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CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	: South Coast Rail – Phase 1 Service
PROJECT MUNICIPALITY	: South Coast Region
PROJECT WATERSHED	: Buzzards Bay, Taunton River, Mount Hope Bay
EEA NUMBER	: 14346
PROJECT PROPONENT	: Massachusetts Department of Transportation (MassDOT)
DATE NOTICED IN MONITOR	: February 7, 2018

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62I) and Section 11.08 of the MEPA regulations (301 CMR 11.00), I have reviewed the Draft Supplemental Environmental Impact Report (DSEIR) and hereby determine that it **adequately and properly complies** with MEPA and its implementing regulations. MassDOT must provide Responses to Comments on the DSEIR and provide draft Section 61 Findings. Notice will be published in the next Environmental Monitor that the responses and findings shall be filed, circulated, and reviewed as a Final Supplemental Environmental Impact Report (FSEIR) pursuant to 301 CMR 11.08(b)(2)(b).

A Certificate on the Final Environmental Impact Report (FEIR) for the South Coast Rail (SCR) was issued on November 11, 2013. It indicated that the FEIR adequately and properly complied with MEPA and its implementing regulations and that the project could proceed to permitting. The Massachusetts Department of Transportation (MassDOT) filed a Notice of Project Change (NPC) to address potential environmental impacts associated with a proposal to provide interim rail service from Fall River and New Bedford (Phase 1) prior to construction of the South Coast Rail project (Full Build). The NPC described the interim service and identified associated changes and potential environmental impacts. The Phase 1 project is proposed to meet existing and future demand for public transportation

between Fall River/New Bedford and Boston and to enhance regional mobility while MassDOT continues to design and advance the Full Build project.

According to the DSEIR and the NPC, a review of construction costs for the Full Build project (in 2016) estimated that it would cost $3.3 billion and identified an in service date of 2028. MassDOT proposed to phase construction of the Full Build project to provide service to the South Coast Region much sooner than would be possible if it were constructed at one time. MassDOT estimates that Phase 1 will cost approximately $935 million and service is projected to start in 2022.

Phase 1 consists of the construction and operation of commuter rail service from Fall River and New Bedford to the Middleborough Commuter Rail Line via Cotley Junction in Taunton and the Middleborough Secondary Line. Phase 1 will provide service using the Middleborough/Lakeville Main Line from South Station in Boston to Pilgrim Junction in Middleborough, where the rail intersects the Middleborough Secondary at the existing Middleborough Layover facility. The Middleborough Secondary Line, an active freight line, will be reconstructed and expanded.

The section of the project from the New Bedford Main Line and the Fall River Secondary Line extending to Cotley Junction is referred to as the Southern Triangle. The Southern Triangle is common to Phase 1 and the Full Build and underwent MEPA review as part of the South Coast Rail project. The Southern Triangle includes the two terminal stations proposed for Phase 1 - Whale's Tooth Station in New Bedford and Fall River Depot Station in Fall River.

Phase 1 will include the following improvements along the Middleborough Secondary: reconstruction of existing single track from Pilgrim Junction to Cotley Junction (approximately 7.1 miles) including limited new double track construction, culvert replacements and retaining wall construction;[1] new signal/communications systems; positive train control (PTC); and upgrades to five grade crossings.

Phase 1 will include three peak-period trains from and to each terminal station. Phase 1 will include construction of the two terminal stations, King's Highway Station in New Bedford, Freetown Station in Freetown, a new station in East Taunton[2], and a new station in Middleborough. The Freetown and Fall River Depot stations will require modifications. The existing Lakeville Station may be retained by providing a shuttle bus to the new Middleborough station or closed. Because the stations proposed for the Full Build project in Taunton are north of Cotley Junction they are not included in Phase 1.

The DSEIR notes that Phase 1 will provide independent utility because the capital construction elements will provide improved and faster service along a critical freight corridor and, upon Full Build, it will provide redundancy and resiliency for service disruptions.

[1] Upgrades will be coordinated with current MassDOT State of Good Repair program along this alignment
[2] The Taunton Depot Station proposed in the FEIS/R will be relocated to the new East Taunton site.

Original Project Description and Procedural History

The South Coast Rail project consists of the development of a public rail system to connect the cities of Fall River and New Bedford to Boston and enhance regional mobility, while supporting smart growth planning and development strategies in affected communities. Fall River and New Bedford are historically underserved areas with respect to public transportation options. The South Coast Rail is a priority transportation initiative and a component of MassDOT's efforts to increase transit access throughout the Commonwealth.

The South Coast Rail will provide commuter service to South Station using the Northeast Corridor, Stoughton Line, New Bedford Main Line, and Fall River Secondary Line. The New Bedford to Boston route is 54.9 miles long and the Fall River to Boston route is 52.4 miles long. Travel time during peak periods on the New Bedford line and the Fall River line are estimated at 77 minutes and 75 minutes, respectively. The project requires upgrades to track infrastructure along the existing Stoughton line including reconstruction of tracks from Canton Junction to Stoughton, construction of new tracks from Stoughton to Winter Street in Taunton, for a distance of 15 miles, on an abandoned right-of-way (ROW) which crosses through the Hockomock Swamp and the Pine Swamp. Reconstruction of tracks is also proposed from Winter Street in Taunton to Weir Junction, a distance of 1.7 miles. The project requires reconstruction of tracks in the Southern Triangle. Infrastructure improvements associated with the project include constructing, reconstructing, or widening 45 bridges, and constructing or reconstructing 46 at-grade railroad crossings.

The project includes ten new rail stations: North Easton, Easton Village, Raynham Park, Taunton, Taunton Depot, King's Highway, Whale's Tooth, Freetown, Fall River Depot, and Battleship Cove. New stations will include high-level platforms (4 feet above track), canopies, commuter parking, a drop-off area for buses, and areas for kiss and ride. Platforms will be designed to handle a 9-car train set (approximately 800 feet long). The station designs include bike storage areas and pedestrian connections to neighboring streets.

The project includes two overnight layover facilities, one on the New Bedford Main Line (Wamsutta site) and one on the Fall River Secondary (Weaver's Cove East site). Independent of the South Coast Rail project, MassDOT is proposing an expansion of South Station (SSX) as well as mid-day layover facilities in Boston to address existing and future Massachusetts Bay Transit Authority (MBTA) and Amtrak capacity needs.[3] SSX will support infrastructure requirements associated with this project.

Numerous alternatives were introduced in the Environmental Notification Form (ENF) and reduced to eight alternatives for evaluation in the Draft Environmental Impact Statement/Draft Environmental Impact Report (DEIS/R). The DEIS/R presented electric and diesel options for three rail routes; Attleboro, Stoughton, and Whittenton (a variant of the Stoughton route), as well as a Rapid Bus route, and a No-Build/Enhanced Bus scenario. The Certificate on the DEIS/R indicated that MassDOT had adequately supported the advancement of the Stoughton Electric Alternative as the Preferred Alternative in the Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/R).

[3] The layover facility was most recently addressed in the South Station Expansion Project (EEA #15028).

The Scope for the FEIS/R outlined the outstanding issues that were required to be addressed, including the development of specific and detailed mitigation plans.

For the purpose of the FEIS, the U.S. Army Corps of Engineers (ACOE) continued to analyze alternatives as part of the National Environmental Policy Act (NEPA) process, including the Whittenton Alternative. Because a joint Federal/State review document was filed, the FEIS/R included additional analysis of the Whittenton Alternative. Upon review of the FEIS/R, ACOE determined that the Stoughton Alternative was the Least Environmentally Damaging Practicable Alternative (LEDPA).

The FEIS/R evaluated the relative benefits and impacts of this large-scale transportation infrastructure project. Amongst the project's benefits are improved access to transit and the corresponding traffic, safety, air quality, and GHG reduction benefits associated with increased use of public transit. The project also has significant potential to facilitate sustainable land use and development patterns and will service Environmental Justice communities. The proposed route does however involve substantial environmental impacts. The FEIS/R refined impact estimates associated with alteration of wetlands and elimination or fragmentation of habitat (including rare species habitat and loss of biodiversity). It identified impacts to the Hockomock Swamp Area of Critical Environmental Concern (ACEC), which is one of the largest unfragmented wetland systems in the state, and the Pine Swamp conservation area in Raynham. The Certificate on the FEIS/R emphasized that the benefits and impacts of the South Coast Rail project are significant and acknowledged that any project of this scope and scale will bear environmental impacts.

The Certificate on the FEIS/R was issued on November 1, 2013 and indicated that the FEIS/R adequately and properly complied with MEPA and its implementing regulations and that the project could proceed to State permitting. Because the project, and associated wetland mitigation was presented at a conceptual design level in the FEIS/R, the Certificate on the FEIS/R included a requirement that MassDOT continue to consult with the Interagency Coordinating Group (ICG) wetlands subgroup on the development of mitigation for impacts to wetlands and rare species. It also required that the plan be published through the MEPA Office for public review and comment to provide an opportunity to gather additional input from State Agencies, advocacy organizations, municipalities and the public on the mitigation plan.

Interagency and Community Involvement

As noted previously, the project underwent joint environmental review. Throughout project development, MassDOT has conducted an extensive stakeholder involvement process that included the ICG and a broad civic engagement process. MassDOT held a number of public meetings prior to filing the NPC regarding potential phasing of the project and during review of the DSEIR.

These efforts are complemented by the South Coast Rail Economic Development and Land Use Corridor Plan (Corridor Plan) which has been developed in conjunction with 31 Corridor communities and three regional planning agencies (RPAs). The Corridor Plan identifies sustainable development principles to manage both the projected growth in the region under business as usual conditions and the induced growth associated with the project. MassDOT, other State Agencies, the RPAs, and municipalities have made significant progress in implementation of the Corridor Plan.

I have received numerous comments from public officials, State Agencies, environmental advocates, local residents, and other members of the public concerning Phase 1 and associated environmental impacts. I thank the many parties who have provided comments on the DSEIR and the many agencies that have participated in its development. In particular, I note the comments from Senator Michael J. Rodrigues, Senator Walter F. Timilty, Senator Mark Montigny, Senator Marc R. Pacheco, Senator Joseph A. Boncore, Representative Robert M. Koczera, Representative William M. Straus, Representative Carole A. Fiola, Representative Christopher M. Markey, Representative Susan Williams Gifford, Representative Alan Silvia, Representative Antonio Cabral, Representative Keiko Orrall, Representative Paul A. Schmid, and Representative Dylan Fernandes. Comments were received from City of Taunton, the City of Fall River, the City of New Bedford, the Town of Middleborough, the Town of Lakeville, the Town of Freetown, the Town of Stoughton, the Town of Easton, and the Town of Fairhaven.

I appreciate the ongoing participation of, and comments provided by, stakeholders during the environmental review of this project and Phase 1. The Certificate on the NPC required MassDOT to continue its commitment to stakeholder outreach and public input as it prepared the DSEIR for Phase 1 and simultaneously proceeded through design and permitting of Full Build, including consultation with the ICG[4] and publication of a final mitigation plan and revised Section 61 Findings for public review and comment through the MEPA Office.

Permitting and MEPA Jurisdiction

The Full Build project was subject to MEPA review because it is being undertaken by a State Agency and because it exceeds review thresholds set forth in the MEPA regulations (310 CMR 11.00), including thresholds for a mandatory EIR pursuant to the following sections: 11.03(1)(a)(1) and (2) because it is will result in alteration of 50 or more acres of land and creation of 10 or more acres of new impervious area; 11.03(3)(a)(1)(a) because it will result in alteration of more than one acre of Bordering Vegetated Wetlands (BVW); 11.03(3)(a)(2) because it involves alteration requiring a Variance in accordance with the Wetlands Protection Act (WPA); and 11.03(6)(a)(1)(5) because it involves construction of a new rail or rapid transit line along a new, unused or abandoned right-of-way. The Full Build project also exceeded the following ENF review thresholds: 11.03(1)(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 (Article 97); 11.03(2)(b)(2) because it would result in more than two acres of disturbance of designated priority habitat that results in a take of a state-listed species; 11.03(10)(b)(1) and (2) because it may result in demolition of a part of a state-listed historic structure and destruction of a state-listed archaeological site; and 11.03(11)(b) because it is located within a designated ACEC. The project may also meet or exceed other MEPA review thresholds depending upon its final design.

