SOUTHCOAST WIND

Appendix T.1 Onshore Visual Impact Assessment – Brayton Point

Document Revision	F
Issue Date	July 2024

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Acronyms and Abbreviations

Abbreviation or Acronym	Definition
APVI	Area of Potential Visual Impact
AVEHP	Analysis of Visual Effects to Historic Properties
BOEM	Bureau of Ocean Energy Management
COP	Construction and Operations Plan
DEM	Digital elevation map
DSM	Digital surface model
EJ	environmental justice
ft	foot
ha	hectare
HDD	horizontal directional drilling
HVDC	high-voltage direct-current
km	kilometer
KOP	Key Observation Point
kV	kilovolt
LCA	landscape character area
Lease Area	BOEM Renewable Energy Lease Area OCS-A 0521
LiDAR	light detection and ranging
m	meter
mi	mile
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
OCS	outer continental shelf
OSP	offshore substation platform
POI	point of interconnection
Project	SouthCoast Wind Offshore Wind Project
Project site	onshore converter stations
SouthCoast Wind	SouthCoast Wind Energy LLC
Tetra Tech	Tetra Tech, Inc.
VIA	Visual Impact Assessment
WTG	wind turbine generator

1.0 Introduction

In 2021, Tetra Tech, Inc. (Tetra Tech) was retained by SouthCoast Wind Energy LLC (SouthCoast Wind) to prepare a Visual Impact Assessment (VIA) Addendum for the proposed onshore facilities at Brayton Point in Somerset, Massachusetts associated with the SouthCoast Wind Project (Project). The Project is a wind-powered electric generating facility to be located in federal waters in the outer continental shelf (OCS), in Bureau of Ocean Energy Management (BOEM) Renewable Energy Lease Area OCS-A 0521 (Lease Area). The proposed Project is composed of up to 149 positions in the Lease Area to be occupied by wind turbine generators (WTGs) and offshore substation platforms (OSPs), inter-array cables connecting the WTGs and OSPs, and submarine export cables connecting the OSPs to onshore facilities.

In February 2021, SouthCoast Wind submitted a Construction and Operations Plan (COP) to BOEM. Appendix T of the COP included a VIA addressing impacts to visual resources for the offshore components of the Project and onshore components in Falmouth, Massachusetts, where one point of interconnection (POI) for the Project will be located. This Addendum to the VIA (Appendix T of the COP) addresses the onshore Project facility to be located at the Brayton Point POI in Somerset, Massachusetts. The potential visual effects from the onshore facilities at Brayton Point regarding two high-voltage direct-current (HVDC) converter stations (converter stations), are the subject of this assessment. Specific onshore Project details are described in Section 1.1 and Table 1-1.

The purpose of this VIA Addendum is to:

- Establish the Area of Potential Visual Impact (APVI) surrounding the converter stations at Brayton Point and define its visual character,
- Identify visually sensitive resources within the APVI and evaluate potential views of the onshore Project components at Brayton Point (referred to as the Brayton Point Onshore Project Area) from those resources, and
- Assess potential impacts to visually sensitive resources and viewers experiencing those resources, and describe recommendations for mitigation, if required.

The impact assessment presented here is separated into seascape and landscape impact assessment (SLIA, Section 3.4), which evaluates sensitivity of visual receptors and magnitude of change, and the VIA (Section 3.5), which evaluates the impact on people from adding the Project to views from a set of representative viewpoints.

1.1 Project Overview

The Project includes a Lease Area located in federal waters south of Martha's Vineyard and Nantucket (Figure 1-1). WTGs constructed within the Lease Area will deliver power via inter-array cables to the OSPs. Submarine offshore export cables will be installed within offshore export cable corridors to carry the electricity from the OSPs within the Lease Area to the onshore transmission systems via up to two different export cable corridors. One export cable corridor will make landfall at Brayton Point, in Somerset, Massachusetts and the other will make landfall in Falmouth, Massachusetts, if Falmouth is selected as the POI for Project 2. The proposed Brayton Point export cable corridor will run north and west from the Lease Area through Rhode Island Sound to the Sakonnet River. It will then run north up the Sakonnet River, traverse Aquidneck Island underground, and transition back to offshore in Mount Hope Bay, and then north into Massachusetts state waters to Brayton Point. Landfall will be made via horizontal directional drilling (HDD) at one of two potential landing locations in Somerset, Massachusetts, on the western side of Brayton Point from the Lee River (preferred) or the eastern side via the Taunton River (alternate). The offshore export cables will make landfall via HDD. The proposed Falmouth export cable corridor may extend from the Lease Area through Muskeget Channel into Nantucket Sound to three potential landing location(s) in Falmouth including Worcester Avenue (preferred), Central Park, or Shore Street.

At Brayton Point, the onshore underground export cables will traverse the site from the landing to the location of up to two new converter stations. Underground transmission cables will be constructed from the converter stations to the Brayton Point POI, the adjacent existing National Grid substation.

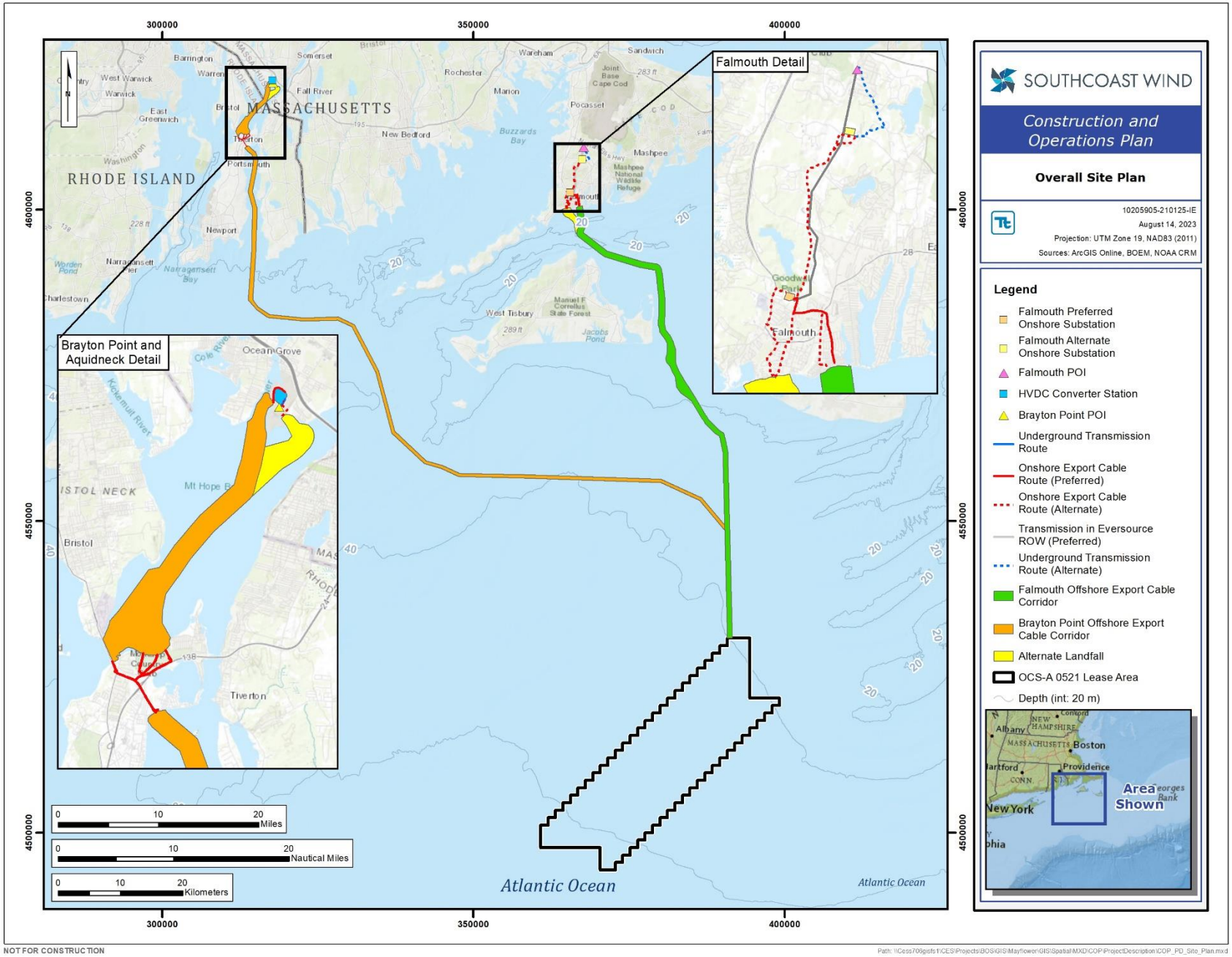

Figure 1-1. Overview of the SouthCoast Wind Project Area

1.2 Onshore Facility Details

The Brayton Point Onshore Project Area is briefly described below in Table 1-1. Additional details may be found in the COP Section 3 – Description of Proposed Activities.

Table 1-1. Key Project Details

Project Attribute	Description
Landfall Location(s)	Brayton Point, Somerset, MA Two locations under consideration: the western (preferred) and eastern (alternate) shorelines of Brayton Point Installation methodology: HDD Aquidneck Island, Portsmouth, RI Several locations under consideration for the intermediate landfall across the island Installation methodology: HDD
Onshore Export Cables	Brayton Point, Somerset, MA HVDC; Nominal underground onshore export cable voltage: ±320 kilovolts (kV) Up to 4 export power cables and up to 2 communication cables Length: Up to 0.6 miles (mi, 1.0 kilometer [km]) per cable on Brayton Point
HVDC Converter Stations	Brayton Point, Somerset, MA Location: On the Brayton Point property area under consideration Area: Up to 7.5 acres (3.0 hectares) each
Transmission from HVDC Converter Stations to POI	Brayton Point, Somerset, MA New 345-kV underground transmission route to National Grid substation HVAC; nominal underground transmission cable voltage: up to 345 kV Up 0.5 mi (0.8 km) on Brayton Point property
Point of Interconnection	Brayton Point, Somerset, MA Existing National Grid substation

1.3 Onshore Facility Location and Description

The converter stations are located in Somerset, Massachusetts in Bristol County, on Brayton Point. It is the former site of the Brayton Point Power Generation Station, which included two 500-foot (152-meter[m])-tall concrete cooling towers. That facility was decommissioned in 2017 (Finucane, 2017) and demolished in 2019. Much of the Brayton Point peninsula has been used for industrial activities since the mid twentieth century. Currently, the site is bordered to the west by the Lee River; to the north by undeveloped industrial lands, a large emergent wetland connected to the Lee River, and a commercial radio facility; to the east by another industrial site and a large earthen berm and residential development; and to the south by Mount Hope Bay (see Figure 1-2).

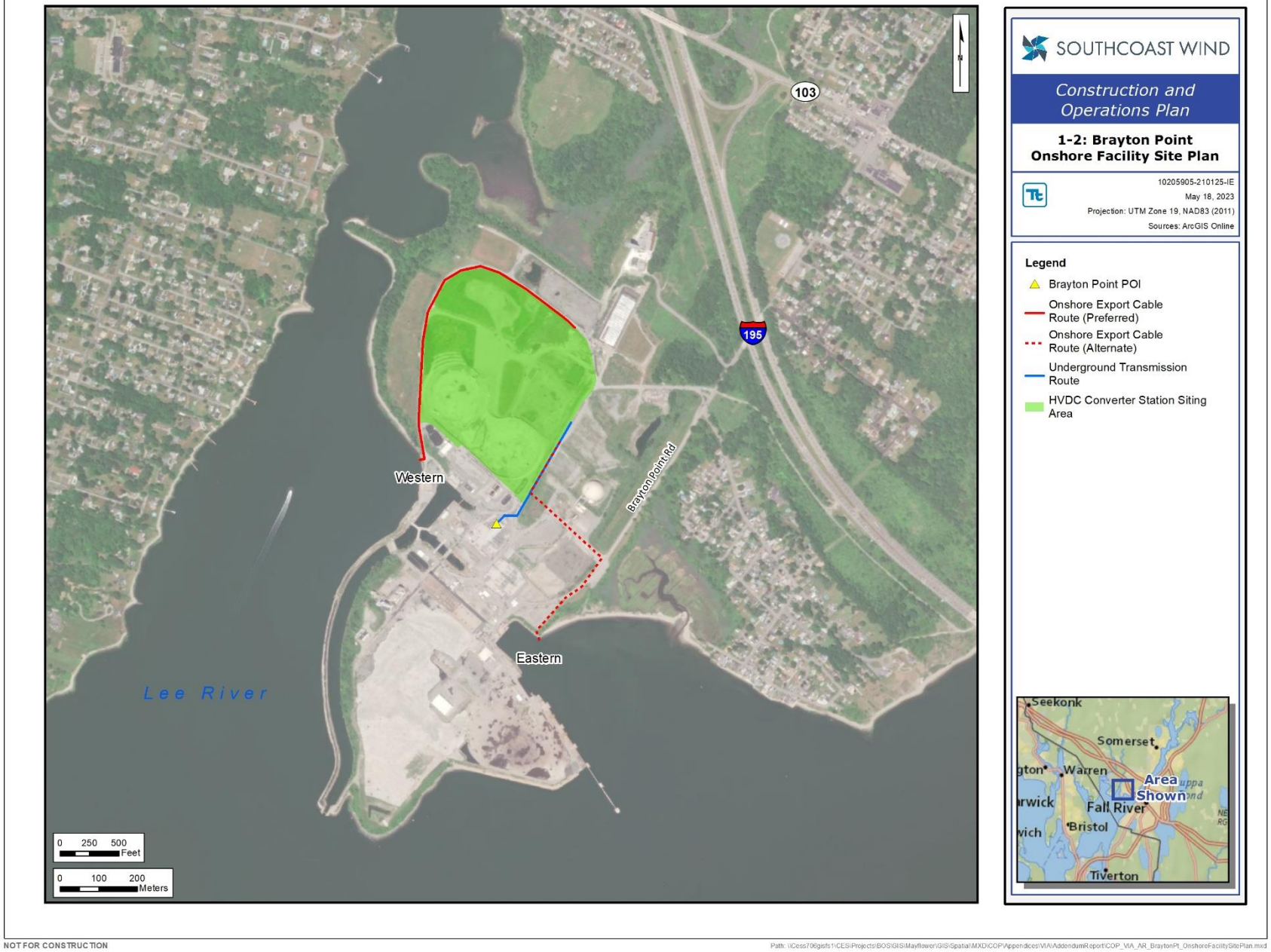

Figure 1-2. Brayton Point Onshore Facility Site Plan

2.0 Setting

2.1 Regulatory Setting

Assessments of visual resources are required to support BOEM's National Environmental Policy Act review process for an offshore wind energy project. BOEM's Information Guidelines for a Renewable Energy Construction and Operations Plan (2020) indicate that the visual resource assessment should apply appropriate viewshed mapping, photographic simulations, and field inventory techniques to determine, with reasonable accuracy, the visibility of the proposed Project to sensitive and scenic viewpoints. BOEM's latest methodology for the assessment of coastal character impacts, the *Assessment of Seascape, Landscape, and Visual Impacts for the Outer Continental Shelf of the United States* (Sullivan 2021), was also applied insofar as the Project could affect landscape areas surrounding it.

Activities proposed under the COP and all potential future phases of development have the potential to affect historic properties—those properties included in or eligible for inclusion in National Register of Historic Places—under Section 106 of the National Historic Preservation Act (NHPA; 54 United States Code § 306108) and the implementing regulations at 36 Code of Federal Regulations Part 800. Additionally, the Project has the potential to affect properties designated as National Historic Landmarks (NHLs), which requires compliance with Section 110(f) of the NHPA.

An Analysis of Visual Effects to Historic Properties (AVEHP) for the COP (Appendix S) provides a delineation of an Area of Potential Effects for visual effects and analysis and recommendations of visual effects to historic properties to assist BOEM with meeting its compliance requirements under Sections 106 and 110 of the NHPA. An addendum to the AVEHP addresses visual effects to historic properties specific to the onshore Project facility at Brayton Point (Appendix S.1).

2.1.1 Local Land Use Plans and Guidance

Development of the onshore facilities will be guided by applicable land use plans from local jurisdictions within which the converter stations will be located. Land use plans reviewed for relevant guidelines and policies include the Somerset Master Plan and the Somerset Conservation, Recreation, and Open Space Plan; and the City of Fall River Master Plan. The compatibility of the Project with the stated goals and objectives of those plans is detailed in Table 3-1.

2.1.1.1 Somerset Master Plan

The Somerset Master Plan (Town of Somerset, 2007) is a policy guide and a framework for future land use and development that includes guidance applicable to scenic resources and unique environments. The Somerset Master Plan provides comprehensive goals and policies that are intended to enhance future development while managing the town's natural and cultural resources:

- Continue to provide high quality services, facilities and infrastructure while balancing this with efficient resource management.
- Protect the town's natural resources and provide access to them.

