

CTPS - FFY 2013 UPWP Universe of Proposed New Projects

SYSTEM PRESERVATION, MODERNIZATION, AND EFFICIENCY

Project Name	Total Cost	FFY 2013 UPWP Budget	Project Description	FFY 2013 UPWP Staff Evaluation	Link Land Use and Transportation.	Work w Limited Financial Resources	Use a Mngmt & Operations Approach	Protect Air Quality and Environment	Preserve and Maintain the System	Increase Transit and Healthy Transportation Mode Share	Encourage Sustainable Communities	Consider Transportation Equity	Address Documented Need (from CMP, RTP, PMT, YOUMOVE, METROFUTURE)	Enhance Technical Capacity	Comments
Addressing Non-recurring Congestion in the Region: A Status Report	\$30,000	\$0	<p>Up to sixty percent of all congestion is caused by non-recurring events such as traffic incidents, special events, weather, and bad signal timing. The Boston Region MPO has a very good record in performing planning studies on identifying safety and operational recurring congestion and deficiencies at roadway segments and intersections and recommending short and long term improvements for the efficient and safe processing of all modes, including looking at the performance of signals. However, freeway incidents frequently affecting travel in the region and their management for safety and congestion fall wholly in the responsibilities of MassDOT, the police, and other first responders.</p> <p>Through this study, staff sees an opportunity to inform and educate members of the MPO about how incidents affect travel in the region, what is the location, severity, type, and frequency of occurrence, what resources are expended in the program and what resources the program may be lacking for an improved incident management. Being informed about congestion-causing events in the region has the potential of influencing the selection of projects for funding, including funding for ITS and operational strategies instead of, or in addition, to traditional pavement management capital projects.</p>	High		✓	✓	✓	✓				✓	✓	
Pavement Management System Development ✓	\$375,000	\$0	<p>Federal guidance for the development of the FFY 2010 UPWP advised that Massachusetts MPOs undertake a study to establish the cost of maintaining municipally controlled arterials and urban collectors and to give priority to their maintenance. The guidance further stated that the results of the study be used to inform decision making in the development of the 2030 LRTP.</p> <p>The MPO programmed funding for this work in the FFY 2011 and FFY 2012 UPWPs. The results of the FFY 2012 UPWP Pavement Management System project will be discussed by the MPO meeting on April 5 to determine if further work should be included in the FFY 2013 UPWP.</p>	To be determined		✓			✓				✓		
✓ Recent Addition					✓ Major Consideration		✓ Minor Consideration								

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TIP Project Impacts Before-After Evaluation ✓	\$30,000	\$0	<p>This program is the continuation of a pilot study begun in FFY 2012. Its purpose is to identify the effectiveness of TIP projects. Measuring project effectiveness is important in order to know whether the employed strategies work well and are therefore suitable for application in similar situations.</p> <p>To this end, staff will select TIP projects that are programmed for construction during the spring of 2013. It is likely that only traffic management and operations projects will be selected, as the construction period of projects in this category is shorter than for other projects, such as the construction of freeway interchanges. The “before” data will be collected in the early spring of 2013, before a selected project begins. The “after” data will be collected upon project completion, which may be later than 2013.</p> <p>The type of “before” and “after” data that staff will collect depends on the nature of the project. For traffic management and operations it is likely that traffic flow, speed, delay, and safety information will be collected. If budget allows, the level-of-service and air quality information will also be calculated for the “before” and “after” conditions. Staff will compare the two sets of data and draw conclusions.</p>	Medium		✓							✓		Before/after evaluations are included in SAFETEA-LU regulations and were recommended by FHWA and FTA in their comments to the MPO following last year's certification process.
School Bus Transportation: Issues and Opportunities	\$40,000	\$0	<p>This study of school bus transportation would inventory towns to explore school bus transportation practices, likely inefficiencies, trends in ridership and likely explanations, costs, alternative forms of transporting students, including drop-offs, drive along, car-pool, walking, biking.</p> <p>It was the observation of MAGIC Subregion members, school buses are underutilized for a number of reasons, but still required to provide service to a diminished number of students contributing to roadway congestion. At the same time, students who do not ride school buses drive to school themselves or are driven to school thus also contributing to morning hour congestion even more. The MAGIC Subregion is interested in exploring several areas of school bus transportation and how it may relate to congestion at town intersections, especially during the morning commuting hours.</p> <p>The results of the study will be shared with administrators and school officials for their consideration in planning school transportation options, and municipal planners for transportation delays and resource planning.</p>	Low	✓	✓	✓	✓	✓	✓			✓		
✓ Addition correcting error in listing this project as ongoing in the March 15 UPWP Committee draft document.					✓ Major Consideration	✓ Minor Consideration									