The Full Build project requires a 401 Water Quality Certification (WQC), a Chapter 91 (c. 91) License, and a Variance from the WPA and the WQC regulations from the Massachusetts Department of Environmental Protection (MassDEP); a Conservation and Management Permit (CMP) from the Massachusetts Natural Heritage and Endangered Species Program (NHESP); a land disposition

[4] MassDOT eliminated the separate subgroups of the ICG (ie. wetlands subgroup or smart growth subgroup) and consulted with members collectively regarding Phase 1.

agreement with the Department of Conservation and Recreation (DCR); approval from the legislature and the Division of Capital Asset Management (DCAM) for a disposition of land protected by Article 97 legislation; and review from the Massachusetts Office of Coastal Zone Management (CZM). The Full Build project also required Orders of Conditions (OOCs) from local Conservation Commissions (and, on appeal only, Superseding Order(s) from MassDEP); an Individual Section 404 permit from ACOE; an Air Quality Conformance Determination; a National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) from the U.S. Environmental Protection Agency (EPA); and review under Section 106 of the National Historic Preservation Act (NHPA) by the Massachusetts Historical Commission (MHC). The Full Build project is subject to the MEPA Greenhouse Gas Emissions Policy and Protocol (GHG Policy) and the Executive Office of Energy and Environmental Affairs (EEA) Environmental Justice (EJ) Policy.

Phase 1, considered on its own, would exceed ENF review thresholds pursuant to: 11.03(1)(b)(2) for creation of five more acres of impervious area; 11.03(2)(b)(2) because it would result in more than two acres of disturbance of designated priority habitat that results in a take of a state-listed species; 11.03(3)(b)(1)(b) for alteration of 500 or more linear feet (lf) of Inland Bank; and 11.03(3)(b)(1)(f) for alteration of one-half or more acres of other wetlands. Phase 1 may also exceed the ENF threshold pursuant to 11.03(1)(b)(1) for alteration of 25 or more acres of land.

Phase 1 will require three individual 401 WQCs from MassDEP and a CMP from NHESP. It will also require OOCs from local Conservation Commissions (and, on appeal only, Superseding Order(s) from MassDEP); two individual Section 404 permits from ACOE; review under Section 106 of the NHPA by MHC; and a NPDES CGP from EPA. ACOE determined that Phase 1 is a separate, albeit related project with independent utility from the Full Build. ACOE expects to assert its discretionary authority to require an Individual Standard Permit for Phase 1, with a complete public interest review and federal NEPA review process.

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.

Review of the DSEIR

The DSEIR includes a project summary and schedule, a list of permits and approvals required, and a description of any changes for Phase 1 since the filing of the NPC. It includes maps, plans and other graphics that describe existing and proposed conditions, environmental impacts, proposed structures, and other project components. The DSEIR supplements information provided in the FEIS/R to include those new elements that will be constructed as part of Phase 1 that were not previously considered. It also provides an update on the total impacts of Phase 1 and the cumulative impacts of Phase 1 and the State of Good Repair projects. The DSEIR does not re-analyze those elements of the project described in the FEIS/R that remain unchanged.

New elements proposed as part of Phase 1 include:

- Improvements to track infrastructure on the Middleborough Secondary Line;
- A new station at Pilgrim Junction in Middleborough;

- A new station in East Taunton south of Cotley Junction (replacing Taunton Depot Station proposed in FEIS/R);
- Modifications to previously studied stations at Freetown and Fall River Depot; and
- Use of diesel locomotives for Phase 1 Service, with lower emission Tier 4 locomotives phased into the fleet.

The project description and assessment of impacts includes construction and operational phases. The impact assessment includes temporary and permanent impacts, direct and indirect impacts, and secondary and cumulative impacts. Impact analyses provided in the DSEIR are consistent with the methodology applied in the DEIS/R and the FEIS/R; however, because limited design and permitting has occurred for those elements of the Full Build north of Cotley Junction, the DSEIR does not provide a discussion of these impacts.

Diesel trains will be used for Phase 1 service because neither the Middleborough Secondary nor the Middleborough/Lakeville Line can support electric train service. Electrification would require installation of overhead catenary for Phase 1 as well as the Middleborough Line extending to Boston. The DSEIR indicates that construction will be sequenced to add catenary for electrification along the Southern Triangle for the Full Build, while continuing to operate diesel trains during Phase 1 service.

Alternatives Analysis

Numerous routing and mode options were evaluated in the ENF (65 alternatives) and reduced to eight alternatives for evaluation in the DEIS/R. The FEIS/R evaluated five main routes, which ultimately, led to selection of the Stoughton Straight Electric Alternative (Full Build) as the preferred alternative. In advancing the design of the Full Build, MassDOT determined that its implementation would be significantly longer (i.e., 2030) due to the length of time required for permitting and construction, and that its cost would increase considerably. MassDOT is advancing a phased approach to bring interim service to Fall River, New Bedford, and Taunton in the short term while it continues to proceed with design and permitting of the Full Build. The majority of the Phase 1 route, known as the Southern Triangle, was previously reviewed in the FEIS/R, and thus is not included in the alternatives analysis. The DSEIR clarifies that Phase 1 will include construction of a modified Freetown Station and Fall River Depot Station, which will be constructed as the terminal station for Phase 1. Battleship Cove Station will be included in the Full Build.

In the No-Action scenario, phased service would not be implemented and the Full Build would not be provided sooner than 2030, thereby delaying the benefits of commuter rail service to this underserved region. The DSEIR describes alternatives MassDOT considered for phasing of the project to provide service prior to Full Build operations. Only routes along existing rail infrastructure were considered to meet the interim service goals of providing a one-seat ride between Fall River and New Bedford and Boston by 2022. Based on this criteria, the Attleborough Secondary to the Northeast Corridor (NEC) and the Middleborough Secondary to the Middleborough Main Line were selected for additional analysis. Other alternatives that were not considered include the Mansfield Alternative (off the Attleborough Secondary) because it would use the heavily congested NEC and would require additional track infrastructure and the Whittenton Alternative because it would require new track construction. The feasibility and practicability of each of the routing options was evaluated based on

whether it could achieve goals for Phase 1 service (one-seat ride to/from Fall River/New Bedford by 2022) and could provide adequate capacity for MBTA operations.

The Attleboro Secondary would use the NEC to travel to/from South Station. The NEC currently operates with limited available capacity while serving the MBTA's Needham, Franklin, and Providence/Stoughton Line trains, as well as Amtrak intercity high-speed and regional rail services. To provide Phase 1 service, trips would either need to be diverted from these existing services to New Bedford/Fall River (reducing the frequency of existing operations) or added to the NEC beyond the current supply. Adding new trips to the NEC and MBTA system would involve a reverse move at the Attleborough Station requiring an additional 15 minutes, which the DSEIR asserts is impracticable along the NEC given its limited capacity and would result in significant operational impacts to existing services. MassDOT evaluated construction of a new Attleborough Secondary connection along a utility ROW to the NEC to bypass the existing station, which would have associated environmental and community impacts, and could not be constructed by 2022. Adding trips to provide operational feasibility would also require construction of additional track on the NEC and reconstruction of three existing commuter rail stations. The Attleborough Secondary alternative was dismissed due to potential environmental impacts, construction costs, scheduling challenges, and property acquisition considerations.

The Middleborough Secondary option was previously dismissed in the DEIS/R as a permanent-service option because it did not fully meet Full Build ridership or quality of service (frequency) criteria. However, it would provide earlier commuter rail service because it takes advantage of existing active freight lines with operational capacity and would extend existing service on the Middleborough Main Line (limiting number of new trips). It would require upgrading existing track infrastructure along the Middleborough Secondary, New Bedford Main Lines, and Fall River Secondary. This alternative would travel along exclusive ROW owned by MassDOT, would not have significant environmental impacts, could be constructed by 2022, and would provide both short-term and long-term benefits to MBTA operations.

Preferred routing along the Middleborough Secondary addressed two junctions: Pilgrim Junction in Middleborough and Cotley Junction in Taunton. Options considered through Pilgrim Junction, serving at least one station in Middleborough or Lakeville, include: Option 1 via a reverse move at the existing Middleborough/Lakeville Station in Lakeville; Option 2 via the existing Middleborough/ Lakeville Station and providing a train shuttle from the existing Middleborough/Lakeville Station to a modified Bridgewater Station and cross-platform transfer; and Option 3 via a new Middleborough Station to a point north or west of Pilgrim Junction, including a bus/van shuttle between the existing Middleborough/Lakeville Station and the new Middleborough Station.

Service Options through Cotley Junction, serving at least one station in Taunton, include: Option 1 via a reverse move at a Taunton Station proposed in the FEIS/R north of Cotley Junction (Taunton Depot and Downtown Taunton); Option 2 via a reverse move at the Taunton Depot Station; Option 3 via a new station south of Cotley Junction; and Option 4 via a new station south of Cotley Junction and provide a one-seat ride between the Downtown Taunton Station and Boston by providing less frequent service to each of the three termini than in Options 1 to 3.

The DSEIR outlines evaluation criteria used to select the Phase 1 service route using the Middleborough Secondary including: achieves goals for Phase 1 service; impacts to existing/future MBTA operations (operational flexibility, effect on service, and travel time); infrastructure; and environmental impacts. Based on a comparison of the three Pilgrim Junction options, MassDOT identified Option 3 (New Middleborough Station) as the preferred option to advance for Phase 1 service because it would avoid reverse moves, have the most operational flexibility by reducing the number of meet/pass conflicts on the Middleborough Main Line, minimize trip times, minimize environmental impacts from new infrastructure, and provide service by 2022. This alternative does require passengers who access the existing Middleborough/Lakeville Station by foot, including those who live within the TOD near the station, to take a bus shuttle to a new Middleborough station and will require discharge to the Zone II of a municipal water supply.

Based on a comparison of the four Cotley Junction options, Option 3 (New Taunton Station) is the preferred option to advance for Phase 1 service because it is equal to or more favorable than Options 1, 2, and 4 for nearly all criteria. It would avoid reverse moves, provide the lowest travel times, provide three peak period trips to/from Fall River/New Bedford and six peak period trips to/from Taunton, have the most operational flexibility by eliminating the reverse turn in Taunton, requires least wetland impacts, minimizes permitting delay, as it would not require track upgrades or bridge reconstruction north of Cotley Junction, provide service by 2022. It will provide feeder bus service for downtown Taunton passengers.

The preferred Phase 1 service option is a combination of Pilgrim Junction Service Option 3 and Cotley Junction Service Option 3. This option will accommodate the stations proposed in the FEIS/R south of Cotley Junction. All stations north of Cotley Junction will be included in the Full Build with the exception of the Taunton Depot Station, which will be relocated south of Cotley Junction, included in Phase 1, and renamed East Taunton Station. Phase 1 will also include a new, relocated, or reconstructed station in Middleborough. Phase 1 service could retain the existing Middleborough/Lakeville Station by providing a bus/van shuttle from the existing station to the new Middleborough Station and continue to accommodate existing Cape Flyer service. Alternatively, the station could be closed, allowing the land to be made available for other uses.

The DSEIR contains evaluations of the relocated Middleborough Station, the new (relocated) East Taunton Station, and the modified Freetown and Fall River Depot stations based on the following criteria: achieves goals for Phase 1 service; accommodates freight and commuter rail operations; addresses other siting and environmental criteria (parking, property takings, wetland impacts, traffic impacts, etc); and considers long-term benefits and costs. Freetown Station will be constructed with a different configuration within the same parcel proposed in the FEIS/R. Fall River Depot Station will maintain the FEIS/R proposed location with a smaller parking area for Phase 1.

The DSEIR evaluates two sites for a new Middleborough Station north or west of Pilgrim Station to avoid a reverse move: Station Options 1a and 1b at Middleborough Center (on the Middleborough Main Line, north of Pilgrim Junction); and Station Option 2 at Pilgrim Junction (west of the Middleborough Main Line). Each station option can include a second platform to accommodate potential future Cape service and can be connected to the existing Middleborough/Lakeville Station via a bus or van shuttle. Option 1a would consist of a station sized to accommodate approximately 500 spaces and Option 1b would provide limited parking, requiring parking accommodations to remain at

the existing Middleborough/Lakeville Station. Option 2 would include a new at Pilgrim Junction inside the wye. Based on a comparison of the Middleborough Station options, Option 2 at Pilgrim Junction is the preferred station site because it would result in the fewest impacts, not require demolition of a historic structure, have the lowest costs, provide long-term use, accommodate rail operations, be proximate to existing MBTA Yard, require less property takings, provide access and parking opportunity, and minimize freight impacts or property needs.

