing:
 - Pre-contact period sites: slope lower than 15 percent, within 1,000 ft (305 m) of major non-artificial water sources, and contain well drained, moderately well drained, or excessively drained soils
 - Post-contact period sites: on or adjacent to historic roadway, within 100 ft (31 m) of a previously identified historic archaeological site or mapped historic structure
- Moderate archaeological sensitivity, strategic subsurface testing:
 - Pre-contact period sites: slope between 15 – 25 percent, are within 1,000 – 2,000 ft (305 – 610 m) of major non-artificial water sources, and contain moderately drained soils

- Post-contact period sites: within 500 ft (152 m) of a historic roadway, within 100 – 300 ft (31 to 91 m) of a previously identified historic archaeological site or mapped historic structure
- Low archaeological sensitivity, limited sample for subsurface testing:
 - Pre-contact period sites: slope greater than 25 percent, over 2,000 ft (610 m) from a major non-artificial water sources, and contain moderately drained to poorly drained soils;
 - Post-contact period sites: over 500 ft (152 m) from a historic roadway, over 300 ft (91 m) from a previously identified historic archaeological site or mapped historic structure

The proposed modification to the standard 50-ft (15-m) shovel testing interval in areas of low to moderate archaeological sensitivity agreed to via email by VDHR resulted in the following subsurface testing intervals based on archaeological sensitivity:

- High sensitivity, transects and shovel tests (STs) at 50-ft (15.2 m) intervals
- Moderate sensitivity, transects at 50-ft intervals, STs at 100-ft (30.5 m) intervals
- Low sensitivity, transects at 50-ft intervals, STs at 100-ft (30.5 m) intervals

After consultation with VDHR, subsurface testing of a discretionary sample of low archaeologically sensitivity areas resulted in some of these areas being tested at the shorter interval in order to verify the sensitivity model. Other low sensitivity areas would not be subject to subsurface testing based on the discretion of the Principal Investigator, taking into consideration factors such as proximity to roads, utility installations, landscaping, and residences.

The ARPA Permit application submitted to the Navy on September 15, 2021 details the TARA methodology for portions of the PAPE located within NAS Oceana. Generally, the methodology is the same as detailed in the Survey Plan with the exception of the use of the predictive model and stratified testing based on archaeological sensitivity. The predictive model and stratified sampling strategy was not used for the NAS Oceana portion of the survey. Subsurface excavations provided full coverage of the PAPE at a standard 50-ft (15-m) ST and transect interval. Field conditions determined if all STs within the PAPE could be excavated. If areas are determined in the field as unsuitable for excavation due to ground conditions such as previous disturbance or wetland areas, such conditions were documented.

G.3 ENVIRONMENTAL SETTING, CULTURAL CONTEXTS, AND PREVIOUS SURVEYS

The following sections provide a brief overview of the environmental setting, pre-contact context, post-contact context, Project area history, and previous archaeological investigations relative to the Project Area.

G.3.1 Environmental Setting

G.3.1.1 Physiography and Geology

The Project Area is located in the Lowland sub-province (CL) of the Coastal Plain physiographic province within the Tidewater region in far southeast Virginia. The Lowland sub-province is characterized by a flat,

low-relief landscape rising no more than 60 ft (18.3 m) above mean sea level (Virginia Division of Mineral Resources 1993; Roberts and Baily 2000).

The Coastal Plain is underlain by deeply buried igneous and metamorphic basement rocks dating to the Precambrian and Paleozoic eras. Beginning in the Late Cretaceous period, glacial advance and retreat led to the repeated inundation of the Coastal Plain resulting in sedimentation and subsidence, which lasted through the Miocene Epoch. Fluvial and estuarine activity beginning in the Pleistocene, and continuing throughout the Quaternary period, resulted in the deposition of clays, silts, sands, and gravels that characterize the soils of the Coastal Plain today. The topography of the eastern portion of the Coastal Plain is characterized by a series of low terraces rising approximately 5 to 15 ft (1.5 to 4.6 m) above the surrounding landscape. The cities of Chesapeake and Virginia Beach sit atop the Pamlico Terrace whose generally flat topography is broken by a series of low ridges oriented parallel to the Atlantic Coast. These low ridges resulted in the creation of backwater swamps, marshes, and other poorly drained areas (Onuschak 1973; Teifke 1973; Hatch et al. 1985; Dietrich 1990; Fichter and Baedke 1999; McFarland and Bruce 2006; Thomas and Harper 2008).

G.3.1.2 Soils

Numerous soil series were identified within the Project Area based on a search of the United States Department of Agriculture's Web Soil Survey (USDA 2021). The most common type is Acredale silt loam (153A, 153B), which covers 34 percent of the Project Area. Acredale silt loam is characterized as poorly drained with zero to 2 percent slopes. The next most common soil type is Tomotley loam (133A, 153A, 153B), which covers 11.3 percent of the Project Area and is also characterized as poorly drained with zero to 2 percent slopes. With the exception of Nimmo loam (133A, 153A, 153B) at 6.8 percent, Acredale-Urban land complex (153A, 153B) and Dorovan mucky peat (133A, 153A, 153B) at 4.6 percent each, and Nawney silt loam (153A, 153B) at 3.8 percent, all other soil series in the Project Area comprise less than 2 percent of the total. All soils identified in the Project Area are poorly drained with zero to 2 percent slopes and are generally formed from loamy marine and fluvial sediments.

G.3.1.3 Hydrology

The Project Area drains into both the Atlantic Ocean and Chesapeake Bay via rivers, high order streams, and bays including North Landing River, the Elizabeth River, and West Neck Creek and their numerous tributaries. Other major waterbodies in the Project Area include Lake Christine, Lake Holly, and Lakes Rudee and Wesley, which drain into the Atlantic Ocean via Owl Creek. The low topography of the Outer Coastal Plain is also conducive to wetlands, swamps, and marshes, which are common throughout the Project Area.

G.3.2 Pre-contact Context

Current research from the Cactus Hill Site in Sussex County, Virginia, suggests that the earliest human occupation of this area dates to some point before approximately 15,000 years before Present (B.P.) based on both stratigraphy and radiocarbon dating. Characteristic artifacts of this period include utilized quartzite flakes and sandstone grinders (Boyd 2003; Carr 2018; McAvoy and McAvoy 1997).

G.3.2.1 Paleoindian Period (14,950–9950 B.P.)

The Paleoindian period in Virginia is characterized by small, likely kin-based, highly mobile bands engaged in generalized foraging (Gingerich 2011; Grayson and Meltzer 2003). Mobility and/or trade among Paleoindian groups is suggested by the distribution of high-quality lithic material far from their points of origin, particularly varieties of chert, jasper, and chalcedony. The fluted points that characterize the early Paleoindian period were manufactured from both of these high-quality materials as well as more readily available, but coarser grained, materials such as quartz and quartzite (Boyd 1989; Gardner 1974, 1989; Goodyear 1979).

The discovery of a Clovis point in association with extinct paleofauna at the Blackwater Draw site in New Mexico in the 1920s that forced archaeologists to recognize the antiquity of this widely distributed point type. The Blackwater Draw find and others in the Great Plains provided direct evidence of big game hunting as a Paleoindian subsistence stratagem, and it was long assumed that eastern Clovis groups also practiced a specialized hunting adaptation to megafauna or herd animals, despite the absence of identified kill sites or large mammal faunal remains at eastern sites (Ritchie 1980:3). The belief that megafauna hunting was the focus of Clovis subsistence practices suggested that human predation and overkill was a causative agent of much of the genera extinction that occurred in North America at the close of the Pleistocene (Martin 1967). Both of these assumptions (specialized hunting adaptation and megafauna overkill) have been strongly challenged over the past few decades, and it is now generally conceded that Clovis and other Paleoindian groups resident in eastern North America relied on a broad range of subsistence resources, including fruiting seeds, fish, and small animals, as well as herd game (Dent 2007:127-129). Recent analysis suggests that megafauna had mostly vanished from the northeast by the time Paleoindians arrived (Boulanger and Lyman 2014).

Biface technology during the final thousand-year interval of the Paleoindian period displays basic continuity with earlier forms; large lanceolate points, parallel flaking, and preference for high quality stone. Late Paleoindian points differed from their predecessors by generally lacking the channel flute, and sometimes exhibiting basal tangs. Toolkits from northeastern late Paleoindian sites show a striking absence of the formal endscrapers that characterized the Clovis and other fluted point assemblages. Expedient flake tools begin to appear among toolkits, leading some researchers to postulate that late Paleoindian groups were “settling in” to local environments resulting in reduced range mobility and greater reliance on local lithic sources (Lothrop et al. 2016:237-238).

The VCRIS review identified four Paleoindian sites within 1 mi (1.6 km) of the PAPE, one of which occurs within the PAPE. The three sites within the 1-mi (1.6-km) buffer have been determined potentially NRHP-eligible; the Paleoindian site within the PAPE (44VB0274) has been determined NRHP-not eligible.

G.3.2.2 Archaic Period (9950–3150 B.P.)

The Archaic Period, which is subdivided into Early (9950–8450 B.P.), Middle (8450–4950 B.P.), and Late (4950–3150 B.P.) phases, is characterized by climate warming that gradually resulted in greater biodiversity in the resource base. Modification of tool technology, increased site size, and changing site distribution reflect utilization of a broader spectrum of resources and ecological zones. Glacial retreat at the end of the Pleistocene led to a shift from a cooler, wetter climate to a warmer, drier one in the Holocene. Concurrently, rising sea levels during this period eventually created the general geography, hydrology, and ecology of the

region as it is currently known with mixed conifer-deciduous forests and essentially modern flora (Barber 2003; Brush 1986; Webb 1988). Seasonal variability also became more pronounced (Dent 1995), which led to more mobile subsistence strategies as populations followed changing resources over the course of the year. Innovations in the Archaic assemblage include celts, net sinkers, pestles, pecked stones, and axes, which reflect an increase of the use of ground stone technology in their manufacture (McLearen 1991).

During the Early Archaic Period, regional stylistic differences in the lithic assemblage become more pronounced with an increase in the amount of locally available material used for their manufacture (Custer 1990; Ford 1974; Sassaman et al. 1988). Common forms during the Early Archaic Period include side and corner notched points with serrated blades, including Palmer and Kirk Corner-Notched. Bifurcate base projectile points are also seen, of which LeCroy points are the most common form in this region (Dent 1995; Justice 1995).

The Middle Archaic period roughly corresponds with an extended warm and dry interval during the mid-Holocene. This climatic trend established the oak-chestnut forest as the dominant vegetational cover in the region, although excessive drought conditions probably introduced grassland prairies to some inter-drainage uplands (Sassaman 2010:23). Whether tied to this environmental shift or independent of it, use of locally sourced lithic raw materials becomes more pronounced and biface technology markedly changed from notched to stemmed forms at the onset of the Middle Archaic. New forms include broad Morrow Mountain and Stanley stemmed varieties and small notched point and narrow stemmed types, such as Bare Island, Claggett and Halifax (Justice 1987). Other common types in this region include LeCroy, Stanly, Morrow Mountain, Guilford, and side-notched Halifax (Amick and Carr 1996; Blanton 1996; Dent 1995; Justice 1995). This change of form in bifacial tools may reflect stylistic variations introduced by immigrating groups, or a technological adaptation to a shifting resource base, or both.

Fishing and shell fishing are seen in the archaeological record toward the latter part of the Middle Archaic, as sea level rise slowed, and estuaries and riverine habitats stabilized. While it appears unlikely that shellfish (or fish) had become a specialized focus of Middle Archaic subsistence, resident populations were nonetheless aware of these resources, and capable of exploiting them.

The Late Archaic Period sees a profusion of sites throughout the region, which is likely indicative of a population increase and concurrent reduction in mobility (Klein and Klatka 1991). Elongated stemmed and notched forms, such as Savannah River, Susquehanna, and Perkiomen, are indicative of this period (Dent 1995; Justice 1995; Ritchie 1971). Appearing around the same time as broadspears, cooking vessels carved from the mineral steatite (also called soapstone) were in wide use across the eastern seaboard. Steatite was quarried from outcroppings in the Ridge and Valley province extending from Alabama to Maine, and fashioned into rectangular, straight sided vessels. Steatite use peaked from between circa 2000 to 1000 B.C., although it is present in dated contexts as early as 4300 B.C. (Truncer 2004:506). Steatite vessel distribution is closely mapped to the area of nut-producing deciduous forests, and may have functioned as stone-boiling containers for processing hickory, oak, and other nuts (Truncer 2004:507). These bowls were both labor intensive to manufacture and widely exchanged, indicating incipient trade networks in the region (McLearen 1991; Stewart 1989). Ceremonialism grew in importance, with more elaborate, formalized burial practices and the presence of exotic raw materials as symbols of enhanced status and rank (Fiedel 2001).

The VCRIS review identified 35 Archaic components among the recorded sites, including one site attributed to a generalized Archaic period, nine with Early Archaic components, 12 with Middle Archaic components, and 13 with Late Archaic components. Among sites occurring within the PAPE, one dates to the Early Archaic period, three to the Middle Archaic, and three contain site components dating to the Late Archaic period. Woodland Period (3150–350 B.P.)

G.3.2.3 Woodland Period (3150–350 B.P.)

The Woodland Period, which is also subdivided into Early (3150–2450 B.P.), Middle (2450–1050 B.P.), and Late (1050–350 B.P.) phases, is broadly characterized by a more sedentary population with a subsistence strategy increasingly reliant on plant cultivation and the widespread manufacture of ceramics. The VCRIS review identified 17 Woodland period components among the sites within 1 mi (1.6 km) of the PAPE, including six Woodland components within the PAPE.

The Early Woodland Assemblage remains somewhat ill-defined with similarities to both the preceding Late Archaic Period and following Middle Woodland Period. Tools including drills, perforators, scrapers, small bifaces, hammerstones, net sinkers, mortars, and pestles are common in assemblages of this period (McLearen 1991; Stewart 1998a). Projectile points associated with the Early Woodland Period include Calvert and Fishtail to which might be added the Potts Corner-Notched, Vernon, and Claggett projectile point types (Inashima 2008; Stephenson 1963). Early Woodland ceramic types include Marcey Creek, Accokeek Creek, and Elk Island (Egloff 1991; Klein 2003; Klein and Stevens 1996). Of note is an apparent decrease in long-distance trade during the Early Woodland Period of the type that characterized the previous Late Archaic period (Klein 2003). Seven Early Woodland components have been identified among sites occurring within 1 mi (1.6 km) of the PAPE, of which two are present within the PAPE. Multicomponent site 44VB0162, containing Early Woodland material, is potentially eligible to the NRHP.

Subsistence strategies in the Middle Woodland Period continued to focus primarily on hunting and gathering predicated on a seasonally mobile lifestyle. However, the appearance of large middens and houses at some sites suggests that certain groups, while not sedentary, were somewhat less mobile than in the Early Woodland Period (Gallivan 2003, 2016). Often, sites of this period occur on the banks of both major rivers and their tributaries. There is evidence for the emergence of horticulture during the Middle Woodland Period, but little indication it played any significant role in subsistence strategies (Blanton 2003; Mouer 1991; Smith 2007, 2011; Stewart 1995). The emergence of elaborate burials, the creation of labor-intensive non-utilitarian objects, and the resumption of long-distance trade all hint at social changes that may have been occurring in Middle Woodland populations of the region (Knepper et al. 2006; McLearen 1992; Stewart 1992, 1998b).

Stemmed and notched points continue to be seen in the Middle Woodland lithic assemblage, though with a significant variation in forms (Custer 1989; McLearen 1992). Ceramic manufacture increases during this period (Brown 1986, 1989) with types including Popes Creek net-impressed (Blanton 1992; Egloff and Potter 1982) and the related Prince George and Varina types (Mouer et al. 1986). Later Mockley ware, with surface treatments that include plain, net impressed, and cord marked, becomes common (Johnson 2001). Eight Middle Woodland components occur within 1 mi (1.6 km) of the PAPE, of which two occur within the PAPE. Site 44VB0162, containing Middle Woodland material, is potentially eligible to the NRHP.

The Late Woodland Period is characterized by significant changes in society and economy, particularly in its later phase. These include the introduction of maize agriculture, population growth, the establishment of villages, an intensification of regional trade, and the emergence of stratified societies (Curry 2015; Gallivan 2003, 2005, 2016; Gold 2004; Hodges 2003; Klein and Magoon 2017; Mahoney 2009; Shephard 2015). While hunting and gathering of wild resources, particularly aquatic, remained the major dietary component, cultivation of maize, beans, and squash became increasingly important during the Late Woodland Period (Gremillion 2018; McKnight and Gallivan 2007). The need for arable land by growing populations fueled by a diet increasingly dependent on the cultivation of these domesticated plants may have been an impetus for villages, some of which were palisaded, to coalesce on the floodplains of major rivers during this period (Dent 1995; Potter 1993). These major changes likely predicated the rise of hereditary chiefdoms, and their attendant social inequality, which are first identified during the Late Woodland Period (Gallivan 2003, 2005, 2016; Potter 1993).

