



## 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:** November 5, 2015  
**TO:** Boston Region Metropolitan Planning Organization  
**FROM:** Karl H. Quackenbush  
CTPS Executive Director  
**RE:** Work Plan for: Long-Range Transportation Plan: FFY 2016

#### Action Required

Review

#### Project Identification

Unified Planning Work Program Classification

Certification Requirements

CTPS Project Number

10101

#### Client

Boston Region Metropolitan Planning Organization

#### CTPS Project Supervisors

*Principal:* Elizabeth Moore

*Manager:* Anne McGahan

#### Funding

MPO Planning Contract #89787

MPO §5303 Contracts #84080 and #91027

## Impact on MPO Work

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

## Background

The federal government requires that metropolitan planning organizations (MPOs) conduct planning processes and prepare certain planning documents in accordance with federal regulations and guidelines. The purpose of these processes and guidelines is to guide and support MPO information gathering and decision making related to policies and to the programming of federal transportation funds. MPOs must conduct this process, known as the 3C process (defined below), in order to remain certified to receive these funds. The 3C activities conducted by the MPO staff to comply with these requirements and guidance are called certification activities.

While the Certification Activities Group of the Central Transportation Planning Staff (CTPS), which is the staff to the MPO, has the primary responsibility for conducting this work and preparing the necessary documents, staff members from all of the groups at CTPS contribute to these activities.

The 3C process is so named because it must be a continuing, comprehensive, and cooperative transportation-planning process. To be “continuing,” it must be underway all year long, not sporadically. To be “comprehensive,” the MPO must be aware of the activities of the many agencies and interested entities involved in transportation planning in the MPO region, and must consider these and the transportation needs identified by all interested parties in MPO decisions. Finally, to be “cooperative,” an MPO must invite the public to participate in its process, and must conduct its planning and decision making with an open and cooperative approach.

This work plan focuses on the Boston Region MPO’s activities related to its Long-Range Transportation Plan (LRTP), which is one of the three major certification documents required as part of the 3C process. The LRTP guides transportation system investments for the Boston metropolitan region for at least the next 20 years. The MPO adopted its most recent LRTP, *Charting Progress to 2040*, in July 2015. This LRTP serves as the Boston Region MPO’s guiding document as it plans for the year 2040. For this document, the MPO established regional goals and objectives, which the MPO will use for future decision-making.

While the quadrennial LRTP document was endorsed in federal fiscal year (FFY) 2015, the MPO’s continuing, cooperative, and comprehensive planning process—including its long-range-planning activities—is ongoing. The MPO’s robust LRTP development program helps meet the requirements of the current federal legislation Moving Ahead for Progress in the 21st Century (MAP-21), which include measuring

and tracking the performance of the region's transportation system and the effectiveness of the MPO's programming in meeting regional goals. This work plan also supports scenario planning to generate data for future decision-making.

## Objectives

This work plan describes the ongoing implementation of the MPO's recently adopted LRTP, *Charting Progress to 2040*, which provides a vision for the future of the transportation system in the region and guides progress toward achieving that vision. A major part of LRTP implementation is the continued advancement of the MPO's performance-based planning practice (PBPP), building on work performed during development of the LRTP. The objectives of this LRTP work plan are to:

1. Provide a comprehensive portrait of the MPO region that considers demographics, land use, economics, and the transportation system, as well as the relationships among these characteristics
2. Establish and implement the policies and priorities (including specific multimodal, intermodal, and management and operations strategies) needed to accomplish the MPO's vision and goals
3. Develop performance measures and implement the MPO's PBPP and other innovations to inform MPO investments
4. Gather information, conduct analyses, and communicate the results to support decision making
5. Guide the development of the MPO's Transportation Improvement Program (TIP), which is the implementing document for the LRTP
6. Maintain compliance with federal regulations and requirements

This work plan describes the specific tasks that will be conducted during FFY 2016, as well as work that will be ongoing over the next three years, prior to the adoption of a new LRTP. The work plan also identifies which tasks will occur on an ongoing basis and which will be completed in this fiscal year.