A previous station siting analysis identified 13 potential locations in Taunton, of which three are located along the proposed Phase 1 route: the "Mini Golf Site" located on the New Bedford Main Line just south of Cotley Junction; the "Galleria Site (Mall)" located on the New Bedford Main Line near the Silver City Galleria; and the "Old Colony Ave." site located on the Middleborough Secondary (which would not be located on the Full Build route). Based on a comparison of the Taunton Station options, the Mini Golf Site is the preferred station site because it has favorable topography, geometry, and siting conditions making it practicable to construct, is available for acquisition, provides access using existing road infrastructure within a reasonable distance of a highway (Route 24 and Route 140), is close enough to the proposed Taunton Depot Station site to attract riders who would have used that station, has lower wetland impacts than the Taunton Depot Station site, and could support smart growth development.

The DSEIR maintains that Phase 1 will not delay or negatively impact the benefits of the Full Build described in the FEIS/R and will accelerate benefits, beginning in 2022, with the implementation of interim service. In the absence of Phase 1, benefits would not begin to be realized until 2030 at the earliest. Phase 1 will result in improvements to the transportation system, benefits to environmental justice populations, air quality improvements and reductions in greenhouse gas emissions, and opportunities for smart growth.

The DSEIR indicates that the longer travel time of Option 1 (for both Pilgrim Junction and Cotley Junction) because of the required reverse move would result in lower ridership than the other service options. In addition, a cross-platform transfer would increase travel time and decrease the attractiveness of Phase 1 service. Similarly, the shorter travel times of Option 3 (for both Pilgrim Junction and Cotley Junction) would result in higher ridership.

Secondary Growth and Cumulative Impacts

Development along the South Coast Rail project corridor has been guided by the Corridor Plan. Executive Order 525 (EO 525) requires state investments to be consistent with the recommendations of the Corridor Plan to the maximum extent feasible. It acknowledges that State actions have significant potential to leverage local and private investments in the priority areas. The Full Build is anticipated to result in economic benefits and growth in jobs/households within the South Coast Region. However, induced growth has the potential to adversely impact resources. The Corridor Plan promotes smart growth by identifying Community Priority Areas of Regional Significance including Priority Development Areas (PDAs) and Priority Protection Areas (PPAs).

The Phase 1 project area has already been studied as part of smart-growth planning efforts and is included in the Corridor Plan. New elements that will be added to the Corridor Plan include use of the Middleborough Secondary line, a relocated Taunton Station, and new Pilgrim Junction Station. Implementation of phased service will not bring any new communities into the service plan that were

not previously evaluated in the FEIS/R. Phase 1 will result in a change in the proposed development schedule for the South Coast Region and service will include fewer stations that will initially be constructed for the Full Build Project; however, it will provide bring commuter rail service to some communities sooner than originally anticipated, thus providing economic and transportation benefits in the near term.

The DSEIR describes potential indirect effects from new elements associated with Phase 1 service only, and does not revisit elements previously analyzed in the FEIS/R; potential indirect effects are not anticipated to change significantly. Modifications to the Freetown and Fall River stations are not anticipated to change induced growth effects from those previously described. Phase 1 may prompt the development of undeveloped land at Pilgrim Junction Station, Middleborough/Lakeville Station, and East Taunton Station. Relocating the existing Middleborough/Lakeville Station to Pilgrim Junction Station will shift development opportunities from one station location to the other. Development opportunities near Pilgrim Junction Station are constrained due to an absence of developable land and location within a Zone II. New development at the Middleborough/Lakeville Station will occur on surface parking. The East Taunton Station would encourage similar levels of residential development compared with the concept plan for Taunton Depot Station identified in the Corridor Plan.

The DSEIR describes potential for TOD opportunities as presented in the Corridor Plan. Distribution of projected jobs and housing reported in the FEIS/R remain unaffected; however, levels of TOD similar to those presented in the Corridor Plan are anticipated in communities with Phase 1 stations. It is likely that current riders who use the Middleborough/Lakeville Station will use stations that are closer to them throughout the Southern Triangle once Phase 1 service commences.

The DSEIR discusses the implementation of the Corridor Plan, including related performance metrics and the associated monitoring and reporting program, as well as the consistency of State investment commitments with the Corridor Plan.

MassDOT does not anticipate any shifting of public infrastructure investments or other funding as a result of the implementation of Phase 1 service. MassDOT and the Executive Office of Housing and Economic Development (EOHED) have awarded technical assistance (TA) grants of more than $1.7 million to the 31 corridor communities. This program will be continued through the start of Full Build service (providing an average of $200,000 per year). The proposals are developed by the communities with assistance from RPAs. Emphasis is placed on proposals to advance the Corridor Plan, its PDA/PPA designations and the state's Sustainable Development Principles, and proposals that demonstrate a clear and achievable outcome.

The DSEIR analyzes cumulative impacts of Phase 1 service on natural, social, cultural, and physical resources compared to the No-Action Alternative. The cumulative impacts of the Phase 1 elements in addition to the Full Build will not result in a significant environmental impact on land use, wetlands, biodiversity, rare species, water quality, and air quality. In particular, impacts to wetland resource areas within the entire Phase 1 area are significantly reduced from the original impact estimates in the FEIS/R; cumulative wetland impacts from both the Phase 1 and Full Build will not exceed what was originally estimated in the FEIS/R.

Monitoring and Reporting Plan

The long-term Evaluation and Monitoring Plan is intended to evaluate anticipated environmental and smart-growth benefits of the project and verify impact projections to allow for corrective/adaptive strategies mid-course. The DSEIR references the evaluation indicators and performance metrics described in the FEIS/R, which are tailored to the SCR project and include metrics for growth projections, PDA, PPA, TOD, and social equity. The FEIS/R outlined the State Agency or RPA responsible for data collection, which will apply throughout Phase 1 service.

MassDOT and its evaluation partners have not begun monitoring the performance metrics. MassDOT is not proposing changes to the performance metrics or associated data collection processes for Phase 1 service. MassDOT will expand the social equity metrics beyond Chapter 40B and inclusionary zoning to include other socio-economic factors, as appropriate.

The DSEIR describes modifications to the proposed monitoring and reporting programs that will be carried forward during Phase 1. It provides an update on the monitoring and collection of data, and discusses how the phasing of the project will be incorporated into the long-term Evaluation and Monitoring Plan. MassDOT will follow the same structure for the programs as outlined in the FEIS/R. The first year of data collection will commence during the first year of construction of Phase 1 service. MassDOT will report the results of the performance metrics evaluation on its website four years after commencement of Phase 1 service, and subsequent reports will be available every three years after this first report for a maximum of 20 years. The first report will include data collected for the baseline year (the first year of construction) and data collected three years after the baseline data collection year. Each subsequent report will include historical data and data collected for the additional reporting period.

Because rehabilitation/use of the existing freight line for commuter rail purposes will not significantly change wildlife habitats, fragmentation, or continuity, MassDOT determined that the use of the Conservation Assessment and Prioritization System (CAPS) analysis would not be necessary to site wetland mitigation areas or redesign culverts associated with Phase 1. Wetlands mitigation will occur at the local level in accordance with the WPA and culverts will be replaced to address structural deficiencies and reconstructed to meet the Stream Crossing Standards to the extent practicable.

Land Alteration

The DSEIR indicates that Phase 1 elements are not located within an ACEC, will not result in new impacts to open space, or require the disposition of Article 97 lands. The proposed Pilgrim Junction Station is located within a Water Resource Protection District and the Zone II wellhead supply protection area. The DSEIR describes the type, amount, and location of land alteration associated with Phase 1 that was not previously analyzed in the FEIS/R. Existing and proposed conditions are categorized as either impervious (pavement, building, dirt, gravel, asphalt, and/or sidewalk) or pervious (grass, trees, landscape, and/or pond) for each site. The DSEIR does not specifically provide cumulative totals for land alteration and impervious area for Phase 1 and the Full Build.

The following table describes the size of the redevelopment envelope, creation of impervious area, and proposed parking at each station.

Station	Site Acreage (acre)	Proposed Redevelopment (acre)	Existing Impervious (acre)	Proposed Impervious (acre)	Total Impervious (acre)	Proposed Parking
Pilgrim Junction	11.0	8.50	1.95	4.06	6.01	501
East Taunton	44.9	10.32	1.37	3.80	5.17	363
Freetown	28.6	9.53	0.53	1.91	2.44	100
Fall River Depot	7.0	3.05	1.35	1.17	2.52	220

New project elements will be located on previously developed land and land that is adjacent to existing freight lines. Parking at each station will be designed to avoid the alteration of undisturbed land, reduce impervious area to the extent practicable, and accommodate projected ridership. The reconfigured Freetown Station will provide 100 parking spaces, which is approximately 73 spaces less than proposed in the FEIS/R to reduce impervious area by 2.4 acres. A portion of the proposed Fall River Depot Station was sold and redeveloped into a medical office building. Additional parking may be added to the north side of the Fall River Depot Station for the Full Build project to replace this.

According to the DSEIR, upgrading the railbed, track, and signals to facilitate commuter rail service on the Middleborough Secondary will not result in significant alteration to the land within the ROW. Minor temporary and permanent impacts may occur within narrow strips immediately adjacent to the existing ballasted track for track reconstruction and minor realignment of track segments in certain areas. No significant land acquisition is required for Phase 1 construction along this ROW.

Ridership Projections

The DSEIR provides updated travel demand modeling to project ridership and vehicle miles travelled (VMT) for the Full Build project and for Phase 1. Modeling does not include extension of daily commuter rail service south of the Middleborough/Lakeville Station to Buzzards Bay to assess impacts and benefits. However, MassDOT emphasizes that construction of Phase 1 will not preclude future expansion of Cape service.

Ridership was modeled using the Massachusetts Statewide Travel Demand Model (TDM) developed by the Central Transportation Planning Staff (CTPS). The SCR TDM is a version that was refined specifically for the SCR study area. The DSEIR identifies the methodology, sources of data, and assumptions used as inputs to the model. The SCR TDM was updated to evaluate the 2016 and 2040 forecast year for the No Build, Phase 1 and Full Build (compared to the 2028 Full Build forecast year described in the FEIS/R). In addition, CTPS was directed to model the 2030 ridership forecast for Phase 1 on an expedited schedule. Because forecasts for the 2030 scenarios were similar to 2040 scenarios modeled and major transportation network improvements were not expected after 2030, CTPS performed an off-model analysis to estimate the 2030 ridership. The DSEIR indicates that the 2030 forecast year was selected (eight years after the projected start of service in 2022) because it provides sufficient time to assess the benefits and impacts of Phase 1 service. According to the ridership analysis, Phase 1 projections consist of approximately 1,600 trips in 2030 and Full Build projections consist of approximately 3,900 trips in 2040.

The modeling incorporates station locations associated with Phase 1; however, it does not include grade crossings. The DSEIR provides a qualitative comparison of the projected ridership and cost associated with Phase 1. It does not include an estimated cost per rider based on the results of the ridership analysis. Because the model may be sensitive to cost, relative travel times, income and other demographic data, there may be some uncertainty in the estimation of each of these variables. The DSEIR describes the considerable uncertainty inherent in the modeling process which make it challenging to develop a composite margin of error or composite range. Therefore, the DSEIR did not present a range of projected boardings for each alternative (rather than a single number) based on consideration of uncertainty factors and sensitivity of the model.

The ridership projection results include boardings by station and linked trips, and the number of mode shifts from bus and auto. In addition to the 1,600 boardings diverted from automobile use, private bus service boardings under Phase 1 will decline to a projected 1,400 boardings (compared to 2,200 in the 2030 No Action) due to the diversion of passengers to the new rail options. Air quality benefits are based on the reduction in automobile VMT and the increase in transit VMT associated with new and extended trips.

