

GREEN LINE EXTENSION PROJECT

Fall 2009



Introduction

The Massachusetts Department of Transportation (MassDOT) is proposing to extend the Green Line to improve transit service, mobility, and regional access for residents and visitors of Cambridge, Somerville, and Medford. Bringing MBTA light rail service to these densely populated cities will address longstanding transportation inequities, result in fewer automobiles on local roads, and help to combat greenhouse gas emissions and other components of air pollution. The Green Line Extension will also support municipal plans for smart growth and urban redevelopment and provide residents of environmental justice communities with faster rides to jobs and other destinations.

Proposed Project

In recent years, MassDOT has been studying alternatives for extending Green Line service beyond Lechmere Station in Cambridge into Somerville and Medford. The proposed service consists of two distinct branches: a “mainline” branch which will operate within the existing MBTA Lowell Line Commuter Rail right-of-way, beginning at a relocated Lechmere Station in Cambridge and traveling north to Medford; and a branch line operating within the existing MBTA Fitchburg Line Commuter Rail right-of-way to Union Square in Somerville. For both lines, the existing Commuter Rail tracks will be moved and the new Green Line tracks will be located within the existing rights-of-way.

To support this proposal, a detailed environmental analysis was conducted for each of the various proposed alternatives, and the proposed project was then selected. The summary of this analysis is detailed in a Draft Environmental Impact Report/Environmental Assessment (DEIR/EA), a combined state and federal planning document. The DEIR/EA contains the results of technical information on potential benefits and environmental impacts to the municipalities through which the Green Line Extension will run. The document is now available for public review at www.mass.gov/greenlineextension.

As described in the DEIR/EA, MassDOT is proposing that the Green Line be extended to College Avenue in Medford, with a branch to Union Square in Somerville. This alternative, referred to as the **Proposed Project**, provides a reasonable balance of cost, new ridership, mobility and other benefits, and environmental impacts. It will also improve regional air quality and can be accomplished by December 31, 2014, the legal deadline for the initiation of passenger service. Once additional funding becomes available, MassDOT intends to pursue extending the Green Line further to Mystic Valley Parkway/Route 16. Both phases of the project have been fully evaluated in the DEIR/EA.

The Commonwealth is pursuing the Green Line Extension project in an environment of severe financial

Facts and Figures:

Miles of new service: approximately 4

Communities served: Cambridge, Somerville, and Medford

Number of new stations: 7 (including relocated Lechmere Station)

Projected opening: December 31, 2014

New MBTA systemwide transit trips: 7,900

Peak headways: 5 to 6 minutes

Accessibility: Full

Reduction in Vehicle Miles Traveled (VMTs): 25,018 daily in 2030

Cost: \$805 million (2008); \$932.4 million (Year of Expenditure)