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Household Survey-based Travel Profiles and Trends	\$66,700	\$66,700	In 2011, the Massachusetts Travel Survey obtained travel information from 15,017 Massachusetts households, 10,399 of which were in the CTPS model region. Every household member prepared a diary for a specified day, and reported all trips, mode of travel, and the type of activity at each visited location from the beginning of the day to the end. A similar survey using a smaller sample (3,743 households) was undertaken in 1991 for the CTPS model region only. The 1991 survey was used for model development and later topical investigations. The proposed study would have two primary purposes. First, it would analyze the 2011 survey in order to create a statistical household and travel profile of the CTPS model region. Second it would develop a set of comparisons between 1991 and 2011 with respect to trip making patterns and household characteristics such as household size, income, and auto ownership. Of particular interest is measuring any trends in the average length of trip by trip purpose, travel mode, and time of day travel distributions, auto occupancy, and travel speeds. Measuring these trends may have important implications for calibration and validation of the current CTPS model set.	High									✓	✓	
Priority Corridors for LRTP Needs Assessment ✓	\$105,000	\$105,000	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. A particular corridor or several sections from multiple corridors could be selected. Candidate locations would include: <ul style="list-style-type: none"> • Route 9 in Framingham, Natick, and Southborough (West Corridor) • Route 30 in Framingham, (West Corridor) • Mystic Valley Parkway in Medford (North Corridor/Central Area) • Route 203 in Boston (Southwest Corridor/Central Area) • Route 145 in Boston and Winthrop (Northeast Corridor/Central Area) • Route 37 in Braintree (Southeast Corridor) • Route 16 in Newton and Wellesley (West Corridor) • Route 3A in Quincy and Weymouth (Southeast Corridor) • Route 16 in Chelsea and Revere (Northeast Corridor/Central Area) • Route 140 in Wrentham ((Southwest Corridor) • Route 138 in Stoughton (Southwest Corridor) • Route 1 in Norwood (Southwest Corridor) • Route 3/3A in Burlington and Woburn (North Corridor) • Route 60 in Arlington (Northwest Corridor) • Route 140 in Franklin (Southwest Corridor) Note: Corridors are listed roughly in priority order according to traffic flow.	High	✓	✓	✓	✓				✓			
✓ Correction replacing previous listing of Safety and Operations Analysis at Selected Intersections					✓ Major Consideration	✓ Minor Consideration									

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CharlieCard Trip Paths Study Phase II	\$55,000	\$0	The MBTA Charlie Card Trip Paths Pilot Study conducted by CTPS in 2011 created a set of computer programs to generate station-to-station trip tables for the MBTA rail rapid transit system. These used as input daily station entry reports from the MBTA's automated fare collection (AFC) system. For planning purposes, it would be very useful to be able to calculate travel volumes over individual links in the system at hourly or even finer levels. The results of the Pilot Study indicated that it would be feasible to adapt the trip-table programs to generate such line-volume tables. The trip tables generated by the 2011 programs do not separate passengers by mode of access to or egress from the rapid transit system. However, with additional programming it would be feasible to produce tables for subgroups such as station-to-station travel by passengers transferring to or from MBTA buses, commuter rail trains, or commuter boats. This second phase of the study would create the additional programming needed to generate tables of line volumes and transfers.	Medium		✓	✓	✓		✓			✓	✓	\$1350 per location
Regional HOV Systems Planning Phase II	\$60,000	\$60,000	Provision of HOV facilities can be helpful in making more efficient use of our existing express highways by providing a superior level of service for multiple occupancy vehicles and encouraging the use of public transportation. Potential types of facilities may include queue bypasses, contraflow lanes on existing pavement, and separate new HOV lanes. Phase I of HOV systems planning , rules of thumb are being developed to illustrate where in our express highway system HOV facilities might be considered, and where they could yield the highest benefits relative to construction feasibility. Phase 2 of HOV systems planning will concentrate on the I-93 corridor north of Boston, which will be identified as having a high priority for potential HOV systems implementation, as well as having major relevance to on-going projects. In this corridor, a number of projects are in the planning and/or implementation stage where the designs would be impacted by the expectation of potential future HOV facilities. These include planned improvements to the I-93/I-95 interchange in Woburn/Reading/Stoneham, the expected construction of a new Tri-Town interchange in Andover/Tewksbury/Wilmington, rebuilding of the Route 110/Route 113 interchange in Methuen, and the widening of I-93 from six lanes to eight from Route 125 in Wilmington to the New Hampshire state line. This study would be the second part of a phased program considering the potential for new HOV facilities in the Boston region.	High		✓	✓	✓		✓			✓		
					✓ Major Consideration				✓ Minor Consideration						