The DSEIR describes how information on fares and parking fees were incorporated in the model. Also, it describes how regional land use and planning assumptions were incorporated into the model.

Environmental Justice

The DSEIR identifies Environmental Justice (EJ) populations within and adjacent to the Phase 1 project area and evaluates potential impacts to these populations that may result from changes proposed in Phase 1. The EJ Phase 1 study area consists of a 0.5-mile radius around the railroad alignment (Middleborough Secondary) and new station sites in East Taunton and Middleborough. The DSEIR addresses relevant State and federal policies including the EEA EJ Policy. The EJ Policy was designed to improve protection of minority and low income communities from environmental pollution as well as promote community involvement in planning and environmental decision-making to maintain and/or enhance the environmental quality of their neighborhoods.

The DSEIR indicates that there are no designated EJ populations within the EJ Phase 1 study area and Phase 1 will not result in impacts to EJ communities associated with property acquisition, socioeconomics, noise, vibration, air quality, public safety, and access and travel time and will not have a disproportionate adverse impact on EJ communities. There are two low income EJ communities in Middleborough located proximate to the EJ Phase 1 study area. The DSEIR does not anticipate direct impacts to these communities. The DSEIR indicates that phased service will benefit all EJ communities previously identified and evaluated in the FEIS/R. Benefits will include improved access to transit services to improve employment and educational opportunities, and general mobility. Phase 1 will bring these benefits to EJ communities as early as 2022.

The DSEIR outlines strategies to enhance public participation in the environmental review process and describes outreach efforts to EJ communities in New Bedford, Taunton, Fall River, and Middleborough. MassDOT will continue to update and engage EJ and other South Coast communities throughout the entirety of the project, including Phase 1 through final construction.

Climate Change

The DSEIR discusses the project within the context of the Global Warming Solutions Act of 2008 (GWSA), Executive Order 569: *Establishing An Integrated Climate Change Strategy for the Commonwealth* (EO 569; September 16, 2016) and the MassDOT GreenDOT Policy. EO 569 recognizes the serious threat presented by climate change and directs agencies within the administration to develop and implement an integrated strategy that leverages state resources to combat climate change and prepare for its impacts. The Order seeks to ensure that Massachusetts will meet GHG emissions reduction limits established under the GWSA and will work to prepare state government and cities and towns for the impacts of climate change. The GHG Policy and requirements to analyze the effects of climate change through EIR review is an important part of a statewide strategy.

Greenhouse Gas Emissions

This project is subject to review under the May 5, 2010 MEPA GHG Policy. The FEIS/R included an analysis of GHG emissions for the Full Build Project. The DSEIR provided an updated GHG analysis for Phase 1. A stationary source analysis was not conducted for the stations because they will not include conditioned spaces. The East Taunton Station will include an emergency generator. The DSEIR calculates that Phase 1 will reduce regional GHG emissions by 7,121 tons per year (tpy) based on data from the mesoscale analysis. These reductions are associated with mode-shift and a related reduction in VMT by automobiles. The DSEIR commits to measures to reduce GHG emissions associated with Phase 1.

MassDOT will design platform roofs to be solar ready and will consider installation of solar PV at the stations. Stations will use light emitting diode (LED) technology and include electric vehicle (EV) charging equipment. The DSEIR does not quantify associated emissions reductions for these mitigation measures. The Massachusetts Department of Energy Resources (DOER) recommends that MassDOT commit to installing PV on parking lots and roofs, and use air to water heat pumps in conjunction with emergency generators to demonstrate that it has avoided, minimized, and mitigated GHG emissions to the maximum extent practicable. Further reductions in VMT and GHG emissions may also be achieved through the adoption of smart growth principles and transit-oriented development (TOD) in Phase 1.

The DSEIR addressed the effect of rail transit on freight services such as a shift from freight lines to roadways that might result in increased truck traffic. The DSEIR indicates that the project is not expected to have a significant impact on freight operations.

Adaptation and Resiliency

The DSEIR outlines the benefits of updates to the Middleborough Secondary Line to climate adaptation and resiliency of the Full Build project. The DSEIR describes strategies MassDOT may take that will increase the resiliency of Phase 1, and Full Build, to the effects of climate change. It evaluates how the projects may be impacted by changes in precipitation and increased temperature in compliance with the *Draft MEPA Climate Change Adaptation and Resiliency Policy*. MassDOT is currently undertaking a vulnerability assessment as part of its Statewide Climate Change Adaptation Plan which includes climate projection maps for the Commonwealth and a report titled Assessment of Extreme Temperature Impacts on MassDOT Assets (Assessment). The DSEIR presents climate change

projections (for precipitation depth and temperature change) representing three GHG concentration trajectories for four future periods that can be used for planning purposes.

The DSEIR identifies locations within the Phase 1 area that are vulnerable to flooding due to changes in precipitation and threats along the transportation system associated with extended periods of extreme temperatures. MassDOT's Assessment determined that exposure to high temperature would not significantly impact the infrastructure design and materials specifications.

The DSEIR identifies potential solutions to mitigate projected increased flooding and temperature increase. MassDOT will use the data and design standards provided in the Boston Water and Sewer Commission's (BWSC) 2015 *Wastewater and Storm Drainage System Facilities Plan* for the project's stormwater management systems including analyzing existing and designing new culverts. MassDOT maintains that Phase 1 will provide resiliency by providing a reliable redundant route should the Full Build become vulnerable due to flooding, power outages, or track damage.

Air Quality

The DSEIR evaluates the air quality impacts of Phase 1 consistent with the analysis provided in the FEIS/R. The DSEIR describes the methodology used for the mesoscale and microscale analyses. The analyses address emission impacts from both automobiles and locomotives. Modeling conservatively assumed Tier 3 diesel locomotive engines; however, cleaner Tier 4 locomotives will be phased into the fleet. Any locomotives purchased for Phase 1 will comply with federal locomotive standards. The DSEIR considers the emissions from minimal electrical consumption at each station and the direct emissions from the emergency generator at the East Taunton Station to be negligible.

The mesoscale analysis evaluates regional air quality impacts of Phase 1 with respect to National Ambient Air Quality Standards (NAAQS), Clean Air Act (CAA), and State Implementation Plan (SIP). It calculates emissions of volatile organic compounds (VOCs), nitrogen oxides (NOx), carbon dioxide (CO_2), carbon monoxide (CO), and Particulate Matter 2.5 micrometers and 10 micrometers in diameter ($PM_{2.5}$ and PM_{10}). The mesoscale analysis uses traffic and emissions data for existing and future (No Action and Build) conditions within the Phase 1 study area. It was informed by the Regional Travel Demand Model (RTDM) maintained by CTPS to project reductions in VMT and emissions factors derived using EPA's Motor Vehicle Emissions Simulator (MOVES2014a). Diesel train emissions were modeled using EPA emission factors and based on travel distances from the proposed service schedule.

The DSEIR describes how the project will comply with the CAA Amendments (General Conformity Rule and SIP) and NAAQS. Phase 1 is expected to reduce CO by 64 kilograms per day (kg/day), VOC by 1-2 kg/day, $PM_{2.5}$ and PM_{10} by less than 1 kg/day, and CO_2 by 7,121 tpy. Phase 1 is expected to increase NO_X emissions by 26 kg/day because the increased train emissions offset the reduction in motor vehicle emissions; however, these values are well below the de minimis levels outlined in the General Conformity Rule. Use of Tier 4 locomotives could further decrease emissions of all pollutants.

Consistent with previous analysis, the DSEIR also includes a microscale analysis to determine if automobiles and train locatives for Phase 1 will cause or exacerbate existing CO, $PM_{2.5}$, or $PM_{10,}$ and NO_2 at localized "hotspots" (including NO_2 at stations associated with diesel trains). The DSEIR

describes the methodology used for the microscale analyses and model input data such as vehicle/train emission factors. The analysis microscale analysis includes assessments of the Phase 1 service at intersections in the vicinity of new stations; grade crossings; and train stations.

The worst-case intersection in each station's traffic study area was analyzed. It is assumed that because these intersections will comply with the NAAQS criteria, all other intersections in the traffic study area will also comply. Each of the five grade crossings along the Phase 1 corridor was modeled during the peak transit hour when the most grade crossing events would occur. Ambient air quality near the stations was considered by assessing idling locomotives during the peak transit hour. Automobile and train emissions were used to calculate worst-case concentrations. Emissions of the moving diesel commuter rail trains were added to grade crossing receptor locations to calculate the highest concentrations of pollutants. All of the measured pollutant concentrations will comply with the NAAQS and Phase 1 will not result in a significant change in concentrations.

Consistent with MassDOT's GreenDOT Policy Directive and Revised Diesel Retrofit Specifications, contractors will be required to install emissions control devices in all off-road vehicles. Ultra-low sulfur diesel (ULSD) fuel must be used in off-road equipment. Protocols will be established to limit excessive idling during the construction period. This may include driver training, periodic inspections by site supervisors, and posting signage.

Traffic and Transportation

The DSEIR includes a revised transportation analysis which describes the transportation and roadway safety impacts for Phase 1 that were not previously evaluated in the FEIS/R. It analyzed potential transportation impacts at four station locations and five existing grade crossings along the Middleborough Secondary. Study area roadway and intersections around each proposed station were selected for safety and traffic operation analyses and these were adjusted from locations evaluated in the FEIS/R based on revised station locations, as appropriate.

Phase 1 Operations

Impacts of proposed Phase 1 operations were evaluated with respect to intersection and roadway traffic operations, pedestrian and bicycle accommodations, and parking at each planned station. Current and future demographic and economic data were incorporated into the CTPS TDM and Phase 1 ridership projections, based on land use data and projections from the Southeastern Regional Planning and Economic Development District (SRPEDD) and Old Colony Planning Council (OCPC). The DSEIR describes potential impacts of Phase 1 on existing roadways, freight, passenger rail, and bus operations.

The analysis evaluates existing conditions and the potential impacts of Phase 1 operations within Middleborough, Lakeville, Taunton, Fall River, and Freetown based on the existing roadway and intersection geometry, grade crossings, traffic volume data collection, vehicle crash analysis, and traffic operations analysis. Traffic volume data (automatic traffic recorder (ATR) counts and turning movement counts (TMCs)) were collected in June 2017 for roadway and intersections in the study area of proposed stations (new, relocated, or reconfigured). No new traffic data was collected in Freetown because the only change since the FEIS/R consists of relocating the driveway.

The analysis evaluates current and projected traffic congestion at study area intersections (expressed in terms of level of service (LOS)) with and without Phase 1 operations based on a 2030 traffic forecast by CTPS. Trip generation for each station was based on projected park and ride and kiss and ride ridership. MassDOT conducted peak-hour signal warrant analyses at study area intersections. The TDM was used to project total pedestrian and bicycle volume at each proposed station.

There have been modifications to traffic signal timing and phasing along the Route 140 Corridor in Taunton since the FEIS/R, which have improved traffic operations in the vicinity of Route 24. The majority of study area intersections in the vicinity of stations currently operate at LOS D or better under peak period conditions. However, under existing conditions, the South Main Street (Route 105)/West Grove Street (Route 28) intersection in Middleborough operates at LOS E during the evening peak hour.

Existing traffic volumes were projected to 2030 No-Action conditions by applying annual background growth rates for Middleborough (eight percent), Taunton (four percent), and Fall River (1.5 percent) based on model inputs, in addition to project-specific traffic volumes. Project First Light (EEA#14924) in Taunton and its preferred alternative for the new interchange at Route 24/Route 140 were included in the No-Action analysis for Taunton. I expect that the No-Action analysis for Freetown accurately incorporated updated traffic information associated with the Freetown Business Park (EEA#15420). Vehicle trips associated with expected passenger growth at the existing Middleborough/Lakeville Station were included in the No-Action analysis.

Analysis of transportation impacts was based on projected ridership at each station. Analyses indicate that the majority of intersections will operate at acceptable LOS. The South Main Street (Route 105)/Route 28 intersection in Middleboro which will continue to operate at LOS F during the evening peak-hour under the 2030 Phase 1 Operation and will be improved to LOS D with proposed mitigation. Phase 1 is not anticipated to adversely impact traffic in Middleborough; however, MassDOT is proposing mitigation to address existing deficiencies or enhance bicycle/pedestrian access to the station.