The Late Woodland lithic assemblage is typified by small, triangular projectile points, likely indicative of the introduction of the bow and arrow. Common types include Levanna, Madison, Roanoke, and Clarksville (Coe 1964; Potter 1993; Ritchie 1971). Ceramics of this period are diverse with Gaston ware and Roanoke ware common in the Project Area (Gallivan 2003; Turner 1992). Non-utilitarian goods, possibly linked with the development of stratified societies, are also common in the Late Woodland Period. These include, most prominently, shell and copper beads, the latter obtained through long distance trade. Ceramic tobacco pipes and shell gorgets and pendants are also seen (Magoon 1999; Stephenson 1963). Seven Late Woodland components are present within 1 mi (1.6 km) of the PAPE, two of which occur within the PAPE. Site 44VB0162, containing Late Woodland artifacts, is potentially eligible to the NRHP.

Late pre-contact economy in the Virginia Coastal Plain shifted from a focus on hunting and foraging to maize-bean-squash horticulture situated on floodplains and was accompanied by a parallel shift toward semi-sedentism and increased population density (Gallivan 2006). By the late sixteenth century, Algonquian-speaking groups throughout the Tidewater had coalesced into a hierarchical polity led by hereditary chiefs, werowances, who received tribute from subordinate groups and redistributed surplus goods and food to overlords and non-elites. Standing paramount within this socio-political system was Wahunsunacock, or Powhatan, whose powerful rule lent his name to the thirty-some bands comprising the Powhatan Chiefdom. Among the largest of these bands were the Pamunkey, Chickahominy, Mattaponi, and Nansemond, and in all, the Powhatan population in A.D. 1600 was approximately 14,000 (Moretti-Langholtz 2006). Of the Powhatan bands, the Nansemond lived nearest to the Project Area, occupying several villages on both banks of the Nansemond River. In 1607, John Smith of Jamestown recorded the Nansemond accounting for 200 warriors (Mooney 1907:144; Speck 1928).

G.3.3 Post-Contact Context

The European presence in the Chesapeake Bay region began with Spanish, French, and British forays into the area beginning roughly in the mid-sixteenth century. These initial interactions would be the catalyst for radical, catastrophic changes for the native population and the creation of a new society within the greater Atlantic world. The first European attempts at settlement in the area, notably a Spanish Mission in the late sixteenth century and the doomed English Settlement on Roanoke Island, failed and it was not until the

English established Jamestown in 1607 that there would be a durable European presence in the region (Quinn 1977).

G.3.3.1 Settlement to Society (1607–1750)

While the English presence at Jamestown, to the north, began in 1607, settlement in the Project Area did not begin until the 1630s (Attachment G-2, Figures G-2-1 and G-2-2). English settlement was initially focused on the Elizabeth and Lynnhaven Rivers around which New Norfolk County was incorporated in 1636. The next year the existing county was divided, and the Project Area became part of Lower Norfolk County. Subsequently, Lower Norfolk County was further subdivided and Princess Anne County, which eventually became Virginia Beach, was created in 1691 (Mansfield 1989).

Conflict between English settlers and Indians occurred often even as the two groups pursued mutually beneficial trade. It was not uncommon for the perpetually hungry colonists to demand corn from native peoples, and if not delivered, to take it by force including murder. Reacting to such violence, Indians killed English settlers in retaliation, but the colonists possessed superior numbers and weapons and the conflict's outcome was never in serious doubt. Due to poor harvests, burdensome taxes, and an exploitative ruling class, violence extended intramurally among the settlers. Resentment toward the large planters and colonial government spilled into open conflict in 1676 when the charismatic Nathaniel Bacon led an armed band against Governor William Berkeley, driving him and his supporters from Jamestown and burning the town. "Bacon's Rebellion" as it was known was short lived, and most of Bacon's men soon were hanged. The rebellion was in part a reaction against what Bacon considered the government's overly conciliatory attitude toward the Indians, which included restricting English settlement on the frontier, a policy that benefited the elite planters. The majority of English colonists probably resented Berkeley's imperious rule and onerous taxation policies, but they also believed that eliminating the native population was their only route to obtaining land for themselves out of the reach of the ruling interests. In fact, this became official policy when the Crown sent troops and a new governor to replace Berkeley after the rebellion had been put down (Tayler 2001:131-150).

These violent clashes between the Nansemond people and British colonists in the mid-seventeenth century led to a schism within the Nansemond community. One group chose to adhere to a more traditional lifestyle and belief system while the other adopted Christianity and assimilated into Anglo-American culture to varying degrees. The descendants of the latter group eventually settled in Deep Creek at the northern edge of the Great Dismal Swamp and became the progenitors of the current Nansemond community (Bass 2017b).

The economy during this period was based primarily on tobacco and products produced from surrounding pine forests including tar and turpentine. Agricultural output came from both plantations and small holdings. Initially, tenant farmers and indentured servants provided much of the labor with enslaved Africans making up only a small proportion of the workforce throughout the seventeenth and early eighteenth centuries. However, shifting economic pattern led to a decrease in the number of indentured servants during this period, and by the mid-eighteenth-century enslaved Africans became the bulk of agricultural laborers in the region (Morgan 1975; Wertebaker and Schlegel 1962).

G.3.3.2 Colony to Nation (1750–1789)

Over the course of the eighteenth century as the population increased, inland settlements, particularly along waterways, continued to grow (Attachment G-2, Figure G-2-3). Most of these settlements comprised small holders and the economy remained primarily agricultural. The main towns of the region, such as Norfolk, Newtown, Portsmouth, and Kempsville, were to the north of the Project Area, which retained a distinctly rural character during this period (Mansfield 1989). The increase in agricultural goods for export produced by the inland farms led to interest in more efficient ways of getting these goods to market. To that end, an enterprise called “Adventurers for Draining the Dismal Swamp” was established in 1763 with the aim of developing a system of canals through the swamp. One of the original investors in the venture was George Washington. Work on the enterprise began in earnest but was halted by the outbreak of hostilities between the colonists and the British Crown (Simpson 1990).

Lord Dunmore, the last royal governor of Virginia, was forced to abandon Williamsburg in 1775 and attempted to govern from a Royal Navy vessel moored in the Elizabeth River. Fighting flared between Virginia militia and the Crown forces, which led Dunmore to burn Norfolk and flee the following year. Towards the end of the war, in 1781, Crown forces made several raids into Princess Anne County (Mansfield 1989).

G.3.3.3 Early National Period (1789–1830)

Throughout the late eighteenth and early nineteenth centuries, the Project Area remained largely rural in character with the larger towns to the north and farms to the south. During the War of 1812, Crown troops were once again raiding in the area as part of the Chesapeake Campaign. In 1813, militia and an American flotilla based on the Elizabeth River were able to repel the British incursions. The Norfolk Navy Shipyard was established after the war and would come to be one of the defining institutions in the society, economy, and history of the region (Eshelman et al. 2010; Mansfield 1989).

People of African descent had been in the area since the seventeenth century, largely as enslaved labor. In the early nineteenth century, free people of African descent established a community in what is now the Beach District of Virginia Beach, named “Seatack” (City of Virginia Beach 2016).

Economic growth after the end of the War of 1812 spurred new interest in exploiting the resources of the Great Dismal Swamp. To that end, “Adventurers for Draining the Dismal Swamp” was reincorporated as the “Dismal Swamp Company,” which financed a 22-mi (35.4 km) canal from Deep Creek, Virginia, to Joyce Creek, North Carolina. The canal both facilitated the movement of goods and provided timber, primarily for the shipbuilding industry in the region. A road built parallel to the canal eventually became what is now U.S. Route 17 (Simpson 1990).

G.3.3.4 Antebellum Period and Civil War (1830–1865)

Prior to the Civil War, the Project Area continued to be largely rural with an economy predicated on agriculture and exploiting marine resources. The advent of war led to a U.S. Navy blockade of the southern coastline, including what is now Virginia Beach. The U.S. Navy was forced to abandon the Norfolk Navy Yard in April 1861, putting it to the torch to keep the supplies and materiel from falling into enemy hands. In February of the following year, a U.S. Navy ship which had been salvaged by the Confederates was refitted with iron plating and renamed the C.S.S. Virginia. On March 9, 1862, the Monitor, the first ironclad

launched by the U.S. Navy, met the Virginia at Hampton Roads in a battle that would see the preservation of the U.S. Navy fleet from destruction by the Virginia, but that would ultimately be inconclusive (Salmon 2001).

The U.S. Government regained control of the area including Princess Anne County after the Confederates abandoned Hampton Roads in 1862 (Attachment G-2, Figure G-2-4). However, guerilla attacks against the U.S. military continued throughout the war. Like most of the South, Princess Anne County and environs were devastated both socially and economically by the end of the war (Mansfield 1989).

G.3.3.5 Reconstruction (1870–1916)

After the Civil War, several communities were established in the area by people who had been formerly enslaved including Beechwood, Burton Station, Doyletown, Gracetown, Great Neck, and Lake Smith. The economy continued to be primarily agricultural and the Port of Norfolk provided ready access to regional markets (Attachment G-2, Figure G-2-5). The expansion of railroads in the area during the 1880s created further opportunities for development, and in the late nineteenth and early twentieth centuries both tourism and the military began to become important components of the regional economy (Hawkins-Hendrix and Lucas 2017; Heinemann et al. 2007; Mansfield 1989).

G.3.3.6 World War I to World War II (1917–1945)

The entry of the United States into the First World War predicated the establishment of Naval Station Norfolk in 1917. The military presence in Norfolk and the surrounding area would become a major engine of economic growth over the course of the twentieth century (Attachment G-2, Figure G-2-6). World War II prompted further expansion of the military facilities in the area, including the establishment of what would become NAS Oceana, and saw an influx of both military and civilian workers to Norfolk, Virginia Beach, and environs (Wertenbaker and Schlegel 1962; Freitas 2014).

The tourist industry grew throughout the early twentieth century spurred by improved transportation in the region. The Stock Market Crash of 1929 and the ensuing Great Depression largely halted growth of the tourist industry throughout the 1930s. However, a Civilian Conservation Corps program during this period aimed at mosquito eradication would help spur further development and population growth in the region after World War II. Post-war economic growth coupled with further expansion of the National Highway System saw increasing population density and a marked shift away from the rural character of the region in the later twentieth century (Heinemann et al. 1962; Mansfield 1989).

G.3.3.7 Native Peoples in the Twentieth Century

By the early twentieth century, the Powhatan peoples of the Virginia Tidewater numbered around 2,000 individuals, largely comprised of the Pamunkey, Mattaponi, Chickahominy, and Nansemond tribes (Speck 1928:236). The Powhatan were studied by anthropologists as an example of “ethnological survival,” a common theme of early anthropological theory that sought to trace prior stages of civilization in the cultural vestiges or residues of modern groups (Tylor 1881). In the Powhatan, James Mooney, Frank Speck and others saw the persistence of certain cultural practices and traits as evidence of cultural continuity across centuries even as current-day Powhatan had adopted many of the material trappings of the dominant white

culture. This methodological approach appeared to provide researchers with the tools to plumb the past from vestigial practices of the present (Decter 2020:254).

Prominent among the Nansemonds are the Bass family whose origins can be traced to John Bass(e) (1616-1699), an English colonist and minister, and his wife, Elizabeth (1618-1676), the daughter of a Nansemond chief (Speck 1928, Bass 2017c). The histories of their descendants illustrate the complex interplay of race, ethnicity, culture, and law that the Nansemonds have navigated from the seventeenth century to the present.

In her genealogical research of the Bass family, Nikki Bass has demonstrated that despite intermarriage between people of Indigenous, African-American, and Anglo-American descent, the community living in and around Deep Creek and the Great Dismal Swamp maintained a cohesive Nansemond identity to the present day. This was despite the shifting laws surrounding racial identity throughout the nineteenth and twentieth centuries (Bass 2017c). Research of historic sources to date has not identified any sites associated with the Nansemond people within the Project Area, but has identified a group of post-contact Nansemond properties approximately ten miles to the northwest of the Project Area around Deep Creek and the Great Dismal Swamp. Although no cultural material that can be clearly linked to the Nansemond people has been identified thus far within the Project Area, historical research clearly indicates continued use of the area by Nansemond peoples.

During the Jim Crow era (circa 1890-1965), the Powhatan, including the Nansemonds, strove to distinguish themselves from African American Virginians, seeking separate status for themselves that would protect them from the repressive laws of racial apartheid. The Pamunkey and Mattaponi had been accorded tribal status by Virginian authorities since the seventeenth century, while the Chickahominy and Nansemond had to wait for Commonwealth recognition until the 1980s. Mooney noted in 1907 that Pamunkey “law” forbade intermarriage with African Americans, with other Powhatan tribes discouraging such practice (Mooney 1907:145). This proscription against racial intermarriage was undoubtedly an attempt to prove to the dominant white culture that Powhatans should not be considered Negro, even though much evidence exists pointing to what Mooney called “commingling” of blood among local Indian, Black, and white groups. Jim Crow laws forcing racial separation on public transportation caused the Pamunkey to request, and receive, documents from the Commonwealth indicating their special tribal (i.e., “non-Negro”) status (Mooney 1907:145). Nansemond and Chickahominy pursuit of state recognition began in earnest during the early phase of Jim Crow.

Special status for Native Americans was eliminated in 1924 with the passage of the Racial Integrity Act by the Virginia General Assembly. This act mandated that all Virginians be identified at birth as either “White” or “Colored,” with no recognition of Indian or alternative ethnicity. While Virginia’s Jim Crow laws were enacted to constrain and did principally affect Black citizens, the Racial Integrity Act had a powerful impact on Virginia’s Indian population by legally stripping them of their ethnic identity. Finding themselves unable to access segregated institutions and services and unwilling to declare themselves “colored,” the Nansemond and other Virginian Indians tended to withdraw into their own communities and to limit interaction with both whites and Blacks. Turning inward had the effect of maintaining tribal structures and to some degree minimizing assimilation into the broader culture. The U.S. Supreme Court struck down the Racial Integrity Act in 1968 in its landmark *Loving v. Virginia* decision (Bass 2017b; Moretti-Langholtz 2002).

Ethnographic accounts of the Nansemonds during the early twentieth century indicate that their economic subsistence was based largely on truck farming and to a lesser degree on hiring out as merchant seamen. The Nansemond tribe numbered around 180 individuals at the turn of the twentieth century, residing around the margins of the Great Dismal Swamp and in the cities of Suffolk and Chesapeake, with principal family names being Bass and Weaver (Mooney 1907:250, Speck 1928:278). Virginia granted state recognition to the Nansemonds in 1985, with federal recognition of their tribal status arriving in 2018.

G.3.4 Previous Surveys

A VDHR archives search for previously identified archaeological sites was undertaken in October of 2020. As Dominion Energy refined the Onshore Project Components, the original archives search was supplemented by VCRIS searches to account for updates to the PAPE and reassessment of the previously identified sites that fall within the PAPE, or within 1 mi (1.6 km) of the PAPE.

In May 2021, Tetra Tech made an additional archives request for a clipped geographic information system (GIS) file of the VCRIS Phase I Survey Areas layer. The layer was used to aid in the assessment of the applicability of previous archaeological investigations.

The assessment of previously identified archaeological sites determined a total of 134 sites are located within 1 mi (1.6 km) of the PAPE, 12 of which are located within the PAPE (Figure G-6). Of the 12 sites located within the PAPE, two sites are potentially eligible for listing on the NRHP, 9 sites are ineligible for listing, and one site has no eligibility status. Table G-2 presents a summary of the previously identified archaeological sites and the NRHP eligibility status of sites within the PAPE, Table G-3 presents sites located within or intersecting the PAPE, and Table G-4 presents data for all sites located within 1 mi (1.6 km) of the PAPE.

The 12 sites within the PAPE consist of two pre-contact sites, seven post-contact sites, and three sites with both pre-contact and post-contact materials. Two sites within the PAPE (44VB0162 and 44VB0412) have been determined potentially eligible to the NRHP: site 44VB0162 is a multicomponent pre-contact site that contains early post-contact material and site 44VB0412 is a World War II-era airstrip.

In accordance with BOEM guidelines and feedback received on the Survey Plan, BOEM considers sites that are potentially eligible for the NRHP, or with undetermined NRHP eligibility status, as NRHP-eligible for the purposes of the Project until determined otherwise. Until VDHR formally determines the eligibility status of previously or newly identified archaeological sites, they are considered historic properties and need to either be avoided by the Project or may require archaeological investigations to determine their NRHP-eligibility status. Archaeological sites determined by VDHR as ineligible for inclusion in the NRHP do not require further consideration.

