

FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)

**ENDORSED BY THE OLD COLONY MPO ON JUNE 16, 2020 FOLLOWING
A PUBLIC REVIEW AND COMMENT PERIOD**

**PREPARED UNDER MASSDOT CONTRACT 108210
OLD COLONY PLANNING COUNCIL
70 SCHOOL STREET, BROCKTON, MA 02301**

FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)

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DISCLAIMER

The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section 505 [or Metropolitan Planning Program, Section 104(f)] of Title 23, U.S. Code.

The views and opinions of the Old Colony Planning Council expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

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ADDITIONAL INFORMATION

To request additional information regarding Title VI and related federal and state nondiscrimination obligations, please contact:

Old Colony Planning Council
Title VI/ Nondiscrimination Coordinator
Mary Waldron
70 School Street
Brockton, MA 02301
508-583-1833 Extension 202
mwaldron@ocpcrpa.org

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Title VI Specialist
MassDOT, Office of Diversity and Civil Rights
10 Park Plaza
Boston, MA 02116
857-368-8580
TTY: 857-368-0603
MASSDOT.CivilRights@state.ma.us

COMPLAINT FILING

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Massachusetts Commission Against Discrimination (MCAD)
One Ashburton Place, 6th Floor
Boston, MA 02109
617-994-6000
TTY: 617-994-6196

TRANSLATION

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If this information is needed in another language, please contact the MPO Title VI Coordinator at 508-583-1833 ext. 202.

Spanish

Si necesita esta información en otro idioma, por favor contacte al coordinador de MPO del Título VI al 508-583-1833 ext. 202.

Portuguese

Caso estas informações sejam necessárias em outro idioma, por favor, contate o Coordenador de Título VI da MPO pelo telefone 508-583-1833, Ramal 202

Chinese Simple

如果需要使用其它语言了解信息，请联系Old Colony大都会规划组织（MPO）《民权法案》第六章协调员，电话508- 583-1833，转202。

Chinese Traditional

如果需要使用其他語言瞭解資訊，請聯繫Old Colony大都會規劃組織（MPO）《民權法案》第六章協調員，電話508- 583-1833，轉202。

Vietnamese

Nếu quý vị cần thông tin này bằng tiếng khác, vui lòng liên hệ Điều phối viên Luật VI của MPO theo số điện thoại 508- 583-1833, số máy nhánh 202.

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Haitian Creole

Si yon moun bezwen enfòmasyon sa a nan yon lòt lang, tanpri kontakte Koòdonatè a Title VI MPO nan 508-583-1833 ext. 202.

French Creole

Si yon moun vle genyen enfòmasyon sa yo nan yon lòt lang, tanpri kontakte Kowòdinatè MPO Title VI la nan nimewo 508-583-1833, ekstansyon 202.

Russian

Если Вам необходима данная информация на любом другом языке, пожалуйста, свяжитесь с Координатором Титула VI в МРО по тел: 508-583-1833, добавочный 202.

French

Si vous avez besoin d'obtenir une copie de la présente dans une autre langue, veuillez contacter le coordinateur du Titre VI de MPO en composant le 508-583-1833, poste 202.

Italian

Se ha bisogno di ricevere queste informazioni in un'altra lingua si prega di contattare il coordinatore MPO del Titolo VI al 508- 583-1833 interno 202

Mon-Khmer, Cambodian

ប្រសិនបើលោក-អ្នកត្រូវការបកប្រែពីភាសានេះ សូមទាក់ទងអ្នកសម្របសម្រួលជំពូកទី6 របស់ MPO តាមរយៈលេខទូរស័ព្ទ 508-583-1833 រួចភ្ជាប់ទៅលេខ 202។

Arabic

508- 583-1833 إذا كنت بحاجة إلى هذه المعلومات بلغة أخرى، يُرجى الاتصال بمنسق الفقرة السادسة لمنظمة التخطيط الحضري على الهاتف: 202. و ثم اضغط الأرقام

Updated December 2019

Old Colony Planning Council

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1. INTRODUCTION

The Old Colony Metropolitan Planning Organization (MPO) conducts and implements a federally certified, continuing, cooperative, and comprehensive transportation planning process (3C) that results in plans, programs, and projects that encompass all transportation modes and that support the region's vision and goals that are articulated in the Old Colony Long Range Transportation Plan (LRTP). The Old Colony MPO plans for the movement of both people and goods within the region by all modes of travel, including highways, rail, public transportation, bicycles, and foot, and also plans for the connections linking these modes.

The FFY 2021 Old Colony Unified Planning Work Program (UPWP) describes and provides budgetary information for the transportation planning tasks and activities, which are to be conducted in the region during the federal fiscal year. The UPWP is prepared and endorsed annually by the Old Colony MPO, prior to the start of the planning program. The Old Colony Planning Council (OCPC) has the responsibility of preparing the UPWP and implementing the tasks contained here within.

The FFY 2021 Old Colony UPWP describes the planning to be undertaken by the Old Colony MPO. Transportation planning activities are described as procedures under specific tasks. For each task, the anticipated accomplishment or product is provided. For each task, budget, and sources of funding are also provided. For management convenience, similar tasks are grouped into the following tasks:

- Task 1000 - Management and Support of Planning Process and Certification Activities
- Task 2000 - Data Reconnaissance, Acquisition, and Analysis Activities
- Task 3000 - Short Range and Long Range Transportation Planning Activities
- Task 4000 - Other Transportation Technical Activities

The Old Colony UPWP is a planning and budgeting tool that is used by Brockton Area Transit (BAT), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Massachusetts Department of Transportation (MassDOT), and Old Colony Planning Council, as the Scope of Services for the contracting for planning services, and may be amended, and/ or administratively modified during the program year with approval of the Old Colony MPO. All relevant tasks will be performed with input from MassDOT District 5.

Continued growth in population, employment, and housing, and the associated increases in travel demand continue to place pressure on the transportation system in the Old Colony Region and beyond. The Old Colony Long Range Regional Transportation Plan represents the Old Colony MPO's effort to create a document and a process that will meet the challenges of preserving and expanding a truly intermodal transportation system. The LRTP includes goals and objectives, performance measures, analyses and recommendations necessary to build and maintain an efficient, effective, and affordable regional transportation system. It is the intention of the Old Colony MPO to build on the current system, striving to make it comprehensive and multi-modal. The goal is a balanced range of well-connected transportation options that will optimize each travel mode: automobile, transit, rail, bicycle, and pedestrian, boat, air, and freight. The LRTP identifies the region's transportation project needs for the next twenty years. The principal way in which LRTP recommendations will be translated into action is through the Transportation Improvement Program (TIP). The TIP is a multimodal list of investments for which federal surface transportation funds will be used. The TIP covers a five-year period, is updated annually, and is based on reasonable estimates of funds available to the region.

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The FFY 2021 Old Colony UPWP continues to expand on several major tasks that are specifically targeted to implement provisions of several pieces of federal legislations, such as the Fixing America's Surface Transportation (FAST) Act, the Clean Air Act Amendments of 1990, and the Americans with Disabilities Act. The Old Colony MPO develops its programs with regional needs in mind, and in alignment with the FAST Act Planning Factors. The federal transportation act, the FAST Act identifies nine (9) Planning Factors that Metropolitan Planning Organizations, such as the Old Colony MPO, must consider in their Unified Planning Work Programs. During the development of the LRTP, goals and objectives were developed to guide the region's transportation planning activities through the near future, as were the performance measures that work towards achieving these goals and objectives. Planning staff collaborated with stakeholders in an attempt to develop realistic and achievable targets and performance measures for each individual objective. The Old Colony MPO will continue to collaborate with its planning partners and refine the development of targets and performance measures for objectives, as they are applicable. Additionally, planning staff will continue to self-evaluate on progress towards all objectives and report to its planning partners and to the public as appropriate. The following is a listing of the national planning factors with information provided on the related 2020 LRTP objectives and performance measures.

1.1 FAST Act, National Planning Factors, and Performance Based Planning

The Fixing America's Surface Transportation Act legislation requires MPOs to implement a continuing, cooperative, and comprehensive performance-based multimodal transportation planning process. To meet this requirement, the Old Colony MPO develops the LRTP, TIP, and UPWP that facilitate the safe and efficient movement of safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight (including accessible pedestrian walkways, bicycle transportation facilities, and intermodal facilities that support intercity transportation, including intercity bus facilities and commuter van pool providers) and that fosters economic growth and development within and between States and urbanized areas, and take into consideration resiliency needs while minimizing transportation-related fuel consumption and air pollution in all areas of the region.

The FAST Act continues to emphasize performance-based planning as an integral part of the metropolitan planning process: states are to develop performance goals, guided by the national goals, and then MPOs will work with state departments of transportation to develop MPO performance measures and targets, or adopt the statewide performance measures and targets. The TIP and UPWP integrates MassDOT's and the MPOs' performance measures and link transportation-investment decisions to progress toward achieving performance targets. The MPOs, MassDOT, and providers of public transportation jointly agree and have developed specific written provisions for cooperatively developing and sharing information related to transportation performance data, the selection of performance targets, the reporting of performance targets, the reporting of performance to be used in tracking progress towards attainment of critical outcomes for the MPO regions and the collection of data for the MassDOT Asset Management Plan.

The Old Colony MPO develops the TIP and the UPWP with due consideration of additional planning activities within the metropolitan area, and utilizes a process that provides for the design and delivery of transportation services within the metropolitan planning area. The following is an overview of how the Long Range Transportation Plan, the Transportation Improvement Program, and the Unified Planning Work Program reflect the national planning factors and performance-based planning:

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- **Safety Goals:** Achieve a significant reduction in traffic fatalities and serious injuries on all public roads; increase the safety of the transportation system for motorized and non-motorized users; ensure that the transportation system and its users are safe and secure; and review safety data, goals, objectives, and strategies to promote safety.

The Strategic Highway Safety Plan is incorporated into the Long Range Transportation Plan. The Old Colony MPO applies specific criteria in the review of transportation strategies. These criteria are applied to estimated changes in safety. The primary goal of the LRTP is focused on safety and security: "Enhance Safety and Security." Safety is of such importance that it is recognized in its own chapter of the LRTP. Also included in the LRTP are the following goals: Increase the security of the transportation system for motorized and non-motorized users; examine both transit and highways networks and develop appropriate goals and strategies; review current plans for emergency planning and security elements; identify critical facilities and transportation systems; and define the roles of the various players in promoting security. One area of additional security planning that applies is that of traffic impacts due to extreme weather events such as impending hurricanes, and climate changes.

Objectives:





- Reduce the number and rates of fatalities and serious injuries.
 - ▬ **Target and Performance Measure:** Reduce motor vehicle, pedestrian, and bicyclist fatalities, hospitalizations, and crashes by 10 percent in 10 years.
 - ▬ **Target and Performance Measure:** Conduct Road Safety Audits for a minimum of 3 high crash locations (MassDOT Top 5% Crash Clusters) per year, including minimum of 1 pedestrian/ walkability audit and one bicycle audit per year. In 2019, 11 locations were analyzed through Road Safety Audits.
 - ▬ **Target and Performance Measure:** Fully program minimum HSIP targets each TIP year and seek to program Statewide HSIP funds when available/ feasible for priority safety related projects.
- Provide and maintain safe fixed route service (e.g. Preventable Accidents per 100K miles).
 - ▬ **Target and Performance Measure:** Maintain fixed route service preventable accidents/ 100k miles below 2.00 (FY 2019 is 1.27 (from BAT Performance Dashboard).
- Provide and maintain safe demand response service (Preventable accidents/ 100k miles).
 - ▬ **Target and Performance Measure:** Maintain demand response service preventable accidents/ 100k miles below 2.00 (FY 2019 is 0.67) (from BAT Performance Dashboard).
- Protect the viability of transportation infrastructure to accommodate emergency response and evacuations.
- Protect transportation system users from safety and security threats.
- Increase number of Safe Routes to School Partner Schools.
 - ▬ **Target and Performance Measure:** Increase percentage of SRTS Partner Schools to 85% in 10 years. Currently, 71% of eligible partner schools are partner schools.
- **Infrastructure Condition (Pavement, Bridge, and Transit) Goals:** Maintain a highway and transit infrastructure asset systems in a state of good repair; and emphasize the preservation of the existing transportation system. As part of the LRTP development, the MPO utilizes a pavement management system to develop costs and recommended repair for operation, preservation, and maintenance of the federal aid network.

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MassDOT develops the Transportation Asset Management Plan (TAMP) to address pavement and bridge conditions on the National Highway System (NHS). The TAMP includes information on the NHS Inventory and Performance, Life Cycle Planning and Investment Strategy, Risk Management, and a Financial Plan.

Recipients of public transit funds, which can include states, local authorities, and public transportation operators, are required to establish performance targets for safety and state of good repair, develop transit asset management and transit safety plans, and to report on their progress toward achieving targets. Public transportation operators are directed to share information with MPOs and states so that all plans and performance reports are coordinated. The identified state of good repair performance measures for transit asset management with regard to BAT include the following areas: equipment (Percentage of vehicles that have met or exceeded their Useful Life Benchmark (ULB)); rolling stock (Percentage of revenue vehicles within a particular asset class that have met or exceeded their ULB); and facilities (Percentage of facilities within an asset class rated below 3.0 on the FTA Transit Economic Requirements Model scale).