The Route 140/Industrial Drive intersection in Taunton which will deteriorate to LOS F during peak hours under the 2030 Phase 1 Operation and will be improved to LOS B with proposed mitigation. Potential adverse impacts of Phase 1 in Taunton are associated with the effect of the new at-grade railroad crossing on traffic operations along the Route 140 corridor; however, station-related traffic impacts are not anticipated. MassDOT proposes intersection improvements to facilitate grade crossing safety while maintaining traffic operations to the extent possible during grade crossing closures on Route 140.

The NPC indicated that Phase 1 could continue to provide a connection between Bridgewater State College and the Fall River/New Bedford area in the long term, if warranted by demand. Phase 1 will not preclude future Cape service.

Crash Analysis

Historical crash data was reviewed for the most recent three- to five-year periods available for study area intersections in Middleborough, Taunton, and Fall River. High crash rate locations (exceeding the statewide and/or district averages) in the vicinity of proposed stations include the

following intersections:

- the South Main Street (Route 105)/West Grove Street (Route 28) in Middleborough (ranked as number 121 of the Top 200 intersection crash locations in the Commonwealth;
- Route 140/Mozzone Boulevard in Taunton;
- Route 140/Route 24 ramps (northbound (NB) and southbound (SB)) in Taunton (listed as high crash locations, eligible for Highway Safety Improvement Program (HSIP) funding;
- North Main Street/President Avenue in Fall River;
- North Main Street/Lincoln Avenue;
- North Main Street/Pearce Street; and
- North Davol Street/President Avenue.

The President Avenue corridor, between North Davol Street and Thompson Street is listed as a high crash location eligible for HSIP funding. The President Avenue corridor between Dyer Street and June Street is listed as a bicycle crash cluster eligible for HSIP funding.

MassDOT will undertake a Roadway Safety Audit (RSA) for high crash locations identified in Middleborough and Fall River. An RSA was determined not to be required at the Route 140/Route 24 ramp (NB/SB) intersections as there have been no changes in crash trends since a previously completed RSA at this location. Mitigation identified from the RSAs will be incorporated into Phase 1.

Grade Crossing Analysis

The DSEIR includes an evaluation of the five grade crossings along the Middleborough Secondary (two in Lakeville and three in Taunton) and provides an analysis of traffic and safety impacts. Existing train frequency varies between four and 22 freight trains per week. The DSEIR includes a delay and queue technical analysis for all grade crossing locations. The DSEIR indicates that a review of MassDOT crash data over the past five years shows no history of crashes that can be attributed to existing activity on the Middleborough Secondary.

During the morning and evening peak-hours, the grade crossings are projected to be closed three times, respectively, with a total of 13 round trips per day. The grade crossings on the Middleborough Secondary in Lakeville and Taunton are active. It is assumed that, in the future, freight will run outside of the peak commuting hours to facilitate commuter rail along the single track. The DSEIR describes the traffic volumes, maximum queue, and average delay at these grade crossings. No impacts to driveways or adjacent intersections in the vicinity of the crossings in Lakeville are projected. Queue lengths and average delays at three crossings in Taunton will affect driveways immediately adjacent to the crossings. No impacts to any adjacent intersections due to queued vehicles at the crossing are anticipated.

The assessment of potential traffic and safety impacts at the proposed public grade crossings indicates that each location will be suitable for public use equipped with a combination of new, state of the art, Automatic Highway Crossing Warning (AHCW) systems and minor geometric modifications such as driveway reconfiguration, driveway closures, vegetation clearing and utility pole relocations. Specifically, minor modifications to driveways adjacent to the grade crossings are proposed along Old Colony Avenue and Middleboro Avenue. More extensive changes are proposed along Route 140.

Parking

A parking assessment for each station compares the planned number of parking spaces to the projected peak parking demand and identifies any existing parking supply that may be affected by the proposed project. Peak parking demand at each station was projected based on daily passenger boardings determined by the TDM. The following table identifies proposed parking supply.

Station	Parking Supply	Peak Parking Demand Phase 1/Full Build	Handicap Accessible	Kiss and Ride
Pilgrim Junction	501	453/483	18	Yes
East Taunton	363	298/322	10	Yes
Freetown	107	*	7	Yes
Fall River Depot	220**	***	8	Yes

* 73 fewer spaces than previously proposed in the FEIS/R; DSEIR indicates this amount will still maintain adequate supply

** Additional parking may be added on the north side of the track at 870 North Main Street as part of the Full Build

*** For Phase 1, the reduced parking area is expected to be adequate to meet demand.

Multimodal Connectivity

The ridership modeling projections include a mode of access for each station, which were used to define proposed infrastructure improvements. Mode choices included auto (single-occupant vehicle trip and carpool), transit, and non-motorized (walk or bicycle). The DSEIR describes pedestrian and bicycle connections from local neighborhoods to the proposed stations, which will be designed to accommodate these users, and measures proposed to encourage multimodal access such as exclusive signal timing phasing and bicycle racks.

Southeastern Regional Transit Authority (SRTA) and Greater Attleboro Taunton Regional Transit Authority (GATRA) provide local bus service within the vicinity of proposed stations. These operators use a fleet of buses that accommodate bicycles, which will encourage multi-modal integration for the project. Current bus operators will provide enhanced Feeder Bus service (extending or adjusting existing bus routes) to the proposed stations for Phase 1 service to support interconnectivity between urbanized communities in the study area to proposed stations. A Feeder Bus network would provide an alternative to driving to stations and would support TOD and other smart growth initiatives in the study area. The DSEIR summarizes the proposed Phase 1 Feeder Bus connections to each of the four stations, including a shuttle between the existing Middleborough/Lakeville Station and the new station at Pilgrim Junction and extension of GATRA's Bus Route 8 to serve the proposed East Taunton Station to provide a connection to other locations in Taunton, including downtown Taunton, the Bloom Bus Terminal, Taunton High School, Taunton Depot, and the Silver City Galleria.

The Phase 1 service will operate in an area that is not currently served by Transportation Management Associations (TMAs) and other Transportation Demand Management programs. MassDOT plans to coordinate with Regional Transit Authorities (RTAs) and TMA and Transportation Demand Management programs that operate in the region in the future.

Mitigation

The DSEIR identifies the following mitigation commitments to address traffic impacts and ensure safe, multi-modal access to the stations:

Middleborough
- Complete RSA at Route 105/Route 28 intersection and implement recommended improvements;
- Modify traffic signal timing/phasing at Route 105/Route 28 intersection to provide adequate pedestrian crossing times and protected/permissive left turns for all approaches;
- Modify traffic signal timing/phasing at Route 105/I-495 NB intersection to incorporate new station driveway and a pedestrian crossing across Route 105;
- Install high visibility materials, advanced signage, and flashing beacon warning devices at the existing unsignalized crosswalks across Route 28 at West Street and at Elm Street; and
- Modify traffic signal timing at Route 105/Route 79/Commercial Drive intersection.

Taunton
- Install new traffic signal at Route 140/Industrial Drive intersection;
- Install pre-signals at the Route 140 grade crossing;
- Restripe Route 140 SB between Industrial Drive and Route 24 SB to provide two through lanes and a dedicated right-turn lane onto Route 24 SB (minor widening may be required); and
- Modify traffic signal timing/phasing at Route 140/Mozzone Boulevard/Route 24 SB ramps intersection to provide preemption phasing during gate closure.

Freetown
- Install advanced warning signage along South Main Street and at Freetown Station driveway; and
- Install dynamic messages signing along approach where sight distance is deficient.

Fall River
- Widen North Main Street on both approaches to President Avenue
- Update traffic signal timing/phasing at North Main Street/President Avenue and increase pedestrian crossing time
- Increase the pedestrian crossing time at North Davol Street/President Avenue

MassDOT is separately advancing a design to address the Middleborough Rotary. Traffic operations at Pilgrim Junction are not expected to impact the Middleborough Rotary. The DSEIR indicates that new trips to the Pilgrim Junction Station through key intersections in Middleborough Center, the Middleborough Rotary, and in the vicinity of the schools located along Route 28 will be unchanged.

Wetlands, Water Quality and Wildlife Habitat

Wetlands

Phase 1 will result in impacts to BVW, Land Under Water (LUW), Bank, Bordering Land Subject to Flooding (BLSF), Riverfront Area (RFA), and Land Subject to Coastal Storm Flowage (LSCSF). The project is subject to Federal, State, and local wetland permitting jurisdiction, each with its own performance standards and regulations. Local Conservation Commissions will review Phase 1 to determine its consistency with the WPA, the Wetlands Regulations (310 CMR 10.00), and associated performance standards, including the Stormwater Management Standards (SMS). MassDEP will assess the project's consistency with the WPA, the 401 WQC regulations (314 CMR 9.00) and the c. 91 regulations (310 CMR 9.00). ACOE will review the project to determine its consistency with Section 404 of the Federal Clean Water Act. Phase 1 will not require a Variance in accordance with the WPA.

An Order of Conditions issued by a local Conservation Commission is not a Permit, as that term is defined in the MEPA regulations; therefore, MassDOT may initiate wetlands permitting prior to completion of MEPA review. Phase 1 received OOCs from the Conservation Commissions in Fall River, New Bedford (for the layover station), Freetown (two), Berkley, Taunton (two), and Raynham, which were not appealed. Outstanding OOCs are required from the Conservation Commissions in Middleborough (only work along Middleborough Secondary; Pilgrim Junction is not within WPA jurisdiction), Lakeville, and New Bedford (for track work).

In addition to new impacts along the Middleborough Secondary and at proposed stations, the DSEIR also provides an update on the impacts to wetland resource areas within the Southern Triangle that were previously analyzed in the FEIS/R. The following table identifies permanent and temporary impacts within the Phase 1 area and mitigation for permanent BVW impacts (MassDOT provided updated impact numbers during review of the DSEIR).

Municipality	**Bank (lf) P/T**	**BVW (sf) P/T**	**LUW (sf) P/T**	**BLSF (sf)/(cf) P**	**RFA (sf) P**	**Proposed BVW Mitigation (sf)**	**OOC Issued**
Middleborough*	0/0	0/0	0/0	0/0	0/0	0	TBD
Lakeville*	0/484	0/0	0/0	0	78,990	0	TBD
Taunton**	1,021/36	4,230/0	5,227/178	1,354/979	78,036	5,200	2/13/2018
Raynham***	0/0	0/0	0/0	0	0	0	12/20/2017
Berkley	476/206	3,330/18,028	1,342/1,943	4,468/4,815	0	5,520	1/10/2018
Freetown**	2,201/48	2,640/0	2,338/461	2,782/504	105,680	5,410	2/26/2018
New Bedford*	6,656/86	9/93	921/313	0	479	2,600	1/8/2018/TBD
Fall River****	160/20	0/98	0/0	0/0	7,372	0	3/9/2018

P: permanent impacts
T: temporary impacts
TBD: to be determined
* NOI to be filed for track work – estimated impacts
** Impacts are combined from two separate NOIs
*** Buffer Zone work only
**** Impacts also include 16,419 sf of LSCSF and 1,715 lf of Coastal Bank

The DSEIR includes a description of wetland systems identified along the proposed alignment for Phase 1 for track construction/reconstruction (single and double tracking), culvert/bridge replacement, retaining wall construction, and upgraded grade crossings, and at the proposed station sites. It includes figures to supplement the narrative and depicts specific locations and extent of wetland impacts. The DSEIR includes tables summarizing wetlands impacts for Phase 1, including the identification of cumulative impacts for each resource area and by municipality. MassDOT consulted with the ICG on several occasions to review proposed work and project impacts. The methodology used to assess impacts was consistent with the approach used in the FEIS/R. The DSEIR describes how proposed work in wetland resource areas will meet applicable performance standards.

The DSEIR describes and quantifies alterations to floodplains (BLSF) and discusses how work associated with Phase 1 will comply with applicable regulatory standards pursuant to 310 CMR 10.57(4)(a). Hydrologic analyses were conducted to determine the 100-year flood elevation in the vicinity of Phase 1 elements not previously reviewed in the FEIS/R. Flood storage mitigation will be provided on an incremental (one-foot) basis well in excess of the proposed volume of fill at each elevation. Compensatory storage will be provided in the immediate vicinity of proposed fill within BLSF (within the same floodplain) for loss of BLSF within each municipality.