## Work Description

This work plan consists of seven tasks, which outline all of the LRTP work that will be undertaken during FFY 2016. Some of this work will continue in subsequent years during development of the next LRTP, which will be approved in FFY 2019. Other activities will occur only in FFY 2016. Each task identifies the time frame in which each activity will occur.

## Task 1 Update the LRTP Needs Assessment

The Needs Assessment has become a foundational resource for the MPO's transportation-planning work. Staff developed a Needs Assessment as part of *Charting Progress to 2040* and made it available to the public via the Needs Assessment application on the MPO's website. In FFY 2016, staff will continue to update the Needs Assessment with new information on an ongoing basis as it becomes available. Staff will also perform analyses to keep the Needs Assessment current and will use the results of the analyses for future studies, reports, and deliberations. The updated information will also be made available to the public via the MPO's website. Data from the Needs Assessment will support two MPO initiatives: the MPO's scenario-planning activities and its PBPP.

In FFY 2016, staff will use output from the Needs Assessment to develop and analyze land use and transportation options and scenarios. The output will also be used to review MPO performance measures, set MPO performance targets, evaluate progress toward the targets, and track other indicators of interest.

### *Subtask 1.1 Gather Data*

Staff will identify newly available data from state- and CTPS-managed databases, and identify additional types and sources of data that will be needed to implement the MPO's PBPP. The data collected will represent several categories of use: information that will be used for tracking performance measures and targets; information identified as measures for understanding trends; and other information included in the current Needs Assessment, for which updates will provide an improved understanding of needs in the region.

Staff will continue to work with the Metropolitan Area Planning Council (MAPC) to develop a process for projecting demographic trends that will be used in the future. The projections will be used in the regional travel demand model, and reflect MAPC's development databases, MetroFuture's (MAPC's land-use plan's) goals and policies, and the MPO's vision and goals.

The *Charting Progress to 2040* Needs Assessment information established a baseline to which the updated data will be compared.

#### Schedule:

- FFY 2016: developing a process and schedule for demographic projections
- Ongoing: updating information as new data become available

***Subtask 1.2 Analyze Data***

The newly collected data will be reviewed by staff and will be used for subsequent analyses that will explore the extent of changes and their implications for the region's transportation network and land use. Staff will discuss the changes and trends with the MPO and the public. Using the new data and the performance measures established in Task 2, staff will assess the progress toward reaching the MPO's vision for the region.

Schedule: Ongoing

***Subtask 1.3 Incorporate New Data into the Web-Based Needs Assessment***

New data will be incorporated into the existing web-based edition of the Needs Assessment. This will involve developing text, tables, maps, and charts that summarize the new data collected and the analyses performed in Subtask 1.2. It will also require the preparation of informational materials for the MPO and the public.

Schedule: Ongoing

***Subtask 1.4 Make the Needs Assessment Available for Public Review***

The Needs Assessment data that are currently available on the MPO's website will be updated for public review, use, and comment. Staff will produce a table that summarizes the public comments received.

Schedule: Ongoing

***Products of Task 1***

- A process and schedule for demographic projections
- Summary of data analyses (including updated maps, tables, and charts)
- Updated web-based Needs Assessment
- A table summarizing public comments on the updated Needs Assessment data

**Task 2 Develop Performance Measures**

Under MAP-21, the MPO is required to develop and use performance measures in its planning process and decision making: this work is well under way. The MPO adopted its goals, objectives, and an initial set of related performance measures in FFY 2015 as part of the *Charting Progress to 2040* LRTP. These performance measures were used for scenario planning and for evaluating LRTP projects and programs. In FFY 2015, the MPO also initiated the development of performance targets, which are specific levels of performance the MPO desires to achieve within a certain time frame.

In FFY 2016, the MPO will formalize and expand its performance-based planning practice in the context of both the LRTP and TIP programs. Staff will review the performance measures developed in FFY 2015 and fine-tune them, if necessary. Additional updates or measures may be made based on FHWA and FTA guidance, new MassDOT measures, and emerging data sources. Staff will use the MPO goals, objectives, and performance measures to continue to develop a set of targets for a subset of the performance measures.

