4.8 CULTURAL RESOURCES

4.8.1 INTRODUCTION

This chapter identifies the effects to cultural resources that may result from implementing each of the proposed South Coast rail alternatives. This section describes the potential impacts to identified cultural resources within the Area of Potential Effect (APE) defined for each of the alternatives, as well as steps that may be taken to avoid, minimize, or mitigate any adverse impacts to significant historic and archaeological properties. Impact analyses are based on the cultural resource identification surveys that have been completed to date for each of the alternatives, as documented in the Cultural Resources Reconnaissance Survey (PAL, 2003) and the Supplemental Cultural Resources Reconnaissance Survey (PAL, 2009). Because of their extensive documentary nature, both documents are included with this DEIS/DEIR by reference. Background information on the proposed South Coast Rail Alternatives is provided in Chapter 3, Alternatives.

4.8.1.1 RESOURCE DEFINITION

For the purposes of this assessment, "cultural resources" refer to historic above-ground buildings, structures, and areas/districts and below-ground archaeological sites and archaeologically sensitive areas within and adjacent to the various components of the alternatives. The Massachusetts Secretary of Energy and Environmental Affair's Certificate dated April 3, 2009, on the Expanded Environmental Notification Form (ENF) for the South Coast Rail Project requires that the Draft Environmental Impact Report (Draft EIR) describe potential impacts to historic and archaeological resources, including sites of significance to native people. The Certificate also requires that the Draft EIR describe measures to avoid and minimize adverse impacts to cultural resources and propose mitigation for any unavoidable impacts.

Direct impacts to historic resources could occur during the construction phase from the physical alteration of buildings, structures, and landscape or setting components within areas/districts, including demolition. Indirect impacts on historic resources could result during construction and/or operations from elevated noise or vibration levels, changes to the visual setting, increased traffic, or other environmental conditions affecting historic buildings, structures, and areas/districts. Direct impacts to archaeological resources could result from ground-disturbing construction activities in places where recorded/documented and under-documented pre-contact/contact Native American and post-contact EuroAmerican resources are or could be present.

4.8.1.2 METHODOLOGY

The Corps methodology is described in Appendix C - Procedures for the Protection of Historic Properties[1] of 33 CFR Part 325 - Processing of Department of the Army Permits ("Appendix C"). Appendix C identifies the procedures to be followed by the Corps to fulfill the requirements set forth in the National Historic Preservation Act (NHPA), other applicable historic preservation laws, and Presidential directives as they relate to the regulatory program of the Corps of Engineers (33 CFR Parts 320-334).

The central concept in the Corps methodology is the "Permit Area," as defined in Appendix C. The term "permit area" as used in Appendix C means those areas comprising the waters of the United States that

[1] AUTHORITY: 33 U.S.C. 401 et seq., 33 U.S.C. 1344, 33 U.S.C. 1413

will be directly affected by the proposed work or structures and uplands directly affected as a result of authorizing the work or structures. The following three tests must all be satisfied for an activity undertaken outside the waters of the United States to be included within the "permit area":

1. Such activity would not occur but for the authorization of the work or structures within the waters of the United States;
2. Such activity must be integrally related to the work or structures to be authorized within waters of the United States. Or, conversely, the work or structures to be authorized must be essential to the completeness of the overall project or program; and,
3. Such activity must be directly associated (first order impact) with the work or structures to be authorized.

The district engineer will take into account the effects, if any, of proposed undertakings on historic properties both within and beyond the waters of the U.S. pursuant to Section 110(f) of the NHPA. The district engineer, where the undertaking that is the subject of a permit action may directly and adversely affect any National Historic Landmark, shall, to the maximum extent possible, condition any issued permit as may be necessary to minimize harm to such landmark.

In addition to the requirements of the NHPA, all historic properties are subject to consideration under the National Environmental Policy Act (33 CFR Part 325, Appendix B), and the Corps' public interest review requirements contained in 33 CFR 320.4.

In addition to the Corps' methodology for complying with the NHPA, the methodology based on the regulations of the Advisory Council on Historic Preservation 36 CFR 800.16(d), implementing Section 106 of the National Historic Preservation Act of 1966 are used by the Cooperating Agencies (EPA, FRA, FTA and FHWA) in complying with the NHPA. The regulations of the Advisory Council on Historic Preservation 36 CFR 800.16(d) refer to the Area of Potential Effect (APE), which defines the areas in which a proposed undertaking may have an effect on an historic property, and the type of effect that may occur.

As defined in the Council's regulations, the APE for a project is the geographic area or areas within which an undertaking may directly, indirectly, or cumulatively cause changes in the character of historic properties that make them eligible for listing in the National Register of Historic Places (National Register), if any such properties exist [*36 CFR 800.2(c)*]. A direct impact APE is established to include the geographic area in which historic properties would be altered or otherwise used by construction activities or impacts related to project operations. An indirect impact APE typically consists of a larger area where auditory, pollution, noise, recreational visitor usage vibration, visual, and/or other types of environmental impacts resulting from an undertaking might affect the qualities for which a historic property is eligible for or listed in the National Register.

The South Coast Rail Alternatives include 12 categories of potential work and operations types which may result in permanent or temporary and direct or indirect effects. The work types and operations expected for the project are:

- Increased train traffic on existing active track segments
- Minor repairs or rehabilitation of existing track in active use
- Constructing an additional track on an existing active track segment
- Restoring track and train traffic on out-of-service or abandoned rights-of-way
- Constructing commuter rail or bus stations
- Constructing overhead catenary to allow electrified train service

- Adding new lanes in existing highway right-of-way
- Adding new lanes / interchange in existing highway outside of right-of-way
- Layover and maintenance facilities
- Construction staging and laydown areas
- Operations noise and vibration (including horn blowing)
- Increased traffic queuing, intersection changes

These work types and operations may or may not be restricted to individual alternatives. Some of the proposed routes for the alternatives overlap and it is effective to look at track or corridor segments when defining the APE. Furthermore, an undertaking's APE may differ for above-ground resources (e.g., historic structures, buildings, and landscapes, etc.), below-ground resources (e.g., archaeological sites), and locations that are of traditional cultural significance to a particular individual or group including Native Americans (Traditional Cultural Properties or TCPs). Additional varying components of the project may result in more than one APE for the undertaking.

The various South Coast Rail Project APEs were established by the U.S. Army Corps of Engineers (Army Corps) in terms of project alternatives and segments, work and operations (i.e., electrified and diesel) types, and resource class (see June 5, 2009 letter and final APE statement included in Appendix 4.8-A). The Massachusetts Historical Commission (MHC), which serves as the State Historic Preservation Office (SHPO) in Massachusetts concurred with the Army Corps' definition of the South Coast Rail Project APEs in a letter dated July 2, 2009 (see Appendix 4.8-A).

The Wampanoag Tribe of Gay Head/Aquinnah has indicated that the Hockomock Swamp and the Pine Swamp are regarded as traditionally culturally sensitive lands. These two swamps are located in the towns of Easton, Raynham, and Taunton, and may be affected by the Stoughton Alternative, Whittenton Alternative or the Rapid Bus Alternative. The Mashpee Wampanoag Tribe and The Narragansett Indian Tribe may also express interest in these and other traditionally culturally sensitive lands. Should a location(s) of traditional cultural significance be identified within the project study area by individual(s) and/or groups including the above Native Americans, through the Corps' consultation with these groups, then the APE for such a location and its eligibility as a Traditional Cultural Property will be determined through consultation between the Corps and the individual(s) and/or groups.

Historic Resources Methodology

The South Coast Rail Project will have direct and indirect, as well as temporary and permanent, impacts on above-ground historic resources. Factors with potential to cause effect to historic above-ground properties that were considered in the definition of the APE for historic resources include:

- Atmospheric: resulting from trucks and machinery dust and exhaust during construction and train exhaust particulates during operation;
- Noise: resulting from a variety of construction activities, and train wheels and horn blowing during operation;
- Physical modification or demolition: changes to historic properties including bridges, culverts, and stations from actions including, but not limited to, noise insulation and barriers that alter historic buildings or their setting;
- Traffic: changes in traffic patterns and traffic increases around grade crossings and stations;
- Vibration: from construction activities and train pass-bys during operation;
- Visual (setting): changes to existing cultural landscape resulting from new construction (e.g., site preparation, signal and electrification equipment, grade crossings, new and modified bridges, right-of-way fences, noise walls, new and modified stations, new layover facilities, changes in land use,

reduction of parcel sizes), vegetation clearing, and introduction of trains where none previously existed; and cumulative impacts.

The South Coast Rail Project baseline APE for historic resources and for TCPs as defined by the Army Corps is summarized in Table 4.8-1. The areas listed in Table 4.8-1 encompass the direct APE, defined as the construction limits of the Project, as well as the indirect APE. If a previously recorded or potential historic district or cultural landscape was identified, the APE broadened as necessary to encompass the boundary of the entire resource.

Table 4.8-1 APE Definitions by Work Types and Operations and Resource Class

Work Types and Operations	Below-ground	Above-ground	Traditional Cultural Properties
Rail corridors, baseline	Area of direct impact for proposed construction activities	800 ft (400 ft to either side of centerline) for electrification, 800 feet (400 feet either side of centerline) for diesel routes	To be determined in consultation with the Tribes
Stations (including stations, parking lots, access roads, and associated features)	Area of direct impact for proposed construction activities	250 ft from perimeter of proposed facility boundary	To be determined in consultation with the Tribes
Layover and maintenance facilities (lot only)	Area of direct impact for proposed construction activities	250 ft from perimeter of proposed facility boundary	To be determined in consultation with the Tribes
Construction laydown and staging areas (lot only)	Area of direct impact for proposed construction activities	250 ft from perimeter of proposed facility boundary	To be determined in consultation with the Tribes
Road, new lane within existing right-of-way	None	None	None
Road, new lane outside existing right-of-way	Area of direct impact for proposed construction activities	400 ft from proposed road centerline	To be determined in consultation with the Tribes
Road, temporary and permanent access to proposed facility	Area of direct impact for proposed construction activities	400 ft from proposed road centerline	To be determined in consultation with the Tribes
Road, intersections	Area of direct impact for proposed construction activities	400 ft on either side of the intersection centerline	To be determined in consultation with the Tribes

Direct impacts to historic resources were evaluated using preliminary engineering concept plans of project elements to identify the locations of historic buildings, structures, and areas/districts that are listed, determined eligible by the MHC, or recommended as eligible for the National Register within the APE for direct project impacts related to construction activities.

Indirect impacts to historic resources were evaluated by using environmental analyses for relevant impact categories including atmospheric, noise, traffic, vibration, visual, and cumulative impacts.

Atmospheric: Atmospheric effects are considered in relation to Environmental Protection Agency (EPA) and Massachusetts Bay Transportation Authority (MBTA) studies of emissions (nitrous oxide) and

particulates (soot) from train diesel exhaust during operations that could potentially damage historic buildings. Air quality analyses have shown impacts to be minor for commuter rail lines and they are expected to be minimal for the South Coast Rail alternatives.

Noise: The analysis of noise impacts presented in Section 4.6, Noise, reports that properties could be impacted during service by changes in cumulative noise levels caused by train operations along the right-of-way and at layover facilities, and by warning horn blowing starting one-quarter mile prior to and at grade crossings. The Federal Transit Administration's (FTA's) noise impact criteria establish three levels of noise impacts, including no impact, moderate, and severe. These impact levels are calculated based on existing and projected new noise exposure, and the receptor and surrounding land use. Noise exposure at sensitive receptors along the rail right-of-way is expected to vary from 52 Ldn at locations up to 900 feet, to 70 or more Ldn at locations less than 125 feet from the track. Severe impacts are anticipated at locations where modeling predicts that the project noise exposure will exceed the sound levels in the FTA's noise impact criteria.

As identified in Chapter 4.6 - *Noise*, the majority of noise sensitive receptors for the South Coast Rail Alternatives within 1,000 feet of the rail corridor are single family and multi-family residences. The following definitions were used for the South Coast Rail Alternatives per land use and receptors categories in FTA May 2006, pp 3-7, 3-8:

- Category 1 (quiet essential element for intended purpose): none (per FTA definition)
- Category 2 (buildings where people sleep): houses, inns, historic districts with houses (many in South Coast Rail Project APE)
- Category 3 (institutional land uses with day and evening uses): schools, churches, libraries, lodges (a few in South Coast Rail Project APE)
- Other sensitive historic categories with quiet settings –
    - Parks (passive and meditative) – per FTA are sensitive receptors (one in South Coast Rail Project APE)
    - Cemeteries– not discussed in FTA report. PAL identifies them as sensitive (four in South Coast Rail Project APE)

Based on the noise analysis, the following locations were not considered sensitive noise receptors: transportation, industrial, commercial structures; parks with active recreational uses; and golf courses.

Based on reconnaissance survey level information and the generalized (not building by building) noise analysis, residences in historic districts with noise impacts will be affected. There also may be passive-use parks, institutions, and other types of resources in the districts. Additional detail would be developed for prior to completion of environmental review and when more design information is available.

Noise level may have an effect on historic resources if noise increases reach the severe threshold at properties where quiet setting is an important characteristic of National Register eligibility. There are five historic resources in the project APE where natural quiet is integral to the National Register setting. These are: Peirce and Haskins Cemetery (PAL LA.024); North Burial Ground (PAL FR.K, FR.C); Neck of Land Cemetery (PAL Ta.029, Ta.C); Mount Pleasant Cemetery (PAL Ta.262); and the Blue Hills Multiple Resource Area (PAL De.A, Ca.E).

Noise may also affect an historic property if it is residential and if soundproofing measures such as barriers, insulated windows, or new doors are proposed that would affect the setting or appearance of

the building or the setting of a district. Temporary noise from construction activities associated with utility relocation, grading, excavation, track and stations work, and installation of systems components is anticipated to be short-term and to occur mostly during the day.

Physical modification or demolition: Physical modification or demolition to historic properties may occur from the application of noise proofing (discussed above); bridge and culvert demolition, repair, and replacement; and the replacement or demolition of existing railroad infrastructure.

Traffic: Traffic impacts that could affect the setting of historic resources during operations include additional traffic around stations at certain times of day, and vehicle queuing at grade crossings or traffic control device during train pass-bys. Major changes in traffic could introduce or dramatically increase vehicles where none or few existed and/or alter access to and from historic properties by vehicles and pedestrians. Temporary traffic changes that could affect the setting of historic resources during construction would consist of the introduction of large machinery and vehicles, and redirected traffic. Potential impacts are analyzed in terms of traffic study thresholds to determine what, if any, locations are expected to have significant levels of impact. Traffic impacts to historic properties are expected to be minor for the South Coast Rail alternatives.

Vibration: The analysis of vibration impacts presented in Chapter 4.7 - *Vibration* shows that properties would be impacted by vibration where vibration levels reach 80 VdB or above. Based on the FTA Generalized Ground-Surface Vibration Curves Table included in the chapter, properties within approximately 90 feet of the center line of a locomotive powered passenger or freight rail line could be impacted by vibration levels of 80 VdB or more. Vibration may impact historic resources if the vibration levels are sufficiently high to result in structural damage to a building or structure, which is a threshold of 100 VdB for minor damage to fragile buildings. The vibration analyses for each of the diesel and electric alternatives indicate that the vibration levels from train pass-bys are below the threshold to cause structural damage to surrounding buildings or structures.

Temporary vibration from pile driving during construction could generate structurally damaging vibration levels of 104 VdB or more within 25 feet of the work site. This would be anticipated in the vicinity of certain bridges only.

Visual (setting): The analysis of visual impacts presented in Chapter 4.5 – Visual Resources and Aesthetic Resources provided information regarding the certain types of project work with new or substantially increased (beyond what is already present) modern elements that could potentially change the setting of historic properties. Elements that may have a permanent effect on viewsheds and setting of historic resources include: new catenary, traction power facilities, and other electrification infrastructure; vegetation clearing and grading along new or improved rights-of-way; new grade crossing and signal shed equipment; traffic controls and road realignment; new right-of-way fences; noise walls; new or enlarged parking lots, new layover facilities and other site/landscaping work; and modification or demolition of existing buildings and structures, or new construction. Temporary visual effects may occur from construction staging areas. The quality of visual impacts is influenced by land contours and terrain, existing vegetation that will remain, view corridors along streets, and the presence of intervening buildings. Introduction of new visual elements that are not out of character, either inherently or with mitigation measures applied, to the historic character of adjacent historic resources or areas will have low to moderate impacts. High impacts will occur where new visual elements are out of character with factors that qualify an historic property for inclusion in the National Register.

Cumulative: Cumulative effects are defined as the result of incremental effects of the project when added to other past, present, and reasonably foreseeable future actions. Cumulative effects on Cultural Resources are expected to be minor for the South Coast Rail alternatives. A description of Indirect Effects and Cumulative Impacts is provided in Chapter 5.

Archaeological Resources Methodology

The South Coast Rail Project baseline APE for below-ground archaeological resources as defined by the Army Corps is described below.

The APE for archaeological resources is the direct APE where ground disturbances are planned for the construction of project elements. These elements include the active and inactive railroad right-of-way and active road right-of-way segments; new station locations; new layover/maintenance facility(s); and any other ancillary work areas and land takings identified as part of the alternatives.

Preliminary engineering concept plans of project elements (dated pre-May 2009) were used to determine if recorded archaeological sites and sensitive areas occurred within areas scheduled for direct impact. Concept plans were used to further inform on the direct project impacts to recorded archaeological resources and areas defined as archaeologically sensitive.

4.8.2 EXISTING CONDITIONS

4.8.2.1 HISTORIC RESOURCES

The characterization of existing conditions, also referred to as the historic resources reconnaissance survey, was undertaken in two phases. An initial historic resources survey was conducted which included the Stoughton Alternative followed by supplemental surveys which included the Attleboro Alternative and the Rapid Bus Alternative as well as additional survey information on the Stoughton Alternatives.

This section presents the results of the initial reconnaissance survey for the Stoughton Alternative (PAL 2009a), followed by the results of the subsequent survey for the Stoughton Alternative, Attleboro Alternative and Rapid Bus Alternative (PAL 2009b). The discussion of the Stoughton Alternative includes the Whittenton Alternative, which is the same as the Stoughton Alternative, except that it proposes to use the Whittenton Branch of the Stoughton Line.

The initial reconnaissance survey for the Stoughton Alternative identified areas/districts and individual properties within the APE for the rail corridor and proposed stations that meet any of the following characteristics:

- Properties listed in the National Register of Historic Places (National Register)
- Properties previously determined eligible by the MHC for listing in the National Register
- Properties recommended as potentially eligible for listing in the National Register
- Designated National Historic Landmarks (NHL)

Table 4.8-2 presents a summary of the historic resources identified for the Stoughton and Whittenton Alternatives, including those within the Southern Triangle. This table includes historic resources that are not eligible for the National Register.

Table 4.8-2 Summary of Historic Resources

Project Location	Alternative		Survey Results: All Properties Surveyed within 800' APE	Survey Results: NR Listed or Determined Eligible	Survey Results: NR Recommended Eligible
Southern Triangle: Fall River Secondary and New Bedford Main Line	All Rail Alternatives				
Taunton	All Rail	Areas/Districts	0	0	0
	Alternatives	Individual	0	0	0
Berkley	All Rail	Areas/Districts	3	0	1
	Alternatives	Individual	6	0	1
Lakeville **	All Rail	Areas/Districts	3	0	1
	Alternatives	Individual	4	0	2
Freetown	All Rail	Areas/Districts	4	1	1
	Alternatives	Individual	18	1	1
New Bedford	All Rail	Areas/Districts	6	4 [1 NHL]	1
	Alternatives	Individual	77	6 [1 NHL]	9
Fall River	All Rail	Areas/Districts	16	9	4
	Alternatives	Individual	109	10	13
ALTERNATIVE TOTAL		Areas/Districts	32	14 [1 NHL]	8
		Individual	214	17 [1 NHL]	26
Stations:					
Freetown	All Rail	Areas/Districts		0	0
	Alternatives	Individual		0	0
King's Highway	All Rail	Areas/Districts		0	0
	Alternatives	Individual		0	0
Whale's Tooth	All Rail	Areas/Districts		0	0
	Alternatives	Individual		0	1
Fall River Depot	All Rail	Areas/Districts		0	1
	Alternatives	Individual		1	1
Battleship Cove	All Rail	Areas/Districts		1	0
	Alternatives	Individual		0	2
Attleboro Alternative: Northeast Corridor Attleboro Bypass Attleboro Secondary					
Boston (Readville)	Attleboro	Areas/Districts	2	0	1
		Individual	1	1	0
Dedham	Attleboro	Areas/Districts	1	1	0
		Individual	1	0	0
Westwood	Attleboro	Areas/Districts	0	0	0
		Individual	0	0	0
Canton	Attleboro	Areas/Districts	3	1	2
		Individual	3	2	0
Sharon	Attleboro	Areas/Districts	0	0	0
		Individual	9	1	4
Foxborough	Attleboro	Areas/Districts	0	0	0
		Individual	2	1	0

Table 4.8-2 (Continued)
Summary of Historic Resources

Project Location	Alternative		Survey Results: All Properties Surveyed within 800' APE	Survey Results: NR Listed or Determined Eligible	Survey Results: NR Recommended Eligible
Mansfield	Attleboro	Areas/Districts	0	0	0
		Individual	23	0	4
Attleboro	Attleboro	Areas/Districts	1	0	0
		Individual	4	1	1
Norton	Attleboro	Areas/Districts	4	0	3
		Individual	8	0	2
Taunton	Attleboro	Areas/Districts	11	3	4
		Individual	170	13	4
ALTERNATIVE TOTAL	Attleboro	Areas/Districts	22	5	10
		Individual	221	18	15
Stations:	Attleboro				
Sharon (existing)	Attleboro	Areas/Districts	0	0	0
		Individual	5	0	2
Mansfield (existing)	Attleboro	Areas/Districts	0	0	0
		Individual	9	0	
Stoughton Alternative and Whittenton Alternative: Stoughton Line and Whittenton Branch	Stoughton/ Whittenton				
Canton	Stoughton/ Whittenton	Areas/Districts	4	0	2
		Individual	24	1	4
Stoughton *	Stoughton/ Whittenton	Areas/Districts	4	0	1
		Individual	75	3	4
Easton *	Stoughton/ Whittenton	Areas/Districts	7	2 [1 NHL]	4
		Individual	6	1	0
Raynham *	Stoughton/ Whittenton	Areas/Districts	5	0	2
		Individual	13	0	2
Taunton *	Stoughton/ Whittenton	Areas/Districts	14	2	7
		Individual	149	11	2
ALTERNATIVE TOTAL	Stoughton/ Whittenton	Areas/Districts	34	4	16
		Individual	267	16	12
Stations:	4				
Canton Junction (existing)	4	Areas/Districts		0	0
		Individual		1	0
Canton Center (existing)	4	Areas/Districts		0	1
		Individual		0	0
Stoughton (existing)	4	Areas/Districts		0	1
		Individual		1	1
North Easton	4	Areas/Districts		1 [1 NHL]	0
		Individual		2 [1 NHL]	0
Easton Village	4	Areas/Districts		0	0
		Individual		0	0
Raynham Place	4	Areas/Districts		0	0
		Individual		0	0
Taunton (Dean Street)	4	Areas/Districts		0	1
		Individual		0	0
Taunton Depot	4	Areas/Districts		0	0
		Individual		0	0

Table 4.8-2 (continued)
Summary of Historic Resources

Project Location	Alternative		Survey Results: All Properties Surveyed within 800' APE	Survey Results: NR Listed or Determined Eligible	Survey Results: NR Recommended Eligible
Raynham Place	4	Areas/Districts		0	0
		Individual		0	0
Taunton (Dean Street)	4	Areas/Districts		0	1
		Individual		0	0
Taunton Depot	4	Areas/Districts		0	0
		Individual		0	0
Rapid Bus Alternative	Rapid Bus				
Quincy	Rapid Bus	Areas/Districts	1	1	0
		Individual	0	0	0
Braintree	Rapid Bus	Areas/Districts	1	1	0
		Individual	1	0	0
Randolph	Rapid Bus	Areas/Districts	1	1	0
		Individual	0	0	0
Avon	Rapid Bus	Areas/Districts	1	1	0
		Individual	0	0	0
Brockton	Rapid Bus	Areas/Districts	0	0	0
		Individual	0	0	0
West Bridgewater	Rapid Bus	Areas/Districts	0	0	0
		Individual	0	0	0
Bridgewater	Rapid Bus	Areas/Districts	0	0	0
		Individual	0	0	0
ALTERNATIVE TOTAL	Rapid Bus	Areas/Districts	2 (3 are part of same MRA)	2 (3 areas are part of same MRA)	0
		Individual	0	0	0
Stations:	Rapid Bus				
Galleria (Taunton)	Rapid Bus	Areas/Districts	0	0	0
		Individual	0	0	0
Freetown (Freetown)	Rapid Bus	Areas/Districts	0	1	1
		Individual	0	1	1
King's Highway (New Bedford)	Rapid Bus	Areas/Districts	0	0	0
		Individual	0	0	0
Whale's Tooth (New Bedford)	Rapid Bus	Areas/Districts	0	0	0
		Individual	0	0	1
Fall River Depot (Fall River)	Rapid Bus	Areas/Districts	0	0	1
		Individual	0	1	1

* Results for town are pending completion of survey and evaluation of the inactive segment of the Stoughton Line right-of-way.
** Results for town are pending completion of survey and evaluation of bridges within the railroad right-of-way.

The following summary addresses those historic resources that are listed in, previously determined eligible for by the MHC, or recommended as potentially eligible for the National Register for the rail corridors and stations in these two alternatives, including the Southern Triangle common to all of rail alternatives.

Lists of these properties are provided for each alternative, indicating their association with a proposed or existing station as defined by the project or a grade crossing identified on the project base maps. These lists are included in the Cultural Resources Reconnaissance Survey (March 2009), Volume VI,

Appendices A-1, A-2 and A-3 (PAL 2009a). The results are based on archival research and walkover surveys of project elements new to the South Coast Rail Alternatives, as well as updates to previous assessments of project elements for the Stoughton Alternative of the New Bedford/Fall River Commuter Rail Extension Project conducted in 2001. The results of these tasks are summarized below by project alternative. The surveyed properties discussed below in Sections 4.8.2.1.1 though 4.8.2.1.4 are mapped on Figures 4.8-1 through 4.8-29, and are labeled according to "Map No." These resources are described in greater detail in the Cultural Resources Reconnaissance Survey (March 2009), Volumes III and IV.

Southern Triangle (Common to All Rail Alternatives): New Bedford Main Line and Fall River Secondary

The Southern Triangle consists of the existing Fall River Secondary (active CSX) railroad right-of-way, the existing New Bedford Main Line (active CSX) railroad right-of-way, and five proposed stations: Freetown, Fall River Depot, Battleship Cove, King's Highway, and Whale's Tooth. The Southern Triangle also includes 4 proposed layover facility sites (one in Freetown, two in New Bedford and one in Fall River) and 7 proposed traction power sites located along the existing Fall River Secondary (active CSX) and the existing New Bedford Main Line (active CSX) railroad ROWs in Berkley, Freetown, New Bedford, and Fall River. Four of the traction power sites are proposed at locations that will serve either the Attleboro Alternative or the Stoughton Alternative.

The Southern Triangle results are discussed below from north to south by community and station, and are listed in the Cultural Resources Reconnaissance Survey (March 2009), Volume VI, Appendix A and in the Supplemental Cultural Resources Reconnaissance Survey (July 2009), Volume III, Appendix C. The surveyed properties discussed below are mapped on Figures 4.8-1 through 4.8-7.

Taunton

Approximately 0.7 miles of the New Bedford Main Line rail right-of-way extends through Taunton. There are no properties listed in, determined eligible, or recommended as eligible for the National Register along the New Bedford Main Line in Taunton. Historic properties located in Taunton along the Stoughton Alternative are discussed in the subsequent section on the Stoughton and Whittenton Alternatives.

Berkley

Approximately 2.8 miles of the New Bedford Main Line and 0.7 miles of the Fall River Secondary rail rights-of-way, and one traction power site, are in Berkley as part of the Stoughton Alternative. The junction of the New Bedford Main Line and Fall River Secondary with grade crossings at Myricks and Mill streets occurs within the Myricks Area (Map No. Be.C), a nineteenth-century railroad village. The New Bedford Main Line passes within 50 feet of 1 Macomber Street (Map No. Be.006) at the Padelford Street grade crossing, which is an Italianate style farmhouse constructed circa 1860. Both properties are recommended as potentially eligible for National Register listing.

One traction power site (TP-06/TP-27) is proposed in Berkley as part of the Attleboro and Stoughton Alternatives.

- TP-27, Paralleling Station (PS-2) as part of the Attleboro Alternative or TP-06, Switching Station (SWS-2) as part of the Stoughton Alternative, is located at the Myricks Street grade crossing of the New Bedford Main Line, within the recommended National Register eligible Myricks Area of mid-nineteenth- to early-twentieth-century residences (Map No. Be.C,).

Lakeville

Approximately 3.5 miles of the New Bedford Main Line and 0.3 miles of the Fall River Secondary Line rail rights-of-way are in Lakeville as part of the Stoughton Alternative. The Pierce and Haskins Cemetery (Map No. La.024), which is located 200 feet east of the Fall River Secondary right-of-way and is accessible from Adams Lane in Berkley, contains approximately 45 slate and granite headstones dating from 1785 to 1892. Bridge No. 18.37 Over the Assonet River (Map No. La.025), constructed in 1906, carries the Fall River Secondary over the Assonet River in Lakeville and is a rare surviving example of a two-span timber deck railroad bridge with timber abutments. The Assonet Cedar Swamp Area (Map No. La.C) in Lakeville is a cultural landscape encompassing the majority of the New Bedford Main Line that extends through Lakeville. It is comprised of approximately 2,670 acres of natural resources and cultural resources dating from the early eighteenth to early twentieth century. These three properties are recommended as potentially eligible for National Register listing.

There are currently no proposed layover facilities or traction power sites in Lakeville. One bridge noted as having insufficient information in the March 2009 report, Bridge over Cedar Swamp River (Map No. La.022, Photo No. 237), was surveyed and found to not be National Register eligible.

Freetown

Approximately 3.5 miles of the New Bedford Main Line and 5 miles of the Fall River Secondary rail rights-of-way, two traction power sites, one layover facility and the proposed Freetown station, are in Freetown as part of the Stoughton Alternative. The George Cummings House (Map No. Ft.002) at 76 Chace Road is a Cape Cod cottage built in 1806 that is sited approximately 400 feet from the New Bedford Main Line and is recommended as eligible for National Register listing. The Richmond Road/Maple Tree Crossing Bridge (Map No. Ft.009), situated approximately 100 feet north of the Fall River Secondary Line near the grade crossings at Richmond and Beechwood roads, is a dry-laid stone three-arch structure built in 1820–1824 and determined eligible for National Register listing. The National Register-listed Assonet Historic District (Map No. Ft.D) on the Fall River Secondary Line is a town center dating from 1720 to the mid twentieth century. It encompasses one property, a cattle pound, which extends into the APE. The Slab Bridge Road Area (Map No. Ft.C) is adjacent to or overlaps three grade crossings on the Fall River Secondary and is an intact neighborhood of late eighteenth- to early twentieth-century residential architecture that is recommended as National Register eligible.

Two traction power sites (TP-08/TP-28 and TP-10/TP-31) and one layover facility (No. 5) are proposed in Freetown as part of the Attleboro and Stoughton Alternatives.

