

Draft Federal Fiscal Year (FFY) 2015 UPWP Universe of Proposed New Projects

Proposed Project Notes - May 15, 2014

Universe Contents

This document contains the individual proposed project descriptions submitted by Boston Region Metropolitan Planning Organization (MPO) staff for the Federal Fiscal Year (FFY) 2015 Unified Planning Work Program (UPWP), along with proposed project descriptions from Metropolitan Area Planning Council (MAPC) staff and proposed project descriptions created in response to suggestions from various regional transportation stakeholders and members of the public. These descriptions are preceded by an index. Individual project descriptions contain:

- Details on the proposed project's purpose, approach, and deliverables
- Additional comments on the proposed project, where applicable
- Information on anticipated project staff and an estimated range of anticipated costs
- Information about the functions that proposed projects could perform to support transportation planning in the region
- Information on Long-Range Transportation Plan vision topics that could be addressed by the proposed project
- Results of UPWP focus area reviews

Several updates have been made since the UPWP Committee Meeting on March 20, 2014. FFY 2015 UPWP Staff Evaluation and Estimated Project Cost information has been updated, and a new project has been added. Other updates are highlighted in yellow.

FFY 2015 UPWP Focus Areas

For the past several years, the UPWP project selection process has made use of focus areas as a way of examining how proposed projects could advance the visions, goals, and/or policies of the MPO, federal and state agencies, and MAPC. MPO staff conduct a focus area review for each proposed project, which is a qualitative assessment based on the content of the proposals. Projects are noted as giving each focus area "primary" or "secondary" consideration or are noted as "not applicable." When MPO staff and the UPWP Committee create their recommendations for proposed new projects for the next UPWP, the results of these focus area reviews are considered, along with a number of other factors, including survey feedback from MPO staff and UPWP Committee members, guidance from federal and state agencies, and study feasibility and implementation issues.

The focus areas for FFY 2015 UPWP proposed new projects include:

1. **Link Land Use and Transportation:** Considers whether the proposed project could support coordination with local and regional land use planning efforts, including MAPC's MetroFuture plan.

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FFY 2015 UPWP Focus Areas (continued)

2. **Work with Limited Financial Resources:** Considers whether the proposed project could support project prioritization, low-cost transportation improvement strategies, or innovative resource management approaches.
3. **Use a Management and Operations Approach:** Considers whether the proposed project could support management and operations improvements, which might be physical or technology-based. It also considers whether the project could support transportation demand management, or other strategies that provide low-cost, easy-to-implement solutions, which help avoid the need for capacity expansion.
4. **Protect Air Quality and the Environment:** Considers whether the proposed project could support improvements to air quality, other ecological functions, or energy conservation.
5. **Increase Transit and Healthy-Transportation Mode Share:** Considers whether the proposed project could support increased access and connectivity to bicycle, pedestrian, or transit options, promoting mode share or mode shift where possible.
6. **Encourage Sustainability and Livable Communities:** Considers whether the proposed project could support Complete Streets, context-sensitive transportation project implementation, or the preservation of community resources and cohesiveness.
7. **Advance Mobility and Access, and Reduce Congestion:** Considers whether the proposed project could help close gaps for one or more modes in the transportation network, or could support reductions in delays, congestion, or travel time.
8. **Increase System Reliability:** Considers whether the proposed project could support improvements to transit reliability or nonrecurring roadway congestion.
9. **Increase Transportation Safety and Security:** Considers whether the proposed project could support improved safety for one or more modes, or whether it supports responses to natural or man-made hazards.

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FFY 2015 UPWP Focus Areas (continued)

- 10. Support Economic Vitality:** Considers whether the proposed project could support freight movement or local or regional economic development.
- 11. Preserve and Maintain the Transportation System:** Considers whether the proposed project could support bringing one or more modes into a state of good repair or making these modes more efficient.
- 12. Consider Transportation Equity and Accessibility:** Considers whether the proposed project could support access, mobility, or participation in decision making for those with disabilities, those in low-income households, minorities, the elderly, youth, or those with limited English proficiency.
- 13. Support MetroFuture Implementation:** Considers whether the proposed project could address MAPC's MetroFuture Implementation Strategies.
- 14. Support Statewide and Regional Transportation Initiatives:** Considers whether the proposed project could address MassDOT's *weMove Massachusetts* and GreenDOT Implementation plans, the Healthy Transportation Compact, and other plans and initiatives.
- 15. Enhance Technical Capacity, Knowledge, and Insights:** Considers whether the proposed project could support the MPO's understanding of transportation issues and innovations or improves the MPO's planning capacity.
- 16. Support Performance-Based Planning:** Considers whether the proposed project could support the MPO's performance-based planning process, including data collection and monitoring.

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A-1. Addressing Safety, Mobility and Access for Subregional Priority Roadways: FFY 2015

Proposed Project Group:	Roadway Network Performance	FFY 2015 UPWP Staff Evaluation:	High
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$110,000	Proposed FFY 2015 Budget:	TBD
L RTP Vision Topics Addressed:	Environment; Livability; Mobility; Safety and Security; System Preservation, Modernization, and Efficiency		
Project Function:	Support to Regional Transportation Stakeholders		

Project Description:

During MPO outreach, MAPC subregional groups identify transportation problems and issues that concern them. Often these issues are related to bottlenecks or lack of safe access to transportation facilities in their area. These issues can affect livability, quality of life, crash incidence, and air quality along an arterial and its side streets. If problems are not addressed, mobility, access, safety, economic development, and air quality are compromised.

To address comments from the MAPC subregional groups, MPO staff will identify priority arterial bottleneck locations (or a series of locations) in the MPO region, with an emphasis on the issues identified by the relevant subregional groups, and will develop recommendations for low-cost improvements. Special attention will be paid to the need for and feasibility of bus service along these arterial segments. Staff will consider numerous strategies to improve arterials, including examining and evaluating any or all of the following factors: traffic signals (equipment, retiming, redesign, and coordination); bus stop locations; processing buses through traffic lights; location and management of pedestrian crossings and signals, including Americans with Disabilities Act (ADA) requirements; travel lane utilization by motorized and bicycle traffic; speed limit assessment; and access management. These corridor improvements could be recommended to implementing agencies and funded through various federal, state, and local sources, separately or in combination.

Project Comments:

In the Addressing Safety, Mobility, and Access for Subregional Priority Roadways study included in the FFY 2013 and FFY 2014 UPWPs, MPO staff conducted analyses of Routes 127/127A in Gloucester and Rockport and of Route 3A in Cohasset and Scituate. MPO staff will study a segment of Washington Street in the City of Newton as part of the Addressing Safety, Mobility, and Access for Subregional Priority Roadways: FFY 2014 study included in the FFY 2014 UPWP.

MPO staff gathers information on candidate corridors as part of outreach for the UPWP, and refers to corridors suggested in past years when making study selections.

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A-1. Addressing Safety, Mobility, and Access for Subregional Priority Roadways: FFY 2015 (continued)

UPWP Focus Area	Rating
1. Link Land Use and Transportation	Secondary
2. Work with Limited Financial Resources	Secondary
3. Use a Management and Operations Approach	Primary
4. Protect Air Quality and the Environment	Secondary
5. Increase Transit and Healthy-Transportation Mode Share	Secondary
6. Encourage Sustainable Communities and Livability	Secondary
7. Advance Mobility and Access, and Reduce Congestion	Primary
8. Improve System Reliability	Secondary

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	Primary
10. Support Economic Vitality	Secondary
11. Preserve and Maintain the Transportation System	Primary
12. Consider Transportation Equity and Accessibility	N/A
13. Support MetroFuture Implementation	Primary
14. Support Statewide and Regional Transportation Initiatives	Primary
15. Enhance Technical Knowledge, Capacity, and Insights	N/A
16. Support Performance-Based Planning	N/A

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A-2. Low-Cost Improvements to Freeway Bottleneck Locations: FFY 2015

Proposed Project Group:	Roadway Network Performance	FFY 2015 UPWP Staff Evaluation:	High
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$40,000	Proposed FFY 2015 Budget:	TBD
L RTP Vision Topics Addressed:	Mobility; System Preservation, Modernization, and Efficiency		
Project Function:	Support to Regional Transportation Stakeholders		

Project Description:

Several freeway bottleneck locations were analyzed in two consecutive studies in the past, titled Low-Cost Improvements to Bottlenecks Phases I and II, and they were very well received by MassDOT and the Federal Highway Administration (FHWA). Previous study locations included sections of I-95 in Weston and Burlington and sections of Route 3A in Braintree and near the Hingham-Weymouth line. A few study recommendations have been implemented already and staff have been interviewed by FHWA consultants about their successful implementation. In this study, staff will coordinate with MassDOT to identify additional locations to study in FFY 2015. Potential deliverables could include memoranda and presentations documenting recommendations for improving freeway bottlenecks.

Project Comments:

As part of the Low Cost Improvements to Bottleneck Locations study included in the FFY 2010 UPWP, MPO staff analyzed I-95 ramps at interchanges in Weston and Burlington, and locations along Route 3 in Braintree and at the Hingham-Weymouth Town Line. Through the Low Cost Improvements to Bottleneck Locations: Phase II study, which was included in the FFY 2011 UPWP, MPO staff analyzed a section of I-95 between Waltham and Lexington, and an additional portion of I-95 near Burlington.

