4.18 COASTAL ZONE AND CHAPTER 91

4.18.1 Introduction

This chapter identifies the potential impacts that may result from implementation of each of the proposed South Coast Bail Alternatives (see Figure 4.18-1 and Figure 4.18-2 for illustrations of the Stoughton Alternative and the Whittenton Alternative, respectively) to coastal zone resources and jurisdictional tidelands and navigable rivers and streams. Coastal zone resources are those identified in the Coastal Zone Management Act (CZMA) of 1972, as amended (16 U.S.C. 1451 et seq.), which provides for management of the nation's coastal resources and balances economic development with environmental conservation. Resources addressed under the CZMA include coastal development, water quality, public access, habitat protection, energy facility siting, ocean governance and planning, coastal hazards, and climate change.

The Massachusetts Coastal Zone Management Plan and regulations implement the federal CZMA. The Massachusetts Coastal Zone Management Act (MGL Chapter 21A, Sections 2 and 4A) established local authority to implement the Massachusetts Coastal Zone Management Plan (CZMP) through regulations at 301 CMR 20.00 through 301 CMR 25.00. This chapter assesses the consistency of the South Coast Rail project with the Massachusetts Coastal Zone Management Program (MCZMP) in accordance with regulations at 301 CMR 21.00 (federal consistency certification).

This chapter also assess impacts to tidelands and navigable rivers and streams subject to jurisdiction under M.G.L) Chapter 91, as implemented by 310 CMR 9.00 (collectively Chapter 91). Chapter 91 seeks to preserve and protect the rights of the public, and to guarantee that private uses of tidelands and waterways serve a proper public purpose. In addition to the state-level Chapter 91 requirements, Section 10 of the Rivers and Harbors Act also provides federal (USACE) jurisdiction over alterations to navigable waters of the United States.

This chapter includes descriptions of each resource, the regulatory context and significance of each, and a description of the existing resources present within the project area potentially affected by the alternatives.

Work required to implement the project within the jurisdiction of MGL Chapter 91 and the Massachusetts Coastal Zone includes track and signal system upgrades, bridge and abutment replacement, construction of stations and layover facilities. As each alternative may require some approvals within each of these jurisdictions, depending on MassDEP determinations, the following sections summarize the potential regulatory approvals and describe potential effects to Chapter 91 resources and the Massachusetts Coastal Zone.

Coastal zone and Chapter 91 resources are depicted in Figures 4.18-3 through 4.18-19. These figures illustrate the alignment alternatives from the Canton Junction Station in the north to Fall River and Bedford in the south.

The Secretary's certificate on the DEIR included the following requirements related to coastal zone:

- [For layover facilities] "Consistency with Chapter 91 licensing requirements and requirements for location within a Designated Port Area (DPA) should be described as applicable. The FEIR should clarify whether any facility located in a DPA can be allowed as a temporary and/or supporting DPA use."

- "The FEIR should clarify, and depict on figures/plans, any filled or flowed tidelands on or near the proposed layover facilities. Where applicable, information to support a Public Benefit Determination should be included."

- "The FEIR should include measures [at the proposed Whale's Tooth Station] to avoid and minimize non-point source pollution from idling trains and describe how the station site will be designed to be compatible with existing industrial uses in the New Bedford/Fairhaven Designated Port Area (DPA)."

- "The Wamsutta layover alternative is located adjacent to the Whale's Tooth Station site and the DPA. The FEIR should address compatibility issues with regard to coastal zone protection and DPA uses as recommended by CZM."

- "The proposed stations in Fall River are located near the Mount Hope Bay DPA and the Fall River station is partially located within the coastal zone. ... In consideration of sea level rise, the FEIR should consider a margin of safety to avoid a facility being located in a future elevated Zone A floodplain."

- "The FEIR should address pollution prevention and low impact development at all station and layover sites as well as project consistency with DPA uses and the Fall River City's harbor planning goals for pedestrian reconnection to the Waterfront."

- "MassDOT should consult with MassDEP and provide more detailed plans to determine whether or not the filled tidelands at Fall River Battleship Cove Station, New Bedford Whale's Tooth Station, and Wamsutta Layover facility are considered landlocked tidelands as defined at 301 CMR 9.02."

- "The FEIR should include analysis and mitigation as applicable to support a Public Benefits Determination consistent with Chapter 168 of the Acts of 2007."

- "The FEIR should describe any public access restrictions to the shoreline that may result from construction of layover facilities or other components of the proposed project."

- "Mitigation plans should be included in the FEIR to compensate for any public access impacts."

- "The FEIR should include detailed information describing the nature of the tidelands affected and the public benefits of the proposed project in accordance with the Public Benefits Determination Requirements at 301 CMR 13.00."

- "MassDOT should consult with DEP concerning the layover facility at Weaver's Cove [relative to filled tidelands] and provide DEP with the information outlined in its comment letter."

- "The FEIR should include an update on consultations and jurisdictional determinations."

- "The FEIR should identify and describe all components of the project requiring Chapter 91 licensing and whether project components are considered water-dependent or non-water dependent."

- "The FEIR should describe in detail how the project will meet licensing standards."
- "The FEIR should explain how the project is consistent with the New Bedford and Fall River Municipal Harbor Plans pursuant to 310 CMR 9.34, including how intermodal connections to the ferry service would be achieved."
- "The FEIR should explain how railroad components subject to licensing will preserve or enhance navigational capacity and maintain or enhance public access pursuant to 310 CMR 9.35 and 9.36."
- "If navigation or public access is impacted by the project, the FEIR should include detained mitigation plans."
- "The FEIR should explore opportunities on or near the layover facilities where MassDOT can 'take reasonable measures to provide open space for active or passive recreation at the water's edge'."

4.18.2 Regulatory Framework

4.18.2.1 Coastal Zone Management

Section 307(c) of the Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1456(c)) requires federal agencies conducting activities, including development projects, directly affecting a state's coastal zone, to comply to the maximum extent practicable with an approved state coastal zone management program. The Act also requires any non-federal applicant for a federal license or permit to conduct an activity affecting land or water uses in the state's coastal zone to furnish a certification that the proposed activity will comply with the state's coastal zone management program. Generally, no permit will be issued until the state has concurred with the non-federal applicant's certification.

The Massachusetts Coastal Zone Management Program (MCZMP) is the state-delegated authority established by the Federal Coastal Zone Management Act of 1972. Massachusetts General Law Chapter 21, Sections 2 and 4A establishes the Commonwealth's authority to require a Federal Consistency Certification (Coastal Zone Consistency) for certain projects requiring federal action that can reasonably be expected to affect the resources or land or water uses of the Massachusetts Coastal Zone. Certification is obtained through agency confirmation that projects subject to review are consistent with the regulatory policies and management principles established by the approved Massachusetts Coastal Zone Management Program. State agency certification is required prior to federal actions by the Department of the Army under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.

The MCZMP has the jurisdictional mandate to review activities in accordance with the Massachusetts Coastal Zone Management Regulations at 301 CMR 21.00 for consistency with the program policies enumerated in the regulations at 301 CMR 21.98 and the MCZMP. The geographic scope of this program is the Massachusetts Coastal Zone established by 301 CMR 21.99, 1972, as amended (16 U.S.C. 1451 et seq.) and 15 CFR 930, as amended. The Coastal Zone Management Program also protects the limited capacity to site water-based industrial and other maritime facilities within previously developed port areas.

The Massachusetts Coastal Zone includes the entire Massachusetts coastline extending from the seaward limit of state jurisdiction to point 100 feet landward of the first major transportation infrastructure adjacent to the coast. The precise boundary is defined by the regulations at 301 CMR 21.00 (Coastal Zone Management Program Federal Consistency Review Procedures). The Federal Coastal Zone Management Act requires state certification that applicable projects requiring federal actions are consistent with the approved coastal zone management plan. Federal consistency certification of the project is required prior to issuance of a Department of the Army permit.

Coastal Zone limits presented in this chapter were determined using GIS data provided by MassGIS. The Coastal Zone limits are illustrated on Figures 4.18-11 through 4.18-19. Section 4.18.6 demonstrates the project's consistency with the MCZMP.

4.18.2.2 Section 10 of the Rivers and Harbors Act of 1899.

Section 10 of Rivers and Harbors Appropriation Act of 1899, (33 U.S.C. 403) requires a Department of the Army permit for structures and/or work in or affecting navigable waters of the United States. In the case of South Coast Rail, the Taunton River is a tidal navigable water of the United States up to the South Street East Bridge in Taunton, and the Mill River in Taunton is navigable to Spring Street in Taunton. Should the South Coast Rail proposal involve any placement of structures or work (except bridges) in or affecting the Taunton or Mill Rivers, it will be necessary for MassDOT to obtain Department of the Army authorization under Section 10, in addition to the authorization to discharge dredged or fill material under Section 404 of the Clean Water Act.

In addition, Section 9 of Rivers and Harbors Appropriation Act of 1899, (33 U.S.C. 401) prohibits the construction of any dam or dike across any navigable water of the United States in the absence of Congressional consent and approval of the plans by the Chief of Engineers and the Secretary of the Army. Section 9 also pertains to bridges and causeways but the authority of the Secretary of the Army and Chief of Engineers with respect to bridges and causeways was transferred to the Secretary of Transportation under the Department of Transportation Act of October 15, 1966. As of that date, the construction or alteration of any bridge across any navigable water of the United States requires a permit from the U.S. Coast Guard. Therefore, it will be necessary for MassDOT to obtain a bridge permit from the U.S. Coast Guard for alteration or replacement of the bridge crossings over the Taunton River for the Whittenton Alternative, and over both the Taunton and Mill Rivers for the Stoughton Alternative. The Whittenton route also crosses the Mill River; however, that crossing is located well upstream of its navigable limits, and therefore a bridge permit from the U.S. Coast Guard would not be required for the Whittenton route crossing of the Mill River).

The Corps does not have authority over bridges under Sections 9 or 10 of the Rivers and Harbors Act of 1899. Corps authority over bridges is limited to appurtenant structures such as abutments and bank stabilization, the construction of which may involve discharges of dredged or fill material, and as such are regulated under Section 404 of the Clean Water Act.

4.18.2.3 Chapter 91–Waterways Regulations

Massachusetts General Law Chapter 91 is the modern codification of a series of statues which preserve certain rights in tidelands for the citizens of the Commonwealth. These rights date to the Massachusetts Colonial Ordinances of 1641-1647 and preserve the rights of the public to fish, fowl and navigate within all tidal waters of the Commonwealth up to and including the natural high water mark. With relatively

few legislative exceptions, these rights are preserved in perpetuity for the citizens of the Commonwealth.

Compliance with Chapter 91 is administered by the Massachusetts DEP through the Waterways Regulations at 310 CMR 9.00. These regulations establish procedures for the issuance of licenses for activities and structures located within jurisdictional areas. Maintenance, repair and minor modifications to existing, authorized structures within a jurisdictional area may be permitted without a new license or license amendment under the procedures at 310 CMR 9.22.

As it relates to this project, Chapter 91 jurisdiction potentially extends to four key components:

- non-tidal rivers and streams;
- tidal waters (flowed tidelands);
- filled tidelands; and
- landlocked tidelands.

4.18.2.4 Non-Tidal Rivers and Streams

The Waterways Regulations at 310 CMR 9.04(1)(e) establish Chapter 91 jurisdiction over the following:

> (e) any non-tidal river or stream on which public funds have been expended for stream clearance, channel improvement, or any form of flood control or prevention work, either upstream or downstream within the river basin, except for any portion of any such river or stream which is not normally navigable during any season, by any vessel including canoe kayak, raft or rowboat; The Department [DEP] may publish, after opportunity for public comment and review, a list of navigable streams and rivers….

This regulation establishes Chapter 91 jurisdiction over any navigable river or stream to which public funds have been expanded. To date, the Massachusetts DEP has not published a list of navigable rivers and streams in the Commonwealth, and neither MassDOT nor MassDEP is aware of a definitive list of non-tidal rivers and streams upon which public funds have been spent. In the absence of such a list, MassDEP states in their comment letter on the DEIS/DEIR:

"As a general rule … only the non-navigable uppermost reaches of a river basin are not subject to review."

Therefore, in order to determine the jurisdictional status of non-tidal rivers and streams, this evaluation considered the potential navigability of each river, stream, or wetland crossing within the rail corridor. The following materials were relied upon in assessing navigability:

- Stream order as determined by reference to USGS maps and "StreamStats;" using the Strahler method;
- Presence of a defined channel upstream and/or downstream of the crossing;
- Upstream and downstream conditions in terms of density of vegetation or the presence of culverts or other obstructions to navigation;

- Available survey data; and
- Field observations.

Existing and planned transportation improvements within areas potentially subject to jurisdiction under Chapter 91 pursuant to 310 CMR 9.04 were reviewed and preliminary determinations made regarding jurisdiction. These preliminary determinations are based in part on written and verbal guidance provided by MassDEP. MassDEP has the sole authority for making such determinations under Chapter 91.

4.18.2.5 Tidal Waters (Flowed Tidelands)

The Massachusetts Waterways Regulations at 310 CMR 9.02 define Flowed Tidelands as "…present submerged lands and tidal flats which are subject to tidal action." Flowed tidelands presented in this chapter are based on GIS data provided by MassGIS and Massachusetts DEP.

4.18.2.6 Filled Tidelands

The Massachusetts Waterways Regulations at 310 CMR 9.02 define filled tidelands as "former submerged lands and tidal flats which are no longer subject to tidal action due to the presence of fill."

The jurisdictional boundaries of filled tidelands are defined by the Historic High Water Mark, which is defined by 310 CMR 9.02 as:

> The high water mark which existed prior to human alteration of the shoreline by filling, dredging, excavating, or other means. In areas where there is evidence of such alteration by fill, the Department shall presume the historic high water mark is the farthest landward former shoreline which can be ascertained with reference to topographic of hydrographic surveys…

Filled tidelands presented in this chapter are based on GIS data provided by DEP.