Objectives:

- Provide and maintain fixed route and demand response state of good repair.
 -  **Target and Performance Measure:** Increase miles between breakdowns with passenger interruption on fixed route to 25,000 (goal) within 10 years (FY 2019 is 45,778) (from BAT Performance Dashboard).
 -  **Target and Performance Measure:** Increase miles between breakdowns with passenger interruption on demand response to 30,000 (goal) within 10 years (FY 2019 is 37,622) (from BAT Performance Dashboard).
- Improve bridge conditions.
 -  **Target and Performance Measure:** Maintain percentage of bridges categorized structurally deficient below 5% and increase overall average AASHTO rating (current 79) by 10 percent by 2040. Currently, eight percent of the bridges are categorized as structurally deficient.
- Improve pavement conditions and state of good repair.
 -  **Target and Performance Measure:** Achieve 50% of federal-aid eligible roadways in the region with a PCI-based pavement ranking of Good or Excellent within 10 years. In 2016, the pavement management system determined that 36% of the federal-aid eligible roadways were categorized as either Good or Excellent.
- **Congestion Reduction Goals:** Achieve a significant reduction in congestion on the NHS; and enhance the integration and mobility of the transportation system, across and between modes, for people and freight. The MPO applies specific criteria in the review of transportation strategies. These criteria are applied to improvements in multimodal accessibility. The LRTP supports these efforts through its goal: “Enhance and Protect Regional Mobility, and Foster Sustainable, Healthy, and Livable Communities.”

Objectives

- Promote Mode Shift by increasing use of transit, carpool/ vanpool, and non-motorized transportation modes such as bicycling and walking.
 -  **Target and Performance Measure:** Achieve 15% of commuters in the Old Colony region using healthy transportation modes (transit, walking, bicycling, etc.) within 10 years (10.5% of surveyed commuters in Old Colony Region were using transit, walking, or bicycling in the 2011 Massachusetts Travel Survey).

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- Reduce traffic congestion, and improve level of service and access management.
 -  **Target and Performance Measure:** Monitor congestion levels on federal-aid eligible highway network annually, and highlight corridors with volume to capacity (v/c) ratios of 0.8 or greater for targeted study and/or improvements.
- Maintain and improve transit system efficiency and capacity.
 -  **Target and Performance Measure:** Achieve average on-time ranking on fixed-route system of 98% by 2040 (from BAT Performance Dashboard). FY 2019 actual on-time performance is 97.81%.
- Increase automobile and bicycle parking capacity and usage at transit stations and commuter lots.
 -  **Target and Performance Measure:** 100% of intermodal facilities with adequate bicycle parking by 2040.
- Eliminate bottlenecks on limited access highways and on the freight network.
- Improve and expand human service coordination, mobility, and accessibility for all modes.
- Reduce number and size of gaps in the ADA accessible sidewalk network.
- Increase use of traffic signal priority (hold current green light) for transit vehicles and traffic signal pre-emption for emergency vehicles (override programmed phasing to provide approaching emergency vehicles a green light).
- Monitor utilization and congestion levels at commuter rail and park & ride parking facilities.
 -  **Target and Performance Measure:** Record utilization data twice annually and report data to MassDOT.
- Improve accessibility for all modes to all users.
 -  **Target and Performance Measure:** 50% of communities with Complete Streets policies within 10 years. Currently, 59% of communities have an approved Complete Street Policy.
 -  **Target and Performance Measure:** 50% of available Transportation Improvement Program funding allocated to projects that significantly improve bicycle and pedestrian mobility.

System Reliability Goals: Improve the efficiency of the surface transportation system; and promote efficient system operation and management. The Old Colony MPO supports Operation and Management Strategies (O and M) for both the transit and highway networks. The LRTP supports this planning factor through this performance measure: “Maintaining and preserving transit, highway, and bridge infrastructure.” As part of the LRTP development, the MPO utilizes a pavement management system to develop costs and recommended repair for operation, preservation, and maintenance of the federal aid network. The Old Colony MPO and BAT are coordinating to implement a performance based planning process. The MPO integrates BAT’s Transit Asset Management (TAM) Plan into its planning process that prioritizes investments that meet regional performance targets for State of Good Repair. The identified state of good repair performance measures for transit asset management with regard to BAT include the following areas: equipment (Percentage of vehicles that have met or exceeded their Useful Life Benchmark (ULB)); rolling stock (Percentage of revenue vehicles within a particular asset class that have met or exceeded their ULB); and facilities (Percentage of facilities within an asset class rated below 3.0 on the FTA Transit Economic Requirements Model scale). Additionally, the Old Colony TIP contains operation and maintenance costs for the federal aid network and BAT.

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Objectives

- Provide and maintain fixed route reliability: Miles between breakdowns w/ passenger interruption.
 - ▬ **Target and Performance Measure:** Achieve average of 25,000 miles between breakdowns with passenger interruptions by 2040 (from BAT Performance Dashboard). FY 2019 actual is 45,778 miles between breakdowns with passenger interruptions.
 - Provide and maintain demand response reliability: Miles between breakdowns w/ passenger interruption.
 - ▬ **Target and Performance Measure:** Achieve average of 30,000 miles between breakdowns with passenger interruptions by 2040 (from BAT Performance Dashboard). FY 2019 actual is 37,622 miles between breakdowns with passenger interruptions.
 - Provide and maintain highway network travel time reliability.
 - Protect and strengthen transportation systems vulnerable to climate change through identification of at-risk transportation assets and development of protection measures for each category of asset.
-
- **Freight Movement and Economic Vitality Goals:** Improve the nation’s freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development; and support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency. The MPO applies specific criteria in the review of transportation strategies. These criteria are applied to changes of delay and emissions. Reduction in traffic delay has a direct consequence on economic vitality both through the timely arrival of commuters and goods and reduction in fuel expenses and losses due to air pollution. The LRTP directly supports these efforts through the goal: “Promote Policies that Ensure Economic Vitality and Sustainability.” The MPO directly supports regional productivity through its economic development mission manifested in the Regional Policy Plan, including support of the federally approved Old Colony Comprehensive Economic Development Strategy priority projects.



Objectives

- Reduce delay along identified freight routes.
 - ▬ **Target and Performance Measure:** Address minimum of (2) freight corridors through UPWP every four years.
- Improve safety along freight routes.
- Mitigate and improve key arterial (such as Route 106) and limited access highways (Routes 3 and 24) bottlenecks that inhibit efficient freight movement by truck.
- Identify opportunities for promoting intermodal freight movement and uses for the Brockton CSX site.
- Increase access to major employment centers.
 - ▬ **Target and Performance Measure:** Minimum of 2 planning studies in UPWP every 4 years that address access to employment centers.
- Increase viaduct clearance to improve freight movement, emergency response, and reduce delay.
 - ▬ **Target and Performance Measure:** 100% of underpasses on freight corridors have highway standard vertical clearance by 2040.
- Plan and prioritize transportation investments that serve targeted development areas.


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- **Environmental Sustainability Goals:** Enhance the performance of the transportation system while protecting and enhancing the natural environment; protect and enhance the environment; promote energy conservation; improve the quality of life; and promote consistency between transportation improvements and State and local planned growth and economic development patterns. The LRTP supports this planning factor through three goals: “Promote Environmental Protection and Climate Change Adaptation, and Pursue the GreenDOT Vision and achieve the three GreenDOT goals.” The LRTP and therefore the TIP includes a focus on addressing Climate Change. Where appropriate, TIP projects will include assessments of vulnerabilities and negative risks that climate change effects or extreme weather events pose, to the region’s transportation infrastructure. These vulnerabilities and risks will be seriously considered when planning future improvements. Where appropriate, TIP projects include adaptation strategies that will enable the region to implement improvements appropriately. The reduction of greenhouse gas emissions (GHG) remains an important goal in addressing climate change.





Objectives

- Minimize negative environmental impacts of the transportation system.
 -  **Target and Performance Measure:** Program a minimum of 100% of Congestion Mitigation and Air Quality (CMAQ) Program funding targets.
 - Reduce greenhouse gas emissions and ground level ozone (NOx and VOCs) by all transportation modes.
 -  **Target and Performance Measure:** 50% of TIP projects reduce GHGs while also reducing negative impacts on the natural environment (such as improved storm water management or the addition of green space). In the FFY 2021-2025 TIP, 79% of the road projects, and 100% of the bus replacement projects had measureable reductions in GHGs.
 - Increase the usage of clean alternative fuels and recyclable material for new transportation infrastructure.
 - Increase coordination of transportation and housing programs to promote affordable housing near transit.
 - Develop and support transportation policies that support healthy lifestyles.
 - Support investments that clean up brownfields and avoid investments that increase pressure to develop greenfields.
 - Support livable communities and smart growth development patterns through the creation of a balanced multi-modal transportation system.
- **Reduced Project Delivery Delay Goal:** Reduce project costs; promote jobs and the economy; and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agency work practices.



Objectives

- Continue to utilize transportation evaluation criteria in screening potential TIP projects.
 -  **Target and Performance Measure:** 100% of all potential projects undergo initial evaluation to determine if project is realistic, viable, and implementable.
- Enhance screening and evaluation of projects to determine Year 1 readiness for TIP.

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-  **Target and Performance Measure:** 100% of potential Year 1 TIP projects are screened for implementation readiness. In the FFY 2021-2025 TIP, 100% of Year 1 projects were screened for readiness.
 -  **Target and Performance Measure:** At least 80% of Year 1 TIP Projects are advertised. In the FFY 2020-2024 TIP, 100% of Year 1 projects are on schedule to be advertised.
 - Continue to maintain annual participation at TIP Day with MassDOT.
 -  **Target and Performance Measure:** 100% attendance and participation at TIP Day. One hundred percent attendance and participation at TIP Day has occurred since its inception.
 -  **Target and Performance Measure:** At 25% design stage, work with stakeholders on 100% of potential projects to determine Right-of-Way (ROW), environmental permitting, and other potential challenges to project development and implementation.
 - Reduce time of transit contracting.
-
- **Resiliency and Reliability of the Transportation System Goals:** Improve the resiliency and reliability of the transportation system; reduce or mitigate stormwater impacts of surface transportation; and promote efficient system operation and management.

Objectives

- Provide and maintain fixed route reliability: Miles between breakdowns w/ passenger interruption.
 -  **Target and Performance Measure:** Achieve average of 25,000 miles between breakdowns with passenger interruptions by 2040 (from BAT Performance Dashboard). FY 2019 actual is 45,778 miles between breakdowns with passenger interruptions.
- Provide and maintain demand response reliability: Miles between breakdowns w/ passenger interruption.
 -  **Target and Performance Measure:** Achieve average of 30,000 miles between breakdowns with passenger interruptions by 2040 (from BAT Performance Dashboard). FY 2019 actual is 37,622 miles between breakdowns with passenger interruptions.
- Provide and maintain highway network travel time reliability.
- Protect and strengthen transportation systems vulnerable to climate change through identification of at-risk transportation assets and development of protection measures for each category of asset.

The Old Colony MPO supports Operation and Management Strategies (O and M) for both the transit and highway networks. The LRTP supports this planning factor through this performance measure: “Maintaining and preserving transit, highway, and bridge infrastructure.” As part of the LRTP development, the MPO utilizes a pavement management system to develop costs and recommended repair for operation, preservation, and maintenance of the federal aid network. Additionally, the Old Colony TIP contains operation and maintenance costs for the federal aid network and BAT.

- **Travel and Tourism - Enhance Travel and Tourism Goals:** The Old Colony MPO is working on efforts to enhance travel and tourism through the LRTP and TIP. Opportunities to monitor, analyze, and develop recommendations will be undertaken.

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One desired outcome of performance-based planning is constant quality improvement in project selection and delivery with respect to meeting national goals. If a particular project did not help the plan meet its stated goals, or was more effective than originally thought, that information can inform future decision-making. Done properly, performance-based planning not only improves project selection and prioritization, it also can make a compelling case for the Old Colony MPO's LRTP and why the community is invested in its outcome.

The TIP is designed such that once implemented, it makes progress toward achieving the performance targets. Performance-based planning attempts to make the transportation investment decision-making process both informed and accountable. Projects and services implemented through the TIP will help to achieve the performance targets for Safety (PM1), Bridge and Pavement Condition (PM2), System Performance Measures (PM3), and Transit Asset Management (TAM) State of Good Repair (SGR).

Safety (PM1)

The Old Colony MPO has chosen to adopt the statewide safety performance measure targets set by MassDOT for Calendar Year (CY) 2020. In setting these targets, MassDOT has followed FHWA guidelines by using statewide crash data and Highway Performance Monitoring System (HPMS) data for vehicle miles traveled (VMT) in order to calculate 5 year, rolling average trend lines for all FHWA-defined safety measures. For CY 2020 targets, four of the five safety measures - total number of fatalities, rate of fatalities per 100 million vehicle miles traveled, total number of incapacitating injuries, and rate of incapacitating injuries per 100 million VMT - were established by extending their trend lines into the 2016-2020 period. All four of these measures reflect a modest decrease in statewide trends. The fifth safety measure, the total number of combined incapacitating injuries and fatalities for non-motorized modes, is the only safety measure for which the statewide trend line depicts an increase. MassDOT's effort to increase non-motorized mode share throughout the Commonwealth has posed a challenge to simultaneously reducing non-motorized injuries and fatalities. Rather than adopt a target that depicts an increase in the trend line, MassDOT has elected to establish a target of non-motorized fatalities and injuries and for CY 2020 that remains constant from the rolling average for 2012–2016. In recent years, MassDOT and the Old Colony MPO have invested in "complete streets," bicycle and pedestrian infrastructure, intersection, and safety improvements in both the Capital Investment Plan (CIP) and Statewide Transportation Improvement Program (STIP) to address increasing mode share and to incorporate safety mitigation elements into projects. Moving forward, the Old Colony MPO, alongside MassDOT, is actively seeking to improve data collection and methodology for bicycle and pedestrian VMT counts and to continue analyzing crash clusters and crash counts that include both motorized and non-motorized modes in order to address safety issues at these locations.

In all safety categories, MassDOT has established a long-term target of "Toward Zero Deaths" through MassDOT's Performance Measures Tracker¹ and will be establishing safety targets for the MPO to consider for adoption each calendar year. While the MPO is not required by FHWA to report on annual safety performance targets, FHWA guidelines require MPOs to adopt MassDOT's annual targets or to establish their own each year.