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A-2. Low-Cost Improvements to Bottleneck Locations: FFY 2015 (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A	9. Increase Transportation Safety and Security	Secondary
2. Work with Limited Financial Resources	Primary	10. Support Economic Vitality	Secondary
3. Use a Management and Operations Approach	Primary	11. Preserve and Maintain the Transportation System	Secondary
4. Protect Air Quality and the Environment	Secondary	12. Consider Transportation Equity and Accessibility	N/A
5. Increase Transit and Healthy-Transportation Mode Share	N/A	13. Support MetroFuture Implementation	N/A
6. Encourage Sustainable Communities and Livability	N/A	14. Support Statewide and Regional Transportation Initiatives	Primary
7. Advance Mobility and Access, and Reduce Congestion	Primary	15. Enhance Technical Knowledge, Capacity, and Insights	N/A
8. Improve System Reliability	Secondary	16. Support Performance-Based Planning	N/A

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A-3. Priority Corridors for LRTP Needs Assessment: FFY 2015

Proposed Project Group:	Roadway Network Performance	FFY 2015 UPWP Staff Evaluation:	High
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$110,000	Proposed FFY 2015 Budget:	TBD
LRTP Vision Topics Addressed:	Environment; Mobility; Safety and Security; System Preservation, Modernization, and Efficiency		
Project Function:	MPO Planning, Support to Regional Transportation Stakeholders		

Project Description:

Corridor analysis is a logical way to approach transportation studies in the region. Possible corridors of critical and strategic concern might best be viewed in a programmatic way. An arterial management roadway improvement effort would recommend conceptual improvements for corridors that the Congestion Management Process (CMP) and the Long-Range Transportation Plan (LRTP) identified as part of the needs assessment process. These corridor improvements could be recommended to implementing agencies and funded through various federal, state, and local sources, separately or in combination.

This project would constitute an additional phase of the Priority Corridors for Long-Range Transportation Plan (LRTP) Needs Assessment project. Previous iterations were funded in the FFYs 2012, 2013, and 2014 UPWPs.

A particular corridor or several small sections of multiple corridors could be selected for study. Deliverables would likely include memoranda and presentations documenting recommendations for corridor improvements, as in past years.

Project Comments:

Depending on the timing of updates to the MPO's Long-Range Transportation Plan Needs Assessment, this project could make use of an updated list of candidate corridor locations. MPO staff also considers municipal, subregional, and other public feedback when selecting study corridors.

In the Priority Corridors for LRTP Needs Assessment study included in the FFY 2012 UPWP, MPO staff conducted analyses of Route 114 in Danvers and Route 203 in Boston. MPO staff studied Route 30 in Framingham and Natick, and Route 2 in Concord and Lincoln, as part of the Priority Corridors for LRTP Needs Assessment study included in the FFY 2013 UPWP. MPO staff will study sections of Route 140 in Franklin through the Priority Corridors for LRTP Needs Assessment: FFY 2014 study.

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A-3. Priority Corridors for LRTP Needs Assessment: FFY 2015 (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A	9. Increase Transportation Safety and Security	Primary
2. Work with Limited Financial Resources	Secondary	10. Support Economic Vitality	N/A
3. Use a Management and Operations Approach	Secondary	11. Preserve and Maintain the Transportation System	Primary
4. Protect Air Quality and the Environment	Secondary	12. Consider Transportation Equity and Accessibility	N/A
5. Increase Transit and Healthy-Transportation Mode Share	Secondary	13. Support MetroFuture Implementation	Primary
6. Encourage Sustainable Communities and Livability	N/A	14. Support Statewide and Regional Transportation Initiatives	Primary
7. Advance Mobility and Access, and Reduce Congestion	Primary	15. Enhance Technical Knowledge, Capacity, and Insights	N/A
8. Improve System Reliability	N/A	16. Support Performance-Based Planning	N/A

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B-1. Regional Bicycle Crash Self-Reporting Survey

Proposed Project Group:	Active Transportation	FFY 2015 UPWP Staff Evaluation:	Low
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$55,000	Proposed FFY 2015 Budget:	TBD
L RTP Vision Topics Addressed:	Safety and Security		
Project Function:	MPO Planning; Support to Regional Transportation Stakeholders; Contribution to Transportation Knowledge		

Project Description:

In 2009, the City of Boston’s “Boston Bikes” initiative conducted a survey of more than 2,500 cyclists on crashes taking place from 2005 through 2009, titled the “Boston Bikes Accident Survey.” Respondents were asked to report every crash, including seemingly insignificant incidents (such as cyclists falling over and getting up uninjured), in order to capture the characteristics of crashes that did not involve Boston Emergency Medical Services (EMS) or Boston Police Department (BPD) attention. Data collected through this self-reported survey included the crash cause, location, and severity, and the types of bicycle accommodations at the crash location. The results of this survey were used in concert with BPD and EMS data in the analysis documented in Boston Bike’s 2013 “Boston Cyclist Safety Report.”

This study would propose to apply the Boston Bikes Accident Survey approach to collect data from other parts of the region, in order to complement other sources of bicycle crash data currently available to the MPO. Using data collected via this regionwide survey, as well as other data sources (potentially including the Boston Bikes survey results), MPO staff would analyze trends in bicycle crashes and how they could relate to available bicycle accommodations and other transportation network characteristics.

Project deliverables would include a report documenting the survey approach and an analysis of the results. This information could be used to inform MPO staff’s bike-planning activities, particularly by enhancing the available information on safety issues that could be taken into account during the planning process. It could also support the MPO’s prioritization of infrastructure projects. These results could also be used by the region’s transportation stakeholders in incorporating safety considerations into bicycle accommodation and Complete Streets planning efforts.

Project Comments:

None.

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B-1. Regional Bicycle Crash Self-Reporting Survey (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A	9. Increase Transportation Safety and Security	Primary
2. Work with Limited Financial Resources	N/A	10. Support Economic Vitality	N/A
3. Use a Management and Operations Approach	N/A	11. Preserve and Maintain the Transportation System	N/A
4. Protect Air Quality and the Environment	N/A	12. Consider Transportation Equity and Accessibility	N/A
5. Increase Transit and Healthy-Transportation Mode Share	Primary	10. Support MetroFuture Implementation	Secondary
6. Encourage Sustainable Communities and Livability	Secondary	11. Support Statewide and Regional Transportation Initiatives	Primary
7. Advance Mobility and Access, and Reduce Congestion	N/A	12. Enhance Technical Knowledge, Capacity, and Insights	Primary
8. Improve System Reliability	N/A	13. Support Performance-Based Planning	Primary

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B-2. Bicycle Network Gaps: Feasibility Evaluations

Proposed Project Group:	Active Transportation	FFY 2015 UPWP Staff Evaluation:	High
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$55,000	Proposed FFY 2015 Budget:	TBD
L RTP Vision Topics Addressed:	Livability; Mobility; Safety and Security		
Project Function:	Support to Regional Transportation Stakeholders		

Project Description:

The MPO's regional Bicycle Network Evaluation, currently underway, will result in a recommended list of high-priority gaps that should be addressed to develop a more connected regional network. This project would follow through on that study by conducting more detailed feasibility evaluations of two of the identified high-priority gaps. Deliverables would include a report documenting study results and recommendations for the selected locations. The identified recommendations could ultimately become Transportation Improvement Program (TIP) projects or projects funded by state, local, or other funding sources.

Project Comments:

None.

UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A
2. Work with Limited Financial Resources	Secondary
3. Use a Management and Operations Approach	N/A
4. Protect Air Quality and the Environment	Secondary

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	Secondary
10. Support Economic Vitality	N/A
11. Preserve and Maintain the Transportation System	N/A
12. Consider Transportation Equity and Accessibility	N/A

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B-2. Bicycle Network Gaps: Feasibility Evaluations (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
5. Increase Transit and Healthy-Transportation Mode Share	Primary	13. Support MetroFuture Implementation	Primary
6. Encourage Sustainable Communities and Livability	Secondary	14. Support Statewide and Regional Transportation Initiatives	Primary
7. Advance Mobility and Access, and Reduce Congestion	Primary	15. Enhance Technical Knowledge, Capacity, and Insights	N/A
8. Improve System Reliability	N/A	16. Support Performance-Based Planning	N/A

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B-3: Community Pedestrian Network Studies

Proposed Project Group:	Active Transportation	FFY 2015 UPWP Staff Evaluation:	High
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$40,000	Proposed FFY 2015 Budget:	TBD
L RTP Vision Topics Addressed:	Livability; Mobility; Safety and Security; System Preservation, Modernization, and Efficiency		
Project Function:	Serve Regional Transportation Stakeholders		

Project Description:

This project would provide support to several municipalities within the MPO region that are interested in examining opportunities to improve their community-wide pedestrian network. Using municipal inventories of sidewalks and other data resources, MPO staff would work with communities to conduct an assessment of existing pedestrian transportation connections, including sidewalks, paths, and crosswalks, and identifying opportunities to improve these connections. This analysis would be coordinated with work done by the Metropolitan Area Planning Council (MAPC), MassRIDES through the Massachusetts' Safe Routes to School Program, and other stakeholders, where appropriate. Deliverables would include reports documenting pedestrian network inventories, analysis results, and recommendations for improvement. The results of these pedestrian network assessments could be used to support community-level Complete Streets improvement efforts, which could be funded with federal, state, local, or other capital funding.