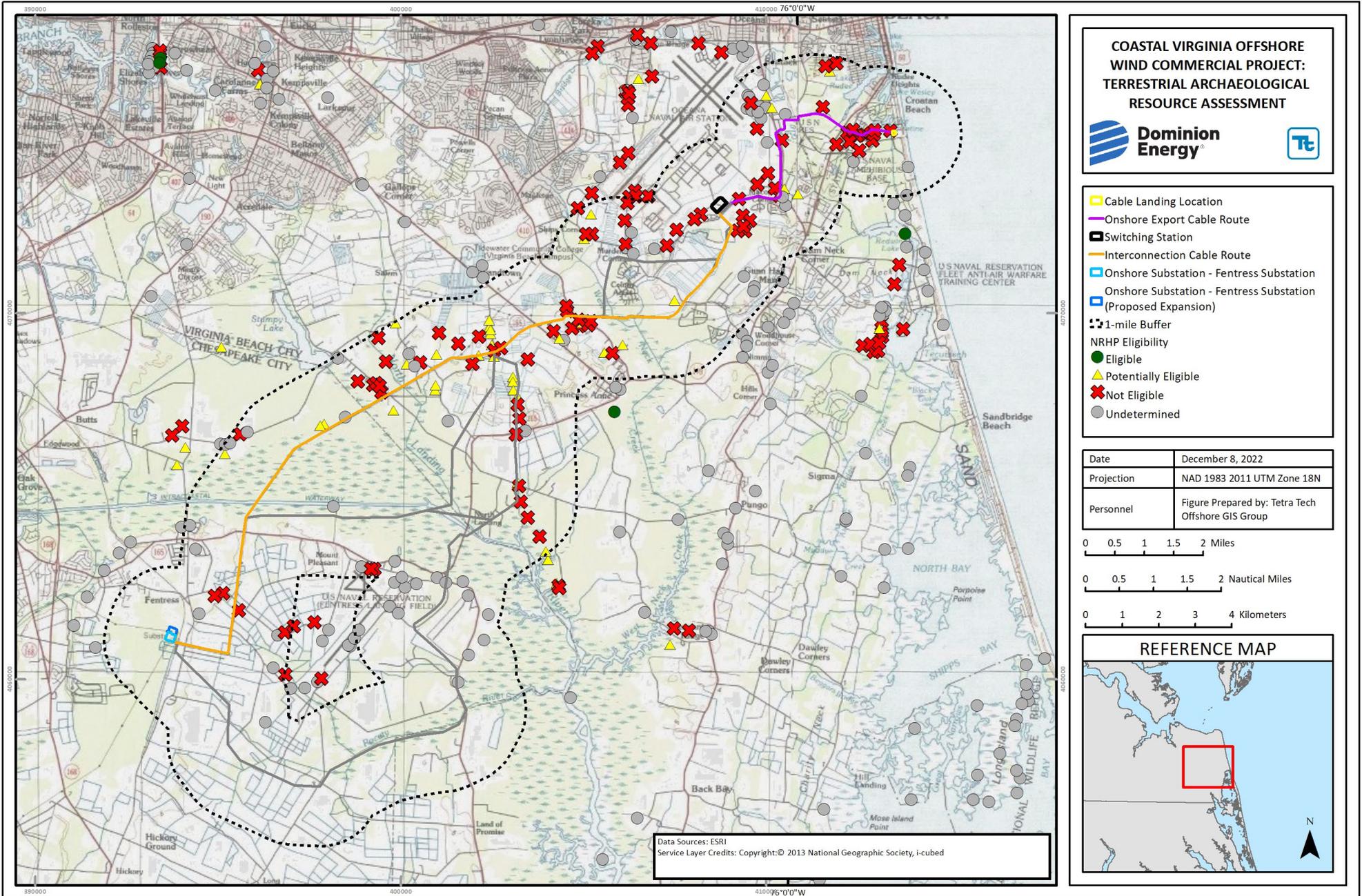


Figure G-6. Previously Identified Archaeological Sites Within 1 Mile of the Original PAPE

Table G-2. Summary of Previously Identified Archaeological Sites within 1 Mile of the PAPE

Total Sites	Sites Within 1 Mile of PAPE	Sites Within PAPE	Within PAPE Potentially NRHP-Eligible	Within PAPE NRHP-Ineligible	Within PAPE, Undetermined NRHP Eligibility Status
134	122	12	2	9	1

Source: VDHR 2022

Table G-3. Previously Identified Archaeological Sites within the PAPE

Virginia DHR ID	Site Type	Time Period	NRHP Eligibility Status
44CS0250	Camp	Middle Archaic (6500–3001 B.C.), Late Archaic (3000–1201 B.C.)	—
44VB0162	Camp, temporary, Cemetery	Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early Woodland (1200 B.C.E–299 C.E), Middle Woodland (300–999 C.E), Late Woodland (1000–1606), Early National Period (1790–1829)	Potentially Eligible
44VB0175	Artifact scatter	Contact Period (1607–1750), Colony to Nation (1751–1789), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible
44VB0204	Trash scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible
44VB0274	Artifact scatter, Farmstead	Paleo-Indian (15000–8501 B.C.E), Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early Woodland (1200 B.C.E–299 C.E), Middle Woodland (300–999 C.E), Late Woodland (1000–1606)	Not Eligible
44VB0306	Canal	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0314	Dwelling, single	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible
44VB0361	Farmstead	Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0389	Lithic scatter, Military base/facility	Pre-Contact, World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0395	Lithic scatter, Military base/facility	Pre-Contact, Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0396	Military base/facility	World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0412	Military base/facility	World War I to World War II (1914–1945), The New Dominion (1946–1991)	Potentially Eligible

Source: VDHR 2022

Notes: A.D. – Anno Domini, B.C. – before Christ; C.E. – Common Era

Table G-4. Previously Identified Archaeological Sites within 1 Mile of the PAPE

Virginia DHR ID	Within PAPE	Site Type	Time Period	NRHP Eligibility Status
44CS0029	No	Camp, base, Cemetery, Dwelling, single	Contact Period (1607–1750), Colony to Nation (1751–1789), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945)	Potentially Eligible
44CS0036	No	Artifact scatter, Other, Well	Early Archaic Period (8500–6501 B.C.), Middle Archaic Period (6500–3001 B.C.), Late Archaic Period (3000–1201 B.C.), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	—
44CS0037	No	—	—	—
44CS0062	No	—	Precontact/Unknown (15000 B.C. – 1606 A.D.)	—
44CS0063	No	Camp	Archaic (8500 – 1201 B.C.), 19 th Century (1800 – 1899)	Potentially Eligible
44CS0066	No	—	—	—
44CS0116	No	Camp	Pre-contact/Unknown (15000 B.C.–1606 A.D.)	Potentially Eligible
44CS0117	No	Other	19 th Century (1800–1899)	Potentially Eligible
44CS0119	No	Camp, Other	Middle Archaic (6500 – 3001 B.C.)	DHR Staff: Potentially Eligible
44CS0184	No	Trash scatter	20 th Century (1900–1999)	—
44CS0185	No	Trash scatter	19 th Century: 4 th quarter (1875–1899), 20 th Century (1900–1999)	—
44CS0190	No	Canal, Other, Store	19 th Century (1800–1899), 20 th Century (1900–1999)	—
44CS0250	Yes	Camp	Middle Archaic (6500–3001 B.C.), Late Archaic (3000–1201 B.C.)	—
44CS0270	No	Farmstead	20 th Century (1900–1999)	Not Eligible
44CS0274	No	Trash scatter	19 th Century: 4 th quarter (1875–1899), 20 th Century: 1 st quarter (1900–1924)	—
44CS0320	No	Artifact scatter	Antebellum Period (1830 – 1860)	—
44CS0349	No	Artifact scatter	Antebellum Period (1830–1860), Civil War (1861–1865)	Not Eligible

Virginia DHR ID	Within PAPE	Site Type	Time Period	NRHP Eligibility Status
44CS0350	No	Artifact scatter	Reconstruction and Growth (1866–1916)	Not Eligible
44CS0351	No	Dwelling, single	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945)	Not Eligible
44CS0352	No	Artifact scatter	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945)	Not Eligible
44CS0364	No	Artifact scatter	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	—
44CS0365	No	Artifact scatter	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	—
44VB0082	No	Trash pit	Reconstruction and Growth (1866 – 1916), World War I to World War II (1917 – 1945), The New Dominion (1946 – 1991), Post Cold War (1992 – Present)	—
44VB0088	No	Trash pit	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945)	—
44VB0124	No	Dwelling, single	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Potentially Eligible
44VB0125	Yes	—	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	—
44VB0126	No	—	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	—
44VB0162	Yes	Camp, temporary, Cemetery	Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early Woodland (1200 B.C.E–299 C.E), Middle Woodland (300–999 C.E), Late Woodland (1000–1606), Early National Period (1790–1829)	Potentially Eligible

Virginia DHR ID	Within PAPE	Site Type	Time Period	NRHP Eligibility Status
44VB0163	No	Artifact scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0164	No	Artifact scatter, Camp, temporary	Late Archaic Period (3000–1201 B.C.E), Early Woodland (1200 B.C.E–299 C.E), Middle Woodland (300–999 C.E), Late Woodland (1000–1606), Contact Period (1607–1750), Colony to Nation (1751–1789), Early National Period (1790–1829)	Potentially Eligible
44VB0165	No	Artifact scatter, Camp	Paleo-Indian (15000–8501 B.C.E), Middle Archaic Period (6500–3001 B.C.E)	Potentially Eligible
44VB0166	No	Camp, Camp, base, Dwelling, single	Middle Archaic Period (6500–3001 B.C.E), Early National Period (1790–1829)	Potentially Eligible
44VB0167	No	Camp, temporary	Pre-Contact	Not Eligible
44VB0168	No	Artifact scatter, Dwelling, single	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0169	No	Camp, temporary	Pre-Contact	Not Eligible
44VB0170	No	Camp, temporary, Other	Pre-Contact, Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible
44VB0171	No	Dwelling, single	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0172	No	Camp, temporary, Dwelling, single	Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Potentially Eligible
44VB0175	Yes	Artifact scatter	Contact Period (1607–1750), Colony to Nation (1751–1789), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible

Virginia DHR ID	Within PAPE	Site Type	Time Period	NRHP Eligibility Status
44VB0176	No	Camp, temporary, Farmstead	Late Archaic Period (3000–1201 B.C.E), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991)	Potentially Eligible
44VB0177	No	Artifact scatter, Camp, temporary	Pre-Contact, Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0178	No	Artifact scatter	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Potentially Eligible
44VB0179	No	Camp, temporary, Other	Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Potentially Eligible
44VB0180	No	Artifact scatter, Camp, Cemetery, Trash scatter	Paleo-Indian (15000–8501 B.C.E), Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early Woodland (1200 B.C.E–299 C.E), Middle Woodland (300–999 C.E), Late Woodland (1000–1606)	Potentially Eligible
44VB0181	No	Artifact scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Potentially Eligible
44VB0182	No	Cemetery	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0183	No	Cemetery	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0184	No	Cemetery	Post-contact/Unknown	Not Eligible
44VB0185	No	Cemetery	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible

Virginia DHR ID	Within PAPE	Site Type	Time Period	NRHP Eligibility Status
44VB0186	No	Dwelling, single	Contact Period (1607–1750), Colony to Nation (1751–1789), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Potentially Eligible
44VB0189	No	Artifact scatter, Cemetery	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Potentially Eligible
44VB0190	No	Artifact scatter	Contact Period (1607–1750), Colony to Nation (1751–1789), Early National Period (1790–1829), Antebellum Period (1830–1860)	Potentially Eligible
44VB0191	Yes	Artifact scatter, Camp	Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Potentially Eligible
44VB0193	No	Farmstead	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Potentially Eligible
44VB0194	No	Farmstead	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0196	No	Dwelling, single	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0200	Yes	—	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	—
44VB0201	No	Artifact scatter	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	—

Virginia DHR ID	Within PAPE	Site Type	Time Period	NRHP Eligibility Status
44VB0203	No	Outbuilding	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0204	No	Trash scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible
44VB0205	No	Trash scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0206	No	Trash scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible
44VB0207	No	Trash scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0208	No	Dwelling, single, Trash scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0209	No	Trash scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0219	No	Trash scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0220	No	Camp	Pre-Contact	—
44VB0221	No	Camp, Trash scatter	Pre-Contact, Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	—
44VB0222	No	Trash scatter	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	—

Virginia DHR ID	Within PAPE	Site Type	Time Period	NRHP Eligibility Status
44VB0223	No	Camp	Pre-Contact	—
44VB0224	No	Lithic cache	Pre-Contact	—
44VB0225	No	Lithic workshop	Pre-Contact	—
44VB0226	No	Cemetery	Post-contact/Unknown	—
44VB0227	Yes	Camp, Farmstead, Trash scatter	Middle Woodland (300–999 C.E), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0228	No	Artifact scatter	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	—
44VB0229	No	Artifact scatter	Colony to Nation (1751–1789), Early National Period (1790–1829)	—
44VB0230	No	Trash scatter	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	—
44VB0254	No	Farmstead	Reconstruction and Growth (1866 – 1916), World War I to World War II (1917 – 1945), The New Dominion (1946 – 1991)	Not Eligible
44VB0262	Yes	Farmstead	Contact Period (1607–1750), Colony to Nation (1751–1789), Early National Period (1790–1829), Antebellum Period (1830–1860)	Not Eligible
44VB0263	Yes	Artifact scatter	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Potentially Eligible
44VB0264	No	Artifact scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991)	Potentially Eligible
44VB0265	No	Trash scatter	—	Potentially Eligible
44VB0266	No	Artifact scatter	Pre-Contact, Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Potentially Eligible
44VB0269	No	Trash scatter	Early National Period (1790–1829), Antebellum Period (1830–1860)	Potentially Eligible

Virginia DHR ID	Within PAPE	Site Type	Time Period	NRHP Eligibility Status
44VB0270	No	Artifact scatter	Paleo-Indian (15000–8501 B.C.E), Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early Woodland (1200 B.C.E–299 C.E), Middle Woodland (300–999 C.E), Late Woodland (1000–1606)	Potentially Eligible
44VB0271	No	Trash scatter	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Potentially Eligible
44VB0272	No	Trash scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Potentially Eligible
44VB0273	No	Trash scatter	Reconstruction and Growth (1866–1916)	Potentially Eligible
44VB0274	Yes	Artifact scatter, Farmstead	Paleo-Indian (15000–8501 B.C.E), Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early Woodland (1200 B.C.E–299 C.E), Middle Woodland (300–999 C.E), Late Woodland (1000–1606)	Not Eligible
44VB0275	Yes	Trash scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Potentially Eligible
44VB0290	No	Camp	Late Archaic Period (3000–1201 B.C.E)	—
44VB0291	No	Camp	Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early Woodland (1200 B.C.E–299 C.E)	—
44VB0292	No	Artifact scatter	Pre-Contact	Not Eligible
44VB0293	No	Artifact scatter	Pre-Contact	Not Eligible
44VB0300	No	Lithic scatter	Pre-Contact	Not Eligible
44VB0301	No	Farmstead	Contact Period (1607–1750), Colony to Nation (1751–1789), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0306	Yes	Canal	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible

Virginia DHR ID	Within PAPE	Site Type	Time Period	NRHP Eligibility Status
44VB0307	Yes	Canal	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0310	No	Cemetery	Reconstruction and Growth (1866–1916)	—
44VB0311	No	Dwelling, single	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0312	No	Dwelling, single	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0313	No	Dwelling, single	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0314	Yes	Dwelling, single	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible
44VB0315	No	Dwelling, single	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0316	No	Dwelling, single	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0317	No	Dwelling, single	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	—
44VB0318	No	Dwelling, single	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible
44VB0320	No	Dwelling, single	Early National Period (1790–1829), Antebellum Period (1830–1860)	Not Eligible
44VB0321	No	Dwelling, single	Early National Period (1790–1829), Antebellum Period (1830–1860)	Not Eligible
44VB0342	No	Cemetery	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	—

Virginia DHR ID	Within PAPE	Site Type	Time Period	NRHP Eligibility Status
44VB0343	No	Other	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44VB0361	Yes	Farmstead	Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0363	No	Dwelling, single	18 th Century: 4 th quarter (1775–1799), 19 th Century: 1 st quarter (1800–1825)	Potentially Eligible
44VB0364	No	Dwelling, single	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0365	No	Farmstead	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0370	No	Dwelling, single	18 th Century (1700–1799), 19 th Century (1800–1899), 20 th Century: 1 st half (1900–1949)	Not Eligible
44VB0374	No	Artifact scatter	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991)	—
44VB0379	No	Farmstead	World War I to World War II (1917–1945)	—
44VB0385	No	Military base/facility	World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0386	No	Military base/facility	World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0387	No	Military base/facility	World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0388	No	Military base/facility	World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0389	No	Lithic scatter, Military base/facility	Pre-Contact, World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0390	Yes	Military base/facility	World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0391	No	Dwelling, single	Reconstruction and Growth (1866–1916)	Not Eligible
44VB0392	Yes	Dwelling, single	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible

Virginia DHR ID	Within PAPE	Site Type	Time Period	NRHP Eligibility Status
44VB0393	Yes	Dwelling, single	Colony to Nation (1751–1789), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0394	No	Lithic scatter, Military base/facility	Pre-Contact, Middle Woodland (300–999 C.E), Late Woodland (1000–1606), World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0395	Yes	Lithic scatter, Military base/facility	Pre-Contact, Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0396	Yes	Military base/facility	World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0412	Yes	Military base/facility	World War I to World War II (1914–1945), The New Dominion (1946–1991)	Potentially Eligible
44VB0430	No	Artifact scatter	Colony to Nation (1751–1789), Early National Period (1790–1829)	—
44VB0431	No	Artifact scatter	Pre-Contact, Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991)	—
44VB0432	No	Agricultural field	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991)	—

Source: VDHR

Notes: A.D. – Anno Domini, B.C. – before Christ; C.E. – Common Era

Sites within the PAPE are shaded gray.