State of Good Repair Program

Phase 1 includes activities that qualify as "Bridge Exempt" under the Transportation Bond Bill and portions that do not qualify for the exemption. MassDEP has indicated that it will require two 401 WQC applications. MassDOT filed the Bridge Exempt 401 WQC with MassDEP, which has been classified as State of Good Repair (SGR) work. This SGR work includes discharge of fill and dredging associated with the maintenance, repair and/or replacement of bridges and culverts for the existing Freight Line. These bridges/culverts meet the definition of functional equivalent and will be repaired, replaced or reconstructed

401 Water Quality Certification

Phase 1 will require the issuance of two 401 WQCs for the discharge of fill to wetlands (BVW, IVW, and/or LUW) as well as a 401 WQC for dredging in excess of 100 cubic yards. The DSEIR identifies 28 stream crossing locations associated with Phase 1 including two bridges and 26 culverts. Both bridges and ten culverts will be reconstructed as part of the SGR program. All culvert replacements will be designed to meet Stream Crossing Standards to the maximum extent practicable. Phase 1 will replace two culverts in Taunton; 14 will remain in their existing condition. Detailed cross-sections for proposed culverts and bridges and designs will be provided during final design. Culvert design will include hydrological studies to demonstrate that the upstream and downstream hydrology will not adversely impact flood capacity or storage volume in wetlands. As the design progresses, MassDOT should evaluate opportunities for maximizing hydrological connections between wetlands for enhancement and restoration as well as for flood capacity.

Comments from the Massachusetts Division of Marine Fisheries (DMF) indicate that Phase 1 includes culverts and bridges over waterways that support a variety of diadromous fish species. The Middleborough Secondary crosses Box Brook, a tributary to Poquoy Brook, in two locations. Box Brook is listed as supporting a coldwater fishery. Phase 1 will not alter the two existing culverts;

therefore, it will have no short- or long-term effects on coldwater fisheries. The DSEIR indicates that Phase 1 will implement BMPs for erosion and sedimentation controls and time-of-year (TOY) restrictions on construction activity to avoid and minimize impacts to fisheries resources; however, it does not identify specific TOY restrictions. Comments from DMF recommend TOYs to minimize impacts associated with in-water along the Southern Triangle and Middleborough Secondary.

Outstanding Resource Waters

Vernal pool habitats are protected under the Massachusetts 401 WQC standards as Outstanding Resource Waters (ORWs); there are no other designated ORWs within the Phase 1 study area. Vernal pools were identified within the Phase 1 project area (adjacent to the Middleborough Secondary and new/relocated stations) implementing the same methodology used for the FEIS/R study and approved by NHESP. Investigations were conducted within 100 feet of the ROW of the Middleborough Secondary. The DSEIR includes the results of potential vernal pool investigations associated with Phase 1, including a description and mapping of those meeting the criteria for certification. According to the DSEIR, Phase 1 will not discharge or fill any vernal pools.

Biodiversity

The DSEIR includes information on conservation areas (including ecosystems, bioregions, Biomap core habitats, and Important Wildlife Habitats (IWH)) adjacent to new Phase 1 elements (Middleborough Secondary and associated new/relocated station). There are no Important Bird Areas in the vicinity of the Phase 1 study area. The DSEIR includes an analysis of biodiversity value and supporting maps/graphics in the Phase 1 project area using the same methodology presented in the FEIS/R.

The DSEIR includes a quantitative and qualitative analysis of impacts to wildlife habitat, wetlands, water quality, water supply, and floodplain. It evaluates direct and indirect impacts to wildlife and their habitat, including hydrologic changes, fragmentation, edge effects, noise and vibration, and restrictions to mobility. Phase 1 will not change hydrology, increase fragmentation, create new edge effects, or result in new noise or vibration effects that will result in impacts to wildlife and their habitat. Phase 1 will add wildlife crossings and increase culvert openness to improve mobility of turtles and other small wildlife. Impacts to migratory birds will be limited to small areas of vegetation removal adjacent to the existing tracks and removal of 1.2 acres of deciduous forest at the proposed East Taunton Station that may provide migratory bird habitat. Phase 1 will avoid impacts to nesting birds by restricting tree clearing to the non-breeding season. It indicates that upgrading the existing active freight line will not impact biodiversity nor any areas of high conservation or habitat value.

Stormwater

Phase 1 will create approximately 11 acres of new impervious area, some of which was previously reviewed in the FEIS/R as part of the proposed Freetown and Fall River Depot stations (see Land Alteration section). The DSEIR addresses how Phase 1 will comply with the Wetlands Regulations and associated SMS for work proposed in wetland resource areas and buffer zones. The Fall River Depot Station is not subject to the WPA or SMS. The DSEIR includes an analysis of impacts and mitigation along the Middleborough Secondary and station sites including Fall River Depot Station.

Proposed BMPs were sized to mitigate the increase in peak flow rate for the 10-year storm and provide required recharge and water quality volumes. The DSEIR presents conceptual stormwater designs for each station. As station designs are refined and environmental and site constraints are considered, proposed BMPs at the stations will be designed in accordance with MassDEP guidance. Stormwater management plans will be developed to describe collection, treatment, and discharge of stormwater.

The DSEIR considers three of the four stations as a mix of new development and redevelopment, the Middleborough Secondary line as redevelopment, and the Freetown Station as new development. The Phase 1 Study Area will fully comply with the ten MassDEP SMS for new development and will comply with Standards 2, 3, 4, and 6 to the maximum extent practicable for redevelopment. None of the stations contain any type of Land Uses with Higher Potential Pollutant Loading (LUHPPLs), thereby, obviating the requirement to comply with Standard 5. Because the Pilgrim Junction station is located within a Zone II to a municipal groundwater well approximately 3,600 feet away, stormwater runoff will be treated to remove at least 44 percent of total suspended solids prior to discharge to an infiltration structure and the infiltration BMPs will be sized to treat at least one-inch of runoff over the impervious area.

In general, the stormwater design at the stations includes closed drainage systems with deep sump catch basins and piping to collect runoff and convey it to infiltration basins for treatment and recharge, where feasible, before discharging off-site. As the design advances, Low Impact Development (LID) practices that include a combination of detention, infiltration, and treatment techniques, such as rain gardens, water quality swales, and infiltration basins will be proposed to the maximum extent practicable. Infiltration-based BMPs will be used whenever possible to maximize ground water recharge, reduce stormwater volumes, and remove contaminants.

Existing drainage features (ditches and discharge points) along the Middleborough Secondary will be rehabilitated or maintained as required. Improved stormwater management measures will be incorporated into the drainage design to comply with the SMS. Reconstructed features will be designed to collect and convey runoff from the 24-hour, 50-year storm. Proposed ditches may be designed to be deeper than what exists today. Flow that discharges to open ditches upgradient of resource areas will enter sediment forebays for suspended solid removal. Underdrain systems will be installed where ditches are not practicable and daylight to discharge to the same flow path or outlet point as the existing ditch. There are nine certified vernal pools along the Middleborough Secondary. Stormwater BMPs will be set back 100 feet from a certified vernal pool and a habitat evaluation will be performed to demonstrate that the stormwater BMPs will not adverse impact the vernal pool’s habitat functions. A 100-foot buffer will be maintained between discharge points and certified vernal pools where feasible.

Vegetation Management and Herbicide Use

The DSEIR describes ROW maintenance and evaluates the MBTA's Vegetation Management Plan (VMP) and herbicide usage along the ROW and associated impacts to sensitive receptors including wetland resources, public or private drinking water supplies, Priority Habitat, aquatic organisms and water quality. It outlines restrictions on herbicide application, and identifies areas proposed for herbicide use and those that would be designated as a No-Application sensitive area. Specific zones will be identified on project plans submitted during final design and permitting. The DSEIR describe invasive

species that may occur along the Middleborough Secondary, and the proposed monitoring and control program for such invasive species.

Mitigation

The DSEIR was required to demonstrate that the Phase 1 will avoid, minimize or mitigate impacts to wetland resource areas and water quality to the maximum extent practicable. As a result of significant improvements to the track design, impacts along the freight lines have been reduced considerably since review of the FEIS/R and NPC. The DSEIR outlines a comprehensive mitigation program designed to meet ACOE, MassDEP, and local requirements and performance standards. The DSEIR describes wetland mitigation measures proposed to offset alteration of each resource area. Areas of temporary impact will be restored. Wetland mitigation will be designed and constructed in accordance with the WPA performance standards, and will provide a minimum 1:1 in-situ replacement of the lost wetland area, functions and values, including wildlife habitat. Additional compensation will be provided to meet ACOE mitigation requirements for secondary (indirect) and temporary impacts. The site-specific details of wetland mitigation will be provided in the NOIs, Section 404 ACOE permit and Section 401 WQC applications for Phase 1. The mitigation program will include implementation of construction-period measures to avoid and minimize impacts; post-construction monitoring to document the outcome of replacement/restoration activities and improvements to wildlife habitat; and address potential establishment of non-native and/or invasive species.

MassDOT will provide a schedule to MassDEP and the MEPA Office regarding the timing of wetlands permitting and publication of the mitigation plan for wetlands and rare species which was required by the FEIS/R Certificate. Phase 1 will not require a Variance. MassDOT will continue to pursue design and permitting of the Full Build project. MassDOT should consult with the MEPA Office once permitting for the Full Build advances to a point where an updated mitigation plan can be provided.

Waterways

The DSEIR confirms that new Phase 1 elements are not located within tidelands or the Coastal Zone. Although, the Middleboro Secondary crosses three navigable waterways subject to c. 91 jurisdiction, Phase 1 does not include work within these waterways. These three waterways include the Cotley River (Barstow's Pond) in Taunton, Richmond Brook (Taunton River tributary) in Taunton, and the Furnace Brook in Raynham. The DSEIR indicates that Phase 1 will not affect jurisdictional waterways that were not previously reviewed. MassDOT is currently reconstructing two bridges as part of the SGR program, and no work is proposed at Furnace Brook as part of Phase 1.

MassDEP comments consider any work proposed on these bridge crossings to be maintenance, repair or replacement, and therefore exempt pursuant to the Bridge Exemption. As a result, no c. 91 authorizations will be required for this work. The Weaver's Cove Layover Facility described in the FEIS/R will require a c. 91 License as an Accessory to Water Dependent Use.

Rare Species and Wildlife

Portions of the Middleborough Secondary are mapped as *Priority* and/or *Estimated Habitat* for the following state-listed species: Three-angled Spike-sedge (Endangered plant); Plymouth Gentian

(Special Concern plant); Long's Bulrush (Threatened plant); Pine Barrens Bluet (Threatened damselfly); and Eastern Box Turtle (Special Concern reptile). These species and their habitats are protected pursuant to the Massachusetts Endangered Species Act (MESA, MGL c.131A) and its implementing regulations (321 CMR 10.00). MassDOT has been actively coordinating with NHESP to discuss and evaluate potential concerns, including the methodology for conducting habitat analysis and surveys for state-listed plant species.

NHESP anticipates that Phase 1 will likely not result in a Take of Long's Bulrush or Pine Barrens Bluet; however, it will likely need to be conditioned in order to avoid a Take of Three-angled Spike-sedge and Plymouth Gentian. Conditions may include, but are not limited to, delineating and avoiding state-listed plants during construction and implementing NHESP-approved vegetation and invasive species management plans within areas where state-listed plants are known to occur.