- TP-28, Paralleling Station (PS-3) as part of the Attleboro Alternative or TP-08, Paralleling Station (PS-3) as part of the Stoughton Alternative, is located in a forested area on the New Bedford Main Line, near an existing electrical transmission line. There are no National Register listed, determined eligible, or recommended eligible properties in the APE.
- TP-31, Paralleling Station (PS-5) as part of the Attleboro Alternative or TP-10, Paralleling Station (PS-4) as part of the Stoughton Alternative, is located at the Copicut Road grade crossing of the Fall River Secondary rail ROW. No National Register listed, determined eligible, or recommended eligible historic properties have been identified in the APE.
- The ISP Layover Facility is located on the Fall River Secondary between the proposed Freetown Station and the Fall River city boundary. No National Register listed, determined eligible, or recommended eligible historic properties have been identified in the APE.

New Bedford

Approximately 7.4 miles of the New Bedford Main Line rail right-of-way, three traction power sites, one layover facility and two stations – King's Highway and Whale's Tooth – are located in New Bedford as part of the Stoughton Alternative. All the historic resources identified in New Bedford are along the New Bedford Main Line and south of Route 140. In the general vicinity of King's Highway Station between Route 140 and King's Highway Station/Tar Kiln Road, is the massive, reinforced concrete Belleville Warehouse Company Cotton Storage Building (Map No. NB.012) constructed in 1916. The warehouse is located on the east side of the New Bedford Main Line near the Nash Road railroad crossing and was determined eligible for National Register listing by the Keeper of the National Register. The following resources are recommended as potentially eligible for listing in the National Register. The Manomet Mills Cotton Mill No. 4 (Map No. NB.011), located at 91 King Street on the east side of the New Bedford Main Line, is a brick loft constructed in 1920 for the purpose of spinning cord tire fabric. The Lambeth Rope Corporation Complex (Map No. NB.010) is a brick loft constructed between 1894 and 1918 to manufacture pulley ropes for textile mills, and is located at 627 to 637 Tarkiln Hill Road along the west side of the New Bedford Main Line, near the Tarkiln Hill Road railroad crossing.

Between King's Highway Station/Tar Kiln Road and Route I-195, the following properties are recommended as National Register eligible. The Brook Street Industrial and Commercial Area (Map No. NB.B) is a linear area along the east side of the New Bedford Main Line between Coggeshall, Collette, and Brook streets that is comprised of eight late-nineteenth- and early-twentieth-century brick mill complexes. Connected early-twentieth-century brick buildings comprise the Pierce Brothers Textile Mill Complex (Map No. NB.026), manufacturers of fine cotton cloth products, that is located west of the New Bedford Main Line at 1125 County Street. The Gothic Revival-style, wood-frame Christ Presbyterian Church (Map No. NB.029), located approximately 250 feet west of the New Bedford Main Line at 1097 County Street, was constructed circa 1890. The Purchase Street Fire Station (Map No. NB.053) on the west side of the New Bedford Main Line at 2071 Purchase Street is a Renaissance Revival brick building constructed circa 1910.

The area between I-195 and Route 6 includes the following National Register listed properties. The Acushnet Heights Historic District (Map No. NB.C) is a nineteenth-century residential neighborhood located west of the rail right-of-way near Acushnet Avenue. The Wamsutta Mills Historic District (Map No. NB.D), comprised of a cotton cloth mill established in 1847 and associated worker housing, is located east and west of the New Bedford Main Line where it crosses Acushnet Avenue. The Union Street Railway Carbarn (Map No. NB.063) at 1959 Purchase Street in Weld Square, is a Classical Revival style, two-story, brick structure constructed in 1910. The Dawson Building (Map No. NB.065) at 1851 Purchase Street is a Classical Revival style, brick office building with cast-iron storefronts built in 1896. Both are also within the Acushnet Heights Historic District.

The following properties located between I-195 and Route 6 are recommended as eligible for National Register listing. The Guardian Angel Parochial Schoolhouse (Map No. NB.064) is a wood-frame building with a hip roof and front gabled entrance, constructed in 1896 and is located 300 feet east of the New Bedford Main Line at 844 Acushnet Avenue. The Classical Revival Style, brick New Bedford Textile School (Map No. NB.069) constructed between 1899 and 1911 sits one block west of the New Bedford Main Line at 1213 Purchase Street across John F. Kennedy Highway from the proposed Whale's Tooth Station.

Three traction power sites and one layover facility are proposed in New Bedford as part of the Attleboro and Stoughton Alternatives.

TP-07, Substation (TPSS-2) as part of the Stoughton Alternative is located south of Samuel Barnett Boulevard on the New Bedford Main Line, near the existing electrical transmission line. No National Register listed, determined eligible, or recommended eligible historic properties have been identified in the APE.

- TP-29, Paralleling Station (PS-6) as part of the Attleboro Alternative is located on the New Bedford Main Line, across from the proposed Church Street layover facility. Two new resources (not eligible) were surveyed within 400 feet of the proposed access road. No National Register listed, determined eligible, or recommended eligible historic properties have been identified in the APE.
- TP-30, Paralleling Station (PS-4) as part of the Attleboro Alternative or TP-09, Paralleling Station (PS-6) as part of the Stoughton Alternative is located on the New Bedford Main Line within 400 feet of four National Register listed resources: the Acushnet Heights Historic District (Map No. NB.C), Wamsutta Mills Historic District (Map No. NB.D), Union Street Railway Carbarn (Map No. NB.063), and the Dawson Building (Map No. NB.065); and one recommended National Register eligible resource: Guardian Angel Parochial Schoolhouse (Map No. NB.064).
- The Church Street Layover Facility is located on the west side of the New Bedford Main Line rail ROW near Church Street. No National Register listed, determined eligible, or recommended eligible historic properties have been identified in the APE.
- The Wamsutta Street Layover Facility is located on the east side of the New Bedford Main Line rail between Wamsutta Street and the proposed Whale's Tooth Station. The National Register Listed Wamsutta Mill Historic District (Map No. NB.D) and the recommended National Register eligible Revere Copper Products mill (Map No. NB.080) are both located about 400 feet to the north.

Fall River

Approximately 6.5 miles of the Fall River Secondary line rail right-of-way, one traction power site and two stations, Fall River Depot and Battleship Cove, are located in Fall River as part of the Stoughton Alternative. All of the historic resources in Fall River are situated along the Fall River Secondary rail corridor. The Southern Triangle encompasses seven historic districts and six individual properties included in the Fall River Multiple Resource Area (MRA) (Map No. FR.C). The boundaries of the Fall River MRA are the city limits. The entire MRA consists of five National Register Historic Districts, 90 properties individually listed in the National Register, and four districts and one individual property determined eligible for National Register listing.

The following properties located between the Freetown town line and Route 79 are listed in the National Register. The William Collins House (Map No. FR.005, FR.C) is Federal style Cape Cod cottage constructed circa 1800 that is approximately 300 feet east of the Fall River Secondary at 3775 North Main Street. The North Christian Congregational Church (Map No. FR.006, FR.C) is a Gothic Revival style wood-frame building constructed circa 1842 that is located 100 feet west of the Fall River Secondary at 3538 North Main Street. The Borden-Winslow House (Map No. FR.010, FR.C) is a wood-frame, Georgian style house constructed circa 1740 that is located approximately 400 feet east of the Fall River Secondary at 3063 North Main Street. The Squire William B. Canedy House (Map No. FR.012, FR.C) is a wood-frame, Federal style house constructed circa 1806 that is located approximately 100 feet east of the Fall River Secondary at 2634 North Main Street.

The following properties located between the Freetown town line and Route 79 are recommended as eligible for National Register listing. The Fall River Country Club Golf Course (Map No. FR.B) located on both sides of the Fall River Secondary at Country Club Road includes portions of a nine-hole golf course designed by A.H. Fenn in 1899. The North Main Street Area (Map No. FR.D) is an approximately one-mile-long residential corridor roughly bounded by the Fall River Secondary to the west. It encompasses a

neighborhood developed between the early nineteenth to the early twentieth century. The Jael Hathaway House (Map No. FR.003) is a wood-frame, Federal style building constructed circa 1785 that is located approximately 400 feet east of the Fall River Secondary at 4042 North Main Street. The Railroad Bridge near Ashley Street (Map No. FR.011) carries the Fall River Secondary over a closed, unnamed dirt road leading to a vacant pier on the Taunton River. The structure dates from the late nineteenth or early twentieth century and is a rare surviving single-span timber stringer bridge with stone abutments. The William J. Wiley Middle School (Map No. FR.013) is a Classical Revival style, steel and concrete building with red brick sheathing and brownstone trim constructed from 1911 to 1912. The school is located approximately 500 feet east of the Fall River Secondary at 2613 North Main Street within the potentially National Register eligible North Main Street Area.

The following properties located between Route 79 and President Avenue are listed in the National Register. The Border City Mills (Map No. FR.E, FR.C) are located on both sides of Weaver Street west of the Fall River Secondary and were constructed between 1872 and 1889 adjacent to a railroad spur connecting the Fall River Branch Railroad to a wharf on the Taunton River. The Sagamore Mill Nos. 1 and 3 Complex (Map No. FR.F, FR.C) consists of brick and granite textile mills built between 1888 and 1907, which are located on both sides of Ace Street on the west side of the Fall River Secondary. The Sagamore Mill No. 2 (Map No. FR.G, FR.C) is a five-story granite loft constructed in 1881, located at 1822 North Main Street across the Fall River Secondary right-of-way from the rest of the Sagamore Mills complex. The Foster Spinning Company (Map No. FR.H, FR.C) was constructed in 1916 at 119 Cove Street, west of the Fall River Secondary. The mill was the last new textile manufacturing facility established in Fall River. The Narragansett Mills complex (Map No. FR.J, FR.C) is comprised of nine brick buildings constructed between 1872 and 1895, located at the corner of North Main Street and Narragansett Street, approximately 400 feet east of the Fall River Secondary. The North Burial Ground (Map No. FR.K, FR.C) is a rectangular property bounded by the Fall River Secondary to the west, Brightman Street to the north, North Main Street to the east, and Cory Street to the south. It is the city's oldest municipal cemetery, established circa 1810 and purchased by the City of Fall River in 1825. The Border City Mill No. 2 (Map No. FR.015, FR.C) is an Italianate style brick mill loft with an exterior stair tower constructed in 1873 for the manufacture of woolens that is located approximately 300 feet west of the Fall River Secondary at 1 Weaver Street. The Weaver Street Bridge (Map No. FR.016) over the Fall River Secondary is a single-span, built-up, riveted steel plate, deck girder structure constructed in 1910 that was determined National Register eligible by the MHC. The bridge was rebuilt in 1960, but is notable for its highly decorative cast-iron railings and battered stone abutments. The Hathaway Brightman House (Map No. FR.026, FR.C) is a wood-frame, Gothic Revival style house constructed circa 1858 that is located approximately 400 feet east of the Fall River Secondary at 205 Crescent Street. The St. Joseph's Roman Catholic Church Complex (Map No. FR.066, FR.C) is located approximately 800 feet east of the Fall River Secondary at 1355 North Main Street across from the North Burial Ground. The complex consists of a High Victorian Gothic style, brick church and Second Empire style, wood-frame rectory built circa 1880, and a school constructed in 1930.

The following properties located between Route 79 and President Avenue are recommended as eligible for National Register listing. The Wellington-Brownell Street Area (Map No. FR.I) is an approximately one-half-mile-long neighborhood bounded by the Fall River Secondary to the east. The area encompasses a late-nineteenth- and early-twentieth-century residential neighborhood formerly known as Mechanicsville and is recommended as eligible for National Register listing. The 311 Crescent Street House (Map No. FR.017) is a Second Empire style, multi-family, wood-frame residence constructed circa 1880 that is located approximately 400 feet east of the Fall River Secondary in the Border City Mills neighborhood. The St. Michael's Roman Catholic Church (Map No. FR.050) is a Neo-Gothic Revival style brick building constructed in 1896 that is located approximately 250 feet west of the Fall River

Secondary at 199 Essex Street. The St. Matthew's Convent (Map No. FR.052) is a Colonial Revival style brick and concrete building constructed circa 1920 that is located approximately 300 feet west of the Fall River Secondary at 189 Wellington Street. The St. Matthew's School (Map No. FR.053) is a Colonial Revival style brick and concrete building constructed circa 1920 that is located on the west side of the Fall River Secondary at 221 Wellington Street. The Cotton Warehouse (Map No. FR.67) located on the west side of the Fall River Secondary at 7 Oregon Street, was constructed of brick pier and spandrel walls with iron interior posts circa 1910.

The following properties located between President Avenue and Route I-195 are listed in the National Register. The Diners of Massachusetts Multiple Property Submission (Map No. FR.M) encompasses individual diners throughout Massachusetts, including Al Mac's Diner (Map No. FR.070, FR.M), which is located in the APE at 135 President's Avenue, approximately 300 feet west of the Fall River Secondary. Al Mac's is a stainless steel diner opened by Fall River's McDermott Lunch Company in 1954 and moved to its current location in the mid-1970s. The Lafayette-Durfee House (Map No. FR.082) is a wood-frame Georgian style building constructed circa 1747 that is located approximately 400 feet east of the Fall River Secondary. It was moved to its current location at 94 Cherry Street in 1874.

The following properties located between President Avenue and Route I-195 are recommended as eligible for National Register listing. The Pearce-Durfee Street Area (Map No. FR.L) is a large, one-mile-long residential area bounded by the Fall River Secondary to the west. The area is defined by early nineteenth-century through the twentieth-century residential buildings that filled in a street grid originally laid out by 1850. The 800 Davol Street Inn (Map No. FR.073) is a wood-frame, Second Empire style building constructed circa 1870 that is located approximately 400 feet from the proposed Fall River Depot Station on the Fall River Secondary. The 524 Durfee Street House (Map No. FR.081) is a wood-frame Italianate style house constructed circa 1870 that is located approximately 200 feet east of the Fall River Secondary. The Central Street Bridge over Quequechan River (Map No. FR.084) is located west of the Fall River Secondary, below the I-195 Braga Bridge. It is a single-span stone arch bridge constructed in 1903 in the course of a Fall River railroad grade elimination project and has been determined eligible for listing in the National Register.

The following property located between I-195 and the south terminus of the Fall River Secondary at Battleship Cove Station is listed in the National Register. The American Printing Company - Metacomet Mill (Map No. FR.N, FR.C) is a complex of masonry buildings constructed between 1847 and the early twentieth century along Anawan Street. The portion of the complex to the east of the Fall River Secondary contains the earliest buildings.

The following properties located between I-195 and the south terminus of the Fall River Secondary at Battleship Cove Station are recommended as eligible for National Register listing. The American Printing Company Machine Shop (Map No. FR.088) is located approximately 400 feet west of the Fall River Secondary near Battleship Cove Station, at the corner of Anawan and Water streets. The machine shop is a brick mill loft constructed circa 1900 for the neighboring American Printing Company-Metacomet Mill, which is listed in the National Register. The Borden and Remington Company (Map No. FR.089) consists of a brick loft with connected brick structures constructed as a paint mixing factory circa 1890. The mill is located at 105 Anawan Street on the west side of the Fall River Secondary near Battleship Cove Station.

One traction power site is proposed in Fall River as part of the Attleboro and Stoughton Alternatives.

- TP-11, Paralleling Station (PS-05) as part of the Stoughton Alternative is located in a dense urban area on the Fall River Secondary, near the proposed Fall River Depot Station, across from the

recommended National Register eligible Pearce-Durfee Street Area (FR.L), a neighborhood constructed between 1870 and 1920.

Stations

Three of the proposed stations (Whale's Tooth, Fall River Depot, and Battleship Cove) have at least one historic resource within the APE that is an NHL or is listed in, previously determined eligible for, or recommended as potentially eligible for the National Register. The proposed Whale's Tooth Station on the New Bedford Main Line is across John F. Kennedy Highway from the recommended eligible New Bedford Textile School. The proposed Fall River Depot Station on the Fall River Secondary is adjacent to the Pearce-Durfee Street Area and 800 Davol Street Inn, which are both recommended as eligible. The proposed Battleship Cove Station at the terminus of the Fall River Secondary is adjacent to the National Register listed American Printing Company–Metacomet Mill complex, and the recommended eligible American Printing Company Machine Shop, and Borden and Remington Company. The remaining two proposed stations (Freetown and King's Highway) do not have any historic resources within the APE that are designated as NHLs or listed in, previously determined eligible for, or recommended as potentially eligible for the National Register.

Attleboro Alternative

The Attleboro Alternative consists of the existing Northeast Corridor (active and electrified) railroad ROW, the new 2.55-mile long Attleboro Bypass railroad ROW, and the existing approximately nine-mile Attleboro Secondary ROW (active CSX), along with nine proposed new and three upgraded existing stations. There are no new traction power sites proposed along the Northeast Corridor, which is already electrified. Three layover facilities are planned in Boston, but information about potential locations was not available at the time of this survey. The Northeast Corridor, Attleboro Bypass, and Attleboro Secondary results are discussed below from north to south by community and station.

The architectural survey of the Northeast Corridor was limited to the identification of historic resources that have been previously documented in the Massachusetts Inventory or National Register, new survey around the Sharon and Mansfield stations where upgrades are proposed, and an update of the National Register status of properties that were previously recorded in Amtrak's Northeast Corridor Improvement Project survey (Deleuw, Cather/Parsons n.d., 1978a, 1978b; Historic Resource Consultants, Inc. 1993, 1994). The historic resources discussed below are mapped in Figures 4.8-1 through 4.8-16.

Boston (Readville Only)

Approximately 0.3 miles of the Northeast Corridor rail ROW passes through the Readville Junction section of Boston as part of the Attleboro Alternative. This section includes the Sprague Street Bridge over Penn Central Railroad (Map No. Bo.001), which has been determined National Register eligible, and the recommended National Register-eligible Readville Car Shops Complex (Map No. Bo.A).

Dedham

Approximately 1.5 miles of the Northeast Corridor rail ROW passes through Dedham as part of the Attleboro Alternative. A portion of one National Register-listed multiple resources area is located in this section, Blue Hills National Register Multiple Resource Area (MRA) (Map No. De.A).

Westwood

Approximately 0.8 miles of the Northeast Corridor rail ROW passes through Westwood as part of the Attleboro Alternative. No National Register listed, determined eligible, or recommended National Register eligible historic properties have been identified in the APE.

Canton

Approximately 5.7 miles of the Northeast Corridor rail ROW passes through Canton as part of the Attleboro Alternative. The National Register listed Blue Hills MRA (Map No. Ca.E, De.A, Qu.A, Br.A, Ra.A), the determined eligible Chapman Street Bridge (Map No. Ca.026), and the National Register listed Canton Viaduct (Map No. Ca.027) are located within this section of the APE. Five resources in this section are recommended as eligible for National Register listing: Canton Junction Railroad Station (Map No. Ca.001), Revere Copper Company Railroad Embankment (Map No. Ca.002), the Revere Copper Company Works Area (Map No. Ca.B), the Neponset Street Area (Map No. Ca.F), and the Neponset Cotton Mill Area (Map No. Ca.G).

Sharon

Approximately 4.7 miles of the Northeast Corridor rail ROW passes through Sharon as part of the Attleboro Alternative, which includes project improvements around the existing, historic Sharon Station. This section includes the National Register listed Maskwonicut Street Bridge (Map No. Sh.001), as well as the recommended National Register eligible Sharon Waterworks (Map No. Sh.002), Sharon Railroad Station (Map No. Sh.003), Webster House (Map No. Sh.007), and Charles Herbert Nutting House and Carriage House (Map No. Sh.008).

Foxborough

Approximately 2.7 miles of the Northeast Corridor rail ROW passes through Foxborough as part of the Attleboro Alternative. This section includes the National Register-listed Captain Joseph Pratt House (Pratt Mansion) (Map No. Fo.001).

Mansfield

Approximately 4.5 miles of the Northeast Corridor rail ROW and 0.7 miles of the proposed Attleboro Bypass extend through Mansfield as part of the Attleboro Alternative, which includes project improvements around the existing Mansfield Station. The Mansfield Station is not an historic resource. This section includes Walter M. Lowney Chocolate Factory (Map No. Ma.001), Harding House (Map No. Ma.012), Apollos Skinner House (Map No. Ma.013), and Wading River Railroad Bridge (Map No. Ma.014), which are all recommended as National Register eligible.

Attleboro

Approximately 2.0 miles of the proposed Attleboro Bypass, 0.4 miles of the Attleboro Secondary rail ROW, and one proposed traction power site are located within Attleboro as part of the Attleboro Alternative. This section of the Attleboro Secondary includes the recommended National Register eligible Residence and Barn, 457 Pleasant Street (Map No. At.003).

- TP-24, Switching Station (SWS-1) is located on the Attleboro Bypass north of the Richardson Avenue grade crossing. No National Register listed, determined eligible, or recommended eligible historic properties have been identified in the APE.

Norton

Approximately 4.3 miles of the Attleboro Secondary rail ROW, one station, and one traction power site are located within Norton as part of the Attleboro Alternative. This section includes five resources recommended as eligible for National Register listing: the Wading River Area (Map No. No.B), Chartley Area (Map No. No.C), Taunton Copper Works (Map No. No.D), William M. Sturdy House (Map No. No.001) and the William A. Sturdy House (Map No. No.002).

- TP-25, Paralleling Station (PS-1) site is located west of Taunton Avenue at mile post 30.06 on the Attleboro Secondary. No National Register listed, determined eligible, or recommended eligible historic properties have been identified in the APE.
- The Barrowsville Station site is located west of South Worcester Street. Two resources that are recommended as eligible for National Register listing have been identified in the APE: the Wading River Area (Map No. No.B) and the Chartley Area (Map No. No.C).

Taunton

Approximately 6.7 miles of the Attleboro Secondary rail ROW, two new stations, and two traction power facilities are located within Taunton as part of the Attleboro Alternative. This section of ROW includes the National Register-listed Massachusetts State Hospitals and State Schools Multiple Property Submission (Map No. Ta.R), specifically the Taunton State Hospital Historic District (Map No. Ta.S); and the Taunton Multiple Resource Area (Map No. Ta.C), specifically the N.S. Mason House (Map No. Ta.181), St. Thomas Episcopal Church (Map No. Ta.208), McKinstrey House (Map No. Ta.209), Henry G. Brownell House (Map No. Ta.211), Lord-Baylies-Bennett House (Map No. Ta.245), Samuel Washburn House (Map No. Ta.246), Samuel Colby House (Map No. Ta.254), Sarah A. Haskins House (Map No. Ta.259), J. C. Bartlett House (Map No.Ta.266), Albert Field Tack Works (Map No. Ta.293), H. B. Lothrup Store (Map No. Ta.294), and the William Lawrence House (Map No. Ta.309). The following properties are recommended as National Register eligible: the Camp Myles Standish - Paul Dever State School (Map No. Ta.P), Tremont Street Area (Map No. Ta.T), Hodges Avenue Area (Map No. Ta.U), Harrison Street Area (Map No. Ta.V), Staples Coal Company Coke Silos and Warehouse (Map No. Ta.160), Taunton Car Manufacturing Company Building (Map No. Ta.206), Joseph E. Wilbar House (Map No. Ta.213), and the Rhodes Button Company (Map No. Ta.225).

- TP-21, Paralleling Station (PS-2) is located between proposed Taunton Depot station and Porter Street grade crossing. The National Register-listed Henry G. Brownell House (Map No. Ta.211) and the recommended National Register eligible Joseph E. Wilbar House (Map No. Ta.213) and Rhodes Button Company (Map No. Ta.225) are situated near TP-21.
- TP-26, 115k Substation (TPSS-1) is located on the Attleboro Secondary near the proposed East Taunton North Station. The recommended National Register eligible Hart Street Area (Map No. Ta.L) consisting of mid-nineteenth- to early-twentieth-century residences is located to the northwest of the proposed substation.
- Taunton Depot Station is proposed on Oak Street at the existing GATRA bus station. The Taunton Car Manufacturing Company Building (Map No. Ta.206), which is recommended as National Register eligible, is located at 3 Myrtle Street, approximately 400 feet south of the proposed station.

- East Taunton North Station is proposed off Route 140 at the Target Plaza and was surveyed for the Stoughton Alternative and included in the March 2009 report. No National Register listed, determined eligible, or recommended eligible historic properties have been identified in the APE.

The following properties located on the Attleboro Secondary between the Stoughton Line and the East Taunton (North) Station are listed in the National Register. The Alfred Paul House (Map No. Ta.087, Ta.C) is a Second Empire style wood-frame building constructed circa 1860 that is located at 467 Weir Street, approximately 700 feet southwest of the Attleboro Secondary near Weir Junction. The Weir Engine House (Map No. Ta.088, Ta.C) is a Queen Anne style, brick firehouse constructed in 1889 that is located at 530 Weir Street, approximately 800 feet southwest of the Attleboro Secondary near Weir Junction. The Cohannet Mill No. 3 (Map No. Ta.089) is a brick loft constructed in 1890 that is located at 120 Ingell Street, approximately 200 feet southwest of the Attleboro Secondary near the Ingell Street railroad crossing. These three properties are also within the Weir Village Area (Map No. Ta.K, see below).

The following properties located on the Attleboro Secondary between the Stoughton Line and Taunton Depot Station are recommended as eligible for National Register listing. The Weir Village Area (Map No. Ta.K) extends on either side of the Attleboro Secondary at the Ingell Street grade crossing and encompasses approximately 78 properties associated with the growth of Taunton's nineteenth- and early-twentieth-century industries. Bridge No. 12.00 over Brickyard Road (Map No. Ta.091) carries the Attleboro Secondary over an abandoned dirt road in Taunton and consists of a single-span structure with stone and concrete abutments and two separate superstructures – a built-up riveted beam deck of 1906 on the east and a more recent rolled beam deck on the west. The Hart Street Area (Map No. Ta.L) includes approximately 45 residences constructed between the mid-nineteenth and early-twentieth-centuries and is located almost entirely north of the Attleboro Secondary, equidistant from Weir and Cotley junctions.

Stoughton Alternative and Whittenton Alternative

The Stoughton Alternative consists of the Stoughton Line (active and inactive CSX and commuter) railroad right-of-way a short section of the Attleboro Secondary (active CSX) railroad right-of-way (five proposed stations (North Easton, Easton Village, Raynham Place, Taunton (Dean Street), and Taunton Depot), and three existing stations (Canton Center, Canton Junction, and Stoughton). The Whittenton Alternative is a variant of the Stoughton Alternative in that it uses the Whittenton Branch (inactive) railroad right-of-way.

The Stoughton/Whittenton Alternatives results are discussed below from north to south by community, station site, and layover facility/traction power site. The surveyed properties discussed below are mapped in Figures 4.8-17 through 4.8-22.

Canton

Approximately 2.3 miles of the Stoughton Line rail right-of-way, one traction power facility and two existing stations, Canton Junction Station and Canton Center Station, are located within Canton as part of the Stoughton Alternative. The Stoughton Line rail corridor in Canton is recommended as not National Register eligible.

The following historic properties located along the Stoughton Line in Canton are recommended as potentially eligible for National Register listing. The Canton Junction Railroad Station (Map No. Ca.001) is a Richardsonian Romanesque style, granite and red sandstone building erected in 1892 that is located at

666 Sherman Street, immediately east of the Stoughton Line at the point where it diverges from the Amtrak Northeast Corridor. The Revere Copper Company Railroad Embankment (Map No. Ca.002) is a linear earth mound feature with a single stone culvert from 1835 that is set in a wooded area south of Canton Junction, between the Stoughton Line and Amtrak's Northeast Corridor. The Revere Copper Company Works Area (Map No. Ca.B) is a 33-acre, multiple-building, active industrial complex purchased by Paul Revere in 1801, that is located 800 feet southwest of the Stoughton Line at 104 Revere Street. A portion of the original Revere Copper Company lot line, which is currently used as a parking lot, extends into the APE. The area was the site of the first copper rolling mill in the United States. The Washington Street Commercial and Institutional Area (Map No. Ca.C) is a neighborhood of approximately 55 commercial, civic, and residential buildings centered on Washington Street that straddles the Stoughton Line between Church Street to the south and Chapel Street to the north. It encompasses the Canton Center Area (Map No. Ca.C) and the Canton Public Library (Map No. Ca.006). The library is a cruciform-plan, limestone and brick, Classical Revival style building constructed in 1901 that is located at 786 Washington Street, approximately 600 feet north of the Stoughton Line. It has been determined eligible for listing in the National Register. The Forge Pond Railroad Bridge (Map No. Ca.007) carries the Stoughton Line over a short waterway connecting Forge Pond and Kinsley Pond and is a single span stone arch and reinforced concrete bridge built between 1845 and 1890. The Canton Water Works (Map No. Ca.024) is a Romanesque-style industrial building constructed circa 1835 that is located at 44 Pine Street approximately 100 feet northeast of the Stoughton Line.

One traction power facility is proposed within Canton as part of the Stoughton Alternative.

- TP-02, Switching Station (SWS-1) is located near a late-twentieth-century residential subdivision, with a proposed access road that will extend through the driveway of an industrial loft (not eligible). A recommended National Register eligible stone-and concrete arch Forge Pond Railroad Bridge (Ca.007), constructed between 1845 and 1890, is located to the northeast of TP-02.

Stoughton

Approximately 4.1 miles of the Stoughton Line rail right-of-way with one existing and one proposed station are located within Stoughton as part of the Stoughton Alternative. No proposed traction power sites are within Stoughton as part of the Stoughton Alternative. The existing Stoughton Station is located at Wyman Street and the proposed North Easton Station site is located in Stoughton at the town boundary with Easton. The Stoughton Line rail corridor in Stoughton is recommended as not National Register eligible.

The following historic properties are located along the Stoughton Line in Stoughton. The Downtown Stoughton Area (Map No. St.B) radiates out from Stoughton Station and consists of approximately 386 properties developed with civic, commercial, industrial, and residential buildings between the mid-nineteenth through the mid-twentieth century. The area is recommended as eligible for National Register listing. The Pearl Street Cemetery (Map No.St.022) is the oldest burial ground in Stoughton and is located approximately 1,100 feet northeast of the Stoughton Line near the town center. It consists of a 1.6-acre lot with approximately 400 burial markers from 1737 to 1965 and is recommended as eligible for National Register listing. The Stoughton Town Hall (Map No. St.023) is a Romanesque Revival style building constructed in 1881 that is located at 10 Pearl Street, approximately 400 feet northeast of the Stoughton Line and 600 feet from Stoughton Station. It has been determined eligible for National Register listing by the MHC. The Mystic Rubber Company Building (Map No. St.024) is a brick mill loft constructed in 1877 that is located at 2 Canton Street, on the southwest side of the Stoughton Line near Stoughton Station and the Wyman and Porter street railroad crossings. It is recommended as eligible for National Register listing. The Stoughton Old Colony Railroad Station (Map No. St.025) is a National

Register listed Romanesque Revival style granite building constructed in 1888 that is located at 45-47 Wyman Street, near the Wyman Street railroad crossing serving the Stoughton Line. The Lucius Clapp Memorial Library (Map No. St.026) is a National Register listed Classical Revival style brick building constructed in 1903 that is located at 6 Park Street, approximately 600 feet northeast of the Stoughton Line at Stoughton Station and the Wyman Street crossing. The Meade Rubber Company Building (Map No. St.046) is a brick mill loft constructed in 1916 that is located at 25 Brock Street on the west side of the Stoughton Line and an existing layover facility, and adjacent to the Brock Street railroad crossing. It is recommended as eligible for National Register listing. The Benjamin Marshall House (Map No. St.075, St.D) is located at 1823 Washington Street, approximately 300 feet east of the Stoughton Line. The rear of the property extends west to the railroad. It is a Federal style, wood-frame building constructed circa 1780 that is recommended as National Register eligible.