4.18.2.7 Landlocked Tidelands

The Waterways Regulations define landlocked tidelands in 310 CMR 9.02 as:

> Any filled tidelands which on January 1, 1984 were entirely separated by a public way or interconnected public ways from any flowed tidelands, except for that portion of such filled tidelands which are presently located:
>
> (a) within 250 feet of the high water mark, or
>
> (b) within any Designated Port Area. Said public way or ways shall also be defined as landlocked tidelands, except for any portion thereof which is presently within 250 feet of the high water mark.

4.18.2.8 Designated Port Areas

The Chapter 91 and Coastal Zone Programs overlap in the case of nonwater-dependent use projects and activities proposed within Designated Port Areas (DPA) established by 301 CMR 25.00. New nonwater-dependent use projects are not permitted within DPAs except on a limited basis and without significant

detriment to the capacity of the DPA to accommodate water-dependent industrial uses in the future [310 CMR 9.32(b)]. More information regarding DPAs is provided in the Coastal Zone Management section of this chapter.

4.18.2.9 Chapter 91 Licensing Requirements

Chapter 91, Section 12A authorizes DEP to license and prescribe the terms for the construction or extension of a dam, road, bridge or other structure, or the filling of land, the driving of piles, or the making of excavations, in, over or upon the waters below high water mark of any river or stream within the commonwealth with respect to which expenditures from federal, state or municipal funds have been made for stream clearance, channel improvement or any form of flood control or prevention work, and the provisions of this chapter shall apply to all such licenses."

Massachusetts General Law Chapter 91, Section 18B as established by the Statute 2007, Chapter 168, Section 8 reaffirms this exception from licensing for filled tidelands and requires the Secretary for Energy and Environmental Affairs to issue a Public Benefit Determination for projects in landlocked tidelands within 30 days of the issuance of a final MEPA certificate pursuant to 301 CMR 13.00.

The Waterways Regulations do not require a new license or license amendment for the continued use, maintenance or minor modifications to existing, authorized fill or structures within jurisdictional areas, provided that the proposed work does not include a substantial enlargement of the existing structures or fill and the structures have been in existence since January 1, 1984.

The jurisdictional resources are further described below. New nonwater-dependent use projects are permitted on a limited basis within Designated Port Areas (DPA) if, among other instances, the project constitutes a supporting DPA use as defined at 310 CMR 9.02 as pursuant to the waterways regulations at 310 CMR 9.32(1) (b) (4). Furthermore, as confirmed by MassDEP in their comment letter on the Draft EIS/EIR, "replacement, reconstruction or other modification" to existing railroad beds is allowed, even in a Designated Port Area, provided there is limited net encroachment per 310 CMR 9.31(2)(b) and (c). A detailed description of DPAs is provided later in this chapter.

In the case of landlocked tidelands, no license is required under 310 CMR 9.00, but the Secretary for Energy and Environmental Affairs is required to issue a Public Benefits Determination under 301 CMR 13.00.

The Waterways Regulations require a license for all construction activities, placement of fill and changes in use within present and former tidelands and the navigable portions of non-tidal rivers and streams when such streams have been improved through the expenditure of public funds for stream clearance, channel improvement or flood control upstream or downstream of the proposed work. The DEP, following review of a completed application and plans and a public comment period, issues licenses for proposed construction, placement of fill or changes in use. The proposed project is regulated under Chapter 91 as an infrastructure crossing facility. The regulations at 310 CMR 9.12 require the Secretary of Energy and Environmental Affairs to make a determination of water dependency for the project. Such a finding of water dependency is anticipated for the bridges based on geography alone.

Any project element requiring a new license must meet the applicable basic requirements established by 310 CMR 9.32 through 9.54. Table 4.18-1 lists the basic licensing requirements.

Table 4.18-1 Compliance with Basic Requirements Listed in 310 CMR 9.31(1) for Non-Tidal Rivers and Streams

Requirement in 310 CMR 9.31(1)	Referenced Regulation	Requirement Description	Standard	Applicability / Compliance
(a)	310 CMR 9.32	Categorical restrictions on fill and structures	No new fill is permitted in flowed tidelands for non-water dependent use projects.	All existing and proposed crossings are water dependent infrastructure crossing facilities pursuant to 310 CMR 9.02 and 310 CMR 9.12(2)(d).)
(b)	310 CMR 9.33	Environmental protection standards	Projects must comply with all applicable state environmental protection requirements.	The project would obtain all required state and federal permits and approvals.
			Projects must comply with applicable local zoning.	MassDOT is not subject to local zoning.
(c)	310 CMR 9.34	Conformance with municipal zoning and harbor plan	Projects must comply with applicable Municipal Harbor Plans (MHP)	The project complies with the plans and recommendations of the approved New Bedford/Fairhaven MHP as described in Section 4.18.6.5. The project is consistent with the Fall River Harbor and Downtown Economic Development Plan as described in Section 4.18.6.5.
(d)	310 CMR 9.35(2)	Standards to preserve water-related public rights: Public Rights Applicable to All Waterways	This standard prohibits projects from significantly interfering with: Public rights of navigation which exist in all waterways; Free passage over and through the water; and Access to town landings.	Existing culverts crossing non-tidal rivers and streams provide limited navigation. The existing bridges are generally licensed structures and provide passage for small vessel navigation. Proposed culvert and bridge improvements would maintain or enhance existing navigability at jurisdictional crossings. Table 4.18-2 lists individual non-tidal river and stream crossings and describes the potential effect on public rights to navigation and free passage over and through the water.

Requirement in 310 CMR 9.31(1)	Referenced Regulation	Requirement Description	Standard	Applicability / Compliance
(d)	310 CMR 9.35(3)	Standards to preserve water-related public rights: Public Rights Applicable to Tidelands and Great Ponds	Projects "shall not significantly interfere with public rights of fishing and fowling which exist in tidelands and Great Ponds…" Projects shall not significantly interfere with on-foot passage and in the case of non-water dependent use projects shall include accommodations for public access across the site.	The project does not include any work within existing flowed tidelands or Great Ponds and therefore would not interfere with such public rights.
(d)	310 CMR 9.35(4)	Compensation for Interference with Public Rights in Commonwealth Tidelands and Great Ponds	Any water dependent use projects which include fill or structures for private use of Commonwealth tidelands shall provide compensation to the public for interfering with its broad rights to use such lands for any lawful purpose.	The project is a public infrastructure project as defined at 310 CMR 9.02 and therefore does not include any fill or structures for private use of Commonwealth Tidelands of Great Ponds.
(d)	310 CMR 9.35(5)	Management of Areas Accessible to the Public	Any project which includes tidelands or Great Ponds accessible to the public shall provide for long-term management of such areas which achieves effective public use and enjoyment while minimizing potential conflicts with other legitimate uses.	The project does not include any tidelands or Great Ponds accessible to the public.
(e)	310 CMR 9.36(1)	Standards to protect water-dependent uses	The Project shall preserve the availability and suitability of tidelands, Great Ponds and other waterways that are in use for water-dependent purposes, or which are reserved primarily as locations for maritime industry or other specific types of water-dependent use.	See 310 CMR 9.36(2) through (5) below

Requirement in 310 CMR 9.31(1)	Referenced Regulation	Requirement Description	Standard	Applicability / Compliance
(e)	310 CMR 9.36(2)		The project shall not significantly interfere with littoral or riparian property owners' rights to approach their property from a waterway and to approach the waterway from said property.	The project does not include any new non-tidal river and stream crossings and would therefore not significantly interfere with any littoral or riparian property owners' rights of access. Existing crossings would be maintained or upgraded to support passenger rail traffic. Where feasible, upgrades will widen culverts to improve wildlife passage resulting in a net benefit to navigation.
(e)	310 CMR 9.36(3)		The project shall not significantly disrupt any water-dependent use in operation, as of the date of license application, at an off-site location proximate to the vicinity of the project site.	The project would enhance the capacity for the existing water-dependent infrastructure crossing facilities to support public transportation and this public service project.
(e)	310 CMR 9.36(4)		The project shall not displace any water-dependent use that occurred on the site within the last five (5) years.	The existing railroad crossings are all located on land owned and/or operated as a railroad for many years. The project would restore, maintain or enhance these existing water-dependent infrastructure crossing facilities only water dependent use.

A determination of water dependency is an important part of demonstrating the project's compliance with Chapter 91 because water-dependent use projects are presumed to meet the proper public purpose requirement and may allow DEP to issue individual licenses without a public hearing, if appropriate, expediting the approval process in these instances.

Many of the existing bridges and track over non-tidal rivers and streams lack existing licenses for one of three reasons:

- The waterbody is not subject to Chapter 91 and therefore no license is required;
- The bridge and associated fill and structures were authorized by act of the Massachusetts General Court in chartering the original railroad;
- They were built prior to the promulgation of 310 CMR 9.00 and did not require a license.

The regulations at 310 CMR 9.22 provide a regulatory mechanism to authorize several categories of maintenance, repair and minor modification to existing authorized structures since January 1, 1984. These are:

- **Maintenance and Repair**–defined by 310 CMR 9.22(1) as including but not limited to: replacement of railroad track, stabilization of road or rail beds, reconstruction of culverts and catch basins, and other maintenance or repair of existing public transportation facilities and associated drainage systems, as necessary to preserve or restore the serviceability of such facilities for the original use, provided that maintenance and repair shall not include substantial enlargement of such facilities, such as roadway widening, adding shoulders, or upgrading intersections.

This is interpreted to mean that repair, replacement and maintenance activities may be permitted to restore the serviceability of the tracks, bridges, culverts, etc. provided the work does not include addition of new tracks within the jurisdictional area not contemplated by the original license.

- **Minor Project Modification**–defined by 310 CMR 9.22(3) to include: Structural alterations which are confined to the existing footprint of fill and structures being altered and which represent an insignificant deviation from the original license specifications in terms of size, configuration, materials or other relevant design or fabrication parameters.

In the case of authorized jurisdictional crossings that are determined by DEP to be jurisdictional, minor modifications may typically be obtained for work that a) reduces or maintains the footprint of existing fill or structures; and b) maintains or increases the space available for navigation.

4.18.2.10 Designated Port Areas

The 1978 MCZMP identified twelve Designated Port Areas (DPA) within existing developed harbors in Massachusetts coastal communities. The stated purpose for identifying these areas was to establish specific developed ports that are uniquely suited to host marine-based commercial and industrial activities.

The MCZMP establishes state policies recognizing the unique characteristics of the designated port areas and seeks to protect them from pre-emption by uses that are nonwater-dependent uses through the

federal consistency certification process created by the MCZMP and the standards for nonwater-dependent use projects subject to Chapter 91. The regulations at 301 CMR 25.00 formalize the boundaries of the DPAs and establish specific procedures for periodic review and adjustment. There have been several adjustments to the DPAs since 1978, including the elimination of the Plymouth Cordage DPA and other changes.

The Chapter 91 and Coastal Zone Programs overlap in the case of nonwater-dependent use projects and activities proposed within Designated Port Areas (DPA) established by 301 CMR 25.00. Nonwater-dependent use projects are not permitted within DPAs except on an interim basis without significant detriment to the capacity of the DPA to accommodate water-dependent industrial uses in the future.

The location of Chapter 91 resources, Massachusetts Coastal Zone and Designated Port Areas used in this chapter were provided by MassGIS, Massachusetts DEP and Massachusetts Office of Coastal Zone Management.

4.18.3 Existing Conditions

4.18.3.1 Non-Tidal Rivers and Streams

The jurisdictional review of non-tidal rivers and streams conducted for this FEIS/FEIR considered all culvert and bridge crossings in the project corridor to confirm the presence of a watercourse at each crossing. There are 139 bridges or culverts along the corridor. Culverts that convey drainage under public roads, stormwater in upland areas, and drainage parallel to the tracks were eliminated from further review because they have no potential for navigability. After eliminating these from consideration, 42 crossings of rivers and streams along the right-of-way were considered further for potential Chapter 91 jurisdiction. Table 4.18-2 lists the 42 crossings and provides the rationale for the Chapter 91 jurisdictional determination. Based on this analysis, there are 24 Chapter 91 jurisdictional waterway crossing locations, consisting of 15 bridges and 9 culverts. Figures 4.18.3 through 4.18.19 show the locations of these structures as well as the 25 structures not subject to Chapter 91 licensing.

4.18.3.2 Tidal Waters (Flowed Tidelands)

No work for the South Coast Rail project is proposed within flowed tidelands.

4.18.3.3 Filled Tidelands

The South Coast Rail project includes the reconstruction of track, ballast, bridges and culverts within filled tidelands and the construction of two new stations and two layover facilities within filled tidelands. The location and extent of filled tidelands relative to the South Coast Rail project elements was determined by mapping the historic mean high water mark generated by the Massachusetts Chapter 91 Mapping Project as distributed by MassGIS.

