



U.S. Department  
of Transportation  
**Federal Transit  
Administration**

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**JUN 11 2012**

Mr. Richard A. Davey  
Secretary  
Massachusetts Department of Transportation  
10 Park Plaza, Suite 4160  
Boston, MA 02116

**Re: Preliminary Engineering Approval for the Green Line Extension (GLX)  
Light Rail Transit Project**

Dear Mr. Davey:

The Federal Transit Administration (FTA) is pleased to inform you that the Green Line Extension (GLX) light rail transit (LRT) project sponsored by the Massachusetts Department of Transportation (MassDOT), in cooperation with the Massachusetts Bay Transportation Authority (MBTA), has been approved into the preliminary engineering (PE) phase of project development of the New Starts program. This approval for the initiation of PE is a requirement of Federal transit law governing the New Starts program [49 U.S.C. Section 5309(e)(6)].

The GLX will serve the cities of Cambridge, Medford and Somerville, MA. This PE approval is for an approximately 4.3-mile double track light rail line, seven station extension of the existing MBTA Green Line LRT line from a relocated Lechmere Station in Cambridge to College Avenue in Medford, with intermediate stations at Washington Street, Gilman Square and Lowell Street in Somerville, and Ball Square in Medford. Also included in the GLX is a separate one-mile LRT branch line from the relocated Lechmere Station to Union Square in Somerville. The GLX will operate on the exclusive right-of-way of the MBTA Commuter Rail System.

The project will include six at-grade stations and one elevated station (the relocated Lechmere Station); three miles of at-grade guideway and 1.3 miles of elevated guideway; purchase of 24 LRT vehicles; construction of a LRT rail car storage and maintenance facility; and reconstruction of 11 bridge structures to maintain grade separation on the route. GLX service will operate as an extension of existing Green Line service from Lechmere.

The purpose of the GLX is to improve mobility and regional access for residents of Cambridge, Somerville and Medford. The GLX will serve some of the region's most densely populated communities, including approximately 80,300 residents who live within one-half mile of proposed stations. The project is expected to carry 39,100 weekday passenger trips on average in the opening year and 44,800 weekday trips in 2030, including 7,000 new daily transit trips.

The estimated capital cost of the project in year-of-expenditure dollars is \$1,334.62 million. MassDOT is seeking \$557.06 million (41.7 percent) in Section 5309 New Starts funds. While MassDOT has requested entry of the GLX into PE, MBTA is expected to be responsible for implementation, construction and eventual operation of the project, with MassDOT participation and oversight.

With this approval, MassDOT/MBTA has pre-award authority to incur costs for PE activities prior to grant approval while retaining eligibility for future FTA grant assistance for the incurred costs. This pre-award authority does not constitute an FTA commitment that future Federal funds will be approved for the project. As with all pre-award authority, all Federal requirements must be met prior to incurring costs in order to retain eligibility of the costs for future FTA grant assistance. FTA's approval to initiate PE is not a commitment to approve or fund any final design (FD) or construction activities. Such a decision must await the outcome of the analyses to be performed during PE, including completion of the environmental review process.

FTA is required by law to evaluate a proposed project against a number of New Starts criteria and ensure that prospective grant recipients demonstrate the technical, legal, and financial capability to implement the project. Based on an evaluation of the GLX against these criteria, FTA has assigned the project an overall rating of *Medium*.

#### *Project Scope, Schedule, Cost and Technical Capacity*

FTA and its Project Management Oversight Contractor (PMOC) conducted a pre-PE risk assessment of the project in March 2011 based on the cost, scope, schedule and technical capacity and capability reviews done in late 2010. Based on the results, FTA determined that MassDOT's schedule for completion of the project by the end of 2014 was a significant risk. In response to the findings of the risk assessment report, MassDOT updated the project schedule to show completion by June 2019. The cost estimate was updated from \$953.74 million to \$1,334.62 million to reflect the updated schedule, escalation costs, additional finance costs and other minor risks identified. FTA has determined that the revised cost and schedule are reasonable for this phase of the project and that MassDOT/MBTA possess the technical capacity and capability to implement the project.

Some of the key items that MassDOT/MBTA should address during PE include the following:

#### *Project Scope*

- Given that MassDOT/MBTA is considering using an alternative delivery method other than the traditional delivery methods, an updated project delivery analysis should be completed within 90 days of entering PE. The documentation should provide an overall strategy for selecting a specific delivery method; a description and evaluation of the contract packaging approach; bid sequencing procurement schedule; market analysis; risk sharing strategies; and demonstrate that MassDOT/MBTA has the technical capacity and capability to manage the preferred delivery method.

### *Project Schedule*

- Continued maintenance and update of the master schedule to ensure activity timelines and interfaces remain realistic towards the June 2019 completion date.
- Implement progress monitoring and reporting.

### *Project Capital Cost*

- Update and continue to actively maintain the project Risk Register.
- Implement design-to-budget controls and procedures.

### *Technical Capacity and Capability*

- Consider hiring additional staff with experience in the project's selected delivery method and/or provide training to the key existing project staff.
- Update the organizational structure and PMP to reflect the coordination with key players including the Construction Manager/Project Manager/Preliminary Engineering consultant, Final Design consultant, General Contractor, and Project Management Contractor.