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Express Highway Vehicle Occupancy and Classification Counts	\$80,000	\$0	Understanding the composition of traffic on regional roadways is important for modeling, planning, and policy purposes. Unfortunately, these are among the most difficult data to obtain. Occupancy measurement is impossible by technical methods, and requires direct observation. Vehicle type also requires direct observation for all but an extremely limited set of instances. Hazardous cargoes require direct observation, and are looming larger as a public policy and modeling issue. The proposed study will begin the process of building a broad, regional sample of occupancies and vehicle classifications at various express highway locations in the CTPS model region. Occupancy and classification data will correspond with CTPS trip table assignment categories, and data will be obtained in both peak and off-peak directions, as well as during the midday. Preliminary work indicates significant variations in traffic composition by location, direction, and time period. These counts may also help to validate other classification methods used in Massachusetts.	High									✓	✓	
MetroWest RTA Planning Assistance	\$30,000	\$30,000	An evaluation of existing transit services will identify improvements to present routes and schedules and new services to meet untapped area demand and to relieve traffic congestion. CTPS will provide support to the MetroWest Regional Transit Authority (MWRTA) in evaluating best routes and to modify in making the system more efficient and economical. MWRTA is entering its fifth year of service and would benefit from an evaluation of route efficiencies and demands.	High	✓	✓				✓				✓	
SWAP Regional Public Transit Feasibility Study	\$40,000	\$40,000	A regional approach to transit that takes into account trips within the region, to other regional transit systems, and to Boston, is the best approach in dealing with congestion, deteriorating roads and limited accessibility/mobility for all residents. Components of the proposed study would include: an inventory of existing public transit services within SWAP and adjacent areas; a needs assessment based on existing travel patterns and projected population; and recommendations that focus on regionalizing transit services, connections among existing systems and providing new public transit initiatives that could be implemented over time.	High	✓	✓				✓				✓	
					✓ Major Consideration					✓ Minor Consideration					

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Travel Demand Management: Status and Activity in Boston MPO Region	\$20,000	\$0	<p>The study will inventory the activities and services of Boston metropolitan area TMAs (Transportation Management Associations) and other providers that promote and provide alternative commuting options to area citizens. TMAs are nonprofit organizations with membership from local businesses, municipalities, and chambers of commerce. Depending on the size and location of the TMA, membership benefits may include carpool and vanpooling matches, promoting transit pass programs, managing and operating shuttle bus services, and operating guaranteed ride home programs. In addition to TMAs, MassDOT funds and manages MassRides, consulting staff that operate car pool and vanpool programs in the region, in addition to providing statewide many of the programs TMAs also provide. The services mentioned earlier are the most well-known initiatives taken by TMAs but recently the FHWA expanded the notion of TDM to include any type of management or roadway travel demand modification strategy, including the construction and operation of HOV lanes.</p> <p>Though the Boston region MPO does not manage and operate directly services for commuting alternatives, it has a history of supporting, studying, and funding travel demand management options. Staff will record where the region stands with travel demand management services, including researching transportation demand software that estimate benefits of travel demand management programs such as carpooling, telecommuting and transit use.</p> <p>Travel demand management strategies are recommended to be the first step of congestion reduction strategies in the Congestion Management Process (CMP). In future work programs, sections of the MPO region can be analyzed to see what strategies benefit what areas the best. Strategies would have to be analyzed on a sub-regional or regional basis.</p>	Low	✓	✓	✓		✓			✓		
					✓ Major Consideration	✓ Minor Consideration								