Project Comments:

The recently-passed transportation bond bill includes a Complete Streets certification program. Communities that are certified under this program would be eligible to receive funding to regularly and routinely include Complete Streets design elements and infrastructure on locally funded roads. MPO staff anticipates that this program would make \$50 million available to communities during a five-year-period. The certification requirements for municipalities would include:

- Adoption of a Complete Streets bylaw, ordinance, or administrative policy
- Coordination with MassDOT to confirm the accuracy of a baseline pedestrian and bicycle accommodations inventory in order to identify priority projects
- Development of procedures to follow when conducting municipal road repair, upgrades, or expansion projects on public rights-of-way to incorporate Complete Streets elements

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B-3: Community Pedestrian Network Studies (continued)

Project Comments (continued):

- Establishment of a municipal review process for all private development proposals to ensure that Complete Streets components are incorporated into new construction
- Establishment of municipal goals for an increased mode share for walking, cycling, and public transportation, where applicable, to be met within five years, and development of a program to reach that goal
- Annual progress reporting to MassDOT

The results of these Community Pedestrian Network studies could be a resource to municipalities when applying for, or maintaining certification under, this anticipated Complete Streets certification program.

UPWP Focus Area	Rating
1. Link Land Use and Transportation	Secondary
2. Work with Limited Financial Resources	Secondary
3. Use a Management and Operations Approach	N/A
4. Protect Air Quality and the Environment	N/A
5. Increase Transit and Healthy-Transportation Mode Share	Primary
6. Encourage Sustainable Communities and Livability	Secondary
7. Advance Mobility and Access, and Reduce Congestion	Primary
8. Improve System Reliability	N/A

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	Primary
10. Support Economic Vitality	N/A
11. Preserve and Maintain the Transportation System	Primary
12. Consider Transportation Equity and Accessibility	Secondary
10. Support MetroFuture Implementation	Primary
11. Support Statewide and Regional Transportation Initiatives	Primary
12. Enhance Technical Knowledge, Capacity, and Insights	Secondary
13. Support Performance-Based Planning	Secondary

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B-4. Fairmount Line Station Access Analysis (added May 15, 2014)

Proposed Project Group:	Active Transportation	FFY 2015 UPWP Staff Evaluation:	N/A
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$75,000	Proposed FFY 2015 Budget:	TBD
L RTP Themes Addressed:	Livability; Mobility; Safety and Security		
Project Function:	Support to Regional Transportation Stakeholders		

Project Description:

The 9.2-mile Fairmount Line is a MBTA commuter rail service running from South Station in Boston's central business district (CBD) to Readville, passing through the following neighborhoods: Downtown Boston, South Boston, Roxbury, Dorchester, Mattapan, and Hyde Park. Until 2012, there were only four stations outside of Boston's CBD: Upham's Corner, Morton Street, Fairmount, and Readville. As part of the Fairmount Line Improvements Program, the MBTA has opened three new stations: one at Talbot Avenue (in 2012), one at Newmarket (in 2013), and one at Four Corners/Geneva (in 2013). A fourth station at Blue Hill Avenue is currently under construction.

This proposed project would help promote the success of the Fairmount Line by analyzing possible impediments to walking or biking for areas within a quarter-mile of each of the eight stations mentioned above. Information generated through this study could be used to support the City of Boston in making the stations more accessible to bicyclists and pedestrians, and to make the Fairmount line a continued success overall.

Project Comments:

This project has been suggested by Rafael Mares with the Conservation Law Foundation (CLF). Mr. Mares recommended conducting this study in FFY 2015, if possible, while the station improvements are still relatively recent.

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B-4. Fairmount Line Station Access Analysis (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A	9. Increase Transportation Safety and Security	Primary
2. Work with Limited Financial Resources	N/A	10. Support Economic Vitality	N/A
3. Use a Management and Operations Approach	N/A	11. Preserve and Maintain the Transportation System	Secondary
4. Protect Air Quality and the Environment	Secondary	12. Consider Transportation Equity and Accessibility	Secondary
5. Increase Transit and Healthy-Transportation Mode Share	Primary	13. Support MetroFuture Implementation	Primary
6. Encourage Sustainable Communities and Livability	Secondary	14. Support Statewide and Regional Transportation Initiatives	Primary
7. Advance Mobility, Access, and Congestion Reduction	Primary	15. Enhance Technical Knowledge, Capacity, and Insights	N/A
8. Improve System Reliability	N/A	16. Support Performance-Based Planning	N/A

Draft FFY 2015 UPWP Universe of Proposed New Projects

C-1. Safety Analysis at Intersections near MAGIC Schools

Proposed Project Group:	Safety and Security	FFY 2015 UPWP Staff Evaluation:	High
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$75,000 - \$100,000 (see comments)	Proposed FFY 2015 Budget:	TBD
L RTP Vision Topics Addressed:	Livability; Mobility; Safety and Security		
Project Function:	Support to Regional Transportation Stakeholders		

Project Description:

The proposed study would provide information to support understanding of the impacts of school transportation on regional road systems in the **Minuteman Advisory Group on Interlocal Coordination (MAGIC) subregion**. This activity would fulfill two purposes:

1. Enable the MPO and others to target local and state/federal funding to those intersections which have safety problems and are within the walk zone of schools
2. Help Boston Region MPO municipalities, MPO members, and state officials in considering opportunities to avoid costs when addressing intersection safety and congestion issues around schools. This information would help these stakeholders to better consider alternatives to upgrading intersections (or doing widenings) to address capacity/congestion issues; and focus energy and financial investment on a mode shift to school buses, walking, and biking

The base mapping effort would include several steps:

1. Identify and map all signalized intersections within a 2-mile radius of each school
2. Identify and map major arterial routes with intersections within the 2 mile radius (those on the federal-aid-eligible list)
3. Map high crash intersections within this 2-mile buffer of each school.
4. Do a data review of any available level-of-service (LOS) traffic studies that capture the LOS of these intersections and map those intersections (for which we have data) that are currently at LOS C or worse
5. Identify and flag the intersections within these buffers that are high volume (perhaps using a threshold of greater than 10,000 vehicles per day)

After conducting these initial mapping steps, staff would refine the list of key intersections to a subset for which staff would obtain data from the school departments on how students get to school (percent who are bused, driven, walk, or ride bicycles.)

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C-1. Safety Analysis at Intersections near MAGIC Schools (continued)

Project Description (continued):

Information on the patterns of student cycling, walking, or busing (particularly if use of these modes is low) could be compared to the results of the safety analysis to improve stakeholders' understanding of traffic and safety issues around particular schools. Deliverables would include the maps of the school and safety data.

Project Comments:

This proposal is based on a suggestion provided by Michelle Ciccolo (Town of Hudson), which was presented at the January 16 MAGIC Subregion meeting. The number and types of schools that would be covered in the mapping and analysis work is still being determined. **Costs also may vary depending on the extent of mapping and analysis work that is pursued.**

UPWP Focus Area	Rating
1. Link Land Use and Transportation	Secondary
2. Work with Limited Financial Resources	Primary
3. Use a Management and Operations Approach	Primary
4. Protect Air Quality and the Environment	N/A
5. Increase Transit and Healthy-Transportation Mode Share	Secondary
6. Encourage Sustainable Communities and Livability	Primary
7. Advance Mobility and Access, and Reduce Congestion	Primary
8. Improve System Reliability	N/A

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	Primary
10. Support Economic Vitality	N/A
11. Preserve and Maintain the Transportation System	N/A
12. Consider Transportation Equity and Accessibility	N/A
13. Support MetroFuture Implementation	Primary
14. Support Statewide and Regional Transportation Initiatives	Primary
15. Enhance Technical Knowledge, Capacity, and Insights	Secondary
16. Support Performance-Based Planning	N/A

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D-1. Community and Human-Services Transportation Support

Proposed Project Group:	Transportation Equity and Accessibility	FFY 2015 UPWP Staff Evaluation:	High
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$45,000	Proposed FFY 2015 Budget:	TBD
L RTP Vision Topics Addressed:	Livability; Mobility; Regional Equity		
Project Function:	Support to Regional Transportation Stakeholders, Contribution to Transportation Knowledge		

Project Description:

This project would look at practices that successful community and human-service agencies (such as agencies that provide transportation and councils on aging) use to plan, coordinate, and manage their transportation services. These could include exploration of programs and projects, operational practices, or software or other technology. The study would also look at issues such as who participates and who pays for or subsidizes the services. Information-gathering techniques would include a literature review and, potentially, consultations with transportation service providers. Documentation of these successful practices would include case studies. Materials produced by MPO staff would not only suggest practices, but also provide some guidance to service providers on how to apply for Community Transit Grants.

Possible deliverables could include:

- A white paper/report/guidebook for community and human-service transportation providers, such as councils on aging and others, which would document practices and provide guidance
- Guidance materials to support transportation service providers in completing Community Transit Grant applications

Project Comments:

None.