***Subtask 2.1 Continue to Develop MPO Performance Measures***

Staff will continue its research and development of performance measures to correspond with the MPO's LRTP vision and goals that were adopted as part of *Charting Progress to 2040*. Staff will recommend which performance measures should be adopted by the MPO and will prepare a memorandum explaining the process and reasoning behind the recommendations. The memorandum will also explain how the MPO will use the performance measures to track how well implementation of projects programmed in the TIP and the LRTP helps the region to achieve its targets and goals, and to identify performance trends for measures that do not have specific associated targets.

As part of this research, information will be gathered on the development of MassDOT's performance measures, and staff will utilize this material when making its recommendations. The development of performance measures will be an ongoing process, with new information incorporated as it becomes available.

Throughout this process, staff will prepare materials for the MPO and lead a series of discussions with the MPO and MassDOT on performance measures, staff recommendations, and the process to be implemented in the MPO's PBPP. Staff will ask for guidance and concurrence from the MPO in all of the discussions. This information will be posted on the MPO's website and will be circulated for public discussion and comment.

Schedule: Fall 2015 and winter 2016

***Subtask 2.2 Gather Data on Performance Measures***

Staff will develop the vehicles and formats that will be used to house, organize, manage, and present the performance measurement data. This work will be coordinated with the MPO's Needs Assessment and its Congestion Management Process (CMP), and with an agencywide effort to develop an inventory and a report on all of the data available for use by MPO staff, and which sets of those data are available to the public. Staff will determine which formats to use based on the informational materials to be

produced and the analysis needs of the performance-based planning work. Staff will then assemble the data into the agreed-upon formats.

Schedule: Spring and summer, 2016

### *Subtask 2.3 Report on the MPO's Progress toward Performance Targets*

Both the LRTP and TIP will include a performance report that describes progress toward targets and the trends of non-target indicators of interest. In FFY 2016, staff will plan performance reports to include in the TIP and in future LRTPs. The LRTP will report progress at the systems and project levels, as applicable, and will include a full assessment of the progress made toward the MPO's goals. The TIP will report on project-level performance and the results of system-level analysis, as applicable. In the future, each LRTP will provide an opportunity to review and document progress in meeting performance goals and, if needed, make adjustments to the LRTP to meet those goals.

Schedule: FFY 2017–21 TIP Performance Report, spring 2016

### *Products of Task 2*

- Memorandum reporting on the process for developing the performance measures and the recommendations for the measures
- Presentations and materials supporting discussions with the MPO and MassDOT
- Formats and vehicles for housing, managing, and reporting on performance measurement data
- Performance measurement data
- A summary of public comments on performance measures

## **Task 3 Incorporate PBPP into MPO Decision Making**

All of the tasks outlined below, as is the case for many of the tasks in this work plan, will involve ongoing and often detailed consultation with the MPO with the goal of creating agreement and policy on the MPO performance-based planning practices. This work will be coordinated with the MPO's ongoing CMP.

### *Subtask 3.1 Integrate Performance Measures into LRTP, TIP and UPWP Criteria*

Staff will review the current criteria that are used for project selection in the 3C (certification) documents and make recommendations for revisions to the criteria that are consistent with the performance measures identified in Tasks

1 and 2, as needed. This work will be done in conjunction with the work plans for the other 3C documents, the TIP and Unified Planning Work Program (UPWP).

Schedule: TIP criteria, fall 2015 (UPWP and LRTP criteria, ongoing)

#### ***Subtask 3.2 Compare Current Conditions to Baseline Conditions***

Staff will use the data collected in Tasks 1 and 2 for each of the performance measure categories to document the current conditions in the MPO region's transportation system. These will be compared to the baseline data established in *Charting Progress to 2040* in each of the performance measurement areas.