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Effects of Bicycle Facilities on MBTA Access	\$30,000	\$0	While some MBTA stations are well connected to a network of bicycle lanes, trails, and paths (bicycle facilities), others are relatively isolated to bicyclists. There is also significant variation in the number and quality of amenities at T stations. Other bicycle-related projects in the 2012 UPWP provide a solid foundation for this project by identifying access-starved and dangerous stations, but they stop short of determining what benefit filling these gaps might have on the usage of recommended facilities. Using existing data from the CMP's bicycle inventory, GIS, the MBTA systemwide survey, trail counts, and previous project products, this project would determine what impact improving bicycle access (and by extension, safety) and the amenities at T stations does to increase the number of people who ride their bicycles to T stations. Using a regression analysis, the impact of different types of bicycle facilities and amenities could be estimated. The theoretical number of additional people who would bicycle (or some other benchmark derived from the study) could be added into TIP project criteria.	Medium	✓	✓		✓		✓	✓		✓		
Bicyclist Safety Improvements at Selected Intersections	\$40,000	\$0	Bicyclist crash data has been collected since 1995, and contains detailed information about crash type, severity, location, weather condition, and date and time. This study would utilize these crash reports to identify key conflict points and intersections throughout the region that have a disproportionately high number of bicyclist fatalities and injuries. Common safety challenges would be identified for each community context, and be used to inform potential low-cost safety improvements. Common challenges could include inadequate bicycle facilities, high traffic speeds, and right of way constraints. Potential improvements might involve incorporating a buffer between automobile traffic and bicyclists, improving bicycle and pedestrian accommodations on the approach to the intersection, or continuing bicycle facilities through intersections.	High	✓	✓		✓		✓	✓		✓		This work can be done under the Congestion Management Program, which is already included in the draft UPWP as an ongoing project.
					✓ Major Consideration					✓ Minor Consideration					

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Economic Benefit Assessment of Transportation Investments	\$60,000	\$0	Transportation and economic development are closely linked. The transportation system provides access to supplies, goods, and services and allows for their circulation. Transportation investments improve access to jobs and commercial centers. Investments in transportation can produce short-term construction jobs, new long-term jobs, and expand the size of the labor market. This study would explore how the MPO can quantify the economic benefits of projects under consideration for programming in the Transportation Improvement Program (TIP) and Long-Range Transportation Plan (LRTP). As a broad scale scenario planning review of the collective projects in the LRTP, the study would consider the relative differences, in economic terms, between making the transportation investments in the LRTP, opposed to a base-case scenario. It may do so by studying the relative economic benefits of projects currently programmed in the TIP and LRTP and applying the lessons learned in future project evaluations. This study will explore the use of the software program TREDIS (Transportation Economic Development Impact System) in conducting these evaluations. Among the many measures that could be used to evaluate economic benefits are total employment growth, transportation-related job growth, dollars invested in a brownfield area as a result of a transportation project, dollars invested in transit-oriented development as a result of a transportation project, and monetary value of time savings or improved accessibility resulting from a transportation project.	High							✓		✓	✓	
					✓ Major Consideration				✓ Minor Consideration						

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<p>Comprehensive Route 3A Corridor Study</p> <p style="text-align: center;">✓</p>	\$50,000		<p>Recent intensification of land uses and large-scale, diverse development along the Route 3A Corridor in the South Shore Subregion requires a focused review of the overall influence of all of the projects in the area. The developments have been created in a rapid succession and on a case by case basis without an overall integrated strategy for dealing with the transformative effects of the combination of projects. The concern for public safety along Route 3A and the integration and access to transportation options would be the emphasis of this study. This would help to link the benefits of the new development to an overall vision for growth in the subregional corridor. The main goals of this corridor study will be to put forth an overall strategy to enhance public safety, find and develop transportation alternatives and help in the implementation of improvements along the corridor.</p> <p>The 3A Corridor Study would include the approximately 3-mile segment of Route 3A between the Cohasset Commuter Rail Station (in Cohasset) and the intersection of Route 3A with Henry Turner Bailey Road (in Scituate). The corridor study is proposed to have two main focuses which are improving traffic safety and increasing transportation choices, including bicycle, pedestrian and potential transit accommodations. The study will look at key intersections with Route 3A along the corridor, such as Sohier Street, Beechwood Street and Henry Turner Bailey Road, to determine opportunities for traffic operations and access management improvements that would improve safety and reduce congestion. The focus would be on low-cost, quick fix improvements that could be implemented quickly. Additionally, the corridor will be investigated for opportunities to increase travel options using a Complete Streets approach. These opportunities could include locations where 'last mile' sidewalk connections can be made, potential locations for on-road bicycle accommodations and shared use paths, and possible transit connections to the rail station and other destinations.</p> <p>Could be considered in the Addressing Safety, Mobilty and Access on Subregional Priority Arterial Roadways project listed on page 14.</p>	Medium	✓	✓		✓		✓	✓		✓		<p>Could be considered in the Addressing Safety, Mobilty and Access on Subregional Priority Arterial Roadways project listed on page 14.</p>
<p>✓ Revised project description and budget</p>					<p>✓ Major Consideration</p>		<p>✓ Minor Consideration</p>								