### *Project Funding*

MassDOT is seeking \$557.06 million (YOE) in New Starts funds (41.7 percent) for the project. The remaining \$777.55 million in funding is proposed to come from Massachusetts Commonwealth funding. Commonwealth bond funds of \$558.75 million (41.9 percent) are proposed for direct capital construction costs, and Massachusetts general funds of \$218.80 million (16.4 percent) are proposed to pay for project finance charges.

FTA assigned a Financial Management Oversight Contractor (FMOC) to conduct an assessment of the GLX finance plan. The FMOC reviewed the reasonableness of MassDOT's financial plan and cash flow analysis and its underlying assumptions. The review determined that MassDOT has demonstrated sufficient local financial commitment to enter PE.

FTA understands the importance of the GLX to the Boston region and the commitment made locally to implementing it and other transit improvements as part of the State Implementation Plan. However, the law requires FTA to evaluate proposed projects seeking New Starts funding against a number of project justification and local financial commitment criteria and to ensure that prospective grant recipients demonstrate the technical, legal and financial capacity to implement the project and the existing system. FTA's standards for developing financial ratings become more stringent as a project moves from PE to FD. While the GLX project has obtained a satisfactory financial rating for entry into PE due primarily to the level of committed capital funds to build the project, the current financial plan assumes several large new, uncommitted funding sources to address MBTA's state of good repair needs and ongoing operations. The new sources include transferring \$1.6 billion of prior MBTA debt obligations to the Commonwealth, implementing a new \$0.01 per mile statewide tax on vehicle miles traveled dedicated to the Commonwealth Transportation Fund, and allocating casino

gaming revenues to MBTA. Other options were also listed in the financial plan as potential new sources if the anticipated funding approaches mentioned above are insufficient or infeasible. These include increasing fares, increasing the motor vehicle registration renewal fee, indexing the \$160 million annual contract assistance from the Commonwealth to growth in sales tax revenue, dedicating a portion of the state motor vehicle sales tax revenue to MBTA, increasing MBTA parking fees, implementing a commercial parking tax and indexing the fuel tax to inflation. Without new sources of revenues, significant negative annual balances in the financial plan would result and the state of good repair backlog would increase. Considerable progress on gaining commitment of new sources of funding will be necessary before FTA will contemplate approval of the project into FD. Continued development and strengthening of the financial plan will be a crucial part of the PE effort.

### *Civil Rights*

Pursuant to the Title VI Civil Rights Act of 1964 and its implementing regulations, including FTA Circular 4702.1A (Title VI Program Guidelines for FTA Recipients, Part II, Section 114), MassDOT submitted a Title VI Program on June 6, 2011. MassDOT recently submitted additional information to complete their Title VI Program that is currently under review. MassDOT's Equal Employment Opportunity (EEO) Program has not been approved by Massachusetts FHWA Highway Division office. Additional information has been requested, but not yet provided. MassDOT has established a Disadvantaged Business Enterprise (DBE) Goal of 1.7 percent and it will expire on September 30, 2012. MBTA has an approved DBE goal of 13.5 percent which expires at the end of Fiscal Year (FY) 2014.

Pursuant to the Title VI Civil Rights Act of 1964 and its implementing regulations, including FTA Circular 4702.1A (Title VI Program Guidelines for FTA Recipients, Part II, Section 114), MBTA submitted an updated Title VI plan on June 1, 2011. FTA is currently reviewing MBTA's supplemental information provided to FTA on April 8, 2012. MBTA submitted the required EEO Program to FTA on May 18, 2011. MBTA's EEO Program is currently approved and expires on May 27, 2014.

As project development continues, MassDOT/MBTA is reminded to ensure that the vehicles, stations and facilities are designed and engineered to ensure compliance with current standards for accessibility under U.S. Department of Transportation regulations implementing the transportation provisions of the Americans with Disabilities Act of 1990 (ADA). MassDOT/MBTA is advised to independently verify manufacturers' claims of ADA compliance, and to consult with FTA's Office of Civil Rights concerning ADA requirements as project development progresses. The Office of Civil Rights will provide MassDOT/MBTA a separate letter further detailing ADA compliance issues in the near future.

MassDOT and MBTA recently proposed consolidating their civil rights offices. FTA is waiting for the submission of a full and complete description of the responsibilities of staff and a clear organizational chart identifying the responsible staff and their reporting relationship.

MassDOT/MBTA must work with FTA during PE to address the concerns identified above, along with any others that are identified as project development progresses. As PE proceeds, FTA will

provide more detail to MassDOT/MBTA regarding other deliverables that should be completed prior to requesting approval to enter FD.

FTA looks forward to working closely with MassDOT/MBTA during the development of the GLX project. If you have any questions regarding this letter, please contact me at (617) 494-1784.

Sincerely,

A handwritten signature in cursive script that reads "Mary Beth Mello".

Mary Beth Mello  
Regional Administrator

Cc: Jonathan R. Davis