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Draft FFY 2015 UPWP Universe of Proposed New Projects

D-1. Community and Human-Services Transportation Support (continued)

UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A
2. Work with Limited Financial Resources	Primary
3. Use a Management and Operations Approach	Secondary
4. Protect Air Quality and the Environment	N/A
5. Increase Transit and Healthy-Transportation Mode Share	Primary
6. Encourage Sustainable Communities and Livability	Secondary
7. Advance Mobility and Access, and Reduce Congestion	Primary
8. Improve System Reliability	N/A

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	N/A
10. Support Economic Vitality	N/A
11. Preserve and Maintain the Transportation System	N/A
12. Consider Transportation Equity and Accessibility	Primary
13. Support MetroFuture Implementation	Primary
14. Support Statewide and Regional Transportation Initiatives	Primary
15. Enhance Technical Knowledge, Capacity, and Insights	Primary
16. Support Performance-Based Planning	N/A

Draft FFY 2015 UPWP Universe of Proposed New Projects

D-2. Title VI Service Equity Analyses: Methodology Development

Proposed Project Group:	Transportation Equity and Accessibility	FFY 2015 UPWP Staff Evaluation:	High
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$55,000	Proposed FFY 2015 Budget:	TBD
L RTP Vision Topics Addressed:	Mobility; Regional Equity		
Project Function:	MPO Planning, Support to Regional Transportation Stakeholders; Contribution to Transportation Knowledge		
Project Description:			

As outlined in FTA C 4702.1B (released in 2012), providers of public transportation must develop written procedures to evaluate, prior to implementation, any and all service changes that exceed the transit provider's major service change policy to determine whether those changes will have a disparate impact based on race, color, or national origin. The Federal Transit Administration (FTA) defines the typical measure of disparate impact as a comparison between the proportion of persons in the protected class who are adversely affected by the service change and the proportion of persons not in the protected class who are adversely affected. As defined by the FTA, the disparate impact analysis is limited to a cursory look at whether the minority percentage of the population of the area or service affected by the change (for example, the population within a quarter mile of a bus route) is greater than the minority percentage of the population of the entire service area (for example, the entire MBTA service area). The required analysis is outlined, as follows, in FTA C 4702.1B:

“When a transit provider uses ridership as the comparison population, the transit provider will compare the ridership of the affected route(s) with the ridership of the system. For example, if the ridership of affected route(s) is 60 percent minority and the system ridership is 40 percent minority, then changes to the route(s) may have a disparate impact. When a transit provider uses the population of the service area as the comparison population, it will compare the population in Census blocks or block groups served by the affected route(s) with the population in the service area. For example, if affected route(s) serves Census blocks that are 40 percent minority and the service area is 45 percent minority, there would likely not be a disparate impact.”

This approach to the equity analysis fails to examine the true impacts of service changes. The intent of this project is, in service equity analyses, to go beyond whether or not a change is occurring, and provide more meaningful information about the impacts of that change on protected populations. This project will develop an innovative methodology for analyzing the potential adverse effects of a major service change based on the use of standardized metrics. The end result of this project will ensure congruity across all procedures and policies related to Title VI service equity analysis.

This project would deliver its findings in the form of a technical memorandum. The report could contain:

- A complete and comprehensive Title VI methodology for assessing major service changes
- A definitive list of metrics to be used in the equity analysis of major service changes, outlined for each type of major service change
- Guidelines for evaluating each equity analysis metric

Draft FFY 2015 UPWP Universe of Proposed New Projects

D-2. Title VI Service Equity Analyses: Methodology Development (continued)

Project Description (continued):

The results from this project could enhance the MPO's Title VI and transportation-equity-related work, as well as Title VI work conducted on behalf of MassDOT and the MBTA.

Project Comments:

None.

UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A
2. Work with Limited Financial Resources	N/A
3. Use a Management and Operations Approach	N/A
4. Protect Air Quality and the Environment	N/A
5. Increase Transit and Healthy-Transportation Mode Share	Secondary
14. Encourage Sustainable Communities and Livability	N/A
15. Advance Mobility and Access, and Reduce Congestion	Primary
8. Improve System Reliability	N/A

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	N/A
10. Support Economic Vitality	N/A
11. Preserve and Maintain the Transportation System	N/A
12. Consider Transportation Equity and Accessibility	Primary
13. Support MetroFuture Implementation	N/A
14. Support Statewide Transportation Initiatives	Primary
15. Enhance Technical Knowledge, Capacity, and Insights	Primary
16. Support Performance-Based Planning	Primary

Draft FFY 2015 UPWP Universe of Proposed New Projects

E-1. Core Capacity Constraints

Proposed Project Group:	Land Use, Environment, and Economy	FFY 2015 UPWP Staff Evaluation:	High
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$120,000	Proposed FFY 2015 Budget:	TBD
L RTP Vision Topics Addressed:	Livability; Mobility; System Preservation, Modernization, and Efficiency		
Project Function:	Support to Regional Transportation Stakeholders		

Project Description:

The transportation system is heavily utilized within the city of Boston and its surrounding communities. The transportation system encompasses the roadway system and the MBTA transit system. The congestion on roadways and crowding on the transit system are a function of the density of land use, the trip-making activity associated with the different land use types, and the capacity of the different transportation modes to handle the trip making during specific times of the day.

The proposed study will examine three perspectives of how utilized our transportation system is and how it could accommodate future growth:

1. The first part of this study would be to document for current conditions where there are existing or potential constraints on the roadway and transit system in the core area during the peak periods. The core area is defined as the city of Boston and several neighboring communities. The transit system would consist of only the major fixed-route MBTA modes. The roadway system would potentially consist of higher-functional-class roadways. The peak periods consist of the peak AM and PM 3-hour times. The constraints would be based on performance metrics to be determined, but for transit they could include load factors (carrying capacities) that exceed the MBTA service levels and volume-to-capacity ratios for the higher-functional-class roadways.
2. The second part of this study would build on part one and examine a future year (possibly 2040) and its developments. The future year would include future transportation projects as they exist in the current adopted Long-Range Transportation Plan. As future development or redevelopment occurs in the area, it leads to changes in the land use types and trip-making activity in the region. This change in trip-making activity has the potential to stress the transportation system more than it currently is stressed today. The product of this task would be to quantify what developments would have impacts on what transit submodes or elements of the roadway network and to what degree in the future.
3. The third task is a review of the process of assessing transit investments for the purpose of mitigating the transportation impacts of development. Local planning processes and environmental reviews often call for transportation mitigation as a contingency for issuing a permit. However, the way in which these mitigation efforts impact transit is not clear. This task will examine this process and identify the strengths and weaknesses.

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Draft FFY 2015 UPWP Universe of Proposed New Projects

E-1. Core Capacity Constraints (continued)

Project Description (continued):

Deliverables could include memoranda that document the findings from each of the three steps.

The proposed study could complement the Needs Assessment chapter of the Long-Range Transportation Plan by helping the MPO understand how the land use changes in the core would impact the transportation system in 2040.

Project Comments:

The cost of the project is a function of the geography and transit modes examined and could be scaled to include more or less analysis activity.

This proposed UPWP study is based on a discussion between CTPS staff and a group of state senators and representatives on Dec 20, 2013. This group included Sen. William Brownsberger, Rep. Jay Livingstone, Rep. Byron Rushing, and Rep. Gloria Fox. They would like to better understand the constraints of the transportation system in the core area and how it affects their constituents.

Following the development of the proposed study idea, Sen. William Brownsberger sent a letter (dated 1/30/14) requesting a study for the UPWP, which would accomplish three items:

1. Document, for current condition, where there are capacity constraints on the transportation systems in the city of Boston and the surrounding communities. The transportation systems are defined in the roadway system and the MBTA transit system.
2. Quantify how future developments will impact transportation systems. To what extent will congestion limit future development?
3. Examine possible major transportation system investments with an emphasis on transit investments in the study area. Will they be sufficient to meet projected demand?

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Draft FFY 2015 UPWP Universe of Proposed New Projects

E-1. Core Capacity Constraints (continued)

UPWP Focus Area	Rating
1. Link Land Use and Transportation	Primary
2. Work with Limited Financial Resources	N/A
3. Use a Management and Operations Approach	N/A
4. Protect Air Quality and the Environment	N/A
5. Increase Transit and Healthy-Transportation Mode Share	Secondary
6. Encourage Sustainable Communities and Livability	Secondary
7. Advance Mobility and Access, and Reduce Congestion	Primary
8. Improve System Reliability	N/A

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	N/A
10. Support Economic Vitality	Secondary
11. Preserve and Maintain the Transportation System	Primary
12. Consider Transportation Equity and Accessibility	N/A
13. Support MetroFuture Implementation	Secondary
14. Support Statewide and Regional Transportation Initiatives	Primary
15. Enhance Technical Knowledge, Capacity, and Insights	Secondary
16. Support Performance-Based Planning	N/A

Draft FFY 2015 UPWP Universe of Proposed New Projects

E-2. Watertown: Development Impacts on Transportation

Proposed Project Group:	Land Use, Environment, and Economy	FFY 2015 UPWP Staff Evaluation:	Low
Proposed Project Staff:	CTPS and MAPC	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$55,000	Proposed FFY 2015 Budget:	TBD
L RTP Themes Addressed:	Livability; Mobility; System Preservation, Modernization, and Efficiency		
Project Function:	Support to Regional Transportation Stakeholders		

Project Description:

The Town of Watertown is concerned about how new developments along the Arsenal Street and Pleasant Street corridor in Watertown would impact transportation capacity and service in the study area. The Town seeks technical assistance in three areas:

1. Quantifying the extent of development that could occur in the study area
2. Identifying what transportation problems might occur because of these developments
3. Developing mitigation ideas for the roadway and transit networks that serve the study area

Potential products of this cooperative effort between MAPC and CTPS, which may be documented in reports and memoranda, may include:

1. Lists of developments and trip-generation data
2. Analyses of trip flows and the origins of people coming to the study area
3. Information about the location and severity of anticipated transportation problems because of expected increases in travel generated by the new developments
4. Identification of roadway and transit network mitigation ideas to address increased travel demand

Project Comments:

None.