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Transportation Access Studies of Commercial Business Districts	\$49,500	\$0	<p>Cities and towns have relatively little information on the characteristics of CBD patrons, and, as a result, the planning process for these areas is often governed by perceptions that may or may not be correct. Understanding the transportation access mode and spending and visiting characteristics of CBD patrons would help planners in their work with businesses to improve transportation access to CBDs. Other planning agencies have conducted similar surveys of business patrons about their transportation access mode (driving, public transit, bike, walk, taxi, other) and linked spending characteristics (amount spent per visit, number of visits per month, amount spent per month) with these transportation access modes. A transportation access study of a cross-section of Boston metropolitan area CBDs would evaluate how patrons access CBDs and how this access differs according to the type of CBD.</p> <p>The study would consist of several tasks. First, CTPS would conduct a literature review and summary of other transportation access studies and their conclusions. Second, CTPS would assemble a demographic and transportation profile of CBDs in the Boston metropolitan area, categorize the CBDs according to this profile, and choose a representative CBD from each category. Third, CTPS would work with the selected towns and any business associations to solicit business participation in the study. Businesses would first be asked to provide their perceptions on their customers' actual and preferred transportation access modes. Participating businesses would then be asked to encourage their customers to fill out a short, 4-question survey while they wait in line at the register. The questions would ask the transportation access mode, how much the patron is spending on this visit, how much the patron typically spends at this business per month, and how many times per month the patron typically visits this business. The pilot study would also consist of a parking-use study. This would include a license plate survey and a vehicle turnover count conducted every hour.</p> <p>Finally, CTPS would also conduct a CBD-user survey asking questions about demographics (age, income, vehicle availability, etc.) as well as users' stated preferences (i.e. what mode would users prefer for transportation access). The resulting summaries from this study could be used to inform planning processes that are debating transportation access. Subsequent studies by CTPS could use the model refined by the study to analyze transportation access in other areas.</p>	Low	✓	✓		✓		✓	✓		✓		
					✓ Major Consideration			✓ Minor Consideration							

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<p>Route 1A/Boston-Providence Turnpike, Dedham: Transit Service Enhancements</p> <p style="color: red; text-align: center;">✓</p>	\$4,000	\$0	<p>The purpose of this study would be to explore transit connections from/to commercial and retail establishments near Boston-Providence Turnpike and Washington Street in the area of Dedham close to Route 128. The proponent of this study is the MAPC sub region Three Rivers Interlocal Council (TRIC). According to TRIC members, MBTA bus 34E passengers get off the bus at Washington Street and walk along Elm Street toward Boston-Providence Turnpike, a distance of less than ¼ mile, to reach Legacy Place.</p> <p>MBTA bus route 34 and its variation 34E serve locations along Washington Street. The route originates at Forest Hills Station and terminates at Dedham Mall located close to the West Roxbury/Dedham town line. Variation 34E continues on to Walpole Center. Bus 34E, which passes through the western side of the area of interest for a transit study, operates with 20 to 30 minute headways on weekdays; 30-minute headways on Saturdays; and 60-minute headways on Sundays. Depending on traffic conditions, total running time between Walpole Center and Forest Hills Station is 52 to 62 minutes, one-way.</p> <p>The best way to address the concern of TRIC members, would be to study the benefits and impacts of modifying the route alignment of bus 34E so that it deviates from Washington Street onto Elm Street toward Boston-Providence Turnpike, cross the Turnpike, and connect with the external circulation system of Legacy Place Mall and other retail and commercial establishments east of the Turnpike.</p> <p>In the past, MBTA Service Planning staff explored providing service to the Mall. Some issues had been identified, including, low interest from the Mall owners, lack of appropriate locations for bus stops, and concern over lengthening the present run time of the bus. Currently, MBTA Service Planning is exploring altering route 34E to deviate from Washington Street to a point closer to the Boston-Providence Turnpike (but not crossing it), including locating appropriate spots for bus stops and connections to sidewalks and crosswalks for safe crossing of Elm Street and the Turnpike. A decision on this matter will likely be part of next year's MBTA Bus-Service Plan.</p>	Low	✓	✓		✓		✓	✓				<p>This work could be done under the Community Transportation Technical Assistance Program, which is already included in the draft UPWP as an ongoing project.</p>
<p>✓ Recent addition</p>					<p>✓ Major Consideration</p>		<p>✓ Minor Consideration</p>								

