2 PROJECT PURPOSE AND NEED

2.1 INTRODUCTION

On May 8, 2008, the Massachusetts Executive Office of Transportation and Public Works (EOT) (currently known as MassDOT) submitted an application to the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act and potentially Section 10 of the Rivers and Harbors Act of 1899 for a Department of the Army (DA) permit to discharge fill material into waters of the United States (U.S.), ranging in area from less than 11 acres to approximately 21 acres (depending on the alternative selected), including wetlands, incidental to the construction of new public passenger rail (or other public transportation) facilities connecting the terminal stations of Fall River and New Bedford with South Station in Boston, Massachusetts (the project).

The Massachusetts Department of Transportation (MassDOT) (formerly the Executive Office of Transportation and Public Works) considered several transportation facilities and corridor alternatives to implement this transit service over a distance of approximately 50 to 60 miles. Transportation modes considered during the environmental review process included commuter rail (diesel or electric) and rapid bus.

2.2 PROJECT PURPOSE AND NEED

2.2.1 Purpose of the Project

MassDOT's stated purpose is "to more fully meet the existing and future demand for public transportation between Fall River/New Bedford and Boston, MA, and to enhance regional mobility, while supporting smart growth planning and development strategies in the affected communities." As part of its review of the Department of the Army (DA) permit application, the Army Corps of Engineers (USACE, Corps) is required to evaluate the proposal with regard to the U.S. Environmental Protection Agency (EPA) *Guidelines for Specification of Disposal Sites for Dredged or Fill Material* ("EPA Guidelines") at Title 40 of the Code of Federal Regulations, part 230. The basic project purpose is examined by the U.S. Army Corps of Engineers to determine if the project is water-dependent. A project is water dependent if it requires access or proximity to, or siting within, a special aquatic site[1] in order to fulfill its basic purpose. The USACE has determined that the basic project purpose for the MassDOT proposal is: "to more fully meet the existing and future demand for public transportation between Fall River/New Bedford and Boston, Massachusetts." Since ground-based public transportation does not fundamentally require siting within a special aquatic site to meet this basic project purpose, the EPA Guidelines stipulate that practicable alternatives are (1) presumed to exist and (2) presumed to be less environmentally damaging than the proposed action, unless clearly demonstrated otherwise.

The overall project purpose is used by the USACE to evaluate whether there are less environmentally damaging practicable alternatives available. The 404(b)(1) Guidelines state that an alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of *overall* project purpose (40 CFR 230.10(a)(2)). This evaluation applies to all waters of the United States, not just special aquatic sites.

[1] 40 CFR Part 230 Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material Subpart E--Potential Impacts on Special Aquatic Sites.

Determination of the overall project purpose is the USACE's responsibility; however, MassDOT's needs and the type of project being proposed are considered by the USACE in reaching this determination. The overall project purpose is defined by the USACE as: "to more fully meet the existing and future demand for public transportation between Fall River/New Bedford and Boston, MA, and to enhance regional mobility. This definition is specific enough to define MassDOT's needs, but not so restrictive as to constrain the range of alternatives that must be considered under the EPA Guidelines.

For purposes of the current NEPA analysis, USACE considers and expresses the proposed project's underlying purpose and need from a public interest perspective when appropriate, but generally focuses on MassDOT's purpose and need statement. The Council on Environmental Quality (CEQ) regulations at 40 CFR 1502.13, stipulate that the EIS purpose and need statement "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." The USACE exercises independent judgment in defining the purpose and need for the project from both MassDOT's and the public's perspectives. The purpose and need as independently determined by the USACE is: to more fully meet the existing and future demand for public transportation between Fall River/New Bedford and Boston, Massachusetts, and to enhance regional mobility.

2.2.2 Need for the Project

2.2.2.1 Transportation Problems in the South Coast Region

The current transportation system connecting Southeastern Massachusetts (i.e. the South Coast region including the cities of Fall River and New Bedford and the area served by the Southeast Regional Planning and Economic Development District [SRPEDD]) with Boston and internally is primarily a highway system and characterized by a lack of transportation mode choice, especially public transit. The highway system is composed of major, limited access state routes, regional highways, and local roadways (Figure 1.2-1). As the population in the South Coast region and employment in the Boston area have grown, the demands on the roadway system linking Southeastern Massachusetts to Boston and the rest of the region have increased, as reflected by increased traffic volumes. The increase in traffic volumes has resulted in roadway congestion and travel delays, especially during peak hours that have become worse over the past decade. The increased volume of traffic and congestion have also adversely affected air quality (contributing to air quality conditions in the South Coast region that do not meet federal Clean Air Act standards) and traffic safety. Based on the Commonwealth's forecasts, regional growth and the trend of commuters to locate to areas further away from the Boston metropolitan core, such as the South Coast region will continue to increase the demand for transportation in the South Coast region.[2] This would exacerbate the current problems of congestion, delays, transportation safety and air quality and affect an increasing number of people. A more detailed discussion of the problems identified above, as well as other considerations, is provided in Sections 2.2.2.1 through 2.2.2.10 below.