Easton

Approximately 6.6 miles of the Stoughton Line rail right-of-way, two traction power sites and one station, the Easton Village Station, are located in Easton as part of the Stoughton Alternative. The Stoughton Line rail corridor in Stoughton is recommended as not National Register eligible, with the exception of approximately 2,000 ft of the Stoughton Line: Dighton and Somerset/Old Colony Railroad, Fall River Line Railroad Corridor (Map No. Ea.A) ROW that extends through the existing North Easton National Register Historic District. This portion is recommended as National Register eligible as a contributing element of the historic district.

The following historic properties located on the Stoughton Line in Easton are designated as NHLs or listed in the National Register. The H.H. Richardson Historic District of North Easton (Map No. Ea.D) is a noncontiguous NHL district of five properties containing Richardson Romanesque style buildings designed by Henry Hobson Richardson. The Oliver Ames Free Library (1877) and Oakes Ames Memorial Hall (1879) are located on Main Street, approximately 400 feet west of the proposed Easton Village Station on the Stoughton Line. The Old Colony Railroad Station (1881) is located immediately north of the proposed station abutting the rail right-of-way. The North Easton Historic District (Map No. Ea.B) encompasses the Stoughton Line between Main and Elm streets, and the proposed Easton Village Station. The district is listed in the National Register and includes approximately 160 buildings and six landscapes that date from the late eighteenth to the early twentieth century, including the Ames Company Shovel Shop complex located adjacent to the proposed Easton Village Station. The Stoughton Line right-of-way (Map No. Ea.A) track structure – including bridges, cuts and fills, retaining walls, and signal infrastructure – is recommended as important to the setting of this district. The Old Colony Railroad Station (Map No. Ea.003), located on the east side of the Stoughton Line between the Oliver Street grade crossing to the north and the proposed Easton Village Station to the south, is an H.H. Richardson Richardsonian Romanesque granite and brownstone building constructed in 1881. The station is individually listed in the National Register and is a contributing property to the H.H. Richardson Historic District NHL and the North Easton Historic District.

The following historic properties located on the Stoughton Line in Easton are recommended as eligible for National Register listing. The Holmes-Linden Street Area (Map No. Ea.C) encompasses approximately 400 feet of the Stoughton Line and consists of approximately 78 simple, wood-frame residences constructed in the mid- to late-nineteenth-century to house laborers employed at the Ames Shovel Works and nearby shoe factories. The Center Street Area (Map No. Ea.E) encompasses approximately 0.5 miles of the Stoughton Line and includes approximately 343 wood-frame houses that demonstrate the expansion of North Easton out from its center at the Ames Company Shovel Shop complex from the early nineteenth to the early twentieth century. The Easton Center Area (Map No. Ea.F) encompasses

approximately 0.5 miles of the Stoughton Line right-of-way and includes 120 civic and residential buildings from the late eighteenth through the twentieth centuries. The Hayward-Pool Area (Map No. Ea.G) abuts approximately 1,000 feet of the Stoughton Line at its west edge. It contains residences, a cranberry bog with associated agricultural buildings, and a burial ground developed between 1778 and 192. The Stoughton Line: Dighton and Somerset/Old Colony Railroad, Fall River Line Railroad Corridor (Map No. Ea.A) is an inactive section of the Stoughton Line right-of-way, originally constructed in 1866. Because of the poor integrity and condition of the Stoughton Line corridor, it is not recommended as eligible for the National Register as an independent historic district. However, the 2,000 foot-long portion of the Stoughton Line railroad ROW within the North Easton Historic District (MHC Nos. EST.E and EST.B) between Main and Elm streets is recommended as eligible for the National Register as a contributing element to the existing North Easton Historic District (Supplemental Cultural Resources Reconnaissance Survey, Volume III).

Two proposed traction power sites are located in Easton as part of the Stoughton Alternative.

- TP-03, Paralleling Station (PS-1) is located south of the proposed North Easton Station, near a shopping center and contemporary residential subdivisions. No National Register listed, determined eligible, or recommended eligible historic properties have been identified in the APE.
- TP-04, Substation (TPSS-1) is located in a forested area near Hockomock Swamp. No National Register listed, determined eligible, or recommended eligible historic properties have been identified in the APE.

Raynham

Approximately 4.9 miles of the Stoughton Line and 1.2 miles of the Whittenton Branch rail rights-of-way, along with one proposed station, the Raynham Place Station, are located within Raynham as part of the Alternative. The Raynham Place Station is on the Stoughton Line near the Easton town boundary. There are no proposed traction power sites in Raynham. The portion of the Stoughton Line rail ROW corridor located in Raynham is recommended as not National Register eligible.

The following properties along the Stoughton Line and Whittenton Branch in Raynham are recommended as eligible for National Register Listing. The property at 87 Prospect Hill Street (Map No. Ra.001) is a farmstead that extends between Prospect Hill Street and the west side of the Stoughton Line, and includes a wood-frame house constructed circa 1890 and several outbuildings. The Carver Street Area (Map No. Ra.B) is located on the east side of the Stoughton Line at the Carver Street railroad crossing and consists of six civic, religious, and residential properties constructed between 1865 and 1905. The Broadway-Center Street Area (Map No. Ra.C), which is centered on Broadway (State Route 138), encompasses portions of the Stoughton Line and abuts the west side of the Whittenton Branch. The area includes residential, commercial, and civic properties constructed between approximately 1860 and 1960. The Dog Kennel and Track Property (Map No. Ra.011) is located at 385 Thrasher Street along the east side of the Stoughton Line near the Britannia Street railroad crossing and the Taunton city boundary. It includes a wood-frame farmhouse constructed circa 1870, a fenced kennel and dog run complex, and a large, oval dirt track with an announcer's podium that abuts the railroad.

Taunton

Approximately 2.0 miles of the Stoughton Line and 2.1 miles of the Whittenton Branch rail rights-of-ways are located within Taunton as part of the Stoughton Alternative, as well as approximately 1.6 miles of the Attleboro Secondary rail right-of-way between Weir Junction and Cotley Junction that connects the Stoughton Line to the New Bedford Main Line. Two new stations are proposed in Taunton: Taunton

(Dean Street) and Taunton Depot, as well as one traction power site. The portion of the Stoughton Line rail corridor located in Taunton is recommended as not National Register eligible.

The Taunton Multiple Resource Area (MRA) (Map No. Ta.C) includes five National Register Historic Districts and 87 properties individually listed in the National Register, which are located within the city limits of Taunton. The South Coast Rail project APE encompasses one historic district and 10 individual properties included in the Taunton MRA.

The following properties located between the Raynham town boundary and the junction of the Stoughton Line with the Attleboro Secondary are listed in the National Register. These properties are all within the Taunton Center Area (Map No.Ta.B, see below). The Dean-Hartshorn House (Map No. Ta.018, Ta.C) is a Georgian style building constructed circa 1798 that is located approximately 600 feet east of the Stoughton Line at 68 Dean Street. The Old Colony Railroad Station (Map No. Ta.019, Ta.C) is a brick structure constructed in 1876 that is located on the west side of the Stoughton Line between the Dean Street railroad crossing and the proposed Dean Street Station. The William Woodward House (Map No. Ta.020, Ta.C) is a Federal style house constructed circa 1830 that is located at 117 Arlington Street, approximately 200 feet west of the Stoughton Line, near the Dean Street crossing and the proposed Dean Street Station. The house was originally located on Dean Street, where it was used as a depot by the Old Colony and Newport Railroad from 1866 to 1881. The Charles R. Atwood House (Map No. Ta.021, Ta.C) is an Italianate style, wood-frame building constructed circa 1850 that is located at 30 Dean Street, approximately 400 feet west of the Stoughton Line near the Dean Street railroad crossing. The Theodore Dean House (Map No. Ta.022, Ta.C) is a wood-frame building constructed in 1866 that is located approximately 500 feet west of the Stoughton Line at 26 Dean Street. The C.J. H. Bassett House (Map No. Ta.023, Ta.C) is an irregular-plan Gothic Revival style wood-frame building constructed in 1851 that is located approximately 950 feet west of the Stoughton Line at 20 Chestnut Street. The Abiezar Dean House (Map No. Ta.028, Ta.C) is a Federal style wood-frame building constructed circa 1835 that is located approximately 800 feet west of the Stoughton Line at 57 Summer Street. The Neck of Land Cemetery (Map No. Ta.029, Ta.C), which dates from 1687 to 1889, is located on Summer Street, approximately 100 feet west of the Stoughton Line. The cemetery is Taunton's oldest burial ground and contains the graves of many of Taunton's early prominent figures.

The following properties located between Raynham Junction (the Raynham town boundary) and Weir Junction (the junction of the Stoughton Line with the Attleboro Secondary) are recommended as eligible for National Register listing. The Taunton Center Area (Map No. Ta.B) is a large, irregularly shaped area located along the north and west sides of the Taunton River east and west of the Stoughton Line. It encompasses the Church Green National Register Historic District (outside the APE), the larger Church Green LHD (within the APE), and the Ashland Street Area (within the APE, no map number). The High Street Area (Map No. Ta.D) is a residential neighborhood bounded by the Mill River to the north, the Stoughton Line to the east, the Attleboro Secondary to the south, and Winthrop Street to the west. It encompasses approximately 200 properties, the majority of which are Victorian period residences constructed between 1870 and 1910.

One property on the Whittenton Branch in Taunton is listed in the National Register. The Whittenton Mills Complex (Map No. Ta.G, Ta.C) is bounded by the Whittenton Branch right-of-way to the east, Whittenton Street to the south, and the Mill River to the west. The 20-acre industrial complex contains 10 major attached and freestanding brick and wood-frame industrial buildings dating from circa 1858 to 1895.

The following properties on the Whittenton Branch in Taunton are recommended as eligible for National Register listing. The Whittenton Mills Area (Map No. Ta.F) is centered on Whittenton Street, east of the Mill River, and located east and west of the Whittenton Branch. The area encompasses the proposed Whittenton Station site and approximately 80 properties developed with worker housing and industrial buildings associated with the National Register listed Whittenton Mills Complex (Map No. Ta.G) discussed above. The Reed and Barton Mill Village (Map No. Ta.H) is a compact neighborhood of worker housing located along Meadow, Cottage, and Lawrence streets, to the southeast of Whittenton Branch near the proposed Whittenton Station site. It encompasses approximately 87 wood-frame residences constructed between the mid- to late nineteenth century. The Ancient Whittenton Area (Map No. Ta.I) is a linear area located on Whittenton and Warren streets that intersects the Whittenton Branch at the Warren Street railroad crossing and encompasses approximately 40 eighteenth- and nineteenth-century properties. The Railroad Bridge over the Mill River (Map No. Ta.149), located on the Whittenton Branch between Warren and Whittenton streets, is a five-span reinforced concrete deck bridge built circa 1930 with an unusual tripartite design on the reinforced concrete piers, an asphalt deck surface, and pipe railings.

One traction power facility is proposed within Canton as part of the Stoughton Alternative.

- TP-05, Paralleling Station (PS-2) is located on the south side of High Street within 200 feet of the recommended National Register eligible High Street Area (Ta.D) that consists of early nineteenth to early twentieth century housing.

Stations

Two of the proposed stations (Easton Village and Taunton [Dean Street]) have at least one historic resource within the APE that is designated as an NHL, or listed in, previously determined eligible for, or recommended as eligible for the National Register. The proposed Easton Village Station on the Stoughton Line in Easton is located immediately adjacent to the Easton Railroad Station (Map No. Ea.003), which is part of an NHL district and is within the North Easton Historic District. The proposed station site abuts important contributing properties of this district that are associated with the Ames Shovel Works. The railroad also contributes to the setting of the district. The proposed Taunton (Dean Street) Station in Taunton is adjacent to the recommended eligible Taunton Center Area.

The remaining three proposed stations (North Easton, Raynham Place, East Taunton [North]) do not have any historic resources within the APE that are designated as an NHL or listed in, determined eligible for, or recommended as eligible for the National Register.

Two existing stations are historic resources: Canton Junction (Map No. Ca.001) at the junction of the Stoughton Line and Amtrak Northeast Corridor and Stoughton Station (Map No. St.025), which is also within the Downtown Stoughton Area. The third existing station, Canton Center, is not a historic resource but is adjacent to the Canton Center Area.

Rapid Bus Alternative

The Rapid Bus Alternative would provide service connecting both Fall River and New Bedford to South Station in Boston along existing highway routes. The primary work area extends approximately 30 miles along Interstate-93 and Route 24 in Quincy, Braintree, Randolph, Holbrook, Avon, Brockton, West Bridgewater, Bridgewater, and Taunton. Six stations are proposed in Taunton, Freetown, New Bedford, and Fall River. The surveyed properties discussed below are mapped on Figures 4.8-23 through 4.8-29.

The architectural survey for the Rapid Bus Alternative was limited to the identification of historic resources located within the working APE (50 ft from edge of the existing road ROW) that have been previously surveyed and included in the Massachusetts Inventory or National Register.

Quincy

The Blue Hills MRA (Map No. Ca.E, De.A, Qu.A, Br.A, Ra.A) is a contiguous 6,600-acre area in Quincy, Braintree, Milton, Randolph, Dedham, and Canton that is listed in the National Register. No other National Register listed, determined eligible, or previously recommended eligible historic properties have been identified in the APE.

Braintree

The Blue Hills MRA (Map No. Ca.E, De.A, Qu.A, Br.A, Ra.A) is a contiguous 6,600-acre area in Quincy, Braintree, Milton, Randolph, Dedham, and Canton that is listed in the National Register. No other National Register listed, determined eligible, or previously recommended eligible historic properties have been identified in the APE.

Randolph

The Blue Hills MRA (Map No. Ca.E, De.A, Qu.A, Br.A, Ra.A) is a contiguous 6,600-acre area in Quincy, Braintree, Milton, Randolph, Dedham, and Canton that is listed in the National Register. No other National Register listed, determined eligible, or previously recommended eligible historic properties have been identified in the APE.

Holbrook

No National Register listed, determined eligible, or previously recommended eligible historic properties have been identified in the APE.

Avon

Daniel Waldo Field Park (Map No. Av.A), a 650-acre recreational park individually listed in the National Register, is located on the east side of approximately one-half mile of the Route 24 ROW. No other National Register listed, determined eligible, or previously recommended eligible historic properties have been identified in the APE.

Brockton

No National Register listed, determined eligible, or previously recommended eligible historic properties have been identified in the APE.

West Bridgewater

No National Register listed, determined eligible, or previously recommended eligible historic properties have been identified in the APE.

Bridgewater

No National Register listed, determined eligible, or previously recommended eligible historic properties have been identified in the APE.

Stations (Taunton, Freetown, New Bedford and Fall River)

Historic resources around all proposed bus station locations that match proposed rail stations in Freetown, New Bedford, and Fall River can be summarized as follows:

- Freetown: The Freetown Station APE contains no identified National Register listed, determined eligible, or previously recommended eligible historic properties.
- New Bedford: The King's Highway Station does not have any historic resources on the proposed site or within the APE.
- New Bedford: The Whale's Tooth Station APE includes one property (Map No. NB.069) recommended as eligible for the National Register.
- Fall River: The Fall River Depot APE includes one property (Map No. FR.073) recommended as eligible for the National Register.

Detailed information on the resources identified above is provided in the Cultural Resources Reconnaissance Survey, Volumes III and IV (Chapter 2) (PAL, 2009).

One additional station is proposed in Taunton at the Silver City Galleria Mall existing park and ride as part of the Rapid Bus Alternative. No National Register listed, determined eligible, or previously recommended eligible historic properties have been identified in the APE.

Further Historic Resources Surveys

Further Historic Resource Surveys Based on the Initial Cultural Resources Reconnaissance Survey

Based on the results of Cultural Resources Reconnaissance Survey the following recommendations are made for additional surveys of historic resources prior to completion of environmental review and when more design information is available.

The Cultural Resources Reconnaissance Survey indicated that among the Alternatives there are 18 areas/districts and 33 individual properties that are listed or have been determined eligible for listing in the National Register, or are NHLs. The Stoughton Alternative includes 4 areas/districts and 16 individual properties), while within the Southern Triangle area (which is common to all rail alternatives) there are 14 areas/districts and 17 individual properties). An intensive survey is recommended for areas/districts and individual resources that have been identified as potentially eligible for inclusion in the National Register.

The methodology for further evaluation would include additional background research and field survey to analyze the integrity, historical context, and significance criteria met for each resource. Intensive survey efforts would include assessment and evaluation of area boundaries in defining eligible historic districts. The intensive survey would serve as the basis for a determination of eligibility for listing in the National Register. MHC (Massachusetts Historical Commission) Area and Building forms would be completed for each resource to inform consultation between the Corps and MHC on the NR eligibility of resources and determinations of effect on resources. No additional survey is recommended for

resources categorized as not being potentially eligible for the National Register for reasons of lack of integrity and/or distinctive physical characteristics or historical associations.

Further Historic Resource Surveys Based on the Supplemental Cultural Resources Reconnaissance Survey

The supplemental reconnaissance survey for the Attleboro Alternative and the Rapid Bus Alternative with updates of portions of the Stoughton Alternative and the Southern Triangle common to all rail alternatives of the South Coast Rail Project resulted in the identification of areas/districts and individual properties that are listed in, previously determined eligible for, or recommended as eligible for the National Register, as well as designated NHLs within the APE for the rail corridor, proposed station improvements, work sites, and traction power facilities as currently planned. The Supplemental Cultural Resources Reconnaissance Survey, Volume III, Table 7-1 presents a summary of the total number of all historic resources identified during this supplemental survey, and is additional to the resources summarized in the Cultural Resources Reconnaissance Survey, Volume VI, Table 2-1 (PAL March 2009).

The following describes the supplemental historic resources that are listed in, previously determined eligible by the MHC, or recommended as eligible for the National Register. The Supplemental Cultural Resources Reconnaissance Survey, Volume III, Appendix A lists these properties for each alternative included in the supplemental survey, indicating their association with an existing station or a proposed station, or a grade crossing. The results are based on archival research and walkover surveys of project elements new to the South Coast Rail Project, including updates to previous assessments of project elements for the Northeast Corridor component of the Attleboro Alternative. Three bridges in the Southern Triangle common to all rail alternatives and the Stoughton Line railroad corridor in the Stoughton Alternative were surveyed and assessed for National Register eligibility in the supplemental survey. The supplemental survey results are summarized below by project alternative. The Supplemental Cultural Resources Reconnaissance Survey Volume III, Chapters 2 through 6 provide additional discussion of the historic resources identified for each alternative.

The Supplemental Cultural Resources Reconnaissance Survey, Volume III, Table 7-1 lists a total of 7 new areas/districts and 18 new individual properties that are already listed or determined eligible for listing in the National Register, or are NHLs, as follows: Attleboro Alternative (5 areas/districts and 18 individual properties); Rapid Bus Alternative (2 areas/districts and 0 individual properties); Stoughton Alternative Supplemental (0 areas/districts and 0 individual properties); and Southern Triangle Supplemental (0 areas/districts and 0 individual properties).

An intensive survey is recommended of areas/districts and individual resources that have been identified as potentially eligible for inclusion in the National Register prior to completion of environmental review and when more detailed design information is available. The properties identified for further evaluation consist of 10 areas/districts and 15 individual properties on the Attleboro Alternative, 0 areas/districts and 0 individual properties on the Rapid Bus Alternative, 0 areas/districts and 0 individual properties on the Stoughton Alternative Supplemental, and 0 areas/districts and 1 individual property on the Southern Triangle Supplemental. The methodology will include additional background research and field survey to analyze the integrity, historical context, and significance criteria met for each resource.

Intensive survey efforts would include an assessment and evaluation of area boundaries in defining eligible historic districts. The intensive survey would provide a basis for a determination of eligibility for listing in the National Register. MHC (Massachusetts Historical Commission) Area and Building forms

would be completed for each resource to inform consultation between the Corps and MHC on the NR eligibility of resources and determinations of effect on resources. No additional survey is recommended for resources categorized as not being potentially eligible for the National Register, due to lack of integrity and/or distinctive physical characteristics or historical associations.

4.8.2.2 ARCHAEOLOGICAL RESOURCES

The identification of areas of archaeological sensitivity was undertaken in two phases. An initial survey was conducted which included the Stoughton Alternative followed by supplemental surveys which included the Attleboro Alternative and the Rapid Bus Alternative as well as additional survey information on the Stoughton Alternatives.

This section presents the results of the initial reconnaissance survey for the Stoughton Alternative (PAL 2009a), followed by the results of the subsequent survey for the Stoughton Alternative, Attleboro Alternative and Rapid Bus Alternative (PAL 2009b). The discussion of the Stoughton Alternative includes the Whittenton Alternative, which is the same as the Stoughton Alternative, except that it proposes to use the Whittenton Branch of the Stoughton Line.

Table 4.8-3 presents a summary of the archaeologically sensitive areas for the alternatives, including the Southern Triangle rail corridors and stations common to all the project alternatives. The sensitivity assessments are based on background research and walkover surveys of project elements new to the South Coast Rail Project, as well as updates to previous assessments of project elements for the Stoughton Alternative of the New Bedford/Fall River Commuter Rail Extension Project conducted in 2001.

Southern Triangle (Common to All Rail Alternatives)

The Southern Triangle consists of the existing Fall River Secondary (active CSX) railroad right-of-way, the existing New Bedford Main Line (active CSX) railroad right-of-way, and five proposed stations: Freetown, Fall River Depot, Battleship Cove, King's Highway, and Whale's Tooth. No archaeologically sensitive areas were identified within the rail rights-of way; however, several sensitive areas were found immediately adjacent to them. One of these areas is located along the Fall River Secondary line in Freetown. It is the location of a recorded nineteenth-century forge mill complex (FRE-HA-22) next to Forge Pond. The other two areas are located along the New Bedford Main Line in east Freetown and Lakeville. They consist of pre-railroad origin cemeteries where the rail right-of-way appears to have cut through (in the case of Freetown) and/or cut along the historic cemetery properties. Both areas have the potential for unmarked burials in the right-of-way embankments.

Three of the proposed stations (Freetown, King's Highway, and Whale's Tooth) are identified as containing moderate and high sensitivity areas for potentially significant pre-contact sites and documented/recorded post-contact resources. The Freetown Station is located within the Lower Taunton River Basin Archaeological District, an area designated by the MHC as being highly sensitive for significant pre-contact and contact period Native American sites. A 1.6-mile section of the Fall River railroad right-of-way also lies within this archaeological district.

The remaining two stations (Fall River Depot and Battleship Cove) along the Southern Triangle are assessed as having low sensitivity. This assessment is based primarily on the presence of historic and modern period disturbances that have severely compromised the below-ground soil integrity and potential for any meaningful archaeological contexts to be present.

Table 4.8-3 Summary of Archaeologically Sensitive Areas and Recommendations

Project Location	Alternative	*Survey Results*	*Recommendations*
New Bedford Main Line Right-of-Way	All Rail Alternatives	*Low sensitivity* *High: Two historic cemeteries: Howland Cemetery (LAK.806) in Lakeville and Braley Cemetery (FRE.823) in Freetown adjacent to rail right-of-way – potential for unmarked burials in right-of-way embankments*	*Design protection/ stabilization measures along right-of-way property lines*
Freetown Station	All Rail Alternatives	*Low sensitivity* *Moderate and high sensitivity for pre-contact sites (within the Lower Taunton River Basin Archaeological District)*	*Avoid moderate and high sensitive areas, or conduct an intensive (locational) survey*
Fall River Depot	All Rail Alternatives	*Low sensitivity*	*No further work*
Battleship Cove Station	All Rail Alternatives	*Low sensitivity*	*No further work*
King's Highway Station	All Rail Alternatives	*Low sensitivity* *Moderate sensitivity for pre-contact sites; and for 19th c. home-shop site*	*Avoid moderate and high sensitive areas, or conduct an intensive (locational) survey*
Whale's Tooth Station	All Rail Alternatives	*Within historic archaeological Acushnet Ave Waterfront Industrial area – high sensitivity for 19th c. industrial and commercial sites; pre-contact sites*	*Avoid work below clean fill cap, or conduct an intensive (locational) survey*
Wamsutta Layover	All Rail Alternatives	*High sensitivity for pre-contact/contact Native American sites and post-contact Euro-American resources*	*Avoid work below clean fill-geotextile composition cap, or conduct an intensive (locational) survey*
Church Street Layover	All Rail Alternatives	*Moderate sensitivity for pre-contact/contact Native American sites and post-contact Euro-American resources*	*Avoid, or conduct an intensive (locational) survey*
ISP Layover	All Rail Alternatives	*High sensitivity for pre-contact/contact Native American sites related to the Mother's Brook Site (19-BR-106)*	*Avoid, or conduct an intensive (locational) survey*
Weaver's Cove West Layover	All Rail Alternatives	*No/Low sensitivity (previously surveyed)*	*No further work*
Northeast Corridor Right-of-Way	Attleboro	*No/Low sensitivity*	*No further work for diesel or electric options*
Attleboro Secondary Right-of-Way	All Rail Alternatives	*No/Low sensitivity (possible exception of the overhead catenary structure support footings that could extend into archaeologically sensitive strata for primarily pre-contact/contact period Native American sites)*	*No further work for the diesel option; Additional reconnaissance (review of detailed soil profiles based on soil borings) for the electric option overhead catenary structure support footings to determine the presence of archaeologically sensitive strata; possible intensive (locational) survey*

Table 4.8-3 (continued)
Summary of the Archaeologically Sensitive Areas and Recommendations

Project Location	Alternative	*Survey Results*	*Recommendations*
Attleboro Bypass Route	Attleboro	*Areas of low, moderate, and high sensitivity for pre-contact/contact Native American sites and post-contact Euro-American resources*	*Avoid moderate and high sensitive areas, or conduct an intensive (locational) survey*
Barrowsville Station	Attleboro	*Areas of low, moderate, and high sensitivity for pre-contact/contact Native American sites and post-contact Euro-American resources*	*Avoid moderate and high sensitive areas, or conduct an intensive (locational) survey*
Downtown Taunton Station	Attleboro	*Moderate and high sensitivity for post-contact Euro-American resources*	*Avoid, or conduct an intensive (locational) survey*
Stoughton Line Right-of-Way	Stoughton	*Low sensitivity* *High sensitivity area north of Foundry Street and from Elm Street north to Stoughton town line – potential for 18th and 19th c. residential sites* *Hockomock and Pine Swamps – sensitive terraces for pre-contact sites; potential for traditional cultural places for Wampanoag Tribe of Gay Head/Aquinnah*	*Conduct an intensive (locational) survey within sensitive right-of-way sections* *Intensive survey of sensitive terraces may be warranted by project design through the swamps*
Frontage Road	Stoughton	*Low sensitivity*	*No further work*
Grade Separation at Route 138 Crossing	Stoughton	*Low* *Moderate sensitivity for pre-contact and post-contact sites beneath railroad fill*	*Review soil borings data for proposed tunnel work when available; possible intensive (locational) survey*
North Easton Station	Stoughton	*Low* *Moderate sensitivity for pre-contact and underdocumented post-contact sites*	*Avoid moderate sensitive area, or conduct an intensive (locational) survey*
Easton Village Station	Stoughton	*Low* *Moderate sensitivity for pre-contact sites, 18th and 19th c. industrial and railroad-related resources beneath built-up railroad embankment*	*Avoid moderate sensitive areas, or conduct an intensive (locational) survey (if project impacts will extend below current railroad embankment)*
Raynham Place Station	Stoughton	*Low sensitivity*	*No further work*
Taunton (Dean Street) Station	Stoughton	*Low sensitivity*	*No further work*
Taunton Depot Station	Stoughton	*Low* *High sensitivity for cultural deposits related to recorded pre-contact site (19-BR-592)*	*Avoid high sensitive areas, or conduct an intensive (locational) survey*
Third Track (associated with Taunton Depot Station)	Stoughton	*Moderate sensitivity for pre-contact sites*	*Avoid sensitive areas or conduct intensive (locational) survey*

Table 4.8-3 (continued)
Summary of the Archaeologically Sensitive Areas and Recommendations

Project Location	Alternative	*Survey Results*	*Recommendations*
Whittenton Branch Right-of-Way	Whittenton	*Pending completion of fieldwork and data analysis*	*TBD*
Whittenton Junction to Weir Junction Right-of-Way (in Attleboro Secondary Corridor)	Whittenton	*Pending completion of fieldwork and data analysis*	*TBD*
Highway Corridor Rights-of-Way (Route 24, Route I-93/128, I-93/Route 3)	Rapid Bus	*No/Low*	*No further work*

The proposed Wamsutta Layover Facility in New Bedford is assessed as having high archaeological sensitivity for pre-contact/contact Native American habitation and resource procurement/processing sites and post-contact Euro-American domestic, commercial/wharves, and railroad-related structures and cultural deposits below the clean fill-geotextile composition cap. The proposed Church Street Layover Facility in New Bedford is assessed as having moderate archaeological sensitivity for pre-contact/contact Native American habitation and resource procurement/processing sites and underdocumented post-contact Euro-American agricultural-related cultural deposits. The proposed ISP Layover Facility in Freetown is assessed as having high archaeological sensitivity for pre-contact/contact Native American habitation and resource procurement/processing sites, which if present could be contributing elements to the Mother's Brook Site (19-BR-106) within the Lower Taunton River Basin Archaeological District. There could also be underdocumented post-contact period Euro-American agricultural-related cultural deposits. The proposed Weavers Cove West Layover Facility in Fall River was previously surveyed for the Proposed Weaver's Cove LNG Terminal and was not determined to be archaeologically sensitive.

Attleboro Alternative

The Attleboro Alternative includes a new third track on the Northeast Corridor from Readville Junction in Boston to the new Attleboro Bypass in Attleboro (new track in new ROW), the active CSX Attleboro Secondary freight rail line from the new bypass route in Attleboro to Whittenton Junction (upgrade existing track), and two stations: Barrowsville Station in Norton and Downtown Taunton Station (GATRA Site). Sensitivity assessments were completed for the railroad ROWs and the two new stations proposed for this alternative.

No archaeologically sensitive areas were identified within the rail ROWs that include the Northeast Corridor and the Attleboro Secondary active railroad lines. Proposed impacts for new track and track improvements within the rail ROWs are not anticipated to extend outside previously disturbed soil contexts, with the possible exception of the overhead catenary structure support footings that would be needed within the Attleboro Secondary ROW for the electrification option. Archaeologically sensitive strata could be present below the previously disturbed rail bed in filled areas. These strata could contain important pre-contact/post-contact period Native American habitation and resource procurement processing sites.

The proposed Attleboro bypass route is assessed as having areas of moderate and high archaeological sensitivity for pre-contact/contact Native American habitation and resource procurement/processing

sites and post-contact Euro-American agrarian-related cultural deposits. The proposed Barrowsville Station in Norton is assessed as having areas of moderate and high archaeological sensitivity for pre-contact/contact Native American habitation and resource procurement/processing sites and post-contact Euro-American residential and institutional-related cultural deposits associated with documented and extant structures.

The proposed Downtown Taunton Station is assessed as having moderate and high archaeological sensitivity for post-contact Euro-American industrial and railroad-related structures.