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Low-Cost Safety Improvements at Interchanges with High Crash Rates	\$60,000	\$0	<p>In the recent LRTP, MPO staff reviewed safety problems on the highway network and identified the top 25 crash locations in the Boston Region, of which many are clover-leaf interchanges. This study will identify cost-effective, safety improvements for three interchange locations. The selection of the three locations will be done according interchange performance for safety and in consultation with the interchange data base of the CMP that includes traffic volumes and safety index statistics. In addition, for location selection, staff will review interchange project lists contained in the LRTP and consult with MassDOT highway division district staff. The improvements will include improved signage, realignment, restriping, and installation guardrails.</p> <p>Consistent with performance-based planning and follow-up on the needs assessment in the LRTP, this study relates to the LRTP's vision for improved safety and related policies. As the implementation of these eventual recommendations are envisioned to be within the maintenance responsibilities of MassDOT highway district staff, implementation efficacy will be largely warranted by the fact that MassDOT district staff will be consulted regarding location selection and will participate in designing the improvements. In addition, MassDOT participation would make this study relevant to the agency's safety goals and objectives. Furthermore, low-cost improvements through MassDOT maintenance will assure relatively quick implementation. And, this assures that the study has effective safety outcomes.</p>	Medium		✓	✓	✓	✓				✓		
					✓ Major Consideration				✓ Minor Consideration						

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SAFETY AND SECURITY (CONT.)

Project Name	Total Cost	FFY 2013 UPWP Budget	Project Description	FFY 2013 UPWP Staff Evaluation	Link Land Use and Transportation.	Work w Limited Financial Resources	Use a Mngmt & Operations Approach	Protect Air Quality and Environment	Preserve and Maintain the System	Increase Transit and Healthy Transportation Mode Share	Encourage Sustainable Communities	Consider Transportation Equity	Address Documented Need (from CMP, RTP, PMT, YOUNG, METROFUTURE)	Enhance Technical Capacity	Comments
Roadway Network Inventory for Emergency Needs: A Pilot Study	\$25,000	\$25,000	<p>This work advances the MPO's policies in this area and addresses planning factors related to security. It also responds to guidance that the MPO has received from the Federal Highway Administration and Federal Transit Administration calling for MPOs to "increase their capacity to address climate change in transportation." The program builds and updates the MPO's database on the hazards to which the region is susceptible and the emergency evacuation and hazards planning underway. It provides for extensive mapping of this information, including maps showing the hazards in relation to the region's transportation network. This information is used by the MPO in its safety and security planning and in its project selection process. It is available to others, including state agencies and municipalities, for their emergency and evacuation planning.</p> <p>In FFY 2013 staff would inventory the condition of highway and transit bridges on the emergency routing network, and the presence and condition of signals on selected evacuation routes. The signal inventory would document whether signals on key routes are equipped with emergency vehicle pre-emption or connected to a traffic control center, and whether the signals can be upgraded with ITS improvements. This information gathered would be displayed as GIS data layers on the MPO's All-Hazards Planning web application. The results of the study would also inform decision-making for the TIP process by providing information that could be used for the Safety and Security evaluation of projects. The results would also highlight areas on the emergency network that would benefit from infrastructure improvements or ITS strategies. This study advances the MPO's Safety and Security policy of protecting the region from natural and human threats, and addresses the SAFETEA-LU planning factor for security. Work products would include a memorandum presenting an inventory of bridge and signal conditions and the creation of new GIS layers for the All-Hazards Planning web application.</p>	High	✓	✓	✓	✓	✓	✓	✓	✓	✓		
					✓	Major Consideration			✓	Minor Consideration					

CTPS - FFY 2013 UPWP Universe of Proposed New Projects

SAFETY AND SECURITY (CONT.)