A review of previous archaeological surveys within the PAPE determined 34 previous Phase I archaeological surveys and Phase II archaeological evaluations intersect the PAPE (Table G-5). The VCRIS Phase I Survey Areas GIS layer depicts large amount of prior coverage of the northern portion of the PAPE. However, to date, detailed review of the prior survey reports reveals actual coverage of the PAPE is limited. The VCRIS layer presents prior project areas that are typically larger than areas subject to subsurface archaeological excavations. Additionally, numerous surveys did not proceed beyond the reconnaissance level. To date, the review of previous archaeological survey reports has determined only 15 prior surveys provide applicable coverage of the PAPE. The SMR and NAS Oceana properties contain the majority of prior coverage. Additionally, a few surveys of road or transmission line ROWs in the central and southern portions of the PAPE provide previous survey coverage. In relation to the PAPE, the areas covered by applicable prior surveys are limited.

Table G-5. Previous Archaeological Surveys Within the PAPE

VDHR Survey #	Title	Author	Date
VB-174	Completion and Synthesis of Archaeological Survey, State Military Reservation Camp Pendleton, City of Virginia Beach, Virginia	Monroe, Elizabeth J., David W. Lewes, and Ellen L. Chapman	2017
CS-034	Phase I Archaeological Survey of Approximately 2,000 acres at Naval Air Station Oceana, Virginia Beach, Virginia, and Naval Auxiliary Landing Fentress, Chesapeake City, Virginia	Hornum, Michael B, Patrick Giglio, and William T. Dod	1994
CS-044	Additional Phase I Cultural Resource Survey of Revised Alignments for Proposed Southeastern Expressway, Cities of Chesapeake and Virginia Beach, Virginia	Higgins III, Thomas F., Anne S. Beckett, and Veronica Deitrick	1994
VB-097	Supplemental Archaeological Survey of Two Canals within the Proposed Realignment of Elbow Road, City of Virginia Beach, Virginia	Penner, Bruce R.	2003
VB-099	Phase I Archaeological Identification Survey of the Proposed Security Improvements (P-445/P-509), NAS Oceana, Virginia Beach, Virginia	Jensen, Todd L.	2003
VB-173	Phase I Cultural Resource Survey of Landstown Road Improvements	Tyrer, Carol D., and Dawn M. Muir-Frost	2017
VB-183	Addendum to Phase I Cultural Resources Survey of Landstown Road Improvements, City of Virginia Beach, Virginia	Tyrer, Carol D. and Dawn M. Muir-Frost	2017
VB-145	Survey of the Architectural and Archaeological Cultural Resources at the Virginia Air National Guard Installations at the Richmond International Airport, Henrico County and the State Military Reservation, Camp Pendleton, City of Virginia Beach, Virginia	Markell, Ann, Katherine Kuranda, Katherine Grandine, and Nathan Workman	2007
CS-019	Phase I Cultural Resource Survey of the Proposed Build Alternatives for the Southeastern Expressway in the Cities of Chesapeake and Virginia Beach, Virginia	Traver, Jerome D., and Maryanna Ralph	1989
CS-078	Archaeological Survey, Proposed Southeastern Parkway and Greenbelt, Cities of Chesapeake and Virginia Beach, Virginia	Baicy, Daniel, Loretta Lautzenheiser, and Michael Scholl	2005

VDHR Survey #	Title	Author	Date
CS-137	Phase I Cultural Resource Survey of the ±233-Hectare (±576-Acre) Bedford Solar Project Area, City of Chesapeake, Virginia	Dutton & Associates	2018
VB-015	An Archaeological Survey of the Virginia National Guard Camp Pendleton Training Camp Site, City of Virginia Beach, Virginia	Robison, Neil, and Ernie Seckinger	1987
VB-017	A Phase I Archaeological Reconnaissance Survey of the Proposed Improvements to the Entrance to Oceana Naval Air Station, Virginia Beach, Virginia	Wittkofski, J. Mark	1980
VB-025	Review and Compliance Phase I Reconnaissance Summary: North Landing River Bridge Replacement	Virginia Research Center for Archaeology	1980
VB-035	An Archeological Survey of the Naval Amphibious Base Annex, Camp Pendleton, Virginia Beach, Virginia	Robison, Neil, and Ernie Seckinger	1987
VB-037	Phase I Cultural Resource Survey Along Proposed Improvements to Oceana Boulevard in Virginia Beach, Virginia	Egghart, Christopher, and Luke Boyd	1991
VB-038	Phase I Archaeological Survey of a Proposed U. S. Navy Construction Project at Owl Creek in Virginia Beach, Virginia	Bussey, Stanley B., and Jerome D. Traver	1992
VB-047	Phase I Cultural Resource Survey, Birdneck Road, City of Virginia Beach, Virginia	Busby, Virginia, and Leslie Bashman	1993
VB-064	Phase I Archaeological Identification Survey in Support of 1995 Base Realignment and Closure, Naval Air Station Oceana, Virginia Beach, Virginia	Shmookler, Leonid I.	1996
VB-066	An Addendum to Phase I Cultural Resource Study of Proposed Improvements to Oceana Boulevard and First Colonial Road in Virginia Beach, Virginia	Hodges, Mary Ellen N., and Margaret Long Stephenson	1997
VB-069	Phase I Archaeological Survey of Proposed Landstown-West Landing, 230 KV Transmission Line, Virginia Beach, Virginia	Stuck, Kenneth E., and Thomas F. Higgins III	1997
VB-079	Archaeological Survey along a Portion of Holland Road (Route 410), the City of Virginia Beach, Virginia	Clarke, Robert, and Bradley Bowden	2000
VB-082	Archaeological Identification Survey, Princess Anne Road and Ferrell Parkway, City of Virginia Beach, Virginia	Brady, Ellen M., and Loretta Lautzenheiser	2000
VB-087	Phase I Archeological Survey of Approximately 583 Acres at Naval Air Station Oceana, Virginia Beach, Virginia	Madsen, Andrew D., Michael B. Hornum, Steven A. Mallory, and W. Patrick Giglio	1996
VB-088	Archaeological Survey of Route 165 (Princess Anne Road) Between Dam Neck Road and Judicial Boulevard, Virginia Beach, Virginia: Management Summary	Tippett, Lee	2002
VB-091	Phase I Archaeological Identification Survey in Support of 1995 Base Closure and Realignment, Naval Air Station Oceana, Virginia Beach, Virginia	Shmookler, Leonid I.	1996

VDHR Survey #	Title	Author	Date
VB-095	Archaeological Identification Survey and Archaeological Evaluations of Nine Sites Along the Proposed Landstown-West Landing 230 KV Transmission Line, City of Virginia Beach, Virginia	McDonald, Bradley, and Maureen Meyers	2002
VB-125	Phase I Archaeological Survey of the State Military Reservation, 83.81 ha (207 Acres) at Camp Pendleton, Virginia Beach, Virginia	Wayne C.J. Boyko, Beverly Boyko	2008
VB-143	Phase I Archaeological Investigation of Approximately 170 Acres at Naval Air Station Oceana, Virginia Beach, Virginia	Clement, Christopher	2011
VB-157	Phase I Archaeological Survey of the 5 Mile Stretch Project Area and Phase II Archaeological Evaluation of Site 44VB0166, Virginia Beach, Virginia	Dutton, David H. and Cara H. Metz	2014
CS-070	Centerville Turnpike Interceptor Force Main Phase I Intensive Cultural Resources Survey, City of Chesapeake	Browning, Lyle E.	1994
VB-207	Phase I Cultural Resource Survey for the Project Door Project Area in Virginia Beach, Virginia	Johnson, Patrick L. and Jonathan Valalik	2021
NA	Terrestrial Archaeology Survey Report, Virginia Offshore Wind Technology Advancement Project (VOWTAP), Virginia Beach, Virginia, DHR File No. 2013-0452	Jacoby, Robert and Sarah Haugh	2013
VB-205	Archaeological Assessment of the Southern Portion of the City of Virginia Beach, Virginia	Blondino, Joseph R. and Curtis McCoy	2020

Source: VDHR

G.4 ASSESSMENTS AND FINDINGS

G.4.1 Phase IA Assessment

The Phase IA portion of the TARA included undertaking a literature review, site reconnaissance, and archaeological sensitivity assessment. Archaeological site files maintained by the VDHR were reviewed noting the locations and types of all documented sites within 1 mi (1.6 km) of proposed Onshore Project Components as detailed in Section G.3.4, G.3.4 Previous Surveys. Tetra Tech also reviewed reports from previous archaeological surveys, relevant reports from VDHR's report series, and precontact contexts from *First People: The Early Indians of Virginia* (Egloff and Woodward 2006). Additional background research included review of a summary of historic grave sites provided by the City of Virginia Beach Historic Preservation Commission, a review of literature, including sources recommended by the Nation, and documentary, photographic, and cartographic resources available through the Virginia Beach Public Library, VCRIS, Virginia Landmarks Register (VLR), NRHP, and other relevant sources.

Tetra Tech staff archaeologists conducted a Phase IA pedestrian reconnaissance of the Project Area between May 17 and May 21, 2021. The reconnaissance consisted of observations of current conditions of accessible parcels that assisted in the assessment of archaeological sensitivity within the PAPE. Archaeological sensitivity is described as the relative potential for specific geographic locations to contain cultural deposits. Reliable estimates of archaeological potential, or sensitivity, are necessary for the implementation of effective survey strategies. The basis of the sensitivity assessment for the Project Area survey was derived from a review of environmental settings and recorded site locations, identification of zones of past disturbance through field reconnaissance, application of sensitivity modeling from other projects in similar environmental and historical settings, and review of historic maps (Attachment G-2).

The Project will utilize a variety of construction methods including typical trench installation, HDD, DSPT, pile driving, and deep foundations. As detailed in Section G.1.2.2, Onshore Project Components, the vertical extent of disturbance varies by construction method. Terrestrial impacts vary based on location, installation technique, and construction method. Phase IB archaeological testing recommendations were based on an assessment of archaeological sensitivity as well as the proposed construction method. Based on the Phase IA assessment, recommendations were made for the Phase IB reconnaissance and overall Project. This strategy was implemented based on correspondence and SCC pre-application consultation with VDHR. The full results of the Phase IA assessment are provided in the June 2021 COP filing, Appendix G, Phase IA Terrestrial Archaeological Resources Assessment. The Phase IA assessment results and recommendations are built on and superseded by the Phase IB reconnaissance findings presented in Section G.4.2. Note, the Phase IA PAPE was based on a prior alignment (May 2021) of Onshore Project Components and included multiple onshore routes that have since been removed from consideration.

Following the Phase IA assessment, sensitivity modeling of the Project was undertaken. A GIS model of pre-contact archaeological sensitivity was developed using the Project's parameters for predictive modeling detailed in Section 0, Objectives and Methodology. Data sources for sensitivity modeling were the National Hydrology Dataset (NHD), National Wetlands Inventory (NWI), and the National Elevation Dataset (NED), and VCRIS. The NHD and NWI are comprised of line features and polygons with resolution generally on the order of 3.3 to 16 ft (1 to 5 m). The NED is raster based and has a 33-ft (10-m) resolution.

The resulting sensitivity layer was overlain with the georeferenced alignment of Onshore Project Features and loaded to the ESRI ArcCollector program allowing for field teams to view and interact with the model during the Phase IB reconnaissance survey. Historic archaeological sensitivity was assessed based on the onshore alignment and location of previously identified post-contact archaeological sites or mapped historic structures identified through either VCRIS or historic maps.

G.4.2 Phase IB Reconnaissance

The Phase IB reconnaissance field survey was initiated on July 27, 2021 and completed on August 25, 2022. To facilitate the survey, the PAPE was divided into 61 discrete survey units (SUs) (Figure G-7 and Attachment G-3) that supersede the SUs developed for the Phase IA assessment. The SUs were delineated based on their relationship to parcel boundaries or clearly defined geographic features such as field boundaries, waterbodies, and existing roads. The SUs were numbered in the order in which they were surveyed, which means, due to various issues regarding property access, that they were not geographically sequential.

The survey investigated accessible portions of the PAPE through either pedestrian survey or subsurface excavations. The location and layout of STs were based on the Phase IA assessment, ground truthing of the precontact GIS sensitivity model and desktop historic sensitivity assessment, the stratified sampling approach based on archaeological sensitivity, and ground conditions at the time of survey.

The survey team conducted a reconnaissance of each SU to evaluate location-specific terrain and vegetation and to ascertain whether any historical landscape features, such as dry-laid fieldstone walls, were present. Where conditions were suitable, the team then completed excavation of a shovel test grid or transects depending on archaeological sensitivity. A typical ST layout in an area of high archaeological sensitivity consisted of three transects, either parallel or staggered, at 50-ft (15-m) intervals with STs placed at 50-ft (15-m) intervals along the transects. STs within moderate to low sensitivity areas were typically arranged in two parallel or staggered transects at 50-ft (15-m) intervals with STs placed at 100-ft (30-m) intervals along the transects.

If artifacts were recovered during ST excavations, additional radial STs were excavated at a 25-foot (7.5-m) interval in cardinal directions from the positive ST to obtain information on the character and extent of the archaeological deposit, aid in assessing if a site has been located, and, if so, attempt to delineate a site boundary. Site boundaries were established based on either two consecutive negative STs and/or the edge of the PAPE. It is possible that newly identified sites extend beyond the PAPE, but subsurface testing outside the PAPE was beyond the purview of this Phase IB survey.

The pedestrian survey was carried out in locations with a minimum ground visibility of 50 percent, generally in recently plowed agricultural fields. In these locations, the PAPE was traversed along transects spaced 15 ft (5 m) apart and the location of any cultural material was recorded before being collected.

Field conditions within some SUs made shovel testing impossible, impractical, or likely to be unproductive. Constraints included steep slopes (in nominal excess of 15 percent); dense, impenetrable vegetation comprising saplings, shrubs, or reeds; saturated soils with water standing on the surface or immediately below the surface; extensive exposures of bedrock at the surface; marker signs indicating the presence of natural gas pipelines or other underground utilities; or the presence of small- to medium-scale artificial

landforms (berms, ditches, etc.), push piles, patches of exposed subsoil, trash piles, and/or other evidence of recent, substantial ground disturbance. In some instances, it was possible to avoid localized expressions of such conditions by relocating (offsetting) individual STs. Field inspection of an SU involved a walkover, to the extent possible, that documented surface conditions and, where present, historical landscape features, without the excavation of STs.

Subsurface archaeological testing involved excavation of STs approximately 16 inches (in; 40 centimeters [cm]) in diameter either to a depth below which archaeological deposits were not likely to occur or until hand excavation was not possible. The survey has taken place in upland depositional environments, outside of active floodplains. Areas that include wetland expanses with standing water and saturated ground conditions that were unsuitable for subsurface testing were subjected to pedestrian reconnaissance.

In upland settings, the predominant geological and pedogenic processes have led to very slow or no accumulation of mineral soil matter in the post-glacial era or to a dominance of erosional processes. In this environment, soils tend to be thin and archaeological deposits are typically located at ground surface, or within approximately 12 to 16 in (30 to 40 cm) of the surface. Consequently, shovel testing generally extended through a surface soil horizon, typically an artificially homogenized plow zone or similar forest clearance layer, and the upper 4 to 8 in (10 to 20 cm) of the underlying, often truncated, subsoil. As a result, STs generally reached depths of 14 to 20 in (35 to 50 cm) below surface. Excavated soil was screened through 0.25-in (0.64-cm) mesh sieves to facilitate systematic artifact recovery. After excavation, each shovel test was documented using a digital form on an electronic tablet to record soil characteristics and any finds, and its location was recorded by a tablet-based GPS receiver capable of providing sub-meter accuracy. A ST Catalog and an Artifact Catalog are presented in Attachments G-4 and G-5, respectively.

The details of the survey results grouped by Onshore Project Component are presented in the following subsections. Representative photos of SUs, environmental features, previously identified sites, and other features of interest are presented in Attachment G-6. A Phase IB Mapbook is included in Attachment G-7.

Isolated artifact finds have been given a field identifier based on SU and ST (e.g., 01-01 [SU-ST]). Newly identified sites were initially given a field identifier based on SU number and an alphabetical designation (e.g., 01-A [SU-Letter]). Subsequently, VDHR Archaeological Site Inventory Forms were completed for newly identified sites and submitted for review and approval via VCRIS. After the Site Inventory Forms were completed and accepted, VDHR assigned permanent site numbers. Site forms for previously recorded sites were updated with newly acquired survey information.