2.1.1.2 Somerset Conservation, Recreation, and Open Space Plan

The Town of Somerset Conservation, Recreation, and Open Space Plan (Town of Somerset, 2017) was developed to provide guidance by which various town boards and departments and the appropriate local, state, and federal organizations and agencies might work together with the citizens of Somerset to meet the current and future conservation, recreation, and open space needs of the town.

Somerset has identified scenic assets, which largely correspond with its tidal coastline along the Taunton River and its points of access to views of Mount Hope Bay. The following community goals and objectives are included:

Goal: *Protect the quality and quantity of Somerset's natural and water resources*

Objective: *Support natural resource conservation and protection in important water resource, wetland, coastal land, and watershed areas, including the proposed Taunton River Wild & Scenic River Study Corridor.*

Goal: *Prevent the loss of rural, cultural and historical qualities of the town*

Objective: *Support the preservation of open space through various traditional, innovative and creative means*.

2.1.1.3 City of Fall River Master Plan

This Master Plan summarizes the vision and goals for the future of Fall River and presents an implementation plan describing actionable steps (City of Fall River, 2009). The following goals apply to this assessment:

Goal: *Develop and enhance Fall River as a tourist destination with an emphasis on the arts, culture, and history.*

Goal: *Continue to improve the physical appearance of Fall River, particularly visitors' first impressions including its entrances, historic downtown and Government Center area.*

Goal: *Protect and restore the natural resources, riverways, and greenways in urban Fall River and enhance the ecological, scenic, and passive recreation opportunities they provide.*

Goal: *Recognize the importance of vistas, especially to the water, in development planning and site design.*

2.2 Area of Potential Visual Impact

To define the area of potential visual impact associated with the components of the Brayton Point Onshore Project Area, the APVI was set as the area within three miles (mi) (4.8 kilometer [km]) of the converter stations (see Figure 2-1). The 3-mile (4.8-km) APVI is a conservative study area for converter station facilities, based on human visual acuity thresholds, and encompasses the area in which the Brayton Point Onshore Project Area could potentially affect visual resources. While the converter station facilities could theoretically be seen in the background beyond the three-mile area, the size and scale of the converter station facilities in the context of this urban landscape setting would limit its ability to influence visual quality at distances greater than three mi (4.8 km).

This APVI covers 26.2 square miles (67.9 square kilometers) within Bristol County, Massachusetts and 5.2 square miles (13.5 square kilometers) of Warren, Rhode Island. Within the APVI, the landscape was characterized; visually sensitive resources of national, regional, state, and local significance identified; and potential Brayton Point Onshore Project Area components visibility assessed. It should be noted that the APVI represents an inventory area established for the purpose of identifying all potentially affected visual resources. Analyses of potential visual effect will focus on resources within the APVI indicated as potentially visible based on the viewshed analysis discussed in Section 3.1. Maps representing the viewshed analysis results within the APVI are included in Figure 3-1 (Project Viewshed Analysis), Figure 3-4 (Viewshed Compared with Visually Sensitive Resources), Figure 3-5 (Viewshed Compared with Environmental Justice Areas) and Figure 3-6 (Viewshed Compared with Landscape Character Areas).

2.2.1 Existing Landscape Character

To assess potential impacts to visually sensitive resources and visual receptors (i.e., viewers) that may be affected by visual change, it is important to first understand and characterize the existing landscape setting in which the Brayton Point Onshore Project Area is proposed.

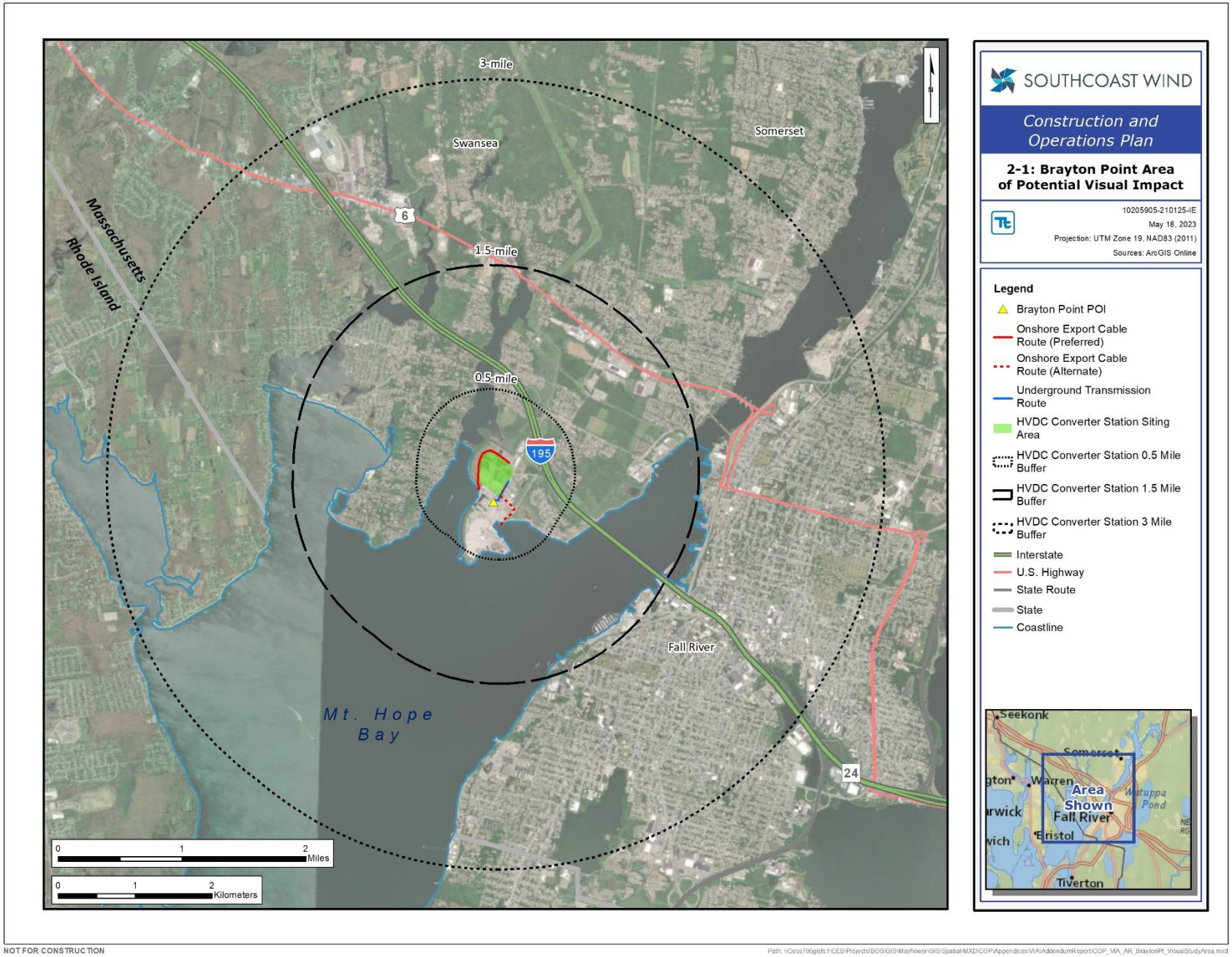

Figure 2-1. Brayton Point Onshore Facility Visual Study Area

The overall landscape within the APVI can be categorized as low-elevation (200 feet [60 m] and lower), fairly level terrain characterized by its irregular coastline of bays, islands, and peninsulas. Much of the APVI is residential of varying types, from rural areas to dense historic urban centers. According to the United States Geological Survey, the APVI is part of the Narragansett/Bristol Lowland, which occupies the largest estuary system in New England, and also maintains some of the most diverse forest types in New England (Griffith et al., 2009).

2.2.1.1 Landscape Character Areas

Landscape character areas (LCAs) within the APVI were defined based on the similarity of various features, including land cover type, vegetation, water, and/or land use patterns, in accordance with established visual resource assessment methodologies. This data and Figure 2-2 were derived from MassGIS (2016) and RIGIS (2011). Table 2-1 shows the LCAs by percentage of land use or land cover as they occur within the APVI.

Low and Medium Density Residential

This LCA occurs in large swaths on the peninsula west of Brayton Point known as Gardners Neck, across the Lee River from the Onshore Project, and to the east across Mount Hope Bay in the City of Fall River, Massachusetts. Single family residential development is also present in smaller pockets directly east of the Onshore Project site, south of I-195 off Oneil Road, and north of I-195 off Brayton Point Road. Within Gardners Neck, the development pattern is low density, having large format lots with one- or two-story colonial style homes set among large trees and lawn. Residential fencing is not commonly present in the neighborhood on Garners Neck. In Fall River, across the Taunton River from the Onshore Project site, residential development nearest the Onshore Project site is of medium density: often three stories and tightly spaced on small lots, the homes appear to serve multiple families. In both settings, low density and medium density residential neighborhoods, views are most often very limited to the immediate foreground by buildings or mature vegetation.

High Density Residential

The high density residential LCA is concentrated in central Fall River north and south of I-195, where three- and four-story houses, most of which appear to be used for multiple families, are tightly organized along the gridded streets. Some buildings include a small outdoor space or patio, but many do not, with the building footprint filling the property. Based on the visual resource inventory conducted for this assessment, many of the homes and buildings in this LCA are designated historic by Massachusetts Historic Commission. However, views out from this LCA are limited to the immediate foreground of the viewer by the dense building patterns.

Forest

Forest and woodlands are present in undeveloped, non-water areas throughout the APVI and are most prevalent in the northern and western portions of the APVI. Forests within the APVI were found to be mostly privately owned. The predominant forest type is deciduous mixed species, occurring in fragmented patches and larger swathes north and west of I-195. While some roads and highways pass through the forest patches, in general this LCA is not accessible to the public, and views outward from it are very limited by mature trees.

Inland Open Water

Mount Hope Bay is the eastern-most arm of the Narragansett Bay complex and joins the mouths of the Taunton, Lee, and Cole Rivers. Comprising 31 percent of the total APVI, open water dominates the southern portion of the landscape. Where they are present, views of the water dominate the foreground and afford broad views across the open water toward the landscape beyond. In addition to dozens of private docks to the water attached to residential properties, many publicly accessible marinas and docks provide access to water-based recreation like fishing and boating. In addition, a shipping channel and ferry route operates in Mount Hope Bay between Fall River Line State Pier south to Newport, Rhode Island.

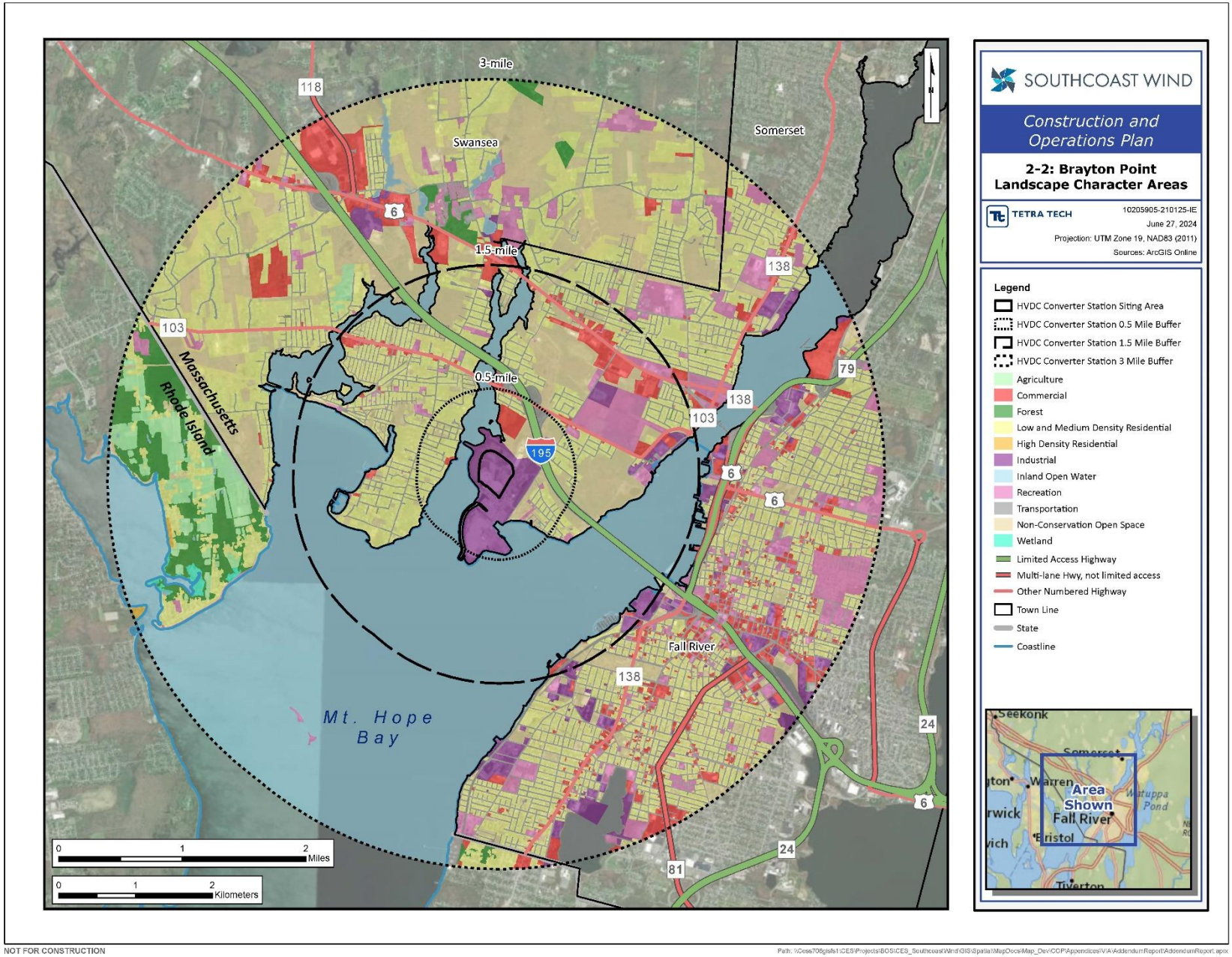

Figure 2-2. Landscape Character Areas

Industrial

The industrial LCA is concentrated on the banks of the Taunton River, and includes Brayton Point, the former site of Brayton Point Power Generation Station, now demolished. Industrial development dominates the riverfront along the western edge of Fall River and the eastern edge of Somerset, Massachusetts. Industrial enterprises include water-based and other manufacturing, fabrication, water treatment, and energy infrastructure sites. These sites are predominantly large, paved parcels (five acres or larger) with clustered structures, whether large buildings or other industrial infrastructure.

Agriculture

Agricultural lands are scattered across the APVI but are most concentrated on the Mattapoisett peninsula in Rhode Island, located 1.5 to 2 miles (2.4 to 3.2 km) west of the Brayton Point Onshore Project Area. Based on the 2011 RIGIS and 2016 MassGIS data, these areas are classified as general agriculture, pasture, or orchards. The landscapes are generally flat or have very gentle topography, and open fields are commonly surrounded with rows of mature trees or hedgerows. Large-format rural residential developments are interspersed among the open fields. While the open fields afford some long views, the low-lying landscape and prevalence of mature vegetation screen most views to the foreground (within 1.5 miles [2.4 km]).

Recreation

Land-based recreation areas are scattered throughout the APVI and include city parks, cemeteries, and conservation areas. Public park facilities vary in size and program, but many include areas of open lawn, large landscape trees, walking paths, playgrounds, and sports fields. Likewise, cemeteries within the APVI are also bordered by screening vegetation, limiting views to the immediate foreground. Water-oriented recreation includes marinas, docks, and public waterfront development and beaches.

Non-Conservation Open Space

Non-conservation open spaces are scattered across the APVI but are mostly concentrated northeast of the Project Area in Somerset and across the Taunton River in Fall River. This LCA primarily consists of parks (with some associated amenities, e.g., playgrounds and parking) or large expanses of grass or low growing vegetation. These non-conservation areas are not designated for conservation and are commonly bordered by screening vegetation such as strips of forested areas, or by residential development.

Wetlands

This LCA is comprised of different ecological types of wetland areas as identified by 2016 MassGIS and 2011 RIGIS data classifications including palustrine emergent wetlands and aquatic beds, estuarine emergent wetlands, scrub shrub, and others. Most of these areas are small, isolated, low-lying drainage ways located adjacent to the Cole, Lee, or Taunton Rivers or in upland areas. Wetland areas are typically covered by fine textured grasses, fingers of shallow water, and scattered shrubs. Wetland areas within the APVI are not readily accessible to viewers and are often bordered by tall trees that limit both access and views.

