



## BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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Stephanie Pollack, MassDOT Secretary and CEO and MPO Chair  
Tegin L. Teich, Executive Director, MPO Staff

### *WORK PROGRAM*

## FREIGHT PLANNING SUPPORT: FEDERAL FISCAL YEAR 2020

APRIL 16, 2020

### Proposed Motion

The Boston Region Metropolitan Planning Organization (MPO) votes to approve this work program.

### Project Identification

Unified Planning Work Program (UPWP) Classification

Boston Region MPO Planning Studies and Technical Analyses

Project Number 2220

Client

Boston Region MPO

Project Supervisors

*Principal:* Mark Abbott

*Manager:* Bill Kuttner

Funding Source

MPO 3C Planning and §5303 Contract #108217

### Schedule and Budget

Schedule: 6 months after work commences

Budget: \$56,730

Schedule and budget details are shown in Exhibits 1 and 2, respectively.

### Relationship to MPO Goals

The Boston Region MPO elected to fund this study with its federally allocated metropolitan planning funds during federal fiscal year (FFY) 2020. The work completed through this study will address the following goal areas established in the MPO's Long-Range Transportation Plan: safety, capacity management and mobility, and economic vitality.

## Background

The Boston Region MPO's freight program began in FFY 2014 and has been funded annually on a regular basis since its inception. The broad outlines of the freight program were presented in the 2013 Freight Planning Action Plan.<sup>1</sup> The Freight Planning Action Plan outlined several planning goals:

- Fulfilling the Boston Region MPO's freight-planning needs
- Complementing state and other regional freight-planning efforts
- Studying specific freight-related issues
- Expanding and improving available freight data to enhance the MPO's technical capabilities and fulfill data-analysis requirements of federal surface transportation legislation

All the study topics identified in the initial action plan have been investigated to some extent, and in 2019 the action plan was updated.<sup>2</sup> The update maintains focus on the planning goals listed above, reviews completed MPO-supported freight studies, and suggests topics for future study.

In 2017 the MPO was asked by the Massachusetts Department of Transportation (MassDOT) to recommend sections of the region's road network that would be designated by the Federal Highway Administration (FHWA) as Critical Urban Freight Corridors (CUFC). MPO staff had sufficient information about heavy vehicle travel patterns and industrial land uses to make recommendations that were accepted by MassDOT and the FHWA. As the designation process is complete, sections of the CUFC system are being studied in detail as part of the MPO's annual freight program. The study proposed for FFY 2020 will focus on the connection of the South Boston Waterfront CUFC with the Southeast Expressway.

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<sup>1</sup> Boston Region Metropolitan Planning Organization (website), "Proposed Freight Planning Action Plan for the Boston Region MPO: Meeting the Goals and Addressing the Issues," September 2013. [https://www.bostonmpo.org/Drupal/freight\\_action](https://www.bostonmpo.org/Drupal/freight_action).

<sup>2</sup> Central Transportation Planning Staff, "Boston Region MPO Freight Planning Action Plan Update," July 2019. [https://www.bostonmpo.org/data/calendar/pdfs/2019/MPO\\_0718\\_Memo\\_Freight\\_Update.pdf](https://www.bostonmpo.org/data/calendar/pdfs/2019/MPO_0718_Memo_Freight_Update.pdf).

## Objectives

The principal objectives of this work program are as follows:

1. Coordinate MPO planning efforts with regional freight stakeholders
2. Study truck trip patterns at the junction of the South Boston Bypass Road and the Southeast Expressway, and develop findings relevant to current and anticipated planning efforts addressing this interchange or surrounding roadways
3. Continue developing regionwide freight-flow data for trucking and other modes, and configure these data for use in the MPO's planning activities, such as the program for the Congestion Management Process and further development of the MPO's regional travel demand model

## Work Description

### Task 1 Coordinate MPO Efforts with Freight Stakeholders

MPO staff will maintain an ongoing, collaborative relationship with freight stakeholders affected by freight movement in the Boston region including municipalities, shippers, carriers, and affected residents and businesses. Some of the activities will involve MPO staff attending and presenting at meetings and conferences, including some sponsored by the MPO. Recruiting and encouraging regional freight stakeholders to be involved in the MPO's planning activities and its advisory committee, the Regional Transportation Advisory Council, will also be a valuable part of staff's outreach.

### Task 2 Develop Truck Travel Profile for the Bypass Road and Interstate 93 Nexus

Figure 1 shows the CUFC system connecting the South Boston Waterfront to Interstate 93, the Southeast Expressway. The Southeast Expressway is one of the most extensive and severe bottlenecks in the Boston region. Several conceptual plans and feasibility studies have explored ways of adding capacity in this corridor.<sup>3</sup> Congestion in this corridor affects all traffic, but the effect on truck movement—specifically from the truck-dependent industries served through Interchange 18 in Newmarket Square, Widett Circle, and the South Boston Waterfront—have not been fully quantified.

#### *Products of Task 2*

Technical memorandum about truck flows in the study area

Freight data for use in model development efforts

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<sup>3</sup> Central Transportation Planning Staff, "Improving the Southeast Expressway: A Conceptual Plan," February 2012. [http://bostonmpo.org/Drupal/se\\_expr\\_concept](http://bostonmpo.org/Drupal/se_expr_concept).

