



## Appendix G – Construction Management Plan

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## **1. Introduction**

The Construction Management Plan (CMP) will help guide the construction of the proposed South Station Expansion (SSX) project in Boston, Massachusetts. The CMP identifies key SSX project issues, considers mitigation measures, and serves as an overall plan for the project's construction activities.

An efficient, well-organized CMP contributes to the success of a project by minimizing impacts to the environment and the surrounding community. This CMP identifies potential key issues and organizational structures in the preliminary engineering process to avoid impacts during construction. The following provides the proposed CMP, which will be further refined as the project advances. A final CMP will be developed by the contractor and approved by the Massachusetts Department of Transportation (MassDOT) and other project stakeholders prior to construction.

## **2. Project Description**

The SSX project consists of the 49-acre site located in and around the existing South Station Transportation Center, which includes the South Station Rail/Transit Terminal, South Station Bus Terminal, and the existing U.S. Postal Service (USPS) property and adjacent roadways. The project also includes two layover facility sites, located at Widett Circle, and Readville – Yard 2. Figure 1 presents a project location map. The project consists of five primary construction components. The proposed work for each of these components is described as follows:

### **2.1. USPS Facility Demolition**

The SSX project would acquire and demolish the USPS General Mail Facility (GMF) located on an approximately 14-acre site along Dorchester Avenue adjacent to South Station.

### **2.2. South Station Track Construction**

The SSX project would expand the South Station Terminal by adding seven tracks and four new platforms for a total of 20 tracks and 11 platforms. Additionally, several existing tracks and platforms would be reconfigured. Platform lengths would be designed to meet Amtrak's and the MBTA's future berthing requirements. Tower 1 Interlocking<sup>1</sup> would be modified and approach interlockings would be reconfigured to reduce conflicting movements through the terminal area and improve efficiencies.

### **2.3. South Station Terminal Expansion**

New structures totaling approximately 385,000 sf, including an expanded headhouse and major station entrance along Dorchester Avenue, would be added at the South Station Terminal to provide larger passenger circulation and waiting areas, as well as amenities such as retail and food outlets.

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<sup>1</sup> An interlocking is a segment of railroad infrastructure that consists of track, turnouts, and signals linked (interlocked) in a way that allows for train operations to succeed each other in a logical, predetermined, safe order to prevent conflicting train movements.