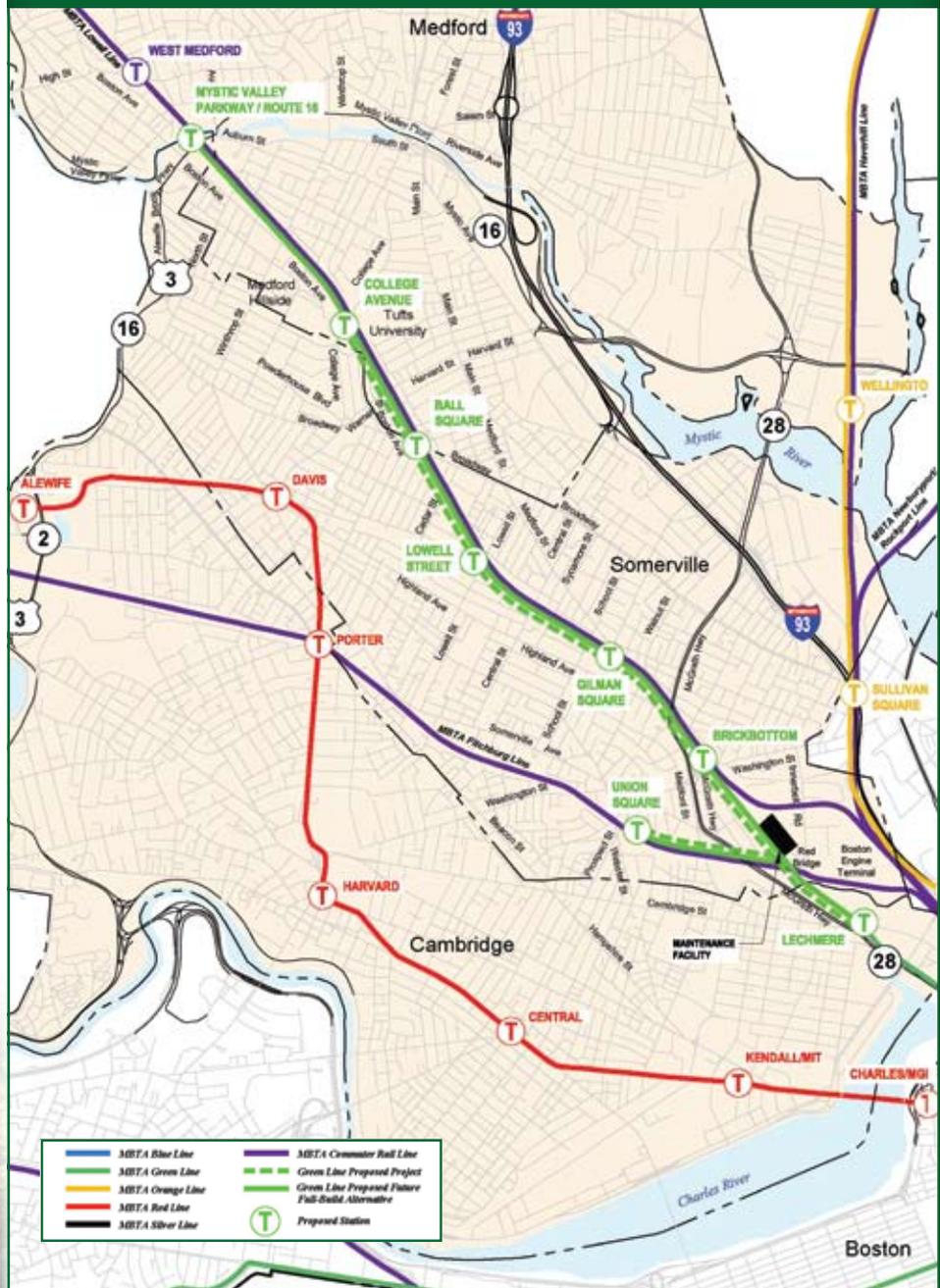
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limitation, not only for transportation, but for all public services. In the summer of 2009, the Boston Region Metropolitan Planning Organization undertook a revision of the twenty-five year Regional Transportation Plan (RTP), a federally-required document charting the course for transportation expansion initiatives. This effort required a comprehensive reassessment of the financial capacity of the Commonwealth to continue to advance certain major projects that have been under consideration for decades. As a result, the Federal Highway Administration and the Federal Transit Administration approved an RTP in October 2009 that failed to provide funding for both the Urban Ring project and Phase III of the Silver Line project. The RTP now includes public transit projects which the Commonwealth has committed to through the State Implementation Plan for air quality conformity, including the Green Line Extension to Medford Hillside and Union Square. These are the efforts that the Commonwealth is currently able to support financially. For this reason, the Proposed Project described here adheres to the geographic boundaries of Medford Hillside and Union Square. The Proposed Project will be the one for which MassDOT pursues federal funding.