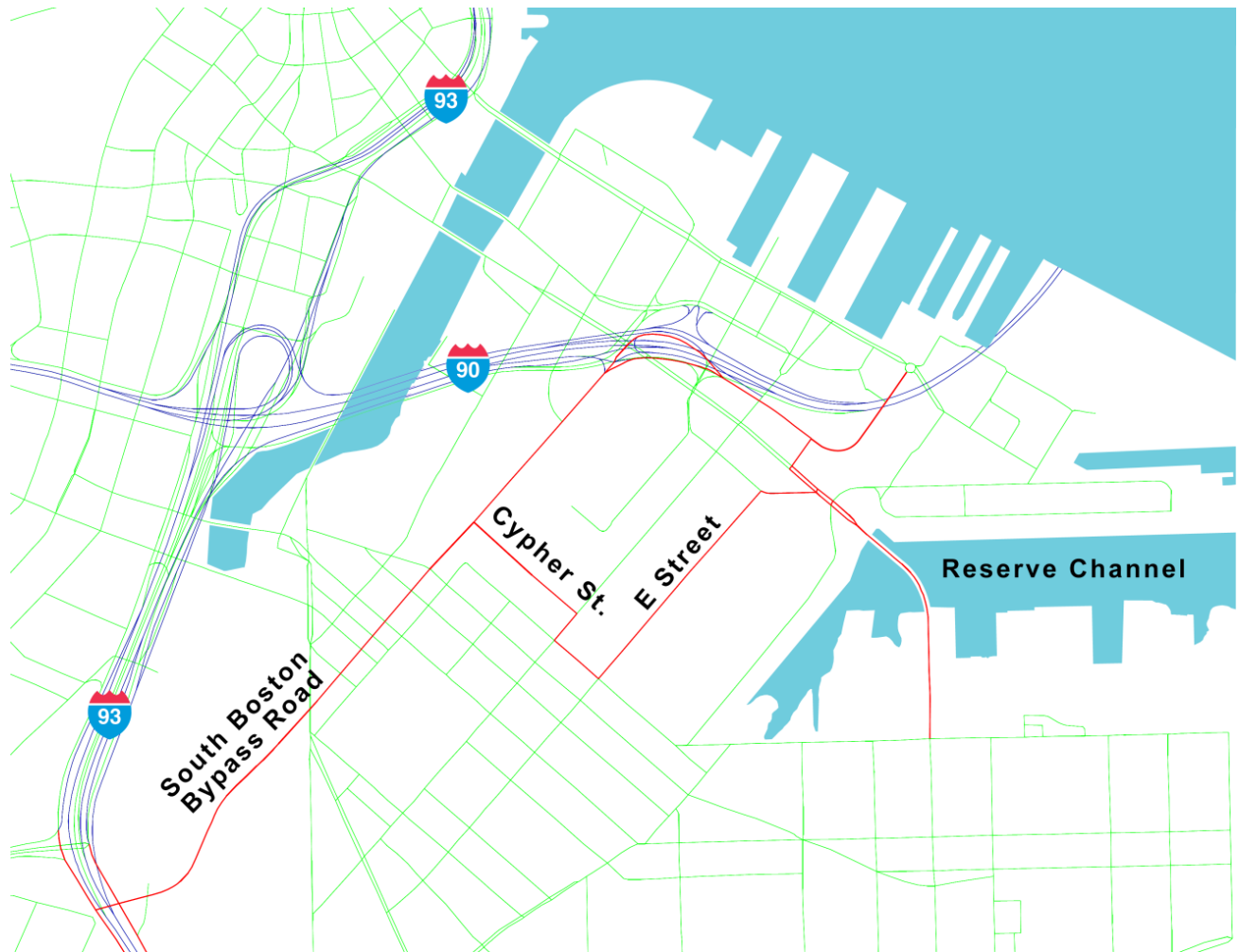
### Task 3 Develop Additional Freight Data Sources

Truck volume data collection for model estimation is ongoing. Some truck volumes have already been developed from Massachusetts toll reports. Vehicle counting equipment is installed at numerous non-tolled locations on the limited-access highway system, and some of these locations have been set up to classify vehicles by size according to the standard FHWA F-scheme. These data must be reviewed for reliability before being used for planning or truck model development.




#### *Product of Task 3*

Truck data appropriate for model development from sources and locations outside the Bypass Road-Southeast Expressway study area

**Figure 1  
South Boston Waterfront**



**Legend**

-  Interstate highways, intermodal connectors, and associated connecting ramps
-  Roadways recommended for CUFC designation and associated interstate highway access ramps
-  Roadways with a functional class of collector or higher

Source: Central Transportation Planning Staff.

**Exhibit 1**  
**ESTIMATED SCHEDULE**  
**Freight Planning Support: Federal Fiscal Year 2020**

Task	Month					
	1	2	3	4	5	6
1. Coordinate MPO Efforts with Freight Stakeholders						
2. Develop Bypass Road/I-93 Truck Travel Profile						A
3. Develop Additional Freight Data Sources						

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Products/Milestones

A: Technical Memorandum

**Exhibit 2**  
**ESTIMATED COST**  
**Freight Planning Support: Federal Fiscal Year 2020**

<b>Direct Salary and Overhead</b>							<b>\$56,730</b>
Task	Person-Weeks				Direct Salary	Overhea (102.11%)	Total Cost
	M-1	P-5	P-4	Total			
1. Coordinate MPO Efforts with Freight Stakeholders	0.0	1.5	0.0	1.5	\$2,980	\$3,043	\$6,022
2. Develop Bypass Road/I-93 Truck Travel Profile	1.5	7.8	2.0	11.3	\$21,116	\$21,562	\$42,678
3. Develop Additional Freight Data Sources	0.0	2.0	0.0	2.0	\$3,973	\$4,057	\$8,030
Total	1.5	11.3	2.0	14.8	\$28,069	\$28,661	\$56,730
<b>Other Direct Costs</b>							<b>\$0</b>
<b>TOTAL COST</b>							<b>\$56,730</b>

**Funding**

MPO Planning Contract and §5303 Contract #108217