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Draft FFY 2015 UPWP Universe of Proposed New Projects

E-2. Watertown: Development Impacts on Transportation (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
1. Link Land Use and Transportation	Primary	9. Increase Transportation Safety and Security	N/A
2. Work with Limited Financial Resources	N/A	10. Support Economic Vitality	Secondary
3. Use a Management and Operations Approach	N/A	11. Preserve and Maintain the Transportation System	Primary
4. Protect Air Quality and the Environment	N/A	12. Consider Transportation Equity and Accessibility	N/A
5. Increase Transit and Healthy-Transportation Mode Share	Secondary	13. Support MetroFuture Implementation	Secondary
6. Encourage Sustainable Communities and Livability	Secondary	14. Support Statewide and Regional Transportation Initiatives	Primary
7. Advance Mobility, Access, and Congestion Reduction	Primary	15. Enhance Technical Knowledge, Capacity, and Insights	N/A
8. Improve System Reliability	N/A	16. Support Performance-based Planning	N/A

Draft FFY 2015 UPWP Universe of Proposed New Projects

F-1. Evaluation of Information-Technology-Based Programs for Encouraging Mode Shift

Proposed Project Group:	Transit	FFY 2015 UPWP Staff Evaluation:	High
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$55,000	Proposed FFY 2015 Budget:	TBD
LRTP Vision Topics Addressed:	Livability; Mobility		
Project Function:	Contribution to Transportation Knowledge		

Project Description:

The core idea of this project is to investigate the utility of new technologies and software applications for tracking and evaluating the effectiveness of transportation demand management strategies in encouraging mode shift.

As part of the GreenDOT initiative, MassDOT has adopted the NuRide program, which rewards individuals when they walk, bike, telecommute, carpool, take transit, or work a compressed week and record these trips in their NuRide account. Companies, transportation management associations and organizations (TMAs/TMOs), and public agencies also employ transportation demand management (TDM) strategies and may have implemented information-technology-based (IT-based) systems to track the transportation habits of individuals within their organizations and reward them for changing to modes other than the single-occupant vehicle.

This study would research, inventory, and review available IT-based systems for evaluating the effectiveness of transportation demand management strategies and document their use in the MPO region. This would be accomplished by identifying:

- Tools and methods that organizations currently use to manage transportation demand
- The extent to which systems that have been implemented to quantify or track mode shift have been employed
- Key personnel who coordinate the transportation demand programs
- Policies and rewards that have been used to encourage mode shift

The potential for IT-based platforms for encouraging mode shift in the MPO region would also be considered.

This project would present its findings in report format. It would likely contain:

- Literature review
- Summary of a survey of companies, TMA/TMOs, and public agencies
- Evaluations and expected benefits of identified IT-based systems and their implementation

Continued on following page

Draft FFY 2015 UPWP Universe of Proposed New Projects

F-1. Evaluation of Information-Technology-Based Programs for Encouraging Mode Shift (continued)

Project Comments:

None.

UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A
2. Work with Limited Financial Resources	N/A
3. Use a Management and Operations Approach	Primary
4. Protect Air Quality and the Environment	N/A
5. Increase Transit and Healthy-Transportation Mode Share	Primary
6. Encourage Sustainable Communities and Livability	N/A
7. Advance Mobility, Access, and Reduce Congestion	Primary
8. Improve System Reliability	N/A

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	N/A
10. Support Economic Vitality	N/A
11. Preserve and Maintain the Transportation System	N/A
12. Consider Transportation Equity and Accessibility	N/A
13. Support MetroFuture Implementation	N/A
14. Support Statewide and Regional Transportation Initiatives	Primary
15. Enhance Technical Knowledge, Capacity, and Insights	Primary
16. Support Performance-Based Planning	N/A

Draft FFY 2015 UPWP Universe of Proposed New Projects

F-2. Non-Fixed-Route Transportation Services: Lessons for Transit Agencies

Proposed Project Group:	Transit	FFY 2015 UPWP Staff Evaluation:	Low
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$55,000	Proposed FFY 2015 Budget:	TBD
LRTP Vision Topics Addressed:	Livability; Mobility; Regional Equity		
Project Function:	Support to Regional Transportation Stakeholders; Contribution to Transportation Knowledge		

Project Description:

Non-fixed-route services such as taxis (and other similar services), THE RIDE, and other human-servicee-transportation providers take people where they want to go when they want to go there. Data about the origins and destinations of customers using these services could provide useful information for transit service planners.

In a past study, CTPS used taxi origin-destination data (along with other data sources) to determine where transit dollars might be best spent to improve the MBTA's early-morning service. This proposed study would broaden the scope of the aforementioned study to include all-day taxi data and other non-fixed-route service origin-destination data to determine where the fixed-route transit system is inadequately serving potential riders. This study would focus on areas with concentrated taxi origins and destinations, as these are the areas with the most potential for supporting fixed-route transit service.

Some people with disabilities can use fixed-route bus and rail public transportation services for some or all trips. Building on the concept described above, origin-destination data from THE RIDE could reveal possible changes to fixed-route service that would help increase some of THE RIDE users' abilities to live independently while using the fixed-route system. This study would look at the question: could the MBTA eliminate geographic barriers to using the fixed-route system by filling gaps in the existing service? This study would be sensitive to the fact that even if a fixed-route service is available, some RIDE customers may be unable to use the fixed-route system and would still require paratransit service. The results from this portion of the study could end in recommendations for additional transit stops, modifications to routes during certain hours, and new routes or route variations.

This project would also explore the history of non-fixed-route transportation services in the region and create an inventory of agencies or organizations that maintain taxi-based origin-destination data, including documentation of the licensing structures of service providers, the current state of the system, and up-and-coming trends in flexible transportation. This information could be used to evaluate potential fixed-route and flexible-route options for providing service.

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Draft FFY 2015 UPWP Universe of Proposed New Projects

F-2. Non-Fixed Route Transportation Services: Lessons for Transit Agencies (continued)

Project Description (continued):

Overall, this project would address MPO interests in supporting transportation access for underserved populations, particularly people with disabilities, as well as mode shift in general. It could also provide information to support service planning by the region's RTAs.

Data needs for this project include taxicab origin-destination data (Wednesday, Friday, Saturday, and Sunday), which might not exist for areas outside of Boston; and THE RIDE origin-destination data (Wednesday, Friday, Saturday, and Sunday). This project's findings will be in the form of a report. The report could contain:

- Maps depicting current origin-destination data
- Maps depicting where current transit services fail to meet demand
- A review of the characteristics of locations with notable non-fixed-route demand
- A dataset of taxi stands, pickup and drop-off locations, and other taxi-related data
- A history of taxicabs, demand-response services, and new services

Project Comments:

None.

UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A
2. Work with Limited Financial Resources	Secondary
3. Use a Management and Operations Approach	Secondary
4. Protect Air Quality and the Environment	N/A
5. Increase Transit and Healthy-Transportation Mode Share	Primary

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	N/A
10. Support Economic Vitality	N/A
11. Preserve and Maintain the Transportation System	N/A
12. Consider Transportation Equity and Accessibility	Primary
13. Support MetroFuture Implementation	Secondary

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Draft FFY 2015 UPWP Universe of Proposed New Projects

F-2. Non-Fixed-Route Transportation Services: Lessons for Transit Agencies (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
6. Encourage Sustainable Communities and Livability	N/A	14. Support Statewide and Regional Transportation Initiatives	Primary
7. Advance Mobility and Access, and Reduce Congestion	Primary	15. Enhance Technical Knowledge, Capacity, and Insights	Primary
8. Improve System Reliability	N/A	16. Support Performance-Based Planning	N/A

Draft FFY 2015 UPWP Universe of Proposed New Projects

F-3. Universal Unlimited Transit Pass / EcoPass Program Feasibility Study

Proposed Project Group:	Transit	FFY 2015 UPWP Staff Evaluation:	Medium
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$55,000	Proposed FFY 2015 Budget:	TBD
LRTP Vision Topics Addressed:	Livability; Mobility		
Project Function:	Support to Regional Transportation Stakeholders; Contribution to Transportation Knowledge		

Project Description:

This project would be a feasibility study on the development of a universal, unlimited fare product which would encourage mode shift and have a revenue-neutral or revenue-positive impact.