Stoughton Alternative

The Stoughton Alternative consists of the Stoughton Line (active and inactive freight and commuter) railroad right-of-way, a short section of the Attleboro Secondary (active freight) railroad right-of-way (Whittenton Alternative only), the Whittenton Branch (inactive) railroad right-of-way (Whittenton Alternative only), and five proposed stations (North Easton, Easton Village, Raynham Place, Taunton [Dean Street], and East Taunton [North]). There are also additional project elements that have been identified for this alternative including a new frontage road in Stoughton along the rail right-of-way, a grade separation (tunnel) crossing at Route 138 in Raynham, and a new third track (outside of the right-of-way) associated with the Taunton Depot Station. High sensitivity areas are assessed for the railroad right-of-way in Easton. These consist of an area north of Foundry Street that contains a documented nineteenth-century house lot and the area between Elm Street and the Stoughton town line that contains documented eighteenth- and nineteenth-century domestic sites.

As identified during the 2001 survey, the sections of the Stoughton Line right-of-way that run through Hockomock and Pine swamps in Easton and Raynham are raised railroad embankments. The rail embankment traverses intermittent terraces in these swamps that could contain potentially significant pre-contact sites (e.g., small and large camps, lithic workshops). Based on the known database for this region, these resources could span the Archaic, Woodland, and even contact periods. The Hockomock and Pine swamps have the potential to be traditional cultural places of the Wampanoag Tribe of Gay Head/Aquinnah The Army Corps will be addressing traditional cultural properties in a separate document pursuant to Section 106 of the National Historic Preservation Act

The proposed Frontage Road in Stoughton is assessed as having a low archaeological sensitivity because of unfavorable environmental conditions and previous earthmoving disturbances. The grade separation (tunnel) crossing at Route 138 in Raynham is assigned a moderate sensitivity for pre-contact and post-contact period resources beneath the railroad ballast and fill.

No archaeologically sensitive areas were identified within the rail right-of way that includes the Attleboro Secondary from Whittenton Junction to Weir Junction. Proposed impacts for track improvements within the rail ROW are not anticipated to extend outside previously disturbed soil contexts, with the possible exception of the overhead catenary structure support footings that would be needed within the Attleboro Secondary ROW for the electrification option. As discussed above, these footings could extend into archaeological sensitive strata below the rail bed in filled areas.

Three of the proposed stations (North Easton, Easton Village, and East Taunton [North]) are identified as containing moderate and high sensitivity areas for potentially significant pre-contact sites and documented/recorded post-contact resources. The Taunton Depot Station in particular contains a recorded pre-contact site (19-BR-592) identified during the 2001 reconnaissance survey for the New Bedford-Fall River Commuter Rail Extension Project. The third track associated with this station is also

assessed as having moderate sensitivity for pre-contact sites. At the Easton Village Station, there may be intact archaeological deposits present beneath the built-up railroad embankment just south of the former passenger station (currently Easton Historical Society). The proposed North Easton Station is also assessed as having moderate sensitivity for pre-contact sites, and at North Easton, possible underdocumented post-contact period resources associated with an extant stone wall.

The remaining two stations (Raynham Place, and Taunton [Dean Street]) are assessed as having low sensitivity. This assessment is based primarily on the presence of historic and modern period disturbances that have severely compromised the below-ground soil integrity and potential for any meaningful archaeological contexts to be present.

Rapid Bus Alternative

The Rapid Bus Alternative provides express Rapid Bus service to South Station in Boston using a proposed dedicated, bus lane to be built along Routes 24 and I-93/128, the existing Interstate-93/Route 3 HOV zipper lane, and a short portion through mixed traffic. No archaeologically sensitive areas were identified within the project highway corridor ROWs. Proposed impacts for road improvements including additional lanes within the highway ROWs are not anticipated to extend outside previously disturbed soil contexts.

Recommendations - Stoughton Alternative, Including the Southern Triangle

No further archaeological survey is recommended for project work elements assessed as having a low sensitivity for potentially significant below-ground resources. This includes sections of the rail rights-of-way where proposed infrastructure improvements will not impact any potentially significant archaeological resources. However, the right-of-way improvements through Hockomock and Pine swamps in Easton and Raynham may involve the construction of a trestle structure. This could result in project impacts to sensitive terrace areas at the bottom of the current railroad embankment. Any such project impacts should be avoided or an intensive (locational) archaeological survey may be warranted in consultation with the Army Corps and other state and local review agencies.

Project work elements assessed as having moderate to high sensitivity could contain potentially significant archaeological resources. Ground disturbances in the sensitive areas should be avoided, or an intensive (locational) archaeological survey may be warranted. The intensive survey(s) would be conducted prior to completion of environmental review and when more design information is available. The intensive survey would be designed to locate and identify any potentially significant and National Register eligible archaeological resources within areas of direct project impacts. The survey would consist of additional background research, including review of soil borings data if and when available, along with subsurface testing in areas of current (or refined) moderate and high sensitivity. The amount and type of subsurface testing would need to be determined for each archaeologically sensitive area where project impacts are planned.

Avoidance zones have been delineated on project maps for the sensitive off right-of-way work areas identified in Lakeville and Freetown (Southern Triangle) where there are two pre-railroad cemeteries and one recorded industrial site complex. Protection measures should be implemented during and after construction along the right-of-way property lines in these areas. These measures could consist of high visibility barriers (i.e., orange construction fencing) and staked hay bales put in place prior to construction work to ensure that soils containing important archaeological deposits and marked/unmarked graves are not inadvertently disturbed during clearing and excavation activities.

Recommendations for Surveyed Areas – All Build Alternatives and the Southern Triangle

No further archaeological investigations are recommended for the Attleboro and Stoughton Alternative rail ROWs where project improvements are not anticipated to extend outside previously disturbed soil contexts resulting from construction, maintenance/improvements, and ongoing rail operations. These disturbed ROW areas include fill materials, ballast, ties, and rails. No further archaeological investigations are recommended for the Rapid Bus Alternative highway corridor ROWs where project improvements are not anticipated to extend outside previous construction disturbances including underground utility easements.

Project work elements for the Attleboro Alternative and the Stoughton and Whittenton Alternatives (Attleboro Bypass, Barrowsville Station, Downtown Taunton Station, Wamsutta Layover Facility, Church Street Layover Facility, and ISP Layover Facility) assessed as having moderate and high sensitivity could contain potentially significant Native American and Euro-American archaeological resources. Project impacts in the sensitive areas should be avoided, or an intensive (locational) archaeological survey may be warranted. The intensive survey(s) would be conducted prior to completion of environmental review and as more design information becomes available. The intensive survey would be designed to locate and identify any potentially significant and National Register eligible archaeological resources within areas of direct project impacts. The survey would consist of additional background research, including review of soil borings data previously generated for the Fall River Secondary and New Bedford Main Lines (Southern Triangle) and for new project elements where available, along with subsurface testing in areas of current (or refined) moderate and high sensitivity. The amount and type of subsurface testing would be determined for each archaeologically sensitive area where project impacts could occur.

Additional reconnaissance survey for overhead catenary structure support footings within railroad ROWs may also be needed to determine the potential for archaeologically sensitive strata below rail bed fill. This additional survey would consist primarily of a review of detailed soil profiles for the project ROWs based on soil borings when available. Intensive survey would be conducted in identified sensitive areas where support footings would extend below the rail bed disturbance/fill deposits.

Outstanding Work Areas

There are a number of proposed work areas for the Build Alternatives within the South Coast Rail APE that have not yet been subjected to an archaeological assessment as part of the cultural resources reconnaissance survey. The completion of these assessments will be undertaken for the LEDPA prior to completion of environmental review and when the design aspects of these project elements have been identified at a level sufficient for survey.

For the Attleboro Alternative archaeological assessments this includes the following project elements:

- existing station modifications (Canton Center, Mansfield, Sharon);
- electrification facilities (substations, switching stations, paralleling stations) and
- associated access roads along the Northeast Corridor and Attleboro Secondary railroad
- ROWs;
- a proposed new bridge at the Canton Viaduct;
- grade crossing/road intersection modifications, particularly where existing driveways will be relocated and other ground disturbances are planned outside of existing rail and road ROWs; and
- temporary and permanent construction easements and property takings off ROW along the railroad corridors including utilities work, staging, and construction access roads.

For the Southern Triangle and the Stoughton Alternative archaeological assessments this includes the following project elements:

- Whittenton Branch ROW (22 out of the 28 private parcels along the ROW);
- existing Stoughton Station modifications;
- electrification facilities (substations, switching stations, paralleling stations and associated access roads) along the Stoughton Line, Attleboro Secondary, Fall River Secondary, and New Bedford Main Line railroad ROWs;
- grade crossing/road intersection modifications, particularly where existing driveways will be relocated and other ground disturbances are planned outside of existing rail and road ROWs;
- temporary and permanent construction easements and property takings off ROW along the railroad corridors including utilities work, staging, and construction access roads; and

For the Rapid Bus Alternative archaeological assessments this includes the following project elements:

- widening of highway corridors, in particular Route 24 outside of the existing highway ROW;
- interchange and bridge reconfigurations including the Braintree Split; and
- modifications to existing bus stations.

Supplemental Reconnaissance Survey

The supplemental survey generally addresses the Attleboro Alternative and the Rapid Bus Alternative, as well as specific work areas along the Stoughton Alternative and the Southern Triangle common to all rail alternatives. Project elements include those associated with the Attleboro Alternative and the Rapid Bus Alternative, as well as specific work areas along the Stoughton Alternative and the Southern Triangle common to all rail alternatives, that were surveyed all or in part for cultural resources. Such project elements consist of the active and inactive railroad rights-of-way (ROWs), road corridors, and the proposed locations of new and modified existing stations, new layover facilities, and new traction power facilities.

4.8.3 ANALYSIS OF IMPACTS

The following section identifies the potential direct and indirect, as well as the permanent and temporary construction impacts to historic and archaeological resources from implementation of the South Coast Rail project for each element of the alternatives as defined in Chapter 3, Alternatives. The potential impacts along the railroad and highway alignments, including traction power facilities for rail electrification, are described in Sections 4.8.3.2 through 4.8.3.9; the potential impacts at the train or bus station locations are described in Section 4.8.3.10; and the potential impacts at layover facilities are described in Section 4.8.3.11. Figure 1.4-1 shows the alternative alignments and existing and proposed stations. For each alternative and segment or element of alternative (e.g. station), direct, impacts on historic resources are discussed first, followed by the discussion of archaeological impacts for that alternative segment, or element. Impact analyses are based on the reconnaissance-level cultural resources identification completed to date. Specific project elements where additional reconnaissance survey work is anticipated are discussed below. Intensive-level surveys will be completed prior to completion of environmental review and when more detailed design information is available.

Figures 4.8-1 through 4.8-29 depict the locations of historic resources by alternatives. Appendix 4.8-B presents lists of historic resources and project impacts by alternatives with summaries of alternatives,

stations, and layovers. Appendix 4.8-C presents lists of recorded archaeological sites and sensitivity areas and project impacts by alternatives.

4.8.3.1 NO-BUILD (ENHANCED BUS) ALTERNATIVE

The No-Build Alternative (Enhanced Bus) would provide enhancements to the existing bus services with limited improvements to the existing transit and roadway system. Minor improvements to existing infrastructure at existing commuter rail stations and park-and-ride lots would be needed. No new infrastructure is currently proposed for the No-Build Alternative, so there are no anticipated impacts to historic and archaeological resources.

4.8.3.2 SOUTHERN TRIANGLE (COMMON TO ALL RAIL ALTERNATIVES)

The Southern Triangle consists of the active freight rail tracks with existing grade crossings of the Fall River Secondary from Myricks Junction in Berkley to Fall River and the New Bedford Main Line from Weir Junction in Taunton to New Bedford (which includes a portion of the Attleboro Secondary between Myricks Junction and Weir Junction). Both diesel and electrification options are being considered for these rail lines.

The Southern Triangle is common to all the rail alternatives (Attleboro, Stoughton, Whittenton) as are the six stations (Battleship Cove, East Taunton, Fall River Depot, Freetown, King's Highway, and Whale's Tooth). Cultural resources reconnaissance survey was conducted for the Southern Triangle elements, and impacts to identified resources are presented below.

Fall River Secondary

Existing freight track would be upgraded and a short segment of the line would be double track south of Myricks Junction, for a distance of 0.61 miles. The remainder of the line would be single track, with the exception of two small double track sections in Freetown and Fall River, 0.62 and 0.71 miles long, respectively.

New catenary supports, wires, and one new traction power facility (TP-11, Paralleling Station [(PS-05]) at a specified location would be constructed along the length of the line for the electrification option. Two new stations would be constructed in Fall River (Battleship Cove and Fall River Depot) and one new station would be constructed in Freetown (Freetown). One new layover facility would be constructed in Fall River, at either the ISP or the Weaver's Cove location.

Potential Adverse Effects on Historic Resources along the Fall River Secondary Rail Segment

The impacts of the South Coast Rail project to historic resources along the Fall River Secondary line of the Southern Triangle segment of the project may be permanent or temporary, direct or indirect. For the two options (electric and diesel), there is a combined total of 43 historic properties (Table 4.8-4). The locations of these structures and districts along the Fall River Secondary are shown in Figures 4.8-6 through 4.8-8. Appendix 4.8-B, Tables 1 and 2, present the data on the individual structures and districts.

Work elements and impacts discussed in this section apply to, but are not repeated in, subsequent sections for the different electric and diesel alternatives.

Table 4.8-4 Southern Triangle, Fall River Secondary – Historic Resources within the APE

Option	Historic – Individual	Historic Districts	Figure	Appendix
Electric	25	16	Figures 4.8-6 through 4.8-8	Appendix 4.8-B, Table 1
Diesel	21	15	Figures 4.8-6 through 4.8-8	Appendix 4.8-B, Table 2

Direct Impacts on Historic Resources along the Fall River Secondary Rail Segment

Project work elements for the Fall River Secondary electric option include railroad upgrade (track, railroad bed, bridges and culverts, fencing in populated areas), at-grade crossing improvements (equipment, signage, traffic control), and electrical infrastructure (catenary and traction power facilities). Direct permanent impacts from work within the existing right-of-way rail corridor are not likely to affect significant historic resources, with the exception of bridges and grade crossings. Two historic bridges that are located in this section may be adversely affected by alteration or reconstruction. These bridges are:

- Railroad Bridge over Assonet River, Lakeville (Map No. La.025, Figure 4.8-6) and
- Railroad Bridge near Ashley Street (Map No. FR.011, Figure 4.8-7).

Direct impacts from improvements to existing at-grade crossings within historic districts and immediately adjacent to individual historic resources are expected to be minor, provided that no roadway changes are proposed. No direct impacts are anticipated from the new traction power facility, TP-11, Paralleling Station (PS-05), as there are no historic resources on the site. Station impacts are discussed below in Section 4.8.3.10. If noise mitigation insulating treatments on historic buildings are recommended to address indirect effects, these treatments may include new windows and doors. The replacement of windows and doors will have a direct effect on the subject properties and will require design considerations for compatibility with historic resources.

Project work elements and direct impacts for the Fall River Secondary diesel option are identical to the electric option, with the exception of any impacts from the electrical power infrastructure.

Indirect Impacts on Historic Resources along the Fall River Secondary Rail Segment

Indirect impacts from the Fall River Secondary electric option may include auditory, vibration, visual, or other environmental effects on the setting or other character-defining features of individual historic individual properties and districts. Indirect impacts from the addition of upgraded existing track and existing grade crossing rail infrastructure elements in the active right-of-way are generally anticipated to be low.

The introduction of additional rail service will result in increased noise during operations from train noise and horn blowing at grade crossings. The noise increase will cause moderate to severe or severe noise at residential, contemplative, and quiet setting historic resources at the following grade crossing locations. These specific areas and resources could require sound insulation or barrier mitigation to reduce noise impacts. An elastic mat may be placed under the ballast to absorb or reduce vibration levels before they enter the ground and propagate to nearby receptors, as described in Section 4.7.3.7 – *Vibration.*

- At Myricks Street and Mill Street grade crossings: Myricks Street Area, Berkley (Map No. Be.C, Figure 4.8-1);
- At Adams Lane grade crossing: Peirce and Haskins Cemetery, Lakeville (Map No. La.024; Figure 4.8-6);
- At Elm Street, Forge Road, and Richmond Road grade crossings: Slab Bridge Road Area, Freetown (Map No. Ft.C, Figure 4.8-7);
- At Richmond Road and Beechwood Road grade crossings: Richmond Road/ Maple Tree Crossing Bridge, Freetown (Map No. Ft.009, Figure 4.8-6)
- Similarly, moderate to severe noise from operations may be experienced at the following resources or districts. These specific areas and resources also would likely require sound insulation or barrier mitigation:
- Assonet Historic District, Freetown (Map No. Ft.D, Figure 4.8-7);
- North Main Street Area, Fall River (Map No. FR.D, Figure 4.8-8);
- Wellington-Brownell Street Area, Fall River (Map No. FR.I, Figure 4.8-8);
- North Burial Ground, Fall River (Map No. FR.K, FR.C; Figure 4.8-8);
- Pearce-Durfee Street Area, Fall River (Map No. FR.M, Figure 4.8-8);
- Jael Hathaway House, Fall River (Map No. FR.003, Figure 4.8-8);
- St. Michael's Roman Catholic Church, Fall River (Map No. FR.050, Figure 4.8-8);
- St. Matthew's School, Fall River (Map No. FR.053, Figure 4.8-8);
- Al Mac's Diner, Fall River (Map No. FR.070, FR,M; Figure 4.8-8); and
- Residence, 524 Durfee Street, Fall River (Map No. FR.081, Figure 4.8-8).

Temporary construction period impacts may include noise and vibration from jack-hammering and pile driving, and atmospheric from dust and exhaust. Vibration impacts to historic resources could be caused by pile driving during construction adjacent to resources in close proximity to the right-of-way, if any pile driving occurs.

New construction including stations (see Section 4.8.3.10 below), the new traction power facility, catenary systems, bridge modifications and replacements, right-of-way fencing, and noise mitigation barriers may have indirect visual impacts on adjacent historic architectural resources and their settings. The new catenary system along the right-of-way will have a moderate to severe visual effect on all of the residential, commercial, and landscape (but not on industrial or transportation) historic resources throughout the rail corridor (see list in Appendix 4.8-B, Table 1). The traction power facility TP-11, Paralleling Station (PS-05) will have a moderate to severe visual effect on the Pearce-Durfee Street Area, Fall River (Map No. FR.L, Figure 4.8-8). Right-of-way fencing and noise mitigation barriers in and adjacent to historic districts and individual properties will have an effect on the setting of those historic resources by introducing new chain link fence and solid walls that alter the historic character of the area.

Indirect impacts for the Fall River Secondary diesel option are similar to the electric option, with the exception of those generated by electrical catenary and traction power infrastructure (see list in Appendix 4.8-B, Table 2). Therefore, the diesel option will result in less visual impact.

Tables 4.8-5 and 4.8-6, below, summarize the adverse effects likely to result from reconstructing the Fall River Secondary, for the electric and diesel alternatives.

Potential Adverse Effects on Archaeological Resources Along the Fall River Secondary Rail Segment

The Fall River Secondary Electric and Diesel APE includes the active freight railroad right-of-way between Myricks Junction in Taunton and Fall River, and any other work areas including electrification

Table 4.8-5 Potential Adverse Effects to Historic Resources, Fall River Secondary (Electric Alternatives)

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Berkley	Myricks Street Area	No	Moderate to severe train and horn noise	Moderate to severe	Noise Visual
Lakeville	Peirce and Haskins Cemetery	No	Severe train noise	Moderate	Noise Visual
Lakeville	Railroad Bridge over Assonet River	Physical alteration or reconstruction	n/a	Moderate	Physical
Freetown	Slab Bridge Road Area	No	Moderate to severe train and horn noise	Moderate to severe	Noise Visual
Freetown	Assonet Historic District	No	Moderate to severe train and horn noise	Moderate	Noise Visual
Freetown	Richmond Road / Maple Tree Crossing Bridge	No	n/a	Moderate	Visual
Fall River	Fall River Country Club Golf Course	Reconstruct vehicle and golf cart bridges	Moderate to severe train and horn noise	Moderate to severe	Visual
Fall River	North Main Street Area	Layover construction	Moderate to severe train noise	Moderate to severe	Physical Noise Visual
Fall River	Wellington-Brownell Street Area	No	Severe to moderate train noise	Moderate to severe	Noise Visual
Fall River	North Burial Ground	No	Moderate to severe train noise	Severe	Noise Visual
Fall River	Pearce-Durfee Street Area	No	Moderate to severe train noise	Moderate to severe	Noise Visual
Fall River	Diners of Massachusetts	No	Moderate train noise	Moderate	Visual
Fall River	American Printing Company - Metacomet Mill	No	n/a	Moderate to severe	Visual
Fall River	Hathaway, Jael House	No	Moderate to severe train and horn noise	Moderate	Noise Visual
Fall River	William Collins House	No	Moderate train noise	Moderate,	Visual
Fall River	North Christian Congregational Church	No	Moderate train noise	Moderate	Visual
Fall River	Borden-Winslow House	No	No	Moderate	Noise Visual
Fall River	Railroad Bridge near Ashley Street	Physical alteration or reconstruction	n/a	Moderate	Physical
Fall River	Canedy, Squire William B. House	No	No	Moderate	Visual (catenary)
Fall River	Residence	No	Moderate train noise	Moderate	Visual
Fall River	Brightman, Hathaway House	No	Moderate train noise	Moderate	Visual
Fall River	St. Michael's Roman Catholic Church	No	Moderate to severe train noise	Moderate	Noise Visual
Fall River	St. Matthew's Convent	No	Moderate train noise	Moderate	Visual
Fall River	St. Matthew's School	No	Moderate to severe train noise	Severe	Noise Visual
Fall River	Al Mac's Diner	No	Moderate train noise	Moderate	Visual
Fall River	Residence	No	Moderate train noise	Moderate	Visual
Fall River	Lafayette-Durfee House	No	Moderate train noise	Moderate	Visual

Table 4.8-6 Potential Adverse Effects to Historic Resources, Fall River Secondary (Diesel Alternatives)

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Fall River	Central Street Bridge over Quequechan River	No	n/a	Moderate	Visual
Berkley	Myricks Street Area	No	Moderate to severe train and horn noise	No	Noise
Lakeville	Peirce and Haskins Cemetery	No	Severe train noise	No	Noise
Lakeville	Railroad Bridge over Assonet River	Physical alteration or reconstruction	n/a	No	Physical
Freetown	Slab Bridge Road Area	No	Moderate to severe train and horn noise	No	Noise-
Freetown	Assonet Historic District	No	Moderate to severe train and horn noise	No	Noise
Fall River	Fall River Country Club Golf Course	Reconstruction of vehicle and golf cart bridges	Moderate to severe train and horn noise	No	Physical (possible)
Fall River	North Main Street Area	Layover construction	Moderate to severe train noise	Severe, portion of area is within layover site	Physical Noise Visual
Fall River	Wellington-Brownell Street Area	No	Moderate to severe train noise	No	Noise
Fall River	North Burial Ground		Moderate to severe train noise	No	Noise
Fall River	Pearce-Durfee Street Area		Moderate to severe train noise	Moderate to severe, portion of area is in vicinity of new station	Noise Visual
Fall River	American Printing Company - Metacomet Mill	No	n/a	Moderate, in vicinity of new station	Visual
Fall River	Hathaway, Jael House	No	Moderate to severe train and horn noise	No	Noise
Fall River	Railroad Bridge near Ashley Street	Physical alteration or reconstruction	n/a	No	Physical
Fall River	St. Matthew's School	No	Moderate to severe train noise	No	Noise

infrastructure that would involve earth moving outside of the previously disturbed railroad right-of-way. Appendix 4.8-C, Table 1 presents the assessment of potential impacts to archaeological resources within the Fall River Secondary portion of the Southern Triangle APE.

A 1.6-mile long segment of the Fall River Secondary line lies within the Lower Taunton River Basin Archaeological District in Freetown. This archaeological district contains a number of significant archaeological sites including pre-contact/contact period Native American resources and sensitive lands where undocumented sites may be present. A nineteenth-century mill complex, Forge Pond Mill (MHC #FRE-HA-22), is also adjacent to the rail right-of-way in Freetown, outside of the archaeological district.

For the diesel option, no direct impacts to these resources are anticipated within the previously disturbed Fall River Secondary right-of-way. For the electric option, there is the possibility that proposed

overhead catenary structure support footings could extend into archaeologically sensitive strata below rail bed disturbance and fill deposits. Specific sensitivity areas would be determined based on a review of soil borings and/or a detailed soil profile of the right-of-way using soil boring logs. The location, number and size of soil borings would be determined to minimize impacts to archeological resources as a result of field testing. An intensive (locational) survey may be needed in sensitive areas where direct physical construction impacts are planned. Project impacts to archaeological resources would be assessed prior to the completion of environmental review and when more design information is available.

Archaeological surveys for track improvements including electrification infrastructure that would involve earthmoving below or outside of the previously disturbed railroad right-of-way within the APE will be completed as more detailed design information becomes available. Project impacts to archaeological resources in these portions of the Fall River Secondary Electric and Diesel APE will be assessed prior to completion of environmental review and when more detailed design information is available.

New Bedford Main Line

Existing freight track would be upgraded and the line would be double track for the entire length between Weir Junction and downtown New Bedford (which includes a portion of the Attleboro Secondary between Weir Junction and Myricks Junction), a distance of 18.51 miles. Passing sidings may also be an option instead of the double track. The section between Weir Junction and Cotley Junction would be a triple track section to allow for freight movement around a proposed station (Taunton Depot).

New catenary supports, wires, and up to three traction power facilities at specified locations would be constructed along the length of the line for the electrification option. The traction power facilities are:

- TP-07, Substation (TPSS-2) as part of Stoughton Electric Alternative;
- TP-29, Paralleling Station (PS-6) as part of the Attleboro Electric Alternative; and
- TP-30, Paralleling Station (PS-4) as part of Attleboro Electric Alternative or TP-09, Paralleling Station (PS-6) as part of Stoughton Electric Alternative

Two new train stations would be constructed in New Bedford (King's Highway and Whale's Tooth) and one new station (Taunton Depot) would be constructed in Taunton. One new layover facility would be constructed in New Bedford, at either the Church Street or the Wamsutta location.

Potential Adverse Effects on Historic Resources along the New Bedford Main Line

The impacts of the South Coast Rail project to historic resources along the New Bedford Main Line of the Southern Triangle segment of the project may be permanent or temporary, direct or indirect. For the two options (electric and diesel), there is a combined total of 43 historic properties (Table 4.8-7). The locations of these structures and districts along the Attleboro Secondary and New Bedford Main Line are shown in Figures 4.8-1 through 4.8-5. Appendix 4.8-B, Tables 1 and 2, present the data on the individual structures and districts.

Table 4.8-7 Southern Triangle, New Bedford Main Line Historic Resources Within the APE

Option	Historic – Individual	Historic Districts	Figure	Appendix
Electric	15	7	Figures 4.8-1 through 4.8-5	Appendix 4.8-B, Table 1
Diesel	14	7	Figures 4.8-1 through 4.8-5	Appendix 4.8-B, Table 2

Direct Impacts on Historic Resources along the New Bedford Main Line Rail Segment

Project work elements and direct impacts for the New Bedford Main Line electric option will be similar to the other electric alternatives. No work is proposed for the one historic bridge located in this section:

- Bridge No. 12.00 over Brickyard Road, Taunton (Map No. Ta.091, Figure 4.8-5), on Attleboro Secondary.

No National Register listed, determined eligible, or recommended eligible historic properties are located in the direct impact APEs for the three traction power sites proposed for the Attleboro Electric Alternative and the Stoughton Electric Alternative. Therefore, there will be no direct effects to historic properties at these locations.

Project work elements and direct impacts for the New Bedford Main Line diesel option are identical to the electric option, as there are no direct impacts from the electrical power infrastructure.

Indirect Impacts on Historic Resources along the New Bedford Main Line Rail Segment

Indirect impacts from the New Bedford Main Line electric option will be similar to the other electric alternatives.

The introduction of additional rail service will result in increased noise during operations from train noise and horn blowing at grade crossings. The noise increase will cause moderate to severe, or severe noise at residential, contemplative, and quiet setting historic resources at the following grade crossing locations. These specific areas and resources would likely require sound insulation or barrier mitigation:

- Ingell Street grade crossing: Weir Village Area, Taunton (Map No. Ta.K, Figure 4.8-5);
- Hart Street grade crossing: Hart Street Area, Taunton (Map No. Ta.L, Figure 4.8-5);
- Padelford Street grade crossing: 1 Macomber Street, Berkley (Map No. Be.006. Figure 4.8-1);
- Malbone Street grade crossing: Malbone Street, Lakeville (Map No. La.C, Figure 4.8-1)
- Similarly, moderate to severe noise from operations may be experienced for historic properties within the Acushnet Heights Historic District, New Bedford (Map No. NB.C, Figure 4.8-5). Sound insulation or barrier mitigation would likely be needed at some of the properties within the district.

New construction including stations (see Section 4.8.3.10 below), traction power facilities, catenary systems, bridge modifications and replacements, right-of-way fencing, and noise mitigation barriers changes may have indirect visual impacts on adjacent historic architectural resources and their settings. The new catenary system along the right of way will have a moderate to severe visual effects on all the residential, commercial, and landscape (but not on industrial or transportation) historic resources throughout the rail corridor (see list in Appendix 4.8-B, Table 1).

Two traction power facilities may have a visual effect on historic properties through the introduction of modern power structures that could alter the historic setting:

- TP-26, 115k Substation (TPSS-1) (Figure 4.8-5, on Attleboro Secondary) on the Hart Street Area, Taunton (Map No. Ta.L); and
- TP-30, Paralleling Station (PS-4) as part of Attleboro Electric Alternative or TP-09, Paralleling Station (PS-6) as part of Stoughton Electric Alternative on four historic properties or districts in New Bedford (Figure 4.8-5):
  - Acushnet Heights Historic District (Map No. NB.C),
  - Dawson Building (Map No. NB.065),
  - Guardian Angel Parochial Schoolhouse (Map No. NB.064).
  - Union Street Railway Carbarn (Map No. NB.063), and
  - Wamsutta Mills Historic District (Map No. NB.D)

Indirect impacts for the New Bedford Main Line diesel option are similar to the electric option, with the exception of those generated by electrical catenary and traction power infrastructure (see list in Appendix 4.8-B, Table 2). Therefore, the diesel option would result in less visual impact.

Tables 4.8-8 and 4.8-9, below, summarize the adverse effects likely to result from reconstructing the New Bedford Main Line, for the electric and diesel alternatives.