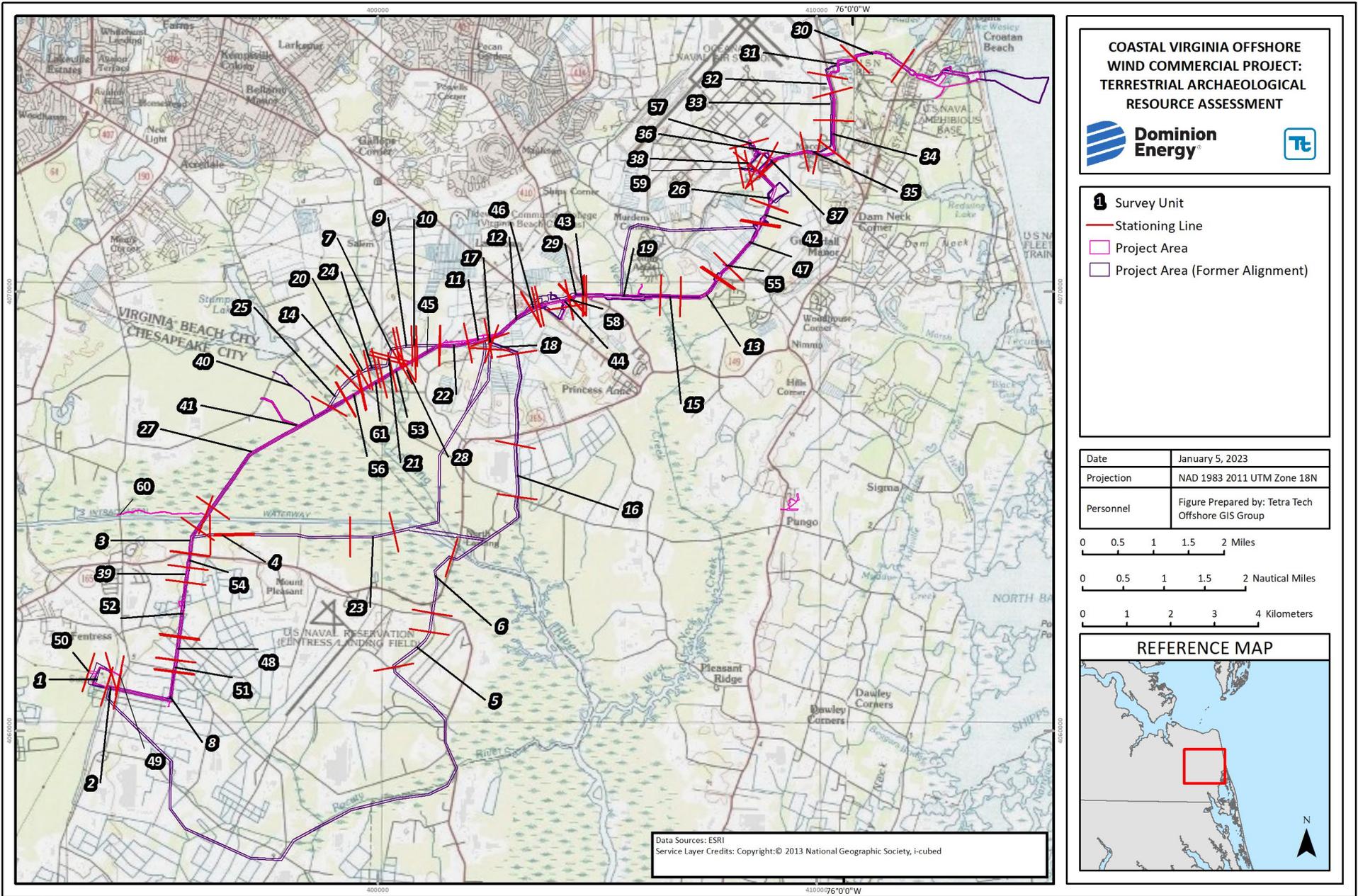


Figure G-7. Parcels and Phase IB Survey Units Including Previous Routes

G.4.2.1 Cable Landing Location

The Cable Landing Location is situated within SMR, which is listed on the VLR and the NRHP (National Park Service [NPS] Reference Number: 04000852, VLR File No. 134-0413; Figure G-3, Attachment G-7, Pages 1 - 2). SMR has been subject to numerous previous archaeological investigations including a completion and synthesis of archaeological survey performed by the William and Mary Center for Archaeological Research in 2015-2016, which summarized the previous work within SMR (Monroe et al. 2017).

The Virginia Research Center for Archaeology conducted the first cultural resources survey of Camp Pendleton in 1986. This survey covered the entire installation, dividing it into four areas. The structures and paved roads area was not surveyed due to the disturbance from the structures and roads. The parade ground and campground were randomly shovel tested and subjected to a surface examination. While historic documentation showed a windmill present in the southeast corner of the parade ground, investigations did not locate it. No cultural material was encountered in the parade ground or campgrounds. The wooded areas adjacent to Lake Christine and behind the administration buildings were shovel tested and recovered a single distal end of a quartzite biface. The final area examined was the small arms range, which was shovel tested and pedestrian surveyed and recovered no cultural material. This survey did not identify any sites.

In 2007, R. Christopher Goodwin & Associates Inc (RCGA) surveyed the Virginia Air National Guard portion of Camp Pendleton. At this time, 11 buildings, all constructed after 1989, were associated with the Air National Guard facility. RCGA identified a single site, 44VB343, which is a light density artifact scatter of 19th and 20th century military debris. It was not recommended eligible for the NRHP. Pedestrian survey and systematic and judgmental shovel testing strategies were employed during the survey.

In 2008, the Conservation Management Institute of Virginia Polytechnic Institute and State University surveyed 207 ac (82.81 ha) of Camp Pendleton. The institute employed systematic and random shovel testing resulting in the recovery of 14 isolated historic artifacts not recommended eligible for the NRHP. The survey focused on five areas of the camp: the Obstacle Course, Camp Field, Old Airfield, Hurt Hill Parking Lot Expansion, and Croatan Shipwreck. The Obstacle Course contained 73 STs, two of which were positive, and recovered two windowpane glass fragments, one whiteware sherd, one brick fragment, and one glass bottled fragment. The Camp Field contained 45 STs and recovered five isolated brick and nail finds. The Old Airfield contained 239 STs. Sixteen of those were positive, recovering various types of ceramic, brick fragments, nails, bottle and window glass, and military-associated items. The Hurt Hill Parking Lot Expansion contained 12 STs which did not contain any cultural material. The Croatan Shipwreck site identified the bow of an unknown tree-masted schooner which washed ashore in 1994 during Hurricane Gordon.

In 2013, Tetra Tech conducted a Phase I archaeological survey associated with the Virginia Offshore Wind Technology Advancement Project at Camp Pendleton. The survey excavated 68 STs and recovered several isolated historic artifacts and three isolate precontact artifacts. The survey focused on four alternative routes: Cable Landfall Alternative, Alternative 1, Alternative 2, and Alternative 3. No shovel testing was conducted in the Cable Landfall and Alternative 2 routes. 25 STs were excavated in the Alternative 1 Route. Four of those STs contained modern and historic artifacts and one contained a possible precontact

lithic. Alternative 3 Route contained 43 STs and recovered military-associated artifacts and three quartzite lithic tools. The lithic tools were recommended for individual listing on the NRHP.

No previously identified archaeological sites are located within the Cable Landing Location.

G.4.2.2 Onshore Export Cable Route

The Onshore Export Cable Route originates within SMR and extends to the Harpers Switching Station (Figure G-4; Attachment G-7, Pages 2 – 24, 26 and 29). A large portion of the cable route is situated within the NAS Oceana property.

The majority of the PAPE associated with the Onshore Export Cable Route was accessible, or able to be viewed, during the Phase IA site reconnaissance. Construction methods include HDD and surface trench installation. The area presents sensitivity for both pre-contact and post-contact archaeological sites due to proximity to Owl Creek, historic military use, and previously identified sites in the vicinity.

Five previously identified archaeological sites are located within the Onshore Export Cable Route PAPE, three of which are located in SMR: 44VB0389, 44VB0395, and 44VB0396 (Table G-6). Site 44VB0389 (Attachment G-7, Page 8) consists of a precontact lithic scatter of unknown date and a military facility dating back to World War I. Site 44VB0395 (Attachment G-7, Page 4) is a multi-component site consisting of a precontact lithic scatter of unknown date and a military facility dating from the mid-nineteenth to the turn of the twentieth century. Site 44VB0396 (Attachment G-7, Page 2) is a military facility consisting of an artifact scatter dating from the twentieth century associated with extant structures, Buildings 113 and 114. For all three sites, VDHR concurred with the consultant's recommendations that the site is not eligible for the NRHP (Monroe et al. 2017). Additionally, while site 44VB0388 is not currently within the PAPE, in consultation with SMR, a buffer of at least 10 ft (3 m) will be established around the resource to avoid any possible impacts.

The remaining two sites (44VB0204, located in SU 35, and 44VB0361, located in SU 37), discussed below, are situated within NAS Oceana and were subject to reassessment as part of the Phase IB survey (Figure G-7).

Table G-6. Previously Identified Archaeological Sites, Onshore Export Cable Route

Virginia DHR ID	Site Type	Time Period	NRHP Eligibility Status
44VB0396	Military base/facility	World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0395	Lithic scatter, Military base/facility	Pre-Contact, Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0389	Lithic scatter, Military base/facility	Pre-Contact, World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
44VB0204	Trash scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible

Virginia DHR ID	Site Type	Time Period	NRHP Eligibility Status
44VB0361	Farmstead	Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible

The Phase IB survey of the Onshore Export Cable Route PAPE was carried out between October 2021 and August 2022 and includes seven entire SUs (30 – 36) and the eastern portion of SU 37 (STs 001 – 038).

The Phase IB excavations identified one new archaeological site (44VB0443, located in SU 0035) and three isolated finds located in SUs 031, 033, and 034 (Table G-7), all currently attributed to undetermined post-contact time periods. These findings are discussed in detail below.

Table G-7. Newly Identified Archaeological Resources, Onshore Export Cable Route

ID#	Resource Type	Time Period	Recommendation
31-46	Isolate	Post-contact, undetermined	Not Eligible
33-08	Isolate	Post-contact, undetermined	Not Eligible
34-02	Isolate	Post-contact, undetermined	Not Eligible
44VB0443	Site, Artifact Scatter	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible

Site 44VB0204

Previously identified site 44VB0204 is located in Virginia Beach at the intersection of Oceana Boulevard and Harpers Road, situated in a small wood lot at the edge of the Oceana NAS (Attachment G-7, Page 23). The site is tangential to the Onshore Export Cable Route, with approximately 20 ft (7 m) of the site boundary extending into the PAPE.

In 1993, RCGA (Hornum et al. 1994) conducted a Phase I survey of a 2000-acre section of NAS Oceana, and in the process identified historic deposits as site 44VB0204. STs were arrayed at 30 m (98.5 ft) intervals, with radial STs set variously at 10 m (32.8 ft) and 5 m (16.4 ft) intervals between positive tests. RCGA recovered a variety of late-nineteenth and twentieth century artifacts, including bottle glass, window glass, brick fragments, nail fragments, table glass, and a whiteware sherd from between 7.5 – 12.5 in (19 – 32 cm) below the surface. A second survey was undertaken by Dovetail (Blondino et al. 2018), consisting of a pedestrian reconnaissance of the defined site area. Dovetail reported no artifacts or cultural features observed. VDHR concurred that the site is not eligible for inclusion in the NRHP.

As part of this Phase IB survey, site 44VB0204 was included in SU 35 (Attachment G-6, Photo 47). The easternmost portion of SU 35, at the intersection of Oceana Boulevard and Harpers Road where 44VB0204 is located, is heavily disturbed and the portion of the site within the PAPE was unable to be shovel tested due to the presence of a gravel shoulder, drainage ditch, storm drain, and utility pole with associated anchor points. Instead, four STs were placed on its periphery (001 – 004). These STs had a single stratum of gray (10YR 6/1) silt indicative of previous subsurface disturbance. None of the four STs contained cultural material.

Based on the subsurface disturbance and lack of cultural material in the vicinity of the site, Tetra Tech concludes that site 44VB0204 does not contain sufficient research value to satisfy NRHP criteria of significance. Consequently, there is no reason to revise the VDHR concurrence that the site is not eligible to the NRHP.

Site 44VB0361

Site 44VB0361, previously recorded in V-CRIS files, lies within NAS Oceana approximately 75 ft (23 m) north of Harpers Road in a fenced-in area immediately east of Paul Jones Circle in Virginia Beach (Attachment G-7, Page 29). The site location is comprised of a landscaped lawn with planted trees. The area is heavily disturbed by landscaping, asphalt roads and parking lots, an unused office complex, storage buildings, aboveground utility installations, and a variety of buried utility lines (gas, telecommunications, sewer, and water).

SEARCH conducted a Phase IB survey (Clement 2010) of portions of NAS Oceana and recovered a limited number of historic period artifacts from the plow zone between 8 – 18 in (20 - 45 cm) below the surface. This assemblage represented kitchen items from an unspecified nineteenth century residential occupation. Recovered artifacts included clear bottle glass, Rockingham/Bennington stoneware, and a kaolin pipe stem. SEARCH noted that a portion of the site appeared to be destroyed. Dovetail CRG (Blondino et al. 2018) undertook a pedestrian survey of the site for an archaeological assessment co-sponsored by the City of Virginia Beach and VDHR. Dovetail reported no artifacts recovered or observed. VDHR has concurred that the site is not eligible for the NRHP.

As part of this Phase IB survey, site 44VB0361 was included in SU 37 (Attachment G-6, Photo 54). The Phase IB survey excavated five STs (026, 026A, 026D, 074, and 075) within the defined boundaries of site 44VB0361. The soils in the upper strata of the STs were a dark grayish brown (10YR 4/2) silty clay loam. The soils in the lower strata were a grayish brown (10YR 5/2) silty clay. No cultural material was recovered from any of these five STs. One nearby ST (027) contained modern refuse including plastic fragments, modern bottle glass shards, and concrete and ceramic drainpipe fragments recovered from the upper stratum at a depth of approximately 7.5 in (19 cm). This material is likely associated with the Navy's recent use of the area rather than with site 44VB0361 given the differences in the nature of the respective assemblages and the fact that ST 027 is between two buried telecommunications cables indicating significant recent subsurface disturbance in this location.

Based on this Phase IB survey, Tetra Tech recommends that site 44VB0361 remain not eligible for listing on the NRHP.

Site 44VB0443

Newly identified site 44VB0443 (temporary ID 35-A) is located on the north side of Harpers Road on property belonging to NAS Oceana, approximately 320 ft (98 m) west of the intersection of Oceana Boulevard and Harpers Road (Attachment G-7, Page 23). Located in SU 35, one primary ST (006) and two radial STs (006C and 006D) contained cultural material. The soils in the upper strata of the STs were a brown (10YR 4/3) silt loam and extended approximately 16 – 18 in (40 – 45 cm) below the surface. The soils in the lower strata were a very pale brown (10YR 7/3) silt loam. The three positive STs contained one

nail head, one porcelain doll head fragment, one non-diagnostic kaolin pipe bowl, one whiteware sherd, three bottle glass fragments, and one window glass fragment all from the upper stratum, which is the plow zone of a recently harvested soybean field (Attachment G-6, Photo 93). The assemblage appears to be a low-density field scatter consisting of late nineteenth to twentieth century domestic refuse.

The 1907 and 1918 USGS maps of the area (USGS 1907; USGS 1918; Attachment G-2, Figures G-2-7 and G-2-8) show two buildings at the northwest corner of Oceana Boulevard and Harpers Road where sites 44VB0204 and 44VB0443 are located, which the 1918 map identifies as “Macons Corner.” Because 44VB0443 and 44VB0204 are more than 150 ft (45 m) apart, per VDHR guidelines they are considered discrete sites (VDHR 2011). The structures are not depicted on the 1948 USGS map (USGS 1948; Attachment G-2, Figure G-2-9) nor are they visible on an aerial photograph from 1954 which shows only agricultural fields at this location (VBHAV 1954; Attachment G-2, Figure G-2-10), a use which continues to the present day.

An understanding of the bacteriological transmission of disease, which grew out of the work of Louis Pasteur and others beginning in the 1860s, began to affect waste disposal practices in the later nineteenth century (Melosi 2000). In rural areas it changed the manner of refuse disposal as the relationship between sanitation, hygiene, and disease became better understood. To minimize contact with vermin, rodents, and larger mammals, residents sought increased distance of disposed refuse from the area around their dwellings. Often this meant disposal in a nearby crop field or pasture. The low-density trash scatter which defines site 44VB0443 likely represents these types of disposal patterns, though more than a century of plowing, as well as more recent road and utility construction, means that the artifacts are likely from a tertiary context.

Site 44VB0443 abuts Harpers Road to the south and an associated drainage ditch is within the site boundary (Attachment G-6, Photos 48 and 49). A substation surrounded by a gravel pad with utility poles, a utility box, and access point for buried utilities is located approximately 105 ft (31 m) to the northwest of site 44VB0443. These disturbances suggest a lack of stratigraphic integrity and low potential for intact cultural features. Further, the sparse nature of the material recovered has limited research potential that would not add to the understanding of the site’s or region’s history. Tetra Tech concludes that the site does not contain sufficient research value to satisfy NRHP criteria of significance and recommends that 44VB0443 is not eligible for listing on the NRHP.