In the current financial environment, revenue-neutral options or revenue-stabilizing options to fare products are important to many public transit operators. One strategy proposed and implemented in other regions of the country is to implement a deeply-discounted group pass (DDGP) program that would be available to a broad range of employers, including universities, private corporations, and government entities. There is evidence that a deeply-discounted group pass program could have a positive impact on revenue, given correct pricing, and may influence mode choice.

This project would further research into deeply-discounted group passes. Particularly, this study would investigate: the structures and administrative requirements of these programs, characteristics of successful programs, pricing scheme(s), and possible implementation regimes. Investigation into additional groups that could participate in this kind of program would be included—for example, tourists, out-of-area visitors, or hotel guests.

The MBTA has been exploring the concept of universal university pass programs, and has worked with Boston University MBA students to explore the potential of such a program. Additionally, MIT has piloted a Mobility Pass project, which goes beyond the provision of transit passes to incorporate strategies to encourage mode shift. Observations from the MIT Mobility Pass program suggest that the implementation of this kind of program is likely to support regional mode shift, and further research and discussion about these potential impacts would be explored.

This project will present its findings in report format. It would likely contain:

- Literature review
- Survey of transit agencies that have implemented this type of program, including estimations of ridership and revenue impacts
- Evaluation of positive impacts and challenges
- Development of schema or menu of programs developed
- Responsibilities of the organizations involved in the program
- Expected benefits from implementation of the program

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Draft FFY 2015 UPWP Universe of Proposed New Projects

F-3. Universal Unlimited Transit Pass / EcoPass Program Feasibility Study (continued)

Project Comments:

None.

UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A
2. Work with Limited Financial Resources	Primary
3. Use a Management and Operations Approach	N/A
4. Protect Air Quality and the Environment	N/A
5. Increase Transit and Healthy-Transportation Mode Share	Primary
6. Encourage Sustainable Communities and Livability	N/A
7. Advance Mobility and Access, and Reduce Congestion	Primary
8. Improve System Reliability	N/A

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	N/A
10. Support Economic Vitality	N/A
11. Preserve and Maintain the Transportation System	N/A
12. Consider Transportation Equity and Accessibility	N/A
13. Support MetroFuture Implementation	Primary
14. Support Statewide and Regional Transportation Initiatives	Primary
15. Enhance Technical Knowledge, Capacity, and Insights	Primary
16. Support Performance-Based Planning	N/A

Draft FFY 2015 UPWP Universe of Proposed New Projects

F-4. Hudson / Marlborough Suburban Mobility Study

Proposed Project Group:	Transit	FFY 2015 UPWP Staff Evaluation:	Low
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$35,000	Proposed FFY 2015 Budget:	TBD
L RTP Themes Addressed:	Livability; Mobility; Regional Equity		
Project Function:	Support to Regional Transportation Stakeholders		

Project Description:

The Town of Hudson proposes a suburban mobility study that would evaluate transit options within Hudson and between Hudson and Marlborough. Currently, Hudson only has a door-to-door, pre-scheduled van service for seniors, which is provided by its Council on Aging. It recently has become a member of the MetroWest Regional Transit Authority, which provides bus service in Marlborough. The Town of Hudson notes that the lack of public transportation and the high number of households in Hudson that do not have access to a vehicle, make it challenging for members of many households to get around.

The proposed study would analyze existing travel patterns and potential demand for service within Hudson and between Hudson and Marlborough, evaluate options for providing transit connections, and recommend approaches for providing transit service. The Town requests information about the cost of proposed route options, and what portion of those costs would need to be paid by the municipality or other grants, as the municipality does not presently pay a Cherry Sheet assessment for RTA services. Study findings and recommendations for improving transit service between Hudson and Marlborough would be documented in a memorandum.

Project Comments:

This proposal is based on a written request for a study from the Town of Hudson. The Town reports that five percent of households do not have access to a vehicle, and that Hudson also includes a high proportion of low-income households, elderly persons, and persons with disabilities.

Hudson and Marlborough are in two different MAPC subregions: Hudson is part of the Minuteman Advisory Group for Interlocal Coordination (MAGIC), and Marlborough is part of the MetroWest Regional Collaborative. The Town of Hudson notes that it has been many years since an analysis examining transit opportunities between the two subregions has been performed, which has made collaboration on concrete ideas for needed public transit services difficult.

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Draft FFY 2015 UPWP Universe of Proposed New Projects

F-4. Hudson / Marlborough Suburban Mobility Study (continued)

Project Comments, continued:

The Town of Hudson reported several observations regarding transit needs between the two communities:

- Because of the high concentration of commercial zones in both Hudson and Marlborough, residents travel back and forth between these two communities daily. Both Hudson and Marlborough have multiple shopping plazas, which also are major employers for lower-income residents.
- Based on the major cross-town commuting patterns along State Route 85—which connects Southborough and Marlborough through Hudson and on to Berlin and Bolton—there are opportunities along this corridor for transit alternatives.

Hudson was included in MAPC's 2011 MAGIC Suburban Mobility Transit Study, which evaluated communities in the MAGIC region for their potential to support different types of transit service. This study examined reverse- and traditional-commuting patterns, suburb-to-suburb commuting, and daily-needs trips. Hudson scored "High" on suburb-to-suburb commuting and daily-needs trips, and the Town believes that this indicates a need to evaluate the suburban mobility of Hudson and nearby Marlborough. This MAGIC Suburban Mobility study also found that Hudson has high population and employment densities compared to other MAGIC communities, citing that many commuting trips both originate and end in Hudson.

UPWP Focus Area	Rating	UPWP Focus Area	Rating
1. Link Land Use and Transportation	Secondary	9. Increase Transportation Safety and Security	N/A
2. Work with Limited Financial Resources	N/A	10. Support Economic Vitality	N/A
3. Use a Management and Operations Approach	N/A	11. Preserve and Maintain the Transportation System	N/A
4. Protect Air Quality and the Environment	Secondary	12. Consider Transportation Equity and Accessibility	Secondary

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Draft FFY 2015 UPWP Universe of Proposed New Projects

F-4. Hudson / Marlborough Suburban Mobility Study (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
5. Increase Transit and Healthy-Transportation Mode Share	Primary	13. Support MetroFuture Implementation	Secondary
6. Encourage Sustainable Communities and Livability	Secondary	14. Support Statewide and Regional Transportation Initiatives	Secondary
7. Advance Mobility, Access, and Congestion Reduction	Primary	15. Enhance Technical Knowledge, Capacity, and Insights	N/A
8. Improve System Reliability	N/A	16. Support Performance-Based Planning	N/A

Draft FFY 2015 UPWP Universe of Proposed New Projects

G-1. Household-Survey-Based Travel Profiles and Trends: Selected Policy Topics

Proposed Project Group:	Other Technical Support	FFY 2015 UPWP Staff Evaluation:	High
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$75,000	Proposed FFY 2015 Budget:	TBD
L RTP Vision Topics Addressed:	N/A (study topics not specified)		
Project Function:	MPO Planning, Contribution to Transportation Knowledge		

Project Description:

In 2011, the Massachusetts Travel Survey obtained travel information from about 15,000 households across the state, with 10,400 of them located in the Boston Region MPO model region. A similar survey, administered just in the Boston region, had been performed in 1991. These kinds of travel surveys are undertaken primarily to obtain data with which to build or rebuild travel models, and Boston Region MPO staff are indeed currently engaged in rebuilding the MPO's model set with the data from the 2011 survey.

In addition to their use in model building, the data from these household travel surveys represent a rich source of information about the travel behavior of Massachusetts householders, and as such, provide an opportunity for MPO staff and others to gain valuable insights of particular use in the transportation planning process. To that end, the FFY 2013 UPWP contained a study entitled Household-Survey-Based Travel Profiles and Trends that was intended as the first step in "mining" the information from the 2011 survey. It actually went further than that. The study yielded a general profile of household travel behavior as measured in 2011, but it also compared the characteristics of work trips reported on and described in 2011 to those reported in the earlier 1991 survey.

Now that the initial study of the 2011 travel survey has been completed, a second, more selective study is proposed for FFY 2015. In this proposed study, selected topics of particular interest to the MPO will serve as the basis for further exploration of the 2011 survey data. These topics will relate to policy and programming interests of the MPO. One suggested topic concerns nonmotorized travel. The survey could be analyzed in order to answer questions such as the following:

- What are the characteristics of those individuals who choose to travel by walking and biking?
- What kinds of trips do they make?
- How long are those trips, and what are the other salient characteristics of them?
- Why are these individuals choosing to utilize nonmotorized modes instead of motorized ones?
- How can the MPO use these insights in its policy development and programming in such a way as to encourage more such travel behavior?

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Draft FFY 2015 UPWP Universe of Proposed New Projects

G-1. Household-Survey-Based Travel Profiles and Trends: Selected Policy Topics (continued)

Project Description (continued):

Other possible topics of particular interest to the MPO pertain to environmental justice, air quality and greenhouse gas emissions, and the propensity to utilize transit. The household survey could be used to analyze any of these topics in a way similar to the nonmotorized topic could be analyzed. In all cases, the object would be to examine the survey data for insights about travel behavior that could then be used by the MPO to inform its decision-making when developing policies and funding projects and programs in the Long-Range Transportation Plan (LRTP) and Transportation Improvement Program (TIP). Up to three policy topics could be examined with the available budget. In each case, the potential deliverable would be a report documenting the MPO staff's findings and their implications.