2.2.2.2 Potential Solutions to the Problem

In consideration of the above, MassDOT has determined that improving the transportation system (facilities and services) in the South Coast region is necessary to address the transportation issues facing the region.

[2] CTPS January 28, 2011 Memo "South Coast Rail Work Trips to Boston," provided in Appendix 2.2-A.

Although important investments in regional transportation facilities and services are planned, these will primarily address localized congestion or safety concerns, or repair aging infrastructure. They would not fundamentally address the lack of regional mobility and service quality.

Expansion of transportation capacity in the South Coast region with the existing transit services (bus, taxis, park-and-ride and vanpool) is limited as they use the same roadway system and are thus subject to the same roadway congestion. Transportation system solutions based on highway improvements are limited due to policy considerations and constraints imposed by the physical conditions of the metropolitan Boston area, where such highway improvements would need to be implemented to be effective in addressing capacity and congestion issues.

However, while highway expansion and utilization of existing transportation services do not provide long-term solutions to the transportation problems, MassDOT has determined that enhancement of (currently inadequate) public transit connections (in terms of travel time, service frequency, capacity and geographic availability) *does* provide opportunities to improve transportation between New Bedford/Fall River and Boston and between South Coast cities (New Bedford, Fall River, Taunton). MassDOT therefore proposes enhancement of public transit connections (collectively known as the South Coast Rail project – see Figure 1.4-1) to improve transportation between New Bedford/Fall River and Boston and between South Coast cities. Various alternatives are under consideration to enhance public transit service (using different transit modes and corridors), and these are described in Chapter 3, *Alternatives*.

The proposed public transit enhancements are consistent with the transportation goals and objectives set forth in the regional transportation plans specifically created by the Metropolitan Planning Organizations (MPOs). The long-term transportation plans of the region support the development of transportation improvements that enhance accessibility, increase mobility, encourage alternatives to automobiles, and provide a more equitable distribution of transit services.

The following describes in greater detail the need for the project and aspects that relate to regional mobility and quality of service:

- Inadequate capacity of the existing transportation system to downtown Boston
- Congestion of the roadway system
- Lack of regional mobility
- Safety issues associated with the existing roadway system
- Air quality issues associated with the existing transportation system
- Demand for transportation services
- Inadequate public transit services
- Absence of other regional transportation improvements to address the identified transportation needs
- State and local public policy context

- Smart Growth considerations

A discussion of each of the above problems is provided below. A more detailed discussion of existing and future deficiencies of the transportation system (including key factors listed above), especially as it relates to existing and future transportation demand, is provided in Chapter 4.1, *Transportation*.

Inadequate Existing and Future Capacity of the Transportation System from the South Coast Region to Downtown Boston

The existing transportation system serving the South Coast region has inadequate capacity, leading to lack of regional mobility, between the South Coast region and Downtown Boston and within the South Coast region itself. This is due in part to the relative dearth of public transit connections between New Bedford/Fall River and Boston and between South Coast cities (New Bedford, Fall River, Taunton and others). An overview of the existing transportation system deficiencies is provided below. A more detailed discussion is provided in Chapter 4.1, *Transportation*.

Roadway System Capacity and Regional Growth

The South Coast region is served by a network of roadways varying from limited access facilities to local roads. The primary highway facilities link the major urban areas of New Bedford, Fall River, and Taunton with each other and to the metropolitan Boston region. Highways provide the primary access routes within the South Coast region and to adjacent regions. The main highway facilities in the South Coast region are Route 24, Route 140, I-195, and I-495 (Figure 1.2-1). Together, Routes 24 and 140 link New Bedford and Fall River to the metropolitan Boston region. The two interstate routes (I-95 and I-495) serving the South Coast region are not part of the primary highway access system to the metropolitan Boston region. Interstate I-195 provides east-west access across the region, connecting Cape Cod, Wareham, New Bedford, Fall River, and Providence, while I-95 just west of the region connects Providence with greater Boston. I-495 runs northwest-southeast, connecting Cape Cod, Wareham, and Taunton. The only option for traffic generated within the South Coast region to reach downtown Boston are I-93/Route 128 and I-93/Route 3 (Southeast Expressway). Route 128 is Boston's inner circumferential highway which provides access to much of the metropolitan Boston region. Following I-93 north/Route 128 south from Route 24 leads to I-93/Route 3 (Southeast Expressway) and downtown Boston, approximately 8 miles from the I-93/Route 128/Route 3 interchange in Braintree. Following I-93 south/Route 128 north from Route 24 leads to I-95 approximately 3 miles to the north and to I-90 approximately 15 miles to the north. The Massachusetts Turnpike (I-90) provides the only limited-access highway to Boston from west of the city.