The safety measures MassDOT has established for CY 2020, and that the Old Colony MPO has adopted, are as follows:

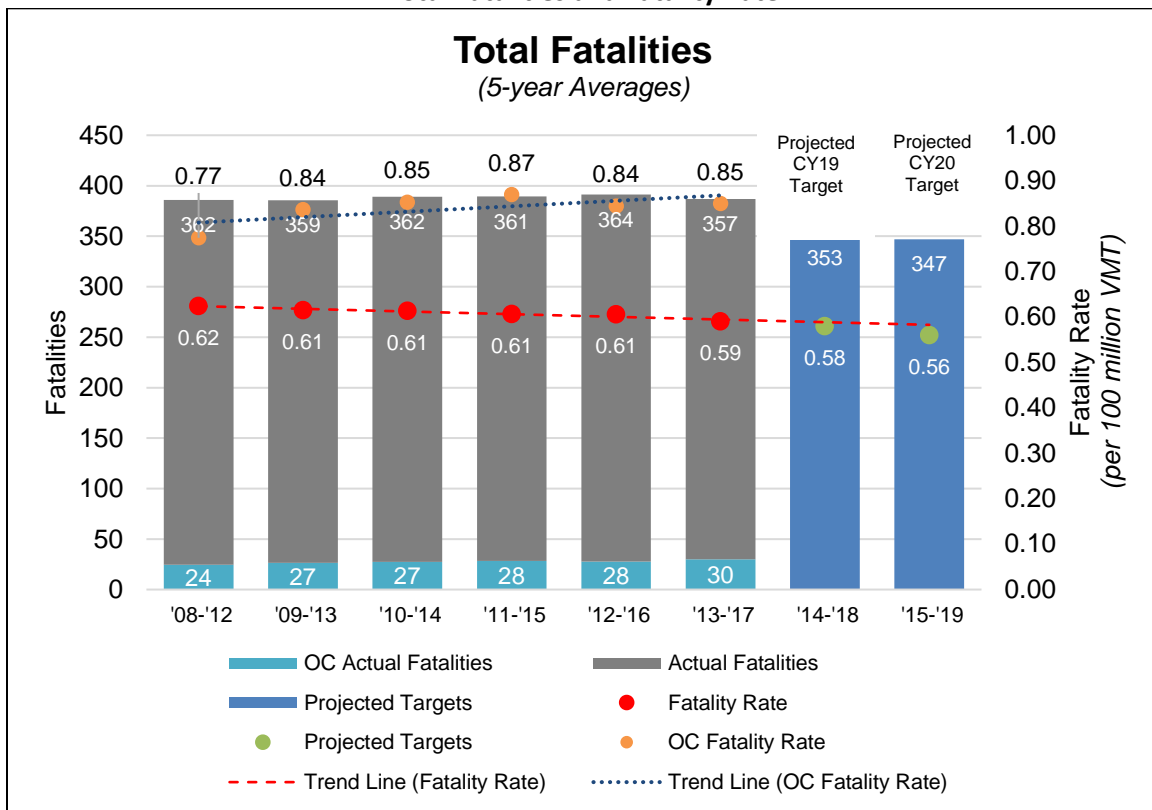
¹ <https://www.mass.gov/lists/tracker-annual-performance-management-reports>

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Total Fatalities: Over the last seven years, the number of fatalities in Massachusetts has been relatively stable, fluctuating less than 1 percent with the exception of 2016, when the 5-year average reached 364. That said, the most recent data shows that the five-year average for fatalities in 2018, 358, is the second lowest it has been since the 2008 – 2012 five-year average. The calendar year (CY) 2020 target of 347 was set to reflect an anticipated decrease in fatalities due to data enhancements, safety projects, and strategies and legislative proposals that were part of the 2018 Strategic Highway Safety Plan (SHSP), such as the primary seat belt and hands-free driving laws. It should be noted that MassDOT’s overarching goal is towards zero deaths, which will be pursued through the continued implementation of SHSP strategies.

Fatality Rate: Partly due to a 0.3% annual increase in VMT and an overarching downward trend in the fatality rate, it is anticipated that the fatality rate from 2013–2017 of 0.59 fatalities per 100 million vehicle miles traveled will drop to 0.56 fatalities per 100 million vehicle miles traveled between 2016–2020. (Note: Statewide VMTs used to calculate the Projected CY20 Target Fatality Rate were adjusted after state adoption of the 0.56 per 100 million VMT target.)

Figure 1
Total Fatalities and Fatality Rate

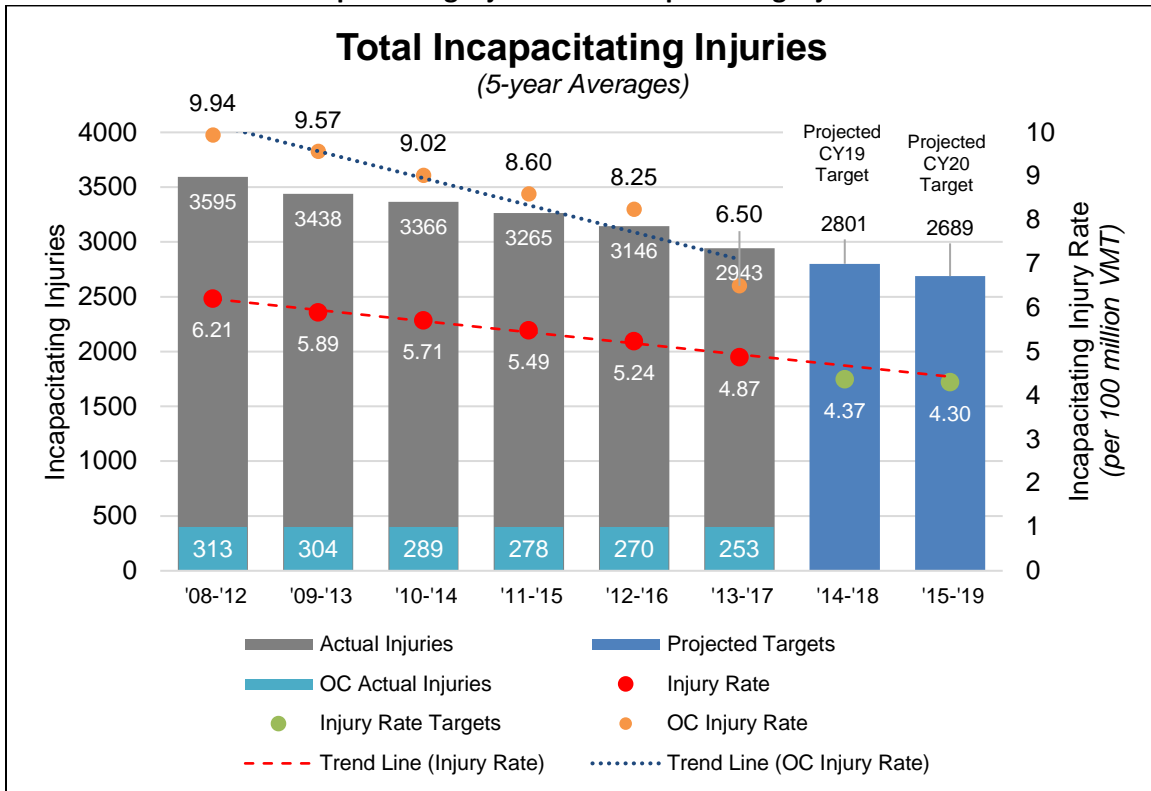


Total Incapacitating Injuries: Although this measure is particularly prone to contextual factors, it is anticipated that there will be an overall decrease in the number of incapacitating injuries due to a continual downward trend line as well as the implementation of countermeasures that are being developed as part of the 2018 Strategic Highway Safety Plan.

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Incapacitating Injuries Rate: Similar to the fatality rate, it is anticipated that the increase in VMT and a downward trend line will result in a drop in the rate of incapacitating injuries from 4.84 per 100 million VMT between 2013–2017 to 4.30 between 2016–2020. (Note: Statewide VMTs used to calculate the Projected CY20 Target Incapacitating Injury Rate were adjusted after state adoption of the 4.30 per 100 million VMT target.)

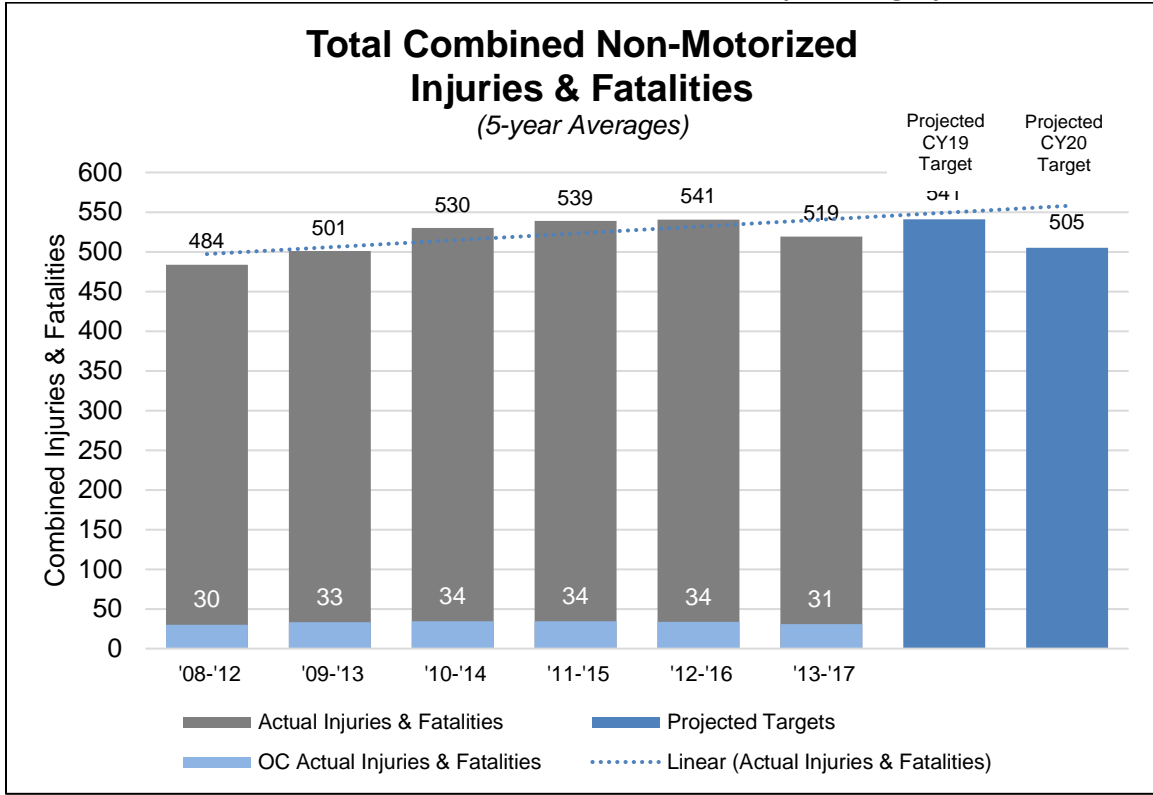
Figure 2
Total Incapacitating Injuries and Incapacitating Injuries Rate



Total Number of Non-Motorized Fatalities and Incapacitating Injuries: The most recent data for non-motorized fatalities and incapacitating injuries indicates that the previously increasing trend decreased in 2017. The CY 2020 target of 505 has been set to reflect continued projected reductions in non-motorized fatalities and injuries due to a number of implementation strategies contained within the Statewide Bike Plan, Statewide Pedestrian Plan, and Strategic Highway Safety Plan.

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Figure 3
Total Number of Non-Motorized Fatalities and Incapacitating Injuries



System Preservation Performance (PM2)

System preservation continues to be a priority for the Old Colony Region MPO because the region’s transportation infrastructure is aging. It is also important to improve the resiliency of the region’s transportation system to prepare for existing or future extreme conditions, such as sea level rise and flooding.

The Old Colony MPO has chosen to adopt the 2-year (2020) and 4-year (2022) statewide bridge and pavement performance measure targets set by MassDOT. MassDOT was required to adopt a statewide target by May 20, 2018, with MPOs either adopting the statewide target or establishing their own by November 2018. In setting these targets, MassDOT has followed FHWA guidelines by measuring bridges and pavement condition using the 9-point National Bridge Inventory Standards (NBIS); the International Roughness Index (IRI); the presence of pavement rutting; and the presence of pavement cracking. 2-year and 4-year targets were set for six individual performance measures: percent of bridges in good condition; percent of bridges in poor condition; percent of Interstate pavement in good condition; percent of Interstate pavement in poor condition; percent of non-Interstate pavement in good condition; and percent of non-Interstate pavement in poor condition. All of the above performance measures are tracked in greater detail in MassDOT’s Transportation Asset Management Plan (TAMP).

Targets for bridge-related performance measures were determined by identifying which bridge projects are programmed and projecting at what rate bridge conditions deteriorate. The bridge-related performance measures measure the percentage of deck area, rather than the total number of bridges.

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Performance targets for pavement-related performance measures were based on a single year of data collection, and thus were set to remain steady under the guidance of FHWA. These measures are to be revisited at the 2-year mark (2020), once three years of data are available, for more informed target setting.

MassDOT continues to measure pavement quality and to set statewide short-term and long-term targets in the MassDOT Performance Management Tracker using the Pavement Serviceability Index (PSI), which differs from IRI. These measures and targets are used in conjunction with federal measures to inform program sizing and project selection. Table 1 provides the MassDOT Performance Measures and Targets for NHS Pavements, while Table 2 provides the MassDOT Performance Measures and Targets for NHS Bridges.

