



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Richard A. Davey, MassDOT Secretary and CEO and MPO Chairman
Karl H. Quackenbush, Executive Director, MPO Staff

MEMORANDUM

DATE March 21, 2013
TO Boston Region MPO Congestion Management Committee
FROM Ryan Hicks and Efi Pagitsas
MPO Staff
RE Boston Region MPO's Intersection Improvements Program, FFY 2014:
Purpose and Proposal

PROGRAM PURPOSE

The purpose of this program is to identify and implement short-term improvements at signalized intersections to improve traffic operations. The program takes into account that signal timing has a greater impact on transportation system efficiency than any other operational measure in the traffic engineering toolkit. Appropriately designed, operated, and maintained traffic signals can provide for the smooth flow of traffic along streets, thereby reducing vehicle stops and delays, and consequently, lessen the negative impacts to air quality and reduce fuel consumption.

PROGRAM FUNDING

The program will be funded by CMAQ funds; a total of \$350,000 has been set aside for this program in the FFY 2014 TIP.

PROPOSED PROGRAM

For purpose of the proposed program is to hire a consultant to identify short-term improvements at signalized intersections and perform the retiming of the traffic signal to improve traffic operations. MassDOT will administer the contract and hire a consultant to conduct this work, and to produce a "mini-report" on each intersection. Municipality participation will be voluntary. A participation agreement to perform the work will be signed by the municipality, MassDOT, and MassDOT's contractor. MPO staff will identify the locations to be considered for improvements.

SELECTION OF LOCATIONS

Locations will be selected by CTPS staff from the MPO's UPWP and Congestion Management Process (CMP) project files. Selections will be made on the basis of historical data on peak period speeds and peak hour delays from previous CMP data collection efforts. Vehicle crash data may also factor into the selection process. Municipalities may also be solicited to submit as candidates isolated intersections that

need improvements. Any signalized intersection on a federal-aid-eligible roadway qualifies for this program.

PROGRAM APPROVAL BY THE MPO

Staff will present the description of the proposed program to the MPO's Congestion Management Process Committee. Upon approval of the program's scope, MassDOT and CTPS will proceed to the following steps.

CONTRACT DEVELOPMENT

MassDOT Planning, MassDOT Highway (Traffic Engineering Section), and CTPS staff will write agreements between MassDOT, the contractors, and interested municipalities. Each agreement will identify the program's candidate location(s) in the municipalities and the responsibilities of each party. The responsibility of the municipality would be to provide access to the consultant for data collection, traffic signal equipment inspection, and access for signal retiming. The municipality would also agree to perform other low-cost related improvements (such as installing signs or pavement markings) as capable.

MASSDOT'S ARCHITECTURAL AND ENGINEERING (A&E) BOARD APPROVAL

In May 2013, the program proposal will be submitted to MassDOT's A&E Board for approval.

SELECTION OF CONTRACTOR

Following A&E approval, four contractors will be invited to show interest in the program; one of them will be selected. This contract will not have to go through the current MassDOT bidding process.

PROJECT START AND END

The contractor will be available to begin work on October 1, 2013, and will complete the program by September 30, 2014.

CONTRACTOR PRODUCTS

For each location, the contractor will perform (1) traffic data collection (turning movement counts), (2) intersection analysis, and (3) signal retiming, and will produce mini-reports that detail recommendations of short-term improvements. Following the completion of the mini-reports, MassDOT Traffic Engineering and CTPS staff will review them. Next, they will be made available to MassDOT district offices and the relevant

municipalities for implementation of any recommendations that go beyond signal retiming. Recommendations for MassDOT-owned intersections could be implemented via “book jobs” or other avenues; recommendations for municipally owned traffic signals could be implemented via local, private (developer), or TIP funding, depending on the scope and scale of each project.

REPORTING TO THE MPO

The CMP Committee chair will report the progress of the program and its projects to the MPO on a regular basis. By September 30, 2014, CTPS will present to the MPO the results of implementing this program; the documentation will include the mini-reports listing the recommended improvements.

EP/RH/rh