Table 4.18-2 Chapter 91 Jurisdictional Status of Non-Tidal River and Stream Crossings

Milepost	Identification	Town	Name of Waterbody	Stream Order	Description	Potentially Navigable	Rationale
Stoughton Line							
0.87	Undergrade bridge for Forge Pond	Canton	Pequit Brook	3	Pond connector for Forge Pond and Kingsley Pond.	YES	stream order, horizontal and vertical clearance
1.64	Undergrade bridge for Beaver Meadow Brook [Mill Brook]	Canton	Beaver Meadow Brook	3	Perennial stream flowing east to west, connecting Beaver Meadow Brook to ponds.	YES	stream order, horizontal and vertical clearance
4.47	CV-ST 4.47	Stoughton	Unnamed tributary	1	Intermittent stream flowing east to west in developed area.	NO	dense vegetation beyond culvert upstream
6.80	Undergrade bridge for Cowessett Brook [Whitman Brook]	Easton	Whitman Brook	2	Perennial stream flowing west to east in rural area.	YES	stream order, horizontal and vertical clearance
7.23	CV-ST 7.23	Easton	Unnamed tributary to Whitman Brook	2	Intermittent stream flowing west to east in rural area.	NO	narrow shallow channel downstream and downstream precludes navigation
7.42	CV-ST 7.42	Easton	Unnamed tributary to Whitman Brook	1	Intermittent stream flowing west to east in suburban area.	NO	upstream ponding at the culvert provides limited open water, upstream channel small and shallow, downstream flow is diffuse with no defined channel
7.95	Undergrade bridge for Small Creek [Quesset Brook at Shovel Shop Pond] BRIDGE E-06-032	Easton	Quesset Brook	3	Perennial stream flowing west to east in urban area.	NO	while bridge provides adequate clearance and likely > 6 in water depth (annually), adjacent culverts downstream preclude navigation
10.95	CV-ST 10.95	Easton	Black Brook	2	Perennial stream flowing west to east in rural area.	YES	stream order and presence of open water, channel
	Undergrade bridge for Black Brook	Easton	Black Brook	2	Perennial stream flowing west to east in rural area.	YES	stream order and presence of open water, channel

Milepost	Identification	Town	Name of Waterbody	Stream Order	Description	Potentially Navigable	Rationale
11.44	CV-ST 11.44	Easton	Unnamed tributary to Black Brook	1	Wetland equalizer in rural area.	NO	narrow stream across golf course
11.59	CV-ST 11.59	Easton	Unnamed tributary to Black Brook	2	Wetland equalizer in rural area.	YES	navigable channel beyond track ballast and culvert
11.91	CV-ST 11.91	Easton	Stream Not Shown On USGS, StreamStats	1	Intermittent stream flowing east to west in rural area.	NO	dense vegetation and very shallow stream channel preclude navigation
12.68	CV-ST 12.68	Easton	Black Brook	3	Perennial stream flowing west to east in rural area.	Potentially navigable, very shallow.	Stream order, wide channel
16.00	CV-ST 16.00	Raynham	Unnamed tributary to Pine Swamp Brook	2	Wetland equalizer in rural area.	YES	stream order and 4-foot wide channel
16.73	CV-ST 16.73	Raynham	Unnamed	1	Small, shallow perennial stream flowing east to west in rural area.	NO	shallow wetland equalizer
17.37	CV-ST 17.37	Raynham	Pine Swamp Brook No. 1	1	Perennial stream flowing west to east in rural area.	YES	defined stream channel/ present only within Pine Swamp.
17.96	CV-ST 17.96	Raynham	Pine Swamp Brook No. 2	1	Perennial stream flowing west to east in rural area.	YES	defined stream channel/ present only within Pine Swamp.
19.50	Undergrade bridge for Taunton River BRIDGE T-01-071	Taunton	Taunton River	5	Perennial stream flowing east to west in urban area.	YES	stream order, horizontal and vertical clearance
19.70	Undergrade bridge for Taunton River BRIDGE T-01-072	Taunton	Taunton River	5	Perennial stream flowing west to east in urban area.	YES	stream order, horizontal and vertical clearance
19.80	Undergrade bridge for Taunton River BRIDGE T-01-073	Taunton	Taunton River	5	Perennial stream flowing west to east in urban area.	YES	stream order, horizontal and vertical clearance
20.00	Undergrade bridge for Mill River BRIDGE T-01-074	Taunton	Mill River	4	Perennial stream flowing west to east in urban area.	YES	stream order, horizontal and vertical clearance

Milepost	Identification	Town	Name of Waterbody	Stream Order	Description	Potentially Navigable	Rationale
New Bedford Main Line							
11.80	Undergrade bridge for Taunton River	Taunton	Taunton River	5	Perennial stream flowing east to west in urban area.	YES	stream order, horizontal and vertical clearance
TBD	No designation	Taunton	Unnamed tributary to the Taunton River	1	Wetland equalizer in suburban/rural area.	NO	no defined channel upstream or downstream
14.52	CV-NB 14.52	Taunton/ Berkley	Unnamed tributary to Cotley River	1	Perennial stream flowing west to east in a suburban area.	YES	open channel downstream
15.17	Undergrade bridge for Cotley River BRIDGE B-08-004	Berkley	Cotley River	2	Perennial stream flowing west to east in rural area.	YES	stream order, horizontal and vertical clearance
15.70	Undergrade bridge for Cotley River BRIDGE B-08-005	Berkley	Cotley River	2	Perennial stream flowing east to west in rural area.	YES	stream order, horizontal and vertical clearance
17.33	CV-NB 17.33	Berkley	Unnamed tributary to Cedar Swamp River	1	Perennial stream flowing east to west in rural area.	NO	stream order, horizontal and vertical clearance
17.99	CV-NB 17.89	Lakeville	Unnamed tributary to Cedar Swamp River	2	Perennial stream flowing east to west in rural area.	YES	stream order, horizontal and vertical clearance
18.60	Undergrade bridge for Cedar Swamp (Assonet River) No. 1 BRIDGE L-01-018	Lakeville	Cedar Swamp River (Assonet River) No. 1	3	Perennial stream flowing east to west in rural area.	YES	stream order, horizontal and vertical clearance
21.65	Undergrade bridge for Fall Brook BRIDGE F-09-028	Freetown	Fall Brook	4	Perennial stream flowing west to east in rural area.	YES	stream order, horizontal and vertical clearance
20.89	CV-NB 20.89	Lakeville	Unnamed tributary to Fall Brook	1	Wetland equalizer in rural area.	NO	no defined channel
26.96	CV-NB 26.96	New Bedford	Unnamed	3	Wetland equalizer in urban/rural area.	YES	Stream stats (USGS does not show crossing.)

Milepost	Identification	Town	Name of Waterbody	Stream Order	Description	Potentially Navigable	Rationale
Fall River Secondary							
0.92	Undergrade bridge for Cedar Swamp (Assonet River) No. 2 BRIDGE L-*TBD*	Lakeville	Cedar Swamp River (Assonet River) No. 2	3	Perennial stream flowing east to west in rural area.	YES	stream order, horizontal and vertical clearance
1.47	CV-FR 1.47	Freetown	Unnamed tributary to the Cedar Swamp River	1	Perennial stream flowing east to west in rural area.	NO	no defined stream channel, densely vegetated
2.13	CV-FR 2.13	Freetown	Unnamed tributary to Forge Pond/Assonet River	1	Intermittent stream flowing east to west in rural area.	NO	dense vegetation, no defined channel
TBD	Number not assigned.	Freetown	Unnamed tributary to Fall Brook	2	Intermittent stream flowing west to east in rural area.	YES	stream order, size of existing culvert,
4.50	CV-FR 4.50	Freetown	Terry Brook Pond	0	Pond connector for bisected Terry Brook Pond in rural area.	Navigable but not jurisdictional	This structure connects two halves of non-jurisdictional Terry Pond.
	Undergrade bridge for Massachusetts Route 24 and Rattlesnake Brook	Freetown	Rattlesnake Brook	2		YES	This is a railroad bridge over Route 24 - Route 24 bridge crosses Rattlesnake Brook.
6.01	CV-FR 6.01	Freetown	Unnamed tributary to the Taunton River	2	Intermittent stream in rural area.	NO	pond outflow, poorly defined small channel
6.86	CV-FR 6.86	Fall River	Unnamed tributary to the Taunton River	1	Intermittent stream flowing east to west in rural area.	NO	poorly defined channel
52.38	Undergrade bridge for channel near Battleship Cove/ stone railroad tie bridge	Fall River	Stream Not Shown On USGS, StreamStats	1	Perennial stream flowing east to west in urban area.	NO	outlet for Watuppa Reservoir, no channel upstream
11.65	CV-FR 11.65	Fall River	Quequechan River	2	Perennial stream flowing east to west in urban area.	NO	collapsed culvert with no upstream channel

This mapping project was a collaborative effort between DEP and the Massachusetts Office of Coastal Zone Management intended to catalog and geo-reference historic maps, charts and surveys of the Massachusetts coast to identify the earliest known shoreline that existed prior to human alteration by placement of fill, damming or other means. The resulting historic high water mark is a combination of data identifying the most likely historic shoreline for the Commonwealth. While this data does not carry statutory or regulatory authority per se, in practice, DEP presumes the historic high water mark and limits of jurisdiction generated by this project represent the oldest most credible shoreline that existed prior to human alteration.

The location of filled tidelands, Massachusetts Coastal Zone and Designated Port Areas used in this chapter were provided by MassGIS, Massachusetts DEP and Massachusetts Office of Coastal Zone Management. The location of the presumed historic high water mark and South Coast Rail project elements in filled tidelands are shown on Figures 4.18.9 through 4.18.19.

4.18.3.4 Landlocked Tidelands, and Coastal Zone and Designated Port Areas Boundaries

Figures 4.18.11 through Figure 4.18.18 depict the Coastal Zone boundaries and the DPAs present within the study area. The limits of the DPAs listed in this chapter and the Coastal Zone boundaries were determined using preliminary GIS data provided by the Massachusetts Coastal Zone Management Program. Landlocked Tidelands are identified in Figures 4.18-11, 4.18-12 and 4.18-18.

4.18.4 Impacts by Element

This chapter provides a description of each project element and outlines the known and potential jurisdictional areas subject to Massachusetts Chapter 91 and the MCZP. The two Build Alternative alignments are shown in Figure 4.18-1 (Stoughton Alternative) and Figure 4.18-2 (Whittenton Alternative). (It should be noted that Section 9 of the Rivers and Harbors Appropriation Act of 1899 (33 U.S.C. 403; Chapter 425, March 3, 1899; 30 Stat. 1151) prohibits the construction of any bridge, dam, dike or causeway over or in navigable waterways of the United States without Congressional approval (see Chapter 8, *Regulatory Compliance*). Administration of Section 9 has been delegated to the Coast Guard. Structures authorized by State legislatures may be built if the affected navigable waters are totally within one State, provided that the plan is approved by the Chief of Engineers and the Secretary of Army (33 U.S.C. 401). Section 10 of the Act prohibits the unauthorized obstruction or alteration of any navigable water of the United States. This section provides that the construction of any structure in or over any navigable water of the United States, or the accomplishment of any other work affecting the course, location, condition, or physical capacity of such waters is unlawful unless the work has been approved by the Chief of Engineers.)

The Stoughton and Whittenton Alternatives each include an electric and a diesel variant (See Chapter 2). Both alternatives would involve development along the same alignment and include the same stations and layover sites. In addition to the development of the alignment, stations and layover facilities, the electric alternatives would involve development of traction power substations, and therefore would potentially affect more Coastal Zone and Chapter 91 resources than would the diesel alternatives. As such, this chapter is focused on evaluation of the Stoughton and Whittenton Electric Alternatives as the worst-case potential impact.

4.18.4.1 No-Build (Enhanced Bus) Alternative

The No-Build Alternative would consist of enhancing current bus service along existing roads and highways. Three existing Park and Ride facilities would be modified as part of the No-Build Alternative:

- West Bridgewater Park and Ride, located near the southwest corner of the intersection of Routes 106 and 24;
- Mount Pleasant Street Park and Ride, located on the northwest corner of the intersection of King's Highway and Route 140 in New Bedford;
- Galleria Park and Ride, located adjacent to the Silver City Galleria shopping mall in Taunton.

None of the elements proposed under the No-Build Alternative are located within Chapter 91 or Coastal Zone jurisdiction. Therefore, no impacts would occur.

4.18.4.2 Southern Triangle Study Area (Common to all Build Alternatives)

The Build Alternatives use existing segments of the railroad right-of-way along the New Bedford Main Line and Fall River Secondary (together referred to as the Southern Triangle). This section describes the portions of these rail lines that are located within the coastal zone, and the portions subject to regulation under Chapter 91. The northern elements of the Build Alternatives within the coastal zone are described in subsequent sections, as are the proposed station sites and layover facilities. These resources are relative to the tidal portions of the Taunton and Acushnet Rivers, generally limited to the adjacent waters of New Bedford Inner Harbor and Mount Hope Bay.

Fall River Secondary

The existing Fall River Secondary freight track extends from Myricks Junction in Berkley to Battleship Cove in Fall River (Figure 4.18-1 and 4.18-2). The corridor crosses several areas of filled tidelands in Fall River, several non-tidal rivers and streams potentially subject to Chapter 91 and portions of the Massachusetts Coastal Zone in Freetown and Fall River.

Work includes reconstructing existing track, addition of a second track, ballast and culvert and bridge replacement. The electric alternative includes constructing an overhead catenary system to provide motive power that would be installed within the railroad right-of-way. Stations and Layovers for the Fall River Secondary are discussed in the Stations and Layover Facilities sections.

Chapter 91 Areas

The Fall River Secondary crosses approximately 4,100 feet of filled tidelands in seven locations (see Figures 4.18-14 through 4.18-19 and Table 4.18-3). Research performed in consultation with the DEP Waterways Program staff was unable to locate licenses for several locations where the track crosses filled tidelands. Because these tidelands were filled and the track was originally constructed in the 1850s, remaining in continuous use since that time, their continued use and permitted maintenance or minor modifications may be authorized under 310 CMR 9.05 provided no unauthorized structural alteration has occurred since January 1, 1984.

The Build Alternatives do not include any work within Fall River Harbor or the tidal portions of the Taunton River. The Fall River Secondary includes three non-tidal river crossings potentially subject to Chapter 91 Jurisdiction. This crossing (see Figure 4.18-14) is consistent with Chapter 91 jurisdiction because the river is navigable during certain times of year by a small boat such as a canoe or kayak. Table 4.18-4 lists the crossing and provides a summary of the jurisdictional status and rationale for the determination.

