

5

CHAPTER FIVE

Determination of Air Quality Conformity

BACKGROUND

The Commonwealth of Massachusetts is classified as “unclassifiable/attainment” for the ozone standard with the exception of Dukes County. Therefore, the Boston Region MPO does not have to perform a conformity determination for ozone for its LRTP or TIP.

In addition, on April 1, 1996, the cities of Boston, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, and Somerville were classified as “attainment” for carbon monoxide (CO) emissions. As part of past LRTPs, an air-quality conformity analysis was required for these communities, as they had a carbon monoxide maintenance plan approved as part of the Massachusetts State Implementation Plan (SIP). As of April 1, 2016, the 20-year maintenance period for this CO maintenance area expired and transportation conformity is no longer required for CO in these municipalities. This is documented in a letter from the United States Environmental Protection Agency dated May 12, 2016.

As of April 22, 2002, the community of Waltham was re-designated as being in attainment for CO, with an EPA-approved limited-maintenance plan. In areas that have approved limited-maintenance plans, federal actions requiring conformity determinations under the transportation conformity rule are

considered to satisfy the “budget test” (as budgets are not treated as being constraining in these areas for the length of the initial maintenance period). Any requirements for future “project-level” conformity determinations for projects located within this community will continue to use a “hot-spot” analysis to ensure that any new transportation projects in this CO attainment area do not cause or contribute to CO nonattainment.

Therefore, the MPO is not required to perform modeling analyses for a conformity determination for ozone or CO; it is only required to provide the statement in the paragraph above regarding the Waltham attainment area. However, it still is required to provide a status report on the timely implementation of transportation control measures included as part of the SIP. This status report is provided below.

Timely Implementation of Transportation Control Measures

Transportation control measures (TCMs) were required in SIP in revisions submitted to the EPA in 1979 and 1982, and in those submitted as part of the Central Artery/Tunnel (CA/T) project. The TCMs included in the 1979 and 1982 submissions were

accomplished through construction or implementation of ongoing programs.

The TCMs submitted as part of the CA/T project mitigation have been included in the LRTP as recommended or completed projects, except for the following three projects:

- Completion of a final design of the Red Line-Blue Line Connector from the Blue Line at Government Center to the Red Line at Charles Station
- Fairmount Line Improvements
- Enhanced Green Line extended beyond Lechmere Station to Medford Hillside and Union Square

MassDOT worked with the Massachusetts Department of Environmental Protection (DEP) to address these projects, and continues to keep the Boston Region MPO informed of their status through monthly reports at the MPO's regularly scheduled meetings. The Boston Region MPO will continue to include these projects in the LRTP and TIP until the process has been completed, assuming that any interim projects or programs would provide equal or better emissions benefits. When the process has been completed, the MPO will amend the LRTP and future TIPs and their conformity determinations to include any changes (including any interim projects or programs).

A Status Report of Uncompleted SIP Projects

The status of the SIP projects has been updated using the *SIP Transit Commitments Status Report*, submitted by MassDOT to DEP in May 2016. Highlights of the report are presented below. For a detailed description of these projects' status, please visit the MassDOT website at:

<https://www.massdot.state.ma.us/planning/Main/PlanningProcess/StateImplementationPlan/SIPTransitCommitmentSubmissions.aspx>

Red Line-Blue Line Connector - Final Design - SIP Required Completion by December 2011

Project Status

MassDOT initiated a process to amend the SIP to permanently and completely remove the obligation to perform a final design of the Red Line-Blue Line Connector. To that end, MassDOT officially sought approval from DEP to support a SIP amendment process. MassDOT did not propose to substitute any new projects in place of the Red Line-Blue Line Connector commitment, given the absence of any air-quality benefits associated with that project (final design only). Correspondence from MassDOT to DEP to initiate the amendment process formally was submitted on July 27, 2011, and is posted on the MassDOT website.

On September 13, 2012, DEP held two hearings to take public comment on MassDOT's proposed amendments to 310 CMR 7.36, "Transit System Improvements," including eliminating the requirement to complete the final design of the Red Line-Blue Line Connector. Between the two hearings, there were 16

attendees, 10 of whom gave oral testimony. All who spoke at the hearings were in favor of DEP not removing the commitment. DEP accepted written testimony until September 24, 2012.

On August 23, 2013, EPA sent a letter to the Federal Highway Administration (FHWA) to provide an update on Massachusetts Air Quality Conformity. In that letter, EPA noted that the Red Line-Blue Line Connector Design project had not met its completion date of December 2011, but that MassDOT was not obligated to implement interim emission-reduction projects because no emission reductions are associated with the design project.

On October 8, 2013, the DEP approved a request made by MassDOT in July 2011 to revise 310 CMR 7.36 to remove the requirement that MassDOT complete the design of the Red Line-Blue Line Connector. This revision to the SIP needed to be approved by EPA. The text of the revision is available on the MassDOT website at: <http://www.massdot.state.ma.us/Portals/17/docs/sip/October13UpdatedSIPReg.pdf>.