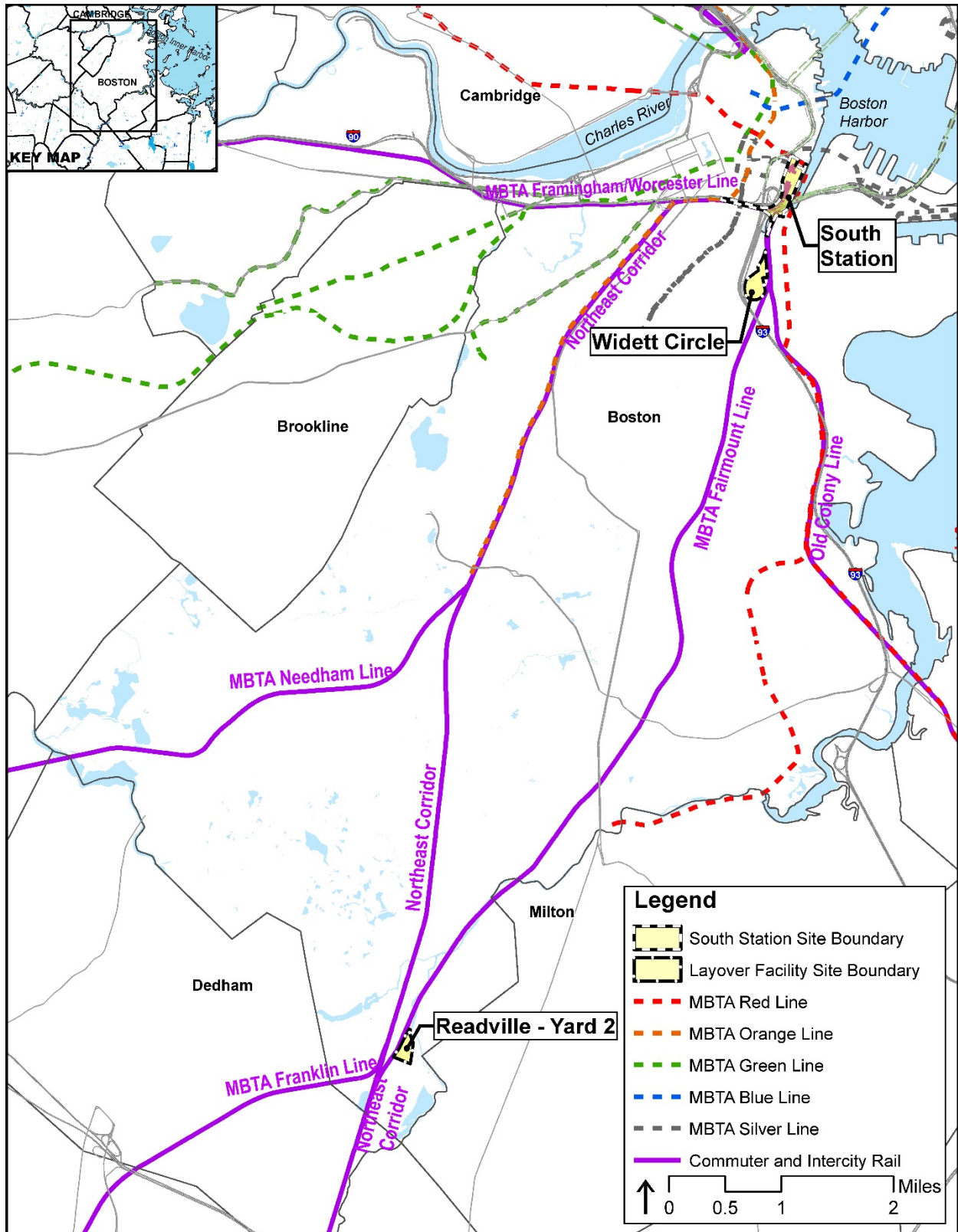


Figure 1 — Project Location Plan

## 2.4. Dorchester Avenue and Harborwalk Reconstruction

Currently, the majority of Dorchester Avenue, in the immediate vicinity of South Station, is in private use by the USPS in support of its operations, with limited public access allowed for USPS customers and MBTA commuters. The SSX project would restore Dorchester Avenue in its entirety for public and station access. Restoration of Dorchester Avenue would reconnect it to Summer Street as a public way. It would include landscaping and improved pedestrian and cycling connections and facilities, including adjacent sidewalks and crosswalks. Restoration also would include construction of an extension of the Harborwalk along the reopened Dorchester Avenue. The Harborwalk extension would include landscaping and street furniture, as well as add more than one acre of open space to the area. Should the acquisition of the USPS advance before funding is identified for the entire project, MassDOT may consider moving forward with the demolition of the USPS and reopening of Dorchester Avenue (along with associated Harborwalk improvements) before other project elements in order to provide improved public access along the Fort Point Channel.

## 2.5. Layover Facility Construction

The SSX project is proposing to provide layover space by expanding or establishing additional facilities at Widett Circle and Readville – Yard 2 to make railroad operations at South Station more efficient and better able to accommodate future service growth.