Transportation

Major transportation corridors within the APVI include Interstate 195 (I-195), which runs northwest from Providence, Rhode Island to Fall River and cities to the east. For the portion of I-195 within the APVI, the interstate is a divided six-lane freeway, and it passes within 0.6 mile (1 km) of the Project site at Brayton Point. However, views from I-195 closest to the Project are predominantly limited by dense deciduous woodlands. Further north from the Project site, Grand Army of the Republic Highway (US Route 6) is also oriented northwest-southeast through the APVI. Varying in width and treatment, US Route 6 passes through urban centers and commercial areas. Lastly, Wilbur Avenue (Route 103) also passes through the APVI from west to east, generally from Warren, Rhode Island to the Taunton River. Route 103 is a two-lane highway, and crosses the Lee River at the Anthony Bridge, which is the nearest publicly accessible, relatively elevated location from which to potentially view the converter stations. Key Observation Point (KOP) 4, in Attachment 1, illustrates the potential view from the Anthony Bridge.

Commercial

Commercial areas within the APVI are concentrated along Grand Army of the Republic Highway (US Route 6) and Swansea Mall Drive (Massachusetts State Route 118), each located more than 1 mile (1.6 km) north of

the Brayton Point Onshore Project Area. These commercial areas are typical in appearance for the land use: large-format parcels fronting the highway with large, flat areas for parking with big-box stores beyond. A denser, more urban commercial center is located in central Fall River along Main Street, 2 miles (3.2 km) southeast of the Brayton Point Onshore Project Area. This commercial area is characterized by two- and three-story buildings densely oriented along the two-lane street. In both types of commercial areas, views are limited to the immediate foreground by buildings and sometimes landscaping trees.

2.2.2 Environmental Justice Areas

Following BOEM's *Information Guidelines for a Renewable Energy COP* (2020) and the requirements of 30 Code of Federal Regulations § 585.627 (a)(7), applicants must consider potential effects to certain social and economic resources, particularly those related to environmental justice considerations, to assess potential negative impacts, including visual impacts. For this analysis, environmental justice (EJ) areas were identified by 2020 MassGIS datasets and consider low-income populations and minority and/or historically underserved communities (Figure 2-3). Because EJ areas are characterized by social and economic factors, and they can be located in different types of physical landscape settings, they are considered separately from LCAs.

Based on the 2020 MassGIS data, EJ areas identified within the APVI fall predominantly in Fall River, with another area identified in Swansea, and encompass the following populations:

- Minority
- Low Income
- English Isolation
- Varying combinations of the above considerations

2.2.3 Distance Zones

Viewer distance from a project is an important factor in determining the level of visual effect, with perceived effects generally diminishing as distance between the viewer and the affected area increases (BOEM, 2007). Distance zones are useful in VIA analyses to identify zones in the landscape based on viewers' ability to distinguish details in objects in the landscape. For this assessment, specific distance zones were applied based on the environmental characteristics of the landscape surrounding the Project site: a developed urban and suburban area in a low-lying landscape having direct inland bay access, in addition to consideration of the scale of the proposed components at the Brayton Point Onshore Project Area (Figure 2-1).

- **Immediate Foreground–0.0. to 0.5 mile (0.0 to 0.8 km):** At this distance, viewers can clearly perceive details of an object. Surface textures, small features, and the full intensity and value of color can be seen on close proximity objects.
- **Foreground–0.5 to 1.5 miles (0.8 to 2.4 km):** At this distance, features in the landscape tend to retain visual prominence, but detailed textures become less distinct. Larger scale landscape elements remain as a series of recognizable and distinguishable landscape patterns, colors, and textures.
- **Middleground–1.5 to 3.0 miles (2.4 to 4.8 km):** The middleground is usually the predominant distance at which landscapes are seen. Between 1.5 and 3.0 miles (2.4 to 4.8 km), a viewer can perceive individual structures and trees but not in great detail. This is the zone where the parts of the landscape start to join together; individual hills become a range, individual trees merge into a forest, and buildings appear as simple geometric forms. Colors will be distinguishable but subdued by a bluish cast and softer tones than those in the foreground. Contrast in texture between landscape elements will also be reduced (EDR, 2021).

For the purposes of this assessment, 'background' is the portion of the landscape seen beyond 3 miles (4.8 km).

Table 2-1 merges LCAs with the identified distance zones to describe the makeup of the APVI, relative to the areas surrounding the converter stations. As shown, the predominant LCAs within the APVI are open water, low to medium density residential, and non-conservation open space (i.e., private undeveloped property).

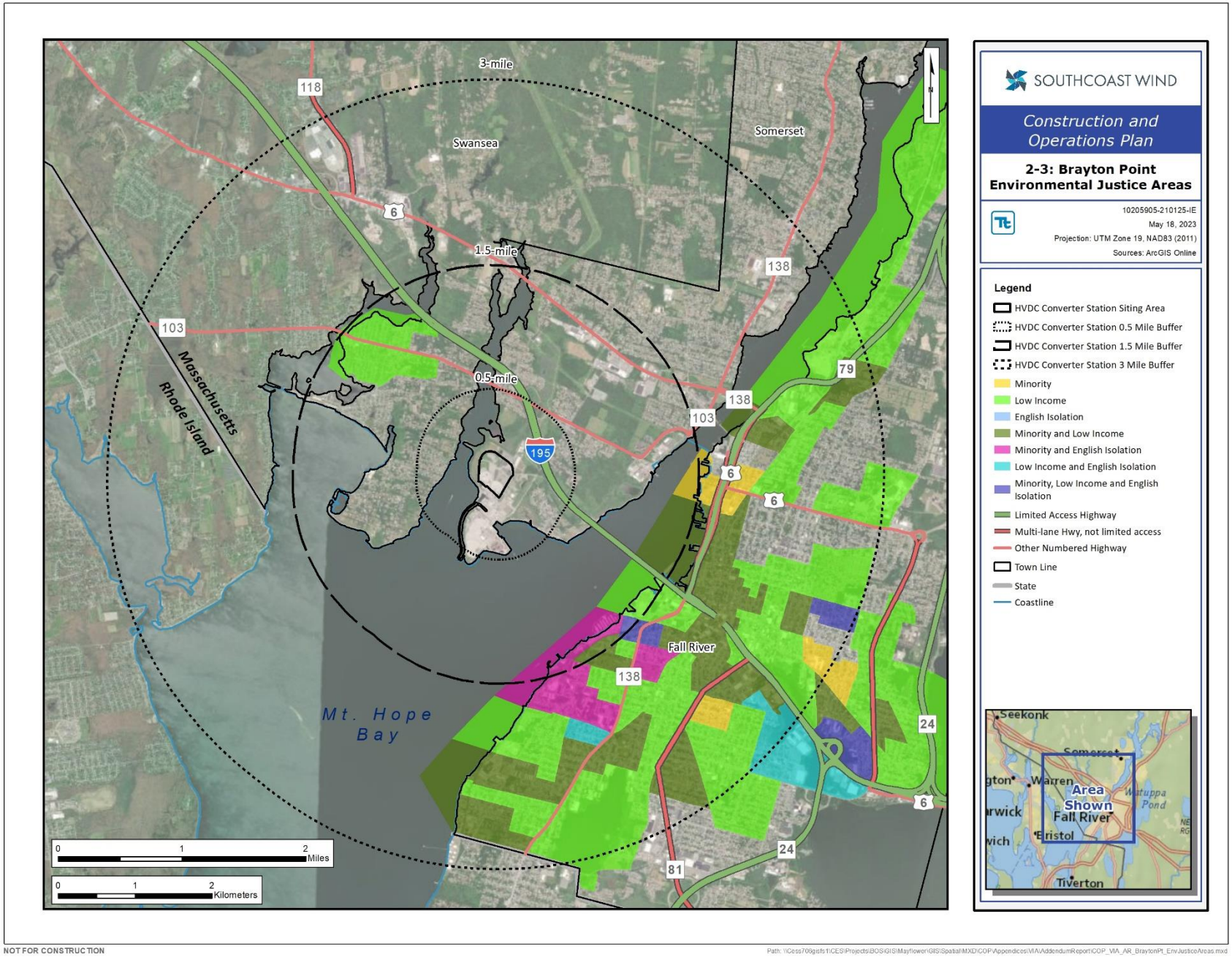

Figure 2-3. Environmental Justice Areas

Table 2-1. Landscape Character Area by Distance Zone

Landscape Character Area (LCA)	LCA Area in Acres Within the Immediate Foreground	Percent of LCA Within the Immediate Foreground	LCA Area in Acres Within the Foreground	Percent of LCA Within the Foreground	LCA Area in Acres Within the Middleground	Percent of LCA Within the Middleground
Low and Medium Density Residential	161.0	18%	842.8	19%	3,023.1	22%
High Density Residential	10.6	1%	78.1	2%	1,233.8	8%
Forest	0.5	<1%	3.6	<1%	465.5	3%
Inland Open Water	237.8	27%	2,324.0	50%	3,646.6	25%
Agriculture	-	0%	0.1	<1%	333.0	2%
Recreation	13.6	2%	203.6	4%	928.5	6%
Non-Conservation Open Space	98.8	11%	559.3	12%	1,967.7	14%
Transportation	93.7	11%	351.3	8%	1,625.2	11%
Industrial	228.7	26%	84.8	2%	368.8	3%
Commercial	30.2	3%	188.3	3%	900.9	6%
Wetland	0.5	<1%	3.4	<1%	46.1	<1%
Total	**873.4**	**100**	**4,670.2**	**100**	**14,539.9**	**100**

Note: data is based on acreage by occurrence from land use/landcover data from 2016 MassGIS and 2011 RIGIS.

2.3 Onshore Receptors/Viewers

Viewers are the people who will see the Project at Brayton Point and experience its effects. The viewer groups and context associated with the Onshore Project are described in the sections that follow. Viewer groups are identified for each KOP, summarized in Table 3-7.

2.3.1 Viewer Groups and Context

Viewers within the viewshed of the converter stations include residents, workers and visitors in Somerset, Swansea, and Fall River, Massachusetts. These communities comprise a diverse set of year-round and seasonal residents, recreational users, tourists, passersby, and workers. Viewers likely engage in many forms of passive and active recreation, including:

- Walking/Jogging,
- Fishing,
- Boating,
- Cycling,
- Swimming,
- Wildlife viewing, and
- Beach recreation.

The following groups represent the anticipated receptors/viewers to interface within the onshore Project components at Brayton Point:

- Residents of the local communities (year-round residents and seasonal residents),

- Tourists and Tourist-related businesses
- Commuters/Through Travelers
- Recreational Users.

It is the combination of setting (LCA) and receptor activity and associated tolerance for visual change and expectations (determined by establishing viewer groups) that inform visual impacts.

It is also notable that viewer groups are not mutually exclusive. For example, residents and tourists may at times participate in recreational activities, in which case their expectations and tolerance for certain changed views would shift in accordance with their activities.

2.3.1.1 Residents of Local Communities

Local communities consist of year-round and seasonal residents. The APVI includes designated historic districts, traditional neighborhoods, industrial sites, parks, beaches, and cemeteries. In addition to conserved historic sites, these communities have protected natural areas for public use.

The year-round population of Somerset, Massachusetts is 18,303 (U.S. Census Bureau, 2020). It is assumed that all or nearly all residents, year-round and seasonal, are concerned about visual quality and resources. It should be noted, however, that the Brayton Point Onshore Project Area was formerly the site of a coal fired power plant that included two 500-foot (150-m) concrete cooling towers, which were dominant visual features in the landscape for decades, until their demolition in 2019.

Residents within local communities predominantly experience the landscape according to their typical routine: moving through their neighborhood and communities to and from work, school, for socializing, shopping, etc. Residents will also visit and experience diverse culture, history, and settings such as the waterfront scenery, historic buildings and sites, active recreation, or nature. Residents view the environment from the main highways (e.g., I-195, US Route 6) but also local and neighborhood streets. Because residents experience the landscape repeatedly over time, they may be more sensitive to visual changes to scenery with which they are familiar, compared to visitors experiencing a landscape for the first time.

2.3.1.2 Tourists and Tourist-Related Businesses

Visitors may come to the communities within the APVI for many reasons: waterfront and rural scenery, historic sites, active recreation, nature, or an escape from summer heat. June, July, and August are by far the most common period for tourism in Somerset, Massachusetts (championtraveler.com, n.d.). Tourists will also likely use the main highways and roadways during their travel. Depending on their intentions, it can be presumed that tourists also expect and value scenery within the APVI, especially regarding waterfront areas and historic sites.

2.3.1.3 Commuters/Through Travelers

Commuters and through travelers are people who pass through an area regularly on their way to work or other daily routine activities. Like residents, commuters experience the visual environment repeatedly over time as they pass through on their way to a destination. Repetitive viewing along their route would afford a typical commuter heightened sensitivity to changes in the visual environment compared with people unfamiliar with the area. While these viewers may certainly value attractive roadside scenery, commuters' primary objective is assumed to be efficiently reaching their destination.

2.3.1.4 Recreational Users

People who live, work in, and visit the area take advantage of the setting to engage in specific recreational activities. Active recreational users, such as bikers, runners, boaters, water skiers, kayakers, paddle boarders, and swimmers, may be less likely to view scenery while they are recreating compared with more passive activities, but the setting likely contributes to what they are doing and why they are drawn to the area.

2.3.2 Historical Importance

As described above, the APVI includes portions of Somerset, Swansea, and Fall River, Massachusetts and a small portion of Warren, Rhode Island, all of which have rich historical significance. Many designated historic resources, including buildings, sites, and districts were identified during the resources inventory stage of this VIA (Figure 2-4).

Historically valued properties for the offshore and Falmouth Project components were identified in the AVEHP (COP Appendix S) and researched in order to understand the value that these properties hold and the role they play in defining the area. An addendum to the COP AVEHP has been developed to assess potential impacts to sites of historical importance in the vicinity of the converter stations at Brayton Point (Appendix S.1).

2.4 Visually Sensitive Resources

Visually sensitive resources are those sites or areas that are valued by a population such that they are particularly sensitive to visual change. They are frequently, but not always identified by federal, state, or local agencies or organizations or tribal communities as having visual or scenic values that warrant protection or special management. Visually sensitive resources are summarized by occurrence in Table 2-2.

Table 2-2. Visually Sensitive Resources by Occurrence

Visually Sensitive Resources	In the APVI	In the Viewshed
Public Open Space and Recreational Resources	114	4
State Parks	4	1
Wildlife Refuge, Wildlife Management Area	3	0
Named City Parks and City-Owned Lands	97	1
Cemeteries	6	0
Publicly Accessible Beaches	3	2
Golf Course	1	0
Historic Resources[1]	2,433	168
National Register of Historic Places: Listed Points	73	5
State Designated Historic Districts	16	4
State Designated Site: Massachusetts Historic Commission	2,344	159
State Designated Site: Rhode Island	0	0
Designated Scenic Resources	0	0
Public High Use Areas	1	1
Interstate Highways	1	1
Total:	**2,548**	**173**

Note: The APVI, defined in Section 2.2, is the total area within a 3-mile radius surrounding the Brayton Point Onshore Project Area assessed for this VIA Addendum. The viewshed, as described in Section 3.1, is the analyzed and theoretical 'seen area' within the APVI from where the Brayton Point Onshore Project Area may be visible.

[1] Historic resources are included in this assessment to identify publicly accessible sites or locations with valued visual quality aspects which could be affected by the Project. A full analysis of historic sites and areas for the Brayton Point Onshore Project Area is covered under an addendum to the COP AVEHP (Appendix S.1).