PROPOSED PROJECT



The Green Line Extension is a top transportation priority of the Commonwealth. It offers a number of benefits:

- A one-seat ride from the project corridor to downtown Boston, (eliminating the need for bus and rail transfers at Lechmere Station and at Orange and Red Line stations) and improving travel times within the project corridor.
- A projected reduction in daily Vehicle Miles Traveled (VMT) by 25,018 miles, improving air quality and reducing automobile congestion.

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- An increase in the MBTA's anticipated daily ridership by approximately 52,000 trips (boardings and alightings) at the new Green Line Extension stations by the year 2030. Approximately 70% of the new riders are projected to be switching from automobiles.
- An improvement in mobility and service quality for transit-dependent riders, providing better access to jobs, schools, and other destinations.
- A commitment to universal access, with new stations that will meet the Americans with Disabilities Act (ADA) standards.
- Operation in existing railroad rights-of-way, reducing the need to purchase local property and minimizing construction impacts.
- Transit service located in pedestrian-oriented urban centers with minimal disruption to the surrounding neighborhoods and the opportunity for local economic growth.
- Mitigation measures that will reduce existing noise and vibration impacts from area railroads.

Key Terms

Proposed Project –

Extension of the Green Line from a new Lechmere Station to College Avenue in Medford, with a spur to Union Square in Somerville.

Draft Environmental Impact Report/Environmental Assessment (DEIR/EA) –

A combined state and federal document analyzing a broad range of environmental impacts projected as a result of the Green Line Extension project.

MassDOT –

Due to recent administrative reorganization, the Massachusetts Department of Transportation (MassDOT) replaces the Executive Office of Transportation as the umbrella transportation agency for the Commonwealth. MassDOT is the sponsor of the Green Line Extension project.

Project Impacts

Land Use – Over time, the Green Line Extension is expected to decrease low-intensity commercial and light industrial uses in the project corridor and to increase mixed-use, high-density transit-oriented development. The **Proposed Project** design minimizes impacts to land, businesses, and residences as much as possible by using existing transportation corridors.

Environmental Justice – The Green Line Extension will substantially increase transit access for environmental justice and disabled populations.

Traffic – With the proposed mitigation, the **Proposed Project** will improve traffic and pedestrian movements at many intersections and will not have an adverse impact on existing traffic operations. Where possible, the design will include direct connections from bicycle facilities to the Green Line stations. There will be ample bicycle parking at the new stations. There are also anticipated to be minimal impacts to vehicular parking in the project corridor, and the DEIR/EA includes recommendations for municipal parking enforcement plans.

Noise & Vibration – MassDOT will install noise barriers or noise walls in areas where the Green Line Extension could be expected to produce higher noise levels than currently exist. With such walls in place, future noise levels are expected to be lower than existing noise levels in many places. At locations where noise barriers are not feasible or effective, MassDOT expects to provide sound insulation or alternative mitigation measures where appropriate. Similar efforts will be made to moderate vibration where homes or businesses are very close to the Green Line Extension tracks. Details on the potential impacts and a description of the mitigation strategies are included in the DEIR/EA.



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Project Cost and Funding

The DEIR/EA includes concept plans (at the 10% level) for the alternative alignments considered for the Green Line Extension project, as well as detailed capital cost estimates for those alternatives. The capital improvements include, but are not limited to: construction of track, station structures, drainage, utilities, property acquisitions and relocations; vehicle acquisitions; and the construction of a vehicle maintenance and storage facility. The project cost also includes relocating the existing Lechmere Station. The total cost is estimated at \$805 million in 2008 dollars, including \$76 million for the purchase of new vehicles. The total estimated costs for the project have been increased to include inflation for the implementation period (Year of Expenditure Dollars or "YOE"). The YOE dollar costs for the project are projected to be \$932.4 million. This projected cost will continue to be refined as engineering progresses.

MassDOT plans to apply for Federal Transit Administration New Starts funding for the Green Line Extension Project. While MassDOT believes the project's benefits will make it competitive for federal funding under the New Starts program, successful completion of the Proposed Project does not depend on receiving federal funding. Any project costs not covered by federal or other sources will be funded by the Commonwealth.