Isolated Finds

Three isolated finds recovered from the Onshore Export Cable Route are all attributed to post-contact time periods and were determined not to be culturally meaningful and/or associated with specific landscape features. Isolated finds consist of a single artifact, or a small grouping of artifacts that lack cultural meaning, context, stratigraphy, or likely reflects casual discard.

Isolated finds included: (1) 31-46, one whiteware sherd from SU 31 (Attachment G-6, Photo 94); 031; (2) 33-08, one whiteware sherd and two brick fragments from SU 32; and (3) 34-02, 22 wire nails from SU 34 (Attachment G-7, Pages 16 and 18-20).

Modern aboveground features were observed adjacent to the east side of, but not within, the PAPE in the vicinity of ST 017 in SU 33 (Attachment G-6, Photos 41 - 44). These consisted of a rectangular concrete slab or foundation, a hydraulic installation, possibly a cistern, and a rectangular pit. The slab/foundation is

poured concrete with steel reinforcements. The associated aboveground cistern is modern brick with a pipe and a rubber hose. The rectangular pit to the north has no associated architecture or features. What appear to be fenceposts are located near the concrete slab. Small piles of construction debris, including cinderblocks and modern bricks, are scattered throughout the woods surrounding the features. The fact that modern building materials, particularly bricks, were used and that pliable rubber hosing was observed in the cistern suggest a recent date. The nearest ST to these features, ST 017, contained gravel, possibly from a driveway, but otherwise none of the STs in the vicinity contained cultural material. An examination of maps and aerial photos failed to identify any structures at this location. Because these features appear to be less than 50 years old and are outside the PAPE, they are not considered an archaeological site.

G.4.2.3 Switching Station

The Harpers Switching Station is situated within NAS Oceana property on the Aeropines Golf Course (Figure G-2; Attachment G-7, Pages 25-36 and 40). This switching station location had been modified since the Phase IA pedestrian survey was undertaken in May 2021. As such, the Phase IA reconnaissance was performed during the same field effort as the Phase IB survey from December 2021 until August 2022. Construction methods were dominantly open excavations with some spread footer and vibrated/driven pipe pile foundations. The area presents low sensitivity for pre-contact sites and low to moderate sensitivity for post-contact archaeological sites due to disturbance, the presence of map documented structures, and historic military use.

No previously identified archaeological sites are located within the Harpers Switching Station PAPE. However, prior to initiating the survey, NAS Oceana personnel informed Dominion Energy and Tetra Tech that a grave or memorial is located within the Project PAPE and the golf course. The grave/memorial site is discussed in further detail below.

The entirety of SUs 38 (Attachment G-6, Photos 56 - 58), 57 (Attachment G-6, Photo 87), and 59 (Attachment G-6, Photo 89) and the western portion of SU 37 (STs 39 – 107) (Attachment G-6, Photo 52) cover the Harpers Switching Station PAPE. The Phase IB excavations did not recover any cultural materials or indications of features from the entirety of the PAPE. The majority of excavated STs exhibited disturbed or stripped conditions and blocks of STs within fairways and surrounding the maintenance building were not excavated due to observed disturbance.

The grave/memorial is situated in the southern portion of the golf course and the western portion of the PAPE (Attachment G-2, Figures G-2-11 – G-2-16; Attachment G-7, Page 36). The grave/memorial site consists of a concrete slab, approximately 4 ft (1.2 m) long, with an embedded metal plaque of the type supplied by funeral homes, often as temporary markers (Attachment G-6, Photos 59 - 61). The area is surrounded by a low fence which appears to be a recent addition. The metal plaque reads:

INFANT GIRL UNKN[O]WN
DERRY-TWIFORD FUNERAL HOME

There are no dates, but the grave/memorial appears to date generally to the mid-twentieth century based on similar dated examples, particularly the plaque supplied by the funeral home, observed in other cemeteries in Virginia.

Navy personnel have made past attempts to determine the history of the grave/memorial site with no result. A 2015 Navy Public Works Department project which reconfigured the 15th hole of the golf course avoided the area by redesign; a formal survey of the grave/memorial site was not undertaken. Navy personnel have relayed varying viewpoints and lore surrounding the grave site including theories that the site is not an actual grave but a memorial, and stories about the it place the events leading to its establishment anywhere between World War II (an aviator's wife, still living in Princess Anne County after her husband had shipped out, abandoned a newborn conceived with a local) and the Vietnam era. (Lauterbach 2021).

Tetra Tech staff contacted the Twiford Funeral Home (former Derry Twiford Funeral Home) to inquire if they retained any records of the infant burial, which they do not. In discussing the grave/memorial site, funeral home staff relayed that based on the description of the slab, plaque, and fence the site is likely a burial; the cost of interring remains through a funeral home and the features of the site would have been a considerable expense for a memorial in the mid-twentieth century.

Dominion Energy contracted Schnabel Engineering to perform a non-invasive ground penetrating radar (GPR) survey to identify potential subsurface anomalies within the fenced grave/memorial site and surrounding area prior to Phase IB subsurface testing (Attachment G-8). An approximate 50 ft (15 m) area surrounding and including the grave/memorial was subject to the GPR survey. The survey results were inconclusive. Although the GPR findings did not display typical responses of a buried vault, body, or casket type anomaly, other anomalies that could represent excavations, graves, or other disturbances in soil stratigraphy were documented. Historic graves would generally be expected to appear as parallel rows of anomalies aligned east – west (Baugher and Veit 2014). The anomalies identified by the GPR are scattered and at different angles, a pattern that is not indicative of burials. The identified anomalies are also located to the south of the grave/memorial on the edge of the golf course, an area that has undergone significant landscaping. The use of this location as an agricultural field and then the construction of the golf course would have resulted in significant subsurface disturbance such as drainage/irrigation ditches, plow scars, and tree removal. These activities could have resulted in the type of anomalies identified by GPR. Within the fenced grave/memorial site, GPR findings determined the concrete slab is approximately 5 inches (12.7 centimeters) thick and contains reinforced steel (Sheaffer 2022).

Following the GPR survey, and in coordination with NAS Oceana cultural resources managers, Tetra Tech undertook Phase IB shovel testing of the area surrounding the grave/memorial utilizing a 50 ft (15 m) interval, expanding outside of the PAPE to the southwest. Six STs were placed in the immediate vicinity of the grave/memorial. None of these STs contained cultural material and there was no indication of grave shafts or voids. The soils in the STs were deflated with a single stratum of gray (10YR 6/1) to light brownish gray (10YR 6/2) silty clay which is consistent with the subsoil identified in other areas of the golf course. The presence of a single stratum of subsoil is indicative of previous grading and is consistent with the area's use as an agricultural field and subsequent landscaping associated with the golf course.

Following the GPR and Phase IB surveys, NAS Oceana has determined a 10 ft (3 m) avoidance buffer will be established for the grave site to protect it from construction related activities, and in accordance with Code of Virginia §18.2-126, violation of sepulture; defilement of dead human body. Additionally, archaeological removal of human remains requires a permit from Virginia DHR, pursuant to Code of Virginia §10.1-2305, "Permit required for the archaeological excavation of human remains" (see section G.5.2 below).

Because there is so little information about the grave, an assessment of its eligibility to the NRHP is necessarily tentative. Lack of information about the individual interred and the circumstances of the internment means that an assessment of eligibility under Criteria A or B cannot be made at this time. However, eligibility under these criteria seems unlikely given the occupant is described as an unknown infant. Given that the grave marker itself consists of a common mass-produced metal plaque and a concrete slab, it would not be eligible to the NRHP under Criterion C. Eligibility under Criterion D is currently unknown, though it is unlikely that it would be eligible under this criterion either.

G.4.2.4 Interconnection Cable Route

The Interconnection Cable Route represents the majority of the PAPE and include SUs 02 - 29, SUs 39 – 56, and SUs 60 and 61 (Figure G-5; Attachment G-7, Pages 37-157 Table G-5). This is an overhead transmission route and presents a range of archaeological sensitivity from disturbed/low to high.

Six previously identified archaeological sites are located within the PAPE of Route 1 (Table G-8), all of which were subject to reassessment as part of the Phase IB survey.

Table G-8. Previously Identified Archaeological Sites, Interconnection Cable Route

VDHR ID	Site Type	Time Period	NRHP Eligibility Status
44VB0175	Artifact scatter	Contact Period (1607–1750), Colony to Nation (1751–1789), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible
44VB0314	Dwelling, single	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible
44VB0274	Artifact scatter, Farmstead	Paleo-Indian (15000–8501 B.C.E), Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early Woodland (1200 B.C.E–299 C.E), Middle Woodland (300–999 C.E), Late Woodland (1000–1606)	Not Eligible
44VB0162	Camp, temporary, Cemetery	Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early Woodland (1200 B.C.E–299 C.E), Middle Woodland (300–999 C.E), Late Woodland (1000–1606), Early National Period (1790–1829)	Potentially Eligible
44VB0306	Canal	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible
44CS0250	Camp	Middle Archaic (6500–3001 B.C.), Late Archaic (3000–1201 B.C.)	—

The Phase IB survey of accessible parcels within the Interconnection Cable Route PAPE undertaken between July 2021 and August 2022 resulted in the excavation of 1,511 STs across 31 SUs. Since October 2021, the Phase IB excavations have focused on a single Interconnection Cable Route (Interconnection Cable Route Alternative 1 – Preferred Alternative). Interconnection Cable Route 1 was approved by the SCC as the preferred route in August 2022.

Excavations identified one new archaeological site (44VB0444) and six isolated finds (Table G-9) all currently attributed to undetermined post-contact time periods. Findings are discussed in detail below.

Table G-9. Newly Identified Archaeological Resources, Interconnection Cable Route

Field ID	VDHR ID	Resource Type	Time Period, Material	Recommendation
26-A	44VB0444	Site, Artifact Scatter	Reconstruction and Growth (1866–1916), World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible
26-234	N/A	Isolate	Post-contact, undetermined	Not Eligible
26-21	N/A	Isolate	Post-contact, undetermined	Not Eligible
11-56	N/A	Isolate	Post-contact, undetermined	Not Eligible
12-09	N/A	Isolate	Post-contact, undetermined	Not Eligible
28-08	N/A	Isolate	Post-contact, undetermined	Not Eligible
28-09	N/A	Isolate	Post-contact, undetermined	Not Eligible

Site 44VB0175

Previously recorded site 44VB0175 is located in Virginia Beach, north of Princess Anne Road and west of the Princess Anne Meadows residential development (Attachment G-7, Page 64). The site extends approximately 5 ft (1.5 m) into an existing gravel road that is part of the PAPE. The majority of the site to the west is in second growth forest adjacent to the recently constructed housing development.

The previous survey, undertaken by MAAR Associates for the proposed Southeastern Expressway (Traver 1989), excavated 24 STs and recovered a thin scatter of brick fragments and eighteenth and nineteenth century pottery sherds primarily from the surface. At the time of that survey, the site locale was described as a fallow field, perhaps already abandoned, and beginning to support early succession species. Presently, the site locale is thickly wooded. MAAR Associates recommended that the site was not eligible to the NRHP and in 1989 VDHR concurred.

As part of this Phase IB survey, the portion of site 44VB0175 located within the PAPE was included in SU 44 (Attachment G-6, Photo 71). Because the small portion of the site within the PAPE is an existing roadbed, no subsurface testing was done and the area was pedestrian surveyed. The pedestrian survey identified no cultural material.

Because of the small area of 44VB0175 surveyed, Tetra Tech cannot make a recommendation regarding the site's eligibility to the NRHP. However, nothing was observed to question the earlier recommendation of not eligible.

Site 44VB0314

Previously recorded site 44VB0314, which is bisected by the PAPE, is located in Virginia Beach approximately 650 ft east of Landstown Road (Attachment G-7, Page 76-77 and 79). The site's location is characterized by marshy soils surrounded by mowed hay fields and it is bisected by drainage ditches and an access road.

Previous surveys include Traver and Murphy (1989) who identified a historic building "I-house" and recommended it not eligible for listing on the NRHP. In 2004, Lautzenheiser et al. excavated 13 STs at the

archaeological remains of the house for the proposed Southeastern Parkway and recovered sparse historic period artifacts from 10 – 20 in (25 - 50 cm) below the surface. In 2018, Dovetail CRG (Blondino et al. 2018) examined a portion of the site via a pedestrian survey, though the house remains appear to have been not visible from their survey transect. VDHR has concurred that site 44VB0314 is not eligible for listing on the NRHP.

As in the previous survey, the Phase IA reconnaissance for this Project did not identify any above-ground remnants of the historic structure. During the Phase IB survey, eight STs were plotted within, or immediately adjacent to, the defined boundaries of the site as part of SU 12 (Attachment G-6, Photos 12 and 13). Only four of these STs (011 – 014) were able to be dug due to marshy soils with standing water. The soils in the upper stratum were a brown (10YR 3/2) silty clay loam extending approximately 12 in (30 cm) below the surface. The lower stratum consisted of grayish brown (10YR 5/2) sandy clay mottled with pale brown (10YR 6/3) sandy clay. No cultural material was recovered from the four STs.

Because no cultural material was recovered from 44VB0314 during this Phase IB survey, Tetra Tech recommends maintaining the site's status as not eligible for listing on the NRHP.

Site 44VB0274

The previously recorded multi-component site 44VB0274 is located in Virginia Beach adjacent to Landstown Road to the west. The location is heavily disturbed by the road berm, drainage ditches, two access roads, and the existing Dominion Energy Landstown to West Landing Transmission ROW (Attachment G-7, Pages 76-77 and 79).

Site 44VB0274 was initially identified during a Phase I survey (Travers and Murphy 1989), which recorded the presence of an early twentieth century house. Three subsequent revisits to the site were undertaken for different proposed projects. Stuck and Higgins (1997) conducted a Phase I survey and reported finding precontact quartz and quartzite debitage, and a variety of historic period artifacts, including square cut nail fragments, brick fragments, single pieces of vessel glass and whiteware, and coal slag. Shuck and Higgins concluded that the historic component represented a mid to late-nineteenth century residential occupation and recommended that the historic period component was potentially NRHP-eligible and that the precontact component was not NRHP-eligible. Coastal Carolina Research (Lautzenheiser et al. 2004) undertook a Phase I survey on a portion of the site and retrieved unspecified precontact period artifacts and historic period artifacts indicating a mid to late twentieth century occupation from the surface or the first level of the STs. Cultural Resource Management (Tyrer 2017) revisited the site in 2016 for a survey related to improvements to the transmission line ROW. Tyrer reported "site totally destroyed" as a result of ongoing construction within the ROW. Site 44VB0274 was recommended not eligible to the NRHP and VDHR concurred.

As in the previous survey, the Phase IA reconnaissance for this Project did not identify any aboveground remnants of the historic structure. The Phase IB survey excavated eight STs within the limits of site 44VB0274; six STs as part of SU 12 (001 – 006) and two STs as part of SU 17 (001 and 002) (Attachment G-6, Photo 18). STs 001 and 002 in SU 12, located immediately to the east of Landstown Road, were heavily disturbed with soils consisting primarily of road gravel. Otherwise, the soils in the upper stratum of the STs were generally a grayish brown (10YR 5/2) sandy loam. The soils in the lower stratum were generally a gray (10YR 6/1) mottled with a yellowish brown (10YR 5/8) sandy clay or sandy clay loam.

One ST in SU 12 (004) contained 15 historic period artifacts, including six bottle glass fragments, five asbestos shingle pieces, and single fragments of brick, whiteware, wire nail, and plastic (Attachment G-6, Photo 95). These appear to date to the twentieth century and are likely associated with the house noted in the original survey. This was the only one of the eight STs within the boundary of site 44VB0274 to contain any cultural material.

Based on the results of previous surveys as well as those conducted for this Project, site 44VB0274 has been subject to extensive subsurface disturbance. Consequently, there is a low probability of intact stratigraphy or subsurface features. Regarding the concerns raised by Dr. Horton on behalf of the Nansemond Indian Nation (CHP 2022b), particularly the possibility of recovering artifacts dating to the Archaic Period, no precontact material was recovered from this Phase IB survey. The artifacts recovered from the single ST appear to be a mix of common twentieth century household items and building materials whose deposition is likely associated with the demolition of the previously noted house. The significant subsurface disturbance and lack of associated features indicate that this site has limited research potential for both precontact and contact material culture. Tetra Tech recommends that site 44VB0274 remain not eligible for listing on the NRHP.

Site 44VB0162

Previously identified site 44VB0162 is located in Virginia Beach south of the Princess Anne Athletic Complex and is bisected by the proposed onshore Interconnection Cable Route (Attachment G-7, Pages 79-81). The eastern end of site 44VB0162 is heavily disturbed by drainage ditches, storm sewers, landscaping, soil berms, and an artificial pond associated with the construction of the Princess Anne Athletic Complex in the early twenty-first century. The western end of the site contains delineated wetlands and is covered in planted pine, indicating previous clear cutting.

Site 44VB0162 is classified as multi-component and was subject to two prior archaeological investigations: a reconnaissance/Phase I survey in 1988 (Traver and Ralph 1989) which originally identified the site via pedestrian survey, and a subsequent Phase I survey in 2016 (Tyrer 2017) which identified no cultural materials, features, or site presence.