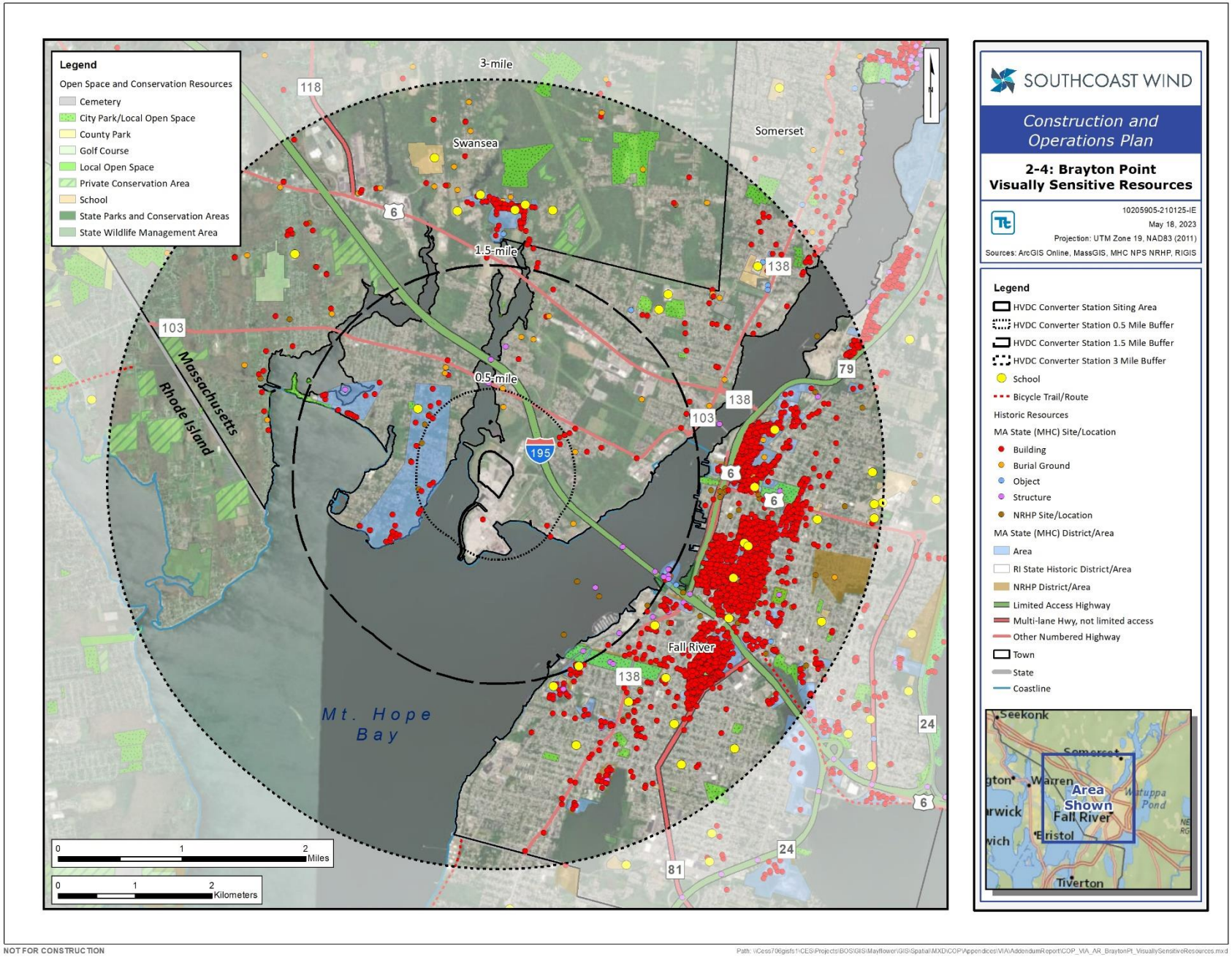

Figure 2-4. Visually Sensitive Resources

3.0 Impact Assessment

This VIA Addendum follows the methodology established by the COP Appendix T: Visual Impact Assessment, which used a modified version of the VIA methodology established by the *Guidelines for Landscape and Visual Assessment* (GLVIA3) (LI and IMEA, 2013), which was discussed with and acceptable to BOEM for the COP. In addition, to the extent it could be applied to the Brayton Point Onshore Project Area, the BOEM document *Methodology for Assessment of Seascape, Landscape, and Visual Impacts of Offshore Wind Energy Developments on the Outer Continental Shelf of the United States* (Sullivan, 2021) was also referenced.

Key steps in the methodology used for this VIA Addendum include:

- Describing the proposed project and establishing a visual study area (the APVI),
- Conducting a GIS-based viewshed analysis,
- Inventorying visual resources and landscape character areas in the visual study area,
- Identifying sensitive viewing locations, viewers, and KOPs as informed by the viewshed,
- Conducting field work to assess the existing visual character of the landscape, and to inventory KOPs,
- Creating visual photo simulations, and
- Assessing seascape, landscape, and visual impacts and identifying mitigation where appropriate.

3.1 Viewshed Analysis

Viewshed analyses were conducted in esri's ArcGIS Pro software to assess the potential visibility of the Brayton Point Onshore Project Area within the APVI. In addition to topography, the viewshed analyses for this study also utilized publicly available light detection and ranging data (LiDAR) from the United States Geological Survey (USGS) to account for effects on visibility from structures and development. The results of the viewshed analyses were used to determine the extent to which the Brayton Point Onshore Project Area would potentially be visible from visually sensitive resources or other areas identified within the APVI. Field visits were then conducted to verify visibility of the Project from the sensitive viewpoints located in areas identified within the resulting viewshed.

Technically, the specific process used to develop the viewshed analyses is as follows: LiDAR LAZ files (USGS, 2013) covering land areas within 4 miles of the Brayton Point Onshore Project Area were downloaded and converted to LAS files using ArcGIS Pro and the Convert LAS tool. The LAS files were inspected for errors and the resulting LAS dataset was used to create the bare-earth digital elevation map (DEM) and digital surface models (DSM) needed for the viewshed analyses.

In order to create the DEM, the Ground classified LiDAR point cloud data was filtered from the dataset and converted to a raster. Cell size was specified to be 10 feet (3.048 m). Because LiDAR point cloud data is collected only for land masses, the remaining study area was reclassified to emulate the surface of the ocean. The creation of the DSM used a similar process as used for the DEM. Data categorized as Ground, Low Vegetation, Medium Vegetation, High Vegetation, and Building were filtered for use with the snap raster environment set to the DEM.

The viewsheds created are intended to show potential visibility by a person at ground level. Filters were created to emulate areas of buildings and vegetation in order to identify areas that would incorrectly show as visible in the model for the purpose of this analysis. For example, the crown of a tall tree or the roof of a house may appear visible but are not representative of standing locations. Thus, these filters remove areas that are not feasibly seen by a person standing at ground level. A filter was created for buildings and vegetation that shows the difference in height of features in the DSM relative to the DEM for which it was assumed anything to have a difference of 2.5 meters or greater to be buildings or vegetation. A second filter was created that removes buildings from the building and vegetation filter leaving only vegetation. To create the building filter, building footprints (MassGIS, 2022) were used to create a 10-foot (3-m) resolution raster

using the DEM as the snap raster. The resulting building raster was added to the building and vegetation filter. This raster was then reclassified to create a vegetation-only filter. A viewshed was created using a maximum height of 85 feet (24.4 m), a target tall person height of 6.56 feet (2 m), and a radius of 3.5 mi (5.6 km) from the Brayton Point Onshore Project Area.

The results of the viewshed analysis are depicted on Figure 3-1. As it illustrates, visibility of the Project components at Brayton Point from the surrounding landscape is constrained by multiple factors. Its isolated location on the Brayton Point peninsula physically separates the Brayton Point Onshore Project Area from other land uses and viewpoints. Topographic features also constrain visibility: a tall earthen berm stretches some 500 feet (150 m) along the eastern edge of the Brayton Point Onshore Project Area, and screening vegetation exists between the Brayton Point Onshore Project Area and nearby development. In addition, at a distance of over 3.3 miles (5.3 km), views from across Mount Hope Bay in Bristol may be possible, but given the scale of the onshore Project components, at this distance they could not introduce a point of focus or dominance. Therefore, the viewshed analysis validates the 3-mile APVI as an appropriate study area for evaluation of visual impacts.

3.2 Photographic Simulations

After assessing the results of the viewshed analyses, seven KOPs were selected from among the visually sensitive resources and other selected areas, such as residential neighborhoods, with potential visibility of the Brayton Point Onshore Project Area (Figure 3-2 and Figure 3-3. Views from KOP locations were collected in January 2022..

Following the assessment of visibility conducted in the field, three KOPs were selected for further study and development into photo simulations. Photographic simulations were created to depict the proposed components of the Brayton Point Onshore Project Area and their potential changes to the existing landscape. The simulations were used to determine the visibility of these components and level of contrast between the existing landscape and the expected landscape after the proposed Project is constructed.

This assessment of impacts is described in greater detail in Section 3.4. Photographic simulations are included in Attachment 1. A log of photos from all KOPs is included in Attachment 2.

The simulations were created using ArcMap GIS software, Autodesk 3D Studio Max®, and rendering software. To create the simulations, the location data captured by a global positioning system device in the field were transferred to ArcMap, where it was combined with geographic information system data of the preliminary layouts of project components and facilities. A map showing the data was exported at true scale and imported into 3D Studio Max®. Using this scaled map as a base, 3D models of the Brayton Point Onshore Project Area were created to scale. These 3D models of the Project features, previously modeled to scale in 3D Studio Max®, were added in their appropriate locations and elevations. The views from the existing photographs were then matched in the 3D model using virtual cameras with the same focal length and field of view as the Nikon Z6 camera used during fieldwork. After date- and time-specific lighting was added to the 3D model, renderings from the virtual cameras were created. These renderings were then blended into the existing conditions photographs in Adobe Photoshop software. Any necessary modifications to the existing landscape were completed in Photoshop as well. This process of creating a 3D model at true scale and rendering images using the same specifications used by the camera ensures that the spatial relationships of the landscape, Brayton Point Onshore Project Area features, and viewer perspective are accurate and match the existing site photographs.

3.3 Compatibility with Local Land Use Plans

Local land use plans relevant to this study are identified and cited in Section 2.1. **Error! Reference source not found.** addresses the compatibility of the Project with the stated goals and objectives of those plans.

Table 3-1. Compatibility with Local Plans, Goals and Guidelines

Plan	Relevant Goals/Policies	Project Compatibility with Stated Goals	Comments
Somerset Master Plan	*Continue to provide high quality services, facilities and infrastructure while balancing this with efficient resource management.*	Compatible	The onshore facility will repurpose an existing coal-fired power station site, thereby supporting energy infrastructure with minimal impact to the town's natural resources.
	Protect the town's natural resources and provide access to them	Compatible	
Somerset Conservation, Recreation, and Open Space Plan	Objective: *Support natural resource conservation and protection in important water resource, wetland, coastal land, and watershed areas, including the proposed Taunton River Wild & Scenic River Study Corridor.*	Compatible	See above. In addition, the nearest designated scenic reach of the Taunton River is located more than 5 miles north of the converter stations, and there is no evidence that the Project could be seen from designated scenic reaches.
	Objective: *Support the preservation of open space through various traditional, innovative and creative means.*	Compatible	
City of Fall River Master Plan	Goal: *Develop and enhance Fall River as a tourist destination with an emphasis on the arts, culture, and history.* Goal: *Continue to improve the physical appearance of Fall River, particularly visitors' first impressions including its entrances, historic downtown and Government Center area.* Goal: *Protect and restore the natural resources, riverways, and greenways in urban Fall River and enhance the ecological, scenic, and passive recreation opportunities they provide.*	Compatible	Although located outside of Fall River, the converter stations would be comparably smaller in scale and present less visual dominance than the previous facility on the site, which may be perceived by viewers as an improvement to waterfront scenic resources of Fall River, including first impression appearances.
	Goal: *Recognize the importance of vistas, especially to the water, in development planning and site design.*	Compatible	No specific vistas were identified or cited as managed for visual quality. Although the highest elements of the onshore facility may be seen from locations in Fall River, visual simulations and field work demonstrate that it would be visually subordinate to unnoticeable to most viewers.

3.4 SLIA Character Area Sensitivity and Magnitude of Change

Impact to seascape and landscape character areas follow the guidelines included in Section 6.4 Evaluation of Impacts in the BOEM Guidance Document (Sullivan 2021). Two interrelated aspects are evaluated: sensitivity of seascape/landscape receptors and magnitude of seascape/landscape receptors. When combined, the

overall impact to the character area can be determined. Considerations used to evaluate resource sensitivity and magnitude factors are explained in the following sections.

When susceptibility to change and value to society are combined (Table 3-2), the sensitivity of a character area is determined based on the SLVIA guidance. When the size or scale of the change associated with the proposed Project, the geographic extent of the change, and the duration and reversibility of the change are combined, the magnitude of change results. Magnitude of impact to character areas is determined when sensitivity and magnitude of seascape/landscape change are combined, as summarized at the end of this section in Table 3-6.

3.4.1 Susceptibility to Change

The susceptibility of a seascape/landscape character area to change is its ability to accommodate the impacts of the proposed Project. Susceptibility factors include both overall and individual elements and particular aesthetic, experiential, and perceptual features of the character area. As a qualitative aspect of visual character, susceptibility to change is measured on a relative scale of High, Medium, and Low, as defined below:

- High – Especially distinct, uncommon, and intact areas of special designation. Expansive or dramatic ocean and/or shoreline views are intrinsic to the distinction. Views of typical urban development are inconspicuous or not present.
  - *Examples (high susceptibility to change): a historic district of high integrity and scenic value or nationally significant recreation areas.*
- Medium - Somewhat distinctive but regionally common seascape/landscape.
  - *Examples (medium susceptibility to change): naturally appearing shorelines or locally important residential areas of small to moderate scale and high visual quality.*
- Low – Indistinct, highly to moderately developed areas with little or no visual connection to the ocean or shoreline. Recreational and historic significance is absent or of low importance.

3.4.2 Value to Society of the Seascape/Landscape

The value to society analysis and disclosure is based on character area distinctiveness and/or contributions of scenic quality, wildness, tranquility, natural or cultural heritage features, tourism value, locally held values and the federal/state/local hierarchy of special designations. In addition, important scenic or experiential characteristics contributing to tourism value or locally held values are considered. Like susceptibility to change, scenic value is measured in terms of High, Medium, and Low, as described below:

- High – Nationally significant and designated areas of exceptional scenic, recreational, and/or historic quality.
  - *Examples (character areas of high scenic value): National Park Service units including National Parks, National Seashores, and sites or areas on the NRHP with qualities related to the landscape setting or views.*
- Medium – Regionally or locally significant areas offering scenic, recreational, tourism, and/or historic qualities or experience.
  - *Examples (character areas of medium scenic value): State Parks, state-designated historic and cultural sites.*
- Low – Areas with no designation or protection for scenic, recreational, tourism, and/or historic qualities.

Table 3-2. Character Area Susceptibility to Change and Value to Society Combined

Susceptibility to Change	Value to Society		
	High	**Medium**	**Low**
High	High a/	High	Medium

Susceptibility to Change	Value to Society		
Medium	High	Medium	Low
Low	Medium	Low	Low

Note: a/ outcome per SLVIA guidance (Sullivan, 2021)

3.4.3 Magnitude of Change

The magnitude of change is a character area's ability to accommodate the effects of the proposed Project. The rating is based on the size or scale of the change associated with the proposed Project, the geographic extent of the change, and the duration and reversibility of the change (Table 3-3 and Table 3-4). Size and scale are measured in terms of Large, Medium, or Small, relative to the Project's perceived effect on each Character Area. Geographic Extent refers to the proportion of the Character Area that shows potential visibility, based on the Viewshed Analysis.

Table 3-3. Character Area Size and Scale and Geographic Extent

Size and Scale	Geographic Extent		
	Large	**Medium**	**Small**
Large	Large a/	Large	Large
Medium	Large	Medium	Medium
Small	Large	Medium	Small

Note: a/ outcome per SLVIA guidance (Sullivan, 2021)

Table 3-4. Character Area Duration and Reversibility, Size and Scale, and Geographic Extent

Duration and Reversibility	Size and Scale and Geographic Extent		
	Large	**Medium**	**Small**
Poor	Large a/	Large	Medium
Fair	Large	Medium	Small
Good	Small	Small	Small

Note: a/ outcome per SLVIA guidance (Sullivan, 2021)

Finally, to determine overall visual impact to Seascape/Landscape Character Areas, Character Area sensitivity and magnitude of change are combined to determine magnitude of SLIA impacts (Table 3-5). Impacts are defined by the BOEM Guidance Document (Sullivan, 2021) as Negligible, Minor, Moderate, and Major. In practice, negligible visual impacts would correspond to unseen or imperceptible visual effects wherein the project is barely visible at most, or the area of potential effect is quite small, combined with medium or low values of other metrics.

Table 3-5. Character Area Sensitivity and Magnitude of Visual Change Combined

Sensitivity Rating	Magnitude of Change		
	Large	**Medium**	**Small**
High	Major a/	Major to Moderate	Moderate to Minor
Medium	Major to Moderate	Moderate	Minor
Low	Major to Moderate	Moderate to Minor	Minor

Note: a/ outcome per SLVIA guidance (Sullivan, 2021)

3.4.4 Impacts to Character Areas

As outlined in Section 6 of the BOEM Guidance Document (Sullivan 2021), the effects or impact to a character area is determined by combining values for both sensitivity and magnitude of change. An evaluation of these effects on each identified Seascape/Landscape Character Area in the Brayton Point Onshore Project Area is given below. Relevant portions of descriptions in Section 2.2.1 are reiterated here. Table 3-6 at the end of this section summarizes the impacts described for each Character Area.