Both Route 128 and the Southeast Expressway are heavily congested roadways, particularly during peak periods. Traffic volumes on Route 128 are approximately 135,000 vehicles per day north of Route 24 (towards I-95) and 167,000 vehicles per day to the south (towards I-93/Route 3). Traffic volumes on I-93/Route 3 are as high as approximately 191,000 vehicles per day. On Route 24, the major north south corridor in the South Coast region, the average daily traffic ranges from 26,700 vehicles per day in Fall River to over 115,000 vehicles per day in Randolph. Traffic congestion and long delays are common on the northern segments of this highway during weekday peak commuting periods.

As the population in the South Coast region and employment in the Boston area have grown, the demands on the roadway system linking Southeastern Massachusetts to the rest of the region have increased. Traffic volumes on the limited-access state routes linking the South Coast region to the employment centers of Boston have been growing over the past decade, as shown in Chapter 4.1,

Transportation, Table 4.1-9: Average Daily Traffic Volume Growth. Overall, traffic volumes on the roadways in the South Coast region have grown at an annual rate of two to three percent over the past decade. However, traffic volumes have grown even more rapidly in some areas. The largest increases in traffic volumes have been on Route 24 in Raynham and Taunton, where the traffic volumes have had annual increases of 4.1 and 5.0 percent respectively. Traffic volumes on Route 140 in Taunton have been increasing at an annual rate of 2.2 percent. Route 128 and I-93 (the Southeast Expressway) exhibit relatively stable traffic volumes, reflecting the fact that they are already some of the most congested highways in the state and traffic volumes on these roadways are at or near capacity for long portions of the day, and have limited capacity for further increases in average daily traffic volumes leading to further congestion with continued population growth. The minor decrease in traffic on portions of I-93 may reflect changes in motorist route choices due to Central Artery/Tunnel project construction, and demand reductions from the Route 3 corridor due to the restoration of the Old Colony Commuter Rail service.

2.2.2.3 Congestion of the Roadway System

The increases in traffic volumes on the principal highways linking the South Coast region to downtown Boston have led to deteriorating level of service (LOS) on these roadways, especially during peak periods. Delays on these roadways are now common and have become worse over the past decade. These delays are especially prevalent on Route 24 as it approaches Route 128/I-93 in Randolph. Increases to peak-hour volumes of up to 3,500 and 4,000 vehicles per hour on Route 24 and on I-93/Route 128 in Braintree and in Randolph, respectively, have led to deterioration of LOS down to F on these major roadways, which are intended to relieve the local roadways from regional traffic. Several mitigation measures have been implemented on I-93 to reduce congestion (HOV lanes, improved MBTA Red Line service, and Old Colony Commuter Rail service). However, this highway continues to operate at poor levels of service, resulting in substantial congestion and decreased safety. There are no roadway alternatives to the use of Route 24 and I-93, and no mitigation measures are planned to reduce congestion.

The lack of adequate capacity of the roadway system and the resultant reduction in LOS is anticipated to become even more problematic with the increased demand for transportation resulting from the growth of the South Coast region, especially as commuters living near Boston are moving away to areas further from the metropolitan core. Southeastern Massachusetts has been one of the fastest growing areas in the Commonwealth. Between 1960 and 2000, this area experienced a growth rate of 31 percent. Between 1960 and 1990, this area had an annual growth of over 2,500 people per year from a base population of 343,353 to its 1990 population of 430,846. Growth slowed somewhat between 1990 and 2000, to an annual growth of approximately 1,950 people per year. These figures translate to a growth of 4.5 percent between 1990 and 2000. Each 10,000 new residents coming into the area are expected to generate a need for 3,500 new residential units, and are predicted to generate 27,650 new vehicle trips per day, further degrading the LOS provided by the regional transportation system. As described in greater detail in Chapter 4.1, *Transportation*, the level-of-service of the roadway system connecting the South Coast region to Boston will deteriorate even further, resulting in a concomitant increase in congestion, accidents, travel time and air pollution; not only on the highways themselves but potentially also on nearby local roadways that may absorb the traffic spillover from nearby congested highways.

2.2.2.4 Lack of Regional Mobility

The lack of regional mobility is reflected by poor connectivity between the South Coast Area and Boston. While GATRA and the Southeastern Regional Transportation Authority (SRTA) do provide intraregional transit service, there are only a limited number of one-seat transit rides from one municipality to another within the South Coast region and adjoining regions, as discussed in greater detail in Section 2.2.2.7. In this regard the South Coast region is severely underserved relative to other comparable regions, especially those that have a commuter rail system.

Of all regions in the Commonwealth, the South Coast region by this measure has the lowest regional mobility index. This is partially due to the absence of commuter rail, which in other regions provides intra (within) regional connectivity (mobility), partially as a byproduct of interregional connectivity with Boston. Chapter 4.1, *Transportation* provides a discussion of interregional links and regional mobility (Table 4.1-47).

