



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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The Boston Region MPO,
the federally designated
entity responsible for
transportation decision-
making for the 101 cities
and towns in the MPO
region, is composed of:

MassDOT Office of Planning and
Programming
City of Boston
City of Newton
City of Somerville
Town of Bedford
Town of Braintree
Town of Framingham
Town of Hopkinton
Metropolitan Area Planning Council
Massachusetts Bay Transportation
Authority Advisory Board
Massachusetts Bay Transportation
Authority
MassDOT Highway Division
Massachusetts Port Authority
Regional Transportation Advisory
Council (nonvoting)
Federal Highway Administration
(nonvoting)
Federal Transit Administration
(nonvoting)

MEMORANDUM

DATE January 20, 2011
TO Transportation Planning and Programming Committee
of the Boston Region Metropolitan Planning Organization
FROM Karl H. Quackenbush, Acting CTPS Director
RE Work Program for: I-495 Corridor/MetroWest Development
Compact: Land Use Study

ACTION REQUIRED

Review and approval

PROPOSED MOTION

That the Transportation Planning and Programming Committee of the Boston Region Metropolitan Planning Organization, upon the recommendation of the Metropolitan Area Planning Council and the Executive Office of Housing and Economic Development, vote to approve the work program for I-495 Corridor/MetroWest Development Compact: Land Use Study in the form of the draft dated January 20, 2011.

PROJECT IDENTIFICATION

Unified Planning Work Program Classification

Planning Studies

CTPS Project Number

11703

Client

Metropolitan Area Planning Council

Project Supervisors: Mark Racicot and Eric Bourassa

CTPS Project Supervisors

Principal: Karl Quackenbush

Manager: Scott Peterson

Funding

EOHED funds

IMPACT ON MPO WORK

The MPO staff has sufficient resources to complete this work in a capable and timely manner. By undertaking this work, the MPO staff will neither delay the completion of nor reduce the quality of other work in the UPWP.

BACKGROUND

The Executive Office of Housing and Economic Development (EOHED) is partnering with the MetroWest Growth Management Committee (MWGMC), the 495/MetroWest Partnership, the Central Massachusetts Regional Planning Commission (CMRPC), and the Metropolitan Area Planning Council (MAPC) to develop a “Compact” under which an examination will be conducted of how different land use strategies affect the transportation system. This study will utilize the process adopted by the South Coast Rail Plan, which won an American Planning Association Award, to examine land use in the study area. The study area will consist of the following 37 communities: Acton, Ashland, Bellingham, Berlin, Bolton, Boxborough, Foxborough, Framingham, Franklin, Grafton, Harvard, Holliston, Hopedale, Hopkinton, Hudson, Littleton, Marlborough, Maynard, Medfield, Medway, Milford, Millis, Natick, Norfolk, Northborough, Plainville, Sherborn, Shrewsbury, Southborough, Stow, Sudbury, Upton, Wayland, Westborough, Westford, Worcester, and Wrentham. The study’s goal is to create a shared framework for developing state, regional, and local strategies regarding the growth, development, and land preservation occurring in these 37 communities.

OBJECTIVES

The objective of this study is to support the study’s analysis of an alternate land use strategy using the CMRPC and CTPS travel demand model sets. CMRPC will develop and apply its travel demand model set separately from the CTPS travel demand model set, but CTPS will coordinate and present the results of both model sets to the client. The utilization of the transportation system and the resulting mobile source emissions of the two land use scenarios will be compared and contrasted.

WORK DESCRIPTION

CTPS will work with the EOHED, MAPC, CMRPC, and MWGMC to develop travel demand forecasts that compare and contrast transportation impacts from two different land use scenarios being developed by MAPC and CMRPC.

Task 1 Develop Base-Year Model

The 2009 travel demand base-year model inputs and assumptions will be reviewed and refined, if needed, to reflect a sufficient level of detail and connectivity with the CMRPC model set in order to produce results that cover the study area.

Product of Task 1

A calibrated base-year model set

Task 2 Develop Inputs, Apply Model, and Analyze Results for Scenario 1

Both land use scenarios will have 2035 as their forecast year. Scenario 1 will utilize an extended-trends land use scenario for the communities within the study area, as well as the no-build transportation network consistent with the current Long-Range Transportation Plan. MAPC will need to provide Scenario 1 land use information by transportation analysis zone within two months of the project's start date in order for CTPS to complete the project by the scheduled completion date. CTPS will coordinate with CMRPC and its travel demand model set in order to develop consistent performance metrics for all communities in the study area. Scenario 1 will be modeled and analyzed with a focus on vehicle-miles of travel, vehicle-hours of travel, regional emissions, and linked and unlinked transit trips by mode.