On December 8, 2015, EPA published a final rule in the Federal Register approving the SIP revision submitted by the Commonwealth of Massachusetts on November 6, 2013. The final rule removes from the SIP the commitment to design the Red Line-Blue Line Connector project.

Funding Source

This commitment has been nullified.

Fairmount Line Improvements Project - SIP Required Completion by December 2011

Project Status

The Four Corners and Newmarket Stations opened for service on July 1, 2013. All change orders have been paid and the project is officially closed out. The Talbot Avenue Station opened in November 2012.

A station at Blue Hill Avenue has been the subject of significant community controversy during the past seven years. Redesign of the station reached 100 percent, with plans submitted in March 2016. While the community still has concerns, the project team is now advancing with the understanding that continued coordination with the community is paramount. Construction is scheduled to begin in winter 2016, and the station to open in summer 2018.

MassDOT and the MBTA prepared a Petition to Delay and an Interim Emission Offset Plan to be implemented for the duration of the delay of the Fairmount Line Improvements project. MassDOT estimated the reduced emissions that are expected to be generated by implementing the new Fairmount Line station and, with input from Fairmount Line stakeholders, proposed offset measures. MassDOT estimated that the potential offset measures would meet emissions-reduction targets. The measures include shuttle bus service from Andrew Square to Boston Medical Center and increased service on bus Route 31, which serves Dorchester and Mattapan. These measures were implemented on January 2, 2012, and currently are in place.

Funding Source

The Commonwealth

Green Line Extension to Somerville and Medford Project – SIP Required Completion by December 2014

Project Status

State-level environmental review (Massachusetts Environmental Policy Act (MEPA)) was completed in July 2010. Federal-level environmental review (National Environmental Policy Act (NEPA)) documents were submitted to the Federal Transit Administration in September 2011, and a public hearing was held on October 20, 2011. A Finding of No Significant Impact (FONSI) was issued by the Federal Transit Administration (FTA) on July 9, 2012.

On January 5, 2015, the US Secretary of Transportation and the MBTA signed the Full Funding Grant Agreement (FFGA) for the Green Line Extension project (GLX), approving \$996,121,000 of FTA New Starts funding to support design and construction of the project. Execution of the FFGA was the result of many years of planning, design and pre-construction efforts by MassDOT and the MBTA, in collaboration with the FTA and its Project Management Oversight Consultant. Federal funding is scheduled to be paid between federal fiscal years (FFYs) 2015 and 2022. As noted in the MassDOT Capital Investment Plan (CIP) for fiscal year 2016, MassDOT and the MBTA will use Commonwealth funds in addition to federal funding to support design and construction activities.

As the project proceeded, it was later found that the project scope as defined in the Full Funding Grant Agreement could not be built for the \$1.992 billion project cost established in January 2015. It was

projected that the total project cost could range between \$2.7 billion and \$3.0 billion. The Commonwealth's share of overall project costs would then be between \$1.7 billion and \$2.0 billion, rather than the currently budgeted \$996 million.

With the federal contribution capped at \$996 million and the Commonwealth responsible for all project cost increases, MassDOT and the MBTA had no choice but to re-evaluate the GLX project in order to recommend to the Commonwealth if and how the project should proceed.

MassDOT and the MBTA are now working to identify opportunities to value engineering elements of the project in order to bring costs of the overall project closer to the original anticipated costs.

The MBTA Fiscal and Management Control Board and the MassDOT Board were briefed on August 24, 2015 and September 9, 2015, respectively, about these developments.

Before seeking additional state funding, MassDOT and the MBTA considered:

- All available options to reduce costs
- All available options to identify additional funding from sources other than the Commonwealth
- Whether or not to proceed with the Green Line Extension project

MassDOT and the MBTA actively sought stakeholder and public input on, as well as staff analysis of, options including the following:

Option 1 - Reduce the Project Scope and Project Costs

Downsize, delay, or eliminate planned vehicle maintenance and storage facility

Option 2 - Find Additional Sources of Funds, Other than State Bonds

This could include:

- Reallocate \$158 million programmed by the Boston Region MPO for a future Route 16 extension to the core GLX project (the MPO endorsed this action in Amendment Four of the 2016–20 TIP)
- Work with municipal partners (Cambridge and Somerville committed \$75 million towards the project)
- Obtain institutional and private contributions
- Seek any additional federal funding in cooperation with the Congressional delegation

Option 3 - Change Procurement Method

Halt Construction Manager/General Contractor process and rebid project—in smaller contract packages—using a more traditional procurement method

Option 4 - Mothball or Cancel the Project

On May 9, 2016, the MBTA Fiscal and Management Control Board and the MassDOT Board voted to advance a scaled-down version of the project by submitting the redesign to federal regulators and continuing with plans for financing the project.

MassDOT will provide an update to DEP and the public as soon as it has determined the impact of this delay on the overall project schedule.

Prior to the cost increase, the project had been moving forward, with MassDOT and MBTA implementing a four-phased project-delivery plan.