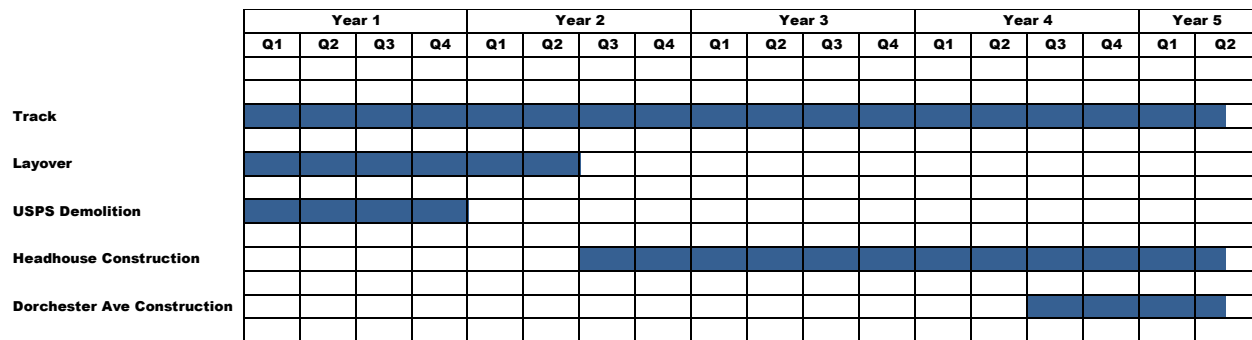
Construction activities at the layover sites would include construction of utilities, roads, and site civil work, including drainage structures.

## 3. Construction Plan

Construction activities include the areas defined in Section 2, Project Description, and are generally categorized as rail, vertical construction, utility relocation and installation, and site and roadway development. The rail-related construction activities would be performed in close coordination with the operating railroads, including the MBTA and its commuter rail operator (currently Keolis), Amtrak, and CSX Transportation, Inc. (CSXT). Flagging (protection of trains and employees) and inspection services would be provided by the operating railroad for a given section of track. Other, non-rail-related construction activities would be coordinated with the City of Boston, utility companies, and other public and private entities as appropriate. Laydown/staging locations are envisioned in the following locations:

- South Station: The existing Dorchester Avenue, currently closed to the public, would be used as a staging area for the demolition of the USPS facility. Once the USPS building is demolished and cleared, the former building site can be used for staging of the headhouse, rail work, and Dorchester Avenue construction.
- Widett Circle: It is anticipated that the yard construction can be staged in segments that would allow for staging to be done in a separate location within the property.
- Readville – Yard 2: It is anticipated that the yard construction can be staged in segments that would allow for staging to be done in a separate location within the yard.

Figure 2 presents the proposed construction sequencing for the SSX project.



**Figure 2 — Proposed Construction Sequencing**

The specific work activities described below further define the construction schedule and sequencing, as well as major work activities for each area.

### 3.1. USPS Facility Demolition

Demolition of the USPS located on Dorchester Avenue would take approximately one year, and would occur at the beginning of the project to make the site available for future construction and staging/laydown space. The site demolition can occur simultaneously with rail construction. The general construction sequencing at the USPS site would be as follows:

- Mobilization and site preparation;
- Demolition of existing structures;
- Excavation; and
- Foundation installation for the proposed track and headhouse.

### 3.2. South Station Track Construction

Installation of the seven new tracks, four platforms, and connections and modifications to Tower 1 Interlocking, and reconfiguration of the approach interlockings would take approximately 4.5 years. The new track and platforms would largely be constructed outside of the existing South Station footprint. The work at Tower 1 Interlocking would require track outages, but would largely be completed during non-revenue hours (12:00 a.m. to 5:00 a.m.), 55-hour weekend closures (Friday 10:00 p.m. to Monday 5:00 a.m.), and using other methods that minimize disruption to passenger service. The general construction sequencing for track installation at the South Station site would be as follows:

- Mobilization and site preparation;
- Rail infrastructure installation;
- Station platforms; and
- Track testing.

### 3.3. South Station Terminal Expansion

Construction of the expanded headhouse and egress components at the South Station site would take approximately three years, beginning in the first quarter of Year 3 and ending in the fourth quarter of Year 5. Construction activities would include passenger circulation and waiting areas, concourse areas, and connections to the South Station Bus Terminal and parking garage. Passenger use most likely would



not be affected during peak hours for the station. Disruptions would be largely minimized during other hours by completing utility connection work in non-public spaces, and using non-revenue hours for public space connections. Once areas are no longer needed for construction activities, they would be returned to public use. The general construction sequencing for headhouse construction at South Station would be as follows:

- Mobilization and site preparation;
- Installation of utility connections;
- Construction of the headhouse, including concourse and passenger circulation and waiting areas;
- Construction of the egress components; and
- Site furnishings and signage installation.