3.4.4.1 Low and Medium Density Residential

Residential areas in the Brayton Point Onshore Project Area are characterized by low- and medium- density residential development occurring in large expanses on the peninsula west of Brayton Point, across the Lee River from the Onshore Project, and to the east across and bordering Mount Hope Bay and the Taunton River (see Figure 2-2). The residential areas within the affected viewshed are varied and regionally common. The residential area immediately east of the Project site is a bayside seascape suburban/exurban residential area that borders the Mount Hope Bay and the Taunton River and is made up of compact pockets of smaller single-family homes that are a mix of modest architectural varieties including ranch, Cape Cod, saltbox, farmhouse, cottage, bungalow, and colonial style homes with only a few having garages. The homes are built on small lots with lawns, hedges, shrubs, and trees. The streetscape is mostly rollover asphalt type curbing except along stretches with asphalt pedestrian sidewalks, which are supported with a concrete vertical curb. Homes along streets on the waterfront or setback on roads are characterized by views or partial views of the bay and Taunton River, whereas views from those homes located within the interior of the subdivision are blocked by other homes and mature trees. The low-density Mount Hope Bay residential area exhibits a private, well-maintained, developed suburban area with potential bay and river views solely along waterfront properties.

Gardeners Neck is a bayside seascape suburban/exurban neighborhood bordered by the Cole and Lee Rivers where they flow into the Mount Hope Bay. The homes in this area are one- or two-story colonial style homes, built on larger lots in relatively low density, and are well maintained. Some residences feature stone perimeter walls and residential fencing is not commonly present. Like the Mount Hope Bay residential area, the low-density Gardeners Neck residential area exhibits a private, well-preserved, developed suburban area. Also similarly, availability of river views is generally limited to just waterfront properties. The Fall River area borders the east edge of Mount Hope Bay, across the Taunton River from the Onshore Project Area, and is characterized by a mixed-use urban setting of residential, business, institutional buildings, steepled brick and granite Italianesque, classic, and cathedral style churches, with many interspersed parking lots. The streets have formalized curb and gutter, sidewalks, streetlamps, and street amenities. Buildings range in height from single-story to multiple-story (up to 8-stories) box style brick structures. The structures range from historic to contemporary or modern-styled architecture. Residential structures are an architectural blend of well-maintained ranch, colonial, French colonial, Victorian, Cape Cod, saltbox, farmhouse, cottage, and bungalow styles with a variety of stories; residential development nearest the Onshore Project Area is of medium density: often three stories and tightly spaced on small lots, the homes appear to serve multiple families. Development along the Taunton River waterfront facing the Project site includes multi-family housing, commercial areas with waterfront restaurants, marinas, parks and trails, and industrial parks and ports. The medium-density Fall River residential area exhibits a predominately urban, well-maintained, developed multipurpose area with river views concentrated along waterfront properties.

Water views from these areas are a defining characteristic and major contributor to the social, real value, and sense of place for the development oriented toward inland open water and river areas. The magnitude of change is small given that any views of the Project components from these low and medium-density residential areas are often very limited due to buildings or mature vegetation screening within the immediate foreground. Further, views of Project components in medium-density residential areas may be seen in the context of existing industrial and commercial development, and thus are considered to be compatible with surrounding land uses, Duration considers the construction and operational period of the Project facilities, which falls into the long-term category of 5-30 years. Overall, the Project impact to this character area would be minor.

Resource Sensitivity: Medium

- Susceptibility: Medium
- Value: Medium

Magnitude of Change: Small

- Geographic Extent: Small
- Size and Scale of Change: Small
- Duration and Reversibility: Fair

Overall Visual Impact: Minor

3.4.4.2 High Density Residential

Residential areas in the Brayton Point Onshore Project Area include a very small portion of high-density residential development present in central Fall River north and south of I-195 comprised of three- and four-story multi-unit houses on small lots along gridded streets (see Figure 2-2). Some residential buildings include a small outdoor space/patio, though a majority do not, with the building footprint (including parking) encompassing the entire property. Some hedges, shrubs, and trees are present amongst the buildings and the streets have formalized curb and gutter, sidewalks, streetlamps, and street amenities. This high-density residential area exhibits a concentrated, developed urban area, within which there are views of designated state historic building. Whereas some of the homes in this area are designated historic by Massachusetts Historic Commission, views from this character area are limited to the immediate foreground of the viewer by the dense building patterns, seen in the context of existing urban development. Duration considers the construction and operational period of the Project facilities, which falls into the long-term category of 5-30 years. Overall, the impact to this character area would be minor.

Resource Sensitivity: Medium

- Susceptibility: Medium
- Value: Medium

Magnitude of Change: Small

- Geographic Extent: Small
- Size and Scale of Change: Small
- Duration and Reversibility: Fair

Overall Visual Impact: Minor

3.4.4.3 Forest

Areas of forest and woodlands within the APVI are characterized by deciduous mixed species and are present in fragments and swathes north and west of I-195, namely on the Mattapoisett peninsula in Rhode Island. These forests are regionally common and are present in undeveloped, non-water areas within the APVI, with no distinctive characteristics. These areas are typically bordered by low and medium density residential, agricultural, and undeveloped areas (see Figure 2-2). Some stretches of road and highway pass through these areas, which allows for some public access. Otherwise, the forest and woodlands present are privately owned (i.e., not publicly accessible) and views from this character area are very limited or screened by mature tree growth. Duration considers the construction and operational period of the Project facilities, which falls into the long-term category of 5-30 years. Overall, the impact to this character area would range from minor to negligible.

Resource Sensitivity: Medium

- Susceptibility: Medium

- Value: Medium

Magnitude of Change: Small

- Geographic Extent: Small
- Size and Scale of Change: Small
- Duration and Reversibility: Fair

Overall Visual Impact: Minor to negligible

3.4.4.4 Inland Open Water

Open water is a unique aesthetic area predominately characterized by simple elements of water and sky. Variations in time of day, time of year, weather, wind, and sound all influence the experience of open water. The inland open water areas within the Brayton Point Onshore Project Area include portions of Mount Hope Bay, Lee River, Cole River, and Taunton River; Mount Hope Bay is the eastern-most arm of the Narragansett Bay complex and joins the mouths of the aforementioned rivers. There are many human-made features such as private docks adjacent to residential properties as well as publicly accessible marinas and docks that provide access to water-based recreation like fishing and boating. In addition, a shipping channel and ferry route operates in Mount Hope Bay between Fall River Line State Pier south to Newport, Rhode Island.

Although open water is susceptible to change from proposed development, the inland open water present in the Brayton Point Onshore Project Area is not an unadulterated environment due to fishing, boating, shipping, and ferry operations ongoing in the vicinity. Comprising 31 percent of the total APVI, open water dominates the southern portion of the landscape (see Figure 2-2). Where they are present, views of the water dominate the foreground and afford broad views across the open water toward the landscape beyond. Within close proximity of the Project, there is visibility by the open water areas of Mount Hope Bay. Even from the open water of Mount Hope Bay, however, the converter stations would be small features among several existing industrial sites on Brayton Point. They would be seen in the context of existing urban development and would therefore be considered compatible with surrounding land uses (see Figure 2-2). Duration considers the construction and operational period of the Project facilities, which falls into the long-term category of 5-30 years. Effects to the inland open water character area would be major to moderate.

Resource Sensitivity: High

- Susceptibility: High
- Value: High

Magnitude of Change: Medium

- Geographic Extent: Medium
- Size and Scale of Change: Medium
- Duration and Reversibility: Fair

Overall Visual Impact: Major to Moderate

3.4.4.5 Agriculture

As identified by 2016 MassGIS and 2011 RIGIS data classifications, agricultural areas within the APVI are defined as general agriculture, pasture, or orchards. These areas are scattered throughout the APVI but are most concentrated on the Mattapoisett peninsula in Rhode Island, located between 1.5 and 2 miles (2.4 to 3.2 km) west of the Brayton Point Onshore Project Area. These agricultural areas are predominately characterized by flat, gently sloping topography and open fields, often surrounded by mature trees and/or hedgerows, with no distinctive characteristics. Some larger rural residential areas are scattered amongst the open fields and forested, undeveloped, or low/medium density residential areas surround a majority of these

agricultural areas (see Figure 2-2). Impacts to agriculture landscape character areas are not expected, because they comprise <1% of foreground landscape character areas and only 2% of middleground landscape character areas (see Figure 2-2). Additionally, while the open fields afford some long views, the low-lying landscape and prevalence of mature vegetation screen most views to the foreground (within 1.5 miles [2.4 km]). Thus, where potential limited views may occur, they would be seen at a distance beyond changeful influence in the context of foreground development. Duration considers the construction and operational period of the Project facilities, which falls into the long-term category of 5-30 years. Overall effects on this character area would range from minor to negligible.

Resource Sensitivity: Medium

- Susceptibility: Medium
- Value: Medium

Magnitude of Change: Small

- Geographic Extent: Small
- Size and Scale of Change: Small
- Duration and Reversibility: Fair

Overall Visual Impact: Minor to negligible

3.4.4.6 Recreation

Land-based recreational areas are scattered throughout the APVI within the vicinity of the Project and include city parks, cemeteries, and conservation areas, most of which are bordered by screening vegetation or screened from view otherwise due to human-made structures/developments. These areas are regionally common. Local public park facilities vary in size and program, but typically are characterized by open lawn, large, mature landscape trees, walking paths, playgrounds, and sports fields. Likewise, cemeteries within the APVI are characterized by bordering vegetation screening, limiting views to the immediate foreground. Water-oriented recreational areas include marinas, docks, and public waterfront development and beaches. The recreation landscape character area overall comprises only 4% of foreground landscape character areas and only 6% of middleground landscape character areas and are largely screened from Project views by vegetation and human-made development, but certain recreational activities could be impacted particularly if open water views are of importance (see Figure 2-2); these areas otherwise don't have any distinctive characteristics. Duration considers the construction and operational period of the Project facilities, which falls into the long-term category of 5-30 years. Overall effects on this character area would be moderate to minor, depending on distance from the Project.

Resource Sensitivity: High

- Susceptibility: High
- Value: Medium

Magnitude of Change: Small

- Geographic Extent: Small
- Size and Scale of Change: Small
- Duration and Reversibility: Fair

Overall Visual Impact: Moderate to minor

3.4.4.7 Non-Conservation Open Space

Non-conservation open space such as public or private undeveloped property, wilderness, or working lands comprises 12% of foreground landscape character areas and 14% of middleground landscape character areas, scattered throughout the Project APVI (Figure 2-2). These non-conservation open space areas are regionally common and predominately characterized by park management or maintenance activities (with some associated amenities, e.g., playgrounds and parking) or large expanses of grass or low growing vegetation, with no distinctive characteristics. These areas occur primarily northeast of the Project Area in Somerset as well as some small open space areas across the Taunton River in Fall River. These areas are not designated for conservation and are screened from view of the Project by strips of forested area or residential development; this is due to almost all the non-conservation open space areas being located inland. Duration considers the construction and operational period of the Project facilities, which falls into the long-term category of 5-30 years. Overall effects on this character area would range from minor to negligible.

Resource Sensitivity: Medium

- Susceptibility: Medium
- Value: Medium

Magnitude of Change: Small

- Geographic Extent: Small
- Size and Scale of Change: Small
- Duration and Reversibility: Fair

Overall Visual Impact: Minor to negligible

3.4.4.8 Transportation

The major high-volume transportation corridors within the APVI that comprise the transportation character area include I-195, Route 6 (Grand Army of the Republic Highway), and Route 103 (Wilbur Avenue), which are generally dominated by automobiles, pavement, guardrails, and signs and do not have any distinctive characteristics. The portion of I-195 within the APVI is a divided six-lane freeway that passes within 0.6 mile (1 km) of the Project site at Brayton Point; However, views from I-195 closest to the Project are predominantly screened by dense deciduous woodlands. Further north from the Project site, US Route 6 is also oriented northwest-southeast through the APVI; Varying in width and treatment, US Route 6 passes through and is characterized by existing urban centers and commercial areas. Lastly, Route 103 also passes through the APVI from west to east, generally from Warren, Rhode Island to the Taunton River; Route 103 is a two-lane highway and crosses the Lee River at the Anthony Bridge. Views from these roadways to the Project are predominantly screened by dense deciduous woodlands or commercial development, thus any views of the Project would be seen in the context of existing urban development and would be considered compatible with surrounding land uses (see Figure 2-2). Additionally, views from within this character area are generally focused on the roadway and associated traffic. Travel along these corridors is at moderate to high speeds, and outward peripheral views are fleeting. The closest publicly accessible roadway that has potential views of the Project Area (i.e., converter stations) is the relatively elevated crossing of Route 103 over the Lee River at Anthony Bridge, although it would be partially screened by existing vegetation and views would be of short duration; KOP 4 illustrates this potential view from the Anthony Bridge. Duration considers the construction and operational period of the Project facilities, which falls into the long-term category of 5-30 years. Overall effects on this character area would be minor.

Resource Sensitivity: Low

- Susceptibility: Low
- Value: Low

Magnitude of Change: Small

- Geographic Extent: Small
- Size and Scale of Change: Small
- Duration and Reversibility: Fair

Overall Visual Impact: Minor

3.4.4.9 Industrial

The industrial character LCA includes developed landscapes defined by a variety of utilitarian functions, which are visually linked by a distinct, mechanized or otherwise production-oriented aesthetic. The industrial character area is comprised of industrial development on the banks of the Taunton River, which includes Brayton Point as the former site of Brayton Point Power Generation Station (since demolished). Industrial development dominates the riverfront along the western edge of Fall River and the eastern edge of Somerset, Massachusetts and are considered to be regionally common; there areas are predominately bordered by low and medium density residential, recreation, commercial, and transportation areas (see Figure 2-2). Industrial enterprises include water-based and other manufacturing, fabrication, water treatment, and energy infrastructure sites. These sites are characterized by large, paved parcels (five acres of larger) with clustered structures, whether large buildings or other industrial infrastructure, thus any views of the Project would be seen in the context of existing urban development and would be considered compatible with surrounding land uses (see Figure 2-2). Therefore, the nature of the development of the converter stations is largely aligned with the nature of the industrial character area as it exists in the Project APVI. Duration considers the construction and operational period of the Project facilities, which falls into the long-term category of 5-30 years. Overall effects on this character area would be moderate to minor.

Resource Sensitivity: Low

- Susceptibility: Low
- Value: Low

Magnitude of Change: Medium

- Geographic Extent: Medium
- Size and Scale of Change: Small
- Duration and Reversibility: Fair

Overall Visual Impact: Moderate to minor

3.4.4.10 Commercial

Commercial areas within the APVI are concentrated along Grand Army of the Republic Highway (US Route 6) and Swansea Mall Drive (Massachusetts State Route 118), each located over 1 mile (1.6 km) north of the Brayton Point Onshore Project Area. These commercial areas are regionally common and typical in appearance and characterization for the land use: large-format parcels fronting the highway with large, flat areas for parking with big-box stores beyond. A denser, more urban commercial center is located in central Fall River along Main Street, 2 miles (3.2 km) southeast of the Brayton Point Onshore Project Area. This commercial area is characterized by two- and three-story buildings densely oriented along the two-lane street. In both types of commercial areas, views are screened to the immediate foreground by buildings and sometimes landscaping, mature trees, and any views of the Project would be seen in the context of existing urban development and would be considered compatible with surrounding land uses (see Figure 2-2). Impacts to commercial landscape character areas are not expected, because they comprise only 3% of foreground landscape character areas and 6% of middleground landscape character areas (see Figure 2-2). Thus, where potential limited views may occur, they would be seen at a distance beyond changeful influence in the context of foreground development. Duration considers the construction and operational period of the Project facilities, which falls into the long-term category of 5-30 years. Overall effects on this character area would range from minor to negligible.

Resource Sensitivity: Low

- Susceptibility: Low
- Value: Low

Magnitude of Change: Small

- Geographic Extent: Small
- Size and Scale of Change: Small
- Duration and Reversibility: Fair
- Overall Visual Impact: Minor to negligible

3.4.4.11 Wetland

As identified by 2016 MassGIS and 2011 RIGIS data classifications, palustrine emergent wetlands and aquatic beds, estuarine emergent wetlands, scrub shrub, and other ecological types of wetland areas are present within this LCA. Most of these areas are in upland areas or adjacent to the Taunton, Cole, or Lee Rivers, and are very small, isolated, low-lying drainage areas, which are considered to be regionally common and otherwise do not have any distinctive characteristics. These wetland areas are predominately characterized by thin, textured grasses, sparse/scattered shrubs, and small areas of shallow water, frequently surrounded by mature trees. Impacts to wetland landscape character areas are not expected, because they comprise <1% of foreground landscape character areas and <1% of middleground landscape character areas (see Figure 2-2). Additionally, the wetland areas within the APVI are not readily accessible to the public and are often bordered by tall trees that serve as an obstruction for both access and views. There are no designations or protections for scenic, recreational, tourism, and/or historic qualities that apply to this LCA. Thus, where potential limited views may occur, they would be seen at a distance beyond changeful influence in the context of foreground development. Duration considers the construction and operational period of the Project facilities, which falls into the long-term category of 5-30 years. Overall effects on this character area would range from minor to negligible.