Table 4.8-8 Potential Adverse Effects to Historic Resources, New Bedford Main Line (Electric Alternatives)

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Taunton	Weir Village Area	No	Moderate to severe train and horn noise	Moderate	Noise Visual
Taunton	Hart Street Area	No	Moderate to severe train and horn noise	Moderate to severe	Noise Visual
Taunton	Railroad Bridge over brickyard road (abandoned)	Physical alteration or reconstruction	n/a	Moderate	Physical
Berkley	Residence	No	Severe train and horn noise	Severe	Noise Visual
Lakeville	Assonet Cedar Swamp Area	No	Moderate to severe train and horn noise	Moderate to severe	Noise Visual
Freetown	Cummings, George House	No	Moderate horn noise	Moderate	Visual
New Bedford	Brook Street Industrial and Commercial Area	No	Moderate to severe train noise	Moderate to severe	Noise Visual
New Bedford	Acushnet Heights Historic District	No	Moderate to severe train noise	Moderate	Noise Visual
New Bedford	Wamsutta Mills Historic District	No	Moderate to severe train noise	Moderate	Noise Visual
New Bedford	Christ Presbyterian Church	No	No	Moderate	Visual
New Bedford	Purchase Street Fire Station	No	Moderate train noise	Moderate,	Visual
New Bedford	Guardian Angel Parochial Schoolhouse	No	No	Moderate	Visual
New Bedford	Dawson Building	No	No	Moderate	Visual

Table 4.8-9 Potential Adverse Effects to Historic Resources, New Bedford Main Line (Diesel Alternatives)

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Taunton	Weir Village Area	No	Moderate to severe train and horn noise	No	Noise
Taunton	Hart Street Area	No	Moderate to severe train and horn noise	No	Noise
Taunton	Railroad Bridge over brickyard road (abandoned)	Yes: Physical alteration on reconstruction	n/a	No	Physical
Berkley	Residence	No	Severe train and horn noise	No	Noise
Lakeville	Assonet Cedar Swamp Area	No	Moderate to severe train and horn noise	No	Noise
Freetown	Cummings, George House	No	Moderate to severe train and horn noise	No	Noise
New Bedford	Brook Street Industrial and Commercial Area	No	Moderate to severe train noise	No	Noise
New Bedford	Acushnet Heights Historic District	No	Moderate to severe train noise	No	Noise
New Bedford	Wamsutta Mills Historic District	No	Moderate to severe train noise	Moderate, in vicinity of new layover facility	Noise Visual

Potential Adverse Effects on Archaeological Resources along the New Bedford Main Line

The New Bedford Main Line Electric and Diesel APE includes the active freight railroad right-of-way between Weir Junction in Taunton and New Bedford, and any other work areas including electrification infrastructure that would involve earthmoving outside of the previously disturbed railroad right-of-way. Appendix 4.8-C, Table 1 presents the assessment of potential impacts to archaeological resources within the New Bedford Main Line portion of the Southern Triangle APE.

Two historic cemeteries are located adjacent to the New Bedford Main Line right-of-way. The cemeteries are:

- Howland Cemetery, MHC #LAK.806 in Lakeville; and
- Braley Cemetery, MHC #FRE.823 in Freetown

There is a potential for unmarked burials associated with these two cemeteries in the right-of-way embankments. Project impacts will be assessed following a review of right-of-way work area design plans and slope stabilization measures when available.

The third track at the proposed Taunton Depot Station has a moderate sensitivity for undocumented pre-contact/contact Native American habitation and resource procurement/processing sites. An intensive (locational) archaeological survey is needed to identify any archaeological sites. Project impacts will be assessed once the intensive survey is completed prior to completion of environmental review and more detailed design information is available.

For the electric option, there is the possibility that proposed overhead catenary structure support footings could extend into archaeologically sensitive strata below rail bed disturbance and fill deposits within the New Bedford Main Line right-of-way. Specific sensitivity areas would be determined based on a review of soil borings and/or a detailed soil profile of the right-of-way using soil boring logs. An intensive (locational) survey may be needed in sensitive areas where direct physical construction impacts are planned. Project impacts to archaeological resources will be assessed prior to completion of environmental review and when more detailed design information is available.

The archaeological survey for track improvements including electrification infrastructure that would involve earthmoving below or outside of the previously disturbed railroad right-of-way within the APE will be conducted during subsequent stages of environmental review. Impacts to archaeological resources in these portions of the New Bedford Main Line Electric and Diesel APE will be assessed prior to completion of environmental review and when more detailed design information is available.

4.8.3.3 ATTLEBORO ELECTRIC ALTERNATIVE

The Attleboro Electric Alternative would provide commuter rail service from Fall River and New Bedford to South Station through Attleboro using the existing Northeast Corridor, the proposed Attleboro Bypass, and the existing Attleboro Secondary freight line. New catenary supports, wires, and electric power facilities would be constructed along the length of the existing and proposed rail lines. Cultural resources reconnaissance survey was conducted for the Attleboro Electric Alternative elements, and impacts to identified resources are presented below.

Northeast Corridor

A third track would be constructed from the proposed Attleboro Bypass in Attleboro to Transfer Interlocking in the Readville section of Boston, a distance of 19.09 miles. The construction of a new third track would require earthwork for the expanded railroad bed, installing new three-track catenary supports with wires along the length of the line and new traction power system, reconstruction of three existing stations (Canton Junction, Sharon, and Mansfield), and reconstructing 22 bridges. It would also require a new bridge parallel to the Canton Viaduct, a historic structure that is not wide enough for three tracks. No changes in road/railroad crossing configurations or layover facilities are planned within this alternative segment.

Potential Adverse Effects on Historic Resources along the Northeast Corridor Segment

The impacts to historic resources along the Northeast Corridor segment of the Attleboro Electric Alternative of the project may be permanent or temporary, direct or indirect. A total of 19 historic properties (15 individual and 4 districts) located within the Northeast Corridor APE may be affected by the electric option. Figures 4.8-9 to 4.8-13 show the location of historic resources along the Northeast Corridor. Appendix 4.8-B, Table 3 presents the potential impacts to historic resources for the Attleboro Electric Alternative.

Direct Impacts on Historic Resources along the Northeast Corridor Segment

Project work elements for the Northeast Corridor include adding a third track and additional third catenary to the existing railroad, and one traction power facility. No changes are planned for existing at-grade crossings. Direct permanent impacts to significant historic resources from work within the existing right-of-way rail corridor are not likely to affect significant historic resources, with the exception of

bridges. All of the 22 crossings over or under the Northeast Corridor railroad right-of-way would be rebuilt to accommodate the new third track. The proposed actions, noted below before each bridge designation, will affect four historic bridges:

- Adjacent new bridge will be built: Canton Viaduct (Map No. Ca.027, Figure 4.8-10);
- To be modified: Chapman Street Bridge, Canton (Map No. Ca.026, Figure 4.8-10);
- To be modified: Maskwonicut Street Bridge (Map No. Sh.001, Figure 4.8-11); and
- To be modified: Wading River Railroad Bridge (Map No. Ma.014, Figure 4.8-13).

Noise mitigation insulating treatments on the historic buildings and areas discussed below would be potential direct impacts to historic resources.

Indirect Impacts on Historic Resources along the Northeast Corridor Segment

Indirect impacts from the addition of upgraded rail infrastructure elements in the existing active Northeast corridor right-of-way are anticipated to be low. However, the introduction of additional rail service will result in increased noise during operations from train noise and horn blowing at grade crossings. The additional rail service in conjunction with horn blowing would cause moderate to severe, to severe noise at residential, contemplative, and quiet setting historic resources listed immediately below. These historic properties may require sound insulation and barrier mitigation:

- Blue Hills Multiple Resource Area, Dedham and Canton (Map No. De.A, Ca.E; Figure 4.8-9)
- Neponset Street Area, Canton (Map. No. Ca.F, Figure 4.8-10);
- Captain Josiah Pratt House, Foxborough (Map No. Fo.001, Figure 4.8-12); and
- Harding House, Mansfield (Map No. Ma.012, Figure 4.8-13).

While the expanded catenary system will have a visual effect on historic resources throughout the rail corridor, the additional overhead catenary system proposed will be similar to the existing Northeast Corridor infrastructure and no grade crossing configurations will be changed. This approach will result in limited visual effects to the historic resources. The addition of a third rail track on the Northeast Corridor would not result in a significant change in the existing noise and vibration levels.

Bridge replacements and the new bridge to be constructed next to the Canton Viaduct will have visual effects on adjacent historic resources and their settings. The Canton Viaduct will be retained and a new railroad bridge will be built next to it in a design, yet to be developed, that would be sensitive to the historic character of the bridge. However, the new bridge would block views towards the west side of the Viaduct, resulting in a visual adverse effect.

Potential Adverse Effects on Archaeological Resources along the Northeast Corridor Segment

The Northeast Corridor Electric APE includes the active Amtrak railroad right-of-way between Readville (Boston) and the proposed Attleboro Bypass north of Attleboro Center and any other work areas including electrification infrastructure that would involve earthmoving outside of the previously disturbed railroad right-of-way. Appendix 4.8-C, Table 2 presents the assessment of potential impacts to archaeological resources within the Northeast Corridor portion of the Attleboro Alternatives APE.

There are no recorded archaeological sites or sensitive areas within the previously disturbed Northeast Corridor railroad right-of-way. No potential direct impacts to archaeological resources in the previously disturbed railroad right-of-way are anticipated.

No reconnaissance survey has been conducted in locations proposed for track improvements; in the new Canton Viaduct bridge location; for any rail and highway bridge reconstruction sites; and in locations that would host electrification infrastructure. All of these locations would be subject to earthmoving actions that would occur outside of the railroad right-of-way within the APE. These project elements are located in geographical areas that contain or are in proximity to recorded archaeological sites and have the potential to contain unrecorded sites in sensitive areas. Project impacts to archaeological resources in sensitive areas of the Northeast Corridor Electric APE will be assessed prior to completion of environmental review and when more detailed design information is available.

Attleboro Bypass

A new 2.55-mile long double track would be constructed west of the National Grid right-of-way from the Northeast Corridor near the Attleboro/Mansfield/Norton town line to the Attleboro Secondary near the Attleboro/Norton town line. New catenary supports, wires, and new traction power system would be constructed along the length of the proposed new line. Two new at-grade road/railroad crossings would be required, one at Richardson Avenue and one at Pleasant Street in Attleboro. No new stations or layover facilities are planned within this alternative segment.

Historic Resources

The impacts to historic resources along the Attleboro Bypass segment of the Attleboro Electric Alternative may be permanent or temporary, direct or indirect. The Attleboro Bypass is an undeveloped, rural, wooded area with no existing rail right-of-way. One individual historic resource (the Residence and Barn at 457 Pleasant Street, Attleboro; Map No. At.003, Figure 4.8-14) is located within the Attleboro Bypass APE and may be indirectly affected by the project. Figures 4.8-14 to 4.8-16 show the location of historic resources along the Attleboro Bypass. Appendix 4.8-B, Table 3 presents the potential impacts to historic resources for the Attleboro Electric Alternative.

Direct Impacts

Direct impacts could occur from project work elements for the Attleboro Bypass electric option including constructing a new railroad (track, railroad bed, bridges and culverts, fencing in populated areas), at-grade crossings (equipment, signage, traffic control), and electrical infrastructure (catenary and traction power facilities). The Attleboro Bypass segment of the Attleboro Electric Alternative will have two new at-grade crossings (Figure 4.8-14) and a proposed switching station (TP-24, switching station [SWS-1], Figure 4.8-14) located north of Richardson Avenue. There are no historic resources located within these construction areas. Therefore, there are no direct impacts of the project on historic resources within the Attleboro Bypass APE.

Indirect Impacts

As noted above, one historic property, the Residence and Barn at 457 Pleasant Street, Attleboro (Map No. At.003) is located within the Attleboro Bypass APE. This historic property may be subject to indirect visual and noise impacts. The visual impacts would result from clearing 60 to 100 feet of vegetation along the new right-of-way and grading and constructing the new rail corridor. Both of these actions would create right-of-way visibility and affect the setting of the historic resource. The setting of the property also would be affected by the construction of catenary along the right-of-way and from the construction of the new, at-grade crossing at Route 123 (Pleasant Street).

The Pleasant Street grade crossing will result in severe noise impact from horn blowing to the historic property, which may be eligible for soundproofing mitigation. Noise mitigation insulating treatments, such as new windows and doors, will have an effect on the subject property and will require design considerations for compatibility with the historic resource.

Archaeological Resources

The Attleboro Bypass Electric APE consists of new right-of-way and associated work areas that roughly follow an existing power line easement between the Northeast Corridor and the Attleboro Secondary. Appendix 4.8-C, Table 2 presents the assessment of potential impacts to archaeological resources within the Attleboro Bypass portion of the Attleboro Alternatives APE.

There are no recorded archaeological sites within the proposed Attleboro Bypass right-of-way. The reconnaissance survey identified areas of moderate and high sensitivity for undocumented archaeological sites including pre-contact/contact Native American habitation and resource procurement/processing sites and post-contact EuroAmerican agrarian-related cultural deposits. An intensive (locational) archaeological survey is needed to identify any archaeological sites. Project impacts will be assessed once the intensive (locational) survey is completed prior to completion of environmental review and when more detailed design information is available.

Attleboro Secondary

Existing freight track would be upgraded and the line would be single track between the Attleboro Bypass and Taunton, a distance of 8.76 miles, with the remaining 0.62 miles to Weir Junction being double track. New catenary supports, wires, and a traction power system would be constructed along the length of the line. In addition, two new traction power stations would be constructed. These are:

- TP-21, paralleling station (PS-2) in Norton (Figure 4.8-16); and
- TP-25, paralleling station (PS-1) in Taunton (Figure 4.8-14)

Two new train stations would be constructed in Norton (Barrowsville) and in Taunton (Downtown Taunton). No new layover facilities would be constructed along this alternative segment.

Historic Resources

The impacts to historic resources along the Attleboro Secondary segment of the Attleboro Electric Alternative may be permanent or temporary, direct or indirect. A total of 28 historic properties (17 individual and 11 historic districts) located within the Attleboro Secondary APE may be affected by the project. Figures 4.8-14 to 4.8-16 show the location of historic resources along the Attleboro Secondary. Appendix 4.8-B, Table 3 presents the potential impacts to historic resources for the Attleboro Electric Alternative.

Direct Impacts

Direct impacts for the Attleboro Secondary electric option will be similar to the other project electric alternatives (see Section 4.8.3.2.1 above).

The construction of the Attleboro Secondary segment of the Attleboro Electric Alternative will occur within the right-of-way. Both paralleling stations (listed above) would be constructed within existing right-of-way as well. There are no historic resources located within these construction areas. Therefore,

there are no permanent direct impacts of the project on historic resources within the Attleboro Secondary APE.

Indirect Impacts

Indirect impacts for the Attleboro Secondary electric option will be similar to the other project electric alternatives described above.

- The introduction of additional rail service will result in increased noise during operations from train noise and horn blowing at grade crossings. The noise increase will cause moderate to severe, or severe noise at residential, contemplative, and quiet setting historic resources at the following grade crossing locations. These specific areas and resources would likely require sound insulation or barrier mitigation:
- Union Road, South Worcester Street, and John B. Scott Boulevard grade crossings: Wading River Area, Norton (Map No. No.B, Figures 4.8-14 and 4.8-15);
- Weir Street and Bow Street grade crossings: High Street Area, Taunton (Map No. Ta.D, Figure 4.8-16)
- Fremont Street grade crossing: Camp Myles Standish – Paul Dever State School, Taunton (Map No. Ta.P, Figure 4.8-16);
- Danforth Street grade crossing (Figure 4.8-16):
  - Massachusetts State Hospitals and State Schools, Taunton (Map No. Ta.R)
  - Taunton State Hospital Historic District, Taunton (Map No. Ta.S);
- Tremont Street grade crossing (Figure 4.8-16);
  - Tremont Street Area, Taunton (Map No. Ta.T)
  - Hodges Avenue Area, Taunton (Map No. Ta.U)
- Winthrop Street and Webster Street grade crossings: Harrison Street Area, Taunton (Map No. Ta.V, Ta.D; Figure 4.8-16)
- Porter Street and Cohannet Street grade crossings (Figure 4.8-16):
  - St. Thomas Episcopal Church, Taunton (Map No. Ta.208, Ta.C;);
  - Henry G. Brownell House, Taunton (Elks Lodge No. 150) (Map No. Ta.211, Ta.C);
  - Joseph E. Wilbar House, Taunton (Map No. Ta.213);
- Winthrop Street, Porter Street, and Cohannet Street grade crossings (Figure 4.8-16):
  - Lord-Baylies-Bennett House, Taunton (Taunton Masonic Lodge) (Map No. Ta.245, Ta.C;)
  - Samuel Washburn House, Taunton (Map No. Ta.246, Ta.C);
- Winthrop Street and Cohannet Street grade crossings: Samuel Colby House, Taunton (Map No. Ta.254, Ta.C; Figure 4.8-16);
- Winthrop Street grade crossings: J.C. Bartlett House, Taunton (Map No. Ta.266, Ta.C; Figure 4.8-16); and
- Barnum Street and Weir Street grade crossings): William Lawrence House, Taunton (Map No. Ta.309,Ta.C; Figure 4.8-16)
- Similarly, moderate to severe noise from operations may be experienced at the following resources or districts. These specific areas and resources also would likely require sound insulation or barrier mitigation:
- Chartley Area, Norton (Map No. No.C, Figure 4.8-14);
- William M. Sturdy House, Norton (Map No. No.001, Figure 4.8-15)
- William A. Sturdy House, Norton (Map No. No.002, Figure 4.8-15);

TP-21, paralleling station (PS-2) in Taunton (Figure 4.8-16) may cause adverse visual effects to five adjacent historic properties through the introduction of modern power structures that alter the historic setting:

- Henry G. Brownell House (Map No. Ta.211);

- Joseph E. Wilbar House (Map No. Ta.213);
- McKinstrey House (Map No. Ta.209);
- Rhodes Button Company (Map No. Ta.225); and
- Thomas Episcopal Church (Map No. Ta.208).

Table 4.8-10 summarizes the adverse effects likely to result from reconstructing the Attleboro Electric Alternative.

Archaeological Resources

The Attleboro Secondary Electric APE includes active freight right-of-way from the Attleboro Bypass and Weir Junction in Taunton. Appendix 4.8-C, Table 2 presents the assessment of potential impacts to archaeological resources within the Attleboro Secondary portion of the Attleboro Alternatives APE.

There are no recorded archaeological sites or sensitive areas within the previously disturbed Attleboro Secondary railroad right-of-way.

There is the possibility that proposed overhead catenary structure support footings could extend into archaeologically sensitive strata below rail bed disturbance and fill deposits. Specific sensitivity areas would be determined based on a review of soil borings and/or a detailed soil profile of the right-of-way using soil boring logs. An intensive (locational) survey may be needed in sensitive areas where direct physical construction impacts are planned. Project impacts to archaeological resources will be assessed prior to completion of environmental review and when more detailed design information is available.

The archaeological survey has not yet been conducted for track improvements including electrification infrastructure that would involve earthmoving outside of the railroad right-of-way within the APE. Project impacts to archaeological resources in these portions of the Attleboro Secondary Electric APE will be assessed prior to completion of environmental review and when more design information is available.

4.8.3.4 ATTLEBORO DIESEL ALTERNATIVE

The Attleboro Diesel Alternative alignment would provide commuter rail service from Fall River and New Bedford to South Station through Attleboro using the existing Northeast Corridor, the proposed Attleboro Bypass, and the existing Attleboro Secondary freight line. The only difference in this alternative form electric-powered service is not requiring electrical infrastructure. Cultural resources reconnaissance survey was conducted for the Attleboro Diesel Alternative elements and impacts to identified resources are presented below.

Northeast Corridor

Even though there would be no overhead catenary system for the Attleboro Diesel Alternative, the existing overhead catenary system supplying power to electric-powered trains along the Northeast Corridor would be relocated to accommodate the additional width for the third track.

Table 4.8-10 Potential Adverse Effects to Historic Resources, Attleboro Electric Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects	
Dedham, Canton	Blue Hills Multiple Resource Area	No	Moderate to severe train noise (portions of area)	No change	Minimal	Noise
Canton	Neponset St Area	No	Moderate to severe train noise	No change	Minimal	Noise
Canton	Canton Junction Railroad Station	No	n/a	No change	Minimal	Physical (possible) Visual (possible)
Canton	Chapman St Bridge	Physical alteration or reconstruction	n/a	No change	Minimal	Physical
Canton	Canton Viaduct	Potential physical alteration or damage related to construction of parallel bridge	n/a	No change	Severe, new parallel railroad bridge will obstruct view	Physical (possible) Visual
Sharon	Maskwonicut Street Bridge	Physical alteration or reconstruction	n/a	No change	Minimal	Physical
Sharon	Sharon Railroad Station	No	n/a	No change	Minimal	Physical (possible) Visual (possible)
Foxborough	Captain Josiah Pratt House (Pratt Mansion)	No	Moderate to severe train noise	No change	Minimal	Noise
Mansfield	Harding House	No	Moderate to severe train noise	No change	Minimal	Noise
Mansfield	Wading River Railroad Bridge	Physical alteration or reconstruction	n/a	No change	Minimal	Physical
Attleboro Bypass						
Attleboro	Residence and Barn	No	Severe horn noise		Severe	Noise
Attleboro Secondary						
Norton	Wading River Area	No	Moderate to severe train and horn noise	Possible temporary from pile driving	Moderate to severe	Noise Visual
Norton	Chartley Area	No	Moderate to severe train and horn noise		Moderate to severe	Noise Vibration (possible) Visual
Norton	William M. Sturdy House	No	Severe train and moderate horn noise		Moderate	Noise
Taunton	High Street Area	No	Moderate train and moderate to severe horn noise		Moderate to severe	Noise) Visual

Table 4.8-10 (continued)
Potential Adverse Effects to Historic Resources, Attleboro Electric Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects	
Taunton	Camp Myles Standish - Paul Dever State School	No	Moderate train noise		Moderate	Visual
Taunton	MA State Hospitals and State Schools MPS	No	Moderate train and horn noise		Moderate	Visual
Taunton	Taunton State Hospital Historic District	No	Moderate train and horn noise		Moderate	Visual
Taunton	Tremont St Area	No	Moderate train and severe horn noise		Moderate	Noise Visual
Taunton	Hodges Ave Area	No	Moderate train and moderate to severe horn noise		Moderate	Noise Visual
Taunton	Harrison St Area	No	Moderate horn noise		Moderate	Visual
Taunton	Taunton Car Mfg. Company	No	n/a		Moderate, in vicinity of new station	Visual
Taunton	St. Thomas Episcopal Church	No	Moderate horn noise	No: 400 ft < 50 VdB	Moderate	Visual
Taunton	McKinstrey House	No	Moderate horn noise	No: 400 ft < 50 VdB	Moderate	Visual
Taunton	Henry G. Brownell House (Elk's Lodge No. 150)	No	Moderate to severe horn noise	No: 400 ft < 50 VdB	Moderate	Noise Visual
Taunton	Joseph E. Wilbar House	No	Severe horn noise		Moderate	Noise Visual
Taunton	Lord-Baylies-Bennett House (Taunton Masonic Lodge)	No	Moderate train and severe horn noise		Moderate	Noise Visual
Taunton	Samuel Washburn House	No	Moderate to severe train and severe horn noise		Severe	Noise Visual
Taunton	Samuel Colby House	No	Moderate train and severe horn noise		Moderate	Noise Visual
Taunton	Sarah A. Haskins House	No	Moderate horn noise		Moderate	Visual
Taunton	Mount Pleasant Cemetery	No	Moderate horn noise		Moderate	Visual
Taunton	J.C. Bartlett House	No	Moderate train and severe horn noise		Severe	Noise Visual
Taunton	H.B. Lothrop Store	No	Moderate horn noise		Moderate	Visual
Taunton	William Lawrence House	No	Moderate horn noise		Moderate	Visual

Historic Resources

The impacts to historic resources along the Northeast Corridor segment of the Attleboro Diesel Alternative may be permanent or temporary, direct or indirect. A total of 15 historic properties (12 individual and 3 historic districts) located within the Northeast Corridor APE may be affected by the Alternatives. Figures 4.8-9 to 4.8-13 show the location of historic resources along the Northeast Corridor. Appendix 4.8-B, Table 4 presents the potential impacts to historic resources for the Attleboro Diesel Alternative.

Direct Impacts

Direct impacts for the Northeast Corridor segment of the Attleboro Diesel Alternative are identical to the electric option discussed in the Northeast Corridor section of the Attleboro Electric Alternative.

Indirect Impacts

Indirect impacts for the Northeast Corridor segment of the Attleboro Diesel Alternative are identical to the electric option discussed in the Northeast Corridor section of the Attleboro Electric Alternative.

Archaeological Resources

See discussion in the Northeast Corridor section of the Attleboro Electric Alternative. The direct and indirect impacts for the diesel option are the same.

Attleboro Bypass

The Attleboro Bypass segment of the Attleboro Diesel Alternative is the same design described above for the Attleboro Electric Alternative, except that the diesel-powered train service does not require electrical infrastructure.

Historic Resources

The impacts to historic resources along the Attleboro Bypass segment of the Attleboro Diesel Alternative may be permanent or temporary, direct or indirect. A total of one individual historic property located within the Attleboro Bypass APE may be affected by the project. Figure 4.8-14 to 4.8-16 show the location of historic resources along the Attleboro Bypass. Appendix 4.8-B, Table 4 presents the potential impacts to historic resources for the Attleboro Diesel Alternative.

Direct Impacts

Direct impacts for the Attleboro Bypass segment of the Attleboro Diesel Alternative are identical to the electric option.

Indirect Impacts

Indirect impacts for the Attleboro Bypass segment of the Attleboro Diesel Alternative are identical to the electric option.

Archaeological Resources

See discussion in the Northeast Corridor section of the Attleboro Electric Alternative. The direct and indirect impacts for the diesel option are the same.

Attleboro Secondary

The Attleboro Secondary segment of the Attleboro Diesel Alternative is the same design described above for the Attleboro Electric Alternative, except that the diesel-powered train service does not require electrical infrastructure.

Historic Resources

The impacts to historic resources along the Attleboro Secondary segment of the Attleboro Diesel Alternative may be permanent or temporary, direct or indirect. A total of 23 historic properties (14 individual and 9 historic districts) located within the Attleboro Secondary APE may be affected by the project. Figures 4.8-14 to 4.8-16 show the location of historic resources along the Attleboro Secondary. Appendix 4.8-B, Table 4 presents the potential impacts to historic resources for the Attleboro Diesel Alternative.

Direct Impacts

Direct impacts for the Attleboro Secondary segment of the Attleboro Diesel Alternative are identical to the electric option.

Indirect Impacts

Indirect impacts for Attleboro Secondary segment of the Attleboro Diesel Alternative are similar to the electric option, with the exception of any impacts from the electrical power infrastructure. Therefore, the diesel option will result in less visual impact.

Table 4.8-11 summarizes the adverse effects likely to result from reconstructing the Attleboro diesel alternative.

Archaeological Resources

See discussion in the Northeast Corridor section of the Attleboro Electric Alternative. The direct and indirect impacts for the diesel option are the same.

4.8.3.5 STOUGHTON ELECTRIC ALTERNATIVE

The Stoughton Electric Alternative alignment would provide commuter rail service from Fall River and New Bedford to South Station through Stoughton, connecting to the existing Stoughton Line and an out-of-service railroad bed. This alternative would use the Northeast Corridor from South Station to Canton Junction (a third track would not be added to this segment, unlike for the Attleboro Alternatives). From Canton Junction, the existing Stoughton line would be used to the Stoughton Station. From there, commuter rail service would be extended, reconstructing a railroad on the out-of-service railroad bed, south through Raynham Junction to Weir Junction in Taunton.

Table 4.8-11 Potential Adverse Effects to Historic Resources, Attleboro Diesel Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Dedham, Canton	Blue Hills Multiple Resource Area	No	Moderate to severe train noise in portions of area	No	Noise
Canton	Neponset Street Area	No	Moderate to severe train noise	No	Noise
Canton	Canton Junction Railroad Station	No	n/a	Moderate	Physical (possible) Visual (possible)
Canton	Chapman Street Bridge	Physical alteration or reconstruction	n/a	No	Physical
Canton	Canton Viaduct	Potential physical alteration or damage related to construction of new parallel bridge	n/a	Severe, new parallel bridge will obstruct view	Physical (possible) Visual
Sharon	Maskwonicut Street Bridge	Yes: Physical alteration or reconstruction	n/a	No	Physical
Sharon	Sharon Railroad Station	No	n/a	moderate modifications to site	Visual (possible)
Foxborough	Captain Josiah Pratt House (Pratt Mansion)	No	Moderate to severe train noise	No	Noise
Mansfield	Harding House	No	Moderate to severe train noise	No	Noise
Mansfield	Wading River Railroad Bridge	Physical alteration or reconstruction	n/a	No	Physical
Attleboro	Residence and Barn	No	Severe horn noise	Severe	Noise Visual
Norton	Wading River Area	No	Moderate to severe train and horn noise	Moderate	Noise Vibration (possible) Visual
Norton	Chartley Area	No	Moderate to severe train and horn noise	Moderate, in vicinity of new station	Noise Vibration (possible) Visual
Norton	William A. Sturdy House	No	Severe train and horn noise	No	Noise
Taunton	High Street Area	No	Moderate train and moderate to severe horn noise	No	Noise
Taunton	Tremont Street Area	No	Moderate train and severe horn noise	No	Noise

Table 4.8-11 (continued)
Potential Adverse Effects to Historic Resources, Attleboro Diesel Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Taunton	Hodges Avenue Area	No	Moderate to severe horn noise	No	Noise
Taunton	Taunton Car Manufacturing Company	No	Moderate horn noise	Moderate, in vicinity of new station	Visual
Taunton	Henry G. Brownell House (Elk's Lodge No. 150)	No	Moderate to severe horn noise	No	Noise
Taunton	Joseph E. Wilbar House	No	Severe horn noise	No	Noise
Taunton	Lord-Baylies-Bennett House (Taunton Masonic Lodge)	No	Moderate train and severe horn noise	No	Noise
Taunton	Samuel Washburn House	No	Severe train and horn noise	No	Noise
Taunton	Samuel Colby House	No	Moderate train and severe horn noise	No	Noise
Taunton	J.C. Bartlett House	No	Moderate train and severe horn noise	No	Noise

This alignment joins the New Bedford Main Line at Weir Junction, the northern end of the Southern Triangle. Existing commuter rail track would be upgraded to a double track, for the 7.26 miles from Canton Junction to just south of the proposed North Easton station. The remainder of the line south to Weir Junction would be single track, with a 1.19-mile long double track section in Raynham, a 0.56-mile long double track section in Taunton, and a 0.44-mile double track section approaching Weir Junction. Infrastructure improvements also include constructing, reconstructing, or widening 43 bridges. New catenary supports, wires, and a new traction power system would be constructed along the length of the line. In addition, three traction power facilities also would be constructed. These are:

- TP-05, Paralleling Station (PS-2) in Taunton;
- TP-04, 115 KV Substation (TPSS-1) in Easton; and
- TP-02, Switching Station (SWS-1) in Canton

Two existing train stations would be reconstructed (Canton Center and Stoughton) along the active Stoughton line segment and four new train stations would be constructed (North Easton, Easton Village, Raynham Place, and Downtown Taunton) in the inactive segment. No new layover facilities would be constructed.

A frontage road would be constructed in Stoughton to eliminate grade crossings, and a new grade separation would be constructed at Route 138 in Raynham. A 1.6-mile long trestle section would be constructed in Raynham and Easton through the Hockomock Swamp.

A cultural resources reconnaissance survey was conducted for the Stoughton Electric Alternative elements and impacts to identified resources are presented below. This section focuses on the existing and extended Stoughton line segment from Canton Junction to Weir Junction Figures 4.8-17 to 4.8-21).

The two Southern Triangle components of the Stoughton Alternative were addressed previously in this Chapter.

