



## BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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Stephanie Pollack, MassDOT Secretary and CEO and MPO Chair  
Karl H. Quackenbush, Executive Director, MPO Staff

### *MEMORANDUM*

**DATE** December 3, 2015  
**TO** Boston Region Metropolitan Planning Organization  
**FROM** Karl H. Quackenbush  
CTPS Executive Director  
**RE** Work Program for: Freight Planning Support: FFY 2016

#### Action Required

Review and approval

#### Proposed Motion

That the Boston Region Metropolitan Planning Organization vote to approve the work program for Freight Planning Support: FFY 2016, presented in this memorandum

#### Project Identification

##### Unified Planning Work Program Classification

Technical Support/Operations Analysis Projects

##### CTPS Project Number

11145

##### Client

Boston Metropolitan Planning Organization

##### CTPS Project Supervisors

*Principal:* Mark Abbott

*Manager:* William S. Kuttner

##### Funding

MPO Planning Contract #89787

## Impact on MPO Work

This is MPO work and will be carried out in conformance with the priorities established by the MPO.

## Background

Recognizing the importance of freight transportation and the unique challenges that comprehensive freight analysis entails, the Boston Region Metropolitan Planning Organization (MPO) established a formal freight-planning program that began in federal fiscal year (FFY) 2014. The MPO anticipates that freight analysis within the framework of this multiyear program will be ongoing.

The MPO staff was directed in FFY 2013 to develop an “action plan” for this program that would further the MPO’s freight-planning goals. The action plan included:

- Fulfilling the Boston Region MPO’s freight-planning needs
- Complementing state and other official planning efforts
- Studying specific freight-related issues
- Fulfilling new analysis requirements of the current federal surface transportation legislation
- Addressing the lack of freight data for the MPO region, including developing enhanced technical capabilities for MPO staff to use in estimating freight demand

The action plan was presented in a memorandum from William Kuttner, MPO staff, to the Boston Region MPO, dated September 12, 2013, “Proposed Freight Planning Action Plan for the Boston Region MPO: Meeting the Goals and Addressing the Issues.” The memorandum suggested several potential studies that would address one or more of those goals and that were within the capabilities of MPO staff. These study options are far-reaching and are envisioned as ongoing, multiyear efforts.

The Action Plan recommended studying truck and logistic issues in Everett, Chelsea, and the South Boston Waterfront. Studies that focused on these areas were undertaken in FFYs 2014 and 2015. However, the remaining Action Plan topics and some newly identified issues require a regionwide analysis, possibly in collaboration with neighboring MPOs. In FFY 2016, staff will conduct extensive preparatory work for potential Boston Region MPO and multi-MPO efforts. Stakeholder outreach, a valuable source of new topics, will continue.

## Objectives

The principal objectives of this work program are:

1. To coordinate MPO planning efforts with regional freight stakeholders
2. To obtain regionwide freight data for trucking and other modes, and configure data for use in the MPO's model development where possible
3. To identify and document regulations, data, and issues related to truck rest-area requirements and regional bridge weight restrictions in anticipation of subsequent regionwide or multiregional study efforts.

## Work Description

### Task 1 Coordinate MPO Efforts with Freight Stakeholders

MPO staff will maintain an ongoing, collaborative relationship with the freight stakeholders who are affected by freight movement in the Boston Region MPO area. Some of the activities will involve MPO staff attending and making presentations at meetings and conferences, some of which will be sponsored by the MPO. Recruiting regional freight stakeholders and encouraging them to be involved in activities of the MPO and its committees will also be a valuable part of staff outreach.

### Task 2 Identify Regulations, Data, and Issues Related to Rest Areas for Truck Drivers

Another topic identified in the FFY 2013 Freight Planning Action Plan was looking at potential locations for one or more rest areas for truck drivers on or near the regional express-highway system. Recently instituted federal truck-driver rest requirements have made this issue increasingly important to motor carriers nationwide.

MPO staff will perform exploratory work on this topic. It will include inventorying and evaluating the existing rest areas for truck drivers and producing maps and distance tables showing the results of this work. Staff will review federal regulations and their impacts on truck drivers. Staff will also initiate outreach to neighboring MPOs, MassDOT, and industry stakeholders in anticipation of a subsequent study that could recommend new truck rest areas. Staff will also produce a technical memorandum on the existing conditions of truck rest areas in the Boston Region MPO area.