Schedule: Summer 2016

#### ***Subtask 3.3 Develop Targets and Strategies***

Working from the baseline and updated data, and applying the national and state goals and the MPO's vision and goals, staff will develop recommended targets in each of the performance measurement areas. Staff will consider the availability of data and will also account for the possibility that some information may be qualitative. Time frames for the targets will be established for each performance measure.

Staff will develop recommendations of strategies for reaching these targets. Once adopted by the MPO, these strategies will be used to guide MPO investments.

Schedule:

- Summer 2016: establish targets based on available data
- Ongoing: develop additional targets as new information and guidance become available.

#### ***Subtask 3.4 Track Data***

Staff will continue to gather data and begin to develop tools and formats for the assembly, analysis, and reporting of the data that were discussed in Subtask 2.2. This process will include using the tools and formats developed in this subtask for assembling and managing the data.

Schedule: Ongoing

#### ***Subtask 3.5 Prepare Memoranda***

Staff will prepare memoranda explaining how the performance-based planning process will be used to guide decision making on programming the transportation funds that are available to the MPO. These memoranda will



build on previously prepared memoranda that documented the development of the performance measures and TIP criteria. The new memoranda will describe the national, state, and MPO goals and policy frameworks. In addition, they will discuss the plans and schedules for monitoring the performance of the transportation system, the development of the targets and strategies, the methods for evaluating progress, and the reporting of data.

Schedule:

- Summer 2016: memorandum on target development, comparison to baseline data, and first-year implementation
- Ongoing: additional memoranda, as new information becomes available

*Products of Task 3*

- Updated LRTP, TIP, and UPWP project-selection criteria
- Comparisons to baseline data for performance measures
- Recommendations of performance targets and strategies for meeting the targets
- Tables, databases, and other materials populated with performance measurement data
- Memoranda on the MPO's performance-based planning program

**Task 4 Develop and Analyze Future Scenarios**

The MPO has begun an ongoing practice of using model-based planning tools and off-model processes to generate forecasts and information about regional conditions and future needs. These tools are also used to assess the effects of potential changes to the transportation network. The MPO plans to continue to use this information to make policy and capital-investment decisions. Throughout the year, staff will identify one or more issues to explore by comparing various scenarios to better understand the impacts of different investment strategies on transportation, air quality, climate change, mode shift, the economy, and land use. Some possible issues are:

- What transportation improvements would yield the greatest mobility on the truck freight network?
- Which investment scenario would result in the most CO<sub>2</sub> reduction?

- Which investment program would generate the land-use pattern closest to MetroFuture's development goals?
- Where are the congestion points in a regional evacuation scenario?

Some of this work also may explore policy-related implications, like the scenario-planning process that was conducted in the development of goals and objectives in the current LRTP. In this way, the LRTP program will serve as an ongoing resource for current information, insights, and analysis for everyone involved in managing and improving the regional transportation network.

Schedule: Winter, spring, and summer, 2016

#### *Products of Task 4*

- A set of future scenarios to be tested for one or more issues of concern
- Results of scenario testing
- Memorandum documenting the results of the scenario testing

#### **Task 5 Prepare the Groundwork for the Next LRTP**

Prior to the year in which the next LRTP will be endorsed (FFY 2019), staff will research and plan for new issues as they arise, coordinate with interested parties, and review MPO priorities. Through ongoing performance-based planning and scenario planning, MPO staff will generate information to help guide investment strategies for the next LRTP and summarize that information for the MPO.

The LRTP program plays an important role in keeping the MPO abreast of current state-of-the-practice communication methods and of planning tools and approaches. In collaboration with MAPC, the MPO will explore effective ways to gather information, understand the MPO region's needs, and analyze transportation and land-use options. As part of FFY 2016 activity, staff will research the best practices in metropolitan transportation planning and other facets of planning.

Schedule: Ongoing

#### *Products of Task 5*

- Summary of investment strategy research
- Adoption of state-of-the-practice communication methods and planning tools and approaches, as applicable

**Task 6 Adopt LRTP Amendments, If Required**

One or more amendments to the LRTP may be required in FFY 2016 if any changes are made to regionally significant projects in the TIP or if there are changes to the State Implementation Plan. Staff will prepare the informational materials for MPO decision making and follow MPO procedures for informing and involving the public.