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Project Components

The Green Line Extension project includes construction of approximately four miles of light rail track and systems, seven new stations, and a new maintenance and storage facility to support the vehicles needed for the service. In addition to the infrastructure needs of the project, MassDOT will prepare final designs for the proposed Somerville Community Path adjacent to the Green Line Extension between Lowell Street and the NorthPoint Development area. Details on the conceptual design of the proposed Community Path are included in the DEIR/EA.

Stations

The Green Line Extension stations will be designed for access by foot, bicycle, and – in some station locations – short-term vehicular drop-off/pickup. More details on the design of the Extension stations will be developed during the preliminary engineering phase of the project.

Stations are proposed for the following locations:

Lechmere Station: The new Lechmere Station will be relocated to the east side of Monsignor O'Brien Highway/Route 28 and be elevated. There will be approximately 250 commuter parking spaces at the station (to replace existing station parking).

Brickbottom Station: This station will be located on the east side of Joy Street, south of the intersection of Washington Street. Passengers will enter from Joy Street.

Gilman Square Station: This station will be located along Medford Street, directly behind Somerville High School. Station entrances will be from two locations along Medford Street.

Lowell Street Station: This station will be located north of Lowell Street, along a bridge – to replace the existing Lowell Street bridge – that will accept automobile drop-off/pick-ups and bicycle traffic. Pedestrian access will be provided along Lowell Street.

Ball Square Station: This station will be located north of the Broadway Bridge, near the corner of Broadway and Boston Avenue. The stations will be accessed from both Boston Avenue and Broadway.

College Avenue Station: Located on the north side of the intersection of College Avenue and Boston Avenue, this station will serve residential neighborhoods adjacent to the station and the Tufts University campus. The station provides two points of access, one from College Avenue and the second along Boston Avenue.

Union Square Station: This station will be located at the intersection of the MBTA Fitchburg Commuter Rail Line and Prospect Street. Access will be provided at two locations along Prospect Street.

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Projected Daily Boardings in the Year 2030 by Station

Station	Daily Boardings
Lechmere	10,900
Brickbottom	2,730
Gilman Square	4,410
Lowell Street	1,260
Ball Square	1,890
College Avenue	2,420
Union Square	2,310

Storage/Maintenance Facility

The Proposed Project requires a storage/maintenance facility with four vehicle storage tracks (providing storage capacity for approximately 80 Green Line vehicles), an employee parking lot (for approximately 100 automobiles), and equipment for Green Line vehicle maintenance. A support facility building is also required, including maintenance bays, a storage room, loading docks, administrative offices, and employee facilities.

MassDOT has analyzed the environmental impacts of locating the storage/maintenance facility within the confines of the so-called Yard 8 site within the Inner Belt area of Somerville. This analysis is presented in full in the DEIR/EA. In addition, the Green Line Extension project team has decided to explore two new potential locations for the construction of the facility: (1) a location labeled "Option L," which is also located in the Inner Belt area, immediately adjacent to the Boston Engine Terminal, and (2) the "Mirror H" site, which straddles the Inner Belt area of Somerville and the NorthPoint area of Cambridge. The DEIR/EA includes a commitment from MassDOT to further consider both of these alternatives; the outcome of that analysis will determine whether MassDOT chooses to pursue a Notice of Project Change for the Green Line Extension project to formally substitute one of the alternative options for Yard 8 as the preferred site for the storage/maintenance facility.

MassDOT will hold a public meeting to seek input and feedback on the potential storage/maintenance facility locations.

Guide to the DEIR/EA Document and Process

On October 15, 2009, the Executive Office of Transportation* submitted a Draft Environmental Impact Report/Environmental Assessment (DEIR/EA) and Draft Section 4(f) Statement for the Green Line Extension Project to the Secretary of Energy and Environmental Affairs. The document was noticed in the October 26, 2009 *Environmental Monitor*, which began public review of the project under the Massachusetts Environmental Policy Act (MEPA).