Table 4.18-3 Project Elements in Filled Tidelands: Fall River Secondary

Location ID[1]	Length (ft)	Municipality	Authorization
FR 1	840	Fall River	License not available; continued use, maintenance and minor modifications may be permitted pursuant to 310 CMR 9.05 and 310 CMR 9.22.
FR 2	1270	Fall River	
FR 3	50	Fall River	
FR 4	370	Fall River	
FR 5	160	Fall River	
FR 6	900	Fall River	
FR 7	530	Fall River	

1 See Figures 4.18-15 and 4.18-19.

Table 4.18-4 Non-Tidal River and Stream Crossings–Fall River Secondary

Waterbody	Municipality	Potentially Jurisdictional	Rationale	Presently Licensed	Anticipated Ch. 91 approval
Assonet River (Cedar Swamp River)	Lakeville	Yes	Navigable river/stream	No	New License

Coastal Zone Areas

Approximately 6.6 miles of the Fall River Secondary (in three segments) is located within the Coastal Zone (see Figures 4.18-14 through 4.18-19). A total of 0.5 mile of the Fall River Secondary near the southern end of the project area is located within the Mt. Hope Bay Designated Port Area, consisting of approximately 2,100 feet near Weaver's Cove (Figure 4.18-16) and 500 feet near Battleship Cove (Figure 4.18-18). The continued use and anticipated replacement/upgrade or enhancement of track within the Coastal Zone and DPAs is consistent with the regulatory policies of the Massachusetts Coastal Zone Management Plan. These improvements would maintain or enhance the capacity of the affected coastal zone and DPA to support marine based industry. A more detailed review of the project's compliance with the regulatory policies of the MCZMP is provided in section 4.18.6.

New Bedford Main Line

The existing New Bedford Main Line freight track extends from Weir Junction in Taunton to the State Pier in New Bedford (see Figures 4.18-1 and 4.18-2. The corridor crosses several areas of filled tidelands south of Wamsutta Street in New Bedford and eight Chapter 91 jurisdictional non-tidal rivers and streams.

Work includes reconstructing existing track, addition of a second track, ballast and culvert and bridge replacement. Electric alternatives include an overhead catenary system to provide motive power that would be installed within the railroad right-of-way. Stations and Layovers for the New Bedford Main Line are discussed in later sections.

Chapter 91 Areas

The New Bedford Main Line crosses approximately 4,300 feet of filled tidelands in four locations, all located south of Wamsutta Street in New Bedford (see Figure 4.18-13 and Table 4.18-5). These jurisdictional areas include existing track and a portion of proposed Whale's Tooth Station.

The construction of the New Bedford Main Line south of Wamsutta Street in New Bedford was originally authorized by Waterways License 166, issued on June 18, 1873 subsequent to Chapter 20 of the Acts of 1873. Review of DEP licensing records identified this license as authorizing the existing track from the Acushnet Street crossing to the terminus adjacent to Leonard's Wharf.

Table 4.18-5 Project Elements in Filled Tidelands–New Bedford Main Line

Location ID[1]	Length (ft)	Municipality	Authorization
NB 1	790	New Bedford	License 166, June 18, 1873
NB 2	1,740	New Bedford	License 166, June 18, 1873
NB 3	1,370	New Bedford	License 166, June 18, 1873
NB 4	400	New Bedford	License 166, June 18, 1873

1 See Figure 4.18-13.

The New Bedford Main Line also crosses eight non-tidal rivers and streams that are likely subject to Chapter 91 jurisdiction. These eight rivers are listed in Table 4.18-6. Of these eight crossings, a license has been identified for only the Taunton River, although it is possible that the existing track was authorized by the Massachusetts legislature as part of any of several approvals for the original construction of the track now collectively called the New Bedford Main Line.

The Waterways Regulations do not require a new license or license amendment for the continued use, maintenance or minor modifications to existing authorized fill or structures within jurisdictional areas, provided that the proposed work does not include a substantial enlargement of the existing structures or fill and the structures have been in existence since January 1, 1984.

The following sections describe the proposed work at the eight crossing and provide a summary of the potential approvals necessary under Chapter 91 and the Coastal Zone Management Program.

Taunton River—The Taunton River is a major regional river, is navigable at this crossing and is presumed to have had public funds expended for stream clearance, channel improvement and flood control. Accordingly, the river is subject to Chapter 91 jurisdiction.

The proposed work at this Taunton River Crossing (Figure 4.18-7, Tile 2) includes replacing the existing wooden pile supported trestle conveying a single track to single span concrete structure supporting two tracks. The work would remove the existing wooden piles and increase the width of the structure within areas of Chapter 91 jurisdiction. The proposed work would improve navigation by removing the existing piles supporting the four spans, but is also anticipated to reduce the space available for navigation by reducing the clearance by approximately 7.5 inches. These changes combined would likely require a new waterways license under Chapter 91.

Unnamed Tributary–Cotley River—The culvert designated CV-NB 14.52 (see Figure 4.18-8) conveys an unnamed tributary to the Cotley River beneath the right-of-way. This crossing would be replaced with a larger structure and would require a new license because (1) the replacement structure would exceed the footprint of the existing structure to accommodate a second set of tracks and (2) the right-of-way at this location does not constitute an existing public service project stipulated by 310 CMR 10.05(3)(c).

Proposed Bridge and Culvert Replacement Subject to Chapter 91

Table 4.18-6 Non-Tidal River and Stream Crossings–New Bedford Main Line

Milepost	Waterbody	Presently Licensed	Proposed Alteration	Number of Tracks		Anticipated Chapter 91 Application
				Existing	Future	
New Bedford Main Line						
11.80	Taunton River (Bridge T-01-075)	Yes	Bridge replacement: existing piles would be removed and one new cast-in-place concrete pier would be constructed in the center span. New abutments would be constructed behind existing abutments which would then be removed.	1	2	New License
14.52	Unnamed tributary to Cotley River (CV-NB 14.52)	No	Replacement/expansion of existing culvert.	1	2	New License
15.17	Cotley River (Bridge B-08-004)	No	Bridge replacement: New abutments would be constructed behind the existing abutments, which would then be removed.	1	2	New License
15.70	Cotley River (Bridge B-08-005)	No	Bridge replacement: New abutments would be constructed behind the existing abutments, which would then be removed.	1	2	New License
17.89	Unnamed tributary to Assonet River [Cedar Swamp River] (CV-NB 17.89)	No	Replacement of existing culvert, not presently designed.	1	1	Maintenance
18.60	Assonet River (Cedar Swamp)No. 1 (Bridge L-01-018)	No	Bridge replacement: existing piles to be replaced by one mid-stream concrete pier. New abutments to be constructed outside existing structure which would then be removed.	1	1	New License
21.65	Fall Brook (Bridge F-09-028)	No	Bridge replacement: new abutments would be constructed behind existing abutments, which would then be removed.	1	1	Minor modification
26.96	Unnamed (CV-NB 26.96)	No	Replacement of existing culvert, not presently designed.	1	1	Maintenance

Cotley River (1)—This Cotley River crossing (Figure 4.18-8, Tile 1) is subject to Chapter 91 jurisdiction because it is navigable during at least part of the year. The proposed work would require a new Chapter 91 license because the project includes widening the crossing from one track to two. This substantial enlargement does not typically meet the regulatory criteria for maintenance or minor modifications permitted under 310 CMR 9.22.

Cotley River (2)—This Cotley River crossing (Figure 4.18-8, Tile 2) is subject to Chapter 91 jurisdiction because it is navigable during at least part of the year. The proposed work would require a new Chapter 91 license because the project includes widening the crossing from one track to two. This substantial enlargement does not typically meet the regulatory criteria for maintenance or minor modifications permitted under 310 CMR 9.22.

Cedar Swamp River—The Cedar Swamp River crossing (Figure 4.18-9, Tile 1) is subject to Chapter 91 jurisdiction because it is navigable during at least part of the year. The proposed work would require a new Chapter 91 license because the project includes widening the crossing from one track to two and the anticipated reduction of space available for navigation by reducing of clearance beneath the bridge by an estimated 6.75 inches. This substantial enlargement does not typically meet the regulatory criteria for maintenance or minor modifications permitted under 310 CMR 9.22 and a new license would be required.

Freetown Brook—Freetown Brook, also known as Fall Brook (Figure 4.18-9, Tile 2), is jurisdictional because its approximately 50-foot cross-section would appear to make it navigable at least part of the year. The proposed work would require a new license because the project includes modifications at this location.

Unnamed Tributary to Assonet River—The culvert designated CV-NB 17.89 (see Figure 4.18-8) conveys non-tidal rivers and streams presumed to be subject to Chapter 91 jurisdiction. This culvert is planned to be replaced by similarly sized structures, presumed to meet the regulatory criteria for maintenance authorized by 310 CMR 9.22(1).

Unnamed Watercourse in Acushnet Cedar Swamp—The culvert designated CV-NB 26.96 (see Figure 4.18-10) conveys non-tidal rivers and streams presumed to be subject to Chapter 91 jurisdiction. This culvert is planned to be replaced by similarly sized structures, presumed to meet the regulatory criteria for maintenance authorized by 310 CMR 9.22(1).

Coastal Zone Areas

Approximately 1,600 feet of the project is within the Coastal Zone associated with the Acushnet River and New Bedford Harbor. This jurisdictional area is all south of Wamsutta Street where the track crosses over the John F. Kennedy Highway (Route 18) and Acushnet Avenue.

Approximately 500 feet of the project near the southern end of the New Bedford Main Line is located within the New Bedford/Fairhaven DPA. The DPA boundary is approximately 70 feet east of the proposed Whale's Tooth Station. The location and extent of this DPA is shown on Figures 4.18-11 and 4.18-12. Work proposed within the DPA is limited to reconstruct the "tail track" south of the station, which would allow trains to access Whale's Tooth Station. These activities are consistent with the regulatory policies of the Massachusetts Coastal Zone Management Plan because they maintain or support the future use of this rail corridor as an accessory use to existing and potential water-dependent marine industrial uses within the DPA. A more detailed review of the project's compliance with the

Massachusetts Coastal Zone Management Plan is presented in Section 4.18.6. Work within the Massachusetts Coastal Zone, including this DPA, will require a Federal Consistency Certification by the Massachusetts Coastal Zone Management Program.

Northeast Corridor

The existing Northeast Corridor would be used for the Build Alternatives from Boston's South Station to Canton Junction. The existing double-track line supports both electric- and diesel-powered regional freight and passenger service. The Build Alternatives would use existing infrastructure between South Station and Canton Junction, and as such, would not involve new construction.

Stoughton Electric Alternative

Chapter 91 Areas

The Stoughton Electric Alternative uses existing rail corridors that were previously developed connecting the Northeast Corridor with the New Bedford Main Line. The existing right-of-way extends from Canton Junction in Canton to Weir Junction in Taunton (see Figures 4.18-1 and 4.18-2). The track from Canton Junction to Stoughton Station is presently an active passenger rail corridor. South of Stoughton Station, the railroad right-of-way remains largely intact; however, most of the track and ballast have been removed and the condition of the culverts and bridges varies. Work proposed within this corridor includes new track, ballast, culvert and bridge replacement, and in the case of electric alternative, an electric centenary system within the right-of-way to provide electric motive power.

The South Coast Rail project elements subject to licensing and therefore required to comply with 310 CMR 9.37(2) include certain non-tidal river and stream crossings. The majority of the non-tidal river and stream crossings is not adjacent to the shoreline and would not be expected to be subject to inundation due to a sea level rise of up to the 16 inches predicted by 2050. There are 13 crossings of non-tidal rivers that are subject to Chapter 91. See Table 4.18-7 for a listing of these crossings. The following section describes the work proposed at Forge Pond, Taunton River and Mill River crossings and summarizes the Chapter 91 jurisdiction.

Kingsley Pond/Forge Pond—The existing ballasted stone arch bridge spanning this hydraulic connection between Kingsley and Forge Ponds (Figure 4.18-3) would be replaced by a single span concrete structure supporting two tracks. While the alternatives using the Stoughton Line would require a second set of tracks, the proposed work is not anticipated to substantially expand the footprint of the structure. The proposed design is expected to be completed without the placement of any new fill within the waterway and without substantially reducing the space available for navigation. If these criteria can be met within the footprint of the existing structure, the work could be approved as maintenance or a minor project modification under the regulations at 310 CMR 9.22.

Beaver Meadow Brook—The Beaver Meadow Brook (Figure 4.18-3) crossing was designed to accommodate two tracks but presently contains only a single track supported by an historic arch bridge. The project includes the construction of a new span over the waterway supported by the existing abutments. A new license would be required because the work would constitute a substantial structural alteration defined at 310 CMR 9.02. While the crossing has not yet been designed, the additional span over the Beaver Meadow Brook would approximately double the footprint of structure over this waterbody.

Table 4.18-7 Proposed Bridge and Culvert Replacement Subject to Chapter 91–Stoughton Line

Milepost	Waterbody	Presently Licensed	Proposed Alteration	Number of Tracks		Anticipated Chapter 91 Application
				Existing	Future	
Stoughton Line						
0.87	Pequit Brook [Forge Pond]	No	No change to historic arch structure. Addition of second track, expansion of footprint over waterway, no change in navigability.	1	2	New License
1.64	Beaver Meadow Brook	No	No change to abutment location. New structure proposed above or adjacent to existing historic arch.	1	2	New License
6.80	Cowessett Brook [Whitman Brook]	No	New abutments would be constructed behind existing abutments, which would then be removed.	1	1	Maintenance
10.95	Black Brook (CV-ST 10.95)	No	Replacement of existing culvert, not presently designed.	1	1	Maintenance
11.59	Unnamed tributary to Black Brook (CV-ST 11.59)	No	Replacement of existing culvert, not presently designed.	1	1	Maintenance
12.68	Black Brook (CV-ST 12.68)	No	New bridge would be constructed to replace washed out culvert.	1	1	New License (if deemed navigable)
16.00	Unnamed tributary to Pine Swamp Brook (CV-ST 16.00)	No	Replacement of existing culvert, not presently designed.	1	1	Maintenance
17.37	Pine Swamp Brook #1 (CV-ST 17.37)	No	Replacement of existing culvert, not presently designed.	1	1	Maintenance
17.96	Pine Swamp Brook #1 (CV-ST 17.96)	No	Replacement of existing culvert, not presently designed.			
19.50	Taunton River (Bridge T-01-071)	Lic. 3118 / Oct. 19, 1906	Reconstruction of existing crossing outside existing structure, removal of existing abutments.	1	1	New License or License Amendment
19.70	Taunton River (Bridge T-01-072)	Lic. 3118 / Oct. 19, 1906	Existing piles to be replaced by one mid-stream concrete pier. New abutments to be constructed outside existing structure which would then be removed.	1	1	New License or License Amendment
19.80	Taunton River (Bridge T-01-073)	Lic. 2909 / Nov. 1, 1904	Existing piles to be replaced by one mid-stream concrete pier. New abutments to be constructed outside existing structure which would then be removed.	1	1	New License or License Amendment

Milepost	Waterbody	Presently Licensed	Proposed Alteration	Number of Tracks Existing	Number of Tracks Future	Anticipated Chapter 91 Application
20.00	Mill River (Bridge T-01-074)	Lic. 3118 / Oct. 19, 1906	Reconstruction of existing crossing outside existing structure, removal of existing abutments.	1	1	New License or License Amendment

Taunton River—The Taunton River (Figure 4.18-7) is subject to Chapter 91 because it is navigable and presumably public funds have been expended for flood control either upstream or downstream of the existing rail crossings. The Stoughton line crosses the Taunton River at three locations between Dean Street and Weir Junction. Each of these existing crossings contains a single track on pile-supported steel and timber structures. These bridges include a recently installed private water supply pipe maintained by Aquaria Water, Inc. to supply water to a desalination plant.