The 1988 precontact findings included a greenstone full-grooved axe that likely represents an unspecified Archaic period, a Late Woodland triangle projectile point, and undated quartz and quartzite debitage. A variety of historic period artifacts were also recovered. These included bottle glass, whiteware, stoneware, and a kaolin pipestem, which were dated from the late eighteenth century to the twentieth century. The V-CRIS site file notes that a local collector had picked up projectile points “over many years.” In 1989, VDHR concurred that the site was potentially eligible to the NRHP.

This Phase IB survey dug 85 STs within the boundary of site 44VB0162 as part of SU 22 (Attachment G-6, Photo 23). STs were arrayed at 50 ft (15 m) intervals within the PAPE. Three primary STs were positive. Twenty-two radial STs, of which seven were positive, were then excavated at 25-foot (7.5 m) intervals around the positive STs. Soils in the upper stratum of the STs were generally a pale brown (10YR 6/3) silty clay loam extending only approximately 6 in (15 cm) below the surface. Soils in the lower stratum were generally a yellow (10YR 7/6) silty loam mottled with a brownish yellow (10YR 6/8). Seven STs within site 44VB0162, specifically in the area artifacts were recovered from, contained only subsoil. Two of the STs which contained only subsoil also produced cultural material (003A and 003A1). Fifty post-contact

period finds from the ten positive STs were recovered, including 18 brick fragments, 18 bottle glass fragments, six window glass fragments, five whiteware sherds, one yellowware sherd, one unidentified metal fragment, and one fragment of field drainage pipe (Attachment G-6, Photo 96). All cultural material recovered from the site survey was retrieved from the upper stratum or, in the case of STs 003A and 003A1, the only stratum. The artifacts were distributed at the western end of the site in an L-shape pattern measuring approximately 120 x 110-ft (36 x 34 m).

The assemblage recovered from site 44VB0162 during this Phase IB survey appears to be a low-density trash or field scatter containing household and construction detritus dating to the late nineteenth or twentieth century. This is largely consistent with material recovered during the 1988 pedestrian survey, with the exception of any artifacts datable to the eighteenth century. As noted by Travers and Ralph, these artifacts may be “associated with a nineteenth century frame house located north of the site,” now gone which was “once used as a domicile by a Mennonite farm family...” (Traver and Ralph 1989).

The 1907 and 1918 USGS maps of the area (USGS 1907; USGS 1918; Attachment G-2, Figures G-2-17 and G-2-18) show structures in the vicinity of the artifact scatter, particularly along Landstown Road, but not the precise location. Both the USGS maps and a 1958 aerial photo (VBHAV 1958; Attachment G-2, Figure G-2-19) indicate that this location was at the interface of agricultural fields and wetlands. An understanding of the bacteriological transmission of disease, which grew out of the work of Louis Pasteur and others beginning in the 1860s, began to affect waste disposal practices in the later nineteenth century (Melosi 2000). In rural areas it changed the manner of refuse disposal as the relationship between sanitation, hygiene, and disease became better understood. To minimize contact with vermin, rodents, and larger mammals, residents sought increased distance of disposed refuse from the area around their dwellings. Often this meant disposal in a nearby crop field or pasture, such as the one it appears this artifact scatter occupies.

To clearly associate the assemblage from 44VB0162 with specific individuals who occupied the site, both a larger sample and more diagnostic artifacts (decorated sherds, makers’ marks, commercial labels, etc.) would be required. This would allow for a more precise dating and, potentially, provide information on issues such as cultural affiliation, foodways, or economic activities (Groover 2008). The small, fragmentary nature of the assemblage and the lack of diagnostic artifacts from the current survey precludes this level of analysis.

Regarding the concerns raised by Dr. Horton on behalf of the Nansemond Indian Nation (CHP 2022b), particularly the possibility of recovering artifacts dating to the Archaic Period, no precontact material was recovered from this Phase IB survey.

Approximately 52 percent of site 44VB0162 lies within the PAPE. Consequently, only slightly more than half of the site was tested during this Phase IB survey. Because only a portion of the site was tested as part of the current survey, a definitive assessment of eligibility to the NRHP cannot be made. However, the evidence of deflated soils and extensive subsurface disturbance within the PAPE suggests little possibility of intact subsurface deposits or cultural features. The artifacts that were recovered, both during this Phase IB survey and the 1988 survey, were all from either the surface or deflated soils and, consequently, are likely from tertiary contexts due to repeated cultivation and extensive logging. Because of this extensive disturbance, along with the scant and fragmentary nature of the assemblage, the investigated portion of site

44VB0162 within the PAPE lacks data potential and integrity of materials (relevant for Criterion D of the NRHP), and integrity to convey association with locally or regionally significant individuals or events (Criteria A and B of the NRHP). Further survey outside of the Project PAPE may alter this view, but results from within the PAPE indicate that site 44VB0162 has low research potential.

Site 44VB0306

The Salem Canal, a channelized segment of North Landing River, was designated by VDHR as site 44VB0306 (Attachment G-7, Pages 91 and 93). The site is crossed by Route 1 approximately 0.3 mi northeast of Indian River Road in Virginia Beach and contains flowing water. Penner (2003) initially described the site as extending approximately 2.5 mi. from Ware Neck Road to immediately south of Indian River Road. This channelized segment of a natural drainage slough was excavated for navigational purposes in the mid to late-nineteenth century and measured approximately 30 feet wide and 4.5 feet deep. Observations made by Dovetail CRG (Blondino et al. 2018) during a 2018 pedestrian survey, indicated that the site was “totally destroyed.” VDHR has concurred that the site is not eligible to the NRHP and has noted that “the site is no longer extant.”

This Phase IB survey included survey on both the northeast and southwest banks of 44VB0306. Subsurface testing was done on the northeast bank, included in SU 53, between Highland Drive and the canal (Attachment G-6, Photo 83; Attachment G-7, Page 91). The area is an existing transmission line ROW with homes, an asphalt driveway, and associated residential landscaping at the northeastern end. There are mark outs for several utilities parallel to the road and a sewer access point in the lawn indicating prior subsurface disturbance in this area. A buried gas pipeline runs the length of the northern side of the PAPE. In the backyard of one of the houses, there is an installation for a geothermal heating system and associated buried pipes, flower beds, and a transmission tower, all further indicating subsurface disturbance. The southwestern portion of SU 53, between the backyard and delineated wetlands, is a level field covered in mown grass. Seventeen STs, 50 ft (15 m) apart, were dug along two transects. A third transect was not dug due to its proximity to the gas pipeline. All 17 STs contained a single stratum of grayish brown (10YR 5/2) silty clay mottled with brownish yellow (10YR 6/8) immediately beneath the sod cap. None of the STs contained cultural material.

The southwest bank of site 44VB0306 was surveyed as part of SU 61 (Attachment G-6, Photo 92; Attachment G-7, Page 93). It is an existing transmission line ROW with a buried natural gas pipeline running its entire length. The area is a level field covered in mix of mown grass and low brush and vegetation with a delineated wetland at its northeastern end. Recently constructed residences line both sides of the ROW and there is a large artificial pond immediately to the north. Large areas of subsoil are visible along much of the ROW. Because the entire SU has been modelled as having low archaeological sensitivity, a single transect of STs spaced 100 ft (30 m) apart was dug. Only one transect was dug because of the buried natural gas pipeline along the northwestern side of the PAPE. Seven STs were dug, all of which were deflated with a single stratum of yellowish brown (10YR 5/8) silty clay. None of the STs contained cultural material.

Because site 44VB306 contains flowing water, the site itself was not part of this Phase IB survey. However, the areas immediately to the northeast and southwest of the site were surveyed and lack both intact

stratigraphy and cultural material. Tetra Tech recommends that these areas do not contribute to site 44VB0306, and are not eligible for listing on the NRHP.

Site 44CS0250

The previously identified site 44CS0250 is located in Virginia Beach, north and west of Gum Swamp within a broad woodlot, and is bisected by the proposed onshore Interconnection Cable Route and an existing aboveground transmission ROW (Attachment G-7, Pages 101 and 102). An access road runs along the northeast edge of the site from its northern boundary to the ROW. No systematic surveys of the site have been conducted previously; identification of the site was by a local collector who found a soapstone vessel and “many points,” including Middle Archaic period Morrow Mountain projectile points.

Numerous areas of disturbance were noted in SU 27 which encompasses site 44CS0250. The existing ROW contains transmission towers as well as a marker for a buried natural gas pipeline. Additionally, subsoil was observed on the surface in several locations. The surrounding area is also covered in planted pine indicating clear cutting in the past.

The Phase IB survey excavated 48 STs at 50-ft (15 m) intervals within the bounds of site 44VB0250 (Attachment G-6, Photos 30 and 31). No cultural material was recovered during the survey. In much of SU 27, the soils are deflated with a single stratum of gray (10YR 6/1) silty clay mottled with yellowish brown (10YR 5/8) observed. When two strata are present, the soils of the upper level range from a dark grayish brown (10YR 4/2) to a gray (10YR 5/1) silty clay loam or clay loam. The soils of the second stratum are the aforementioned gray (10YR 6/1) silty clay mottled with yellowish brown (10YR 5/8). Generally, STs closer to the southeastern edge of the ROW are more likely to contain two strata.

Because only the approximately 30 percent of site 44CS0250 within the PAPE was tested during this Phase IB survey, a definitive assessment of eligibility to the NRHP cannot be made. Regarding the concerns raised by Dr. Horton on behalf of the Nansemond Indian Nation (CHP 2022b), particularly the possibility of recovering artifacts dating to the Archaic Period, no archaeological material was recovered during this Phase IB survey. The evidence of deflated soils and extensive subsurface disturbance suggests little possibility of intact subsurface deposits or features. This, coupled with the lack of any cultural material, either pre- or post-contact, recovered indicates limited research potential, but further survey outside of this Project’s PAPE may alter this view.

Site 44VB0444

Newly identified site 44VB0444 is situated on the south side of Harpers Road, where the Interconnection Cable Route exits the Harpers Switching Station. (Attachment G-7, Pages 38 and 39) The site is located within SU 26, which contains a fallow agricultural field covered in tall, dense grasses and brush adjacent to the Virginia Beach City Public Schools Office of Transportation Services facility to the northwest and the Taylor Farms Sand Pit to the southwest. Several ditches cross SU 26 diagonally from north to south and a wide drainage ditch separates it from both the Transportation Services facility and the sand pit, both indicating significant subsurface disturbance (Attachment G-6, Photo 27). Due to the presence of identified archaeological sites in the vicinity and modelling indicating moderate to high archaeological sensitivity, STs were plotted 50 ft (15 m) apart along three transects.

USGS maps from between 1907 and 1948 indicate two houses set amongst agricultural fields in the vicinity of site 44VB0444 (USGS 1907; USGS 1948; Attachment G-2, Figures G-2-20 and G-2-21). The houses are also visible on aerial photographs from 1937 and 1954 (VBHAV 1937; VBHAV 1954; Attachment G-2, Figures G-2-22 and G-2-23). The structures are gone in a 1958 aerial photograph (VBHAV 1958; Attachment G-2, Figure G-2-24) and do not appear on the 1965 USGS map (USGS 1965; Attachment G-2, Figure G-2-25), though the area is still agricultural. The 1965 USGS map also indicates extensive irrigation or drainage ditches on the property for the first time, which are still evident today.

Site 44VB0444 contained 29 positive primary and radial STs (047B, 050, 050A, 050A1, 050A2, 050C, 053, 053A, 054, 054A, 056, 057, 058, 059, 059A, 060, 061, 062, 063, 064, 065, 067, 068, 069, 071, 073, 074, 077, 078) which serve to delineate the site boundary. Excavations recovered 245 post-contact period finds, which were mostly very fragmentary and worn (Attachment G-5). Most STs within site 44VB0444 contained a single stratum of very compact grayish brown (10YR 5/2) silty clay subsoil. When topsoil was present, it was a dark gray (10YR 4/1) to a dark grayish brown (10YR 4/2) silty clay loam. The subsoil in STs with two strata was the same very compact grayish brown (10YR 5/2) silty clay. All cultural material was recovered from between 0 – 12 in (0 – 30 cm) below the surface.

The most numerous artifact type recovered from 44VB0444 is mold-made bottle glass. This artifact type comprises 43 percent of the assemblage (105 shards) and includes clear, blue, green, brown, and blue green glass. The vessels appear to be primarily beverage, or liquid, containers with some medicine bottles. There is also a single olive colored wine bottle shard.

Ceramics comprise 18 percent of the assemblage from site 44VB0444 (43 sherds) with white ware making up 88 percent of that total (38 sherds). Within the whiteware assemblage, 31 are body sherds and seven are rim sherds. The vast majority of the whiteware sherds are undecorated, but there are two blue shell edge sherds and one sherd with a blue glaze and molded crosshatch pattern. Though most of the sherds are non-diagnostic and too small to ascertain function, they most likely represent tableware. The remainder of the ceramic assemblage consists of three salt-glazed stoneware body sherds, one redware body sherd, and one ironstone rim sherd, all of which appears domestic (Attachment G-6, Photo 97).

Other domestic items in the assemblage from site 44VB0444 include four milk glass shards, one of which appears to be the base of a dish, and six domestic porcelain sherds, all of which is likely tableware. Two of the porcelain sherds, which appear to be from a bowl, have a red transfer floral motif.

Faunal remains from site 44VB0444 include three oyster shell fragments and four clam shell fragments, which is unsurprising given the site's proximity to the Atlantic Ocean.

Building materials comprise 25 percent of the assemblage from site 44VB0444 and include brick fragments (32 fragments), window glass sherds (20 sherds), and nail fragments (10 fragments). The nail fragments are too small and/or rusted to be reliably typed. Four of the brick fragments had a vitrified surface and 10 pieces of slag were also recovered indicating some sort of high heat environment, possibly involved in craft production. Alternately, the vitrified brick and slag could be the result of a fire.

One black plastic fragment and one black hard rubber fragment, both from unidentified objects, were also recovered from site 44VB0444.

The assemblage from site 44VB0444 represents a mix of domestic artifacts with a possible craft or industrial component dating from the late nineteenth to the later twentieth century. An understanding of the bacteriological transmission of disease, which grew out of the work of Louis Pasteur and others beginning in the 1860s, began to affect waste disposal practices in the later nineteenth century (Melosi 2000). In rural areas, it changed the manner of refuse disposal as the relationship between sanitation, hygiene, and disease became better understood. To minimize contact with vermin, rodents, and larger mammals, residents sought increased distance of disposed refuse from the area around their dwellings. Often this meant disposal in a nearby crop field or pasture, such as the one it appears the assemblage from site 44VB0444 occupies.

Site 44VB0444's deflated soils and numerous ditches indicate that the area has been heavily disturbed making any stratigraphic integrity or the presence of intact subsurface features unlikely. The fact that the artifacts from site 44VB0444 are fragmentary, worn, and found on the edge of the field suggests that their distribution may be the result of plowing and, consequently, from a tertiary context. Further, the sparse nature of the material recovered has limited research potential that would not add to the understanding of the site's or region's history. Because of this extensive disturbance, site 44VB0444 appears to lack data potential and integrity of materials (relevant for Criterion D of the NRHP), and integrity to convey association with locally or regionally significant individuals or events (Criteria A and B of the NRHP). Tetra Tech recommends that site 44VB0444 has little potential for future research and is not eligible for listing on the NRHP.

Isolates

Six isolated finds recovered from the Interconnection Cable Route PAPE are all attributed to post-contact time periods and were determined not to be culturally meaningful and/or associated with specific landscape features.

Isolated finds included: (1) 26-21, one bottle glass fragment; (2) 26-234, one whiteware sherd, (3) 11-56, one bottle glass fragment; (4) 12-09, one bottle glass fragment; (5) 28-08, three brick fragments; and (6) 28-09, six brick fragments (Attachment G-7, Pages 39, 40, 88, 89, 91, 101, 102).

G.4.2.5 Onshore Substation

The Onshore Substation includes SU 01, the existing Fentress Substation itself, and access roads SUs 49 and 50 (Attachment G-7, Pages 150-152) and will involve an expansion of the existing Fentress Substation. The northwest portion of SU 01 is primarily delineated wetlands and the northeast portion is a mix of wetlands, access roads, drainage ditches, existing telephone and transmission line ROWs, buried telephone lines, train tracks, and a cell tower (Attachment G-6, Photo 1).

Within the Onshore Substation, 18 STs were placed on a 100 ft (30 m) grid, where possible, because the area has been modelled to have low archaeological sensitivity. Areas not subject to subsurface testing were pedestrian surveyed. The soils in all STs were deflated with a single stratum ranging from gray (10YR 5/1) to dark gray (10YR 4/1) to brown (10YR 5/3) silty clay immediately beneath the leaf litter. None of the STs contained cultural material.

SU 49 is a proposed access road extending approximately 725 ft (220 m) west-northwest from Centerville Turnpike South to the Fentress Substation (Attachment G-6, Photo 78). The western half of SU 49, immediately adjacent to Centerville Turnpike South, is a gravel access road with a drainage ditch running

along its south side. There are utility poles and markers for buried telecommunications cables on both sides of the access road. North of the access road is the Sewell Commerce Park and an agricultural field with young corn is to the south. The western half of the proposed access road is covered in low grass and terminates at active railroad tracks. Three STs were placed here. All three STs were a single stratum of grayish brown (10YR 5/2) gravel indicating that this area is an overgrown extension of the access road to the south. None of the three STs in SU 49 contained cultural material.