In contrast with commuter rail services in other regions that have multiple stops along transit lines, existing express bus services within the South Coast region are by necessity limited to a few stops in order to realize a total travel time competitive with commuting by automobile. Serving additional communities with the bus services would substantially slow service to unacceptable levels, which would result in fewer transit riders. The second constraint that limits intraregional connections is bus capacity. In order to attract riders, existing bus services seek to minimize headway (maximize frequency) while operating at or near capacity almost from their initial point of departure, with very limited or no intermediate stops within the South Coast region. Existing bus services thus operate as exclusive routes with few in-between stops and thus do not provide substantial interregional connectivity.

2.2.2.5 Safety Issues Associated with the Existing Roadway System

The number of accidents on the primary travel routes within the South Coast region has generally been increasing over the past years, as described in detail in Chapter 4.1, *Transportation*, and in the accident tables included with Appendix 4.1-B. Projected future growth in traffic volume on the principal South Coast region roadways cannot be sustained by the current regional transportation system. Recurrent traffic congestion is becoming a more significant problem for the region, as is the increasing frequency of traffic accidents, especially along congested roadway corridors. Traffic volume increases may thus contribute to increased risk of injury and property damage for the commuting public.

2.2.2.6 Air Quality Issues Associated with the Existing Transportation System

Motor vehicles are the predominant sources of ozone precursor emissions within the South Coast region, which has been classified as a Severe Non-Attainment Area for ozone, which means that the region does not meet one or more of the National Ambient Air Quality Standards for the ozone, one of the criteria pollutants designated in the Clean Air Act. Automobiles also emit carbon monoxide through the partial combustion of carbon-containing compounds in gasoline. Reducing greenhouse gas emissions is a priority for the Commonwealth and the United States. Federal and State agencies such as EPA, USDOT, the Massachusetts Executive Office of Energy and Environmental Affairs and MassDOT[3] are

[3] http://www.epa.gov/dced/partnership/index.html#livabilityprinciples; http://www.epa.gov/otaq/climate/publications.htm#otherapproaches' http://www.epa.gov/dced/; http://www.epa.gov/climatechange/wycd/road.html; "Transportation's Role in Reducing U.S. Greenhouse Gas Emissions", Volume 1, Synthesis Report, Report to Congress, USDOT, April 2010. (http://ntl.bts.gov/lib/32000/32700/32779/DOT_Climate_Change_Report_-_April_2010_-_Volume_1_and_2.pdf); http://www.eot.state.ma.us/downloads/90_DayReport/GreenDOT_070710.pdf; http://www.massdot.state.ma.us/main/Documents/HealthyTransportationCompact/P-10-002.pdf; http://www.mass.gov/Eoeea/docs/eea/energy/2020-clean-energy-plan.pdf.

working to reduce greenhouse gas emissions from motor vehicles and fuels through several initiatives, including efforts to promote public transit, multi-modal systems and transit-oriented development. As discussed previously, and described in greater detail in Chapter 4.1, *Transportation* and Chapter 4.9, *Air Quality*, the highways serving the South Coast region convey high volumes of automobile traffic, and have high levels of congestion (both of which increases vehicle emissions). Transportation alternatives for South Coast commuters that would reduce the mobile-source emissions of greenhouse gases are limited due to the inadequacy of the transit system. A shift in travel from automobiles to public transit could reduce vehicle emissions and improve regional air quality.

Vehicle Miles Traveled (VMT) measures the extent of motor vehicle operation or the total number of vehicle miles travelled within the study area on given day. It is an important gauge for air quality and Greenhouse Gas emissions, as emissions of air pollutants and greenhouse gases is related to the distance traveled by automobiles (and to a lesser degree congestion). Regions with high VMTs per capita have a greater potential for poor air quality and GHG emissions compared to regions with lower VMT per capita. One of the reasons for the relatively high VMT in the South Coast region is the much greater proportion of transportation by car versus rail or bus, as compared to other regions. Daily regional automobile VMT is expected to grow from 109,926,000 under existing conditions to 118,894,000 by 2035 under the No-Build Alternative (based on updated modeling conducted by CTPS in 2012, see Appendix 3.2-I).

2.2.2.7 Demand for Transportation Services

Southeastern Massachusetts experienced a 4.5 percent population growth between 1990 and 2000. Growth slowed between 2000 and 2010, with an overall population increase in the South Coast Region of 2.9 percent. Factors driving growth in the region include the desire for affordable housing outside the Boston metropolitan area. Many of the people relocating to the area are retaining their jobs in the Boston market and thus increase the demand for transportation services between the area and Boston, as well as within the South Coast region. The number of commuter trips between the South Coast region and Boston was 8,000 in 2000 and is expected to increase by 1,200 to 9,200 in 2030.[4] Most of the commuter trips from the region to the Boston market are in single occupant vehicles and public transit accounts for a minor proportion of work trips in the service area. MassDOT expects this trend to continue in absence of improved public transit connections between Boston and the South Coast region.