The proposed replacement bridges would each support a single track on two-span bridges within the approximate footprint of existing structures and would include a replacement water supply line for the Aquaria desalination plant. The proposed construction at each of these crossings is anticipated to result in a net improvement to navigation because the work would include demolishing and removing timber piles supporting the existing structures. The proposed Taunton River bridges would reduce the vertical clearance between the Taunton River and the underside of the structure. The proposed work could be approved, at DEP discretion, as maintenance or a minor project modification provided the final design is determined by DEP to result in a net improvement to navigation. It is anticipated that these three bridges would require a new license or amendment of the existing license.

Mill River—The Mill River (Figure 4.18-7, Tile 1) is jurisdictional because it is navigable by small boat during at least part of the year. Its path through developed areas of Taunton makes it very likely that public funds have been expended for flood control, triggering Chapter 91 jurisdiction. The existing Mill River crossing is a single span open steel and timber bridge conveying a single track. The proposed replacement bridge would upgrade this crossing, but retain a single track. The preliminary design includes removing existing bridge and abutments resulting in an effective widening of approximately 25 feet, a substantial increase in the space available for wildlife movement, and potentially navigation. Preliminary design shows a small decrease in the clearance beneath the bridge. It is anticipated that the new bridge would require a new license or amendment of the existing license.

Additional Bridge and Culvert Replacements—The Stoughton Line improvements would include the replacement of six culverts and a Bridge over the Cowessett Brook. With the possible exception of the culvert designated CV-ST 11.59, these structures are anticipated to be replaced within the footprint of the existing fill and structures without any substantial structural alteration or substantial change in use as defined in the regulations. Accordingly, these improvements are anticipated to be approved by MassDEP as maintenance activities authorized pursuant to 310 CMR 9.22. The culvert at milepost 11.59 was washed out several years ago and would be replaced by a new bridge over Black Brook. If this section of Black Brook is deemed navigable by MassDEP, this bridge would require a new license.

Coastal Zone Areas

The Stoughton Line is entirely within inland communities and does not include any work within filled tidelands, flowed tidelands or the Massachusetts Coastal Zone.

Whittenton Electric Alternative

In addition to the segments it shares with the Stoughton Electric Alternative, the Whittenton Electric Alternative utilizes an abandoned rail corridor known as the Whittenton Branch to connect the Stoughton Line and the Attleboro Secondary north of Weir Junction in order to avoid Pine Swamp. The Whittenton Branch corridor runs from Raynham Junction in Raynham to Whittenton Junction in Taunton. The Whittenton Branch is a previously developed right-of-way that is no longer in rail service.

The track has been removed from the corridor, but much of the ballast and the bridge over the Mill River remain largely intact.

Chapter 91 Areas

Proposed work includes track construction and ballast and bridge replacement over the Mill River in Taunton. The Mill River in this area is a non-tidal river or stream navigable by canoe and kayak for at least part of the year, and therefore subject to Chapter 91 jurisdiction. There is not presently a license for this crossing.

The existing crossing consists of a four-span concrete pile-supported bridge with stone abutments. The preliminary design for the replacement bridge would provide a two-span structure with one concrete pile, which would result in a reduction in surface area covered by the existing bridge piles, and would result in greater river bottom surface area and bank area. The bridge over the Mill River would be reconstructed with fewer in-water piers than the current bridge, which would enhance navigability. The work is presumed to include removing the existing structures within the river and only a nominal change in the clearance beneath the bridge. This work could be approved as maintenance necessary to restore the serviceability of the existing public transportation structure under 310 CMR 9.22(1) because the work does not include adding a second track.

Coastal Zone Areas

The Whittenton Branch and Attleboro Secondary do not include any work within filled tidelands, flowed tidelands, or within the Massachusetts Coastal Zone.

Stations

Four of the proposed station sites are located on filled tidelands or are within the Massachusetts Coastal Zone: Battleship Cove (Figure 4.18-19 and 4.18-20), Fall River Depot (Figure 4.18-19 and 4.18-21), Freetown (Figure 4.18-15 and 4.18-22), and Whale's Tooth (Figure 4.18-13 and 4.18-23). Table 4.18-8 lists each station and identifies the applicable jurisdiction. The figures show each of the stations within the context of the project and within Chapter 91 and CZM jurisdiction.

Table 4.18-8 Project Elements in Filled Tidelands or Coastal Zone–Station Sites

Station Site	Waterbody	Municipality	Jurisdictional
Battleship Cove	Mount Hope Bay	Fall River	Landlocked Tidelands Coastal Zone
Fall River Depot	Mount Hope Bay	Fall River	Coastal Zone (partial)
Freetown	Taunton River	Freetown	Coastal Zone (partial)
Whale's Tooth	New Bedford Harbor	New Bedford	Landlocked Tidelands Coastal Zone

The following sections describe the anticipated station work within jurisdictional areas and corresponding approvals required.

Battleship Cove Station Site

The Battleship Cove station (Figure 4.18-19 and 4.18-20) would be a new train station constructed along the Fall River Secondary that would serve all Build Alternatives. It would be located on Water Street in Fall River, near the southern terminus of the Fall River Secondary. A conceptual diagram of the station is provided in Figure 4.18-20. This approximately 2.2-acre site is a previously developed parcel within the

Ponta Delgada Plaza. The station would be a platform-only station that would operate during peak hours only. It would serve the downtown area of Fall River and the Battleship Cove tourist area. The station would be designed to encourage walk-in and drop-off/pick-up customers. There is no dedicated parking currently planned at this station.

The Battleship Cove station would be located partially on landlocked tidelands because the station site is located greater than 250 feet from the existing mean high water of the Taunton River and the site was separated by interconnected public ways on January 1, 1984. The construction of the Battleship Cove station would therefore not require a new waterways license.

The station would be located entirely within the coastal zone, while only a portion of the station would be located within the Mount Hope Bay Designated Port Area. The proposed station construction would require a Federal Consistency Certification under the Massachusetts Coastal Zone Management Program because it includes work within the Coastal Zone. The proposed Battleship Cove station is anticipated to be consistent with the regulatory policies.

Fall River Depot Station Site

Fall River Depot station would be a new train (Figure 4.18-19 and 4.18-21) station constructed along the Fall River Secondary for all Build Alternatives. It would be located near the intersection of North Davol Street and Pearce Street, approximately 1 mile north of downtown Fall River. A conceptual diagram of the station is provided in Figure 4.18-21. Part of this approximately 8-acre site was previously developed as an historic train station. The new station is envisioned to be a multi-modal transportation center with new mixed-use development and parking facilities. The station would serve walk-in, bike-in, and drive-in customers.

Fall River Depot station would not be located within filled tidelands and would not be subject to Chapter 91. At the Fall River Depot Station site, Davol Street is the first major transportation infrastructure adjacent to the coast. As a result, the first 100 feet of the site's frontage on Davol Street are located within the coastal zone associated with the Taunton River. The majority of the station site is located landward of the coastal zone boundary.

The proposed station construction would require a Federal Consistency Certification under the Coastal Zone Management Program because it includes work within the Massachusetts Coastal Zone. The proposed station construction is anticipated to be consistent with the regulatory policies.

Freetown Station Site

Freetown station would be a new train (Figure 4.18-15) station constructed to serve the Fall River Secondary for all Build Alternatives. It would be located along South Main Street in Freetown, at a site currently occupied by a self-storage business. A conceptual diagram of the station is provided in Figure 4.18-22. The approximately 18-acre site is near the Fall River Executive Park and the River Front Park. The station would serve drive-in customers and customers shuttled between the station and these nearby industrial parks.

Freetown station would not be located within filled tidelands and therefore would not be subject to Chapter 91. At the Freetown station site, South Main Street is the first major transportation infrastructure adjacent to the coast. As a result, the first 100 feet of the site's frontage are located

within the coastal zone associated with the Taunton River (the entrance driveway). The majority of the station site is located landward of the coastal zone boundary.

The proposed driveway station construction would require a Federal Consistency Certification under the Coastal Zone Management Program because it includes work within the Massachusetts Coastal Zone. The proposed station construction is anticipated to be consistent with the regulatory policies.

Whale's Tooth Station Site

Whale's Tooth station would be a new train (Figure 4.18-13) station constructed in New Bedford along the New Bedford Main line and would serve all Build Alternatives. It would be located near the intersection of Acushnet Avenue and Hillman Street, near the southern terminus of the New Bedford Main line. A conceptual diagram of the station is provided in Figure 4.18-23. The City of New Bedford has constructed a parking lot on the approximately 14-acre site in anticipation of the South Coast Rail project. The station would include intermodal connections, potentially linking to ferry services. The station would serve walk-in, bike-in and drive-in customers.

The majority of the Whale's Tooth station would be located on landlocked filled tidelands because the station site was entirely separated from the existing mean high water mark of New Bedford Harbor by interconnected public ways on January 1, 1984, and is at least 250 feet landward of the existing mean high water mark. Accordingly, the station would not require a Waterways license. However, the station would require a Public Benefit Determination (see Section 4.18.5).

The station would be located entirely within the Coastal Zone associated with New Bedford Inner Harbor, but outside the New Bedford/Fairhaven DPA. The proposed station construction would require a Federal Consistency Certification under the Coastal Zone Management Program because it includes work within the Massachusetts Coastal Zone. The proposed station construction is anticipated to be consistent with the regulatory policies.

Layover Facilities

Two layover facilities are planned for the Southern Triangle: one near the southern end of the Fall River Secondary and another near the southern end of the New Bedford Main Line. The two proposed sites, listed below in Table 4.18-9, require evaluation for compliance with Chapter 91 and Coastal Zone management requirements. Coastal zone consistency and impacts to filled tidelands are described below for the Wamsutta, Weaver's Cove East layover sites, as applicable.

Table 4.18-9 Project Elements in Filled Tidelands–Layover Sites

Facility Name	Waterbody	Municipality	Jurisdictional
Wamsutta	New Bedford Harbor	New Bedford	Landlocked Tidelands Coastal Zone
Weaver's Cove East	Taunton River	Fall River	Filled Tidelands Coastal Zone

The following sections describe the location, jurisdiction and proposed work required for these layover facilities.

Fall River –Weaver's Cove East Layover Facility Site

The Weaver's Cove East layover facility (Figure 4.18-16) would be constructed along the Fall River Secondary and would serve all Build Alternatives. It would be located off of Main Street between the

existing Fall River Secondary freight line and the Taunton River, approximately 2.5 miles from the southern terminus of the Fall River Secondary. The Weaver's Cove East Layover Facility is subject to licensing and therefore required to comply with 310 CMR 9.37(2). It would be located approximately 20 feet above the current shoreline and would not be expected to experience inundation even under the highest predicted sea level rise of 6.6 feet by 2100.

Consultation with DEP Waterways' staff indicated that the Department considers that the Weaver's Cove East layover facility to be located within filled tidelands. The jurisdictional boundary is based on the shoreline shown on two historic maps provided by the DEP prepared in 1865 and 1874 (Figure 4.18-24 and 4.18-25). Both of these maps postdate the construction of the railroad. It is likely that the railroad impounded water in the vicinity of the proposed layover facility and this impoundment is represented on these historic maps. As such, the construction of the proposed layover facility would require a new Chapter 91 license. The Waterways Regulations are designed to protect and promote the public's interest in tidelands through the inclusion of provisions to conserve the capacity for water-dependent uses. The use of the site for layover needs is classified by DEP as a nonwater-dependent Infrastructure Facility (310 CMR 9.55). This classification may waive some of the above-referenced provisions, as long as feasible mitigation or compensation measures are provided such as the protection of maritime commerce or recreation and associated public access, reduction of flood and erosion-related hazards on lands subject to the 100-year flood or projected sea level rise, and the attainment of water quality goals.

The layover facility would be located entirely within the coastal zone associated with the Taunton River but outside the Mount Hope Bay DPA. Accordingly, the proposed layover facility would require a Federal Consistency Certification under the MCZMP. The proposed facility is anticipated to be consistent with the regulatory policies of the MCZMP.

New Bedford –Wamsutta Layover Facility Site

The Wamsutta layover facility (Figure 4.18-12) would be constructed along the New Bedford Main Line and would serve all Build Alternatives. It would be located near the intersection of Wamsutta Street and Herman Melville Boulevard, near the southern terminus of the New Bedford Main line. This location is just north of the Whale's Tooth Station site described above. The site is currently an active CSX rail yard used for freight. The existing and proposed rail yard is located on top of a capped hazardous waste facility.

The proposed Wamsutta layover facility would be located in landlocked tidelands and would be exempt from licensing under 310 CMR 9.04(2). The construction of the Wamsutta layover facility would require a Public Benefit Determination under 301 CMR 13.00.