Table 1
MassDOT Performance Measures and Targets for NHS Pavements

Interstate Pavement (FHWA Full Distress)			
Performance Measure	Current Condition (2017)	2-Year Target (2020)	4-Year Target (2022)
% Interstate Pavement in Good Condition	74.2%	70%	70%
% Interstate Pavement in Poor Condition	0.1%	4%	4%
Non-Interstate Pavement (FHWA IRI only)			
Performance Measure	Current Condition (2017)	2-Year Target (2020)	4-Year Target (2022)
% Non-Interstate Pavement in Good Condition	32.9%	30%	30%
% Non-Interstate Pavement in Poor Condition	31.4%	30%	30%

Table 2
MassDOT Performance Measures and Targets for NHS Bridges

Performance Measure	Current Condition (2017)	2-Year Target (2020)	4-Year Target (2022)
% Bridges in Good Condition	15.22%	15%	16%
% Bridges in Poor Condition	12.37%	13%	12%

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System Performance Measures (Congestion, Reliability, and Emissions) (PM3)

Through its goal and objectives for capacity management and mobility, the MPO seeks to maximize the region's existing transportation system so that both people and goods can move reliably and connect to key destinations. Portions of the Old Colony Region are densely developed, which creates challenges to making major changes to its transportation infrastructure to address access, reliability, and congestion mitigation needs. In order to determine how well the region's roadways are performing with respect to mobility, the MPO applies performance measures that gauge the duration, extent, intensity, and reliability (or regularity) of the occurrence of congestion.

Table 3
MassDOT System Performance Measures and Targets
Congestion, Reliability, and Emissions

Performance Measure	Current (2017)	2-Year Target (2020)	4-Year Target (2022)
Level of Travel Time Reliability (LOTTR)	68% Interstate	68% Interstate	68% Interstate
	80% Non-Interstate	80% Non-Interstate	80% Non-Interstate
Truck Travel Time Reliability (TTTR)	1.85	1.85	1.85
Peak Hour Excessive Delay (PHED) (Boston UZA) (Annual hours per capita)	18.31	18.31	18.31
Non-SOV Travel	33.60% (2016)	34.82%	35.46%
Emissions Reductions	Baseline (FFY 2014-2017)	1,622 CO	TBD CO - Springfield
		497.9 Ozone	1.1 Ozone

Old Colony MPO staff analyzes congestion in the region using the Congestion Management Process (CMP). The CMP is, "a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs." The CMP includes consideration of the implementation of strategies that provide the most efficient and effective use of existing and future transportation facilities. This process allows for monitoring transportation systems for congestion, reviewing and endorsing plans by local communities that make up the region, and revising monitoring of strategies and overall plans to account for a dynamic management system. In both metropolitan and non-metropolitan areas, consideration needs to be given to strategies that reduce single occupancy vehicle (SOV) travel and improve existing transportation system efficiency. Documentation of the operational Congestion Management Process occurs during the Transportation Management Area (TMA) Certification Review conducted every four (4) years.

In general, the root causes of congestion may be summarized into two main categories:

- Traffic volume on a facility exceeds the available physical capacity of the facility - There is a limited amount of traffic that can be moved on a roadway for a given time, or only so many transit customers that can be accommodated by a given number of buses or trains. This is considered

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the physical capacity of the system. Bottlenecks occur at locations where the physical capacity is restricted, with flows from upstream sections (with higher capacities) being funneled into smaller downstream segments. When traffic flow breaks down to stop-and-go conditions, capacity is actually reduced. Bottlenecks can be very specific chokepoints in the system, such as a poorly functioning freeway-to-freeway interchange, or an entire highway corridor where a “system” of bottlenecks exists, such as a closely spaced series of interchanges with local streets.

- Traffic Incidents - In addition to the physical capacity, external events can have a major effect on traffic flow. These include traffic incidents such as crashes and vehicle breakdowns; work zones; inclement weather; special events; and poorly timed traffic signals. When these events occur, their main impact is to subtract physical capacity from the roadway. Events also may cause changes in traffic demand by causing travelers to rethink their trips.

The cost of congestion can be measured in dollars as well as time. There is a direct link between transportation investment, travel conditions (congestion and reliability), and economic productivity. Two key trends have a substantial impact on the total cost of moving freight:

- As congestion extends into the midday, which is typically the peak travel period for trucks, costs that are more direct will be incurred.
- Reliability - For trucks, the ability to secure delivery windows predictably will decrease and will add even more costs as firms struggle to optimize delivery schedules. This is especially a problem for truckers who must meet “just-in-time” delivery schedules set by shippers, manufacturers, and retailers.

The CMP is also designed to identify intersections and road segments that demonstrate congestion, excessive delays, and circulation problems. The CMP identifies these congested facilities through studies completed by OCPC and other agencies and organizations, and through the ongoing monitoring of facilities. Standard operating procedures have been adopted for data collection that allows the monitoring of intersections within the region specifically targeted due to congestion. The CMP identifies numerous congested intersections, based on a threshold of LOS “D” or less, within the Old Colony region.

When making investments in the region’s transportation system, the Old Colony Region MPO seeks to invest in projects and programs that reduce greenhouse gases (GHGs) and other transportation related pollutants, and otherwise minimize negative environmental impacts. If climate change trends continue as projected, the conditions in the Old Colony Region will include a rise in sea level coupled with storm-induced flooding, and warmer temperatures that would affect the region’s infrastructure, economy, human health, and natural resources. Massachusetts is responding to this challenge by taking action to reduce the GHGs produced in the state, including those generated by the transportation sector. To that end, Massachusetts passed its Global Warming Solutions Act (GWSA), which requires reductions of GHGs by 2020, and further reductions by 2050, relative to 1990 baseline conditions. To meet GWSA requirements, the MPO works with MassDOT and other stakeholders to anticipate the GHG impacts of projects included in the TIP.

Transit System Asset Condition Performance Measures and Targets

Table 4 lists a set of federally required infrastructure condition performance measures for transit systems along with BAT’s Performance Targets. These transit asset management (TAM) measures, which focus on a specific subset of all transit assets, were established in the FTA’s TAM Rule. Brockton Area Transit presented this information along with supporting documentation to the Old Colony MPO in November

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2019. The Old Colony MPO has adopted BAT's FY 2020 Brockton Area Transit Authority Transit State of Good Repair Targets in their entirety and as their own and for the Old Colony Region, in accordance with the certified 3C Transportation Planning Process.

Table 4
Brockton Area Transit Authority Performance Measures and Targets

Performance Targets by Asset Category						
Category	Class	Metric	Performance Target for FY 2020	Total Number of Vehicles	# of Vehicles that exceed ULB - FY 2019	% of Fleet that exceeds ULB - FY 2019
Rolling Stock	Buses	X% of fleet that exceeds default ULB of 14	5.00%	45	1	2.22%
	Cutaway Buses	X% of fleet that exceeds default ULB of 10	50.00%	4	3	75.00%
	Vans	X% of fleet that exceeds default ULB of 8	20.00%	59	6	3.39%
Equipment	Non-Revenue Service Vehicle	X% of non-revenue service vehicles that exceeds default ULB of 8	20.00%	6	1	16.67%
	Non-Revenue Service Truck	X% of non-revenue service vehicles that exceeds default ULB of 8	40.00%	5	2	40.00%
Facilities	Admin/Maintenance Facility	X% of facilities rated under 3.0 on Term scale	0.00%	3	0	0.00%

FTA defines ULB as “the expected lifecycle of a capital asset for a particular transit provider’s operating environment, or the acceptable period of use in service for a particular transit provider’s operating environment.” For example, FTA’s default ULB value for a bus is 14 years. FTA’s Transit Economic Requirements Model (TERM) scale, which pertains to the facilities measure, is a rating system that describes asset condition. The scale values are 1 (poor), 2 (marginal), 3 (adequate), 4 (good), and 5 (excellent). Because each measure is intended to represent the share of transit assets that are not in a state of good repair, the goal is to minimize the value for all four measures. FTA grantees, including transit agencies and agency sponsors, such as MassDOT, are required to develop targets for these TAM measures each fiscal year. MPOs, in turn, are required to set targets for their regions. BAT submitted agency-level targets for state fiscal year (SFY) 2020 (July 2018 through June 2019) to the Old Colony MPO. Their targets

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reflect the most recent data available on the number, age, and condition of their assets, and their expectations and capital investment plans for improving these assets during SFY 2020.

Consistent with U.S. Department of Transportation's strategic objectives for the Surface Transportation Program, the FFY 2020 UPWP emphasizes the planning emphasis areas of the FAST Act Implementation, Regional Models of Cooperation, and Ladders of Opportunity.

- **FAST Act Implementation** - The Old Colony MPO continues to develop its performance management approach to transportation planning and programming. Performance-based planning and programming includes using transportation performance measures, setting targets, reporting performance, and programming transportation investments directed toward the achievement of transportation system performance outcomes. Appropriate UPWP work tasks include working with local planning partners to identify how to implement performance-based planning provisions such as collecting performance data, selecting and reporting performance targets for the metropolitan area, and reporting actual system performance related to those targets. Such activities are included in the FFY 2020 UPWP through tasks such as the Management Systems (Congestion, Pavement, and Safety), and the Performance Management efforts.
- **Regional Models of Cooperation** - The Old Colony MPO seeks to ensure a Regional Approach to Transportation Planning by Promoting Cooperation and Coordination across MPO and Transit Agency Boundaries. To improve the effectiveness of transportation decision making, the Old Colony MPO thinks beyond traditional borders and conducts a coordinated approach to transportation planning. A coordinated approach supports common goals and capitalizes on opportunities related to project delivery, congestion management, safety, freight, livability, and commerce across boundaries. Improved multi-jurisdictional coordination by MassDOT, MPOs, and providers of public transportation can reduce project delivery times and enhance the efficient use of resources, particularly in urbanized areas that are served by multiple MPOs. During FFY 2021, the Old Colony MPO will continue to coordinate planning activities within the Boston Urbanized Area (UZA) with MassDOT and the common MPOs, and seek to update the Boston UZA Coordination Memorandum of Understanding (MOU) to ensure that there are effective processes for cross-jurisdictional communication to improve collaboration, policy implementation, technology use, and performance management.
- **Ladders of Opportunity** - The Old Colony MPO, as part of the transportation planning process, identifies transportation connectivity gaps in accessing essential services. Essential services include employment, health care, schools/education, and recreation. The FFY 2020 UPWP includes efforts to develop and implement methods to identify gaps in the connectivity of the transportation system and developing infrastructure and operational solutions that provide the public, especially the traditionally underserved populations, with adequate access to essential services. As such, examples undertaken in previous UPWPs include the Bicycle and Pedestrian Connectivity and Safety Study (assessing the connectivity and safety and condition of pedestrian and bicycle facilities; and evaluating compliance with Americans with Disabilities Act, particularly around schools, concentrations of disadvantaged populations, social services, medical, and transit facilities), the Congestion Management Process, the Main Street Brockton Corridor Study (Brockton), the Route 53 Corridor Study (Hanover, Pembroke, Duxbury, and Kingston), the Route 106 Corridor Study (Kingston, Plympton, Halifax, East Bridgewater, and West Bridgewater), the Route 123 Corridor Study (Abington and Brockton), and the Route 139 Corridor Study (Hanover).

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This year's UPWP efforts focus on the development of Road safety Audits at multiple locations, the Active Transportation Study, and the Climate Change Vulnerability Transportation Assessment, the FAST Act Performance Management and related Performance Measures and Target development, continued development of the Regional Travel Demand Model (TransCAD), operation of the Congestion Management Process, operation of the Safety Management System, operation of the Pavement Management System, and the development of the Transportation Improvement Program. Attention is also focused on the regional multi-modal data surveillance program (including counting of bicycles and pedestrians, developing an inventory of gaps in the bicycle network, and developing an index of regional bikeability), maintaining regional databases, adjusting and amending certification documents as needed, and implementing the management systems. OCPC continues to integrate the Geographic Information Systems into various tasks and plans undertaken. The safety of our transportation network continues to be a priority, and a key consideration in the selection and prioritization of future projects. Tasks within the UPWP are consistent with the goals of the LRTP. As an example, the LRTP supports efforts to reduce congestion, improve safety, and develop capital projects that represent an efficient expenditure of public dollars. Such efforts are addressed in this UPWP under multiple tasks that include the Management Systems of Congestion, Pavement, and Safety, along with the TIP.

Federal transportation legislation continues to prioritize the concept of Sustainability and Livability within the transportation planning process. This concept is addressed in the Long Range Transportation Plan, and in the Active Transportation Study. Beyond those efforts, one method for measuring the sustainability of a highway project is to assess the project against existing best practices. With this in mind, FHWA has developed and released a web-based tool known as the Infrastructure Voluntary Evaluation Sustainability Tool (INVEST). As such, the Old Colony MPO will continue to consider sustainability and livability, and seek to utilize the INVEST Tool during the implementation of the FFY 2021 UPWP.

Public participation continues to be a vital element of the transportation planning process. The encouragement of participation and provision of meaningful access to all local citizens in metropolitan transportation planning is one of the most important goals of the "3C" (continuing, cooperative, and comprehensive) process. Community and transit representatives of the Old Colony Joint Transportation Committee (JTC) typically meet monthly on the first Thursday to discuss transportation investments and issues of regional importance. The Old Colony MPO meets several times per year to discuss and coordinate transportation planning issues, and to review and endorse certification documents. A Public Participation Program (PPP) was developed to solicit input to the various tasks and programs undertaken. This process will continually be reviewed and refined as necessary. During FFY 2021, the PPP will be reviewed and updated consistent with the recommendations include in the recent Transportation Planning Certification Review.