Products of Task 2

- 2035 model set using Scenario 1 land use
- A summary of the travel model results by mode and community

Task 3 Develop Inputs, Apply Model, and Analyze Results for Scenario 2

Scenario 2 will utilize a revised land use scenario for the communities within the study area, as well as the no-build transportation network consistent with the current Long-Range Transportation Plan. The revised land use will take into account regional priorities for development and preservation. CTPS will coordinate with CMRPC and their travel demand model set in order to develop consistent performance metrics for all communities in the study area. MAPC will need to provide Scenario 2 land use information by transportation analysis zone within nine months of the project's start date in order for CTPS to complete the project by the scheduled completion date. This scenario will be modeled and analyzed with a focus on vehicle-miles of travel, vehicle-hours of travel, regional emissions, and linked and unlinked transit trips by mode.

Products of Task 2

- 2035 model set using Scenario 2 land use
- A summary of the travel model results by mode and community

Task 4 Prepare Technical Memorandum

A technical memorandum documenting all of CTPS's work and all model results will be provided to the client.

Products of Task 4

Technical memorandum documenting the study's methods and results

Task 5 Coordinate the Study with Stakeholders

CTPS will work with and coordinate this study with the EOHEd, MAPC, CMRPC, and MWGMC within the budget life of the project. CTPS will incorporate the travel model results from CMRPC into the final technical memorandum. In order to merge the results, CTPS requests that CMRPC provide the base-year travel model results within three months of the project's start date, Scenario 1 travel model results within six months of the project's start date, and Scenario 2 travel model results within nine months of the project's start date.

Products of Task 10

Meetings, presentations, and phone conversations

ESTIMATED SCHEDULE

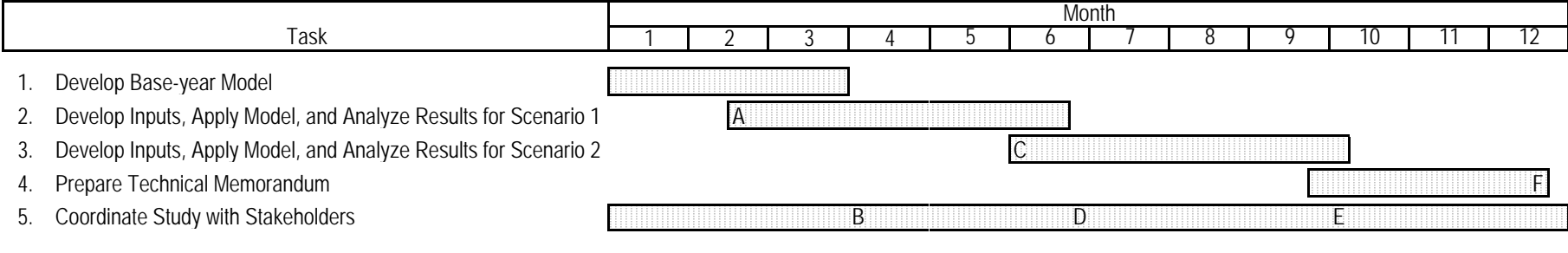
It is estimated that this project will be completed 12 months after the notice to proceed is received. The proposed schedule, by task, is shown in Exhibit 1.

ESTIMATED COST

The total cost of this project is estimated to be \$45,000. This includes the cost of 18.7 person-weeks of staff time and overhead at the rate of 90.69 percent. A detailed breakdown of estimated costs is presented in Exhibit 2.

SAP,KQ/sap

Exhibit 1
 ESTIMATED SCHEDULE
 I-495 Corridor/MetroWest Development Compact: Land Use Study



- Products/Milestones
- A: Scenario 1 land use from MAPC
 - B: Base-year results from CMRPC
 - C: Scenario 2 land use from MAPC
 - D: Travel model results for Scenario 1 from CMRPC
 - E: Travel model results for Scenario 2 from CMRPC
 - F: Technical memorandum

Exhibit 2
 ESTIMATED COST
 I-495 Corridor/MetroWest Development Compact: Land Use Study

Direct Salary and Overhead	\$44,950
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Task	Person-Weeks					Direct Salary	Overhead (@ 90.69%)	Total Cost
	M-1	P-5	P-4	P-3	Total			
1. Develop Base-year Model	0.0	0.5	3.0	3.0	6.5	\$7,544	\$6,842	\$14,386
2. Develop Inputs, Apply Model, and Analyze Results for Scenario 1	0.5	0.0	3.0	0.0	3.5	\$4,478	\$4,061	\$8,540
3. Develop Inputs, Apply Model, and Analyze Results for Scenario 2	0.8	0.0	5.4	0.0	6.2	\$7,835	\$7,105	\$14,940
4. Prepare Technical Memorandum	0.8	0.2	0.5	0.0	1.5	\$2,226	\$2,019	\$4,245
5. Coordinate Study with Stakeholders	0.5	0.1	0.4	0.0	1.0	\$1,489	\$1,350	\$2,839
Total	2.6	0.8	12.3	3.0	18.7	\$23,572	\$21,378	\$44,950

Other Direct Costs	\$50
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Travel	\$50
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TOTAL COST	\$45,000
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Funding
 EOHED funds