#### *Products of Task 2*

- Technical memorandum on the existing conditions of rest areas for truck drivers
- Maps and distance tables

### Task 3 Identify Regional Weight-Restricted Bridges

A number of structurally deficient bridges in the region allow use by autos but not by trucks that exceed a weight-restriction threshold. Trucks that are not allowed on certain bridges are forced to use more circuitous routes to get to their destinations.

Using GIS techniques and the state Road Inventory File, staff will map and analyze deficient bridges by roadway functional class, location, and restriction severity. Staff will also review and utilize information from MassDOT's Bridge Unit and GIS Department. Deficient bridges that are located in the Boston Region MPO area will be identified and associated with their respective network link in the MPO's regional travel demand model set. Staff will produce a technical memorandum on the findings, and maps and annotated regional model links.

#### *Products of Task 3*

- Technical memorandum on the existing conditions of weight-restricted bridges
- Maps and annotated regional model links

### Task 4 Develop New Freight Data Sources

The ticketed toll system on Interstate 90 (I-90) between Weston and the New York State border makes traffic data on toll-plaza-to-toll plaza truck volumes available for use in planning and modeling. Within a few years, this system will be converted to all-electronic tolling (all vehicles will be identified and tolled as they pass under a series of recording gantries between Boston and the New York State border).

Staff will analyze plaza-to-plaza vehicle flows prior to conversion to the gantry system and will produce estimates of volumes by vehicle type. An all-electronic vehicle identification and tolling system is already in use at the Tobin Bridge, where the technology was tested prior to statewide implementation. Staff will identify opportunities for obtaining data from gantry systems as part of this task.

Staff will conduct field observations, use aerial photos, and interview people who work in the trucking industry to yield information on freight volumes and travel patterns that would be useful in improving the truck component of the MPO's regional travel demand model. MPO staff will also investigate new opportunities for cost-effectively obtaining freight data.

#### *Products of Task 4*

- I-90 toll-plaza-to-toll plaza volumes by vehicle type
- A memorandum about how to obtain similar data from a gantry system or from other cost-effective data sources

## Estimated Schedule

It is estimated that this project will be completed 10 months after work commences. The proposed schedule, by task, is shown in Exhibit 1.

## Estimated Cost

The total cost of this project is estimated to be \$46,000. This includes the cost of 13.0 person-weeks of staff time and overhead at the rate of 98.88 percent. A detailed breakdown of estimated costs is presented in Exhibit 2.

KQ/WSK/wsk

**Exhibit 1**  
**ESTIMATED SCHEDULE**  
**Freight Planning Support: FFY 2016**

Task	Month										
	1	2	3	4	5	6	7	8	9	10	
1. Coordinate MPO Efforts with Freight Stakeholders											
2. Identify Regulations, Data, and Issues Related to Rest Areas for Truck Drivers								A			
3. Identify Regional Weight-Restricted Bridges									B		
4. Develop New Freight Data Sources											

Products/Milestones

A: Technical memorandum

B: Technical memorandum

**Exhibit 2**  
**ESTIMATED COST**  
**Freight Planning Support: FFY 2016**

<b>Direct Salary and Overhead</b>								<b>\$46,000</b>
Task	Person-Weeks					Direct Salary	Overhead (98.88%)	Total Cost
	M-1	P-5	P-4	P-2	Total			
1. Coordinate MPO Efforts with Freight Stakeholders	0.3	2.0	0.0	0.0	2.3	\$4,168	\$4,121	\$8,289
2. Identify Regulations, Data, and Issues Related to Rest Areas for Truck Drivers	0.5	3.1	0.3	0.4	4.3	\$7,315	\$7,233	\$14,547
3. Identify Regional Weight-Restricted Bridges	0.2	3.2	0.0	0.0	3.4	\$6,189	\$6,120	\$12,308
4. Develop New Freight Data Sources	0.2	2.8	0.0	0.0	3.0	\$5,458	\$5,397	\$10,855
Total	1.2	11.1	0.3	0.4	13.0	\$23,129	\$22,870	\$46,000
<b>Other Direct Costs</b>								<b>\$0</b>
<b>TOTAL COST</b>								<b>\$46,000</b>

**Funding**  
MPO Planning Contract #89787