### **3.4. Dorchester Avenue and Harborwalk Reconstruction**

Reconstruction of Dorchester Avenue would take approximately one year. Construction activities would include reconstruction of the vehicle travel lanes, raising a portion of Dorchester Avenue and the historic seawall, construction of the parking lanes, Harborwalk, bicycle accommodations, streetscape, and landscaping as well as utility and drainage installation. The general construction sequencing for reconstruction of Dorchester Avenue would be as follows:

- Mobilization and site preparation;
- Utility and drainage installation;
- Construction of the roadway and parking lanes;
- Construction of the Harborwalk including bicycle accommodations; and
- Construction of streetscape and landscaping.

### **3.5. Layover Facility Construction**

#### **3.5.1. Widett Circle Layover Facility**

Installation of the new tracks, connections and modifications to the existing tracks, and the shore power (electrical plug-ins) at the Widett Circle site would take approximately 1.5 years. Construction would include track, signals, and facility program functions such as crew quarters and parking, but would also include demolition of existing structures at the Widett Circle facility. The general construction sequencing for track and infrastructure installation at the Widett Circle site would be as follows:

- Mobilization and site preparation;
- Existing building demolition;
- Rail infrastructure installation;
- Utility installation and non-rail site construction;
- Installation of shore power facilities; and
- Track testing.

MassDOT understands that the City of Boston is considering Widett Circle as a potential location for future air-rights development. This would require decking over any future layover yard in order to

provide a ground plane on which to build. The proposed design of the Widett Circle layover facility can accommodate and does not preclude future air rights development opportunities, which are outside the scope of this project. As any City efforts advance, MassDOT will continue to coordinate with the City to help realize a future development vision for Widett Circle.

### **3.5.2. Readville – Yard 2 Layover Facility**

Because Readville is an active layover yard, construction would be staged to minimize impacts to daily operations. Installation of the new tracks, connections and modifications to the existing tracks, and the shore power at the Readville – Yard 2 Layover Facility would take approximately six months. Construction would include track, signals, and facility program functions such as crew quarters and parking, as well as extension of the existing noise barrier. The general construction sequencing for track and infrastructure installation at the Readville – Yard 2 site would be as follows:

- Mobilization and site preparation;
- Rail infrastructure installation;
- Utility installation and non-rail site construction;
- Installation of shore power facilities; and
- Track testing.

## **4. Construction Impacts and Mitigation**

Construction at the South Station site would be phased to provide a balance between duration and impact. To minimize impacts to rail services and passengers, the contractor(s) would use overnight work windows, weekend work outages, and strategic track closures. As the project advances through preliminary design, MassDOT would coordinate with transportation providers and rail agencies to identify opportunities for strategic closures and alternatives for replacement services.

An example of a strategic track closure would be to shut down for a period of time the Old Colony Line coming into South Station and allow around-the-clock construction at South Station on tracks impacted by this route. Commuter rail passengers would be bused to South Station or transferred from the Old Colony Line at Braintree to the Red Line. This would allow the contractor an extended work window.

Any outages along the NEC would impact Amtrak operations and maintenance activities. This could require overnight closures of South Station for Amtrak with use of Back Bay Station and shuttles as a temporary replacement. Closures that would impact Amtrak's access to maintenance facilities would have to be planned in advance. Freight operations would not be impacted as operations are not in the construction vicinity. Construction would not adversely impact South Station Bus Terminal operations.

Final construction staging/phasing would be determined as part of final design through discussions with MassDOT and project stakeholders. Once the project is advertised and bid, the selected contractor would also have the opportunity to propose changes to the construction staging/phasing as part of the bid process, to be approved by MassDOT and other agencies before implementation.

Work at the layover facilities and within the Dorchester Avenue and USPS building envelope can occur unencumbered, subject to state, local and agency provisions.