The Full Build project will likely result in a take of the Eastern Box Turtle. Phase 1 will result in a loss of approximately 1.2 acres of potential habitat (successional habitats along the railbed) and the anticipated loss of a total of 2.45 acres (including habitat along the Middleborough Secondary, Fall River Secondary and New Bedford Main Line). Because proposed work along the Middleborough Secondary represents a phase of a larger common project and Phase 1 will collectively result in the loss of approximately 7.1 acres of suitable upland and wetland habitats, NHESP anticipates that a CMP authorizing the Take of Eastern Box Turtle will be required in order for work along the Middleborough Secondary to proceed. NHESP comments indicate that while the exact details of the long-term Net Benefit required under a CMP have not yet been finalized, it is anticipated that MassDOT intends to meet the CMP performance standards by: providing funding for off-site habitat restoration, management, protection and/or conservation research to benefit Eastern Box Turtle and its habitats in Massachusetts; installing and maintaining appropriate wildlife crossings to improve connectivity between suitable turtle habitats; and implementing NHESP-approved plans to protect state-listed turtles during and after construction. The DSEIR indicates that MassDOT will provide funding to the Eastern Box Turtle mitigation bank equivalent to 3.7 acres of protected habitat. MassDOT should consult with NHESP to ensure this amount satisfies the long-term Net Benefit provision. NHESP anticipates that a suitable long-term Net Benefit can be achieved by providing conservation funding, and that the proposed project should be able to meet the performance standards of a CMP.

The DSEIR further describes how Phase 1 will avoid and minimize impacts to rare species and wildlife. Avoidance measures include locating all stations outside of Priority Habitat; maintaining track construction and culvert replacements within the existing footprint; and time-of-year (TOY) restrictions for tree and vegetation removal to protect Northern Long-Eared Bats and migratory birds (May 1 through July 15). Minimization efforts include single track instead of double track to reduce loss of habitat; replacing/enhancing structurally deficient culverts to improve hydraulic connections and wildlife movement; adjusting grading to reduce loss of plants/wildlife; using retaining walls; replanting disturbed areas; and developing and implementing an invasive species management plan.

Noise and Vibration

Phase 1 will introduce potential impacts from noise and vibration to the corridor along the Middleborough Secondary associated with new passenger rail service along an active freight corridor

which could negatively impact sensitive receptors. The DSEIR includes an assessment of noise and vibrational impacts associated with Phase 1 areas that were not assessed in prior MEPA review.

The Federal Transit Administration's (FTA) Noise and Vibration Impact Assessment Guidelines were used to evaluate existing conditions and assess potential impacts of the project, which is consistent with the methodology used in the FEIS/R. While they enforce regulations of certain noise sources, MassDEP's noise regulations (310 CMR 7.10) and Noise Policy are not designed to address transportation sources such as commuter rail trains, which are temporary in nature and transient as opposed to stationary sources. The DSEIR describes evaluation of mitigation for Phase 1 according to the MBTA's Noise Mitigation Policy.

The DSEIR describes the methodology for the study and the land use categories and metrics for evaluating transit-related impacts, including information on background noise levels and monitoring locations. The analysis assumed that horns will be sounded at all proposed grade crossings. Using the FTA guidelines, impacts are categorized as severe, moderate, or no impact depending on the projected increased level of exposure compared to existing noise levels. Temporary construction noise impacts are also expected and will be minimized and mitigated to the maximum extent practicable through incorporation of construction noise controls and noise guidelines into construction documents, which will be enforced during construction.

Diesel train pass-by noise associated with Phase 1 operations (operating train noise without horns) will result in 65 moderate and 24 severe impacts to residential receptors in Taunton with the majority on Battle Row and at the condominiums at 96 Old Colony Avenue; 12 moderate and 6 severe noise impacts to residential receptors in Raynham; eight moderate and three severe noise impacts to residential receptors in Lakeville; and 12 moderate and no severe impacts to residential receptors in Middleborough. Use of train horns at grade crossings will add 26 moderate and 66 severe noise impacts in Taunton, specifically near the Old Colony Avenue grade crossing, and 22 moderate and 20 severe noise impacts in Lakeville. In total, there will be 97 moderate and 33 severe impacts due to train pass-by noise and an additional 48 moderate and 86 severe noise impacts due to train horn noise in the Middleborough Secondary study area.

The MBTA Noise Mitigation Policy (including cost effectiveness criteria that considers expenditure of up to $30,000 per residence) is used to address severe noise impacted locations. It indicates that mitigation for moderate impacts is not required under the FTA noise and vibration guidance manual. The DSEIR includes specific measures to mitigate severe noise impacts including a 400-foot noise barrier adjacent to Gatsby Drive in Raynham (six receptors) and sound insulation for the remaining 27 severely impacted sensitive receptors. The rail corridor passes through densely developed areas in several municipalities that will experience severe and moderate impacts; however, MassDOT does not identify mitigation for moderate impacts. As project planning continues and MassDOT develops mitigation agreements with municipalities, I encourage MassDOT to reconsider measures to minimize and mitigate moderate and severe impacts. MassDOT implements noise mitigation measures for impacts associated with train operations. The DSEIR provides a discussion of quiet zones at grade crossings or use of wayside horns. It indicates that municipalities must initiate the process to establish quiet zones. Eliminating all or nearly all horn noise impacts would require considerable design analysis and coordination efforts to determine if these measures are feasible.

The DSEIR includes information on the vibration measurements conducted to evaluate existing conditions. Projected vibration levels are compared to FTA criteria which indicate that 80 Velocity level in decibel units (VdB) is a level at which human annoyance is experienced for residential receptors exposed to infrequent events (less than 30 per day). Along the Middleborough Secondary, the total number of daily train operations is 26; therefore the FTA criterion of 80 VdB for residential receptors that experience occasional train events was used to assess impacts along this corridor. The vibration impact assessment indicates that there are 30 receptors along the Middleborough Secondary with overall vibration levels exceeding 80 VdB. MassDOT will conduct a Detailed Vibration Assessment during final design in accordance with FTA guidelines to verify the need for mitigation and to design/specify effective vibration mitigation solutions.

The DSEIR does not provide a comparison of the estimated vibration levels to existing conditions to describe the actual change that will be experienced. The vibration analysis is based on FTA vibration impact criteria, which uses a relationship between train speed and the distance that vibration may propagate, rather than a comparison to existing vibration levels. The FEIS/R stated that monitoring existing vibration levels is not useful, since these levels are not determinative in the impact analysis (unlike noise where existing noise level influences whether or not a receptor is impacted). The FEIS/R also stated that it is rare for vibration from train operations to cause building damage, even minor cosmetic damage. The vibration threshold for minor cosmetic damage, such as possible cracks in plaster walls, is 100 VdB for fragile buildings, which is higher than any levels projected for Phase 1.

Several common rail/transit system measures to mitigate vibration include: continuously welded rail which minimizes vibrations caused by wheels impacting rail joints; ballast and sub-ballast mats to reduce transmission of vibration from the tracks to the ground; resilient rail fasteners; Tire Derived Aggregate (TDA); resiliently supported concrete ties; special hardware such as flange-bearing or moveable-point frogs; turnouts located away from homes and other sensitive buildings, and maintenance programs. The vibration mitigation plan includes ballast mats totaling up to 1,800 feet for 30 dwelling units (three locations). The advanced engineering phase will include more detailed evaluation of vibration and inform the need for and implementation of appropriate mitigation.

Cultural Resources

The DSEIR describes potential impacts associated with Phase 1 (direct, indirect, temporary, and permanent) to historic and archaeological resources within an Area of Potential Effects (APE) that were not previously analyzed in the FEIS/R. Comments from ACOE indicate that it anticipates impacts to archaeological sites would be limited to areas associated with proposed fill, culvert replacement/reconstruction, and/or new railroad infrastructure. The new elements of the Phase 1 area do not affect the Taunton River, which is designated a Wild and Scenic River. The DSEIR summarizes the results of archaeological and historic investigations conducted for Phase 1.

The DSEIR evaluates impacts to cultural resources associated with noise and vibration, traffic, visual, physical modifications, and air quality, based on additional archaeological and historic surveys conducted along the Middleborough Secondary and at new station locations. One city-wide multiple resource area in Taunton, one area/district in Taunton, and eight individual historic properties in Middleborough, Lakeville, and Taunton may be adversely affected by implementation of Phase 1 associated with indirect noise (trains and horns) and visual (proximity to ROW). Phase 1 will not

directly effect National Register and State Register-listed or -eligible historic properties on the Middleborough Secondary.

MassDOT identified one National Register-eligible archaeological site in Taunton within the Middleborough Secondary ROW, and moderate and high archaeologically sensitive areas in the Middleborough Secondary ROW, the Pilgrim Junction Station APE, and the East Taunton Station APE. MassDOT will develop an archaeological site avoidance and protection plan (SAPP) for implementation prior to and during construction activities to avoid disturbances to significant cultural deposits. Phase 1 will directly impact the moderate and high sensitivity areas within the proposed limit of work for the new track and associated infrastructure in the Middleborough Secondary ROW and to the moderate sensitivity areas in the proposed limits of work at the Pilgrim Junction and East Taunton stations. MassDOT intends to conduct additional intensive archaeological surveys to identify any archaeological sites that may be impacted in these sensitive portions of the APE. There will be no impacts to archaeological resources in areas assigned low sensitivity in the Phase 1 APE and no further archaeological investigations will be conducted in these areas.

MassDOT will work with ACOE, MHC, and other Section 106 parties including tribal representatives to update the draft Programmatic Agreement (PA), which was developed as part of the Full Build project review, to accurately reflect the conditions and effects of Phase 1. The DSEIR describes mitigation measures that may be considered to avoid, minimize, or mitigate adverse impacts to cultural resources and provided in the revised PA. Mitigation will be based on additional archaeological and historic surveys. Avoiding indirect noise and visual impacts may be addressed for historic resources through design modifications. Minimization options include reducing the extent of ground disturbance, establishing vegetated buffers, and designing noise barriers and sound insulation. Potential mitigation measures for unavoidable impacts include historical documentation, data recovery, interpretative signage, visual screening, use of compatible materials, construction staging and methods, and creative and alternative mitigation strategies for archaeological resources.

MassDOT will provide MHC with project information including scaled existing and proposed conditions plan and the draft Cultural Resources Management Plan for its review and comment as they are developed, along with ACOE's findings and determinations regarding potential effects and opinion regarding the need for additional archaeological survey.

Oil and Hazardous Materials

The DSEIR describes the potential presence or release of Oil or Hazardous Materials (OHM) in relation to the Phase 1 Study Area during construction and operation and supplements information provided in the FEIS/R that was not previously reviewed. Potential operational impacts of new elements as part of Phase 1 may include spills or releases of OHM. Spills of diesel fuel or hydraulic fluids resulting from a train derailment or during construction activity are unlikely. MassDOT will implement measures to prevent and control such spills, including a Spill Control Program in compliance with MBTA policy and the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). Contaminated rail beds may be exempt from the reporting requirements of the MCP; however, excavated/relocated materials may be subject to the MCP or other regulations.

OHM may already be present on proposed station sites or along the Middleborough Secondary (ROW) in soils or groundwater, or in existing buildings. MassDOT will conduct environmental site assessments (ESAs)/environmental screenings to assess the potential for encountering OHM during construction and to identify remediation. MassDOT will be responsible for site cleanup pursuant to the MCP. A Permanent Solution must be achieved for regulatory closure of a release site. Several state and federal regulatory programs also govern the requirements for site remediation, transport of regulated hazardous materials, and potential spills during construction.

The DSEIR characterizes the existing and anticipated solid and hazardous waste generated for Phase 1 (new stations and track upgrades). It addresses MassDEP comments regarding development of a soils management plan to manage risk of exposure to materials during construction. Work that would generate solid waste is limited to tie replacement along the Middleborough Secondary, which would be done under MassDOT's SGR program.

Proposed station locations at Pilgrim Junction and East Taunton include identified recognized environmental conditions (RECs) on-site or within buildings including asbestos, lead, etc. A potential exists for encountering OHM impacts when demolishing buildings or constructing new stations and tracks, which would require appropriate soil and groundwater management/handling. The DSEIR summarizes the RECs and potential environmental concerns for station sites and along the Middleborough Secondary. Prior to acquisition and/or construction on proposed parcels associated with the Freetown, Fall River Depot, Pilgrim Junction and East Taunton stations and along the Middleborough Secondary ROW, MassDOT will conduct further evaluations (including sampling) for subsurface contamination because these locations have RECs with a high or medium potential to impact each site. Remediation or soil/groundwater management during construction could be required.