1.2 TITLE VI AND THE AMERICANS WITH DISABILITIES ACT (ADA)

Title VI of the 1964 Civil Rights Act, Executive Order 12898, Executive Order 13166, and Executive Order 13330

Federal "Title VI/ Nondiscrimination" Protections

The Old Colony MPO operates its programs, services, and activities in compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted

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programs and requires that no person in the United States of America shall, on the grounds of **race, color, or national origin** (including **limited English proficiency**), be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal assistance. Related federal nondiscrimination laws administered by the Federal Highway Administration, the Federal Transit Administration, or both prohibit discrimination on the basis of **age, sex, and disability**. These protected categories are contemplated within the Old Colony MPO's Title VI Programs consistent with federal interpretation and administration. Additionally, the Old Colony MPO provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with U.S. Department of Transportation policy and guidance on federal Executive Order 13166.

State Nondiscrimination Protections

The Old Colony MPO also complies with the Massachusetts Public Accommodation Law, M.G.L. c 272 §§ 92a, 98, 98a, prohibiting making any distinction, discrimination, or restriction in admission to or treatment in a place of public accommodation based on **race, color, religious creed, national origin, sex, sexual orientation, disability, or ancestry**. Likewise, the Old Colony MPO complies with the Governor's Executive Order 526, section 4 requiring all programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for by the state shall be conducted without unlawful discrimination based on **race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status** (including Vietnam-era veterans), or **background**.

Executive Order 12898, dated February 11, 1994, expands upon Title VI, requiring each federal agency to achieve environmental justice by identifying and addressing any disproportionately high adverse human health or environmental effects, including interrelated social and economic effects, of its programs, policies, and activities on minority or low-income populations.

On April 15, 1997, the U.S. Department of Transportation issued its Final Order to Address Environmental Justice in Minority Populations and Low-Income Populations. Among other provisions, this order requires programming and planning activities to:

- Explicitly consider the effects of transportation decisions on minority and low-income populations.
- Provide meaningful opportunities for public involvement by members of minority and low income populations.
- Gather (where relevant, appropriate, and practical) demographic information such as the race, color, national origin, and income level of the populations affected by transportation decisions.
- Minimize or mitigate any adverse impact on minority or low-income populations.

Executive Order 13166, dated August 11, 2000, is intended to ensure compliance with Title VI of the Civil Rights Act of 1964 by specifically calling for improved access to federally conducted and federally assisted programs and activities for persons who, as a result of national origin, have limited English proficiency (LEP). To comply with the order, MPOs are required to develop and implement a system by which LEP persons can meaningfully participate in the transportation planning process.

FTA Environmental Justice Policy Guidance For Federal Transit Administration Recipients Circular 4703.1 (2012) provides recommendations on how to fully engage environmental justice populations in the public transportation decision-making process; how to determine whether environmental justice populations

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would be subjected to disproportionately high and adverse human health or environmental effects as a result of a transportation plan, project, or activity; and how to avoid, minimize, or mitigate these effects.

FTA Title VI Circular to 4702.1B (2012) provides guidance to grantees on how to comply with Title VI regulations, as well as to ensure grantees provide meaningful language access to persons who are limited English proficient.

The Americans with Disabilities Act (ADA)

Title III of the Americans with Disabilities Act requires all transportation projects, plans, and programs to be accessible to people with disabilities. At the MPO level, this means that public meetings must be held in accessible places and MPO materials must be made available in accessible formats.

1.3 FUNDING SOURCES

The period covered by each contract described in this UPWP by funding source is as follows:

- FHWA PL/ MassDOT; FTA 5303/ MassDOT: October 2020 through September 2021
- BAT: July 2012 through June 2021

Beginning October 1, 2020, the FHWA PL (\$667,518) and FTA 5303 funds (\$126,454) will be combined into one appropriation to MassDOT to fund Old Colony MPO activities. FHWA and FTA will provide 80% of the funds (\$793,972), while MassDOT will provide the 20% match (\$198,493). MassDOT will annually work with the Old Colony MPO through a single contract that combines these two federal funding sources.

1.4 ADMINISTRATIVE MODIFICATION AND AMENDMENT PROCEDURES

Unified Planning Work Programs, no matter how well planned, may need to be modified from their original MPO endorsed form. There are different actions that may be taken in order to modify the endorsed UPWP. These actions vary, depending on the extent of the modification, and have different impacts on the UPWP. All proposed administrative adjustments and amendments are presented to the MPO for consultation prior to endorsement. The procedures for modifying the UPWP are:

UPWP Amendment

A UPWP Amendment is the most extensive change procedure that a UPWP may undergo. A UPWP Amendment requires the proposed change to undergo a twenty-one (21) day public review period and requires MPO endorsement. However, the Old Colony MPO, at their discretion, may vote to abbreviate the public comment period under what they consider extraordinary circumstances beyond the MPO's control. Examples of actions that require an Amendment include:

- The change in start/ completion dates, outside of originally intended federal fiscal year(s)
- The addition or removal of a UPWP task
- The significant change in project scope, cost (over 20% change), and/ or time allocation

UPWP Administrative Modification (Adjustment)

A UPWP Administrative Modification (Adjustment) is a minor Amendment. The Adjustment procedure requires an administrative action, consultation with the MPO, and MassDOT-OTP approval through the utilization of a Budget Reallocation Request Form. Examples of actions that require an Adjustment include:

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- The change in start/ completion dates, within originally intended federal fiscal year(s)
- The reallocation of budget funds
- The minor change in project scope, cost (less than 20% change), and/ or time allocation

1.5 GEOGRAPHIC DISTRIBUTION OF MAJOR UPWP FUNDED STUDIES

The Old Colony Planning Council staff monitors the geographic distribution of UPWP funded studies over time. Table 5 provides the distribution of Major UPWP Studies over the period of 2004 through 2021. To assist with providing context to the distribution, included in the table is 2010 Population and 2010-2014 Median Household Income. For the purposes of the analysis, a Major UPWP Study is defined as a study programmed in the UPWP under Element 3000 - Short Range and Long Range Transportation Planning Activities. Major studies under this element typically involve the in-depth study and analysis of roadway corridors within a community or may include a roadway corridor that spans multiple communities. Major UPWP studies also may include studies such as region wide bicycle and pedestrian connectivity studies, climate change transportation studies, and priority development areas/ priority preservation areas studies.

From an examination of the distribution of Major UPWP Studies from 2004 through 2020, the following observations may be made:

- There are higher concentrations of studies within the more populated urban areas (i.e. Brockton and Stoughton). Such concentrations tend to follow areas with elevated levels of congestion and crash clusters.
- The towns of Bridgewater, Plymouth, and Stoughton have higher concentration of studies. A potential explanation for such a trend is that these populous communities feature proximity to limited access highways, commuter rail, and academic institutions of higher learning. Such features, while beneficial in many respects, also feature higher pedestrian, bicyclist and vehicle trips, and the need for additional multimodal and infrastructure.

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Table 5
Geographic Distribution of Major UPWP Funded Studies (Task 3000)
FFYs 2004-2021

Community	2010 Population	All Minority (Including White Hispanic) Population	Percent Title VI Minority	Median Household Income, 2010-2014	Number of Major Studies, 2004 - 2021	Percentage of Total Studies, 2004 - 2021
Brockton	93,810	53,542	57%	\$48,569	7	9.9%
Stoughton	26,962	5,822	22%	\$74,688	5	7.0%
Avon	4,356	741	17%	\$78,750	4	5.6%
Bridgewater	26,563	2,941	11%	\$88,481	4	5.6%
Easton	23,112	2,327	10%	\$95,372	1	1.4%
Abington	15,985	1,368	9%	\$81,500	4	5.6%
Plymouth	56,468	4,230	7%	\$76,925	4	5.6%
East Bridgewater	13,794	790	6%	\$88,534	4	5.6%
West Bridgewater	6,916	440	6%	\$81,573	3	4.2%
Whitman	14,489	886	6%	\$76,494	3	4.2%
Kingston	12,629	598	5%	\$86,339	4	5.6%
Halifax	7,518	282	4%	\$69,917	3	4.2%
Duxbury	15,059	560	4%	\$120,253	2	2.8%
Pembroke	17,837	699	4%	\$89,954	2	2.8%
Plympton	2,820	112	4%	\$94,505	2	2.8%
Hanover	13,879	579	4%	\$98,750	2	2.8%
Hanson	10,209	424	4%	\$93,771	1	1.4%
Region wide	362,406	76,341	21%	\$84,963	16	22.5%
					71	100.0%

Table 6
Geographic Distribution of Local Technical Assistance UPWP Funded Studies (Elements 2200 and 3200)
FFYs 2015-2019

Community	2010 Population	All Minority (Including White Hispanic) Population	Percent Title VI Minority	Median Household Income, 2010-2014	UPWP Task 2200		UPWP Task 2200		UPWP Task 3200	
					Automatic Traffic Counter Recorder (ATR) Locations	Turning Movement Count (TMC) Locations	Local Technical Assistance (LTA) Studies	Percentage of LTA Studies		
					Number of ATR Counts FFYs 2015-2019	Percentage of ATR Counts FFYs 2015-2019	Number of TMCs FFYs 2015-2019	Percentage of TMCs FFYs 2015-2019	Number of LTA Studies FFYs 2015-2019	Percentage of LTA Studies FFYs 2015-2019
Brockton	93,810	53,542	57%	\$48,569	125	21.9%	63	26.1%	10	12.8%
Stoughton	26,962	5,822	22%	\$74,688	30	5.2%	6	2.5%	6	7.7%
Avon	4,356	741	17%	\$78,750	20	3.5%	3	1.2%	2	2.6%
Bridgewater	26,563	2,941	11%	\$88,481	23	4.0%	6	2.5%	1	1.3%
Easton	23,112	2,327	10%	\$95,372	36	6.3%	5	2.1%	8	10.3%
Abington	15,985	1,368	9%	\$81,500	57	10.0%	17	7.1%	5	6.4%
Plymouth	56,468	4,230	7%	\$76,925	63	11.0%	22	9.1%	13	16.7%
East Bridgewater	13,794	790	6%	\$88,534	12	2.1%	10	4.1%	1	1.3%
West Bridgewater	6,916	440	6%	\$81,573	26	4.5%	7	2.9%	3	3.8%
Whitman	14,489	886	6%	\$76,494	15	2.6%	8	3.3%	7	9.0%
Kingston	12,629	598	5%	\$86,339	29	5.1%	20	8.3%	3	3.8%
Halifax	7,518	282	4%	\$69,917	14	2.4%	10	4.1%	1	1.3%
Duxbury	15,059	560	4%	\$120,253	57	10.0%	22	9.1%	7	9.0%
Pembroke	17,837	699	4%	\$89,954	14	2.4%	13	5.4%	5	6.4%
Plympton	2,820	112	4%	\$94,505	14	2.4%	2	0.8%	1	1.3%
Hanover	13,879	579	4%	\$98,750	27	4.7%	24	10.0%	3	3.8%
Hanson	10,209	424	4%	\$93,771	10	1.7%	3	1.2%	2	2.6%
	362,406	76,341	21%	Totals:	572	100.0%	241	100.0%	78	100.0%

Analysis is through FFY 2019, as FFY 2020 is currently underway.

FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)

TASK 1000 - MANAGEMENT AND SUPPORT OF THE PLANNING PROCESS AND CERTIFICATION ACTIVITIES

In order to properly support and effectively control the transportation planning activities of the Old Colony Metropolitan Planning Organization, program support activities must be undertaken. These tasks allow for the functioning and the continued certification of the Old Colony MPO in accordance with the Commonwealth of Massachusetts and U.S. DOT requirements.

Task 1100 - 3C Program Support

Task 1200 - Unified Planning Work Program (UPWP)

Task 1300 - Public Participation Program (PPP)

Task 1400 - Transportation Improvement Program (TIP)

Task 1500 - Title VI and Environmental Justice (EJ)

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TASK 1100 - 3C PROGRAM SUPPORT

OBJECTIVE:

To manage, support, and provide the capability to maintain a Comprehensive, Cooperative, and Continuing Transportation Planning and Programming Process at all levels in conformance with applicable Federal and State requirements and guidelines. Tasks include preparation and presentation of transportation plans and programs (Long Range Transportation Plan, Unified Planning Work Program, Transportation Improvement Program, Public Participation Plan, and other transportation studies); Technical assistance and information related to transportation planning to the public, local, state and federal agencies; Updates to memorandums of understanding; Timely response to relevant planning studies by local, state, and federal agencies; and Contract administration.

PREVIOUS WORK:

- Administration of Massachusetts Department of Transportation, Federal Highway Administration, Federal Transit Administration, Brockton Area Transit, Greater Attleboro-Taunton Transit Authority, and Executive Office of Energy and Environmental Affairs contract needs.
- Assistance with statewide transportation planning programs.
- Distribution of information on federal and state rules and regulations.
- Input and support for economic and community development programs.
- Maintenance and federal certification of a viable and ongoing 3C Transportation Planning Process.
- Maintenance and operation of the Old Colony Metropolitan Planning Organization and Old Colony Joint Transportation Committee.
- Preparation of 3C certification documents.
- Provision of ongoing technical assistance to departments, agencies, authorities, and communities.
- Support for public participation and private involvement in the 3C process, Federal Highway Administration, Federal Transit Administration, and air-quality programs.

PROCEDURES:

1. Provide administrative and technical support to the 3C regional planning process; Provide community liaison activities and short term planning assistance to communities on transportation planning matters; Review Federal and State transportation programs, guidelines, circulars and manuals, plans and regulations as may be required or necessary; Provide for and support public and private involvement in the 3C Planning Process; and Participate in informational programs on transportation, air quality, hazardous waste, energy conservation, accessibility, casinos/ gaming, and other planning.
2. Provide and maintain coordination for Old Colony MPO activities including the preparation and presentation of certification documents, transportation plans and programs (e.g. Unified Planning Work Program, Long Range Transportation Plan, Transportation Improvement Program, Amendments, etc., Public Participation Plan), developed through the public participation process. Distribute documents/ amendments to the Old Colony MPO for appropriate action and/ or endorsement as needed; Develop documents necessary for the certification reviews and the self-certification process; and Maintain all Old Colony MPO documentation records, and files.
3. Provide for participation of staff in educational development programs and conferences with coordination of BAT, GATRA, FHWA, FTA, MassDOT, MBTA, and other agencies as needed.