Passenger use most likely would not be affected during peak hours for the station, with the exception of building over the existing terminal and during strategic track closure events. Disruptions would be largely minimized during other operating hours by completing utility connection work in non-public spaces, and using non-revenue hours for public space connections. Once areas are no longer needed for construction activities, they would be returned to public use.

Construction access to the South Station site would occur from Dorchester Avenue, currently closed to traffic due to the USPS facility. All work to be completed at South Station would be completed by construction workers and materials utilizing Dorchester Avenue. Construction access to the Widett Circle site would occur from Widett Circle, a local street immediately adjacent to the layover facility site that connects to the I-93 frontage road. All existing businesses in this location would be closed prior to construction; therefore no access to these businesses during construction would be required. Construction access to the Readville – Yard 2 site would occur from Wolcott Court, a local street immediately adjacent to the layover facility site and the only public roadway that provides access to this location.

The construction sites would be secured by fence enclosures that can also be closed completely during non-work hours. During work hours, workers on site are required to carry proper identification and training cards. Visitors would be required to sign in at the construction entrance. Construction sites would maintain a security guard presence, as determined by state, local and agency requirements.

The contractor would be required to abide by the requirements set forth in MassDOT's *Supplemental Specifications to the 1988 English Standard Specifications for Highways and Bridges*, dated July 1, 2015. The rail and local agencies also identify these requirements in their specifications. In an effort to minimize contradiction or redundant language in the construction contract(s), the specifications would reference the MassDOT specifications only. Any additional requirements would be added to the special provisions of the specifications, as noted in the sections below. The following subsections describe the impacts and mitigation methods to be used by the contractor, based on the proposed construction schedule.

#### **4.1. Air Quality Impacts**

Temporary air quality impacts can be categorized as either dust or emissions. The contractor would be required to control dust and emissions both during active construction activities and during non-work hours. Per MassDOT requirements, the contractor would be required to submit a Dust and Emissions Control Plan for approval by MassDOT prior to beginning any construction activities. The plan would include notation of all the surrounding areas potentially affected, specific equipment used and the measures taken to minimize the emissions made by the equipment to those surrounding areas. These requirements are defined in Subsection 7.02 Pollution Prevention, Part I, Air Pollution Requirements in MassDOT's *Supplemental Specifications to the 1988 English Standard Specifications for Highways and Bridges*, dated July 1, 2015. The MassDOT specifications include the dust and emissions control requirements as identified in the Draft Environmental Impact Report (DEIR). As the design is progressed to final plans and specifications, additional special provisions would be added to the specifications by the designer and owners.

#### **4.2. Soil Erosion and Sediment Control**

The contractor would be required to implement Soil Erosion and Sediment Control measures prior to beginning construction, and maintain and/or replace these measures throughout construction as required by the controlling agency. These requirements are defined in section 767, Mulching, Seed for Erosion Control in MassDOT's *Supplemental Specifications to the 1988 English Standard Specifications for Highways and Bridges*, dated July 1, 2015. The MassDOT specifications include the soil erosion and

sediment control requirements as identified in the DEIR. As the design is progressed to final plans and specifications, additional special provisions would be added to the specifications by the designer and owners.

Additionally, the contractor would be required to follow the provisions set forth by the Boston Water Sewer Commission (BWSC) Stormwater Permit, and the Massachusetts Water Resources Agency (MWRA) 8(m) Permit. If groundwater is encountered during the construction activities, an MWRA Temporary Construction Site Dewatering Discharge Permit will be required pursuant to 360 C.M.R. 10.091- 10.094. The contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) that documents all of these efforts for construction prior to beginning any work. The SWPPP is to be approved by MassDOT and state and federal agencies prior to the commencement of work.

### **4.3. Rare and/or Endangered Species**

There are no known rare and/or endangered species resident to the project sites.