Resource Sensitivity: Low

- Susceptibility: Medium
- Value: Low

Magnitude of Change: Small

- Geographic Extent: Low
- Size and Scale of Change: Small
- Duration and Reversibility: Fair

Overall Visual Impact: Minor to negligible

Table 3-6. Summary of Impacts to Character Areas

Character Area	Sensitivity									Magnitude of Change										Level of Effect
	Susceptibility			Value			SLIA Sensitivity Level			Geographic Extent			Size and Scale			Duration and Reversibility	SLIA Magnitude of Change Rating (Large, Medium, Small)		
	High	Medium	Low	High	Medium	Low	High	Moderate	Low	Large	Medium	Small	Rationale							
													Acres with Potential Visibility	Percent of Character Area with Theoretical Visibility a/	Large	Medium	Small			
Low and Medium Density Residential		X			X			X				X	4,027	20%			X	Long term; Fair	Small	Minor
High Density Residential		X			X			X				X	1,323	4%			X	Long term; Fair	Small	Minor
Forest		X			X			X				X	470	1%			X	Long term; Fair	Small	Minor to Negligible
Inland Open Water	X			X			X				X		6,208	34%		X		Long term; Fair	Medium	Major to Moderate
Agriculture		X			X			X				X	333	1%			X	Long term; Fair	Small	Minor to Negligible
Recreation	X				X		X					X	1,146	4%			X	Long term; Fair	Small	Moderate-Minor
Non-Conservation Open Space		X			X			X				X	2,626	12%			X	Long term; Fair	Small	Minor to Negligible
Transportation			X			X			X			X	2,070	10%			X	Long term; Fair	Small	Minor
Industrial			X			X			X		X		682	10%			X	Long term; Fair	Medium	Moderate to Minor
Commercial			X			X			X			X	1,119	4%			X	Long term; Fair	Small	Minor to Negligible
Wetland		X				X			X			X	50	<1%			X	Long term; Fair	Small	Minor to Negligible

Note: a/ Based on a comparison of the mapped Character Area and the Refined Viewshed Analysis.

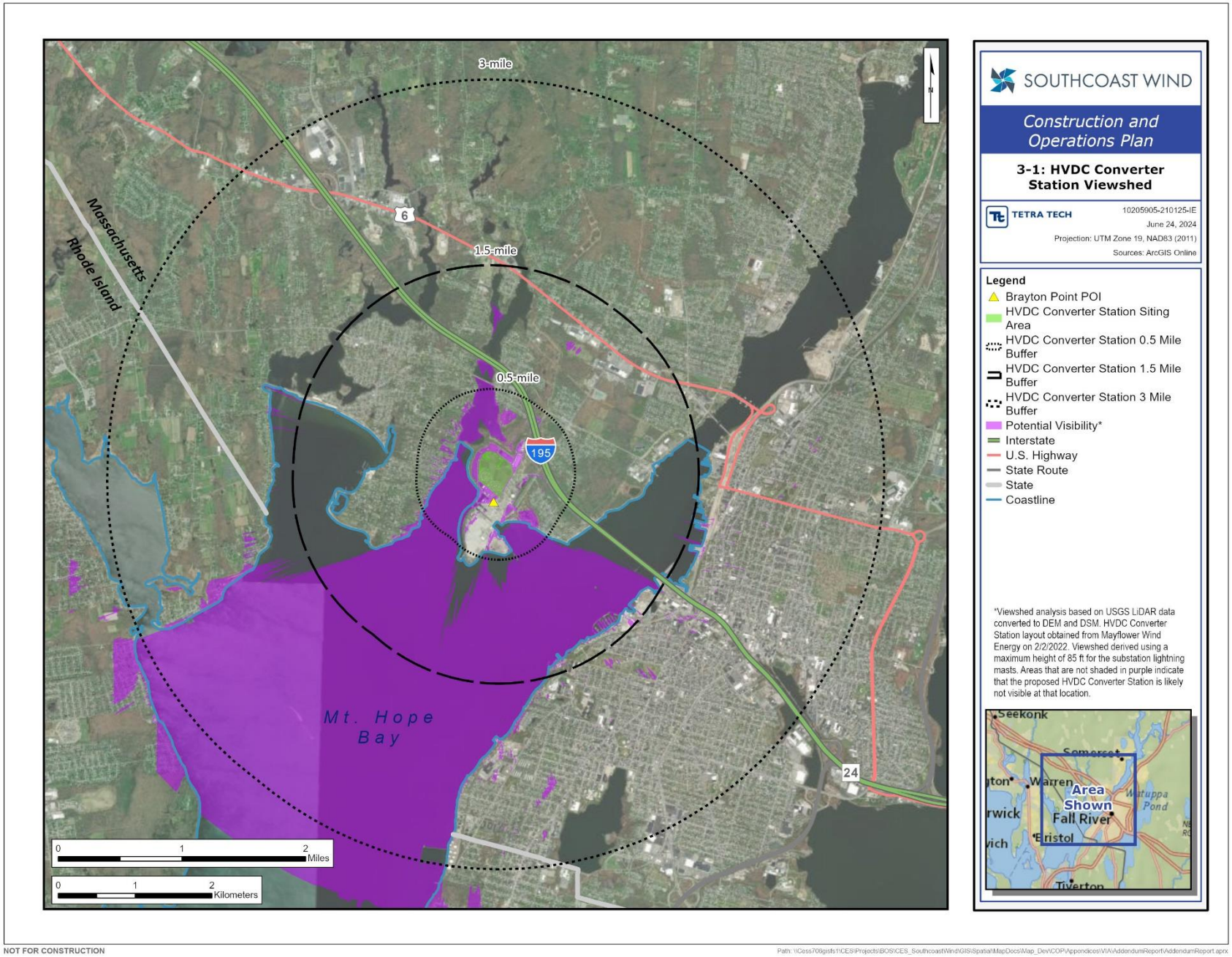

Figure 3-1. Project Viewshed Analysis

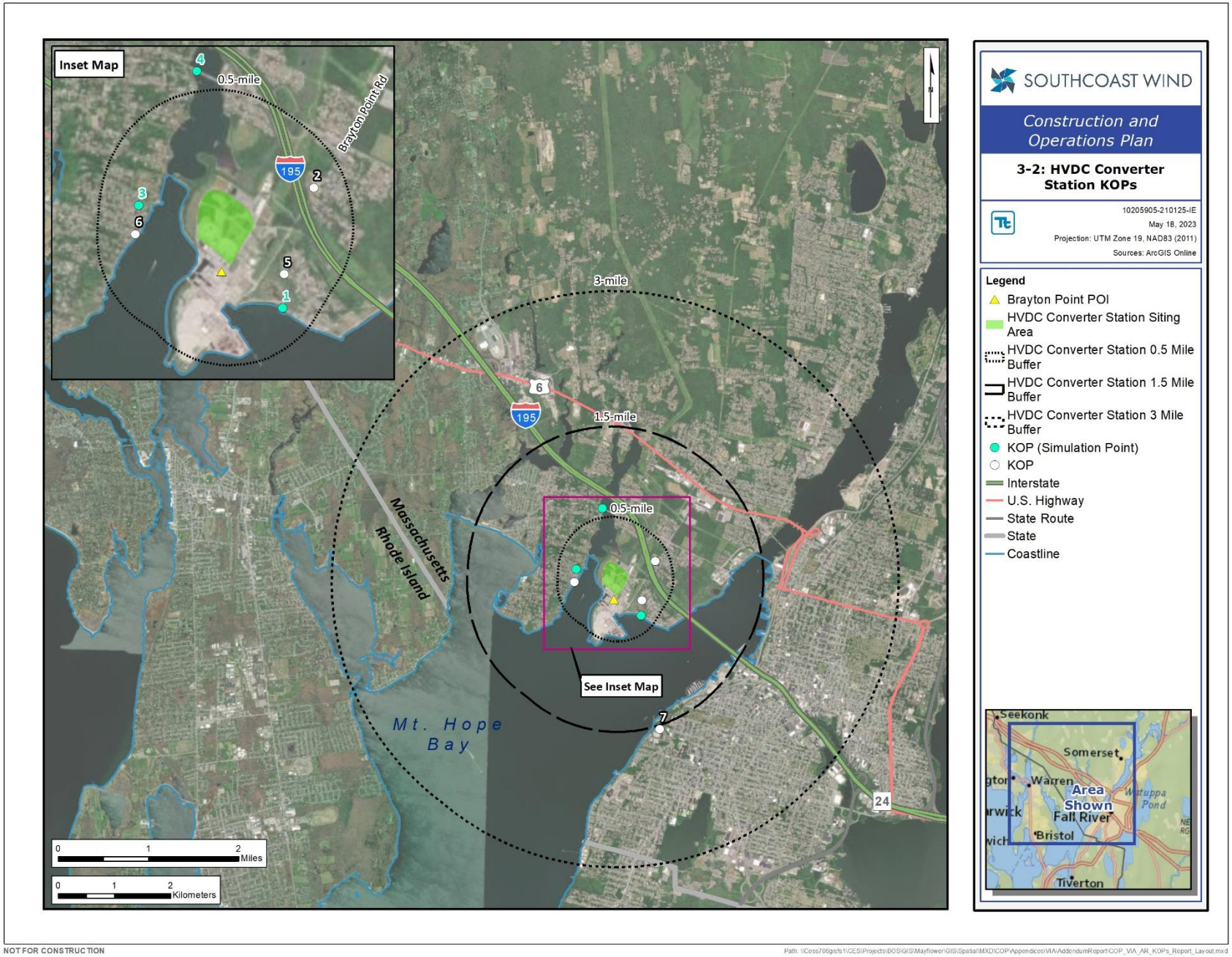

Figure 3-2. Key Observation Points

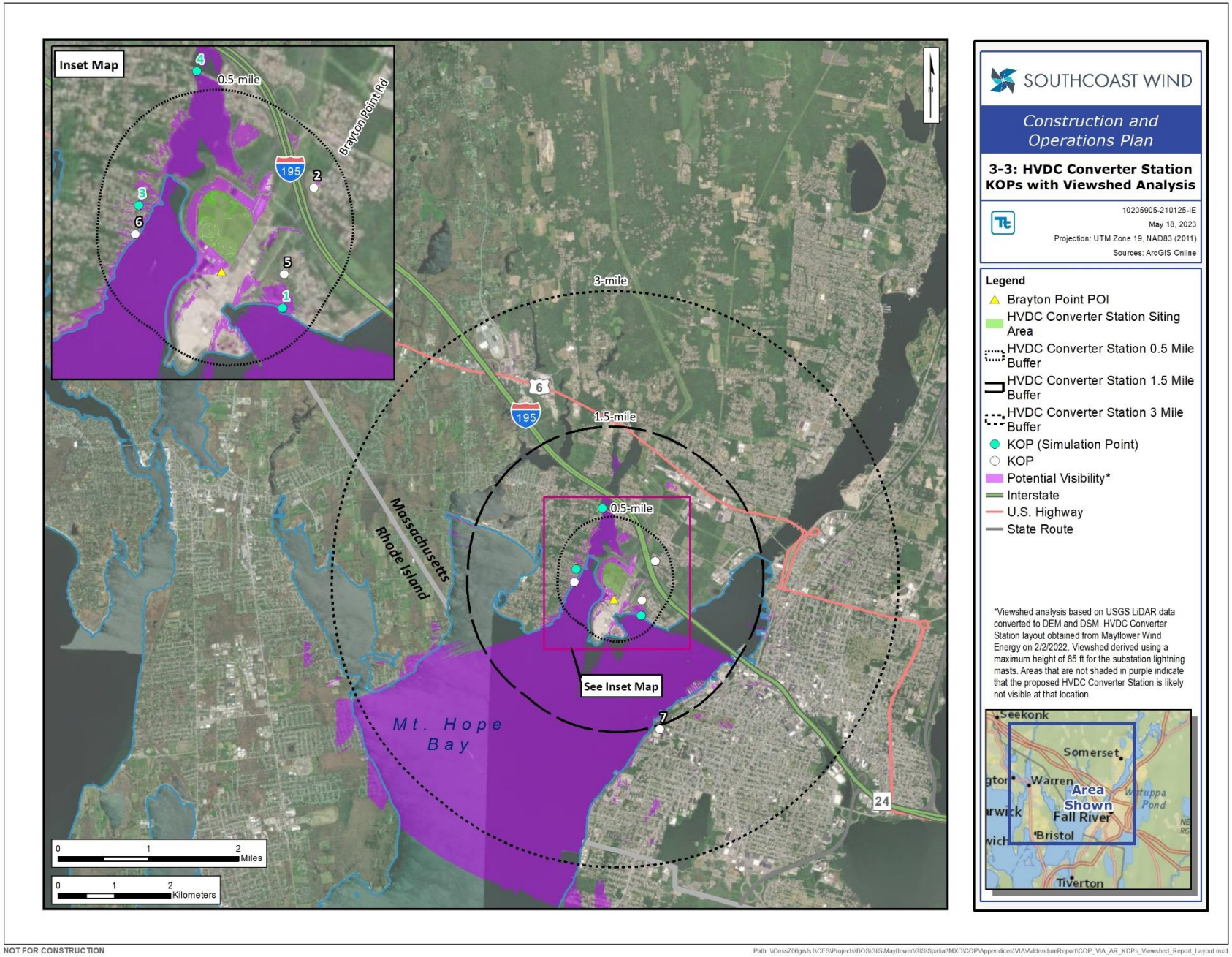

Figure 3-3. Key Observation Points with Viewshed

3.5 Visual Impact Assessment

As demonstrated by the viewshed analysis, and borne out by the photo simulations, the Brayton Point Onshore Project Area would not be visible from most of the surrounding landscape. The viewshed analysis demonstrates that the Brayton Point Onshore Project Area features would be screened from view for 83.96 percent of the APVI (Figure 3-4), and the vast majority of the visible portion is from the open water of Mount Hope Bay. In addition, of seven field-reviewed KOP locations, the three selected as having potential views demonstrate that the Brayton Point Onshore Project Area features would be screened to such a degree it would be practically indiscernible to even highly engaged viewers (Table 3-7). Based on the photo simulations, topography, dense woodland, and existing development screen views of the Brayton Point Onshore Project Area features from the east, and riparian vegetation and distance screen the Brayton Point Onshore Project Area features from the west. As the photo simulations indicate, only the tallest portions of the Brayton Point Onshore Project Area features would be seen: the lightning protection masts (85 feet [26 m] tall) rise above screening topography or vegetation from some viewpoints. However, the small portion of mast that is visible is seen from a distance—varying from 0.44 to 0.82 mile (0.7 to 1.3 km)—alongside existing industrial infrastructure on Brayton Point, including a large concrete storage tank and an existing tower.

Notably, fieldwork and KOP photography was conducted in January 2022 during clear sky conditions, resulting in photo simulations depicting the Project during winter/leaf off conditions, and visibility of the converter stations is still extremely limited. Where vegetation is the key screening element, visibility from the selected KOPs would be screened even more during spring, summer and fall when foliage is present. In addition, visibility would be reduced or eliminated during overcast or foggy weather conditions.

3.5.1 Onshore Visual Change

The following findings are based on the objective methodology described in Appendix T: Visual Impact Assessment. Specific explanations for the methodology and rating terminology used can be found in Section 4.3 of Appendix T.

The analysis of KOPs determined that the Brayton Point Onshore Project Area features are minimally visible from four KOPs within the immediate foreground and foreground distance zones (within 0.5 and 1.5 miles [0.8 to 2.4 km]). Not all KOPs that are mapped within the viewshed have visibility to the Brayton Point Onshore Project Area features because the locations are either enclosed within existing vegetation, screened by buildings or other structures, or the viewer position is set low in the topography.