2.2.2.8 Inadequate Public Transit Services

The inadequacy of public transit service in the South Coast region is reflected in several aspects: The *availability* of public transit service in absolute terms and compared to other regions, especially those that have a large commutation segment to downtown Boston, and the *quality* of transit service as expressed in travel time and frequency of service, especially during the peak hours. The geographic availability of transit service to people in the region is also relevant in terms of access to employment opportunities and services, including education and healthcare. In addition to transit services between the South Coast region and Boston, transit services within the South Coast region are also relevant. An indicator of quality of transit service is the MBTA's *Service Delivery Policy.* This policy identifies minimum frequency of service levels that provides the guidelines by which the MBTA maintains accessibility to the transportation network within a reasonable waiting period. The minimum frequency of service standards is the minimum frequency that must be maintained in a service. For Commuter Rail and

[4] CTPS January 28, 2011 Memo "South Coast Rail Work Trips to Boston", provided in Appendix 2.2-A.

Commuter Bus minimum frequencies should provide three trips in a peak direction during the AM and PM peak periods.

Existing transportation in the South Coast region is predominantly auto-oriented and transit services within the South Coast region are limited to bus and demand-response services operated by regional transit authorities and private carriers (Figure 2.2-1). Most of the commuter trips from the South Coast region to the Boston market are in single occupant vehicles and public transit accounts for a minor proportion of work trips in the service area. To a large extent, this can be attributed to the lack of public transit alternatives other than privately-operated bus service. As discussed below, many communities in the South Coast region lack public transit facilities other than private bus services and major population centers are as much as 25 miles from existing commuter rail stations. All commuter rail stations are located outside the South Coast region and are already nearing capacity.

Bus Service

Local bus public transit within the South Coast region is provided in Taunton by GATRA and in New Bedford and Fall River by SRTA. GATRA also operates intercity bus service between Taunton and Providence, Rhode Island.

Bus service to Boston from the South Coast region including the cities of Taunton, Fall River and New Bedford is limited to private carriers. Private carriers also connect Fall River, New Bedford, and Taunton with each other and with Providence, Newport, and points beyond. Bus service from the South Coast region to Boston uses the regional roadway system and is thus subject to the same congestion and safety problems on the highway system as other vehicles, resulting in long and unpredictable travel times. The bus service is also substantially more expensive than MBTA commuter rail services over similar distances, creating an additional constraint on usage of bus service, especially for lower income travelers. Some bus service exists to commuter rail stations outside the South Coast Area; however the transfer between two transit services increases overall travel time, rendering it less attractive. The private express bus service is subject to the same congestion.

While the current bus service plays an important role, especially as it is the only regular transit service between the South Coast region and Boston, its use is limited, reflecting constraints related to travel time, service frequency and cost. A summary of bus service between the South Coast Area and Boston is presented below. A more detailed description of bus service is provided in Chapter 4.1, *Transportation*.

Vanpools/Carpools

Vanpools in communities of the South Coast region are provided through MassRides, a program of MassDOT. Although relevant as a complementary service vanpool and carpool travel times are severely impacted by slow travel speeds on the expressway and secondary roads.

Park-and-Ride

Park-and-ride facilities and carpool/vanpool services are offered along the primary regional travel corridors in the South Coast region. Park-and Ride lots are associated with car-pooling, van-pooling or private bus service to Boston. There are nine public park-and-ride lots located in the South Coast region, of which five are located along the primary roadways from the region to the Boston metropolitan area and four not in the immediate vicinity of the primary access routes to Boston. In addition, three private park-and-ride lots in the South Coast region are available exclusively for customers using the private bus services to Boston. Three public park-and-ride lots are outside the South Coast region, but still along the

Route 24 access corridor to Boston. An overview of Park-and-Ride Facilities is presented in Chapter 4.1, *Transportation*. Park-and-ride facilities as feeders for bus and car-pooling and van-pooling services are limited in their effectiveness as a transportation connection with Boston, due to the inconvenience of transfers and travel times associated with the congested roadway system, both in terms of traveling to the Park-and-ride facility and travel from the Park-and-Ride facility to Boston.

Commuter Rail

Many communities within the South Coast region do not currently have commuter rail service. The nearest commuter lines (MBTA's Providence Line and Middleborough Lines) terminate on the northwest and northeast edges of the South Coast region. Starting in May 2013, MBTA, in cooperation with the Cape Cod Regional Transit Authority, established a seasonal weekends-only service known as the Cape Flyer, extending the Middleborough line from its current terminus in Middleborough to Hyannis. However, this service is limited to three round-trips per week, all on weekends, and thus serves weekend tourists rather than daily commuters between Boston and the South Coast. In fact, the three major cities in the South Coast region: Taunton, Fall River, and New Bedford are the only cities within 50 miles of Boston that are not served by passenger rail. The closest commuter rail stations to the South Coast region are Middleborough/Lakeville (MBTA Middleborough Line), and Attleboro Station and Providence Station (MBTA Providence Line). The Middleborough Line serves areas east of the South Coast region and southeast of Boston, with stations in Lakeville and Bridgewater, while the Attleboro/Providence and Stoughton lines serve communities to the north and west of the South Coast region. The Attleboro and Mansfield stations are the primary access points on the Attleboro/ Providence Line. The Stoughton Station serves as the primary access point on the Stoughton Line. All communities in the heart of the South Coast region are outside a 6-mile access radius of these stations, and some—including major population centers such as New Bedford and Fall River (combined population of 182,000)—are more than 20 miles and up to 25 miles from the nearest train station (Table 2-1).