Historic Resources

The impacts to historic resources along the Stoughton Line segment of the Stoughton Electric Alternative may be permanent or temporary, direct or indirect. A total of 32 historic properties (17 individual and 15 historic districts) located within the Stoughton Line APE may be affected by the project. Appendices 4.8-17 to 4.8-21 show the location of historic resources along the Stoughton Line. Appendix 4.8-B, Table 5 presents the potential impacts to historic resources for the Stoughton Electric Alternative.

Direct Impacts

Direct impacts for the Stoughton Line electric option will be similar to the other project electric alternatives.

The 2,000 feet of the Stoughton Line: Dighton and Somerset/Old Colony Railroad, Fall River Line Railroad Corridor (Map No. Ea.A; Figure 4.8-19) right-of-way that extends through the existing North Easton National Register Historic District will be affected by rebuilding of the rail bed, track, and equipment. This rail segment is recommended as contributing to setting of the district. The proposed changes will alter the physical appearance of the rail right-of-way, including rebuilding the Main Street Bridge. The alterations would have an adverse effect on the physical properties of both the Stoughton Line segment and the North Easton National Register Historic District.

There will be no direct impacts to historic resources from work at grade crossings or at the three traction power facilities (listed above).

Indirect Impacts

Indirect impacts from the Stoughton Line electric option will be similar to the other electric alternatives. Clearing 60 to 100 feet of vegetation along the right-of-way and grading along the abandoned section of the Stoughton Line south of Stoughton Station will increase right-of-way visibility and affect the setting of historic resources.

The changes to infrastructure and the introduction of new structures along the Stoughton Line will have indirect visual effects on the H.H. Richardson Historic District (Map No. Ea.D, Figure 4.8-19) and the North Easton Historic District (Map No. Ea.B, Figure 4.8-19).

The H.H. Richardson Historic District of North Easton is a discontiguous National Historic Landmark (NHL) district consisting of five properties. These properties are the Oliver Ames Free Library (1877), Oakes Ames Memorial Hall (1879), Ames Gate Lodge (1880) and Ames Gardener's Cottage (1884) at Langwater, and the Old Colony Railroad Station (1881). Of this grouping, the Oliver Ames Free Library and the Oakes Ames Memorial Hall are approximately 400 feet west of the proposed Easton Village Station and the Old Colony Railroad Station is located immediately north of the proposed station abutting the rail right-of-way. The other two properties are well outside of the project APE (see PAL 2009: Volume 5, pg. 14). The proposed changes to the Stoughton Line and the introduction of a new station will affect the visual setting of the three historic properties closest to the project through the introduction of new elements. Adverse effects to National Historic Landmarks require special

considerations to avoid, minimize, or mitigate adverse effects and options for mitigating visual impact through color or landscaping are recommended.

The North Easton Historic District (Map No. Ea.B) encompasses the Stoughton Line between Main and Elm streets and the proposed Easton Village Station site. The district includes the Ames Company Shovel Shop complex located adjacent to the proposed Easton Village Station. The Stoughton Line right-of-way (Map No. Ea.A) track structure – including bridges, cuts and fills, retaining walls, and signal infrastructure – is recommended as important to the setting of this district. The changes to the Stoughton Line will alter the appearance of the Stoughton Line: Dighton and Somerset/Old Colony Line segment as noted above. Construction of a new station platform, access and drop off area will occur adjacent to the North Easton Station and Ames Shovel Shop. The design of these changes will introduce new modern rail elements that will have a visual adverse effect.

The introduction of additional rail service will result in increased noise during operations from train noise and horn blowing at grade crossings that will cause moderate to severe noise, or severe at residential, contemplative, and quiet setting historic resources. The sound intrusions may be mitigated through the use of sound insulation or barrier mitigation. In addition to the potential for noise impacts, one historic resource would be affected by the introduction of modern power structures (from a traction power station) that will alter its historic setting. The grade crossings and traction power station facility and the historic properties and areas that would be affected are listed below.

- Washington Street grade crossing: Washington Street Commercial and Institutional District, Canton (Map No. Ca.C; Figure 4.8-17)
- School Street, Porter Street, and Wyman Street grade crossings: Downtown Stoughton Area, Stoughton (Map No. St.B; Figure 4.8-18)
- Oliver Street and Elm Street grade crossings: North Easton Historic District, Easton (Map No. Ea.B, Figure 4.8-19)
- Elm Street grade crossing: Holmes-Linden Street Area, Easton (Map No. Ea.C, Figure 4.8-19);
- Reynolds Street grade crossing: Center Street Area, Easton (Map No. Ea.E, Figure 4.8-19);
- Short Street and Depot Street grade crossings: Easton Center Area, Easton (Map No. Ea.F; Figure 4.8-19);
- Foundry Street grade crossing: Hayward-Pool Area, Easton (Map No. Ea.G, Figure 4.8-xx);
- Carver Street grade crossing: Carver Street, Broadway, Raynham (Route 138) (Map No. Ra.B, Figure 4.8-21)
- Britton Street grade crossing: Broadway-Center Street Area, Raynham (Map No. Ra.C, Figure 4.8-21);
- West Brittania Street grade crossing: Dog Kennel and Track, Raynham (Map No. Ra.011, Figure 4.8-21);
- Dean Street grade crossing (Figure 4.8-21):
  - Taunton Center Area, Taunton (Map No. Ta.B)
  - William Woodward House, Taunton (Map No. Ta.020, Ta.C)
  - Charles R. Atwood House, Taunton (Map No. Ta.021, Ta.C)
- Weir Street and Bow Street grade crossings and Traction power facility TP-05, Paralleling Station (PS-2): High Street Area, Taunton (Ta.D, Figure 4.8-21)

Table 4.8-12 summarizes the adverse effects likely to result from reconstructing the Stoughton electric alternative.

Table 4.8-12 Potential Adverse Effects to Historic Resources, Stoughton Electric Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Canton	Washington Street Commercial and Institutional District	No	Moderate to severe train noise (in some locations)	Moderate	Visual
Canton	Canton Junction Railroad Station	No	n/a	Severe	Physical (possible) Visual (possible)
Canton	Revere Copper Company Railroad Embankment	No	n/a	Moderate, in vicinity of new catenary	Visual
Canton	Canton Public Library	No	No	Moderate	Visual
Canton	Forge Pond Railroad Bridge	Physical – widen bridge	n/a	Severe	Physical
Canton	Canton Water Works	No	Moderate train noise	Moderate,	Visual
Stoughton	Downtown Stoughton Area	No	Moderate to severe train and horn noise (in some portions of area)	Moderate	Noise Visual
Stoughton	Mystic Rubber Company	No	n/a	Moderate	
Stoughton	Stoughton Old Colony Railroad Station	No	n/a	Severe	Physical (possible) Visual (possible)
Stoughton	Benjamin Marshall House	No	Moderate train noise	Moderate, in vicinity of new catenary	Visual
Easton	Old Colony Railroad - Stoughton Branch Railroad Corridor (only section within North Easton Historic District)	Potential physical alteration or reconstruction	n/a	Severe	Physical (possible)
Easton	North Easton Historic District	No	Moderate to severe train and horn noise (in some portions of district)	Moderate to severe, in vicinity of new catenary, station, and grade crossing systems	Noise Visual
Easton	Holmes-Linden Street Area	No	Moderate to severe train and horn noise (in some portions of district)	Moderate to severe	Noise Visual
Easton	H.H. Richardson Historic District	No	Moderate to severe train and horn noise (in some portions of district)	Moderate to severe	Noise Visual
Easton	Center Street Area	No	Moderate to severe train and horn noise (in some portions of area)	Moderate to severe	Noise Visual
Easton	Easton Center Area	No	Moderate to severe train and horn noise (in some portions of district)	Moderate to severe	Noise Visual
Easton	Hayward - Pool Area	No	Moderate train and moderate to severe horn noise (at edge of area)	Moderate to severe	Noise Visual

Table 4.8-12 (continued)
Potential Adverse Effects to Historic Resources, Stoughton Electric Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Easton	Old Colony Railroad Station	No	n/a	Severe, adjacent to new catenary, Moderate station and site modifications, and grade crossing	Visual
Raynham	Carver Street Area	No	Moderate to severe train and horn noise	Moderate to severe	Noise Visual
Raynham	Broadway-Center Street Area	No	Moderate to severe train and horn noise (in some portions of area)	Moderate to severe	Noise Visual
Raynham	Residence and Barn	No	Moderate train and moderate to severe horn noise (at edge of property)	Moderate,	Noise Visual
Raynham	Dog Kennel and Track Property	No	Moderate to severe train and horn noise	Moderate to severe	Noise Visual
Taunton	Taunton Center Area	No	Moderate to severe train and horn noise (in some portions of area)	Moderate to severe	Noise Visual
Taunton	High Street Area	No	Moderate train noise (at edge of area)	Moderate	Noise Visual
Taunton	Old Colony Railroad Station	No	n/a	Severe, adjacent to new catenary and grade crossing, in vicinity of new station	Visual
Taunton	William Woodward House	No	Severe train and horn noise	Moderate	Noise Visual
Taunton	Charles R. Atwood House	No	Moderate train and severe horn noise	Moderate	Noise Visual
Taunton	Theodore Dean House	No	Severe horn noise	Moderate, in vicinity of new catenary and grade crossing	Noise Visual
Taunton	Neck of Land Cemetery	No	Moderate to severe horn noise	Severe	Noise Visual

Archaeological Resources

The Stoughton Electric APE includes the existing and abandoned railroad right-of-way, the proposed frontage road in Stoughton, the new grade separation Carver Street (Route 138) in Raynham, and any other work areas including electrification infrastructure that would involve earthmoving outside of the previously disturbed railroad right-of-way.

There is a high potential for undocumented eighteenth and nineteenth-century EuroAmerican residential archaeological sites in Easton north of Foundry Street and from Elm Street north to the Stoughton town line. An intensive (locational) archaeological survey is needed to identify archaeological sites. Project impacts will be assessed once the intensive survey is completed prior to completion of environmental review and when more detailed design information is available.

Well drained terraces along the railroad right-of-way in the Hockomock and Pine swamps could contain significant pre-contact Native American sites and traditional cultural places for the Wampanoag Tribe of Gay Head/Aquinnah. Project impacts will be assessed following a review of the Hockomock trestle and right-of-way work area design plans and profiles when available.

The proposed grade separation at the Carver Street (Route 138) crossing is assessed as having a moderate sensitivity for pre-contact Native American and under-documented post-contact EuroAmerican archaeological sites. An intensive (locational) archaeological survey is needed to identify archaeological sites. Project impacts will be assessed once the intensive survey is completed prior to completion of environmental review and when more detailed design information is available.

The proposed frontage road in Stoughton along the Stoughton line right-of-way is assessed as having low archaeological sensitivity. No impacts to archaeological sites are identified for this work element.

There is the possibility that proposed overhead catenary structure support footings and deep pile foundations for the proposed trestle in the Hockomock Swamp could extend into archaeologically sensitive strata below rail bed disturbance and fill deposits. Specific sensitivity areas would be determined based on a review of soil borings and/or a detailed soil profile of the right-of-way using soil boring logs. An intensive (locational) survey may be needed in sensitive areas where direct physical construction impacts are planned. Project impacts to archaeological resources will be assessed prior to completion of environmental review and when more detailed design information is available.

The archaeological survey has not yet been conducted for track improvements including electrification infrastructure that would involve earthmoving outside of the previously disturbed railroad right-of-way within the APE. Project impacts to archaeological resources in these portions of the Stoughton Electric APE will be assessed prior to completion of environmental review and when more detailed design information is available.

Appendix 4.8-C, Table 3 presents the assessment of potential impacts to archaeological resources within the Stoughton Line portion of the Attleboro Alternatives APE.

4.8.3.6 STOUGHTON DIESEL ALTERNATIVE

The Stoughton Diesel Alternative is identical to the Stoughton Electric Alternative with the exception of the electrical infrastructure including the overhead catenary system that is not required for the diesel-powered train service.

Cultural resources reconnaissance survey was conducted for the Stoughton Diesel Alternative elements and impacts to identified resources are presented below.

Historic Resources

The impacts to historic resources along the Stoughton Line segment of the Stoughton Diesel Alternative may be permanent or temporary, direct or indirect. A total of 29 historic properties (14 individual and 15 historic districts) located within the Stoughton Line APE may be affected by the project. Figures 4.8-17 to 4.8-21 show the location of historic resources along the Stoughton Line. Appendix 4.8-B, Table 6 presents the potential impacts to historic resources for the Stoughton Diesel Alternative.

Direct Impacts

Direct impacts for the Stoughton Line segment of the Stoughton Diesel Alternative are identical to the electric option though the electrical infrastructure is not involved.

Indirect Impacts

Indirect impacts for the Stoughton Line segment of the Stoughton Diesel Alternative are similar to the electric option, with the exception of any impacts from the electrical power infrastructure. Therefore, the diesel option will result in less visual impact.

Table 4.8-13 summarizes the adverse effects likely to result from reconstructing the Stoughton diesel alternative.

Archaeological Resources

See discussion above for the Stoughton Electric Alternative above under Section 3.5.1.

4.8.3.7 WHITTENTON ELECTRIC ALTERNATIVE

The Whittenton Electric Alternative is a variant of the Stoughton Electric Alternative alignment described in Section 3.5. At Raynham Junction, the line would divert to the southwest, following the old, unused Whittenton Branch railroad line. This alignment would connect with the Attleboro Secondary near the Whittenton neighborhood in Taunton then continue on toward the southeast to connect with the New Bedford Main Line at Weir Junction.

This alternative would consist of 3.48 miles of single track on the Whittenton Branch, 1.62 miles of single track on the Attleboro Secondary, and 0.62 miles of double track on the Attleboro Secondary west of Weir Junction. New grade crossings would be built and equipment installed. New catenary supports, wires, and a new traction power system would be constructed along the length of the line. Stations along the Stoughton Line portion of this alternative are the same as Stoughton Alternative, except for Taunton Station. No traction power facilities, new stations, or layover facilities would be constructed within the Whittenton Branch corridor.

The results of the cultural resource reconnaissance survey for the Whittenton Electric Alternative elements, and impacts to identified resources are presented below. This section focuses on the Whittenton Branch component.

Historic Resources

The impacts to historic resources along the Whittenton Branch segment of the Whittenton Electric Alternative of the project may be permanent or temporary, direct or indirect. A total of 7 historic properties (1 individual and 6 historic districts) located within the Whittenton Branch Line APE may be affected by the project's electric option. Figure 4.8-22 shows the location of historic resources along the Stoughton Line. Appendix 4.8-B, Table 7 presents the potential impacts to historic resources for the Whittenton Branch of the Whittenton Electric Alternative. North of the Whittenton Branch and Raynham Junction, the Whittenton Electric Alternative may affect an additional 21 properties (8

Table 4.8-13 Potential Adverse Effects to Historic Resources, Stoughton Diesel Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Canton	Washington Street Commercial and Institutional District	No	Moderate to severe train noise (in some locations)	No	Noise
Canton	Canton Junction Railroad Station	No	n/a	Moderate, modifications to site	Physical (possible) Visual (possible)
Canton	Revere Copper Company Railroad Embankment	No	n/a	No	
Canton	Forge Pond Railroad Bridge	No	n/a	No	
Stoughton	Downtown Stoughton Area	No	Moderate to severe train and horn noise (in some locations)	No	Noise
Stoughton	Mystic Rubber Company	No	n/a	No	
Stoughton	Stoughton Old Colony Railroad Station	Potential physical alterations to building	n/a	Moderate	Physical (possible) Visual (possible)
Easton	Old Colony Railroad - Stoughton Branch Railroad Corridor (only section within North Easton Historic District)	Potential physical alteration or reconstruction	n/a	Severe, location of new station and grade crossing	Physical (possible)
Easton	North Easton Historic District	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Holmes-Linden Street Area	No	Moderate to severe train and horn noise (in some locations)	Moderate	Noise Vibration Visual
Easton	H.H. Richardson Historic District	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Center Street Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Easton Center Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Hayward - Pool Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Old Colony Railroad Station	No	n/a	Severe	Visual (possible)
Raynham	Carver Street Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Raynham	Broadway-Center Street Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual

Table 4.8-13 (continued)
Potential Adverse Effects to Historic Resources, Stoughton Diesel Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Raynham	Residence and Barn	No	Moderate to severe train and horn noise (rear of property)	No	Noise
Raynham	Dog Kennel and Track Property	No	Severe train and horn noise	Moderate to severe	Noise Visual
Taunton	Taunton Center Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Taunton	High Street Area	No	Moderate to severe train and horn noise (in some locations)	No	Noise
Taunton	Old Colony Railroad Station	No	n/a	Moderate	
Taunton	Woodward, William House	No	Severe horn noise	Moderate	Noise Visual
Taunton	Atwood, Charles R. House	No	Moderate to severe horn noise	Moderate	Noise Visual

individual properties and 13 historic districts), located on the Stoughton Line north of Raynham Junction. The impacts to these properties are the same as those described in Section 3.5 above, excluding impacts pertaining to the Taunton (Dean Street) Station; TP-05, Paralleling Station (PS-2); and 11 historic properties located on the Stoughton Line south of Raynham Junction in Raynham and Taunton.

Direct Impacts

Direct impacts for the Whittenton Branch electric option will be similar to the other electric alternatives, but will include clearing and grading and construction of new track and grade crossings along the abandoned line. One bridge, the Railroad Bridge over the Mill River, Taunton would be adversely impacted by alteration or reconstruction.

There will be no direct impacts to historic resources for new grade crossings work within the right-of-way, and no traction power facilities are proposed.

Indirect Impacts

Indirect impacts from the Whittenton Branch electric option will be similar to the other electric alternatives, but will also involve clearing that will increase the visibility of the newly reactivated right-of-way from nearby historic properties. The abandoned right-of-way crosses or is adjacent to five historic districts.

- Train operations and horn blowing will result in moderate to severe, to severe noise that may require noise barrier or sound insulation at the following historic resources:
- Britton Street grade crossing: Broadway-Center Street Area, Raynham (Map No. Ra.C, Figure 4.8-21);
- Dean Street and Whittenton Street grade crossings: Taunton MRA (Map No. Ta.C, Figure 4.8-21);
- Whittenton Street grade crossing (Figure 4.8-22):

  - Whittenton Mill Area (Map No. Ta.F)
  - Reed and Barton Worker Housing (Map No. Ta.H)
- Warren Street grade crossing: Ancient Whittenton Area (Map No. Ta.I, Figure 4.8-22).

Table 4.8-14 summarizes the adverse effects likely to result from constructing the Whittenton electric alternative.

Archaeological Resources

The Whittenton Electric APE includes the abandoned railroad right-of-way and any other work areas including electrification infrastructure that would involve earthmoving outside of the former railroad right-of-way. Appendix 4.8-C, Table 3 presents the assessment of potential impacts to archaeological resources within the Whittenton Branch portion of the Attleboro Alternatives APE.

There are no recorded archaeological sites within the Whittenton Electric former right-of-way portion of the APE. The reconnaissance survey of the Whittenton Electric APE including the former railroad right-of-way, however, is incomplete. Project impacts to archaeological resources in the Whittenton Electric APE will be assessed prior to completion of environmental review and when more detailed design information is available.

4.8.3.8 WHITTENTON DIESEL ALTERNATIVE

The Whittenton Diesel Alternative is identical to the Whittenton Electric Alternative with the exception of the electrical infrastructure including the overhead catenary system that is not required for the diesel-powered train service.

Cultural resources reconnaissance survey was partially completed for the Whittenton Diesel Alternative elements, and impacts to identified resources are presented below.

Historic Resources

The impacts to historic resources along the Whittenton Branch segment of the Whittenton Diesel Alternative of the project may be permanent or temporary, direct or indirect. A total of 7 historic properties (1 individual and 6 historic districts) located within the Whittenton Branch Line APE may be affected by the project's diesel option. Figure 4.8-22 shows the location of historic resources along the Stoughton Line. Appendix 4.8-B, Table 8 presents the potential impacts to historic resources for the Whittenton Diesel Alternative.

The Whittenton Diesel Alternative may affect an additional 21 properties (8 individual properties and 13 historic districts), located on the Stoughton Line north of Raynham Junction. The impacts to these properties are the same as those described in Section 3.5 above, excluding impacts pertaining to the Taunton Depot, TP-05, Paralleling Station (PS-2), and 7 historic properties located on the Stoughton Line south of Raynham Junction in Raynham and Taunton.

Direct Impacts

Direct impacts for the Whittenton Branch segment of the Whittenton Diesel Alternative are identical to the electric option.

Table 4.8-14 Potential Adverse Effects to Historic Resources, Whittenton Electric Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Canton	Washington Street Commercial and Institutional District	No	Moderate to severe train noise (in some locations)	No	Noise
Canton	Canton Junction Railroad Station	No	n/a	Moderate, modifications to site	Physical (possible) Visual (possible)
Canton	Forge Pond Railroad Bridge	Physical alteration – add track to bridge	n/a	No	Physical
Stoughton	Downtown Stoughton Area	No	Moderate to severe train and horn noise (in some locations)	No	Noise
Stoughton	Stoughton Old Colony Railroad Station	Potential physical alterations to building	n/a	Moderate	Physical (possible) Visual (possible)
Easton	Old Colony Railroad - Stoughton Branch Railroad Corridor (only section within North Easton Historic District)	Potential physical alteration or reconstruction	n/a	Severe, location of new station and grade crossing	Physical (possible)
Easton	North Easton Historic District	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Holmes-Linden Street Area	No	Moderate to severe train and horn noise (in some locations)	Moderate	Noise Visual
Easton	H.H. Richardson Historic District	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Center Street Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Easton Center Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual

Table 4.8-14 (continued)
Potential Adverse Effects to Historic Resources, Whittenton Electric Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Easton	Hayward - Pool Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Old Colony Railroad Station	No	n/a	Severe	Visual
Raynham	Broadway-Center Street Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Taunton	Whittenton Mill Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Taunton	Reed and Barton Worker Housing	No	Moderate to severe horn noise (in some locations)	Moderate	Noise Visual
Taunton	Ancient Whittenton Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Taunton	Railroad Bridge over Mill River	Physical alteration or reconstruction	n/a	Severe, in close proximity to new catenary	Physical
Taunton	MA State Hospitals and State Schools MPS	No	Moderate train and horn noise	Moderate	Visual
Taunton	Taunton State Hospital Historic District	No	Moderate train and horn noise	Moderate	Visual
Taunton	Tremont St Area	No	Moderate train and severe horn noise	Moderate	Noise Visual
Taunton	Hodges Ave Area	No	Moderate train and moderate to severe horn noise	Moderate	Noise Visual
Taunton	Harrison St Area	No	Moderate horn noise	Moderate	Visual
Taunton	Taunton Car Mfg. Company	No	n/a	Moderate, in vicinity of new station	Visual
Taunton	St. Thomas Episcopal Church	No	Moderate horn noise	Moderate	Visual
Taunton	McKinstrey House	No	Moderate horn noise	Moderate	Visual

Table 4.8-14 (continued)
Potential Adverse Effects to Historic Resources, Whittenton Electric Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Taunton	Henry G. Brownell House (Elk's Lodge No. 150)	No	Moderate to severe horn noise	Moderate	Noise Visual
Taunton	Joseph E. Wilbar House	No	Severe horn noise	Moderate	Noise Visual
Taunton	Lord-Baylies-Bennett House (Taunton Masonic Lodge)	No	Moderate train and severe horn noise	Moderate	Noise Visual
Taunton	Samuel Washburn House	No	Moderate to severe train and severe horn noise	Severe	Noise Visual
Taunton	Samuel Colby House	No	Moderate train and severe horn noise	Moderate	Noise Visual
Taunton	Sarah A. Haskins House	No	Moderate horn noise	Moderate	Visual
Taunton	Mount Pleasant Cemetery	No	Moderate horn noise	Moderate	Visual
Taunton	J.C. Bartlett House	No	Moderate train and severe horn noise	Severe	Noise Visual
Taunton	H.B. Lothrop Store	No	Moderate horn noise	Moderate	Visual
Taunton	William Lawrence House	No	Moderate horn noise	Moderate	Visual

Indirect Impacts

Indirect impacts for the Whittenton Branch segment of the Whittenton Diesel Alternative are similar to the electric option with the exception of any impacts from the electrical power infrastructure. Therefore, the diesel option will result in less visual impact.

Table 4.8-15 summarizes the adverse effects likely to result from constructing the Whittenton Diesel Alternative.

Archaeological Resources

See discussion above for the Whittenton Electric Alternative.

Table 4.8-15 Potential Adverse Effects to Historic Resources, Whittenton Diesel Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Canton	Washington Street Commercial and Institutional District	No	Moderate to severe train noise (in some locations)	No	Noise
Canton	Canton Junction Railroad Station	No	n/a	Moderate, modifications to site	Physical (possible) Visual (possible)
Canton	Forge Pond Railroad Bridge	Physical alterations to bridge	n/a	No	Physical
Stoughton	Downtown Stoughton Area	No	Moderate to severe train and horn noise (in some locations)	No	Noise
Stoughton	Mystic Rubber Company	No	n/a	No	
Stoughton	Stoughton Old Colony Railroad Station	Potential physical alterations to building	n/a	Moderate	Physical (possible) Visual (possible)
Easton	Old Colony Railroad - Stoughton Branch Railroad Corridor (only section within North Easton Historic District)	Potential physical alteration or reconstruction	n/a	Severe, location of new station and grade crossing	Physical (possible)
Easton	North Easton Historic District	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise
Easton	Holmes-Linden Street Area	No	Moderate to severe train and horn noise (in some locations)	Moderate	Noise Visual
Easton	H.H. Richardson Historic District	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Center Street Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Easton Center Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Hayward - Pool Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Easton	Old Colony Railroad Station	No	n/a	Severe	Visual
Raynham	Broadway-Center Street Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual

Table 4.8-15 (Continued)
Potential Adverse Effects to Historic Resources, Whittenton Diesel Alternative

Town	Resource	Direct Physical	Indirect Noise	Indirect Visual	Adverse Effects
Taunton	Whittenton Mill Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Taunton	Reed and Barton Worker Housing	No	Moderate to severe train and horn noise (in some locations)	Moderate	Noise Visual
Taunton	Ancient Whittenton Area	No	Moderate to severe train and horn noise (in some locations)	Moderate to severe	Noise Visual
Taunton	Railroad Bridge over Mill River	Physical alteration or reconstruction	n/a	No	Physical
Taunton	High Street Area	No	Moderate train and moderate to severe horn noise	No	Noise
Taunton	Tremont Street Area	No	Moderate train and severe horn noise	No	Noise
Taunton	Hodges Avenue Area	No	Moderate to severe horn noise	No	Noise
Taunton	Taunton Car Manufacturing Company	No	Moderate horn noise	Moderate, in vicinity of new station	Visual
Taunton	Henry G. Brownell House (Elk's Lodge No. 150)	No	Moderate to severe horn noise	No	Noise
Taunton	Joseph E. Wilbar House	No	Severe horn noise	No	Noise
Taunton	Lord-Baylies-Bennett House (Taunton Masonic Lodge)	No	Moderate train and severe horn noise	No	Noise
Taunton	Samuel Washburn House	No	Severe train and horn noise	No	Noise
Taunton	Samuel Colby House	No	Moderate train and severe horn noise	No	Noise
Taunton	J.C. Bartlett House	No	Moderate train and severe horn noise	No	Noise

4.8.3.9 RAPID BUS ALTERNATIVE

The Rapid Bus Alternative would provide express bus service from Fall River and New Bedford to Boston using a proposed dedicated, primarily reversible bus lane to be built along Routes 24 and I-93/128, the existing Interstate-93/Route 3 HOV zipper lane, and a short portion through mixed traffic. Modifications would be required along these highway corridors to improve existing highway capacity, construct exclusive new bus lanes, install zipper lanes and reconfigure existing interchanges. Constructing these improvements would require rebuilding eight interchanges on Route 24 as well as the Braintree Split and the Route 24/I-93 interchange in Randolph. This option would also require reconstructing 26 highway bridges. New construction is only required from Braintree to Taunton on these highway routes.

Six bus stations are proposed for the Rapid Bus Alternative (King's Highway, Whale's Tooth, Fall River Depot, Freetown, Galleria, and Downtown Taunton). A layover facility would be constructed at a to-be-determined location, likely in a developed area.

Cultural resources reconnaissance survey for the Rapid Bus Alternative elements and impacts to identified resources are presented below.

Historic Resources

The impacts to historic resources of the Rapid Bus Alternative may be permanent or temporary, direct or indirect. Two historic districts are located within the Rapid Bus working APE. The working APE was defined as 50 feet from edge of road right-of-way. Figures 4.8-23 to 4.8-29 show the location of historic resources along the Rapid Bus Alternative. Appendix 4.8-B, Table 9 presents the potential impacts to historic resources for the Rapid Bus Alternative.

Direct Impacts

Project work items for the Rapid Bus Alternative consist of roadway and interchange modifications primarily within or immediately adjacent to the existing right-of-way. No historic resources are present within the highway corridor rights-of-way where project improvements are planned. Therefore work within the rights-of-way will have no potential direct impacts to historic resources. Stations are discussed below.

Indirect Impacts

The majority of work for the Rapid Bus Alternative is proposed within or immediately adjacent to the existing rights-of-way. No visual and noise impacts are anticipated to occur to the two historic properties identified within the 50 foot APE. These two properties are:

- Blue Hills MRA (Map No. Ca.E, De.A, Qu.A, Br.A, Ra.A; Figure 4.8-9, 4.8-23, 4.8-24) in Quincy, Braintree, Milton, Randolph, Dedham, and Canton; and
- Daniel Waldo Field Park (Map No. Av.A, Figure 4.8-26) in Avon.

Potential project impacts to historic resources in the Rapid Bus APE will be reassessed prior to completion of environmental review and when more design information is available. Stations are discussed in Section 3.10 below.

Archaeological Resources

The Rapid Bus APE includes the existing highway corridor rights-of-way, interchange reconfigurations, bridge reconstructions, and any other work areas that would involve earthmoving outside of the existing highway rights-of-way. Appendix 4.8-C, Table 4 presents the assessment of potential impacts to archaeological resources within the Rapid Bus Alternative APE.

There are no recorded archaeological sites or identified sensitive areas within the highway corridor rights-of-way where project improvements are planned. No direct impacts to archaeological resources in the previously disturbed highway rights-of-way are anticipated.

The archaeological survey has not yet been conducted for the interchange reconfigurations, bridge reconstructions, and other work areas that would involve earthmoving outside of the previously disturbed highway rights-of-way within the APE. These project elements are located in geographical areas that contain or are in proximity to recorded sites and have the potential to contain unrecorded sites in sensitive areas. Project impacts to archaeological resources in the Rapid Bus APE will be assessed prior to completion of environmental review and when more detailed design information is available.

Appendix 4.8-C, Table 4 presents the assessment of potential impacts to archaeological resources within the Rapid Bus Alternative APE.

4.8.3.10 STATIONS

There are 18 stations proposed for new construction or improvements for the Attleboro and Stoughton rail alternatives, including the Southern Triangle (electric and diesel) and the Rapid Bus Alternative. Station plans are conceptual at this point, consisting of general layouts and footprints within specified larger parcels. Rail stations will typically consist of a raised 800-foot long platform, canopy, parking lot, signage and lighting.

Conceptual plans were used for the data collection and analysis of cultural resources at the proposed stations. The potential impacts to identified cultural resources station concepts are presented below. The discussions below detail the results of investigations to date at the various stations. Appendix 4.8-C, Table 5 presents the assessment of potential impacts to archaeological resources within the Station APEs. Appendix 4.8-C, Table 6 presents the assessment of potential impacts to archaeological resources with the layover facility APEs. The impacts to the historic structures, areas, and districts are summarized on Appendix 4.8-B, Table 11 and discussed in text below.