Project Comments:

None.

UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A
2. Work with Limited Financial Resources	N/A
3. Use a Management and Operations Approach	N/A
4. Protect Air Quality and the Environment	N/A
5. Increase Transit and Healthy-Transportation Mode Share	N/A
6. Encourage Sustainable Communities and Livability	N/A
7. Advance Mobility and Access, and Reduce Congestion	N/A
8. Improve System Reliability	N/A

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	N/A
10. Support Economic Vitality	N/A
11. Preserve and Maintain the Transportation System	N/A
12. Consider Transportation Equity and Accessibility	N/A
13. Support MetroFuture Implementation	Secondary
14. Support Statewide and Regional Transportation Initiatives	Secondary
15. Enhance Technical Knowledge, Capacity, and Insights	Primary
16. Support Performance-Based Planning	Secondary

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G-2. Public Health and Transportation Data Exploration

Proposed Project Group:	Other Technical Support	FFY 2015 UPWP Staff Evaluation:	Low
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$55,000	Proposed FFY 2015 Budget:	TBD
LRTP Vision Topics Addressed:	Livability		
Project Function:	MPO Planning; Contribution to Transportation Knowledge		

Project Description:

Through this project, MPO staff would conduct an exploration of public health data available through national, state, regional, local, academic, and other sources that could be used in future analyses of the relationship between transportation and public health in the region. Examples include data available from OurHealthyMass, a state-level Web resource, as well as through the Centers for Disease Control and Prevention (CDC) or the Environmental Protection Agency (EPA). MPO staff will assess these tools for applicability to MPO planning activities and how they could be integrated with existing MPO transportation data resources. Deliverables will include a white paper describing data sources that are applicable to MPO work and next steps for integrating these resources into MPO activities. This white paper could also discuss future analysis activities that the MPO could undertake, or could include an example of a type of transportation and public health analysis.

Project Comments:

None.

UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A
2. Work with Limited Financial Resources	N/A
3. Use a Management and Operations Approach	N/A
4. Protect Air Quality and the Environment	N/A

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	N/A
10. Support Economic Vitality	N/A
11. Preserve and Maintain the Transportation System	N/A
12. Consider Transportation Equity and Accessibility	N/A

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G-2. Public Health and Transportation Data Exploration (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
5. Increase Transit and Healthy-Transportation Mode Share	Secondary	13. Support MetroFuture Implementation	Secondary
6. Encourage Sustainable Communities and Livability	Primary	14. Support Statewide and Regional Transportation Initiatives	Secondary
7. Advance Mobility and Access, and Reduce Congestion	N/A	15. Enhance Technical Knowledge, Capacity, and Insights	Primary
8. Improve System Reliability	N/A	16. Support Performance-Based Planning	Secondary

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G-3. MPO Staff Independent Research and Idea Development

Proposed Project Group:	Other Technical Support	FFY 2015 UPWP Staff Evaluation:	Low
Proposed Project Staff:	CTPS	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$35,000	Proposed FFY 2015 Budget:	TBD
L RTP Vision Topics Addressed:	N/A (no topics specified)		
Project Function:	MPO Planning;, Contribution to Transportation Knowledge		

Project Description:

This program would support staff work on a topic that relates to metropolitan transportation planning and something the MPO produces, and that is of great interest to the staff member. The topic may not be covered by a UPWP ongoing program or discrete project, and so would need this more-open avenue for advancement. Staff would complete an application (reviewed by managers and directors) for some MPO funding to do independent research on a topic of professional interest and potential use in the metropolitan transportation-planning program. This program would have benefits for the MPO's information needs and for staff's professional development. Having the opportunity to be awarded a grant in this program could result in a think-tank like quality that could yield highly creative solutions to transportation-planning problems.

Deliverables would include memoranda detailing staff findings and their applicability to MPO activities.

Project Comments:

None.

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G-3. MPO Staff Independent Research and Idea Development (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A	9. Increase Transportation Safety and Security	N/A
2. Work with Limited Financial Resources	N/A	10. Support Economic Vitality	N/A
3. Use a Management and Operations Approach	N/A	11. Preserve and Maintain the Transportation System	N/A
4. Protect Air Quality and the Environment	N/A	12. Consider Transportation Equity and Accessibility	N/A
5. Increase Transit and Healthy-Transportation Mode Share	N/A	13. Support MetroFuture Implementation	N/A
6. Encourage Sustainable Communities and Livability	N/A	14. Support Statewide and Regional Transportation Initiatives	N/A
7. Advance Mobility, Access, and Reduce Congestion	N/A	15. Enhance Technical Knowledge, Capacity, and Insights	Primary
8. Improve System Reliability	N/A	16. Support Performance-Based Planning	Secondary

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H-1. Electric Vehicle Research and Procurement for Municipal Fleets

Proposed Project Group:	MAPC Proposed Projects	FFY 2015 UPWP Staff Evaluation:	N/A
Proposed Project Staff:	MAPC	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$10,000	Proposed FFY 2015 Budget:	TBD
L RTP Themes Addressed:	Environment; Climate Change		
Project Function:	Support to Regional Transportation Stakeholders		

Project Description:

MAPC would research the best available electric vehicles for municipal fleets; then conduct a procurement on behalf of the 101 cities and towns in the region to provide them with the opportunity to replace municipally owned vehicles with electric or electric hybrid alternatives. MAPC would plan events and outreach to educate municipal officials about the benefits of electric vehicles on air quality and climate change.

Project Comments:

This activity would be covered under MAPC's Alternative-Mode Planning and Coordination project group in the UPWP.

UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A
2. Work with Limited Financial Resources	N/A
3. Use a Management and Operations Approach	N/A
4. Protect Air Quality and the Environment	Primary

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	N/A
10. Support Economic Vitality	N/A
11. Preserve and Maintain the Transportation System	N/A
12. Consider Transportation Equity and Accessibility	N/A

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H-1. Electric Vehicle Research and Procurement for Municipal Fleets (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
5. Increase Transit and Healthy-Transportation Mode Share	N/A	13. Support MetroFuture Implementation	Primary
6. Encourage Sustainable Communities and Livability	N/A	14. Support Statewide and Regional Transportation Initiatives	Secondary
7. Advance Mobility and Access, and Reduce Congestion	N/A	15. Enhance Technical Knowledge, Capacity, and Insights	Primary
8. Improve System Reliability	N/A	16. Support Performance-Based Planning	N/A

Draft FFY 2015 UPWP Universe of Proposed New Projects

H-2. Local Parking Management Plans in Selected Communities

Proposed Project Group:	MAPC Proposed Projects	FFY 2015 UPWP Staff Evaluation:	N/A
Proposed Project Staff:	MAPC	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$35,000 - \$75,000	Proposed FFY 2015 Budget:	TBD
L RTP Themes Addressed:	Environment; Livability		
Project Function:	Support to Regional Transportation Stakeholders		

Project Description:

MAPC would work with selected municipalities to develop local parking-management plans to provide better parking availability to stimulate local economic prosperity and to help municipalities plan for greater land use density with decreased parking ratios. The goal of this work program is to address the problems municipalities face from not managing their parking supply in commercial areas. This work would benefit local air quality and congestion by managing parking supply and demand and creating places where people can park once and then walk to multiple destinations. In locations where parking requirements can be reduced, the number of households with one or more vehicles could decline, which could result in higher percentages of walking, biking, and transit ridership. The work product for this project would include recommendations to municipalities in the form of a report.

Project Comments:

This activity would be covered under MAPC's **Alternative-Mode Planning and Coordination** project group in the UPWP.

UPWP Focus Area	Rating	UPWP Focus Area	Rating
1. Link Land Use and Transportation	Primary	9. Increase Transportation Safety and Security	N/A
2. Work with Limited Financial Resources	N/A	10. Support Economic Vitality	Secondary
3. Use a Management and Operations Approach	N/A	11. Preserve and Maintain the Transportation System	N/A
4. Protect Air Quality and the Environment	Secondary	12. Consider Transportation Equity and Accessibility	N/A

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H-2. Local Parking Management Plans in Selected Communities (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
5. Increase Transit and Healthy-Transportation Mode Share	Secondary	13. Support MetroFuture Implementation	Primary
6. Encourage Sustainable Communities and Livability	Primary	14. Support Statewide and Regional Transportation Initiatives	N/A
7. Advance Mobility and Access, and Reduce Congestion	Primary	15. Enhance Technical Knowledge, Capacity, and Insights	N/A
8. Improve System Reliability	N/A	16. Support Performance-Based Planning	N/A

Draft FFY 2015 UPWP Universe of Proposed New Projects

H-3. Right-Size Parking Tool

Proposed Project Group:	MAPC Proposed Projects	FFY 2015 UPWP Staff Evaluation:	N/A
Proposed Project Staff:	MAPC	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$70,000	Proposed FFY 2015 Budget:	TBD
L RTP Themes Addressed:	Environment; Livability		
Project Function:	Support to Regional Transportation Stakeholders		

Project Description:

MAPC would create an online parking tool that would provide municipalities, developers, non-profits, and the general public with the information and ability to understand the parking supply and demand of multi-family housing developments in their communities. Parking has a direct impact on overall development costs, and can hinder developers looking to construct multi-family housing. A better understanding of parking supply and demand would help communities achieve a parking balance, and assist in the state's goal of creating 10,000 new housing units each year. This project also could benefit local air quality and congestion by providing information that municipalities and developers could use to decide to reduce the total number of parking spaces required as a component of a new development. In turn, the less stringent parking requirements would create less traffic and congestion, and benefit local and regional air quality. In such locations, the number of households with one or more vehicles could decline, resulting in higher percentages of walking, biking, and transit ridership.