Table 2-1 Proximity of South Coast Communities to Commuter Rail Service

Community	Closest Station	Proximity[1] (miles)
Acushnet	Middleborough/Lakeville	15.7
Berkley	Middleborough/Lakeville	10.7
Dartmouth	Middleborough/Lakeville	20.9
Dighton	Middleborough/Lakeville	13.7
Easton	Stoughton	5.1
Fairhaven	Middleborough/Lakeville	22.5
Fall River	Middleborough/Lakeville	19.6
Freetown	Middleborough/Lakeville	10.8
Lakeville	Middleborough/Lakeville	3.3
Mattapoisett	Middleborough/Lakeville	19.4
New Bedford	Middleborough/Lakeville	20.8
Norton	Mansfield	5.7
Raynham	Bridgewater	7.5
Rehoboth	Attleboro	8.8
Rochester	Middleborough/Lakeville	13.7
Somerset	Providence	19.4
Swansea	Providence	15.5
Taunton	Middleborough/Lakeville	9.7

Westport	Middleborough/Lakeville	28.3

1 Proximity measured to population centroid
Source: Google Maps

Due to their distance to the nearest commuter rail station the existing commuter rail lines to Boston are difficult for residents to access, especially for those living in Taunton, Berkley, Freetown, Fall River, and New Bedford. Travel to these stations is also limited to local secondary roads, which further increases travel time.

For those commuters in the South Coast region who live closer to commuter rail stations outside the South Coast region, constraints to the usage of the existing stations are posed by station parking and system capacity issues. Commuter rail services are currently approaching capacity and system capacity is limited due to the lack of adequate parking at these stations. Commuter rail parking lots in Attleboro, Mansfield, Stoughton, and on the Middleborough Line are already heavily utilized , as described in Chapter 4.1, *Transportation*, and are either unable or will not be able to handle any more growth. In addition, some peak hour trains experience heavy passenger loads, which was especially evident before the 2009 economic downturn. Therefore, the existing commuter rail service, although within reach of some communities in the South Coast region, is not sufficient to handle the anticipated growth in ridership. A detailed discussion of ridership forecasts is provided in Chapter 4.1, *Transportation*. Growth projections are presented in Chapter 4.3, *Socioeconomics.*

Poor or limited transportation opportunities also constrain access by South Coast region residents to important Boston destinations, including education opportunities provided by numerous private and public colleges and universities, the highest concentration of medical facilities and specialties in the Commonwealth, cultural facilities, and sporting events. Existing highway congestion, extended travel times, and limited (and often expensive) parking affect the ability of many area residents to access these destinations.

The City of Boston continues to provide substantial employment opportunities at all levels, and also contains a substantial employment labor force. Many of the South Coast region communities, particularly in the towns of Easton, Raynham and Taunton, have a substantial work orientation to Boston. Access between South Coast region communities and downtown Boston is constrained by the limited, overloaded highway system and the lack of alternative transit modes. The ability to park in Boston is constrained by the limited space available to provide parking, high demand for parking resulting from new development, the high cost of parking, and the metropolitan area parking freeze. Residents of South Coast region communities would benefit substantially from improved employment access and reduced cost of commuting and parking.

In sum, commuter rail service currently does not extend into the South Coast region, making access to commuter rail difficult for area residents.

2.2.2.9 Absence of Other Regional Transportation Improvements to Address the Identified Transportation Needs

Local communities, regional planning agencies, and MassDOT are pursuing a number of transportation and development projects within the study area. They are included in the long-range transportation plans and Transportation Improvement Programs of the Boston Metropolitan Area Planning Council (MAPC), Old Colony Planning Council (OCPC), and the SRPEDD. While important to the transportation system of the South Coast region, MassDOT has indicated that these programmed projects will not meet

the transportation needs of the region, as it relates to the inadequate capacity of the existing transportation system to Downtown Boston.

2.2.2.10 State, Regional and Local Public Policy Context

The South Coast Rail project is proposed by MassDOT as part of a comprehensive effort to achieve a series of broad study area transportation and development goals, as well as specific objectives for improving the quality of transportation services and the equity of the distribution of services within the South Coast region. These goals and objectives have been developed by MassDOT over several decades as part of both broad-based policies and specific regional documents and include the following statewide plans and reports:

GreenDOT Policy Directive (2010)—MassDOT will promote sustainable economic development, protect the natural environment, and enhance the quality of life for all the Commonwealth's residents and visitors by reducing greenhouse gas emissions, promoting the healthy transportation options of walking, biking and public transit and supporting smart growth development.

South Coast Rail Plan for Action (2007)—This report identified the South Coast of Massachusetts as one of the fastest growing regions in the state, and stated that restoration of passenger rail service could be a catalyst for economic development and job growth in the region. The plan also stated that the project would reach under-served populations and promote smart growth.