Barrowsville

The Barrowsville Station would be a new station constructed on South Worcester Street in Norton (Figure 4.8-15) along the Attleboro Secondary to serve the Attleboro Alternatives. It is an approximately 7-acre parcel near the former train station. The station would be village-style with limited parking, and serve primarily drop-off/pick-up customers.

Historic Resources

The proposed Barrowsville Station APE in Norton contains two historic areas/districts as shown on Figure 4.8-15. The station site overlaps with the Wading River Area (Map No. No.B) boundary. However no buildings within this area are located within the station site. The station site is adjacent to the Chartley Area (Map No. No.C). The boundary of both areas, which were broadly drawn during a previous survey, may be refined during intensive survey phase.

Because there are no identified historic resources on the site, it is unlikely there will be direct impacts to historic resources within the Wading River Area. The introduction of a new station may have indirect visual effects on these two historic districts through the introduction of modern station structures and parking that alter the historic setting. Noise, vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

There are no recorded archaeological sites within the 7-acre project parcel, but it is assessed as having areas of moderate and high archaeological sensitivity for: 1) pre-contact/contact Native American habitation and resource procurement/processing sites; and 2) post-contact EuroAmerican residential and institutional-related cultural deposits associated with documented and extant structures.

The current conceptual plan depicts construction activities within these sensitive areas. An intensive (locational) archaeological survey is needed to identify any archaeological sites. Project impacts will be assessed once the intensive survey is completed.

Battleship Cove

The Battleship Cove Station would be a new station constructed behind the Ponte Delgada monument along Water Street on an approximately 2.2-acre parcel near the southern terminus of the Fall River Secondary. It would serve all of the rail alternatives. The station would be designed to serve walk-in customers and pick up-drop off customers with no parking. The City of Fall River constructed a pickup-drop off loop road for the future commuter rail station as part of the Ponte Delgada monument construction.

Historic Resources

The proposed Battleship Cove Station at the terminus of the Fall River Secondary is adjacent to the American Printing Company–Metacomet Mill (Map Nos. FR.N, FR.C), the American Printing Company Machine Shop (Map No. FR.088), and the Borden and Remington Company (Map No. FR.089) as shown in Figure 4.8-8. There are no historic resources on the site; therefore, there will be no direct impacts to historic resources.

The introduction of a new station may have indirect visual effects on these three historic properties through the introduction of modern station structures that alter the historic setting. Noise, vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

There are no recorded archaeological sites or identified archaeologically sensitive areas within the 2.2-acre project parcel. No project impacts to archaeological resources are anticipated by the construction of this proposed station for the rail alternatives.

Canton Center

The Canton Center Station is an existing commuter rail station located off of Washington Street in Canton Center on the active portion of the Stoughton Line. The existing station would be modified to accommodate a second track (two new platforms adjacent to each track and minor changes to the parking layout in the existing lots near the station).

Historic Resources

Canton Center Station is not a historic resource but is adjacent to the Canton Center Area (Map No. Ca.C) as shown in Figure 4.8-17. There are no historic resources on the site; therefore, there will be no direct impacts to historic resources.

Improvements to the existing station may have indirect visual effects on Canton Center Area through the introduction of modern station structures that alter the historic setting. Noise, vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

No archaeological survey has been conducted; however, the current conceptual plan indicates that the station modification work will be contained within the existing disturbed railroad right-of-way and paved station site. No project impacts to archaeological resources are anticipated.

Canton Junction

The Canton Junction Station is an existing commuter rail station located off of Jackson Street in Canton at the junction of the Stoughton line with the Northeast Corridor. It would serve all rail alternatives, but reconstructions would only be done to accommodate the third track on the Northeast Corridor for the Attleboro Electric and Attleboro Diesel options. Proposed improvements include demolition and reconstruction of the existing platforms, construction of two new platforms, reconstruction of the existing overhead pedestrian bridge, and reconfiguration of existing parking lots to replace the parking spaces impacted by the proposed construction. The station would not be changed for the Stoughton (including the Whittenton variations) Alternatives.

Historic Resources

The historic Canton Junction Station (Map No. Ca.001; Figure 4.8-10) is located at the junction of the Stoughton Line and the Amtrak Northeast Corridor. No direct modifications to the station building are planned. However, improvements to the existing platforms, pedestrian bridge, and parking lot are planned. These improvements may have an indirect effect on the historic architectural qualities of the station; however, these are not anticipated to be substantially different from existing conditions so the effect would not be adverse. Noise, vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

No archaeological survey has been conducted for the Canton Junction Station. The current conceptual plan indicates that the proposed station improvements will mostly be contained within the existing disturbed railroad right-of-way and paved station site. No project impacts to archaeological resources are anticipated in these previously disturbed areas.

The reconfiguration of existing parking spaces involves work outside of existing rail and road rights-of-way. An archaeological reconnaissance survey is needed to assess the archaeological sensitivity of these areas. An intensive (locational) survey may be needed to identify archaeological sites in sensitive areas. Potential project impacts to archaeological resources will be assessed prior to completion of environmental review and when more design information is available.

Appendix 4.8-C, Table 5 presents the assessment of potential impacts to archaeological resources within the Station APEs.

Downtown Taunton

The Downtown Taunton (formerly called Taunton Depot) Station would be a new train or bus station constructed on an approximately 11-acre parcel within a dense mixed commercial/residential area off of Oak Street in Taunton along the Attleboro Secondary (Figure 4.8-16). The parcel currently contains the GATRA/Former Oak Street Mall. It would serve the Attleboro Alternatives, the Whittenton Alternatives, or the Rapid Bus Alternative.

Historic Resources

Downtown Taunton Station in Taunton is proposed on Oak Street behind the existing GATRA bus station. There are no historic resources on the site; therefore, there will be no direct impacts to historic resources.

However, the Taunton Car Manufacturing Company Building (Map No. Ta.206) is located at 3 Myrtle Street within the station APE. The introduction of a new station could have indirect visual effects on this historic property through the introduction of modern station structures and parking that alter the historic setting. However, the effect will not be adverse because of the existing dense urban character of the surrounding area and the original transportation function of the historic building. Noise, vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

There are no recorded archaeological sites within the 11-acre project parcel, but it is assessed as having areas of moderate and high archaeological sensitivity for post-contact Euro-American industrial and railroad-related structures.

The current conceptual plan indicates that the proposed parking lot and subsurface stormwater management area will be constructed in the southern portion of the parcel assigned high archaeological sensitivity. An intensive (locational) archaeological survey is needed to identify any archaeological sites. Project impacts will be assessed once the intensive survey is completed.

Easton Village

The Easton Village Station would be a new station consisting of platform, canopy, and drop-off parking lot only constructed on an approximately 1-acre parcel adjacent to Sullivan Avenue in North Easton Village along the Stoughton Line (Figure 4.8-19). It would serve the Stoughton Alternatives, including the Whittenton variations.

Historic Resources

The proposed Easton Village Station on the Stoughton Line in Easton (Figure 4.8-19) is located immediately adjacent to the Easton Old Colony Railroad Station (Map No. Ea.003), which is part of the

H.H. Richardson Historic District NHL (Map No. Ea.D) and is within the National Register listed North Easton Historic District (Map No. Ea.B).

The proposed station site abuts important contributing properties of this district that are associated with the Ames Shovel Works. The introduction of a new station will have a direct effect on the Stoughton Line through construction of new platform and related features on the railroad embankment. The new station will have indirect visual effects on the surrounding National Register and NHL properties through the introduction of modern station structures and parking that alter the historic setting. Noise, vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

The northern portion of the 1-acre project parcel is assessed as having moderate sensitivity for 1) pre-contact Native American habitation and resource procurement/processing sites; and 2) undocumented eighteenth and nineteenth-century industrial and railroad-related resources beneath the built-up railroad embankment.

The current conceptual plan indicates that the proposed station platform and associated work will be within the abandoned railroad right-of-way assigned moderate archaeological sensitivity. No project impacts are anticipated if construction work is contained within the built-up (raised) railroad embankment. If construction activities would extend below the built-up railroad embankment, then an intensive (locational) archaeological survey would be needed to identify any archaeological sites. Project impacts would be assessed following the completion of an intensive survey, if needed.

Fall River Depot

The Fall River Depot would be a new train or bus station constructed on an approximately 8-acre parcel one mile north of downtown Fall River at Route 79 and Davol Street along the Fall River Secondary (Figure 4.8-8). It would serve all of the rail alternatives and the Rapid Bus alternative.

Historic Resources

There are no historic resources on the site of the proposed Fall River Depot Station on the Fall River Secondary. Therefore, there will be no direct impacts to historic resources

The proposed Station is located across the rail right-of-way from the Pearce-Durfee Street Area (Map No. FR.L) and across Route 138 from the 800 Davol Street Inn (Map No. FR.073). Both of these historic properties are recommended as eligible for the National Register. The introduction of a new station will have indirect visual effects on these two historic properties through the introduction of modern station structures and parking that could alter the historic setting. However, the effect would not be adverse due to the industrial character of the adjacent part of the Pearce-Durfee Street Area and the presence of the highway. Noise, vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

There are no recorded archaeological sites or identified archaeologically sensitive areas within the 8-acre project parcel. No project impacts to archaeological resources are anticipated by the construction of this proposed station.

Freetown

The Freetown Station would be a new train or bus station constructed on an 18-acre parcel situated on South Main Street and west of the Fall River Secondary right-of-way (Figure 4.8-7). The parcel currently contains a self-storage business, and is near the Fall River Executive Park and the proposed Riverfront Park. It would serve all of the rail alternatives and the Rapid Bus Alternative.

Historic Resources

The Freetown Station does not have any historic resources on the proposed site or within the APE. Therefore, there would be no impacts to historic resources.

Archaeological Resources

The proposed Freetown Station lies within the Lower Taunton River Basin Archaeological District. The 18-acre project parcel contains areas of moderate and high archaeological sensitivity for pre-contact Native American habitation and resource procurement/processing sites.

The current conceptual plan indicates that the proposed parking lot and subsurface stormwater management area will be constructed in the southern portion of the parcel assigned high archaeological sensitivity. An intensive (locational) archaeological survey is needed to identify any archaeological sites. Project impacts will be assessed once the intensive survey is completed.

Galleria

The Galleria Station is an existing Park and Ride bus station located at the Silver City Galleria Mall near the intersection of Routes 140 and 24 in Taunton (Figure 4.8-29). It would serve the Rapid Bus alternative. The existing station improvements include re-surfacing and re-striping existing pavement to improve traffic flow and meet the expected parking needs for the Rapid Bus Alternative.

Historic Resources

The Galleria Station in Taunton is an additional station proposed at an existing park and ride. The Galleria Station does not have any historic resources on the proposed site or within the APE. There will be no impacts to historic resources.

Archaeological Resources

No archaeological survey was conducted for the proposed improvements to the existing Galleria Station Park and Ride bus station because no ground surface impacts are planned. Assuming that no impacts are proposed, there would be no impacts to archaeological resources.

King's Highway

The King's Highway Station would be a new train or bus station constructed on a 55-acre parcel within a dense commercial strip off of King's Highway in New Bedford east of Route 140 along the New Bedford Main Line (Figure 4.8-4). The new station would occupy part of a site that is an existing shopping plaza. It would serve all of the rail alternatives and the Rapid Bus Alternative.

Historic Resources

The King's Highway Station does not have any historic resources on the proposed site or within the APE. There will be no impacts to historic resources.

Archaeological Resources

The 55-acre project parcel contains areas of moderate archaeological sensitivity for pre-contact Native American habitation and resource procurement/processing sites. In addition, buildings are documented as present between 1895 and 1911. Though these buildings have been razed, undocumented archaeological deposits related to this period of site use may be present in the north part of the parcel.

The current conceptual plan indicates that the proposed work will be contained within the existing disturbed railroad right-of-way and paved shopping plaza in areas assigned low archaeological sensitivity. No project impacts to archaeological resources are anticipated in these previously disturbed areas.

Mansfield

The Mansfield Station is an existing commuter rail station located off of Route 106 near Mansfield Center (Figure 4.8-13). The existing station would be thoroughly reconstructed for the Attleboro Alternatives. Proposed improvements include demolishing the existing platforms and constructing two new platforms, reconstruction/relocation of the existing station building on the east side of the track, reconstruction/relocation of Mansfield Avenue, reconfiguration of North Common Park near the existing station, extension of two railroad bridges, and reconfiguration/extension of parking lots to replace parking spaces impacted by the proposed construction.

Historic Resources

The existing Mansfield Station is not a historic resource. There are no historic properties in the station APE as defined in March 2009. There will be no impacts to historic resources.

Potential project impacts to historic resources in the current APE extending along Oakland Street will be assessed prior to completion of environmental review and when more design information is available.

Archaeological Resources

The current conceptual plan indicates that the proposed work will be partially contained within the existing disturbed railroad right-of-way and paved station site. No project impacts to archaeological resources are therefore anticipated in these previously disturbed areas; however, other work areas including the relocated station building and replacement parking on the east side of the tracks in the area of the North Common Park may extend outside of the existing station site and railroad/road rights-of-way and could thus extend into previously undisturbed areas, where archeological resources could be present. An archaeological reconnaissance survey (and if necessary an intensive (locational) survey) will be conducted prior to completion of environmental review to assess the archaeological sensitivity of these areas will be conducted prior to completion of environmental review and once more detailed design information is available that would indicate the actual footprint and area of disturbance; at which point potential project impacts to archaeological resources will be assessed.

North Easton

The North Easton Station (Figure 4.8-19) would be a new train station constructed on an approximately 10-acre parcel. The parcel lies behind an existing retail plaza anchored by Roche Brothers shopping plaza along the Stoughton line. New medical buildings have been recently constructed and two additional buildings are planned. The station would serve the Stoughton Alternatives including the Whittenton variations.

Historic Resources

North Easton Station does not have any historic properties on the proposed site or within the APE. There would be no impacts to historic resources.

Archaeological Resources

The 10-acre project parcel contains an area of moderate archaeological sensitivity for pre-contact Native American habitation and resource procurement/processing sites as well as under-documented post-contact EuroAmerican sites.

The current conceptual plan indicates that the proposed stormwater management area and a portion of the proposed parking lot will be constructed in the moderate sensitivity area. An intensive (locational) archaeological survey is needed to identify any archaeological sites. Project impacts will be assessed once the intensive survey is completed.

Raynham Place

The Raynham Place (formerly called Raynham Park) Station would be located at the Raynham-Taunton Greyhound Park off of Route 138 (Figure 4.8-20). The new station would be constructed on a less than 5-acre parcel along the Stoughton line. The station would serve the Stoughton Alternatives including the Whittenton variations.

Historic Resources

No historic properties are located on the Raynham Place Station parcel nor do any exist within the station APE. There will be no impacts to historic resources.

Archaeological Resources

There are no recorded archaeological sites or identified archaeologically sensitive areas within the Raynham Place Station parcel. The station is within the rail APE and has been subjected to prior disturbance. No project impacts to archaeological resources are anticipated by the construction of this proposed station.

Sharon

The Sharon Station is an existing commuter rail station located off of Depot Street south of Route 27 along the Northeast Corridor (Figure 4.8-11). The existing station would be reconstructed for the

Attleboro Alternatives. Proposed improvements include demolishing and reconstructing the existing platforms, constructing two new platforms, and reconfiguring/extension of parking lots to replace parking spaces impacted by the proposed construction.

Historic Resources

Sharon Station (Map No. Sh.003) is an historic property. No direct impacts are planned to the station building itself. Another historic property, the Sharon Waterworks (Map No. Sh.002), is located within the station APE (Figure 4.8-11).Improvements to the existing platforms, pedestrian bridge, and parking lot may have an indirect effect on the historic architectural qualities of the Station and the Sharon Waterworks. These effects, however, are not anticipated to be substantially different from existing conditions and the effects would not be adverse. Noise, vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

No archaeological survey has been completed of the Station parcel. The current conceptual plan indicates that the proposed work will be contained within the existing disturbed railroad right-of-way and paved station site. No project impacts to archaeological resources are anticipated.

Stoughton

The Stoughton Station is an existing commuter rail station located off of Route 138 near Stoughton Center along the Stoughton line (Figure 4.8-18). At this station, an historic property, the platform would be reconstructed for the Stoughton Alternatives including the Whittenton variations. Proposed improvements include relocating the station stop from its present location, constructing two new platforms, and changes to the parking layout in the existing lots near the station.

Historic Resources

The station (Stoughton Station; Map No. St.025) is an individual historic property and is within the Downtown Stoughton Area (Map No. St.B). No direct impacts are planned to the station building itself. The Mystic Rubber Company (Map No. St.024) is within the station APE. Improvements to the existing platforms, walkways, and parking lot may have an indirect effect on the historic architectural qualities of the station, the Area, and the Mystic Rubber Company. However, at this time the proposed improvements are anticipated to have no adverse effect. Noise, vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

No archaeological survey has been completed at the station. The current conceptual plan indicates that the proposed work will be contained within the existing disturbed railroad right-of-way and paved station site. If the work is confined to existing built elements, no archaeological survey is warranted. No project impacts to archaeological resources are anticipated under the proposed conceptual plan.

Taunton

The Taunton Station (Dean Street) would be a new train station constructed on an 8-acre parcel. The parcel is located off of Railroad Avenue near the intersection of Route 44 (Dean Street) and Arlington Street in Taunton along the Stoughton line (Figure 4.8-21). The station would serve the Stoughton Alternatives, but not the Whittenton variations.

Historic Resources

There are no historic properties on the Taunton Station parcel. Therefore, there will be no direct impacts to historic resources.

The station parcel is adjacent to the Taunton Center Area (Ta.B) and the Old Colony Railroad Station (Map No. Ta.019). Introduction of a new station may have indirect visual effects on these two historic properties through the introduction of modern station structures and parking that alter the historic setting. Noise, vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

There are no recorded archaeological sites or identified archaeologically sensitive areas within the 8-acre project parcel. No project impacts to archaeological resources are anticipated by the construction of this proposed station.

Taunton Depot

The new Taunton Depot (formerly called East Taunton (North) Station) train station would be constructed on an approximately 14-acre parcel. The parcel is located off of Route 140 at the rear of an existing Target and Home Depot shopping plaza on the New Bedford Main Line (Figure 4.8-5). The station would serve all the rail alternatives.

Historic Resources

No historic properties are located on the proposed site of the Taunton Depot Station. Therefore, there will be no direct effects to historic properties.

The historic Hart Street Area (Map No. Ta.L) is in the station APE as shown in Figure 4.8-5. The introduction of a new station would not affect the visual environment. Noise, vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

The current conceptual plan indicates that the proposed work will be contained within the existing disturbed (southern) portion of the parcel behind the shopping plaza. This part of the parcel is assigned low archaeological sensitivity. No project impacts to archaeological resources are anticipated.

There is one recorded pre-contact archaeological site (19-BR-592) within the northern part of the 14-acre project parcel. The approximate 5-acre area containing the recorded archaeological site is assessed as having high sensitivity for potentially significant cultural deposits. The current conceptual plan

indicates that no work in or use of this part of the parcel is proposed and therefore, no project impacts to archaeological resources would be anticipated.

Whale's Tooth

The Whale's Tooth Station would be a new train or bus station. The station will be constructed on an 8.7-acre parcel off of Acushnet Avenue, east of Route 18 along the New Bedford Main Line (Figure 4.8-4) and service all of the rail alternatives and the Rapid Bus Alternative.

The parcel is a paved parking lot constructed by the City of New Bedford in anticipation of the commuter rail project. The parking lot caps a closed superfund site.

Historic Resources

The parcel that will be used for the Whale's Tooth Station does not have any historic properties on it. There will be no direct impacts to historic resources.

The proposed Whale's Tooth Station on the New Bedford Main Line is across John F. Kennedy Highway (Route 18) from the New Bedford Textile School (Map No. NB.069). The introduction of a new station may have indirect visual effects on the New Bedford Textile School; however, due to the intervening highway, the effect will not be adverse. Noise, vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

The entire 8.7-acre project parcel lies within the Acushnet Avenue Waterfront Industrial historic area. This location is assessed as having a high archaeological sensitivity for pre-contact Native American habitation and resource procurement/processing sites, and documented nineteenth-century industrial and commercial sites. The archaeologically sensitive strata, if present, would be located below the raised and capped paved parking lot and the capped Superfund site soils.
The current conceptual plan indicates that the proposed work will be contained within the existing disturbed railroad right-of-way and the existing Whale's Tooth paved parking lot. No project impacts to archaeological resources are anticipated.

4.8.3.11 LAYOVER FACILITIES

One midday layover facility is planned for the Boston area, but alternative sites have not yet been selected.

Two train layover facilities are planned for the Southern Triangle; one each at or near the end of the Fall River Secondary and the New Bedford Main Lines. Two alternative sites have been identified for each Southern Triangle element. Train layover facility plans are conceptual at this point, consisting only of general layouts and footprints within specified larger parcels.

Pre-May 2009 conceptual plans were used for the Affected Environment data collection and analysis of cultural resources at the proposed layover facilities. The potential impacts to identified cultural resources using pre-May 2009 layover facility concepts are presented below. Current, refined conceptual plans for these facilities may be slightly different, and were also reviewed for potential impacts to archaeological resources.

Wamsutta

The Wamsutta site overnight layover facility would be constructed on an approximately 8-acre parcel between Route 18 and Herman Melville Boulevard along the New Bedford Main Line (Figure 4.8-4). It is located on the east side of the right-of-way, opposite the proposed Whale's Tooth Station and adjacent to an existing CSX freight yard. The layover facility would serve all of the rail alternatives.

Historic Resources

The Wamsutta Street Layover Facility does not have any historic properties on the proposed site; therefore, there will be no direct impacts to historic resources.

The Wamsutta Layover Facility is located on the east side of the New Bedford Main Line rail between Wamsutta Street and the proposed Whale's Tooth Station. The Wamsutta Mill Historic District (Map No. NB.D) and the Revere Copper Products mill (Map No. NB.080) are both located within the APE as shown in Figure 4.8-4. The introduction of a layover facility could have indirect visual and noise effects on the two nearby historic properties. Because the site is adjacent to the existing freight yard and will constitute an expansion of similar rail use, the visual impacts to the historic setting is likely to not be adverse. There will be no noise impacts to the adjacent historic industrial buildings, which are not a category of noise sensitive receptors under the FTA criteria. Vibration, traffic, atmospheric, and cumulative effects are anticipated to be minimal.

Archaeological Resources

The entire 8-acre project parcel is assessed as having a high archaeological sensitivity for pre-contact Native American habitation, resource procurement/processing sites, and documented post-contact Euro-American domestic, commercial/wharves, and railroad-related structures. This also includes cultural deposits within the Acushnet Avenue Waterfront Industrial historic area. The archaeologically sensitive strata are located below the capped Superfund site soils.

The current conceptual plan indicates that the proposed work will be contained within the existing disturbed railroad right-of-way/rail yard and capped Superfund site soils. Therefore, no project impacts to archaeological resources are anticipated.

Church Street

The Church Street site layover facility would be constructed on an approximately 5-acre parcel situated off of Church Street in New Bedford along the New Bedford Main Line (Figure 4.8-4). The layover facility would serve all of the rail alternatives.

Historic Resources

No historic properties have been identified within the site or in the APE for the Church Street site layover facility. Therefore, there will be no impacts to historic resources.

Archaeological Resources

The entire five-acre project parcel is assessed as having moderate archaeological sensitivity for pre-contact/contact Native American habitation and resource procurement/processing sites and under-documented post-contact Euro-American agricultural-related cultural deposits.

The current conceptual plan depicts construction activities within the sensitive areas. An intensive (locational) archaeological survey with subsurface testing is needed to identify any archaeological sites in the sensitive areas where project construction impacts may occur.

Appendix 4.8-C, Table 6 presents the assessment of potential impacts to archaeological resources within the Layover Facility APEs.

Weaver's Cove East

The Weaver's Cove East site layover facility would be constructed on the east side of the railroad right-of-way, opposite the proposed Weaver's Cove LNG Site, approximately 2.5 miles from the southern terminus of the Fall River Secondary (Figure 4.8-8). The layover facility would serve all of the rail alternatives. A parcel on the west side of the railroad right-of-way within the proposed Weaver's Cove LNG Site is also being considered.

Historic Resources

The historic survey completed for the Weaver's Cove layover facility parcel on the west side of the railroad right-of-way encompasses the historic resources in the APE of the current site on the east side of the right-of-way (see Figure 4.8-8). Based on the survey completed for the west site, the Weaver's Cove East site overlaps into a portion of the North Main Street Area (Map No. FR.D) that has been recommended as eligible for the National Register. This part of the Area has no buildings. The construction of the layover facility would be an adverse effect as it would change the visual setting and the character of the area.

Two historic properties are located in the layover facility APE: the National Register-listed Squire William B. Canedy House (Map No. FR.012) and the National Register-eligible William J. Wiley Middle School (Map No. FR.013).

The William B. Canedy House would be separated from the layover facility by a modern building and outbuildings, and then by the tracks. There would be no adverse visual impact because the layover facility would not substantially alter the historic setting of the house, which is already converted to industrial uses (i.e. the tank farm). There would be no noise impacts that would require modifications to the building and no land acquisition from the property.

The William J. Wiley Middle School is located on the opposite (east) side of Main Street from the facility and separated from it by this major roadway and several modern buildings. There would be no property acquisition, no change in the setting of the school, and no noise impacts that would require modifications to the exterior of the building.

There will be no adverse effect to the nearby National Register-listed Squire William B. Canedy House and the National Register-eligible William J. Wiley Middle School.

Archaeological Resources

The project parcel on the west side of the railroad right-of-way within the proposed Weaver's Cove LNG Site was previously subjected to an archaeological reconnaissance survey in 2003. No areas of archaeological sensitivity were identified in the previously disturbed parcel, and no further work was deemed necessary.

The project parcel on the east side of the railroad right-of-way opposite the Weaver's Cove LNG Site has not been subjected to archaeological reconnaissance survey. An archaeological reconnaissance survey is needed to assess the archaeological sensitivity of this parcel. An intensive (locational) survey may be needed to identify archaeological sites in sensitive areas. Project impacts to archaeological resources for the Weaver's Cove East parcel will be assessed prior to completion of environmental review and when more design information is available.

ISP

The ISP site layover facility would be constructed on an approximately 940-foot long parcel on the west side of the railroad right-of-way, west of Main Street between the existing Fall River Secondary and the Taunton River, approximately six miles from the southern terminus of the Fall River Secondary. It would serve all of the rail alternatives.

Historic Resources

No historic properties have been identified within the ISP Layover Facility site or in the APE; therefore there will be no impacts to historic resources.

Archaeological Resources

The 940-foot long project parcel contains a recorded archaeological site (MHC #19-BR-106). The entire parcel is assessed as having high archaeological sensitivity for pre-contact/contact Native American habitation and resource procurement/processing sites, which if present could be contributing elements to the Mother's Brook Site (19-BR-106) within the proposed Lower Taunton River Basin Archaeological District. There could also be underdocumented post-contact period Euro-American agricultural-related cultural deposits.

The current conceptual plan depicts construction activities within the sensitive areas. An intensive (locational) archaeological survey is needed to identify any archaeological sites. Project impacts would be assessed once the intensive survey is complete.

4.8.4 SUMMARY OF IMPACTS BY ALTERNATIVE

The following summarizes the potential impacts (direct, indirect, permanent, and temporary) to cultural resources resulting from implementing each of the South Coast Rail alternatives,

The individual components of each element are grouped by alternative, and the expected impacts to historic and archaeological resources are summarized based on a quantitative assessment of the impact on cultural resources that would result from the construction of each component.

4.8.4.1 ATTLEBORO ELECTRIC ALTERNATIVE

The Attleboro Electric Alternative would be comprised of the elements listed in Table 4.8-16, which also include summaries of the identified known/expected resource types and potential impact(s) from implementing this alternative.

Table 4.8-16 Attleboro Electric Alternative – Summary of Impacts

Element	Historic Resources				Archaeological Resources		
	Direct	Indirect			Known Sites	High Sensitivity	Moderate Sensitivity
		Visual	Noise	Noise + Visual			
Railroad Alignments							
Northeast Corridor	4	2	4	0	0	0	TBD
Attleboro Bypass	0	0	0	1	0	+	+
Attleboro Secondary	0	11	1	12	0	0	TBD
Fall River Secondary	3	14	0	14	2	0	TBD
New Bedford Main	1	5	0	7	0	0	TBD
Stations							
Canton Junction	0	0	0	0	0	0	0
Sharon	0	0	0	0	0	0	TBD
Mansfield	0	0	0	0	0	0	TBD
Barrowsville	0	0	0	0	0	+	+
Downtown Taunton	0	0	0	0	0	+	+
Taunton Depot	0	0	0	0	0	+	0
Freetown	0	0	0	0	0	+	+
Fall River Depot	0	0	0	0	0	0	0
Battleship Cove	0	0	0	0	0	0	0
King's Highway	0	0	0	0	0	0	0
Whale's Tooth	0	0	0	0	0	0	0
Totals	**8**	**32**	**5**	**34**	**0**	**5**	**4**

The Attleboro Electric Alternative would result in direct impacts (adverse effects) to eight historic properties, primarily historic bridges that would require reconstruction or widening, and potential direct impacts at some existing stations that would need to be reconstructed. In addition, this alternative would have indirect effects to an additional 70 properties as a result of changes in setting and/or increased noise that could affect the setting directly or require noise mitigation that could affect the appearance or setting of a building. It could affect two known archaeological sites for reconstruction of the Fall River Secondary. Archaeological resources could potentially be affected at other areas of archaeological sensitivity along the Northeast Corridor, Attleboro Bypass, Attleboro Secondary, and at five station locations.

As shown in Table 4.8-17, the five terminal layover facilities under consideration would not result in adverse effects to any historic resources, but could affect known archaeological resources or areas of archaeological sensitivity.

Table 4.8-17 Layover Facilities - Impacts to Historic and Archaeological Resources

Site	Historic Resources				Archaeological Resources		
	Direct	Indirect			Known Sites	High Sensitivity	Moderate Sensitivity
		Visual	Noise	Noise + Visual			
ISP	0	0	0	0	+	0	0
Weaver's Cove East	0	1	0	0	0	0	+
Weaver's Cove West	0	0	0	0	0	0	0
Church Street	0	0	0	0	0	0	+
Wamsutta	0	0	0	0	0	0	0

4.8.4.2 ATTLEBORO DIESEL ALTERNATIVE

The Attleboro Diesel Alternative would be comprised of the same elements as the Attleboro Electric Alternative as listed above but would not include electrical infrastructure. Specifically, the metal structures and wires associated with the overhead catenary system, and the traction power facilities would not be constructed as part of this alternative (except along the Northeast Corridor, as previously described). Table 4.8-18 summarizes the impacts to cultural resources potentially resulting from implementing the Attleboro Diesel Alternative.