Table 3-7. Selected Key Observation Points

KOP No.	Name	Municipality	Resource Type	Distance to Facility	Landscape Character Area	Viewer Groups	Visibility
Field Reviewed – With Potential Visibility to Facility							
1	Brayton Point Beach	Somerset, MA	Public Recreation (undeveloped)	0.44 mi [0.71 km]	Recreation	Residents, Tourists, Recreational Users	Partial
3	Sycamore Street	Swansea, MA	Public Road, Recreation	0.50 mi [0.80 km]	Low and Medium Density Residential	Residents, Recreational Users	Partial
4	Route 103 at Anthony Bridge	Swansea, MA	Public Road, Highway	0.82 mi [1.32 km]	Transportation	Residents, Tourists	Partial
7	Club Street at Kennedy Park	Fall River, MA	Public Road	1.54 mi [2.48 km]	Recreation	Residents, Tourists, Recreational Users	Partial
Field Reviewed – No Visibility to Facility							
2	Edward O'Neill Memorial Park	Somerset, MA	Public Park	0.39 mi [0.63 km]	Recreation	Residents, Recreational Users	No: Screened by dense vegetation
5	Carey Street	Somerset, MA	Public Road, Residential	0.30 mi [0.48 km]	Low and Medium Density Residential	Residents	No: Screened by dense vegetation and earthen berm
6	Bayside Avenue	Swansea, MA	Public Road, Residential	0.55 mi [0.89 km]	Low and Medium Density Residential	Residents	No: Screened by dense vegetation

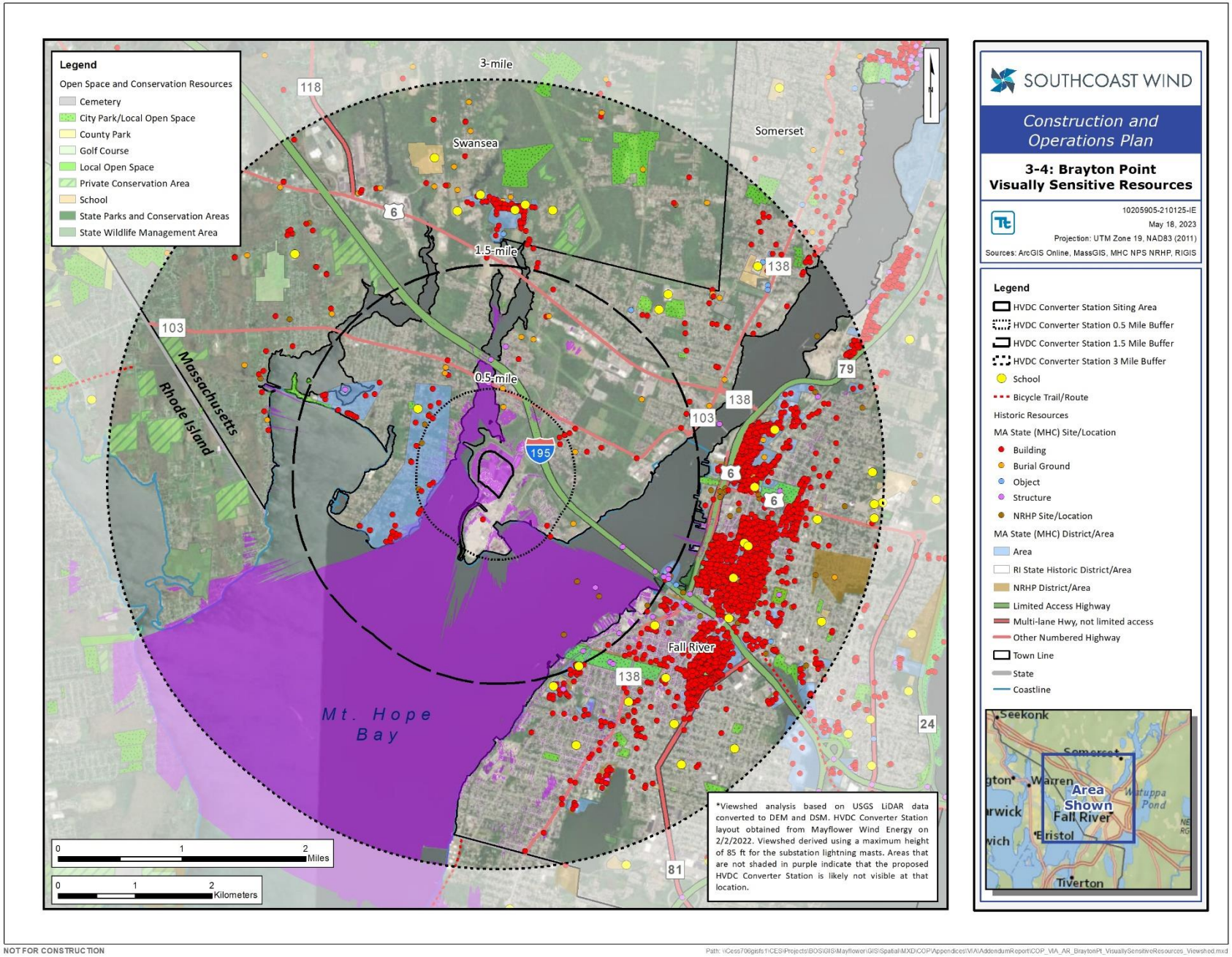

Figure 3-4. Viewshed Compared with Visually Sensitive Resources

Visual Change, as measured by the reported Visibility Levels accounts for both visual compatibility (e.g., type, intactness, unity) and visual contrast (e.g., vividness, scale, and movement). The goal of applying the visual contrast method is to create an objective measure of visual change as would be perceived by sensitive viewers. Within the contrast rating scale, Visibility Levels 5 and 6 indicate **Strong** visual change, Visibility Levels 3 and 4 **Moderate** visual change, and Visibility Levels 1 or 2 **Weak** visual change. However, because this Project was demonstrated by photo simulations to be almost fully to fully screened from view, visual change was found to be negligible.

Simulations were developed for three of seven selected KOPs. Photo simulations for the three KOPs are presented in Attachment 1. A summary of results is found in Table 3-8.

Table 3-8. Effects to KOPs

KOP No.	Name	Distance to Facility	Contrast Rating	Viewer Sensitivity
1	Brayton Point Beach	0.44 mi (0.71 km)	Negligible	Moderate-High
3	Sycamore Street	0.50 mi (0.80 km)	Negligible	Moderate-High
4	Route 103 at Anthony Bridge	0.82 mi (1.32 km)	Negligible	Moderate-High

3.5.2 Onshore Effects to Environmental Justice Areas

As shown by the Viewshed Analysis (Figure 3-5) isolated and 'speckled' data points returned potential visibility from EJ areas in Fall River and Swansea. Investigating these results, Tetra Tech determined these points are likely building rooftop points that, when combined with the ground elevation, rise above the height of the Project lightning protection masts (85 feet [26 m] above ground level) and thus indicate a line of sight in the viewshed. However, fieldwork and further analysis using Google Maps Street View in these areas shows extremely few lines of sight to the converter station site from locations away from the urban waterfront edge.

Furthermore, while it remains feasible that upper-story views from inside buildings in portions of Fall River designated as EJ areas could include the uppermost portion of the lightening protection masts, these views would be seen from a distance of 1.5 to 2 miles (2.4 to 3.2 km), and therefore such narrow objects would be minimally discernable, if they were noticed at all in the context of the broader urban landscape view.

3.5.3 Onshore Visual Sensitivity

Visual sensitivity describes the extent to which viewers relate to the visual characteristics of an area and express their levels of concern about changes that may affect the cultural and scenic integrity on those characteristics and impact the viewer experience. Therefore, Visual Sensitivity is determined by first characterizing Viewer Sensitivity and Visual Resource Sensitivity. Somerset, Swansea, and Fall River, Massachusetts are each populated areas and there is evidence that people are drawn by the maritime setting and historic features. Viewer concern for the scenic condition of landscapes depends on a range of factors, including types of users, amount of use, demonstrated public interest, and protective designations (i.e., conservation or historic sites). These factors suggest that many if not most people who could view the Project from the identified viewshed (permanent residents, seasonal residents, commuters, tourists, recreational users) fall into a **Moderate** to **High** Viewer Sensitivity category (Table 3-8). This means viewers value the setting, are aware of the surroundings, and are expected to notice changes in the visual environment.

Visual Resource Sensitivity ranges are assumed to be from **Moderate** to **High**, depending on the viewer and their activities.

For the purposes of this assessment, Visual Sensitivity is rated as **Moderate** to **High**.

3.5.4 Onshore Visual Impact Characterization

As described in Section 4.3.3 of the Appendix T to the COP, the combination of Visual Change and Visual Sensitivity characterizes the potential for impact associated with the Project; the potential for impact is characterized as **Neutral**, **Low**, **Medium**, or **High**.

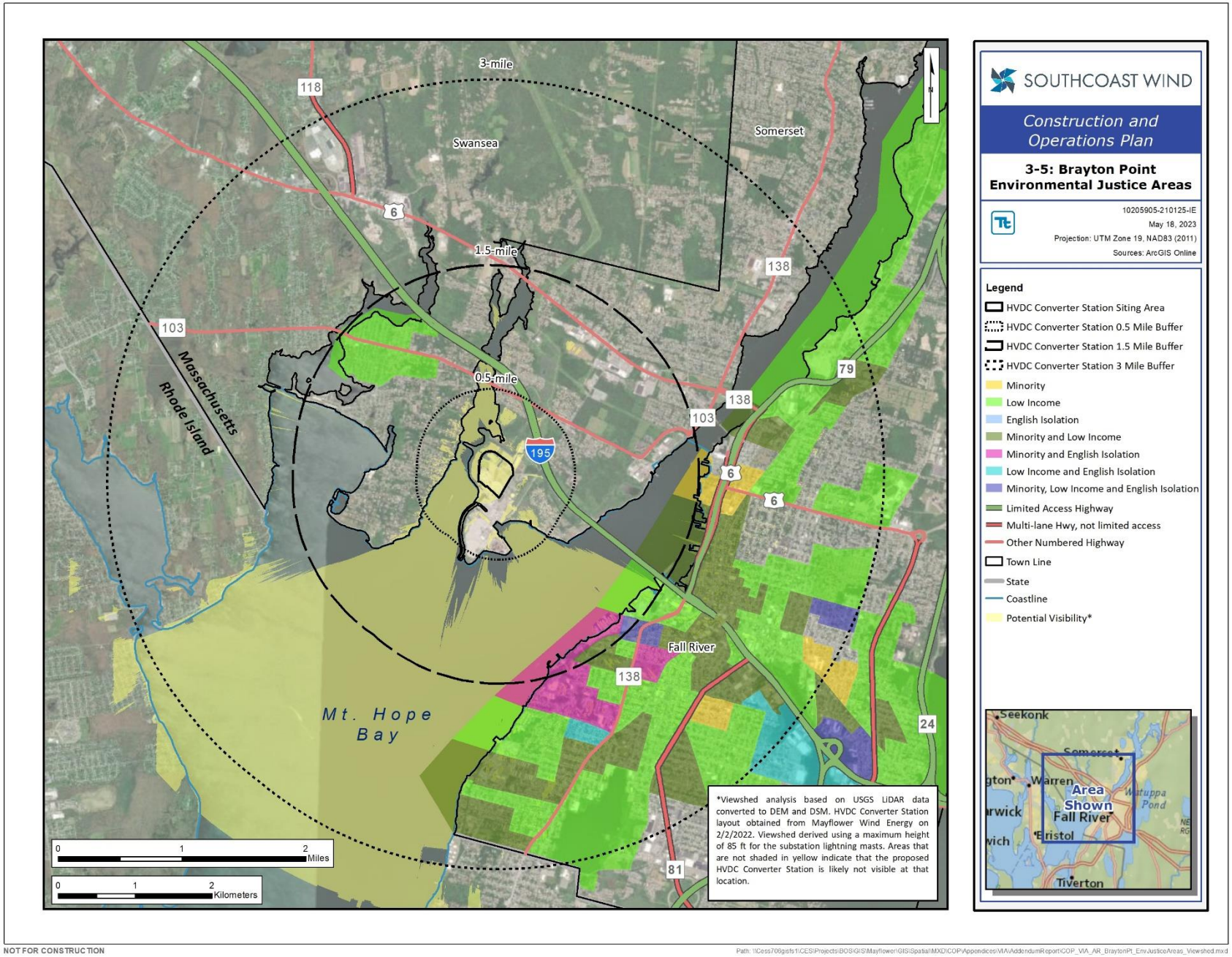

Figure 3-5. Viewshed Compared with Environmental Justice Areas

The viewshed analysis was compared with the identified landscape character areas (refer to Section 2.2.1.1) in order to quantify and determine the relative magnitude of visual effects from the converter stations. The results of that comparison are mapped on Figure 3-6 and shown in Table 3-9. As these results indicate, the open water of Mount Hope Bay would have the highest proportion of visibility, followed by industrial areas and low and medium residential areas. However, it should be noted that, especially in the case of residential and industrial areas, the LiDAR/DSM-based viewshed analysis returns a positive result (i.e., indicates visibility) for 'first-touch' surfaces with a line of sight to the converter stations' lightning masts, which would include, for example, portions of taller rooftops. Therefore, the results somewhat overstate actual visibility as experienced by viewers. Still, the results are helpful to determine from which landscape areas, and to what extent, the converter stations will be seen.

SOUTHCOAST WIND

Table 3-9. Occurrence of Visibility by Landscape Character Area

Landscape Character Area	Area Within Viewshed and Immediate Foreground (Ac)	Area Within Viewshed and Foreground (Ac)	Area Within Viewshed and Middleground (Ac)
Low and Medium Density Residential	19.25	21.78	71.63
High Density Residential	-	-	0.01
Forest	0.11	0.08	3.87
Inland Open Water	139.82	978.15	1,725.76
Agriculture	-	0.10	2.31
Recreation	2.18	2.24	18.67
Non-Conservation Open Space	14.62	13.24	25.0
Transportation	7.74	11.60	19.98
Industrial	90.52	9.24	19.03
Commercial	8.19	5.69	10.71
Wetland	0.30	0.14	0.26
Total	**282.72**	**1,042.27**	**1,897.22**

Based on the results of the viewshed analysis and photo simulations prepared for this VIA addendum, the potential for visual impact of the Brayton Point Onshore Project Area is characterized as **Neutral**, based on the following factors:

- Negligible Onshore Project Visibility: extensive screening of the Brayton Point Onshore Project Area by physical isolation, existing vegetation, and topography;
- Moderate to High Visual Sensitivity;
- Change in views of Brayton Point compared to the site's past use as a coal-fired power plant, including two 500-foot [152-m]-tall cooling towers, which previously dominated local scenery;
- Small Project extent (single isolated site occupied by low buildings and equipment and few tall, narrow features); and
- Short view durations: the Project setting is highly developed, urban environment; minimal viewing locations offer long lasting exposure to the converter stations. Even from open water of Mount Hope Bay, the converter stations would be one small feature among several industrial sites on Brayton Point.

The above characterization does not account for potential mitigation actions, if elected.