Complete reference copies of the document are available at public libraries, including the State Transportation Library, and city clerk's offices in Cambridge, Somerville, and Medford. The DEIR/EA may also be viewed on the project website: www.mass.gov/greenlineextension.

DEIR/EA Contents

While the DEIR/EA is lengthy, MassDOT has developed a comprehensive **Executive Summary** highlighting the key project characteristics and recommendations. The list of chapters below shows you where to review a particular topic in more detail:

Chapter 1, *Introduction and Background*, introduces and summarizes the project; how the project relates to federal, state, and local planning; public involvement and agency coordination; and the requirements of the Secretary's Certificate on the Expanded Environmental Notification Form, previously filed by EOT.

Chapter 2, *Purpose and Need*, defines the purpose of, and need for, the Green Line Extension Project and identifies a number of related project goals.

Chapter 3, *Alternatives*, describes the Preferred Alternative and all of its elements, including stations and the storage/maintenance facility. This chapter also discusses the No-Build alternative, the Baseline Alternative, and the six "Build" Alternatives. This chapter describes how the proposed Somerville Community Path has been integrated into the planning and design of the Proposed Project. It provides background on the ridership modeling methodology

*The Executive Office of Transportation became the Massachusetts Department of Transportation (MassDOT) on November 1, 2009.

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used to assess each Build Alternative, as well as a detailed description and rationale for selecting the Proposed Project.

Chapter 4, *Affected Environment*, discusses the existing conditions and environmental resources that may be affected by the Green Line Extension Project. Environmental resources evaluated include: land use; socioeconomic conditions; environmental justice; traffic; air quality; noise and vibration; stormwater; wetlands; fish, wildlife, and plants; parks and recreation; visual environment; historic and cultural resources; and hazardous materials.

Chapter 5, *Environmental Consequences*, discusses the impacts that each of the Green Line Extension alternatives could have on the environmental resources described in Chapter 4, *Affected Environment*.

Chapter 6, *Draft Section 61 Findings and Mitigation Commitments*, outlines MassDOT's proposed mitigation program to address adverse environmental impacts associated with construction and operation of the proposed Green Line Extension. This chapter includes a draft set of findings on the impacts of the project on the natural environment, in compliance with the requirements of Massachusetts General Laws and the MEPA regulations.

Chapter 7, *Distribution List*, contains a list of governmental agencies and other interested parties who received a copy of the Draft Environmental Impact Report/Environmental Assessment (DEIR/EA) for review.



Opportunities for Public Comment

MassDOT will hold a public hearing on the DEIR/EA on **November 18, 2009 at 6:00PM at Somerville High School** (81 Highland Avenue, Somerville) to allow the public and project stakeholders to provide oral comments. The MEPA Office also accepts comments in writing. If you wish to comment, please mail, fax, or email your comments to the Secretary of Energy and Environmental Affairs, using the information listed below:

Secretary Ian Bowles
Executive Office of Energy and
Environmental Affairs
MEPA Office, Attn: Holly Johnson, MEPA Analyst
EEA #13886
100 Cambridge Street, Suite 900
Boston, MA 02114
Fax: 617-626-1181
Email: Holly.S.Johnson@state.ma.us

Copies of these comments may also be sent to Katherine Fichter, Massachusetts Department of Transportation – Office of Transportation Planning, 10 Park Plaza, Room 4150, Boston, MA 02116.

Comments must be received no later than January 8, 2010. It is anticipated that the Secretary of Energy and Environmental Affairs will issue a MEPA Certificate on the Green Line Extension DEIR/EA by January 22, 2010.

Want more information?

Check out our project website,
mass.gov/greenlineextension

The Green Line Extension website has a wealth of project information for anyone wanting to catch up on progress to date.

For project information please contact:

Katherine Fichter
617-973-7342 or
katherine.fichter@state.ma.us