Table 4.8-18 Attleboro Diesel Alternative – Summary of Impacts

Element	Direct	Historic Resources			Archaeological Resources		
		Indirect			Known Sites	High Sensitivity	Moderate Sensitivity
		Visual	Noise	Noise + Visual			
Railroad Alignments							
Northeast Corridor	4	1	4	0	0	0	TBD
Attleboro Bypass	0	0	1	0	0	+	+
Attleboro Secondary	0	0	10	2	0	0	TBD
Fall River Secondary	3	4	10	0	2	0	TBD
New Bedford Main	1	0	7	0	0	0	TBD
Stations							
Canton Junction	0	0	0	0	0	0	0
Sharon	0	0	0	0	0	0	TBD
Mansfield	0	0	0	0	0	0	TBD
Barrowsville	0	0	0	0	0	+	+
Downtown Taunton	0	0	0	0	0	+	+
Taunton Depot	0	0	0	0	0	+	0
Freetown	0	0	0	0	0	+	+
Fall River Depot	0	0	0	0	0	0	0
Battleship Cove	0	0	0	0	0	0	0
King's Highway	0	0	0	0	0	0	0
Whale's Tooth	0	0	0	0	0	0	0
Totals	**8**	**5**	**32**	**2**	**0**	**5**	**4**

The Attleboro Diesel Alternative would result in direct impacts (adverse effects) to eight historic properties, primarily historic bridges that would require reconstruction or widening, and potential direct

impacts at some existing stations that would need to be reconstructed. In addition, this alternative would have indirect effects to an additional 39 properties as a result of changes in setting and/or increased noise that could affect the setting directly or require noise mitigation that could affect the appearance or setting of a building. It could affect two known archaeological sites for reconstruction of the Fall River Secondary. Archaeological resources could potentially be affected at other areas of archaeological sensitivity along the Northeast Corridor, Attleboro Bypass, Attleboro Secondary, and at five station locations.

4.8.4.3 STOUGHTON ELECTRIC ALTERNATIVE

The Stoughton Electric Alternative would be comprised of the elements listed in Table 4.8-19, which also includes summaries of the identified known/expected resource types and potential impact(s) from implementing this alternative.

Table 4.8-19 Stoughton Electric Alternative – Summary of Impacts

Element	Historic Resources				Archaeological Resources		
	Direct	Indirect			Known Sites	High Sensitivity	Moderate Sensitivity
		Visual	Noise	Noise + Visual			
Railroad Alignments							
Stoughton Line	2	4	0	17	0	0	TBD
Fall River Secondary	3	14	0	14	2	0	TBD
New Bedford Main	1	5	0	7	0	0	TBD
Stations							
Canton Center	0	0	0	0	0	0	0
Stoughton	0	0	0	0	0	0	0
North Easton	0	0	0	0	0	0	+
Easton Village	0	1	0	0	0	0	+
Raynham Place	0	0	0	0	0	0	0
Taunton	0	0	0	0	0	0	0
Taunton Depot	0	0	0	0	0	+	0
Freetown	0	0	0	0	0	+	+
Fall River Depot	0	0	0	0	0	0	0
Battleship Cove	0	0	0	0	0	0	0
King's Highway	0	0	0	0	0	0	0
Whale's Tooth	0	0	0	0	0	0	0
Totals	**6**	**24**	**0**	**38**	**2**	**2**	**3**

The Stoughton Electric Alternative would result in direct impacts (adverse effects) to six historic properties, primarily historic bridges that would require reconstruction or widening, and potential direct impacts at some existing stations that would need to be reconstructed. In addition, this alternative would have indirect effects to an additional 62 properties as a result of changes in setting and/or increased noise that could affect the setting directly or require noise mitigation that could affect the appearance or setting of a building. It could affect two known archaeological sites for reconstruction of the Fall River Secondary. Archaeological resources could potentially be affected at other areas of archaeological sensitivity along the Stoughton Line, and at three station locations.

4.8.4.4 STOUGHTON DIESEL ALTERNATIVE

The Stoughton Diesel Alternative would be comprised of the same elements as the Stoughton Electric Alternative as listed above but would not include electrical infrastructure. Specifically, the metal structures and wires associated with the overhead catenary system, and the traction power facilities would not be constructed as part of this alternative (except along the Northeast Corridor, as previously explained). Table 4.8-20 summarizes the impacts to cultural resources potentially resulting from implementing the Attleboro Diesel Alternative.

Table 4.8-20 Stoughton Diesel Alternative – Summary of Impacts

Element	Historic Resources				Archaeological Resources		
	Direct	Indirect			Known Sites	High Sensitivity	Moderate Sensitivity
		Visual	Noise	Noise + Visual			
Railroad Alignments							
Stoughton Line	2	2	4	12	0	0	TBD
Fall River Secondary	3	4	10	0	2	0	TBD
New Bedford Main	1	0	7	0	0	0	TBD
Stations							
Canton Center	0	0	0	0	0	0	0
Stoughton	0	0	0	0	0	0	0
North Easton	0	0	0	0	0	0	+
Easton Village	0	1	0	0	0	0	+
Raynham Place	0	0	0	0	0	0	0
Taunton	0	0	0	0	0	0	0
Taunton Depot	0	0	0	0	0	+	0
Freetown	0	0	0	0	0	+	+
Fall River Depot	0	0	0	0	0	0	0
Battleship Cove	0	0	0	0	0	0	0
King's Highway	0	0	0	0	0	0	0
Whale's Tooth	0	0	0	0	0	0	0
Totals	**6**	**7**	**21**	**12**	**2**	**2**	**3**

The Stoughton Diesel Alternative would result in direct impacts (adverse effects) to six historic properties, primarily historic bridges that would require reconstruction or widening, and potential direct impacts at some existing stations that would need to be reconstructed. In addition, this alternative would have indirect effects to an additional 49 properties as a result of changes in setting and/or increased noise that could affect the setting directly or require noise mitigation that could affect the appearance or setting of a building. It could affect two known archaeological sites for reconstruction of the Fall River Secondary. Archaeological resources could potentially be affected at other areas of archaeological sensitivity along the Stoughton Line, and at three station locations.

4.8.4.5 WHITTENTON ELECTRIC ALTERNATIVE

The Whittenton Electric Alternative, as a variation of the Stoughton Electric Alternative, would be comprised of the elements listed in Table 4.8-21, which also include summaries of the identified known/expected resource type s and potential impact(s) from implementing this alternative.

Table 4.8-21 Whittenton Electric Alternative – Summary of Impacts

Element	Historic Resources				Archaeological Resources		
	Direct	Indirect			Known Sites	High Sensitivity	Moderate Sensitivity
		Visual	Noise	Noise + Visual			
Railroad Alignments							
Stoughton Line	2	1	2	6	0	0	TBD
Whittenton Branch	1	0	0	4	0	+	TBD
Attleboro Secondary	0	10	0	8	0	0	0
Fall River Secondary	3	14	0	14	2	0	TBD
New Bedford Main	1	5	0	7	0	0	TBD
Stations							
Canton Center	0	0	0	0	0	0	0
Stoughton	0	0	0	0	0	0	0
North Easton	0	0	0	0	0	0	+
Easton Village	0	1	0	0	0	0	+
Raynham Place	0	0	0	0	0	0	0
Downtown Taunton	0	0	0	0	0	+	+
Taunton Depot	0	0	0	0	0	0	0
Freetown	0	0	0	0	0	0	0
Fall River Depot	0	0	0	0	0	0	0
Battleship Cove	0	0	0	0	0	0	0
King's Highway	0	0	0	0	0	0	0
Whale's Tooth	0	0	0	0	0	0	0
Totals	**7**	**31**	**2**	**39**	**2**	**2**	**3**

The Whittenton Electric Alternative would result in direct impacts (adverse effects) to seven historic properties, primarily historic bridges that would require reconstruction or widening, and potential direct impacts at some existing stations that would need to be reconstructed. In addition, this alternative would have indirect effects to an additional 72 properties as a result of changes in setting and/or increased noise that could affect the setting directly or require noise mitigation that could affect the appearance or setting of a building. It could affect two known archaeological sites for reconstruction of the Fall River Secondary. Archaeological resources could potentially be affected at other areas of archaeological sensitivity along the Whittenton Branch or Stoughton Line, and at three station locations.

4.8.4.6 WHITTENTON DIESEL ALTERNATIVE

The Whittenton Diesel Alternative would be comprised of the same elements as the Whittenton Electric Alternative as listed above but would not include electrical infrastructure. Specifically, the metal structures and wires associated with the overhead catenary system, and the traction power facilities would not be constructed as part of this alternative (except along the Northeast Corridor, as previously explained). Table 4.8-22 summarizes the impacts to cultural resources potentially resulting from implementing the Whittenton Diesel Alternative.

The Whittenton Diesel Alternative would result in direct impacts (adverse effects) to seven historic properties, primarily historic bridges that would require reconstruction or widening, and potential direct impacts at some existing stations that would need to be reconstructed. In addition, this alternative would have indirect effects to an additional 46 properties as a result of changes in setting and/or increased noise that could affect the setting directly or require noise mitigation that could affect the

Table 4.8-22 Whittenton Diesel Alternative – Summary of Impacts

Element	Historic Resources				Archaeological Resources		
	Direct	Indirect			Known Sites	High Sensitivity	Moderate Sensitivity
		Visual	Noise	Noise + Visual			
Railroad Alignments							
Stoughton Line	2	1	1	6	0	0	TBD
Whittenton Branch	1	0	0	6	0	+	TBD
Attleboro Secondary	0	1	9	0	0	0	0
Fall River Secondary	3	4	10	0	2	0	TBD
New Bedford Main	1	0	7	0	0	0	TBD
Stations							
Canton Center	0	0	0	0	0	0	0
Stoughton	0	0	0	0	0	0	0
North Easton	0	0	0	0	0	0	+
Easton Village	0	1	0	0	0	0	+
Raynham Place	0	0	0	0	0	0	0
Downtown Taunton	0	0	0	0	0	+	+
Taunton Depot	0	0	0	0	0	0	0
Freetown	0	0	0	0	0	0	0
Fall River Depot	0	0	0	0	0	0	0
Battleship Cove	0	0	0	0	0	0	0
King's Highway	0	0	0	0	0	0	0
Whale's Tooth	0	0	0	0	0	0	0
Totals	**7**	**7**	**27**	**12**	**2**	**2**	**3**

appearance or setting of a building. It could affect two known archaeological sites for reconstruction of the Fall River Secondary. Archaeological resources could potentially be affected at other areas of archaeological sensitivity along the Whittenton Branch or Stoughton Line, and at three station locations.

4.8.4.7 RAPID BUS ALTERNATIVE

The Rapid Bus Alternative would be comprised of the elements listed in Table 4.8-23. As the table shows, this alternative would not result in adverse effects to any known historic or archaeological resource. If the Rapid Bus Alternative is selected as the LEDPA, additional investigation of areas of potential archaeological sensitivity will be conducted at any interchange proposed to be reconfigured, and at two proposed station locations prior to completion of environmental review and when more detailed design information is available.

4.8.4.8 SUMMARY OF IMPACTS

The overall impacts to historic and archaeological resources resulting from improving or constructing the rail alternatives vary considerably between the alternative alignments (Table 4.8-24). Each of the alternatives would be similar in their adverse effects to historic structures, with impacts ranging from six (Stoughton) to eight (Attleboro). The majority of these effects, for all alternatives, would result from reconstructing historic bridges to accommodate an additional track, or to meet Federal Railroad Administration loading standards for commuter rail trains. Each of the alternatives would also result in

Table 4.8-23 Rapid Bus Alternative – Summary of Potential Impacts[1]

Element	Historic Resources				Archaeological Resources		
	Direct	Indirect			Known Sites	High Sensitivity	Moderate Sensitivity
		Visual	Noise	Noise + Visual			
Highway Alignments							
I-93	0	0	0	0	0	0	0
Route 24	0	0	0	0	0	0	0
Stations							
Galleria	0	0	0	0	0	0	0
Downtown Taunton	0	0	0	0	0	+	+
Freetown	0	0	0	0	0	+	+
Fall River Depot	0	0	0	0	0	0	0
Battleship Cove	0	0	0	0	0	0	0
King's Highway	0	0	0	0	0	0	0
Whale's Tooth	0	0	0	0	0	0	0
Totals	**0**	**0**	**0**	**0**	**0**	**2**	**2**

1. Impacts are contingent upon the results of additional cultural resource investigations prior to completion of environmental review and when more detailed design information is available.

Table 4.8-24 Summary of Potential Impacts to Historic and Archaeological Resources[1]

Alternative	Historic Resources				Archaeological Resources		
	Direct	Indirect			Known Sites	High Sensitivity	Moderate Sensitivity
		Visual	Noise	Noise + Visual			
Attleboro Electric	8	32	5	34	0	5	4
Attleboro Diesel	8	5	32	2	0	5	4
Stoughton Electric	6	24	0	38	2	2	3
Stoughton Diesel	6	7	21	12	2	2	3
Whittenton Electric	7	31	2	39	2	2	2
Whittenton Diesel	7	7	27	12	2	2	2
Rapid Bus	0	0	0	0	0	2	2

1. Impacts are contingent upon the results of additional cultural resource investigations prior to completion of environmental review and when more detailed design information is available.

indirect impacts to historic properties as a result in the change in setting (visual impacts) or increased noise (which could affect quiet setting or could result in noise mitigation that would alter the appearance or setting of a structure). These indirect effects (only visual, only noise, or a combination of the two) would impact the fewest properties (39) for the Attleboro Diesel Alternative and the largest number of properties (72) for the Whittenton Electric Alternative. The Rapid Bus Alternative would have no direct or indirect impacts to historic properties, pending the results of additional surveys prior to completion of environmental review and more detailed design.

Each of the alternatives would also have the potential to affect known archaeological resources and areas of archaeological sensitivity (which would require further investigation to determine if archaeological resources were present). The Attleboro Alternatives and the Rapid Bus Alternative would not affect any known sites, while the Stoughton and Whittenton Alternatives would be likely to affect

two known sites. Areas of archaeological sensitivity affected by the alternatives range from nine (the Attleboro Alternatives) to four (the Whittenton Alternatives and the Rapid Bus Alternative). There may also be the potential that traditional cultural properties may be affected. Should such potential exist, this would be resolved through dialogue with the tribes.

4.8.5 MITIGATION

This section summarizes the mitigation measures that may be considered to avoid, minimize, or mitigate the potential impacts on historic and archaeological resources resulting from the implementation of the South Coast Rail project alternatives. The specific mitigation will be informed by additional, more detailed archeological and historic survey fieldwork and additional design detail. A discussion of such additional survey work is presented in the section on Further Historic Resources Surveys.

Cultural resources are defined as archaeological sites; historic buildings, structures, objects, and districts; and traditional cultural properties including both individual sites and landscapes. Consultation has been initiated with federally recognized Native American Tribes; however, no information has been received to date and traditional cultural properties are not considered in the discussions below. The discussion below considers the regulatory requirements of the National Environmental Policy Act (NEPA), §106 of the National Historic Preservation Act (NHPA), and regulatory guidance detailed in National Register Bulletin 45, *Guidelines for Evaluating and Registering Archaeological Properties* (Little et al. 2000).

Assessment of impact to cultural resources was based on the Corps' methodology as described in Appendix C - Procedures for the Protection of Historic Properties[2] of 33 CFR Part 325 - Processing of Department of the Army Permits ("Appendix C"). Appendix C identifies the procedures to be followed by the Corps to fulfill the requirements set forth in the National Historic Preservation Act (NHPA), other applicable historic preservation laws, and Presidential directives as they relate to the regulatory program of the Corps of Engineers (33 CFR Parts 320-334).

The central concept in the Corps methodology is the "Permit Area," as defined in Appendix C. The term "permit area" as used in Appendix C means those areas comprising the waters of the United States that will be directly affected by the proposed work or structures and uplands directly affected as a result of authorizing the work or structures. The following three tests must all be satisfied for an activity undertaken outside the waters of the United States to be included within the "permit area":

1. Such activity would not occur but for the authorization of the work or structures within the waters of the United States;
2. Such activity must be integrally related to the work or structures to be authorized within waters of the United States. Or, conversely, the work or structures to be authorized must be essential to the completeness of the overall project or program; and,
3. Such activity must be directly associated (first order impact) with the work or structures to be authorized.

The district engineer takes into account the effects, if any, of proposed undertakings on historic properties both within and beyond the waters of the U.S. pursuant to Section 110(f) of the NHPA. The district engineer, where the undertaking that is the subject of a permit action may directly and adversely affect any National Historic Landmark, conditions (to the maximum extent possible) any issued permit as may be necessary to minimize harm to such landmark.

[2] AUTHORITY: 33 U.S.C. 401 et seq., 33 U.S.C. 1344, 33 U.S.C. 1413

In addition to Appendix C, impacts were also evaluated in accordance with the Advisory Council on Historic Preservation's regulations implementing §106 of the National Historic Preservation Act (36 CFR Part 800, *Protection of Historic Properties*), which are used by Cooperating Agencies (FTA, FRA, FHWA and EPA). Accordingly, impacts to cultural resources are identified and evaluated by (1) determining the area of potential effects (APE); (2) identifying cultural resources present in the APE that are either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected eligible cultural resources; and (4) identifying ways to avoid, minimize or mitigate adverse effects as outlined in 36 CFR 800.6 (Resolution of Adverse Effects).

In addition to the requirements of the NHPA, all historic properties are subject to consideration under the National Environmental Policy Act (33 CFR Part 325, Appendix B), and the Corps' public interest review requirements contained in 33 CFR 320.4.

Mitigation measures include avoidance, minimization, and data recovery and these measures are discussed below. The documentation for any of these mitigation measures must provide evidence that consultation has been completed with Native American Tribes and individuals with knowledge of affected resources. Further, mitigation measures must consider the comments of these persons on the measure(s) under consideration. Actions that the parties agree upon to resolve adverse effects will then be detailed in a Memorandum of Agreement (MOA), which is a legally binding agreement among the federal agency, the SHPO and/or Tribal Historic Preservation Officer(s), and the Advisory Council on Historic Preservation. The other consulting parties may also be invited to sign the document. Once the agreement is signed by all appropriate parties and the agreement is filed with the Advisory Council on Historic Preservation, the Section 106 process is completed. The agency's Section 106 responsibilities are fulfilled when the MOA's stipulations are implemented.

4.8.5.1 AVOIDANCE

Avoidance is the preferred response when adverse effect is determined. Adverse effects can only be avoided for the No-Build Alternative, which does not meet the project purpose. None of the Build Alternatives can avoid direct impacts to archaeological and above-ground resources. Impact to archaeological sites can be avoided through burial of the resource although this option has limited applicability. Avoiding indirect impacts resulting from noise and visual intrusions may be addressed for historic resources through design modification in some locations.

4.8.5.2 MINIMIZATION

Minimization options are usually only readily apparent in the latter stages of a project once the LEDPA has been determined and the design is sufficiently advanced so that direct impact areas are defined and indirect effects are clearly understood. With these limitations in mind, minimization of impact to historic properties or archaeological resources would be focused on reducing the extent of ground disturbance, establishing vegetated buffers, and designing noise barriers and sound insulation to be compatible with the historic setting.

The Adverse Effects documentation for an individual archaeological site, historic property, or district has to describe the option(s) selected to minimize impact. The Adverse Effect document also has to contain a discussion about the direct/indirect effects of the option on other archaeological sites, districts, and/or historic properties in the option's APE. In all cases, the archaeologists and historians will have to clearly

document the horizontal and vertical boundaries of the archaeological site, historic property, or district in question as part of the Adverse Effects documentation.

4.8.5.3 MITIGATION

The proposed project likely would result in unavoidable impacts to significant cultural resources that cannot be addressed through avoidance or minimization. Mitigation through data recovery and other approaches discussed below may include more than one action. The Adverse Effects documents prepared in support of the MOA will outline the mitigation approaches that will be taken for each cultural resource including districts. The Adverse Effects documents are commonly referred to as Data Recovery Plans (DRP) for archaeology and Treatment Plans for above-ground historic properties. The plans would be developed after the LEDPA is determined and all stages of intensive (locational) survey and, as needed, evaluative testing are completed and the results of the investigations evaluated by the applicable review agencies.

Specific mitigation commitments for cultural resources will be informed by additional, more detailed archeological and historic survey fieldwork and additional design detail for the preferred alternative and consultation with the tribes in the case of traditional cultural properties. In general, the types of mitigation measures that will be considered for above-ground historic resources include engineering methods that reduce noise generation or vibration, and visual barriers that help to minimize aesthetic impacts. For unavoidable adverse impacts, mitigation through data recovery or other approaches will be considered.

Historic Resources

Mitigation responses for historic resources are often impact specific, especially if the resource in question was previously determined significant. Table 4.8-25 lists the mitigation approaches that might be used to mitigate adverse effects resulting from specific project actions. As will be noted, these various mitigation options are directed to maintaining the historic character of both buildings and settings and maintaining the integrity of existing buildings.

Impacts to above-ground resources may be successfully reduced or eliminated by incorporating specific engineering methods that reduce noise generation or vibration, and through use of visual barriers that help to minimize aesthetic impacts. The following sections describe mitigation measures designed to avoid impacts to above-ground resources.

Vibration Dampening

Vibration dampening can be an effective means or reducing or eliminating potential impacts to structures adjacent to active rail lines. Vibration dampening may be achieved by use of subgrade and ballast materials selected for reduced transmissions of vibration. Existing rail beds will be replaced with materials meeting the MBTA's standards for vibration transmission. If additional ballast treatment is necessary to avoid adverse impacts, ballast mats may be used. Ballast mats are a layer of rubber placed between the track and ballast to further reduce vibration. All bridges along the rail corridor will be reconstructed to include the use of ballasted decks containing a layer of crushed stone to absorb vibration and reduce noise generation. Specific mitigation measures used along the project corridor will be selected based on final design and the results of the historic properties impact assessment.

Table 4.8-25 Historic Properties Mitigation Approaches

Project Action	Mitigation Response
General (applicable to multiple actions)	Historic archival documentation Interpretative signs
Construction	Preconstruction inspection of building foundations and construction monitoring of building foundations Site specific design to be compatible with historic character in and adjacent to historic properties including districts and NHLs
Noise (including Vibration)	Preconstruction noise monitoring and early construction monitoring for impacts to specific resources with natural quiet as an element of setting Noise walls During construction, rubber ballast mats (or equivalent) or moveable point frog turnouts (or equivalent)
Traffic/Access	Sensitive design of access changes and turnarounds Traffic calming (particular to Easton)
Visual	Vegetation: minimize clearing within or adjacent to historic properties; use screen planting and landscaping to lessen visual impacts Lighting: within and adjacent to historic properties, minimize number of poles, paint poles non-contrast colors, use directed lights Built elements: use non-contrast paints on fence, roadway equipment, signal bungalows; locate signs and fixtures in a sensitive manner within and adjacent to historic properties Granite curbing: match roadway and sidewalk curbing to existing, granite curbing

Noise Barriers

Noise barriers are an effective means of reducing the potential impacts created by new and expanded transportation corridors. In cases where trains may be idling at stations for the pickup and discharge of passengers or passing close to historic structures or districts, this engineering solution may provide a means to reduce potential impacts from increased noise.

Visual Screening

The project has the potential to alter the aesthetics of certain historic resources and historic districts where new stations, parking or at-grade crossings are proposed. While the original construction of the Old Colony Railroad in the 1840s may have "fit in" with the aesthetic nature of the communities, the reactivation of the rail line using modern materials and safety standards and faster engines and larger passenger cars may result in undesirable changes in the visual environment. Screening certain structures and safety and signal equipment may mitigate these impacts. Potential screening techniques include the combination of wooden and opaque fencing with landscape plantings.

Unnecessary clear-cutting of trees and vegetation along the railroad right of way that could have an adverse visual impact on historic resources will be avoided and existing trees and vegetative screening will be retained to buffer visually historic properties from the rail line to the extent feasible and with due regard for public safety, operational requirements, cost, and maintenance considerations.

Project plans will include internal landscaped areas at station parking lots which are located within or which are visible from historic resources. In and adjacent to historic districts or individual resources,

equipment including traffic signals and controller cabinets, street lights, street furniture, and railroad signal equipment housings will be dark colored to reduce the visual impact of this equipment. Traffic signals and street lights will be ornamental type in accordance with the towns' preferences to the extent reasonably possible.

These methods, when used in combination with other mitigation measures such as noise barriers, may successfully reduce and mitigate some potential visual impacts to historic properties associated with the South Coast Rail project.

Use of Compatible Materials within Historic Districts

To the extent practicable, the project will use materials compatible in color, texture and form to minimize adverse visual impacts to historic structures and districts.

A review of current conditions and materials will be undertaken prior to completion of environmental review and when more design information is available in order to ensure the use of compatible materials in the vicinity of historic properties. All repair, rehabilitation, or modification of historic properties, including sound insulation treatments for mitigation of noise impacts, will be performed in accordance with the U.S. Secretary of the Interior's "Standards for the Treatment of Historic Properties, including Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings."

Construction Staging and Methods

Construction staging and storage areas shall be located in protected areas outside historic districts and resources wherever possible, and in as unobtrusive a location as possible within historic districts or resources if alternative locations are infeasible. Where historic resources used as residences are within 50 feet of a staging area, a temporary solid wood fence, 6 feet high, will be used a visual screen between the residence(s) and the staging area.

Archaeological Resources

Impacts to archaeological resources may occur when sensitive areas are disturbed during construction. The South Coast Rail alternatives have been designed to minimize potential impacts to below-ground resources by maximizing reuse of the existing rail bed and right-of-way.

Unavoidable impacts to archaeological resources will be identified by further analysis of specific construction sites and appropriate, avoidance, minimization or mitigation selected during the Section 106 consultation process. Where impacts to archaeological resources are unavoidable, MassDOT will proceed with subsequent detailed site investigations and/or data recovery as may be stipulated in a MOA or Programmatic Agreement (PA) developed for this project. Where the potential exists that traditional cultural properties could be affected, this would be resolved through dialogue with the tribes.

The mitigation approaches for archaeological sites tend to focus on data recovery: the acquisition of additional site-specific data usually consisting of more feature information and/or artifacts. There are other alternatives, referred to as Creative or Alternative Mitigation Strategies that can be explored once the impacts to archaeological sites are known. Such creative approaches may include oral histories (for historical archaeological sites), whole site excavation, laboratory work to the exclusion of additional

excavation, and non-traditional reporting. Data recovery and these other options are briefly explored below.

Date recovery usually involves block excavations or the complete excavation of specific features such as privies or wells. These excavations are designed to augment and expand upon prior work to reach a cumulative percentage of site area ranging from five to ten percent. Except in certain instances, the only area of the site that will be subjected to data recovery excavation is that within the direct impact area. The exception involves whole site excavation.

Whole site excavation is a relatively new concept that was originally introduced as an alternative mitigation approach for significant sites adversely affected by gas pipeline projects. Whole site excavation involves the selection of a single site from a site group to be subjected to complete data recovery. Rather than concentrating on just the site area within the impact zone, the whole site is considered. Other sites in the same class which may have been determined significant are effectively 'sacrificed' and not subjected to further work. The underlying premise to the whole site excavation is that more will be learned about the site class as a whole by examining a single site fully than by looking at bits and pieces of several sites. The whole site excavation approach is very effective when you are trying to examine questions dealing with site function, activity areas, and intra-site patterning.

The other alternatives that will be considered are non-excavation strategies and some of these may actually be used in tandem with excavation. For historical archaeological sites, the acquisition of information about site function through oral histories is particularly effective for sites that may represent particular industrial or commercial enterprises, or that represent the homes of persons from particular religious or cultural backgrounds. Laboratory analyses of particular artifact types or artifact collections have also been used as an alternative mitigation measure to additional excavation. This has been particularly effective when large collections of artifacts acquired by avocational archaeologists are available for analysis by professionals. Finally, the use of non-traditional reporting is proving to be exceptionally welcome by the public and a critical deliverable in all data recovery efforts. Non-traditional reporting includes, for example, educational web sites; the creation of teaching plans and supporting materials; video/DVD production showing the range and types of cultural resources in areas or other appropriate stories; and the production of popular books, pamphlets, or brochures for use in public outreach.

4.8.6 REGULATORY COMPLIANCE

This section outlines the regulatory compliance requirements for cultural resources. These resources are regulated at the federal and state levels, and are always considered in NEPA and MEPA analyses. At the federal level, Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800) provides the regulatory framework for the compliance guidelines for the identification and evaluation of cultural resources. At the state level, Massachusetts General Laws Chapter 9, Chapter 254, Sections 26-27C, as amended; and 950 CMR 71.00, 950 CMR 70.00 provides the regulatory framework for the state compliance guidelines, under the jurisdiction of the MHC. Other relevant legislation and regulations include the National Environmental Policy Act of 1969, as amended[3]; Executive Order 11593, "Protection and Enhancement of Cultural Environment"[4]; Sections 106 and 110 of the National Historic Preservation Act of 1966, as amended[5], implementing regulation 36 CFR 800, as revised January 2001; and, the

[3] National Environmental Policy Act of 1969, as amended (42 U.S.C. $$ 4321-4347).
[4] Executive Order No. 11593. "Protection and Enhancement of the Cultural Environment," CFR 154 (1971) reprinted in 16 U.S.C.$470 note.
[5] Advisory Council on Historic Preservation. Sections 106 and 110 of the National Historic Preservation Act of 1966 (January 2001) 36 CFR 800.

Procedures for the Protection of Historic Properties (Appendix C) at 33 CFR Part 325 - Processing of Department of the Army Permits.

The historic and archaeological resources reconnaissance survey for the South Coast Rail Project was undertaken in accordance with the Secretary of the Interior's *Standards and Guidelines for Identification* (48 FR 44720-23), the Massachusetts Historical Commission (MHC) standards and guidelines set forth in *Public Planning and Environmental Review: Archaeology and Historic Preservation* (MHC 1985), and the MHC historic resources survey standards. The survey complies with the standards of the MHC, state archaeologist's permit regulations (950 CMR 70), the Secretary of the Interior's *Standards and Guidelines for Identification* (48 FR 44720-23), The Standards of the Massachusetts State Register of Historic Places (State Register), and the National Park Service (NPS) guidelines for assessing eligibility for listing in the National Register, specifically *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*. While the surveys conducted to date have informed the impact analysis, additional surveys will be conducted as necessary prior to completion of environmental review and when more design information is available to further and more specifically assess potential impacts to cultural resources.

4.8.6.1 NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the National Historic Preservation Act of 1966, as amended[6], seeks to accommodate historic preservation concerns with the needs of federal undertakings through consultation among agency officials and other parties with an interest in the effects of the undertaking on historic properties. The goal of the consultation is to identify historic properties that might be potentially impacted by the undertaking, assess its effects, and seek ways to avoid, minimize, or mitigate any adverse effects on historic properties.[7]

The Army Corps, as the lead federal agency for the South Coast Rail Project, has compliance responsibilities regarding cultural resources under the Procedures for the Protection of Historic Properties (Appendix C) at 33 CFR Part 325 - Processing of Department of the Army Permits, Section 106 of the National Historic Preservation Act (NHPA) as amended, the regulations of the Advisory Council on Historic Preservation (Council) at 36 CFR 800, and the National Environmental Policy Act (NEPA).

4.8.6.2 MASSACHUSETTS GENERAL LAWS, CHAPTER 9

EOT serves as the lead state agency and is responsible for identifying and evaluating properties through archaeological and historic architectural surveys in accordance with MGL Ch. 9 Sections 26-27C, as amended; 950 CMR 71.00, 950 CMR 70.00 and the Massachusetts Environmental Policy Act (MEPA). MGL Chapter 9 Section 26-27C stipulates that any project that requires funding, licenses or permits from any state agency must be reviewed by the MHC.

[6] Advisory Council on Historic Preservation. Section 106 of the National Historic Preservation Act of 1966 (June 17, 1999) 36 CFR 800.1(a).
[7] Ibid.