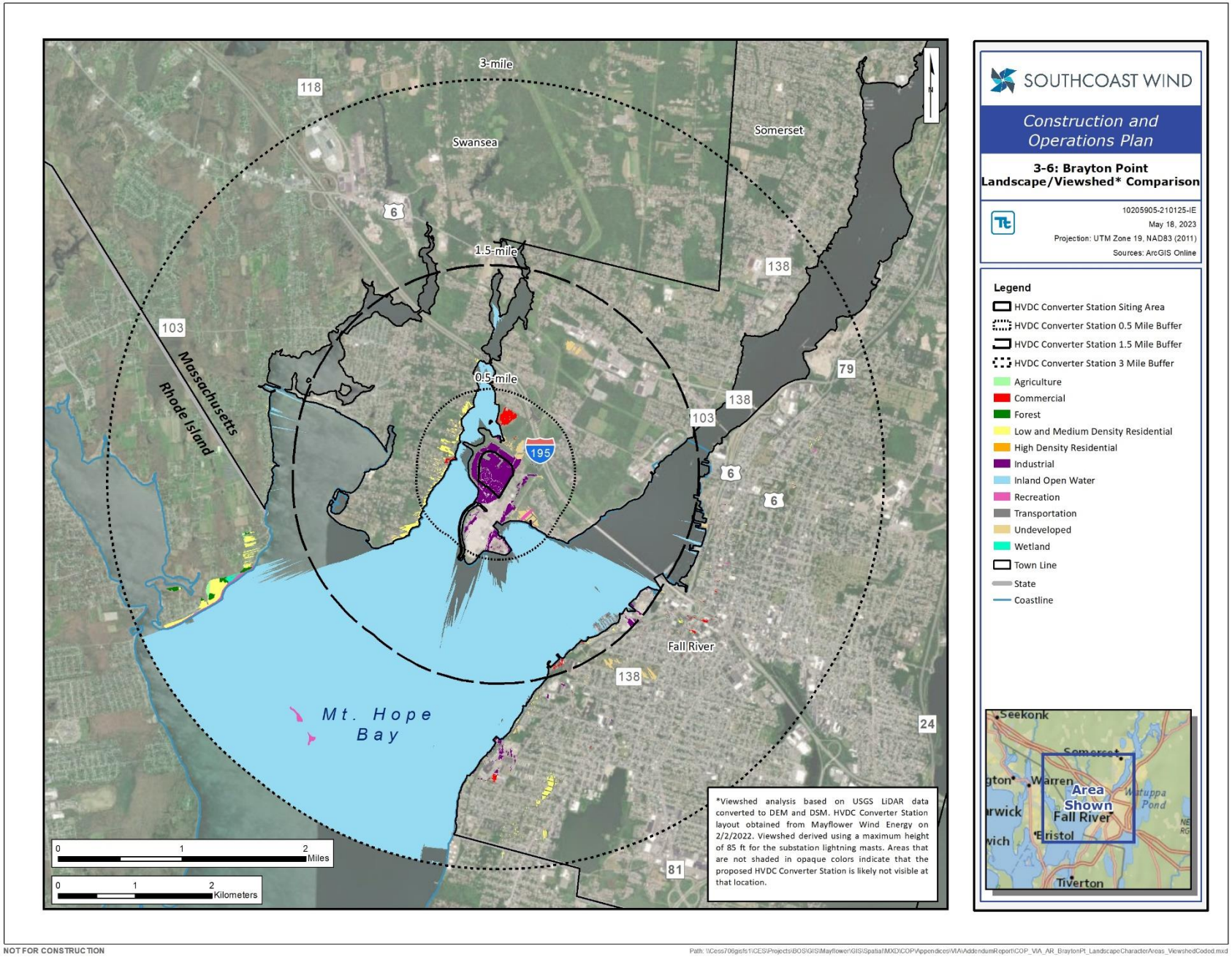

Figure 3-6. Viewshed Represented According to Landscape Character Areas

3.5.5 Visual Impacts During Onshore Construction

Short-term visual effects will occur during construction of the converter stations at Brayton Point and will result from construction activities and the presence of construction equipment and work crews. Construction activities associated with the converter stations will include surveying; excavation, stockpiling topsoil; grading, forming, compacting and construction of converter stations' equipment foundations, buried conduit and cables; placement and erection of equipment and buildings; including steelwork in switchyard, placement of perimeter fencing; and restoration and landscaping installation (if required).

It is anticipated that visual contrast will be introduced during Project construction primarily for motorists and cyclists on the westerly intersection of Oneil Road and Brayton Point Road—associated with the residential areas directly east of the proposed Project—where the presence of construction equipment, materials, and crews will be briefly visible to passing travelers on Brayton Point Road (the anticipated construction access point). However, these visual effects will be short term because construction equipment and crews will be removed once construction is complete. Views of Brayton Point Onshore Project construction from other areas, not immediately adjacent to the construction access, will be predominantly screened by vegetation and/or topography. Visual impacts to these viewers will be mostly limited to construction traffic on local roads, likely predominantly on Brayton Point Road, where construction traffic is likely to be concentrated.

3.5.6 Nighttime Lighting

Nighttime lighting of the converter station site will be limited to only that required for safety and security, such as at vehicle entry points. Low-intensity safety lighting may be affixed at these vehicle entry points and building entry points and will be motion-activated and shielded downward. No lighting is proposed for the tallest features, including the lightning protection masts, which will be seen above vegetation from limited viewpoints.

4.0 Mitigation

SouthCoast Wind commits to the following actions to reduce potential nighttime impacts from artificial light within the converter station site:

Lighting. Lighting at the converter station site will be designed and installed in consideration of sustainable outdoor lighting specifications in accordance with local and state regulations to minimize impact to natural night skies and adjacent properties. Measures include, but are not limited to utilization of LEDs, focused task lighting kept to a minimum and turned on only as needed by manual or auto shut off, and fully shielded lights, follow guidance in the National Park Service Sustainable Outdoor Lighting best practices and BLM Technical Note 457, Night Sky and Dark Environments: Best Management Practices for Artificial Light at Night, along with other industrial lighting and safety standards literature.

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ATTACHMENT 1 – Photo Simulations for the Onshore Facilities at Brayton Point

SOUTHCOAST WIND

Visual Simulations for the Onshore Facilities at Brayton Point

SOMERSET, MASSACHUSETTS

October 2023

Simulation Location 1: Brayton Point Beach

Locator Map

Viewpoint Location:	Brayton Point Beach
Date of Photograph:	January 12, 2022
Time of Photograph:	1:52PM (EDT)
Latitude:	41.711618° N
Longitude:	-71.184672° W
Viewing Direction:	N / NW
Ground Elevation + Camera Height:	5.5 feet
ENVIRONMENTAL	
Temperature:	42° F
Humidity:	57%
Wind Direction:	SW to NE
Wind Speed:	18 mph
Weather Condition:	Partly Sunny

Existing View

View from Brayton Point Beach toward Brayton Point Onshore Project Area

Image Data

Simulation Location 1: Brayton Point Beach

Print Guide / Image Notes:
This sheet should be printed at 11 by 17 inches; full size with no scaling; and viewed at arm's length (18 inches). If viewed on a computer monitor, the document should be scaled to 100 percent and viewed at arm's length (18 inches).

Simulated Condition

Simulation Location 1: Brayton Point Beach

Print Guide / Image Notes:
This sheet should be printed at 11 by 17 inches; full size with no scaling; and viewed at arm's length (18 inches). If viewed on a computer monitor, the document should be scaled to 100 percent and viewed at arm's length (18 inches).

Simulated Condition

The visible elements of the proposed converter station are highlighted here for visual reference only.

Simulation Location 1: Brayton Point Beach

Print Guide / Image Notes:
This sheet should be printed at 11 by 17 inches; full size with no scaling; and viewed at arm's length (18 inches). If viewed on a computer monitor, the document should be scaled to 100 percent and viewed at arm's length (18 inches).

Simulated Condition

The proposed converter station that is obscured by topography and existing structures is highlighted in yellow for visual reference only.

Simulation Location 2: Sycamore Street

Locator Map

Viewpoint Location:	Sycamore Street
Date of Photograph:	January 18, 2022
Time of Photograph:	12:37PM (EDT)
Latitude:	41.718808° N
Longitude:	-71.198907° W
Viewing Direction:	E
Ground Elevation + Camera Height:	5.5 feet
ENVIRONMENTAL	
Temperature:	34° F
Humidity:	37%
Wind Direction:	W to E
Wind Speed:	20 mph
Weather Condition:	Sunny

Existing View

View from Sycamore Street toward Brayton Point Onshore Project Area

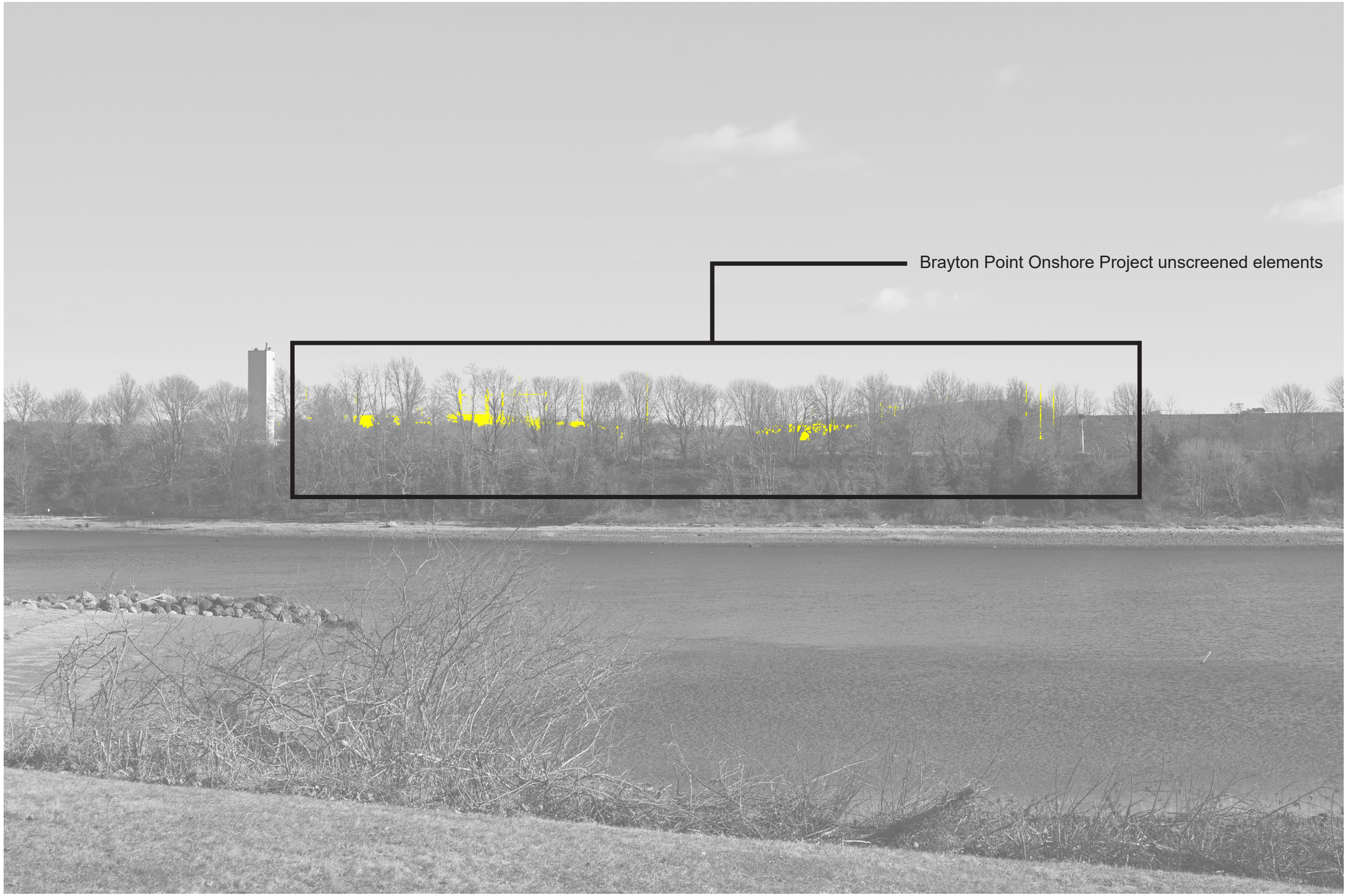
Image Data

Simulation Location 2: Sycamore Street

Print Guide / Image Notes:
This sheet should be printed at 11 by 17 inches; full size with no scaling; and viewed at arm's length (18 inches). If viewed on a computer monitor, the document should be scaled to 100 percent and viewed at arm's length (18 inches).

Simulated Condition

Simulation Location 2: Sycamore Street



Print Guide / Image Notes:
This sheet should be printed at 11 by 17 inches; full size with no scaling; and viewed at arm's length (18 inches). If viewed on a computer monitor, the document should be scaled to 100 percent and viewed at arm's length (18 inches).

Simulated Condition

The visible elements of the proposed converter station are highlighted here for visual reference only.

Simulation Location 2: Sycamore Street

Print Guide / Image Notes:
This sheet should be printed at 11 by 17 inches; full size with no scaling; and viewed at arm's length (18 inches). If viewed on a computer monitor, the document should be scaled to 100 percent and viewed at arm's length (18 inches).

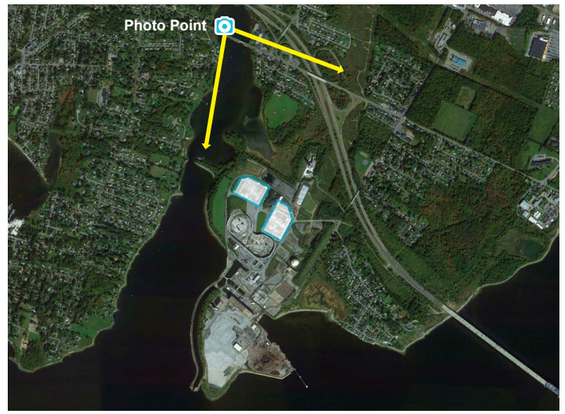
Simulated Condition

The proposed converter station that is obscured by topography and existing structures is highlighted in yellow for visual reference only.

Simulation Location 3: David Anthony Bridge

Existing View

View from David Anthony Bridge looking southeast toward Brayton Point Onshore Project Area



Locator Map

Image Data

Viewpoint Location:	David Anthony Bridge
Date of Photograph:	January 18, 2022
Time of Photograph:	1:22PM (EDT)
Latitude:	41.728643° N
Longitude:	-71.193582° W
Viewing Direction:	SE
Ground Elevation + Camera Height:	5.5 feet
ENVIRONMENTAL	
Temperature:	34° F
Humidity:	37%
Wind Direction:	W to E
Wind Speed:	17 mph
Weather Condition:	Sunny

Simulation Location 3: David Anthony Bridge

Print Guide / Image Notes:
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Simulated Condition

Simulation Location 3: David Anthony Bridge

Print Guide / Image Notes:
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Simulated Condition

The visible elements of the proposed converter station are highlighted here for visual reference only.

Simulation Location 3: David Anthony Bridge

Print Guide / Image Notes:
This sheet should be printed at 11 by 17 inches; full size with no scaling; and viewed at arm's length (18 inches). If viewed on a computer monitor, the document should be scaled to 100 percent and viewed at arm's length (18 inches).

Simulated Condition

The proposed converter station that is obscured by topography and existing structures is highlighted in yellow for visual reference only.

ATTACHMENT 2 – Selected Key Observation Points Photo Log for the Onshore Facilities at Brayton Point

SOUTHCOAST WIND

Selected Key Observation Points Photo Log for Onshore Facilities at Brayton Point

SOMERSET, MASSACHUSETTS

October 2023

KOP 1
Brayton Point Beach

SOUTHCOAST WIND

View 1

Latitude 41.711618°, Longitude -71.184672°

Viewing Direction

NW

Views from Brayton Point Beach area looking toward Project site. Wetland area is seen in the immediate foreground. Existing industrial facilities and earthern berm are seen.

View 2

Latitude 41.711618°, Longitude -71.184672°

Viewing Direction

W

KOP 2
Edward O'Neill Memorial Park

SOUTHCOAST WIND

View 1

Latitude 41.720410°, Longitude -71.181983°

Viewing Direction

W

Developed park includes open lawn area, baseball field, basketball courts, playground and parking. Existing radio broadcasting building located near the Project site is seen.

View 2

Latitude 41.720410°, Longitude -71.181983°

Viewing Direction

W

Another view of baseball field and vegetation beyond. I-195 is located behind the trees.

KOP 3
Residential Sycamore Street

SOUTHCOAST WIND

View 1

Latitude 41.718808°, Longitude -71.198907°

Viewing Direction

E

Overlooking Lee River, toward Project area. Riparian vegetation and topography on Brayton Point can be seen, in addition to the existing radio building.

View 2

Latitude 41.718808°, Longitude -71.198907°

Viewing Direction

SE

View of southern portion of Brayton Point, where existing industrial development is seen.

KOP 4
Route 103 at David Anthony Bridge

SOUTHCOAST WIND

View 1

Latitude 41.728643°, Longitude -71.193582°

Viewing Direction

SE

Viewer is positioned on the roadside along Route 103, on the Anthony Bridge. Lee River is in the immediate foreground, with Brayton Point beyond.

View 2

Latitude 41.728643°, Longitude -71.193582°

Viewing Direction

SE

KOP 5
Residential Carey Street

SOUTHCOAST WIND

View 1

Latitude 41.714075°, Longitude -71.184617°

Viewing Direction

NW

Looking toward the Project site from the western end of Carey Street, part of the small neighborhood on Brayton Point located east of the Project site. Dense vegetation and structures limit views.

View 2

Latitude 41.714075°, Longitude -71.184617°

Viewing Direction

W

KOP 6
Bayside Avenue

SOUTHCOAST WIND

View 1

Latitude 41.716708°, Longitude -71.199168°

Viewing Direction

S

Waterfront view from informal open space overlooking the Lee River, with Brayton Point industrial sites seen in the middleground.

View 2

Latitude 41.716708°, Longitude -71.199168°

Viewing Direction

E

View shows Lee River, with screening vegetation, and Project site. Existing radio building is seen on Brayton Point.

KOP 7
Club Street at Kennedy Park

SOUTHCOAST WIND

View 1

Latitude 41.697253°, Longitude -71.176365°

Viewing Direction

NW

Undeveloped waterfront roadside pull-off overlooking Taunton River. Brayton Point and its industrial lands are seen on the far bank.

View 2

Latitude 41.697253°, Longitude -71.176365°

Viewing Direction

NW