The DSEIR describes the mitigation requirements for management of contaminated media (soil and groundwater) and regulatory compliance that may be required during construction and post-construction. MassDOT may hire the services of a Licensed Site Professional (LSP) to provide guidance regarding response actions and notification requirements pursuant to the MCP. MBTA will coordinate response action activities for Phase 1 through a Special Project Designation (SPD) Permit from MassDEP. Ultimately, response actions will result in a Permanent Solution with No Conditions for each release tracking number (RTN). However, additional response actions beyond those required for Phase 1 construction may be necessary at some sites to achieve regulatory closure. These response actions could occur pursuant to the MCP under provisions such as those of a Release Abatement Measures (RAM) Plan, SPD Permit, or others, and applicable MCP policies pertaining to construction and waste management.

Conclusion

MEPA review of the South Coast Rail project has included extensive and detailed analysis of routes, technology and operations to meet the project goal of providing rail service to Fall River and New Bedford. It has included robust commentary on the project design and selection of alternatives. The Scope for the DSEIR was limited to the proposed changes associated with Phase 1 of the project.

The Certificate on the NPC indicated that the MEPA regulations include a "rollover provision" at 11.08(8)(b)(2) which indicates that upon review of a Draft EIR (DEIR), I may determine that no substantive issues remain to be addressed and:

a. publish notice in the next Environmental Monitor that the DEIR shall be reviewed as a Final EIR (FEIR); *or*
b. require the Proponent to file a Response to Comments on the DEIR and Proposed Section 61 Findings and publish notice in the next Environmental Monitor that the responses and findings shall be filed, circulated, and reviewed as a FEIR.

Based on a review of the DSEIR, consultation with State Agencies, and review of comment letters, I have determined that: the DSEIR adequately and properly complies with MEPA and its implementing regulations and that there are no substantive issues that remain to be addressed through MEPA review. Therefore, MassDOT will provide a Response to Comments on the DSEIR and Proposed Section 61 Findings. Notice will be published in the next Environmental Monitor that the responses and findings shall be filed, circulated, and reviewed as a FSEIR.

SCOPE

General

The FSEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope. The FSEIR should clearly demonstrate that MassDOT has sought to avoid, minimize and mitigate Damage to the Environment to the maximum extent feasible.

Mitigation and Draft Section 61 Findings

The FEIS/R contained draft Section 61 Findings associated with each separate State Agency Action identified for the Full Build project. The FSEIR should include an updated and revised chapter that summarizes mitigation measures associated with Phase 1 including a summary table of all mitigation commitments. The FSEIR should include proposed mitigation measures for Phase 1, contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation. Any changes to mitigation and/or draft Section 61 Findings since issuance of this Certificate should be noted.

Responses to Comments

The FSEIR should contain a copy of this Certificate and a copy of each comment letter received. In order to ensure that the issues raised by commenters are addressed, the FSEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction. This directive is not intended, and shall not be construed, to enlarge the scope of the FSEIR beyond what has been expressly identified in this Certificate.

Circulation

MassDOT should circulate the Response to Comments and draft Section 61 Findings to those parties who commented on the ENF, DEIS/R, FEIS/R, the NPC, and DSEIR, to any State and municipal agencies from which MassDOT will seek permits or approvals, and to any parties specified in section 11.16 of the MEPA regulations. To save paper and other resources, MassDOT may circulate copies to commenters other than State Agencies in a digital format (e.g., CD-ROM, USB drive) or by directing commenters to a project website address. However, MassDOT must make available a reasonable number of hard copies to accommodate those without convenient access to a computer to be distributed upon request on a first come, first served basis. MassDOT should send a letter accompanying the digital copy or identifying the web address of the online version of the Response to Comments and draft Section 61 Findings indicating that hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments. A digital copy of the complete document should be provided to the MEPA Office. A copy of the Response to Comments and draft Section 61 Findings should be made available for review at the Public Libraries in the South Coast region municipalities.

March 30, 2018
Date

Matthew A. Beaton

Comments Received:

03/15/2018 Massachusetts Historical Commission (MHC)
03/21/2018 Massachusetts Natural Heritage and Endangered Species Program (NHESP)
03/23/2018 Massachusetts Division of Marine Fisheries (DMF)
03/23/2018 Massachusetts Department of Environmental Protection (MassDEP)
03/23/2018 U.S. Army Corps of Engineers (ACOE)
03/12/2018 State Senator Michael J. Rodrigues
03/19/2018 State Representative Robert M. Koczera
03/22/2018 State Representative William M. Straus
03/22/2018 State Representative Carole Fiola
03/22/2018 State Representative Christopher M. Markey
03/22/2018 State Representative Susan Williams Gifford
03/22/2018 State Representative Alan Silvia
03/23/2018 State Representative Antonio F.D. Cabral
03/23/2018 State Senator Walter F. Timilty
03/23/2018 State Representative Keiko Orrall
03/23/2018 State Representative Paul A. Schmid
03/23/2018 State Senator Mark Montigny
03/23/2018 State Representative Dylan Fernandes

03/23/2018 State Senator Marc R. Pacheco
03/272018 State Senator Joseph A. Boncore
02/16/2018 Steve Castellina
02/20/2018 Jonathan F. Mitchell, Mayor, City of New Bedford
02/21/2018 David Brodeur
02/22/2018 Robert M. Caron
02/22/2018 Paul S. Medeiros, JOBS for Fall River, Inc.
02/23/2018 Maria Moniz
02/23/2018 Maria Ferreira-Bedard, Southeastern Massachusetts SER-Jobs for Progress, Inc.
02/25/2018 Joan R. Wickersham
02/27/2018 Senator Joan M. Menard
02/28/2018 Melinda L. Ailes
02/28/2018 Bruce E. Fernandes
03/01/2018 Alan Slavin
03/03/2018 Lloyd Mendes
03/05/2018 Steve Voluckas (2nd comments on 03/22/2018; emailed duplicate information)
03/05/2018 George A. Seaver
03/06/2018 Lisa Boragine
03/07/2018 Town of Easton Board of Selectmen
03/07/2018 Wally Glendye
03/09/2018 Robert J. La Tremouille
03/12/2018 Abraham Brody
03/12/2018 Norman and Beth Vieira
03/14/2018 Dr. T.K. Roy
03/16/2018 Paul Chasse
03/16/2018 Karen Bailey Almeida
03/16/2018 Maggie Tomkiewicz
03/16/2018 John Vaughn
03/16/2018 Freeman Hill
03/16/2018 Bill Boles
03/16/2018 Jeanne Fuller-Jones
03/16/2018 Christopher D'Anna
03/16/2018 Stephen T. Lewin
03/16/2018 Debby Boiros
03/16/2018 Linda Moniz Perry
03/16/2018 Stacy Antonio
03/16/2018 Megan Faber
03/16/2018 Greg Murphy
03/16/2018 Marlene Jones
03/16/2018 Ann Marie Guinen
03/16/2018 Kate Lanagan MacGregor
03/16/2018 Debrah Atteberry (2nd comments on 03/22/2018)
03/16/2018 Joseph D. Pacheco (2nd comments on 03/22/2018)
03/16/2018 Paul Helgesen
03/16/2018 Cindy Senra
03/16/2018 Dean Martin, Karen Martin, and Shawn Martin

03/16/2018 Kerrie McNamara
03/16/2018 Susan P. Haley
03/16/2018 Becky Pulley
03/16/2018 Jackie Connolly
03/16/2018 gchace
03/17/2018 Dave Dubak
03/17/2018 Carol Leonard
03/17/2018 Caryn Campbell
03/18/2018 Rahim Aghai
03/19/2018 Benita Rose Montiero
03/19/2018 Richard Connor
03/19/2018 Ann Soares
03/19/2018 Dawn Rusin
03/19/2018 Joseph J. Gomes
03/19/2018 Bob Lima
03/19/2018 Stephanie Harding
03/19/2018 BayCoast Bank
03/19/2018 Plimoth Investment Advisors
03/19/2018 Partner's Insurance Group
03/19/2018 Louis Gitto
03/19/2018 Nona Sbordone
03/19/2018 Patrick Gannon
03/20/2018 Cathleen M. Salley (2nd comments on 03/22/2018)
03/20/2018 Greater Attleboro Taunton Regional Transit Authority (GATRA)
03/21/2018 Margarita Graham
03/21/2018 Gillian and David Holroyd
03/21/2018 Kristi Butler
03/21/2018 David Slutz (duplicate dated 03/22/2018)
03/21/2018 Jody Seivert
03/21/2018 Chuck Lord
03/21/2018 Independence Associates, Inc. and Massachusetts Association of Centers for Independent Living
03/21/2018 Helena DaSilva Hughes
03/21/2018 David A. Cabral
03/21/2018 Marji Maddigan-Wyatt
03/21/2018 Richard Prone
03/21/2018 Town of Lakeville Board of Selectmen
03/21/2018 Claudia Bender
03/21/2018 Will Keene (duplicate addressed to MassDOT)
03/21/2018 Celia and Rob DelGaudio
03/21/2018 John T. Doherty
03/21/2018 Laura L. Douglas, Ph.D. (duplicate addressed to MassDOT)
03/21/2018 Timothy Cole
03/22/2018 Stella Xifaras-Piva (2nd comments same date)
03/22/2018 Kreg R. Espinola
03/22/2018 Ian Abreu, Councilor, City of New Bedford

03/22/2018 Jeanne Azar Padilla
03/22/2018 Deven Q. Robitaille (2nd comments same date)
03/22/2018 Kerri Kuehne
03/22/2018 Mary-Carol Cate
03/22/2018 Christopher Howard
03/21/2018 Old Colony Planning Council (OCPC) (revised on 03/22/2018)
03/22/2018 Nathan C. Vaughan
03/22/2018 Sydney Lewis
03/22/2018 Tracy Silva Barbosa
03/22/2018 Heidi McNeil
03/22/2018 Kathleen Guarino
03/22/2018 Ushminder Kaur
03/22/2018 Joyce D. Lopes
03/22/2018 Public Employees for Environmental Responsibility (PEER)
03/22/2018 Dawn Gaudreau
03/22/2018 Judy Perry
03/22/2018 Sheryl Sears
03/22/2018 Dawn Devlin
03/22/2018 Town of Stoughton
03/22/2018 William M. Callahan
03/22/2018 Andrea Belanger
03/22/2018 Gloria Vincent
03/22/2018 New Bedford Economic Development Council (2nd comments on 03/23/2018)
03/22/2018 Kenneth Silva
03/22/2018 Cate LePage
03/22/2018 Steven A. Camara, Councilor, City of Fall River
03/22/2018 Stephen R. Long, Councilor, City of Fall River
03/22/2018 Erik Tracey
03/22/2018 William H. Reidy
03/22/2018 David
03/22/2018 Melanie Wallis
03/22/2018 Rene Davey
03/22/2018 Crystal Bradwin
03/22/2018 Scott M. Bernard, Esq.
03/22/2018 Town of Freetown Board of Selectmen
03/23/2018 Elizabeth Isherwood
03/23/2018 Jessamyn Finneran
03/23/2018 Barbara J. Hall
03/23/2018 Allin Frawley, Town of Middleborough Board of Selectmen Chairman
03/23/2018 SouthCoast Development Partnership
03/23/2018 Norman J. Orall
03/23/2018 Town of Fairhaven Board of Selectmen
03/23/2018 Ellen Gitlin
03/23/2018 Douglas Brown
03/23/2018 Howe Allen
03/23/2018 Thomas C. Hoye, Jr., Mayor, City of Taunton

03/23/2018	Bristol County Chamber of Commerce
03/23/2018	Alan C. Freitas
03/23/2018	Jasiel F. Correia II, Mayor, City of Fall River
03/23/2018	Hugh C. Dunn, Esq., Councilor, City of New Bedford
03/23/2018	Dom Lee
03/23/2018	Southeastern Regional Planning and Economic Development District (SRPEDD)
03/23/2018	Finger Lakes Railway Corporation
03/23/2018	Leo O. Pelletier, Councilor, City of Fall River
03/23/2018	Mass Audubon
03/23/2018	Massachusetts Sierra Club
03/23/2018	Andrew Jennings
	Donna Horvath
	Marcus D. Ferro, Esq
	Larry Pare
	Remy Nikka
	Alexander Silva
	Paul Chenard
	Jen Cote
03/26/2018	Alan Moore
03/26/2018	Karla Mantini
03/26/2018	Livable Streets Advocacy Committee

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