This tool would allow municipalities, state officials, developers, and residents to see existing parking supply and demand across a municipality and determine the appropriate amount of parking to provide as part of a development. It also might be used by municipalities to set minimum and maximum parking requirements for different types of developments or uses. Not only would the tool assist users when considering a current development, it also would help determine how much parking may be required when planning for future growth around the municipality. The parking tool would live primarily online in order to be interactive and widely accessible from any location. This project would include accompanying documentation that describes the research and analytic methods for developing the tool.

The Parking Tool would be a fully interactive online resource accessible to the public that would have specific focus areas with which to influence local and regional decision making:

1. Data Collection and Representation – MAPC, in partnership with the three-to-four municipalities, would identify a statistically significant number of multi-family housing developments to survey. MAPC would survey both the total amount of parking constructed as part of the development, as well as an on-site night-time survey of the parking being utilized by residents. Developments identified would include varying years of construction, a mix of rental and owner-occupied properties, a mix of bedroom types and sizes, and a mixture of levels of affordability. The developments

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H-3. Right-Size Parking Tool (continued)

Project Description, continued:

would also have different locational qualities such as being near a downtown, having access to different types of transit, or being located near a highway or interstate. Having a mixture of development types and locations would allow MAPC to understand how demographic and locational factors impact the amount of parking constructed and the amount of parking utilized by residents.

Once the surveying work is complete, this information would be entered into an online mapping platform that would allow the public to see which developments were surveyed, the characteristics of that development, the total amount of parking constructed, and the total amount of parking utilized on site. This initial set of data points alone could help inform existing opinions about the state of parking in a municipality.

2. Education – The second component of the parking tool is to educate decision makers, developers, and the public about the impact of parking locally and regionally. This would be accomplished in a few different ways. The first would be the through the release of the online mapping platform that would allow users to review each development surveyed by MAPC and the supporting data points related to each development. This data would assist in forming the basis for a regional conversation around parking requirements and the appropriateness of establishing parking requirements relative to the location and characteristics of development projects.

The second piece of the online tool would provide users with the ability to input information about a proposed development and its location to find existing developments that share similar characteristics. Users could compare the two developments based on the total size, number of units, unit mix, affordability, amount of parking, and location to help determine if the amount of parking provided is appropriate compared to the utilization of existing parking at developments with similar characteristics.

The third piece would be an online parking calculator module that would be a component of the overall parking tool website. The parking calculator would allow users to input information about a particular development project to determine the estimated parking ratio for the project, the estimated costs of constructing the parking, annual Greenhouse Gas Emissions, estimated annual Vehicle Miles Traveled, and more. The proposed development project being evaluated could then be compared to other existing development projects in the community or around the region to see how the parking and parking-related measures compare.

3. Local and Regional Policy – It is MAPC's hope that this online parking tool and unique sets of data would assist residents, developers, planners, and officials in making decisions at the local level when it comes to right-sizing parking. At the regional level, this information is critical to informing how transportation, land use, zoning, and environmental policies could be adjusted to reflect more accurate and appropriate parking supplies. Without this information, parking decisions are being made in a vacuum where developments are considered one at a time for approval often without considering the cumulative impact on the host community and surrounding communities. Our municipalities are asking for the hard data to support more flexible parking regulations, and this tool would play an important role in bringing that information to the public.

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H-3. Right-Size Parking Tool (continued)

Project Comments:

This activity would be covered under MAPC's Corridor and Subarea Planning Studies project group in the UPWP.

UPWP Focus Area	Rating	UPWP Focus Area	Rating
1. Link Land Use and Transportation	Primary	9. Increase Transportation Safety and Security	N/A
2. Work with Limited Financial Resources	N/A	10. Support Economic Vitality	Secondary
3. Use a Management and Operations Approach	N/A	11. Preserve and Maintain the Transportation System	N/A
4. Protect Air Quality and the Environment	Secondary	12. Consider Transportation Equity and Accessibility	N/A
5. Increase Transit and Healthy-Transportation Mode Share	Secondary	13. Support MetroFuture Implementation	Primary
6. Encourage Sustainable Communities and Livability	Primary	14. Support Statewide and Regional Transportation Initiatives	N/A
7. Advance Mobility and Access, and Reduce Congestion	Secondary	15. Enhance Technical Knowledge, Capacity, and Insights	Secondary
8. Improve System Reliability	N/A	16. Support Performance-Based Planning	N/A

Draft FFY 2015 UPWP Universe of Proposed New Projects

H-4. Stream Crossing Inventory for Local Roads

Proposed Project Group:	MAPC Proposed Projects	FFY 2015 UPWP Staff Evaluation:	N/A
Proposed Project Staff:	MAPC	Selected for FFY 2015 UPWP:	TBD
Estimated Project Cost:	\$16,300	Proposed FFY 2015 Budget:	TBD
L RTP Themes Addressed:	Climate Change; Environment; Safety and Security; System Preservation, Modernization, and Efficiency		
Project Functions:	MPO Planning; Support to Regional Transportation Stakeholders		

Project Description:

This concept is based on planning conducted by MAPC's sister regional planning agency (RPA), the Southeastern Regional Planning and Economic Development District's (SRPEDD) Geographic Roadway Runoff Inventory Program (GRIPP), which has been funded by SRPEDD's UPWP. This program includes the mapping of critical roadway segments that are eligible for federal funding, and the mapping of areas where environmentally sensitive resources are located—cold water fisheries, wetland resources, anadromous fish runs (for fish that migrate up river from the sea), etc.—and which may be adversely affected, which could help users identify transportation infrastructures likely in need of improvement.

In a pilot watershed, MAPC would undertake an effort similar to GRIPP to:

- Prioritize local roads, before construction or rehabilitation projects, in order to avoid “status quo” designs that do not account for ecosystem restoration or climate-change impacts (increased precipitation and flooding);
- Provide critical environmental analysis—largely unavailable to municipal staff—which would allow for more informed decisions regarding stormwater management and roadway drainage projects; and
- Identify potential sites for retrofitting, in order to address existing problems.

Anticipated work undertaking this inventory would include the following overarching tasks:

1. Data collection of both roadway infrastructure and environmental data, such as layers utilized within the Conservation Assessment and Prioritization System (CAPS) program at the University of Massachusetts, and other data sources.
2. Utilization of the MAPC Development Database and MAPC's Priority Preservation and Priority Development Areas analyses, if available, to identify proposed development that could either contribute to degradation and/or bear the brunt of flooding and roadway damage from undersized drainage systems.

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H-4. Stream Crossing Inventory for Local Roads (continued)

Project Description (continued):

3. GIS-based analysis of a compilation of the above data to determine the most critical intersections where roadways and hardened trails cross rivers, streams, and freshwater or coastal wetlands.
4. Preparation of a report summarizing results of the analysis and offering recommendations for next steps (e.g., working with partners to evaluate identified culverts for retrofit opportunities, identify sources of funding, etc.).

Benefits of this project could include a compilation and analysis of critical transportation and environmental data, which are rarely combined, to begin to best:

1. Improve transportation networks
2. Reduce public-safety hazards
3. Restore aquatic habitats
4. Create more resilient communities and stream systems
5. Plan for climate change

In addition, the project would advance MAPC's and partners' knowledge of aquatic ecological values and impairments, and transportation and public-safety vulnerabilities.

Project Comments:

This activity would be covered under MAPC's Corridor and Subarea Planning Studies project group in the UPWP.

UPWP Focus Area	Rating
1. Link Land Use and Transportation	N/A
2. Work with Limited Financial Resources	Secondary

UPWP Focus Area	Rating
9. Increase Transportation Safety and Security	Primary
10. Support Economic Vitality	N/A

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H-4. Stream Crossing Inventory for Local Roads (continued)

UPWP Focus Area	Rating	UPWP Focus Area	Rating
3. Use a Management and Operations Approach	N/A	11. Preserve and Maintain the Transportation System	Primary
4. Protect Air Quality and the Environment	Primary	12. Consider Transportation Equity and Accessibility	N/A
5. Increase Transit and Healthy-Transportation Mode Share	N/A	13. Support MetroFuture Implementation	Secondary
6. Encourage Sustainable Communities and Livability	Secondary	14. Support Statewide and Regional Transportation Initiatives	Primary
7. Advance Mobility and Access, and Reduce Congestion	N/A	15. Enhance Technical Knowledge, Capacity, and Insights	Primary
8. Improve System Reliability	Secondary	16. Support Performance-Based Planning	Secondary