The layover facility would be located entirely within the coastal zone associated with New Bedford Inner Harbor but is not within the new Bedford/Fairhaven DPA. The construction would require a Federal Consistency Certification under the Massachusetts Coastal Zone Management Program. The proposed facility is anticipated to be consistent with the regulatory policies of the MCZMP.

4.18.5 Public Benefit Determination

Portions of the South Coast Rail project are subject to the requirements of Chapter 168 of the Acts of 2007 because they are located on landlocked filled tidelands. The identification of landlocked tidelands is described above and is based on cartographic data published by MassGIS on behalf of DEP and OCZM.

The South Coast Rail project exceeds EIR review thresholds as defined in 301 CMR 11.03 and requires a Public Benefit Determination in accordance with the regulations at 301 CMR 13.00.[1] The Act requires projects subject to MEPA to consider a project's potential impacts on groundwater and in cases where projects are located in areas of known low groundwater include measures to avoid, minimize or mitigate potential impacts.

When making a Public Benefit Determination, the Secretary is required to consider the:

- Purpose and effect of the development;
- Impact on abutters and the surrounding community;
- Enhancement of the property;
- Benefits to the public trust rights in tidelands or other associated rights;
- Community activities on the development site;
- Environmental protection and preservation;
- Public health and safety;
- General welfare; and
- Protection of Groundwater.

The Secretary is also instructed by 301 CMR 13.00 to consider the differences between tidelands, landlocked tidelands, and great ponds when assessing the public benefit and shall consider the practical impact of the public benefit on development.

The South Coast Rail project elements that are located on filled tidelands, located at least 250 feet landward of existing flowed tidelands, and completely separated from flowed tidelands by one or more intervening roads are:

- Battleship Cove Station, Fall River;
- Whale's Tooth Station, New Bedford; and
- Wamsutta Layover Facility, New Bedford.

The following sections describe how each of the these stations and the layover facility provide appropriate public benefits and are adequately protective of the public's inherent rights in present and former waterways, held in trust by the Commonwealth for the benefit of the public.

MassDOT's purpose for the South Coast Rail project is "to more fully meet the existing and future demand for public transportation between Fall River/New Bedford and Boston, and to enhance regional mobility, while supporting smart growth planning and development strategies in affected communities."

[1] The public benefit determination discussed in this section is a state requirement unrelated to the U.S. Army Corps of Engineers public interest review as part of Clean Water Act Section 404 permitting.

Battleship Cove Station

The Battleship Cove Station (Figure 4.18-19 and 4.18-20) would be a new station constructed at the southern terminus of the Fall River Secondary, on Water Street in Fall River. This site is adjacent to the previously developed Ponta Delgada Plaza. The station would be a platform-only station that would operate during peak hours. It would serve downtown Fall River and the Battleship Cove tourist area. The station would be designed to encourage walk-in and drop-off/pick-up customers. Dedicated parking is not planned for this station.

The Battleship Cove Station site is approximately 825 feet from the nearest flowed tidelands of the Taunton River. A portion of the site is located on filled tidelands entirely separated from the flowed tidelands by Water Street.

MassDOT is currently developing plans for modified access ramps to Route 79 which would cross the proposed station. These ramps, if constructed, would change adjacent land uses and traffic patterns, and would change the visual environment in the vicinity of the station.

Purpose and Effect of the Development

The purpose of the Battleship Cove Station is to provide commuter rail access to the downtown and Battleship Cove areas of Fall River, providing new transportation access to the regional MBTA services. The station is intended to operate during peak morning and evening hours.

The effects of the development would be the creation of a new public transportation facility providing regional commuter rail service to downtown Fall River and the Battleship Cove area where none presently exists; and construction of approximately 10,000 square feet of platform within an area of filled tidelands.

Impact on Abutters and Community

The Battleship Cove Station is expected to result in a net benefit to abutting properties and the Fall River community. Potential adverse impacts to abutters are expected to be minimal because the adjacent private uses are light commercial/ industrial and warehousing. The proposed station is not expected to interfere with these uses and would result in small net benefit by revitalizing the existing rail infrastructure adjacent to the site.

Potential impacts to the community are expected to be beneficial, resulting from a new transportation link to the regional MBTA system. There would be no impact on the existing park.

Enhancement of the Property

The proposed Battleship Cove Station would enhance the site by rehabilitating the existing rail infrastructure along this section of the Fall River Secondary and activating the property for public transportation use.

Benefits to the Public Trust Rights in Tidelands or Other Associated Rights

The Battleship Cove Station would provide net benefit to the public trust rights in filled tidelands at the site by providing new public access and public transportation uses to the Fall River Secondary and adjacent land. The traditional public trust rights to tidelands include fishing, fowling, and navigation.

While these activities are not possible on the site due to its location approximately 825 feet from the nearest flowed tidelands, the logical extension of such rights in filled tidelands protected by Chapter 91 include the public's rights to pedestrian access and other lawful purposes.

The proposed station and associated public transportation uses would meet these goals. While much of the site contains an open grassy landscaped area adjacent to the Ponta Delgada Monument and plaza and is open to the public, access would not be affected by the station.

Community Activities on the Site

The Battleship Cove Station would increase community activities at the site by providing new access to the regional rail transportation network. The MBTA estimates that approximately 240 daily passengers would use the station.

Environmental Protection/Preservation

The Battleship Cove Station construction would meet all local, state and federal environmental protection requirements and comply with all applicable regulations, as identified in the extensive public review process.

Public Health and Safety

The South Coast Rail project would promote public health and safety through a site design that provides a safe and universally accessible facility for public use. Providing passenger rail service to the Battleship Cove Station and adjacent downtown Fall River area would result in net benefits to public health and safety resulting from a reduction in single passenger vehicle trips, air pollution and regional traffic.

General Welfare

The Battleship Cove Station would promote the general welfare by providing area residents with new public access to the existing regional transportation system. MassDOT would use public funds to provide direct and tangible benefits to the residents and visitors to the Battleship Cove area. The station has been designed to promote use by local residents. The potential for traffic impacts has been mitigated by limiting the number of parking spaces at the station site to the required handicapped-accessible spaces only, and by promoting pick-up/drop-off and local bus connections.

Protection of Groundwater

The Battleship Cove Station site is not within an area of known low groundwater, and is not anticipated to have any adverse impacts to the existing groundwater conditions. The station would be a platform constructed essentially at-grade. No basement, extensive excavation, or groundwater cut-off wall are proposed during construction and no short- or long-term impacts to groundwater are anticipated.

Whale's Tooth Station

Whale's Tooth Station would be a new train station constructed in New Bedford (Figure 4.18-13 and 4.18-23). It would be located near the intersection of Acushnet Avenue and Hillman Street, near the southern terminus of the New Bedford Main Line. The City of New Bedford has constructed a parking lot on the approximately 14-acre site in anticipation of the South Coast Rail project. The station would

include intermodal connections, potentially linking to ferry services. The station would serve walk-in, bike-in and drive-in customers.

The majority of the Whale's Tooth Station would be located on landlocked filled tidelands because the station site is entirely separated from the mean high water mark of New Bedford Harbor by interconnected public ways and is at least 250 feet landward of the mean high water mark. The station would require a Public Benefit Determination, but not a Waterways license. The following sections describe the public benefits of the proposed Whale's Tooth Station.

Purpose and Effect of the Development

The purpose of the Whale's Tooth Station is to provide new passenger rail or bus access to the New Bedford downtown waterfront area, improving access to the MBTA and regional public transportation network. The station would be adjacent to an existing City of New Bedford parking lot and would be accessible to passengers walking, biking, or driving to the station.

The effects of the development would be the creation of a new public transportation facility providing commuter rail service to the downtown New Bedford area, and activation of filled tidelands for public use for construction of the proposed station and vehicle circulation areas.

Impact on Abutters and Community

The Whale's Tooth Station is expected to result in minimal adverse impacts to abutters and a net benefit to the New Bedford community. Adverse impacts to abutters are expected to be minimal because the adjacent properties consist primarily of Route 18 (a six-lane divided highway) and industrial/trucking properties to the west and south, vacant land and industrial properties to the east, and the Greater New Bedford Career Center to the north.

None of these existing uses are likely to be disrupted either by construction or operation of the proposed station. The Greater New Bedford Career Center users would benefit from improved access to the regional transportation network by providing their clientele with improved access to career opportunities along the proposed passenger rail corridor.

The New Bedford community at large would also benefit from the proposed station by gaining short-term construction related jobs and long-term improved access to the regional transportation network. No short-term adverse impacts to the community are expected.

Enhancement of the Property

The Whale's Tooth Station would enhance the property by providing new public transportation infrastructure adjacent to an existing paved parking lot.

Benefits to the Public Trust Rights in Tidelands or Other Associated Rights

The Whale's Tooth Station would provide a net benefit to the public trust rights in filled tidelands at the site by providing new access to the planned passenger rail network. The City of New Bedford has constructed a new parking lot on the site in anticipation of the project. The proposed station would enhance the public's use of the landlocked tidelands by increasing utilization of the site and providing access to additional regional transportation options.

Community Activities on the Site

The Whale's Tooth Station would increase community activities at the site by increasing utilization of the existing 14-acre paved parking facilities at the site.

Environmental Protection/Preservation

The Whale's Tooth Station construction would meet all local, state and federal environmental protection requirements and comply with all applicable regulations, as identified in the extensive public review process.

Public Health and Safety

The South Coast Rail project would promote public health and safety through a site design that provides a safe and universally accessible facility for public use. Providing passenger rail service to the site and the downtown New Bedford area would result in net benefits to public health and safety resulting from a reduction in single passenger vehicle trips, air pollution, and regional traffic.

General Welfare

The Whale's Tooth Station would promote the general welfare by providing area residents with new public access to the existing regional transportation system. MassDOT would use public funds to provide direct and tangible benefits to the residents and visitors to New Bedford. The station's proximity to Route 18, a six lane divided highway, and existing local bus services would take advantage of the existing road network reducing potential adverse transportation impacts that could result from the South Coast Rail project. The 14-acre surface parking lot constructed by the City of New Bedford at the site would minimize potential impacts to parking in the vicinity of the site.

Protection of Groundwater

The Whale's Tooth Station site is not within an area of known low groundwater, and would not be anticipated to have any adverse impacts to the existing groundwater conditions. The station would be a single platform constructed at grade. No basement, extensive excavation or groundwater cut-off walls are proposed during construction and no short- or long-term impacts to groundwater are anticipated.

Wamsutta Layover Facility

The Wamsutta Layover Facility (Figure 4.18-12 and 4.18-13) would be constructed along the New Bedford Main Line. It would be located near the intersection of Wamsutta Street and Herman Melville Boulevard, near the southern terminus of the New Bedford Main Line. This location is just north of the Whale's Tooth Station site described above. A portion of the site is currently an active CSX rail yard used for freight. The existing and proposed rail yard is located on top of a capped hazardous waste landfill.

The Wamsutta Layover Facility would be entirely within landlocked tidelands because the site is entirely separated from the water sheet of New Bedford Harbor by Herman Melville Boulevard (a public way in existence on January 1, 1984) and it is located at least 250 feet from the existing mean high water mark.

The following sections describe the public benefits resulting from the construction of that portion of the proposed Wamsutta Layover Facility within landlocked tidelands.

Purpose and Effect of the Development

The purpose of the Wamsutta Layover Facility is to provide an overnight storage site for equipment needed for the early morning trains departing New Bedford for Boston. In most cases, these trains would have completed one of the last southbound runs of the prior day. Making use of a terminal layover facility avoids the need to run empty equipment to Boston for overnight storage and then back to New Bedford for the first northbound train. This important operation detail would reduce fuel consumption, operation and maintenance costs, and potential environmental impacts to air quality and noise associated with extra late-night and early morning trains.

Potential impacts to the community are expected to be minimal because the proposed site is currently an active CSX freight rail yard located along the waterfront in an area dominated by commercial, industrial and warehouse properties.

Impact on Abutters and Community

The Wamsutta Layover Facility is expected to have minimal adverse impacts to abutters, a net benefit to the New Bedford community and a substantial benefit to abutters to the New Bedford Main Line. Adverse impacts to abutters are expected to be minimal because the site is currently used as an active freight rail yard and construction would be limited to:

- Reconstructing the existing rail infrastructure;
- Installing electric utilities to serve the facility and a drainage system designed to collect and treat stormwater runoff prior to discharge from the site;
- Constructing a small operations building with crew facilities and a small number of parking spaces to support train crews and operations staff.

The Wamsutta Layover Facility would result in a net benefit to each community adjacent to the New Bedford Main Line and the Stoughton Line because the facility would prevent the need to shuttle empty passenger trains north in the evening and south before the first scheduled northbound train, reducing the potential for air quality and noise impacts on these communities.

Enhancement of the Property

The proposed Wamsutta Layover Facility would marginally enhance the property by replacing one rail use with another.

Benefits to the Public Trust Rights in Tidelands or Other Associated Rights

The Wamsutta Layover Facility would improve the capacity of the site to protect the public trust rights in filled tidelands by converting a private freight rail yard to a public transportation facility. As a matter of public safety, the existing use precludes public access for any purpose. While the proposed facility would also prohibit public access to these filled tidelands, the change in use would benefit trust rights in these lands by providing a vital transportation infrastructure facility.

Community Activities on the Site

The Wamsutta Layover Facility is not expected to increase community activities at the site because all public access would continue to be prohibited as a matter of public safety.

Environmental Protection/Preservation

The Wamsutta Layover Facility construction and operation would meet all local, state and federal environmental protection requirements and comply with all applicable regulations, as identified in the extensive public review process.

Public Health and Safety

The South Coast Rail project would promote public health and safety through implementing a site design that provides a safe and universally accessible facility for operator use while restricting public access. The proposed facility would continue to serve as a cap for the soils containing oil and hazardous materials present at the site. The site would be fenced and lighted to further protect public health and safety. Additionally, siting an overnight layover facility at the New Bedford Main Line terminus would eliminate the need to shuttle empty trains north following the last run of the evening and back to New Bedford for the first morning commute, reducing the potential for air quality and noise impacts.