Project Name	Total Cost	FFY 2013 UPWP Budget	Project Description	FFY 2013 UPWP Staff Evaluation	Link Land Use and Transportation.	Work w Limited Financial Resources	Use a Mngmt & Operations Approach	Protect Air Quality and Environment	Preserve and Maintain the System	Increase Transit and Healthy Transportation Mode Share	Encourage Sustainable Communities	Consider Transportation Equity	Address Documented Need (from CMP, RTP, PMT, YOUMOVE, METROFUTURE)	Enhance Technical Capacity	Comments
Address Safety, Mobilty and Access on Subregional Priority Arterial Roadways	\$120,000	\$75,000	<p>The quality of transportation service, associated livability and quality of life, crash incidence, and air quality along an arterial and its side streets largely depends on the presence, size and duration of bottlenecks along it, and safe access for all. Along arterials lacking the design for accommodating traffic flow for passenger cars, freight movements, bus riders, mobility-challenged, and non-motorized users, then mobility, access, safety, and economic development are compromised, including air quality that can become worse for all.</p> <p>To address comments staff heard at several sub regional meetings, staff will identify priority arterial bottleneck locations (or series of locations) in the MPO region, with emphasis in the issues identified by the relevant sub region, including EJ, mobility, and safety concern, sand will develop recommendations for low-cost improvements. Special attention will be paid to the need and feasibility of bus service along these arterial segments. Staff will consider numerous strategies to improve arterials including examining and evaluating: traffic signals (equipment, retiming, redesign, and coordination); bus stops locations; processing buses through traffic lights; location and management of pedestrian crossings and signals, including ADA requirements; travel lane utilization by motorized and bicycle traffic; speed limit assessment; and access management.</p>	High	✓	✓	✓	✓	✓	✓	✓	✓	✓		
					✓ Major Consideration	✓ Minor Consideration									

CTPS - FFY 2013 UPWP Universe of Proposed New Projects

TRANSPORTATION EQUITY															
Project Name	Total Cost	FFY 2013 UPWP Budget	Project Description	FFY 2013 UPWP Staff Evaluation	Link Land Use and Transportation.	Work w Limited Financial Resources	Use a Mngmt & Operations Approach	Protect Air Quality and Environment	Preserve and Maintain the System	Increase Transit and Healthy Transportation Mode Share	Encourage Sustainable Communities	Consider Transportation Equity	Address Documented Need (from CMP, RTP, PMT, YOUMOVE, METROFUTURE)	Enhance Technical Capacity	Comments
EJ-Analysis Methodology Review	\$40,000	\$0	This study would analyze the way that CTPS conducts its environmental justice (EJ) analysis for transit projects such as a fare increase or service change, but the study would also have implications for EJ analyses of other transportation projects. The study would consider four elements: methodology, service area, thresholds, and metrics. With regard to methodology, the travel demand model set currently assigns an EJ designation for each TAZ. An alternative methodology could use the Systemwide Passenger Survey results to assign an EJ designation for each transit mode. The study would consider which methodology is best for analyzing the EJ impacts on transit riders. With regard to service area, the travel demand model set currently uses two potential service areas for certain analyses: one for the entire travel demand model set area and one for a smaller, urban area. The study would consider the rationale for having these two service areas. With regard to thresholds, the travel demand model set currently assumes a 40-minute travel time as the accessibility threshold for transit trips. The study would consider whether this threshold could be refined. Finally, with regard to metrics, the study would consider which metrics from the travel demand model set provide the most useful information for an EJ analysis. These metrics include average fare, access distance, in-vehicle travel time, number of transfers, etc. The study will also include consideration of FTA's proposed new circular (FTA-C-4702.1B) on Title VI compliance.	High								✓		✓	
Household Survey-based Comparisons between Income and Racial Groups	\$30,000	\$0	The 2011 Massachusetts Travel Survey obtained travel information from households on a statewide basis. Every member in selected households prepared a diary for a specific day and reported all trips, method of travel, and the type of activity at each location visited from the beginning to the end of that day. The survey method was designed to have representative results by income and race. In keeping with the MPO's Transportation Equity vision of conducting analyses of the transportation needs of low-income and minority populations, this proposed study would analyze household survey data (including variables such as trip length, number of trips, types of trips, and modes used) for low-income and minority households and compare them with data from non-minority and higher income households to determine what the differences are. This data will be analyzed in comparison with the LRTP Needs Assessment issues to identify specific recommendations for needed improvements.	Medium								✓		✓	
					✓ Major Consideration				✓ Minor Consideration						