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4. Provide inter-agency coordination with other transportation agencies, including FHWA, FTA, MassDOT, MBTA, RPAs, and RTAs on an ongoing, regular basis; and Coordinate highway-planning activities with local officials and MassDOT District 5.
5. Provide financial management of the transportation planning contracts with FHWA/ MassDOT, FTA/ MassDOT, BAT, GATRA, and MBTA staff supervision and work assignment; and Prepare applications, contracts, time sheets, progress reports, invoices, request forms, and perform other contract administration activities necessary to the conduct of the 3C Transportation Planning Process.
6. Follow up on recommendations of previous transportation planning studies by attending and participating in public meetings or making presentation of study results.
7. Coordinate planning activities within the Barnstable Urbanized Area and the Boston Urbanized Area with MassDOT, the common MPOs, and the providers of public transportation to ensure that there are effective processes for cross-jurisdictional communication to foster collaboration, policy implementation, technology use, and performance management.
8. Review and implement Transportation Planning Certification Review recommendations. Implementation of recommendations will be guided by the Action Plan and reported on quarterly.

PRODUCTS:

Maintenance and federal certification of a viable 3C Transportation Planning Process and Old Colony MPO operation; Support of community development and environmental planning; 3C Memorandum of Understanding review and amendments; Information on FAST Act and the Clean Air Act (CAA) as needed; Consideration and implementation of MPO certification review recommendations; Inter-agency meetings, memorandum and correspondence on various aspects of the transportation planning program; Attendance and participation in Transportation Program Managers Group; and Administration of contracts and invoices.

SCHEDULE:

Management and support activities to be carried out on a continuing basis throughout the program year.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$45,645	\$11,411					\$57,056

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TASK 1200 - UNIFIED PLANNING WORK PROGRAM (UPWP)

OBJECTIVE:

To develop, endorse and maintain an annual UPWP that provides a description of the overall transportation related planning activities that are ongoing and anticipated in the region, during the forthcoming year and include funding sources and agency responsibility. Endorsement of this document shall be consistent with the Public Participation Plan.

PREVIOUS WORK:

UPWPs prepared and endorsed annually by the Old Colony MPO; Monthly Invoices; and Quarterly Progress Reports, and Year End Progress Reports.

PROCEDURES:

1. Maintain the current UPWP and prepare related invoicing; and Review and adjust and/ or amend the UPWP when necessary and circulate revisions to the Old Colony MPO, Old Colony JTC, OCPC, and other appropriate agencies for review, adjustments, and/ or endorsement, as appropriate.
2. Follow the Old Colony MPO endorsement process for amendments. Other revisions to the Unified Planning Work Program, such as changes in the existing level of effort or funding of a specific task or the addition/ deletion of a task and procedures within the current contract/ grant programs, etc., will be made as required throughout the program year upon mutual agreement of the agencies involved. Such revisions/ adjustments will be conducted by the OCPC staff and distributed to the appropriate agencies, as appropriate. These revisions/ adjustments do not require formal Old Colony MPO endorsement.
3. Develop the FFY 2022 UPWP for the Old Colony region covering the upcoming federal fiscal year. The UPWP will be developed in conformance with the latest federal and state regulations and guidelines. The UPWP describes transportation, air quality and transportation related planning activities anticipated within the region during the upcoming year. The staff will prepare the UPWP in coordination with the Old Colony JTC and submit it in draft version to BAT, GATRA, FHWA, FTA, OCPC, and MassDOT for public review and comment. The Old Colony MPO will endorse the final document by July 2021.

PRODUCTS:

Maintain the current UPWP and prepare invoices; Prepare Quarterly and Year-End Progress Reports; Prepare and submit Adjustments and Amendments, as needed; and Prepare the FFY 2022 UPWP.

SCHEDULE:

FFY 2022 UPWP to be developed and endorsed by July 2020.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$11,867	\$2,967					\$14,834

FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)

TASK 1300 - PUBLIC PARTICIPATION PROGRAM

OBJECTIVE:

To continue to support, implement, review, and amend the Old Colony MPO's Public Participation Plan that was developed and endorsed in 2017. This process is designed to ensure that key public agencies at all levels of government, private and nonprofit organizations and interested citizens will be kept apprised of transportation planning activities and opportunities to participate in the region. The encouragement of participation and provision of meaningful access to the metropolitan transportation planning for the public is one of the most important goals of the "3C" (continuing, cooperative, and comprehensive) process. The Public Participation Plan is reviewed and updated as deemed appropriate.

To provide staff support and actively encourage public and private participation in the 3C planning process through the Old Colony JTC, Old Colony MPO, and OCPC.

To continue monitoring the effectiveness of its public participation program. The process outlines the public outreach procedures that will be followed by the Old Colony MPO in developing and amending the Region's LRTP and TIP.

To conduct outreach activities related to the development of FAST Act performance measures and targets.

PREVIOUS WORK:

Old Colony JTC Newsletters; OCPC Newsletters; News Releases and Articles for the Media; OCPC Annual Reports; Old Colony JTC meetings; Old Colony LRTPs; Old Colony TIPs and Implementation; Title VI Reports; and Public Participation Plans.

PROCEDURES:

1. Provide a proactive public involvement process that provides complete information, timely public notice, full public access to decisions, and support continuing involvement of the public in the developing Plans, Transportation Improvement Programs and other documents; and Employ social media as a meaningful and effective communication medium.
2. Provide staff support and actively encourage public and private participation in the 3C planning process through the Old Colony Joint Transportation Committee including:
 - Host meetings of the Old Colony JTC and Old Colony MPO.
 - Work with the Old Colony JTC, working towards expanding and educating the membership.
 - Modify and expand the Transportation Advisory Network (TAN) as appropriate.
 - Maintain and update comprehensive mailing lists of interested groups, local, state, and federal agencies, Old Colony JTC, minority and low-income groups, and individuals who should be informed of regional plans, programs, and accomplishments in the area of comprehensive transportation and environmental planning and development.
 - Ensure early and continuing involvement of the public in the development of plans and other documents. Utilize visualization techniques and publish or announce the availability of plans and/or document for review and comments.
 - Review and evaluate the effectiveness of the public participation plan; identify innovative public involvement techniques and/ or programs that enhance public participation.
 - Implement the public involvement process with particular emphasis on the LRTP and the TIP.
 - Continue to prepare mailings, newspaper announcements, public notices, and public service announcements, as outlined in Old Colony MPO's Public Participation Plan.

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- Continue to identify under-served and under-represented groups in the Old Colony region, continue to make efforts to reach out, attempt to get them interested, and involved in the transportation planning process. OCPC will continue efforts to broaden public participation especially reaching out to the limited English proficient, minority, and low-income population groups.
 - Provide staff support and actively encourage both public and private minority groups/ agencies participation in the 3C planning process.
3. Prepare articles and documentation related to transportation planning including: Articles for the OCPC Annual Report, newsletters, website, and other media outlets, as appropriate.
 4. Address Title VI and Environmental Justice as part of the public participation process and ensure that there is equity in the distribution of transportation resources in the Old Colony region. This process is designed to ensure that public and private minority agencies, organizations, and interested residents will be kept apprised of transportation planning milestones in the region. The encouragement of meaningful participation of local minority groups, organizations, and citizens in metropolitan transportation planning is one of the most important goals of the "3C" process (comprehensive, cooperative, and continuing).
 5. Present transportation plans and programs (Long Range Transportation Plan, Transportation Improvement Program, Public Participation Plan, and Unified Planning Work Program) developed through the public participation process to the Old Colony MPO for appropriate action.
 6. Maintain, adjust, and/ or amend the current PPP and ensure that the interested parties and the public are involved in developing outreach procedures and will have opportunities to voice their opinions on these changes once proposed. Endorsement procedures will be conducted in a manner acceptable to the FHWA and FTA.
 7. Conduct outreach activities related to the development of FAST Act performance measures.

PRODUCTS:

Measures of Effectiveness (MOE) Annual Report; Old Colony MPO meetings; Old Colony JTC meetings and documents; Old Colony MPO meetings and documents; Website Notices; Legal Notices; Articles in OCPC Annual Report and News Releases; Participation in public meetings; Newsletters; Outreach activities related to the development of performance measures and thresholds; Maintenance of a viable Public Participation Process; 2021 Old Colony Title VI Report; and Public Participation Plan Amendments, and refinements for the website.

SCHEDULE:

To be carried out throughout the program year.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$49,200	\$12,300					\$61,500

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TASK 1400 - TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

OBJECTIVE:

To develop and maintain a multi-year, financially constrained, program of transportation/ air quality improvement projects that is consistent with the Old Colony MPO's LRTP, the State Implementation Plan (SIP), the Environmental Protection Agency's Air Quality Conformity Regulations, and FHWA and FTA Planning Regulations. The TIP will include a program of highway and transit projects for FFY 2022-2026. Any project, which is to be implemented, using federal funding, must appear in this document and any project, which is to be implemented in the current fiscal year, must appear in the annual element. Projects and service implemented through the TIP will help to achieve the performance targets for Safety (PM 1), Bridge and Pavement Condition (PM 2), System Performance Measures (PM 3), and Transit Asset Management State of Good Repair.

The FFY 2021-2025 TIP will be maintained and any amendments will be conducted in accordance with the PPP. The FFY 2022-2026 TIP will be developed and endorsed.

PREVIOUS WORK:

Transportation Improvement Programs have been developed and endorsed annually; Public Participation Process; Transportation Improvement Program Amendments and Administrative Modifications; Evaluation Criteria Analyses; GHG Tracking and Evaluations; Project Evaluations; Technical Assistance and formulation, implementation and coordination of TIP Subcommittee; and Preparation of related products.

PROCEDURES:

1. Develop a program of projects: In developing the FFY 2022-2026 TIP, staff will update the list of all transit, highway, or air quality projects that are expected to require federal and state transportation funds for planning and engineering, construction or purchase during FFY 2022-2026. This work will include:
 - All transportation projects or programs that require FHWA or FTA approval.
 - For informational purposes, all projects to be funded with Federal funds other than those from FHWA or FTA.
 - For informational purposes, all projects to be funded with Non-Federal Funds.
2. Provide the following information: The MassDOT identification number; Project description; Transportation Evaluation Criteria Scores; Estimated total cost expressed in year of expenditure dollars; Amount of federal funds proposed to be obligated during each program year; Proposed source of Federal and Non-Federal funds; and Identification of the recipient/ sub recipient and state and local agencies responsible for carrying out the project, and project phase. In addition, the total costs of projects seeking Federal funds in each program year shall not exceed reasonably anticipated Federal funds.
3. Prepare the Draft FFY 2022-2026 TIP. The following tasks and procedures will be performed during the development of the Draft FFY 2022-2026 TIP:
 - Include involvement of the communities, elected officials, and the public through the public participation process.
 - Provide technical assistance to municipalities and transit providers in developing projects and priorities.
 - Meet with communities, MassDOT District 5, MassDOT, and consultants in developing project information, and utilizing Transportation Evaluation Criteria.

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- Solicit and analyze Congestion Mitigation and Air Quality Projects.
4. The Transportation Improvement Program will also include sections relative to:
 - Funding categories and amounts of federal funding proposed to be obligated during each program year.
 - An Annual Listing of Obligated Projects, programs, and an explanation of any significant delays in the planned implementation of major projects.
 - A description of the transportation evaluation criteria and process for prioritizing projects.
 - Air quality significance and relationship of the TIP, State Transportation Improvement Program, and State Implementation Plan.
 - Results of Greenhouse Gas (GHG) Emission Analyses.
 - A financial plan that compares revenue needs to revenue sources for highway and transit programs.
 5. Public Participation: There will be a reasonable opportunity for public comment on the Draft FFY 2022-2026 TIP in accordance with the PPP. At least one public meeting will be held during the TIP development process and both the proposed and approved TIP will be published or otherwise made readily available for informational purposes via various media outlets, and website.
 6. TIP Administrative Modifications/ Amendments: Amendments to the TIP will require Old Colony MPO endorsement. Administrative Modifications to the TIP typically require approval of the Old Colony JTC and notification of the Old Colony MPO.
 8. TIP Project Impact Before and After Evaluation to identify the effectiveness of selected TIP projects. Typically, for intersection improvement projects, intersection operations and safety will be evaluated using turning movement counts, operational performance measures, and crash data.
 9. Conduct public health assessments and consider public health outcomes as part of ongoing planning and performance measures planning.
 10. TIP Endorsement: The TIP will be reviewed and endorsed by the Old Colony MPO. Once endorsed, the TIP will include the required air quality conformity documentation necessary for U.S. DOT and EPA conformity determinations.

PRODUCTS:

Maintenance of the FFY 2021-2025 TIP, and Amendments and Administrative Modifications, as needed; Preparation and endorsement of the FFY 2022-2026 TIP; and Preparation of TIP Project Impact Before and After Evaluation.

SCHEDULE:

The FFY 2022-2026 TIP will be developed and endorsed by June 2021. TIP Project Impact Before and After Evaluation to be completed by September 2021.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$36,756	\$9,189					\$45,945

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TASK 1500 - TITLE VI AND ENVIRONMENTAL JUSTICE

OBJECTIVE:

To ensure that there is equity in the distribution of transportation resources in the Old Colony region. Ensuring that the 3C planning process is accessible to the public, including members of the Title VI, Environmental Justice, and Limited English Proficiency communities is a central federal, state, and regional priority. This process is designed to ensure that public and private minority agencies, organizations, and interested citizens will be kept apprised of and involved in the transportation planning milestones in the region. The encouragement of participation and provision of meaningful access to all local citizens in metropolitan transportation planning is one of the most important goals of the "3C" (continuing, cooperative, and comprehensive) process. The MPO process engages with these populations throughout all transportation planning related activities.