General Welfare

The Wamsutta Layover Facility would promote the general welfare by activating the filled tidelands at the site for a public purpose, reducing extra train trips which would otherwise be required, resulting in fewer potential environmental impacts and substantial saving in fuel and operations and maintenance costs for the life on the project.

Protection of Groundwater

The proposed Wamsutta Layover Facility is not within an area of known low groundwater, and is not expected to have any discernible impact on groundwater at the project site because the site is a capped hazardous materials site and is designed to prevent infiltration of surface runoff to groundwater.

Public Benefits Determination Summary

MassDOT's project purpose is "to more fully meet the existing and future demand for public transportation between Fall River/New Bedford and Boston, and to enhance regional mobility, while supporting smart growth planning and development strategies in affected communities." The project would have a substantial public benefit by improving transportation to the under-served South Coast communities.

The South Coast Rail project elements proposed within landlocked tidelands have been sited and preliminarily designed to protect the public interests in tidelands and result in public benefits as required by Chapter 168 of the Acts of 2007 and in accordance with the regulations at 301 CMR 13.00. The project would result in substantial net benefits to the public interest in filled tidelands by revitalizing and expanding public infrastructure in a manner which meets all applicable state and federal environmental protection standards while minimizing potential impacts to abutters to these stations and layover facility and the community.

4.18.6 Coastal Zone Management

The Massachusetts Coastal Zone Management Plan and regulations implement the federal Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1451 et seq.). The Coastal Zone Management Act established federal statutory authority to the management of the nation's coastal resources balancing economic development with environmental conservation. The Massachusetts Coastal Zone Management Act (MGL Chapter 21A, Sections 2 and 4A) established local authority to implement the Massachusetts Coastal Zone Management Plan (CZMP) through regulations at 301 CMR 20.00 through 301 CMR 25.00. The following regulations are most pertinent to the South Coast Rail project:

- 301 CMR 21.00 requires a federal consistency certification issued by the Office of Coastal Zone Management for projects in the coastal zone deemed likely to affect the coastal zone and require a federal action.
- 301 CMR 23.00 establishes state procedures for the preparation of Municipal Harbor Plans. Approved plans provide municipalities a mechanism for modifying certain requirements of Chapter 91 Licensing.
- 301 CMR 25.00 establishes state authority to delineate Designated Port Areas within the coastal zone to protect the unique capacity of developed ports and port infrastructure to support water-dependent industrial activities.

These regulations, in concert with the Waterways Regulations (310 CMR 9.00), create a regulatory framework for planning, licensing and implementing projects in the Massachusetts Coastal Zone. The South Coast Rail project includes track, stations and layover facilities within the Massachusetts Coastal Zone and would require compliance with each of these regulations.

The Massachusetts Coastal Zone Management regulations at 310 CMR 21.98 establish twenty program policies and nine management principles that projects subject to federal consistency certification must comply with. The following sections provide a summary of each of the twenty-five program policies and three management principles established by 301 CMR 21.98 and describes how the project is consistent with each applicable policy or management principle.

The program’s twenty-eight policies and principles are divided into the following 9 categories:

- water quality;
- habitat;
- protected areas;
- coastal hazards;
- port and harbor infrastructure;
- public access;
- energy;

- ocean resources; and
- growth management.

This section lists each policy and management principle as contained in the regulations at 301 CMR 21.00 and demonstrates that the project can be designed and constructed consistent with them.

4.18.6.1 Water Quality

This section addresses the South Coast Rail project's compliance with water quality standards and identifies pollution prevention and low impact development (LID) measures at proposed station sites and layover facilities.

Compliance with state water quality standards and policies is a requirement for federal consistency under the CZMP and the regulations at 301 CMR 21.98. This regulation establishes the CZMP's programmatic policies and management principles which form the basis for federal consistency.

Water Quality Policy #1

Ensure that point-source discharges in or affecting the coastal zone are consistent with federally approved state effluent limitations and water quality standards.

Water Quality Policy #2

Ensure that nonpoint pollution controls promote the attainment of state surface water quality standards in the coastal zone.

Chapter 4.17, *Water Resources*, provides a comprehensive review of the project's compliance with applicable state and federal water quality standards regarding point-source, nonpoint-source, and subsurface discharges at proposed stations and layover facilities. The South Coast Rail project has been designed to meet these environmental protection requirements through compliance with all applicable federal and state regulations governing sources or air and water pollution and wetland protection.

The South Coast Rail project's compliance with the Wetlands Protection Act stormwater regulations are described in Chapter 4.17, *Water Resources*. Compliance with the NPDES Construction General Permit would be achieved through the preparation and filing of a NPDES Notice of Intent and a Stormwater Pollution Prevention Plan (SWPPP) for each station or layover facility site. Compliance with operational stormwater requirements would be achieved through the use of LID measures designed to control the volume, rate, and quality of stormwater runoff discharged from each station or layover facility. LID measures planned for the proposed stations and layover facilities are described in detail in Chapter 4.17, *Water Resources*. The design and construction of the project will be subject to numerous levels of local, state and federal review. This multi-layer permitting process will help ensure that the project is constructed and operated in accordance with these standards.

Water Quality Policy #3

Ensure that activities in or affecting the coastal zone conform to applicable state and federal requirements governing subsurface waste discharges.

Subsurface Waste Discharges

Layover facilities would have limited water use for sanitary facilities. Effluent from these uses would be discharged to municipal sanitary treatment facilities. The South Coast Rail project does not involve subsurface waste discharges.

Air Pollution

The South Coast Rail project would result in a net reduction in air pollution and a net benefit to regional air quality as described in detail in Chapter 4.9, *Air Quality*. The South Coast Rail project is not anticipated to require any new local, state, or federal permit related to air pollution.

Water Pollution

The South Coast Rail project would meet all applicable local, state, and federal requirements regarding potential water pollution and MassDOT would obtain all needed permits under these regulations as described in Chapter 4.17. No point source discharges are proposed. All storm water collected at stations and layover facilities would be treated in accordance with the Massachusetts Stormwater Regulations and, for layover facilities, in accordance with applicable NPDES discharge requirements.

Wetland Protection

The South Coast Rail project would protect state and federally regulated wetlands by adherence to all applicable regulations. The project has been designed to avoid, minimize, and mitigate wetland impacts to the greatest extent practicable and is anticipated to receive permits under the Massachusetts Wetlands Protection Act, Section 401 of the Clean Water Act (Water Quality Certificate) and Section 404 of the federal Clean Water Act. The project would require a Variance under the Wetlands Protection Act pursuant to 310 CMR 10.05(10) subject to approval by the MassDEP Commissioner. The Commissioner may waive certain regulations when mitigating measures are proposed that would allow the project to be conditioned so as to contribute to the public interests in wetlands.

Chapter 4.16, *Wetlands*, provides a complete description of the anticipated wetland impacts and proposed mitigation measures.

4.18.6.2 Habitat

Habitat Policy #1

Protect coastal resource areas including salt marshes, shellfish beds, dunes, beaches, barrier beaches, salt ponds, eelgrass beds, and fresh water wetlands for their important role as natural habitats.

The proposed project would not alter any coastal resource area including salt marshes, shellfish beds, dunes, beaches, barrier beaches, salt ponds or eelgrass beds. In addition, no impacts to freshwater wetlands are proposed within the Coastal Zone.

Habitat Policy #2

Restore degraded or former wetland resources in coastal areas and ensure that activities in coastal areas do not further wetland degradation but instead take advantage of opportunities to engage in wetland restoration.

The Build Alternatives would be designed to comply with this policy. A complete description of the alternatives' potential impacts to wetland resources is presented in Chapter 4.16, *Wetlands*.

4.18.6.3 Protected Areas

Protected Areas Policy #1

Preserve, restore, and enhance complexes of coastal resources of regional or statewide significance through the Areas of Critical Environmental Concern program.

None of the Build Alternatives include any work within a coastal ACEC nor would it affect natural coastal resources. ACECs are discussed in Chapter 4.10, *Protected Open Space and Areas of Critical Environmental Concern*.

Protected Areas Policy #2

Protect state and locally designated scenic rivers and state classified scenic rivers in the coastal zone.

The Taunton River has been designated as a "Partnership Wild and Scenic River." The proposed work within the Taunton River would be designed to the extent practicable with the 2005 Taunton River Stewardship Plan consistent with the National Park Service requirement of the Wild and Scenic Rivers Act.

Protected Areas Policy #3

Ensure that proposed developments in or near designated or registered historic districts or sites respect the preservation intent of the designation and that potential adverse effects are minimized.

Each Build Alternative would be designed to comply with applicable historic preservation standards and include efforts to avoid, minimize and mitigate potential impacts to historic resources. Chapter 4.8, *Cultural Resources*, provides a complete description of the potential impacts to historic resources.

4.18.6.4 Coastal Hazards

Coastal Hazard Policy #1

Preserve, protect, restore, and enhance the beneficial functions of storm damage prevention and flood control provided by natural coastal landforms, such as dunes, beaches, barrier beaches, coastal banks, Land Subject to Coastal Storm Flowage, salt marshes, and land under the ocean.

This policy is not applicable to any of the Build Alternatives because they do not impact coastal landforms.

Coastal Hazard Policy #2

Ensure construction in waterbodies and contiguous land areas will minimize interference with water circulation and sediment transport. Approve permits for flood or erosion control projects only when it has been determined that there will be no significant adverse effects on the project site or adjacent or downcoast areas.

None of the Build Alternatives includes work within coastal waterbodies and none would interfere with water circulation or sediment transport in any coastal waterbody.

Coastal Hazard Policy #3

Ensure that state and federally funded public works projects proposed for location within the coastal zone will:

- not exacerbate existing hazards or damage natural buffers or other natural resources;
- be reasonably safe from flood and erosion related damage;
- not promote growth and development in hazard-prone or buffer areas, especially in Velocity zones and ACECs; and
- not be used on Coastal Barrier Resource Units for new or substantial reconstruction of structures in a manner inconsistent with the Coastal Barrier Resource/Improvement Acts.

The South Coast Rail project would not significantly alter natural buffers in the Coastal Zone and would not promote development in hazard-prone or buffer areas. A small portion of the Weaver's Cove Layover Facility site is within the FEMA flood zone. Project elements proposed for this area are reasonably safe from flood and erosion-related damage.

Coastal Hazard Policy #4

Prioritize public funds for acquisition of hazardous coastal areas for conservation or recreation use, and relocation of structures out of coastal high hazard areas, giving due consideration to the effects of coastal hazards at the location to the use and manageability of the area.

The policy is not applicable to the alternatives.

4.18.6.5 Port and Harbor Infrastructure

The Municipal Harbor Planning process is voluntary, established by the regulations at 301 CMR 23.00 under which municipalities may implement local planning goals for their waterfronts. Harbor plans are prepared in coordination between local officials, the OCZM, DEP, and other state agencies either controlling real property or planning state actions in the harbor planning area.

An approved Municipal Harbor Plan (MHP) is intended to guide state agency actions related to waterfront development, permitting and planning and provides a formal mechanism for local input to the Chapter 91 licensing process. Approved plans may substitute numerical provisions regarding building height, setbacks, open space, and ground floor uses within Commonwealth tidelands.

The South Coast Rail project includes construction activities and changes in use within the geographic planning area for two MHPs:

- New Bedford/Fairhaven Municipal Harbor Plan, and
- Fall River Municipal Harbor and Downtown Economic Development Plan.

The following sections describe the South Coast Rail project's consistency with these MHPs. Subsequent sections demonstrate compliance with the policies contained in Ports and Harbors.

New Bedford/Fairhaven Municipal Harbor Plan

The New Bedford/Fairhaven MHP was prepared through a collaborative effort by the Cities of New Bedford and Fairhaven, the OCZM, MassDEP, and the Seaport Advisory Council. The New Bedford/Fairhaven MHP was approved by the Secretary of Energy and Environmental Affairs on June 14, 2012.

The harbor planning area, shown on Figures 4.18-11 and 4.18-12, includes the existing track extending south from Coggeshall Street (north of the I-195 interchange) to the southern terminus of the New Bedford Main Line near the Whale's Tooth Station. The harbor planning area extends approximately 2,000 to 3,000 feet landward from the watersheet of New Bedford Harbor.

This planning area includes the proposed sites for the Wamsutta Layover Facility and the Whale's Tooth Station. To the extent that these facilities are subject to licensing under Chapter 91, the proposed project elements must be consistent with the approved harbor plan to comply with the provisions of 310 CMR 9.34

Pursuant to 301 CMR 23.05(3), MassDOT has been an active participant in the development of the New Bedford/Fairhaven MHP as it relates to the South Coast Rail project. In February 2010, MassDOT provided written comments to the OCZM that the plan was consistent with their proposed plans and activities.

One of the major initiatives supported by the New Bedford/Fairhaven MHP is: "Improved Transportation Connections including …establishing a passenger rail link to Boston…"

The plan's specific recommendations state that: "The restoration of passenger and freight rail service to the North Harbor creates the landside conditions essential for successful development of expanded port terminal facilities in this area."

The plan recognizes the importance of restoring rail service as a critical component of transportation and industrial infrastructure in the port of New Bedford. The South Coast Rail project supports the New Bedford/Fairhaven Green Ports Initiative and provides intermodal connection to the ferries serving Martha's Vineyard, Cuttyhunk, Woods Hole, and Nantucket via a locally-operated shuttle bus system.

The New Bedford/Fairhaven MHP identifies the combined Whale's Tooth Station as a suitable location to support commuter rail, local and regional bus service, taxis, and waterfront trolley service, and potentially accommodate future rail and pedestrian links to a water terminal.

The New Bedford/Fairhaven MHP concludes by stating that: "The addition of public passenger transport rail enhancements to the existing rail infrastructure at the CSX rail facility represents a significant potential expansion to the economy of the entire region"

In summary, the New Bedford/Fairhaven MHP was developed in collaboration with state agency stakeholders and was reviewed by MassDOT prior to submittal. The plan and the Secretary's Approval Decision recognize the importance of the planned rail improvements to the success of the harbor planning area, the City of New Bedford, and the region.