MBTA Program for Mass Transportation (2003, 2010 Draft Update[5])—This state program identifies mass transit needs through the year 2030 that would require capital expenditures and includes commuter rail service to New Bedford and Fall River.

Toward a New Growth Policy for Massachusetts (1977)—This report encouraged redevelopment of older urban areas across the state. Both New Bedford and Fall River are older urban areas seeking economic development opportunities. The two cities are designated as both federal and state economic target zones. Second, the Southeastern Massachusetts area provides affordable housing opportunities for professionals working in the metropolitan Boston area.

Boston Transportation Planning Review (1970-1973)—This program re-examined the highway construction program in the Boston area and established a new transportation strategy with a strong emphasis on transit as a means to provide additional transportation capacity into Boston.

In addition to statewide plans, regional transportation goals provide a basis for evaluating options for improvement of transportation services and facilities in the South Coast region. They support improvements to transportation services, increase mobility, provide transit services that are cost-effective, and provide a more equitable distribution of transportation benefits. Their objectives are consistent with those of the proposed project and their locally adopted goals and objectives support the broad, long-term study area development and transportation strategy, as described below.

New Bedford/Fall River/Taunton Region—The SRPEDD has adopted a multi-level set of transportation goals and objectives in the region's 2007 Regional Transportation Plan. This planning document includes goals and objectives in support of the region's overall goal of developing and maintaining an effective, safe, and accessible transportation system that promotes sustainable economic development and

[5] http://www.ctps.org/bostonmpo/4_resources/1_reports/1_studies/3_transit/pmt.html.

preserves the region's quality of life. The plan specifically states that continued support for extending commuter rail service to Taunton, Fall River, and New Bedford helps achieve these goals.

Brockton Region—The OCPC has adopted a multi-level set of transportation goals and objectives in the region's 2007 Regional Transportation Plan. This planning document includes 14 goals and objectives in support of community vision, including smart growth principles and a transportation system that is regionally coordinated and based on effective transportation and land use planning.

Boston Region—The MAPC adopted eight visions and corresponding policies in their 2007 Regional Transportation Plan. These goals and policies are based on a vision for the region that emphasizes the maintenance, management, and operation of a multimodal transportation system that provides a high degree of mobility for all people and supports the reduction of air quality degradation and other environmental degradations caused by transportation.

2.2.2.11 Smart Growth Considerations

Smart Growth as proposed by MassDOT integrates two needs identified by the South Coast region that are related to transportation: economic development and environmental preservation.

Southeastern Massachusetts has been the fastest growing region in the Commonwealth for many years both in terms of population and housing units. At the same time, population and housing growth has been unevenly distributed, with the historic cities of Fall River and New Bedford experiencing a decline in population and economic vitality while exurban areas have been experiencing development sprawl resulting in the loss of farms, fields and forests and damages to the character of the historic villages and cities within the region. There is a need for smart growth planning within the region to address the adverse effects of sprawl resulting from current and projected further uncontrolled growth and loss of open space.

The poor connectivity to the metropolitan Boston area may constrain economic activity in the urban areas of New Bedford and Fall River, which in 2006 had substantially higher unemployment rates (8.2 to 8.6 percent) than the state average (5 percent) at that time. The 2009 economic crisis further exacerbated this trend with unemployment rising to 12.4 to 12.6 percent by August 2009 in New Bedford and Fall River, respectively, compared to a statewide average of 9.1 percent. According to MassDOT, improved access to employment markets in Boston could provide employment opportunities for the New Bedford and Fall River labor force that could provide economic benefits for these communities. Commuter rail service could also allow limited "reverse commutes" from area communities like Taunton to New Bedford and Fall River, which would thereby gain access to a larger labor pool within the Southeastern Massachusetts region.

MassDOT's intent is for the South Coast Rail project to provide opportunity to generate new economic development and to shape this growth so that the project helps preserve environmental resources. The project is proposed to be implemented by MassDOT in partnership with municipalities. The transportation project would be planned by MassDOT in conjunction with local land use planning to help cluster people and jobs near transit facilities. The intent of the transportation project proposed by MassDOT would be to help open up new economic development opportunities, while directing growth away from natural areas and reducing sprawl. A discussion of future growth is provided in Chapter 4.2, *Land Use and Zoning*, and Chapter 4.3, *Socioeconomics*. A discussion of Smart Growth as proposed by MassDOT is provided in Chapter 5, *Indirect Effects and Cumulative Impacts*, which describes how

MassDOT through its Smart Growth policies seeks to reduce indirect effects and cumulative impacts on the environment.

2.3 PURPOSE AND SCOPE OF THE ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL IMPACT REPORT

This document has been prepared to comply with the requirements of NEPA, the CEQ regulations for implementing NEPA, [Title 40 CFR Parts 1500-1508], and the USACE Regulatory Program NEPA implementing regulations at Appendix B to 33 CFR Part 325. On May 7, 2008, the USACE determined that an EIS is required for this proposed project because of the project's potential to significantly affect the quality of the human and natural environment. The purpose of this EIS is to assess the environmental impacts associated with the construction and operation of transit enhancements between Fall River / New Bedford and Boston proposed by EOT.