PREVIOUS WORK:

Old Colony LEP Plan; Old Colony PPP; Old Colony JTC Newsletters; OCPC Newsletters; News Releases and Articles for the Media; OCPC Annual Reports; Website; Old Colony JTC meetings; 2020 LRTP Public Participation Process; TIP and Implementation Process; and Annual Old Colony Title VI Reports.

PROCEDURES:

1. Ensure that there is equity in the distribution of transportation resources and that there is reasonable access to the planning process, OCPC will continually conduct Title VI and Environmental Justice planning for the Old Colony Region. The planning includes the following:
 - Evaluate the effectiveness of the public participation plan for engaging transportation-disadvantaged communities in the transportation decision-making process.
 - Regional maps using the U.S. Census illustrating where high concentrations of minority and low-income persons are located.
 - Regional maps using the U.S. Census identifying where highway Transportation Improvement Projects are located in relation to minority population and low-income areas.
 - Regional maps using the U.S. Census illustrating the existing transit routes, fatal crash locations, pavement conditions, safe routes to schools buffers, and future capital transit projects.
 - Examination of mobility issues using the U.S. Census, access to jobs and services, and levels of service for both transit services and automobiles.
 - Promote access to the planning process to those with limited English proficiency by developing and utilizing techniques and strategies such as visualizations, graphics, posters, interpreters, and providing information via ethnic media and community based organizations.
 - Analyze the outcomes of processes and plans by assessing the geographic distribution of the benefits and burdens of the regional transportation system to protected populations.
2. Provide staff support and actively encourage both public and private minority groups/ agencies/ community based organizations participation in the 3C planning process through the Old Colony Joint Transportation Committee.

PRODUCTS:

Title VI and Environmental Justice planning for the Old Colony Region; 2021 Title VI Annual Report; Maintain an outreach contact list of minority groups and community based organizations; Develop maps identifying minority and low-income populations, transit route maps, and maps showing existing and future location of Transportation Improvement Program and Transportation Plan projects; Conduct

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benefits, burden analysis, and include in TIP; Continue to expand outreach process and methods; Obtain and secure on-call interpreters; and Utilize MassDOT Title VI Tool.

SCHEDULE:

To be carried out throughout the year.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$35,778	\$8,945					\$44,723

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TASK 2000 - DATA RECONNAISSANCE, ACQUISITION, AND ANALYSIS ACTIVITIES

A major requirement of planning is to know what is actually happening in the real world. Surveillance activities are designed to do just that by gathering data on transportation resources, their use, and demand for their use. This information is used to locate and define problems for further study and analysis, define requirements for plans and designs, develop programming priorities and evaluate the success of projects after implementation.

Task 2100 - Demographic and Land Use Surveillance, and Road Inventory Update

Task 2200 - Multi-Modal Data Surveillance and System Monitoring

Task 2300 - System Planning Resource Activities

Task 2400 - Geographic Information System (GIS)

Task 2500 - Management Systems (Congestion, Pavement & Safety), and Travel Demand Modeling

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TASK 2100 - DEMOGRAPHIC AND LAND USE SURVEILLANCE, AND ROAD INVENTORY UPDATE

OBJECTIVE:

To continue to develop, update, and maintain current demographic and land use information and data to ensure that transportation planning, programming analyses, and forecasting methods are based on the most current information. This includes analyzing social, economic, and land use data, including historic, current, and forecast information, and the development, update and revision of socioeconomic forecasts, and updated the road inventory for use in refinement of the regional transportation model and the LRTP.

PREVIOUS WORK:

Population, employment, land use, building permits, build out analyses, Journey to Work data, forecasts, and GIS data analyses; Road Inventory Updates; Regional demographic data book preparations; U.S. Census Participant Statistical Areas Program (PSAP); and MassBuilds project updates.

PROCEDURES:

1. Review and continue to maintain, update, and develop where appropriate existing demographic files based on the U.S. Census information, and the 2011 Massachusetts Household Transportation Survey.
 - Attend and participate in workshops and courses (U.S. Census, CTPP, etc.) sponsored by FHWA, FTA, MassDOT, Baystate Roads, and other agencies or groups.
 - Develop traffic analysis zones for the travel demand model with the most recent census data, as it becomes available.
 - Develop, update, and revise socioeconomic forecasts for use in refinement of the regional model, Geographic Information Systems, and the Long Range Transportation Plan.
 - Provide and respond to requests for U.S. Census Data and demographic data.
 - Review and analyze the U.S. Census Data and demographic data.
 - Review, maintain and periodically update physical data and prepare data maps, including land use, zoning, etc.
 - Review, update, and add development projects in MassBuilds.
 - Prepare and engage in outreach and understanding efforts with regard to the 2020 U.S. Census.
2. Socio-Economic forecasting
 - Develop, update, and revise socioeconomic forecasts for use in refinement of the regional travel demand model.
 - Obtain the necessary information to revise the population and employment projections based on the U.S. Census, and the 2011 Massachusetts Household Transportation Survey.
3. Monitor changes in local government land use plans and regulations, land use patterns, development projects, trip generations, on and off site mitigation, and the various associated land use characteristics of the region in order to update the land use and zonal forecasts, and to use as inputs into the MassBuilds, congestion management process, and mitigation activities.
4. Continue to collect and update attributes of MassDOT's Road Inventory File that have not been updated.
 - Assist communities with the documentation needed in order to add newly constructed accepted streets or to change an existing street from an unaccepted to an accepted roadway.
 - Meet with local officials to discuss the Road Inventory Data Files and the changes identified during the Pavement Management survey process.
 - Continue to maintain the Road Inventory on the Geographic Information System.

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- Investigate the feasibility of using a Global Positioning System to plot and update the Road inventory files with new roads created from new subdivision development. Additionally, OCPC will also use the Global Positioning System to plot both existing pedestrian and bicycle trails within the region.

PRODUCTS:

Updated Socio-Economic Data Files; Updated Physical Data Files; Journey-to-Work Data Tables; Journey-to-Work Reports; Technical assistance with regard to the 2010 and 2020 U.S. Census, and the 2011 Massachusetts Household Transportation Survey; Priority Development Areas and Priority Preservation Areas; and Provision of technical assistance, maintenance, and updates regarding the Road Inventory Files.

SCHEDULE:

To be carried out throughout the year.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$17,200	\$4,300					\$21,500

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TASK 2200 - MULTI-MODAL TRANSPORTATION SYSTEM SURVEILLANCE AND SYSTEM MONITORING

OBJECTIVE:

To develop and maintain a region-wide, multi-modal transportation system-monitoring program (includes OCPC Program and MassDOT).

To respond to requests for traffic (vehicle, bicycle, pedestrian, and transit) counts from state, city, and town officials within the region.

To preserve up-to-date files of traffic - specific data characteristics of the multi-modal transportation system, demand, and its use.

To conduct pedestrian, bicyclist counts, and transit counts, and prepare measures such as levels of service.

PREVIOUS WORK:

Annual Old Colony Traffic Volume Reports; Maintenance of database of local, state and other traffic counts, and MS2 upload; Turning movement counts and Travel Time Studies; Collection and analysis of data previously performed for other transportation studies; Speed and vehicle classification studies requested by member communities; Review of studies and reports prepared by agencies and consultants; and MassDOT/ RPA Traffic Count Program (vehicle, bicycle, pedestrian, and transit). In addition, a count program of strategic road/ locations within the region has been developed to provide information for implementation of the regional growth factors, and model inputs, etc.

PROCEDURES:

1. Undertake a transportation system counting program (vehicle, bicycle, pedestrian, and transit) in coordination with municipal and MassDOT officials including:
 - Conduct bicycle and pedestrian counts, as appropriate.
 - Conduct directional traffic counts as part of the MassDOT Statewide Traffic Coverage Counts, and upload to MS2.
 - Conduct traffic counts using mechanical recorders and conduct manual turning movement counts within the region, and/or as needed for planning purposes.
 - Conduct transit counts, as appropriate.
 - Conduct turning movement counts, as appropriate, and upload to MS2.
 - Develop bikeability measures and/ or quality of service metrics.
 - Maintain and continue to expand on an ongoing region wide traffic count database for use in monitoring regional VMT growth rate.
 - Maintain interactive traffic count database.
 - Measure levels of service for all modes (vehicle, pedestrian, bicycle, and transit).
 - Prepare reports summarizing the traffic counting activities in the region (includes distribution to MassDOT), as appropriate.
 - Prepare and report primary data collected to host municipalities and MassDOT.
 - Prepare inventory of gaps within the regional bicycle network.
 - Provide maintenance, payments, and replacements of all traffic counters, and traffic counting related equipment, as needed.
 - Purchase equipment and supplies as needed to continue the traffic count program.
 - Verify and calibrate traffic counters according to MassDOT Procedures.

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2. Conduct additional transportation system (vehicle, bicycle, pedestrian, and transit) counts as needed in order to refine and update the traffic count database for the travel demand model.
3. Undertake travel time and vehicle occupancy study in the Old Colony region as needed for the Regional Transportation Model, the LRTP, and/ or other planning activities.
4. Review, monitor and update the following transportation systems data as needed including:
 - Average Daily Traffic and transportation growth trends and seasonal adjustments (vehicle, pedestrians, bicycles, and transit).
 - Commuter rail parking lots and park and ride facilities (inventory) and utilization study.
 - Traffic crash and crash rate documentation.
 - Traffic control devices.
 - U.S. Census Place of Work and Residence Data.
 - 2011 Massachusetts Household Transportation Survey.
5. Develop and maintain staff awareness of Intelligent Transportation System Technology, and promote Intelligent Transportation System solutions in the region and participate in the implementation of Intelligent Transportation System Architectures.

PRODUCTS:

Transportation System Counting Program; Bikeability measures and/ or quality of service metrics; Highway Data Displays; speed and classification reports; Turning movement counts; MS2 Upload; Vehicle Occupancy and Travel Time Reports as needed and updated traffic counts on a community/ roadway basis and a data layer of regional counts with Geographic Information System and Commuter Rail Parking Lots and MassDOT Park and Ride Utilization documentation; Replacement, maintenance, and, purchase of traffic counters, equipment, and software; Annual Traffic Volumes Report; Traffic Count Interactive Database; Turning Movement Count Interactive Database; and Traffic Volume Growth/ Decline Rates.

SCHEDULE:

To be carried out typically from January to December (weather permitting). Year End Traffic Volume Report to be completed during spring 2021.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$62,533	\$15,633					\$78,166

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TASK 2300 - SYSTEM PLANNING AND RESOURCE ACTIVITIES

OBJECTIVE:

To continually improve the region's capability for estimating and evaluating impacts of existing and proposed regional and multi-modal transportation facilities and to provide support for the day to day operation of the Transportation Department's computer system and to expand the utility of the computers to other areas of transportation planning. Additionally, to provide for staff development, training, and their related participation in educational development programs, seminars, conferences, and courses.

PREVIOUS WORK:

Staff development and participation in courses, seminars, and workshops (on-going project); Use of TransCAD, Geographic Information System, HCS, Pavement Management, McTrans Highway Capacity Software, SYNCHRO, Pictometry, CMAQ Analysis, GHG Analysis, and other transportation analysis software packages; Purchase, installation, and upgrade of computer systems, software, and equipment, as needed; and Purchase of relevant reference materials and documents.

PROCEDURES:

1. Staff development, attendance and participation in transportation courses, trainings, seminars and workshops sponsored by BAT, GATRA, DEP, EOEAA, EPA, FHWA, FTA, MassDOT, and others. This will assist staff in continued and ongoing development, maintenance, and application, sketch planning, quick response and other forecasting methods. This will also encompass all activities that are directed to the production of new computer procedures that support analytical, administrative and documentation tasks.
2. Computer hardware and software acquisition, maintenance, and updates.
 - Purchase, update/ upgrade, and maintenance of all hardware equipment/ supplies and software applications that are needed for the Transportation Section's computer facilities.
 - Integrate computer capabilities into all practical aspects of the transportation planning process. This effort entails the acquisition, testing, and refinement of additional hardware and transportation related software from U.S. DOT supported research and other public agencies as well as private companies.
 - Provide necessary support for the effective operation of the staff's computer facilities.
 - Monitor technological development in the field of computer hardware and software for potential use in planning activities. Continue ongoing planning, evaluation, and implementation of computer software and hardware.
 - Familiarize the Transportation Staff with the computer facilities and applications through informal and formal training sessions.
 - Continue to maintain and update the library of programs and data files.
 - Develop a database that will archive data from past projects and provide current GIS and tabular data in an online format searchable by the public.
 - Maintain website.

PRODUCTS:

Staff development of enhanced technical and multi-modal planning capabilities; Attend courses/ workshops etc.; Maintain, and update website, computer hardware and software, and knowledge bases, as needed; Purchase of relevant software, reference materials, and documents; and Application of new forecasting techniques and transportation analysis techniques.

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SCHEDULE:

To be carried out throughout the year.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$39,422	\$9,855					\$49,277

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TASK 2400 - GEOGRAPHIC INFORMATION SYSTEM (GIS)

OBJECTIVE:

To improve, develop, and utilize the digital data and geographic tools of the GIS for various tasks within the UPWP. The GIS provides the ability to store, display, manage, and analyze data for different work tasks. This includes land use projections for the LRTP; road inventory files; travel demand modeling; traffic volume; high-crash locations; roadway functional classification; transit route analysis; and pavement management analysis. This task will also include collaboration with communities and regional organizations, and provision of technical assistance on geographic matters.