SU 50 is a proposed access road that extends approximately 651 ft (199 m) east from the Fentress Loop to the Fentress Substation (Attachment G-6, Photo 79). This SU contains Etheridge Lakes Par, an existing transmission line ROW and a gravel access road. The western end of SU 50 is modelled as having high archaeological sensitivity and five STs (001 – 005) were dug along two transects at 50 ft (15 m) intervals. All five STs contained a single stratum of grayish brown (10YR 5/2) gravels immediately beneath the sod cap indicating prior subsurface disturbance. The eastern portion of SU 50 is modelled as having low archaeological sensitivity and eight STs (006 – 013) were dug along two transects at 100 ft (30 m) intervals. This portion of SU 50 has significant disturbance, including transmission towers, a gravel access road, and concrete slabs scattered throughout the PAPE. The soils in the upper stratum of the eastern STs were very thin, approximately 5 cm, and consisted of dark grayish brown (10YR 4/2) silty clay. The soils in the lower stratum were a grayish brown (10YR 5/2) silty clay mottled with a brownish yellow (10YR 6/8). None of the STs in SU 50 contained cultural material.

Tetra Tech recommends no further survey is necessary at the Onshore Substation, and the current investigation identified no resources eligible for listing on the NRHP.

G.4.2.6 Laydown Yard

Site 44VB0412

The Pungo Airfield, 44VB0412, located approximately 4.6 mi (7.4 km) southeast of the Interconnection Cable Route in Virginia Beach, has been proposed as a laydown yard for use in support of construction activities. The airfield had been previously included in a Phase IA archaeological survey in 2020 and recommended potentially eligible to the NRHP under Criterion A for its association with World War II and under Criterion D for its potential to contribute significant archaeological data about military life and facilities (Blondino and McCoy 2020), though no systematic pedestrian survey or shovel testing was conducted. The airfield is a decommissioned World War II-era aviation facility currently being used to store construction materials and heavy machinery. The portions of the Pungo Airfield that will be used for the Project are all paved with asphalt, and therefore unsuitable for subsurface testing.

The use of the Pungo Airfield as a laydown yard will be restricted to existing paved surfaces and will not involve subsurface disturbance. Moreover, activities involved in the site's use as a laydown yard will not significantly differ from its current use as a storage facility. If use of the Pungo Airfield is restricted to existing paved surfaces, Tetra Tech recommends no further survey is necessary. As a potentially eligible site, the airfield is considered a historic property, but proposed Project activities are not anticipated to have an adverse effect for the reasons stated above.

G.4.2.7 Former Potential Interconnection Cable Routes

Previous alignments and survey of associated PAPEs have resulted in some survey on former Interconnection Cable Route options outside of the current Route 1 PAPE. Findings include the identification of a new site (44VB0445), the expanded boundary of a previously identified site (44VB0319), and four isolates and a former post-contact/modern dump area.

Site 44VB0445

Newly identified site 44VB0445 (Field ID 26-B) is situated on the south side of Harpers Road, where the Interconnection Cable Route meets a proposed laydown yard (Attachment G-7, Pages 37-39). The site is located within SU 26, approximately 200 ft (61 m) southeast of newly identified site 44VB0444, which is within the PAPE. The area consists of a fallow agricultural field covered in tall, dense grasses and brush adjacent to the Virginia Beach City Public Schools Office of Transportation Services facility to the northwest and the Taylor Farms Sand Pit to the southwest. Several ditches cross SU 26 diagonally from north to south and a wide drainage ditch separates it from both the Transportation Services facility and the sand pit, both indicating significant subsurface disturbance (Attachment G-6, Photo 27). Due to the presence of identified archaeological sites in the vicinity and modelling indicating moderate to high archaeological sensitivity, STs were plotted 50 ft (15 m) apart along three transects.

USGS maps from between 1907 and 1948 indicate two houses set amongst agricultural fields in the vicinity of 44VB0445 (USGS 1907; USGS 1948; Attachment G-2, Figures G-2-20 and G-2-21). The houses are also visible on aerial photographs from 1937 and 1954 (VBHAV 1937; VBHAV 1954; Attachment G-2, Figures G-2-22 and G-2-23). The structures are gone in a 1958 aerial photograph (VBHAV 1958; Attachment G-2, Figure G-2-24) and do not appear on the 1965 USGS map (USGS 1965; Attachment G-2, Figure G-2-25), though the area is still agricultural. The 1965 USGS map also indicates extensive irrigation or drainage ditches on the property for the first time, which are still evident today.

The soils in the upper strata of the STs comprising 44VB0445 were generally a brown (10YR 3/2) to dark grayish brown (10YR 4/2) silty clay loam approximately 30 cm thick. The soils in the lower strata were a grayish brown (10YR 5/2) silty clay. One primary ST (296) and one radial ST (296A) produced one domestic porcelain sherd, three glass bottle fragments, and one milk glass dish base (Attachment G-6, Photo 98).

Site 44VB445 is located approximately 200 ft (61 m) east of site 44VB444. Per VDHR guidelines (VDHR 2011) because sites 44VB0444 and 44VB0445 are more than 150 ft (45 m) apart they are considered separate sites, although they both likely represent related depositional events involving refuse disposal and plowing from nearby houses. If more testing is done indicating that the sites are connected, Tetra Tech recommends merging sites 44VB0444 and 44VB0445.

Tetra Tech concludes that site 44VB0445 lacks the stratigraphic integrity and potential for intact cultural features to be considered a significant historic property. Further, the sparse nature of the material recovered has limited research potential that would not add to the understanding of the site's or region's history. Tetra Tech recommends that site 44VB0445 is not eligible for listing on the NRHP. Because site 44VB0445 is no longer within the PAPE, it is not anticipated to be impacted by Project activities.

Site 44VB0319

Site 44VB0319, previously recorded in V-CRIS files, is approximately 2,100 ft (640 m) southeast of the intersection of Harpers Road and Dewey Drive in Virginia Beach (Attachment G-2, Figures 20 – 25; Attachment G-7, Page 37). The location is characterized as fallow fields on the margins of dense wood lots (Attachment G-6, Photo 29).

Lautzenheiser (Lautzenheiser et al. 2004) conducted a pedestrian survey for the proposed Southeastern Parkway, collecting a small number of whiteware, salt-glazed stoneware, and brick fragments from surface contexts. In 2018, Dovetail CRG undertook a pedestrian reconnaissance of the site area, reporting no cultural material identified (Blondino et al. 2018). VDHR has concurred that the site is not eligible for listing on the NRHP.

This Phase IB survey excavated 14 STs arrayed at 50 ft (15 m) intervals, within the previously defined boundary of site 44VB0319 as part of SU 26. These STs yielded no cultural material. However, approximately 65 to 115 ft (20 to 35 m) northwest of the boundaries of site 44VB0319 there was a cluster of six positive STs (444, 444A-B, 467, 467D-D1). The soils in the upper strata of the STs were generally a dark brown (10YR 3/3) silty clay loam approximately 12 in (30 cm) thick. The soils in the lower strata were a grayish brown (10YR 5/2) silty clay. These six STs produced four glass bottle fragments and three whiteware sherds from the upper stratum/plow zone (Attachment G-6, Photo 99). Initially, these positive STs were given the temporary site ID 26-C. However, because of their proximity to 44VB0319, the boundary of that site was amended to include the positive STs.

Tetra Tech concludes that site 44VB0319 lacks the stratigraphic integrity and potential for intact cultural features to be considered a significant historic property. Further, the sparse nature of the material recovered has limited research potential that would not add to the understanding of the site's or region's history. Tetra Tech recommends that site 44VB0319 is not eligible for listing on the NRHP. Because site 44VB0319 is no longer within the PAPE, it is not anticipated to be impacted by Project activities.

Isolates

Isolates identified on former Interconnection Cable Route alternatives include: (1) 07-38, one blue window glass fragment; (2) 09-14, one whiteware sherd; (3) 14-01, three bottle glass fragments; and (4) 14-43, three bottle glass fragments (Attachment G-7, Pages 98, 106, and 108).

A former post-contact/modern dump area was identified within SUs 14 and 20 (adjacent), near a cluster of four archaeological sites representing dwellings adjacent to Indian River Road (Attachment G-6, Photos 15 and 21; Attachment G-7, Page 94). Four STs excavated in the area produced a mix of materials including bottle glass fragments, whiteware sherds, brick fragments, an oyster shell, and an aluminum can (Attachment G-6, Photo 100). STs exhibited inconsistent stratigraphy. The owner of the adjacent property informed the survey team that a low rise within the former PAPE was a spoil pile and dump created by the previous owner of the property.

G.5 SUMMARY AND RECOMMENDATIONS

Tetra Tech undertook a Phase IA archaeological assessment and Phase IB reconnaissance survey for the CVOW Commercial Project. The Phase IA assessment included reviews of precontact and historic site files and archaeological survey reports on file at the VDHR, review of environmental and cartographic information relevant to the Project vicinity, and a pedestrian reconnaissance of accessible portions of the PAPE. The Phase IA undertaking led to an assessment of archaeological sensitivity of the alignment of Onshore Project Components.

The Phase IB survey of the Project, which was carried out between July 2021 and August 2022, reassessed 12 previously identified archaeological sites within the PAPE (Table G-10). Of the 12 sites that were reassessed, nine sites were previously categorized as not eligible for listing on the NRHP and three sites were categorized as potentially eligible for listing. The status of site 44CS0250 has not been determined by VDHR, but BOEM is treating unevaluated historic properties as potentially eligible to the NRHP. Consequently, site 44CS0250 is being considered one of the potentially eligible sites for the purpose of this TARA. Following Phase IB reassessment of the previously identified sites, Tetra Tech recommends four of the sites as not eligible for listing on the NRHP due to a combination of factors, including lack of sufficient research value, lack of stratigraphic integrity, the absence of intact cultural features, and lack of association with historically significant people or events.

Tetra Tech has made no recommendation regarding the NRHP eligibility of eight of the previously identified sites. The sites located within the SMR/Camp Pendleton (44VB0396, 44VB0395, 44VB0389) were recently surveyed and after consultation with the SMR it was determined no further study was warranted at this time. The survey area of three sites (44VB015, 44VB0162, and 44CS0250), which intersect the PAPE, was not significant enough for Tetra Tech to make a recommendation regarding these sites' eligibility to the NRHP. However, the results of the survey that was done on these three sites produced no data to warrant a change in NRHP status. Site 44VB0306 is the Salem Canal and was not resurveyed due to standing water. The use of the Pungo Airfield (44VB0412) as a laydown yard would not involve subsurface disturbance and, consequently, would not adversely affect any intact archaeological contexts. Because of this, the area was not resurveyed.

The Phase IB survey identified two new post-contact archaeological sites and 10 post-contact isolated finds within the Route 1 PAPE (Table G-10). Both sites are late nineteenth to twentieth century trash scatters in agricultural fields. The artifacts from both sites are likely from tertiary contexts and neither site has significant research potential. Tetra Tech recommends that sites 44VB0443 and 44VB0444 are not eligible for listing on the NRHP.

Table G-10. Archaeological Sites Within Route 1 PAPE

ID	Site Type	Time Period	NRHP Eligibility Status	Anticipated Effect
Onshore Export Cable				
44VB0204	Trash scatter	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible	No Historic Properties Affected
44VB0361	Farmstead	Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible	No Historic Properties Affected
44VB0389	Lithic scatter, Military base/facility	Pre-Contact, World War I to World War II (1917–1945), The New Dominion (1946–1991)	Not Eligible	No Historic Properties Affected
44VB0395	Lithic scatter, Military base/facility	Pre-Contact, Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible	No Historic Properties Affected
44VB0396	Military base/facility	World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible	No Historic Properties Affected
44VB0443	Site, Artifact Scatter	Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible	No Historic Properties Affected
31-46	Isolate	Post-contact, undetermined	Not Eligible	No Historic Properties Affected
33-08	Isolate	Post-contact, undetermined	Not Eligible	No Historic Properties Affected
34-02	Isolate	Post-contact, undetermined	Not Eligible	No Historic Properties Affected
37-27	Isolate	Post-contact, undetermined Modern (potential association with site 44VB0361)	Not Eligible	No Historic Properties Affected
Interconnection Cable				
44VB0162	Camp, temporary, Cemetery	Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early Woodland (1200 B.C.E–299 C.E), Middle Woodland (300–999 C.E), Late Woodland (1000–1606), Early National Period (1790–1829)	Potentially Eligible	No Adverse Effect with Recommended Avoidance
44VB0175	Artifact scatter	Contact Period (1607–1750), Colony to Nation (1751–1789), Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible	No Historic Properties Affected
44CS0250	Camp	Middle Archaic (6500–3001 B.C.), Late Archaic (3000–1201 B.C.)	Potentially Eligible	No Adverse Effect with Recommended Avoidance

ID	Site Type	Time Period	NRHP Eligibility Status	Anticipated Effect
44VB0274	Artifact scatter, Farmstead	Paleo-Indian (15000–8501 B.C.E), Early Archaic Period (8500–6501 B.C.E), Middle Archaic Period (6500–3001 B.C.E), Late Archaic Period (3000–1201 B.C.E), Early Woodland (1200 B.C.E–299 C.E), Middle Woodland (300–999 C.E), Late Woodland (1000–1606)	Not Eligible	No Historic Properties Affected
44VB0306	Canal	Early National Period (1790–1829), Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991), Post-Cold War (1992–Present)	Not Eligible	No Historic Properties Affected
44VB0314	Dwelling, single	Antebellum Period (1830–1860), Civil War (1861–1865), Reconstruction and Growth (1866–1916)	Not Eligible	No Historic Properties Affected
44VB0444	Site, Artifact Scatter	Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible	No Historic Properties Affected
11-56	Isolate	Post-contact, undetermined	Not Eligible	No Historic Properties Affected
12-09	Isolate	Post-contact, undetermined	Not Eligible	No Historic Properties Affected
26-21	Isolate	Post-contact, undetermined	Not Eligible	No Historic Properties Affected
26-234	Isolate	Post-contact, undetermined	Not Eligible	No Historic Properties Affected
28-08	Isolate	Post-contact, undetermined	Not Eligible	No Historic Properties Affected
28-09	Isolate	Post-contact, undetermined	Not Eligible	No Historic Properties Affected
Laydown Yard				
44VB0412	Military base/facility	World War I to World War II (1917 - 1945)	Potentially Eligible	No Adverse Effect with Recommended Avoidance

In addition to these findings, the grave site, or memorial, of an unknown infant was identified in the Harpers Switching Station PAPE within the NAS Oceana Aeropines Golf Course. The Phase IB survey did not identify any indications of other burials or cultural features, nor recover any artifacts. The GPR survey was inconclusive and reported several anomalies that could not be ruled out as mortuary features or internments, though these anomalies do not appear to be consistent with historic burials. Moreover, the anomalies are located on the edge of the golf course, an area which has undergone significant landscaping. The use of this location as an agricultural field and then the construction of the golf course would have resulted in significant subsurface disturbance, which could have resulted in the type of anomalies identified by GPR (see section G.4.2.3 above for further detail).

Former Interconnection Cable Route options subject to the Phase IB survey prior to being removed from consideration identified one new site, four isolated post-contact finds, and one former post-contact/modern dump, and expanded the boundaries on an existing site. The previously identified site (44VB0319) and

newly identified site (44VB0445) are low-density trash scatters in agricultural fields (Table G-11). Neither site is recommended to the NRHP.

Table G-11. Archaeological Sites Surveyed Outside Route 1 PAPE

ID	Resource Type	Time Period	Recommendation
44VB0319	Site	Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible
44VB0445	Site	Reconstruction and Growth (1866–1916), World War I to World War II (1914–1945), The New Dominion (1946–1991)	Not Eligible

Measures for avoiding and/or minimizing effects to archaeological resources as well as a plan for archaeological monitoring during construction are included as Attachment G-9 of this TARA.

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ATTACHMENT G-1 DRAFT UNANTICIPATED DISCOVERIES PLAN, TERRESTRIAL ARCHAEOLOGICAL RESOURCES

DRAFT

ATTACHMENT G-2 HISTORIC MAPS AND AERIAL PHOTOGRAPHS

DRAFT

ATTACHMENT G-3 SURVEY UNITS TABLE

DRAFT

ATTACHMENT G-4 SHOVEL TEST CATALOG

DRAFT

ATTACHMENT G-5 ARTIFACT CATALOG

DRAFT

ATTACHMENT G-6 PHOTOGRAPHS

DRAFT

ATTACHMENT G-7 PHASE IB MAPBOOK

DRAFT

ATTACHMENT G-8 GROUND PENETRATING RADAR SURVEY SUMMARY MEMO

DRAFT

ATTACHMENT G-9 AVOIDANCE, MINIMIZATION, AND MONITORING PLAN - TERRESTRIAL ARCHAEOLOGICAL RESOURCES

Provided under separate cover.

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