Pursuant to its responsibilities under Sections 10 and 404, the USACE, therefore, has a responsibility to review permit requests seeking authorization to (1) perform work or build structures in the navigable waters of the United States and/or (2) discharge dredged or fill material into all waters of the United States. The USACE review considers MassDOT's purpose and need from a public interest perspective. The public interest determination involves more than an evaluation of impacts to the aquatic environment. Once the project has been determined to comply with the EPA Guidelines, the project must also be evaluated to ensure that it is not contrary to the public interest. There are 20 public interest factors listed in 33 CFR 320.4(a) (1). A project may have an adverse effect, a beneficial effect, a negligible effect, or no effect on any or all of these factors. The district must evaluate the project in light of these factors, other relevant public interest factors, and the interests of MassDOT to determine the overall balance of the project with respect to the public interest. The EIS provides the basis for this public interest review, as outlined in Title 33 CFR Part 320.4, which states:

> The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur, are therefore determined by the outcome of this general balancing process. That decision should reflect the national concern for both protection and utilization of important resources. All factors which may be relevant to the proposal must be considered including the cumulative effects thereof: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The public interest review is thus a balancing test by the USACE of the foreseeable benefits and detriments of proposed projects on an individual and cumulative basis. The following general criteria of the public interest review must be considered in the evaluation of every permit application (see 33 CFR 320.4(a) (2)):

(i) The relative extent of the public and private need for the proposed structure or work

(ii) Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work; and
(iii) The extent and permanence of the beneficial and/or detrimental effect(s) that the proposed structure or work is likely to have on the public and private uses to which the area is suited.

The USACE is neither a proponent nor opponent of any permit proposal. The decision to issue or deny a permit is based, in part on the weighing and balancing of the public interest factors. In order to issue a permit, the District Engineer must determine that it would not be contrary to the public interest (33 CFR 320.4(a)). Further, the EPA Guidelines prohibit the issuance of a permit if the discharge is not the least environmentally damaging practicable alternative, or would cause or contribute to significant degradation of waters of the United States (40 CFR 230.10(a)(4).

2.3.1 Environmental Impact Report

The proposed project is subject to review by the Commonwealth of Massachusetts under the Massachusetts Environmental Policy Act (MEPA) because it is being undertaken by a state agency and because it meets or exceeds the review thresholds set forth in the MEPA regulations, including thresholds for a mandatory EIR. The MEPA imposes a requirement on project proponents to understand and fully disclose the potential impacts of a project, both positive and negative; to study feasible alternatives to a project; and to avoid, reduce, or mitigate environmental impacts to the maximum extent feasible. In order to streamline the environmental review process and to facilitate public involvement, MEPA and the USACE are coordinating review of a joint EIS/EIR with the intent to provide the information and analysis required for both federal and state review.

The project is undergoing environmental review pursuant to the following sections of the MEPA regulations at 301 CMR 11.00, which establish the standards for environmental impact review and a basic procedural outline for conducting that review: Section 11.03(a)(1)(5) because it involves construction of a new rail or rapid transit line along a new, unused or abandoned right-of-way; Section 11.03(3)(a)(l)(a) because it will result in alteration of more than one acre of bordering vegetated wetlands (BVW); Section 1 1.02(a)(2) because it involves alteration requiring a variance in accordance with the Wetlands Protection act; Section 11.03(l)(a)(l) and (2) because it may result in alteration of 50 or more acres of land and creation of 10 or more acres of new impervious area; Section 11.03(1 l)(b) because it is located within a designated Area of Critical Environmental Concern (ACEC); Section 1 1.03(b)(3) because it involves conversion of land held for natural resource purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth; Section 11.03(2)(b)(2) because it would result in more than 2 acres of disturbance of designated priority habitat that results in a take of a state-listed species; and Section 1 1.03(10)(b)(l) because it may result in demolition of a part of a state-listed historic structure. The project may also meet or exceed other MEPA review thresholds depending upon its final design. Because the proposed project is being undertaken by a state agency MEPA jurisdiction is broad and extends to all aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment as defined in the MEPA regulations.

Additional state approvals, reviews and permits required for the project include a Water Quality Certification pursuant to Section 401 of the Clean Water Act, a Chapter 91 License and a Variance from the Wetlands Protection Act (WPA) from the Massachusetts Department of Environmental Protection (MassDEP). The project also requires local Orders of Conditions under the WPA (and, on appeal only, Superseding Order(s) from MassDEP). Other permits or approvals required for the project include a Conservation and Management Permit from the Natural Heritage and Endangered Species Program

(NHESP). The project is subject to review by the Massachusetts Historical Commission and the Office of Coastal Zone Management. The project is also subject to the MEPA Greenhouse Gas Emissions Policy and Protocol.