Schedule: As needed

***Product of Task 6***

LRTP amendment(s), if required

**Task 7 Respond to Requests for Information**

Throughout the course of the year, requests for information associated with the LRTP or for information that was developed during the LRTP process are received from MPO members, a variety of transportation and planning agencies' staffs, and members of the public. Staff will respond to requests for information.

Schedule: As needed

***Product of Task 7***

Responses to information requests

**Estimated Schedule**

This project is ongoing from year to year. Some tasks, as noted throughout this work plan, will be ongoing in preparation of the next LRTP, which will be adopted in FFY 2019. The identified tasks to be completed in this fiscal year are identified in this work plan, and will be completed throughout the 12 months of FFY 2016. The proposed schedule, by task, is shown in Exhibit 1.

**Estimated Cost**

The total cost of this project for FFY 2016 is estimated to be \$318,200. This includes the cost of 102.7 person-weeks of staff time and overhead at the rate of 98.8 percent. A detailed breakdown of estimated costs is presented in Exhibit 2.

KQ/AM/am

**Exhibit 1**  
**ESTIMATED SCHEDULE**  
**Long-Range Transportation Plan: FFY 2016**

Task	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1. Update the LRTP Needs Assessment	A											B
2. Develop Performance Measures	C											D
3. Incorporate PBPP into MPO Decision Making	E									F	G	H
4. Develop and Analyze Future Scenarios				I						J		
5. Prepare the Groundwork for the Next LRTP												
6. Adopt LRTP Amendments (If Required)												
7. Respond to Requests for Information												

**Products/Milestones**

- A: Demographic projections: process and schedule
- B: Updated web-based Needs Assessment
- C: Memorandum on performance measures
- D: Formats and vehicles for performance measures
- E: Updated TIP project-selection criteria
- F: Recommendations of performance targets and strategies for meeting the targets
- G: Comparisons to baseline data for performance measures
- H: Memoranda on the MPO's performance-based planning program
- I: Set of future scenarios
- J: Memorandum documenting the results of the scenario planning

**Exhibit 2**  
**ESTIMATED COST**  
**Long-Range Transportation Plan: FFY 2016**

<b>Direct Salary and Overhead</b>	<b>\$318,200</b>
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Task	Person-Weeks							Direct Salary	Overhead (98.88%)	Total Cost
	M-1	P-5	P-4	P-3	P-2	Temp	Total			
1. Update the LRTP Needs Assessment	4.5	16.6	1.1	1.1	1.0	2.0	26.3	\$42,724	\$42,245	\$84,969
2. Develop Performance Measures	5.0	9.0	3.5	5.0	0.0	3.0	25.5	\$36,792	\$36,379	\$73,171
3. Incorporate PBPP into MPO Decision Making	3.1	8.5	3.0	0.2	1.0	0.0	15.8	\$26,027	\$25,736	\$51,763
4. Develop and Analyze Future Scenarios	3.1	6.5	11.0	0.0	2.5	0.0	23.1	\$34,235	\$33,851	\$68,086
5. Prepare the Groundwork for the Next LRTP	0.0	3.0	0.0	0.0	0.0	0.0	3.0	\$5,481	\$5,419	\$10,900
6. Adopt LRTP Amendments (If Required)	1.6	3.0	2.0	0.0	0.0	0.0	6.6	\$10,876	\$10,754	\$21,630
7. Respond to Requests for Information	0.0	2.0	0.0	0.0	0.0	0.4	2.4	\$3,862	\$3,818	\$7,680
Total	17.3	48.6	20.6	6.3	4.5	5.4	102.7	\$159,996	\$158,204	\$318,200

<b>Other Direct Costs</b>	<b>\$0</b>
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<b>TOTAL COST</b>	<b>\$318,200</b>
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**Funding**

- MPO Planning Contract #89787
- MPO §5303 Contract #84080
- MPO §5303 Contract #91027