Fall River Municipal Harbor and Downtown Economic Development Plan

In October 2002, the City of Fall River completed an Economic Development Plan in consultation with a diverse group of regional stakeholders including the OCZM and MassDEP. The Economic Development Plan included the following Statement of Purpose: "The purpose of the Fall River Harbor and Downtown Economic Development Plan is to increase the economic diversity of the community through the expanded use and revitalization of the harbor, the harborfront, and nearby areas within the downtown. The Plan seeks to establish a clear vision for these areas and to create a pragmatic strategy for accomplishing that vision."

The plan was prepared with the goal of obtaining approval by the Massachusetts Secretary of Energy and Environmental Affairs under the provisions of Municipal Harbor Plan Approval (301 CMR 23.00). While the Economic Development Plan was submitted to the Secretary for approval, it was not approved pending further revisions. Therefore, the Economic Development Plan does not meet the regulatory criteria for approved harbor plans and does not serve as formal regulatory guidance for the licensing process.

The South Coast Rail project has been planned and preliminarily designed in a manner consistent with the Fall River Harbor and Downtown Economic Development Plan in terms of supporting water dependent uses and improving public access to the Fall River waterfront while avoiding non-water dependent uses in the DPA or filled tidelands subject to licensing.

The South Coast Rail project includes the reconstruction of track, ballast, water-dependent infrastructure facility crossings and the construction of one new passenger station at Battleship Cove. The station site is well located to meet an overriding vision of the Harbor and Economic Development Plan for the downtown waterfront: "The vision for the waterfront would achieve a higher quality of life by expanding active uses, becoming more accessible to all residents and attracting an increasing number of visitors."

Additionally, the Battleship Cove Station site furthers two specific goals of the harbor plan:

- "The harborfront and the downtown should be enhanced as a visitor destination," and
- "The transportation infrastructure should be focus of appropriate reinvestment that better connects people to their destinations, and supports comprehensive economic goals."

The Battleship Cove Station is centrally located between the densely populated residential neighborhood bounded by Broadway, South Main Street and Kennedy Park. It would be adjacent to the City Gates at Ponta Delgada Park and adjacent to the Water Street/Ferry Street corridor connecting Heritage State Park and Kennedy Park.

The City of Fall River, with assistance from MassDOT, is presently exploring ways to improve pedestrian connections along Fall River's urban waterfront. Critical links being explored at this time include new pedestrian connections between Broadway and Canal Streets to the Battleship Cove Station site and improvements along Water and Ferry Streets. These connections, considered in the context of the planned station, would significantly improve pedestrian access to the waterfront. The Battleship Cove Station would provide new access to the regional transportation network encouraging residents to use these new connections and deliver new visitors to Fall River.

4.18.6.6 Consistency with Designated Port Areas

Massachusetts regulations at 301 CMR 25.00, promulgated pursuant to MGL Chapter 21A, Sections 2 and 4A, established state authority to delineate DPAs within developed industrial waterfronts. The purpose of delineating DPAs is to identify geographic areas of particular state, regional and national significance with respect to the promotion of commercial fishing, shipping and other vessel-related activities associated with waterborne commerce, and of manufacturing, processing, and production activities. Eleven DPAs were subsequently identified by the OCZM and approved by the Secretary of Energy and Environmental Affairs.

The South Coast Rail project includes work in the Mount Hope Bay in Fall River (Figure 4.18-16) and New Bedford/Fairhaven DPAs (Figures 4.18-11 and 4.18-12). These figures show the location of the proposed stations and layover facilities and the regulatory boundaries of these DPAs. The only South Coast Rail project elements within these DPAs are the existing track segments listed in Table 4.18-10.

Table 4.18-10 Project Elements in Designated Port Areas

Designated Port Area	Project Element	Location
Mount Hope Bay	2,000 ± LF of track	South of Weaver's Cove
	500 + LF of track	North of Battleship Cove Station
New Bedford/Fairhaven	500 + LF of track	South of Wamsutta Layover Facility

The South Coast Rail project has been designed to avoid construction of stations and layover facilities within the Mount Hope Bay (Fall River) and New Bedford/ Fairhaven DPAs. The only project-related work proposed within these DPAs is the reconstruction of existing track, ballast, and associated infrastructure.

The CZM regulations include the following port and harbor infrastructure policies and management principles related to projects located in the Massachusetts Coastal Zone:

Ports Policy #1

Ensure that dredging and disposal of dredged material minimize adverse effects on water quality, physical processes, marine productivity and public health.

Ports Policy #2

Obtain the widest possible public benefit from channel dredging, ensuring that designated ports and developed harbors are given highest priority in the allocation of federal and state dredging funds. Ensure that this dredging is consistent with marine environment policies.

These policies are not applicable to the South Coast Rail project because no dredging or disposal of dredged material is proposed within any DPA.

Ports Policy #3

Preserve and enhance the capacity of Designated Port Areas (DPAs) to accommodate water-dependent industrial uses, and prevent the exclusion of such uses from tidelands and any other DPA lands over which a state agency exerts control by virtue of ownership, regulatory authority, or other legal jurisdiction.

The proposed reconstruction of the existing track, ballast and related infrastructure would result in a direct benefit to the DPAs' capacity to support water-dependent industrial uses by improving the railroad transportation infrastructure serving these ports. The South Coast Rail project would improve the load capacity on the New Bedford Main Line from Taunton to the Port of New Bedford and Fall River and provide additional freight transportation capacity to these ports. These improvements would improve the capacity of the DPAs to support water-dependent industrial uses without developing land within the DPA for non-water dependent uses.

Ports Management Principle #1

Encourage, through technical and financial assistance, expansion of water-dependent uses in designated ports and developed harbors, re-development of urban waterfronts, and expansion of visual access.

The proposed improvements within the Mount Hope Bay (Fall River) and New Bedford/Fairhaven DPAs would provide substantial financial assistance to these ports by replacing and upgrading existing rail infrastructure. These upgrades would substantially improve the load capacity of the existing tracks serving these ports increasing the capacity for the DPAs to serve as sea/land intermodal freight node and improve their potential to serve water-dependent industrial uses. The South Coast Rail project has been designed to avoid the construction of any non-water dependent use facilities within the DPAs while substantially improving transportation infrastructure.

The proposed track reconstruction would not adversely affect public views of the shoreline because the work is limited to the reconstruction of existing at-grade railroad infrastructure. No new stations or layover facilities are proposed in any DPA.

4.18.6.7 Public Access

Public Access Policy #1

Ensure that developments proposed near existing public recreation sites minimize their adverse effects.

Public Access Management Principle #1

Improve public access to coastal recreation facilities and alleviate auto traffic and parking problems through improvements in public transportation. Link existing coastal recreation sites to each other or to nearby coastal inland facilities via trails for bicyclists, hikers, and equestrians, and via rivers for boaters.

Redevelopment of commuter rail facilities in Fall River and New Bedford would provide mass transit access to coastal recreational facilities. A station in Fall River is planned to directly service the Battleship Cove Historical Park. Commuter rail service between these coastal areas and Boston would help to alleviate commuter automobile traffic and parking problems. The developed nature of the coastal areas in the project area is not suitable for trail development. The rail embankment does not have sufficient width to incorporate a trail system, and the proximity to high speed rail traffic would not be prudent from a safety perspective. The use of existing, active rail segments within the Coastal Zone does not preclude development of any proposed public access paths in this area.

Public Access Management Principle #2

Increase capacity of existing recreation areas by facilitating multiple uses and by improving management, maintenance and public support facilities. Resolve conflicting uses whenever possible through improved management rather than through exclusion of uses.

This Management Principle is not applicable to the alternatives.

Public Access Management Principle #3

Provide technical assistance to developers of private recreational facilities and sites that increase public access to the shoreline.

This Management Principle is not applicable to the alternatives.

Public Access Management Principle #4

Expand existing recreation facilities and acquire and develop new public areas for coastal recreational activities. Give highest priority to expansions or new acquisitions in regions of high need or limited site availability. Assure that both transportation access and the recreational facilities are compatible with social and environmental characteristics of surrounding communities.

This Management Principle is not applicable to the alternatives.

4.18.6.8 Energy

Energy Policy #1

For coastally dependent energy facilities, consider siting in alternative coastal locations. For non-coastally dependent energy facilities, consider siting in areas outside of the coastal zone. Weigh the environmental and safety impacts of locating proposed energy facilities at alternative sites.

This policy is not applicable to the alternatives.

Energy Management Principle #1

Encourage energy conservation and the use of alternative sources such as solar and wind power in order to assist in meeting the energy needs of the Commonwealth.

The proposed project would support this Management Principle by encouraging the use of public transportation and reducing dependency on automobiles. This project would provide the opportunity to use alternative energy sources such as wind or solar power at the proposed stations or for future transit-oriented development.

4.18.6.9 Ocean Resources

Ocean Resources Policy #1

Support the development of environmentally sustainable aquaculture, both for commercial and enhancement (public shellfish stocking) purposes. Ensure that the review process regulating aquaculture facility sites (and access routes to those areas) protects ecologically significant resources (salt marshes, dunes, beaches, barrier beaches, and salt ponds) and minimizes adverse impacts upon the coastal and marine environment.

This policy is not applicable to the alternatives.

Ocean Resources Policy #2

Extraction of marine minerals will be considered in areas of state jurisdiction, except where prohibited by the MA Ocean Sanctuaries Act, where and when the protection of fisheries, air and marine water quality, marine resources, navigation and recreation can be assured.

This policy is not applicable to the alternatives.

Ocean Resources Policy #3

Accommodate offshore sand and gravel mining needs in areas and in ways that will not adversely affect shorelines areas due to alteration of wave direction and dynamics, marine resources and navigation. Mining of sand and gravel, when and where permitted, will be primarily for the purpose of beach nourishment.

This policy is not applicable to the alternatives.

4.18.6.10 Growth Management

Growth Management Principle #1

Encourage, through technical assistance and review of publicly funded development, compatibility of proposed development with local community character and scenic resources.

The proposed restoration of passenger rail service to Fall River and New Bedford is compatible with the local character and scenic resources and Harbor Master Plan. Fall River and New Bedford are preparing Master Plans that incorporate commuter rail service. Additional information on the project's smart growth corridor plan and the compatibility of the proposed development with the surrounding land uses can be found in the *South Coast Rail Economic Development and Land Use Corridor Plan.*[2]

Growth Management Principle #2

Ensure that state and federally funded transportation and wastewater projects primarily serve existing developed areas, assigning highest priority to projects that meet the needs of urban and community development centers.

The Build Alternatives would improve the transportation options for the existing developed areas of Fall River and New Bedford, and link these areas with the developed urban centers of Boston and Taunton. Enhancing transportation choice is one of the sustainable development principles that is addressed in the *South Coast Rail Economic Development and Land Use Corridor Plan.*[3]

Growth Management Principle #3

Encourage the revitalization and enhancement of existing development centers in the coastal zone through technical assistance and federal and state financial support for residential, commercial and industrial development.

[2] Commonwealth of Massachusetts. 2009. South Coast Rail Economic Development and Land Use Corridor Plan, DRAFT June 29, 2009. Executive Office of Transportation and Public Works, and Executive Office of Housing and Economic Development. Prepared by Goody Clancy: Boston.

[3] Commonwealth of Massachusetts. 2009. South Coast Rail Economic Development and Land Use Corridor Plan, DRAFT June 29, 2009. Executive Office of Transportation and Public Works, and Executive Office of Housing and Economic Development. Prepared by Goody Clancy: Boston.

The Build Alternatives are consistent with this is policy since improvement of transportation options serving Fall River and New Bedford would encourage residential, commercial and industrial development within these coastal communities. Transit-oriented development is specifically addressed in the *South Coast Rail Economic Development and Land Use Corridor Plan.*[4]

4.18.6.11 Summary

Depending on the alternative selected, the project is expected to require several licenses for bridges, stations and layover facilities. Additional approvals would be required for bridge, track and ballast improvements at existing railroad crossings of non-tidal rivers and streams. The jurisdiction of many of these crossings would be determined during further consultation with DEP and the United States Coast Guard.

The alternatives are anticipated to comply with the policies and principles of the Massachusetts Coastal Zone Management Program. The alternatives would support water-dependent industrial uses within the New Bedford and Mt. Hope Bay DPAs by maintaining a critical transportation system supporting these uses.

The Build Alternatives would require a Federal Consistency Certification under the Massachusetts Coastal Zone Management Plan. It is anticipated that the alternatives would be consistent with the applicable policies.

4.18.7 Planning for Sea Level Rise

The Secretary's Certificate on the DEIR and the Waterways Regulations at 310 CMR 9.37(2) require MassDOT to consider potential sea level rise in designing and licensing projects subject to Chapter 91.

The Massachusetts Climate Change Adaptation Report prepared by the Executive Office of EEA and the Office of Coastal Zone Management provides a comprehensive review of potential sea level rise in Massachusetts. This report considered the potential changes in sea level based on several generally accepted climate models and their predictions representing a range of model inputs (i.e., high and low emission rates, precipitation, atmospheric CO_2 and temperatures). Based on this analysis the report cites a potential change in sea level of 8 to 16 inches (0.6 to 1.6 feet) by 2050 and approximately 23 to 79 inches (1.9 to 6.6 feet) by 2100.

The South Coast Rail project elements subject to licensing and therefore required to comply with 310 CMR 9.37(2) are limited to certain non-tidal river and stream crossings and the Weaver's Cove East Layover Facility. The majority of the non-tidal river and stream crossings is not adjacent to the shoreline and would not be expected to be subject to inundation due to a sea level rise of up to the 16 inches predicted by 2050.

The Weaver's Cove East Layover Facility would be located approximately 20 feet above the current shoreline and would not be expected to experience inundation even under the highest predicted sea level rise of 6.6 feet by 2100.

[4] Ibid.