### **4.4. Noise Impacts**

The contractor would be required to control dust and emissions both during active construction activities and during non-work hours. Per MassDOT requirements, the contractor would be required to submit a Noise Control Plan for approval by MassDOT prior to beginning any construction activities. The plan would include notation of all the surrounding areas potentially affected, specific equipment used and the measures taken to minimize the noise made by the equipment to those surrounding areas. These requirements are defined in Subsection 7.02 Pollution Prevention, Part I, Air Pollution Requirements in MassDOT's Supplemental Specifications to the *1988 English Standard Specifications for Highways and Bridges*, dated July 1, 2015. Additionally, the Contractor's work would be completed in accordance with the City of Boston's noise control ordinances. If night work is required, the proper permits would be obtained and the more stringent noise regulations would apply. These requirements are typically included in the project-specific specifications by MassDOT prior to the contract being released for bid. The MassDOT specifications include noise impact requirements as identified in the DEIR. As the design is progressed to final plans and specifications, additional special provisions would be added to the specifications by the designer and owners.

### **4.5. Traffic Impacts**

Travel to and from the South Station project site for workers would be divided into on-site vehicles, off-site shuttles, and transit. Based on 2014 census data from the U.S. Department of Commerce<sup>2</sup> it is assumed that 48% of construction workers would drive in a single occupancy vehicle, 7% would carpool, and 45% would use transit.

For the South Station site, an analysis of the construction sequencing and the proposed work shows the total vehicles generated would average 280 single occupancy vehicles (SOVs) per work day. This was

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<sup>2</sup> The Census Data from the 2014 American Community Survey (ACS) was extrapolated to include only Drive Alone, Carpool, and Public Transit to make up 100% of commuting employees. Based on the *Percentage of Workers By Commuting Modes: U.S. Department of Commerce, United States Census Bureau American FactFinder, "Means of Transportation To Work By Selected Characteristics for Workplace Geography - 2014 American Community Survey 1-Year Estimates"*  
[http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\\_14\\_1YR\\_S0804&prodType=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_1YR_S0804&prodType=table)

calculated by estimating the number of workers based on construction value for each major work element including track, layover, headhouse, and Dorchester Avenue construction and USPS demolition. The project site can accommodate the projected necessary construction vehicles along Dorchester Avenue and areas outside of the building footprint during USPS demolition and South Station Terminal Expansion. Additional vehicles, if required, would be accommodated at offsite parking locations, where shuttles would be provided to minimize the construction-related traffic. The work hours for the project generally would not overlap with the morning and afternoon peak hours for the roadways adjacent to the project area, and should not constitute a significant increase in traffic above current levels. A detailed traffic management plan (TMP) would be submitted for the project with the intent of phasing the project construction so that any disruptions to roadways and sidewalks adjacent to the project area are either minimized or mitigated. Mitigation could include time-of-day restrictions for vehicle on-site access to specific areas.

For the two layover sites, 205 vehicles at Widett Circle and 58 vehicles at Readville – Yard 2 are expected to be generated. Parking capacity is adequate at both locations; therefore, no additional shuttling would be required.

All three project construction areas can be fully enclosed without changes to existing pedestrian, bicycle and motor vehicle paths. Short term closures (typically a week or less) may occur for tie-in construction, and would require approved plans submitted by the contractor.

The MassDOT specifications include traffic impact requirements as identified in the DEIR. As the design is progressed to final plans and specifications, additional special provisions would be added to the specifications by the designer and owners.

## **4.6. Work Hours**

MassDOT work is typically restricted to a normal 8-hour day, 5-day week, with the contractor and all subcontractors working on the same shift. No work would be done on Saturdays, Sundays, holidays, or the day before or after a holiday without prior approval of MassDOT. Night work typically requires a two week notification to the public. These requirements are defined in Subsection 7.09 Public Safety and Convenience, in MassDOT's *Supplemental Specifications to the 1988 English Standard Specifications for Highways and Bridges*, dated July 1, 2015. The MassDOT specifications include work hour and design constraint limitations as identified in the DEIR. As the design is progressed to final plans and specifications, additional special provisions would be added to the specifications by the designer and owners.

For work in the South Station Terminal and Track areas, work would occur during overnight work windows (12:00 a.m. to 5:00 a.m.) and 55-hour weekend work outages (Friday 10:00 p.m. to Monday 5:00 a.m.) to minimize impacts to rail service and passengers.

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