Phase 1 used the traditional design-bid-build approach to deliver the contract for widening the Harvard Street and Medford Street railroad bridges and demolishing the 21 Water Street building. The MBTA also added some retaining wall construction to the Phase 1 contract that had previously been programmed for Phase 4 in that area. This contract is completed.

Phase 2/2A will extend service from the (new) Lechmere Station to the Washington Street and Union Square Stations and relocate the bus facility and vehicle storage at Lechmere Station.

Phase 3 will construct the vehicle-maintenance facility and storage facility.

Phase 4 will provide service from Washington Street Station (completed as part of Phase 2, above) to College Avenue Station.

New Green Line Vehicles: The MBTA Vehicle Procurement contract to purchase 24 Type 9 Vehicles was awarded to CAF USA Inc. in an amount not to exceed \$118,159,822 at the MassDOT Board Meeting held on May 14, 2014. The NTP for this contract was issued on September 4, 2014.

CAF is in the process of developing drawing packages for the Preliminary Design; and the MBTA Project Team and CAF continue to hold technical working sessions and project meetings. In addition, weekly project management meetings are held between MBTA and CAF to discuss project status, short-term schedules and priorities; and monthly project status meetings are held to review and discuss all project issues, including schedules, deliverables, and milestones.

The first vehicle is to be delivered no later than 36 months from the notice to proceed. The pilot car delivery is scheduled for September 2017. The pilot car will receive comprehensive testing for six months followed by delivery of the remaining 22 vehicles, with the last car to be delivered by July 2018. All vehicles are expected to be in service in early 2019.

Somerville Community Path: Originally the Green Line Extension project included just the design of the extension of the Somerville Community Path from south of Lowell Street to the Inner Belt area of Somerville. In May 2014, MassDOT and the City of Somerville announced an agreement to add construction of the Community Path, including a connection to the Cambridge/Northpoint area, to the scope of the program. The Path Extension is not part of the SIP commitment and is currently being re-evaluated by the MBTA Fiscal and Management Control Board and the MassDOT Board.

SIP Requirement Status

By filing an Expanded Environmental Notification Form, procuring multiple design consultants, and

publishing Draft and Final Environmental Impact Reports, MassDOT met the first four interim milestones associated with the Green Line Extension project. MassDOT—which has committed substantial resources to the Green Line Extension project, a top transportation priority of the Commonwealth and the largest expansion of the MBTA rapid transit system in decades—has transitioned the project from the planning and environmental review phases to design, engineering, and eventual construction, coupled with the tasks associated with applying for New Starts funding.

In the 2011 SIP Status Report, MassDOT reported that the Green Line Extension project would not meet the legal deadline of December 31, 2014.

Although the goal of the phased project delivery approach is to complete components in an incremental way, the timeline for overall project completion listed above represents a substantial delay beyond the current SIP deadline of December 31, 2014; this triggered the need to provide interim emission reduction offset projects and measures for the period of the delay (beginning January 1, 2015). Working with the Central Transportation Planning Staff, MassDOT and the MBTA calculated the reductions of non-methane hydrocarbon, carbon monoxide, and nitrogen oxide—reductions equal to or greater than those projected for the Green Line Extension itself, as specified in the SIP regulation—that will be required for the period of the delay.

In June 2012, MassDOT released a list of potential mitigation ideas received from the public that could be

used as offset measures. In the summer and fall of 2012, MassDOT solicited public comments on these potential measures. The MBTA created an internal working group to determine a final portfolio of interim mitigation measures to implement by December 31, 2014, the legal deadline for implementation of the Green Line Extension.

This work resulted in a recommendation to implement the following three interim mitigation measures, which collectively would meet the emissions-reduction target for the project:

- Additional off-peak service along existing routes serving the GLX corridor, including the Green Line, and bus routes 80, 88, 91, 94, and 96
- Purchase of 142 new hybrid electric vehicles for THE RIDE
- Additional park-and-ride spaces at the Salem and Beverly intermodal facilities

The Petition to Delay, submitted to DEP on July 22, 2014, which expands further on the analysis and determination of the interim offset measures, is available on MassDOT's website. These measures went into effect at the beginning of 2015.

Funding Source

The Commonwealth

Russia Wharf Ferry Terminal

Project Status

Former MassDOT Secretary Richard Davey approved construction of the permitted ferry facility and a \$460,000 ferry-service startup subsidy in October 2012. The 2005 facility plans and specifications were

revised to meet the latest MassDOT Highway Division standards. The bid package was issued in fall 2013. A contractor was selected and the Notice to Proceed was issued in April 2014. Pre-construction activities progressed, but contractual issues associated with the project design led MassDOT to decide to rebid the contract. There is no regularly scheduled passenger water transportation service in this area, nor are there any plans to provide such service.

The City of Boston, however, is undertaking design and engineering work to address the Old Northern Avenue Bridge, which will allow for ferry vessel-clearance. The city received a grant in 2012 to purchase two ferry vessels for Inner Harbor use, which could include this ferry terminal as a destination. The Massachusetts Convention Center Authority has agreed to take over that grant and will purchase the vessels. Procurement could occur in calendar year 2016.

Funding Source

The Commonwealth