PREVIOUS WORK:

Roadway Classification; technical assistance program for member communities; Regional crash database; Regional land use map; Regional growth maps; Regional build out analyses; Parcel Maps; Priority Development Areas (PDAs) and Priority Preservation Areas (PPAs); Crash Cluster Maps; Stormwater Maps; and Developed Land as of 2009.

PROCEDURES:

1. Collect and map data on bus stops, routes, and ridership.
2. Collect and map data on vulnerable populations (based on income, race, color, national origin, disability, age, and sex) and ensure that data on seniors and disabilities are reported separately.
3. Collect and map data on where affordable housing is located.
4. Enhance system abilities, and develop regional databases and geodatabases.
5. Enter relevant demographic, economic, environmental, stormwater, drainage, and traffic data into the GIS as needed to provide increased abilities for organization, analysis, and retrieval.
6. Identify and map Priority Development Areas (PDAs), 43D Priority Development Sites, Transformative Development Initiative Districts (TDIs).
7. Provide GIS, Global Positioning System, and technical assistance to regional communities.
8. Review, select, and purchase additional software and hardware as needed.
9. Utilize GIS and GPS capabilities in maintaining traffic data, mapping pavement condition information, mapping existing and projected land use data for use in various transportation projects such as the revisions to long range transportation plans, special studies, road inventories, roadway functional classifications, crash location analyses, travel demand models, and, transit routes; etc.

PRODUCTS:

Base maps; Overlay files, and photography that can be utilized for tasks including travel demand modeling, traffic counting program, management systems, road inventory; PDAs and PPAs maps; 43D Priority Development Sites maps; Transformative Development Initiatives Districts (TDIs) maps; Crash data processing; Transit routing; Plan updates; Vulnerable population maps; Environmentally sensitive areas; Data models for advanced geoprocessing; and Traffic signal and intersection inventory.

SCHEDULE:

To be carried out throughout the year.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$50,978	\$12,744					\$63,722

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TASK 2500 - MANAGEMENT SYSTEMS (CONGESTION, PAVEMENT, AND SAFETY), AND TRAVEL DEMAND MODELING

OBJECTIVE:

Congestion Management Process (CMP)

To continue to implement a congestion management process. Considered an ongoing effort, staff will continue to collect and maintain data needed in the estimation of refined performance measures while identifying both existing and future needs of the region's transportation system (vehicle, pedestrian, bicyclist, and transit). Subsequently, ranked regional listing of congested highways, transit facilities, pedestrian and bicycle, and park and ride parking facilities that have been established will continue to be refined. As part of this System, regional congestion will be addressed at locations identified in the 2020 Old Colony LRTP.

Pavement Management System (PMS)

To continue to implement a pavement management system on a continual basis in keeping with objective driven, performance based planning. Staff will continue to collect and analyze road surface data on federal aid eligible roadways, and update the PMS database on an ongoing basis. Staff will also continue to assist and provide technical assistance to local communities interested in developing a local Pavement Management Program. Staff will continue research in updating and/ or replacing the existing the pavement management system software.

Safety Management System (SMS)

To continue to implement a safety management system. This consists of a systematic process that has the goal of reducing the number of and severity of traffic crashes on roads, reducing transit crashes, reducing pedestrian crashes and injuries, and reducing bicyclist crashes and injuries. Recommended actions include providing information for selecting and implementing effective safety strategies and projects. The safety management system incorporates roadway, human, and vehicle safety elements. Considered an ongoing effort, staff will collect and maintain data needed in the estimation of refined performance measures and the completion of road safety audits. Staff will identify both existing and future needs of the region's multi-modal transportation system with regard to safety. This includes producing a "Top 100" crash locations list, including both intersections and corridors, based on regional criteria to develop a list of unsafe locations from a regional perspective, annual regional listings and monitoring of high hazard intersections and corridors, participation and implementation of the Strategic Highway Safety Plan and the Highway Safety Improvement Program, and evaluation of potential improvements.

Travel Demand Modeling

To continue to develop staff capabilities in using the TransCAD Modeling System and provide assistance in the development of the Statewide Model; Continue refinement, calibration, development, maintenance, and application of the Old Colony Regional Travel Demand Model used in the development of the Long Range Transportation Plan; and Continue refining and calibrating the transportation demand model to meet the forecasting requirements of federal transportation and air quality laws and regulations.

The regional transportation model is an effective and comprehensive way to forecast transportation needs for the next 20 years in the Old Colony region. The transportation model enables forecasting of traffic impacts caused by population and economic growth, identifies congestion growth areas on highways, impacts on travel patterns, and estimate Vehicle Miles Traveled. The model is a valuable transportation tool in analyzing the transportation network and evaluating alternative solution to transportation problems.

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Staff may hire a consultant to assist with model refinements, and will utilize the model in testing of the transportation alternatives as part of the refinement of the Long Range Transportation Plan and traffic studies as appropriate. The model will also be used to assist in identifying future problem areas and in the development of strategies for the ongoing CMP. Staff will utilize the model in testing of the transit alternatives as part of the refinement of the LRTP and transit studies as appropriate. Staff will continue to work with the MassDOT in developing the statewide travel demand model as needed.

PREVIOUS WORK:

Congestion Management Process

Monitoring and analysis of the parking, transit, and roadway facilities. Link V/C Ratios as part of the regional traffic-counting program; Participation on the Congestion Management Technical Team, development of strategies, and corridor studies; Data collection, consisting of numerous travel time runs on roads identified as having existing congestion; and Analyzation of Brockton Area Transit's route ridership data. Staff also identified and analyzed the park and ride lots and commuter rail lots in the region, and identified problematic bottleneck areas to be studied.

Pavement Management System

Maintenance of a PMS on the federal aid eligible roadways miles in the region (approximately 642 miles); Report On Roadway Condition; Road Inventory Update; Technical assistance to communities interested in Pavement Management Program; Pavement Management Subcommittee; PCI development for incorporation in transportation evaluation criteria, and formation coordination and implementation of Pavement Management Subcommittee, and related products; Review of consultant proposals for updating and/ or replacing the pavement management system software; and Revisions to the PMS database to reflect changes in road classifications, and cost of materials for developing budgets.

Safety Management System

Participation in development of Highway Safety Improvement Program; Safety analyses as part of Transportation Evaluation Criteria application; Crash Rate processing; Top 100 High Hazard Intersections; Road Safety Audits (RSAs); and Studies for communities warranting specific attention to safety.

Travel Demand Modeling

The Regional Transportation Model was used as an analytical tool during the development of the LRTP. Staff utilized a regional traffic simulation model that encompasses every community in the region. The model was used to identify and verify congested corridors/ areas in the region for the CMP, Corridor Studies, and Major Bottleneck Identification Studies.

PROCEDURES:

Congestion Management Process

1. Continue to work with the CMP to identify and coordinate various work tasks and to ensure consistency with requirements of Transportation Management Areas. Staff will continue to attend meetings and training as appropriate since they serve as a forum for the dissemination of data produced by the system and allow personnel from other RPAs to meet and share information on data collection, data sources, etc.
2. Continue to refine the established CMP network by utilizing the region-wide traffic simulation model to identify any additional facilities on which congestion exists or is predicted; and Develop and monitor a system of performance measures and thresholds.
3. Continue to measure identified congestion on CMP corridors/ roadways/ transit/ pedestrian/ bicycle through a data collection and analysis effort, which includes, but is not limited to the following:

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- Conduct travel time, delay runs in each identified corridor, and collect traffic counts and turning movement count data, as appropriate.
 - Monitor, survey, and analyze usage at commuter parking lots throughout the region. Develop and monitor mobility and accessibility enhancement measures for the commuter parking lots within the region.
 - Extend and recalibrate the regional model for peak periods and travel time delay. Incorporate turning movement counts and phase specific signal timing information into the model.
 - Continue ongoing collection and analysis of fixed-route transit data. Also included in this process will be to conduct origin/ destination surveys of current transit ridership, walk to transit, and the development and utilization of condition measures and load factors.
 - Continue to identify, evaluate, and select strategies that address congestion, and provide administrative and technical support during the implementation of congestion management strategies.
 - Provide inputs to statewide and regional plans and transportation evaluation criteria for Transportation Improvement Programs.
 - Develop knowledge and skills, regarding the integration of goods movement. Meetings with stakeholders representing the freight community, in order to understand inefficiencies.
4. Continue to develop and refine congestion control strategies. Develop both general and corridor specific recommendations for relieving congestion on selected corridors.
 5. Continue to evaluate performance measures that provide relevant and up-to-date information on the congestion status of transportation facilities.
 6. Continue to identify bicycle and pedestrian connectivity gaps.
 7. Continue ongoing assessment of the effectiveness of implemented strategies on alleviating congestion.
 8. Continue ongoing monitoring and analyses that identify the underlying causes of congestion.
 9. Provide analyses that consider non-traditional congestion management strategies (Transportation Demand Management, growth management, congestion pricing, traffic operational improvements, public transportation, and Intelligent Transportation System) to reduce transportation system congestion.
 10. Provide in depth study of regional congestion at priority locations, and to identify potential locations for additional MassDOT Park and Ride Lots.

Pavement Management System

1. Continue to use the pavement management software to maintain and update the Old Colony Pavement Management Program as needed. Pavement management data collection and analyses will be used to develop estimated costs associated with regional pavement conditions and needs. This information is to support the inclusion of pavement projects in the TIP and will aid in the development of realistic estimates of costs to the Region, particularly while developing the LRTP. Staff will update the PMS database to reflect the expansion of the federal aid eligible mileage due to the reclassification of roads and inclusion of new member communities. Pavement management tasks include:
 - Conducting windshield surveys to determine severity and extent of pavement distresses.
 - Developing conditions analysis and recommended repairs and costs, and reports to municipalities.
 - Developing a system of performance measures and thresholds.
2. Provide technical assistance to member communities interested in the Pavement Management Program.

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3. Meet with MassDOT, RPAs, and committees to coordinate regional and statewide efforts and to compare programs and strategies for improvement of data collection, analysis, and assistance to local communities.

Safety Management System

1. Develop and work with the SMS to identify and coordinate various work tasks, and prepare and participate in Road Safety Audits. Staff will continue to attend meetings (such as SHSP and TRCC, etc.), and training as appropriate since they serve as a forum for the dissemination of data produced by the system, and allow personnel from other RPAs to meet and share information on data collection, data sources, etc.
2. Review local and state crash data for intersections and corridors. Calculation of crash rates (crashes per million entering vehicles and crashes per hundred million miles) and comparison to both State and District Averages will be conducted. For corridors, the crashes per lane mile and fatality per lane mile will be used. Produce a "Top 100" crash locations list, including both intersections and corridors, based on regional criteria to develop a list of unsafe locations from a regional perspective.
3. Conduct RSAs and develop both site specific and generalized recommendations in order to address safety deficiencies. This will include recommendations regarding geometric, speed reductions, traffic calming techniques, vegetation clearing, signage consolidation, pavement markings, pedestrian ramps and crossings, roundabouts and signalizations, as appropriate. Staff will utilize the Manual on Uniform Traffic Control Devices, the MassDOT Project Development and Design Guide Book, and the Governor's Highway Safety Bureau.
4. Incorporate safety criteria in the transportation evaluation process used in the development of the TIP. Project specific recommendations will be discussed with local, regional and state officials as appropriate, in order to address safety issues and concerns.
 - Provide administrative and technical support during the implementation of safety management strategies.
 - Provide safety inputs to statewide and regional plans and TIPs.
5. Continue to develop and refine safety strategies, and develop both general and corridor specific recommendations for addressing safety on selected corridors.
6. Develop a system of performance measures and thresholds, and document results of implemented safety measures. Such measures may include percent reduction in crash rate, percent reduction in the number of injury crashes, and percent reduction in crashes involving fatalities. Improve methods for compiling and retrieving crash data through utilization of GIS and through the improvement of information sharing with local, State, and Federal partners.
7. Continue to measure identified safety at high hazard locations through a data collection effort, which includes, but is not limited to the following:
 - Conducting turning movement counts, vehicle volume studies, vehicle speed studies, vehicle classification studies and pedestrian studies.
 - Continuing to identify, evaluate, and select strategies that address safety.
 - Updating status of performance measures at locations where safety improvements have been implemented.

Travel Demand Modeling

1. The products developed from the model, i.e. the existing and future year scenarios used for network analysis of air quality and travel demand will be reviewed, evaluated, and utilized as part of any changes/ updates to the LRTP and TIP.

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2. Continue to refine and update the Old Colony travel demand model to include the block group demographic data from U.S. Census; contract with consultant as needed; this information will be used to calibrate the model (this may include utilizing consultants under contract).
3. Continue to collect/ compile, update traffic count data, and adjust as necessary to refine the accuracy of the model.
4. Develop external zones from external stations on the fringe areas of the region to improve the calibration of the existing conditions as appropriate.
5. Utilize the refined and calibrated model for analyzing alternatives in the development and refinement of the Long Range Transportation Plan and other transportation or corridor studies (this may include utilizing consultants under contract).
6. Analyze forecast information to identify deficiencies as required for the LRTP and Air Quality Conformity. Evaluate improvement strategies. Incorporate findings in the LRTP as appropriate.
7. Assist MassDOT in the preparation of statewide modeling efforts as needed. Integrate the U.S. Census Block Group data and MassDOT Road Inventories Files into TransCAD model for use with the statewide travel demand model.
8. Continue work on developing the transit network model as appropriate.
9. Collect data on existing services provided by the MBTA, BAT, and GATRA. This data collection will include route and service information provided by the respective transit providers as appropriate.
10. Collect data on needs for transit services across region. Data will be collected using a variety of techniques such as ridership surveys origin/ destination, license plate surveys, and mode split analysis as appropriate.

PRODUCTS:

Congestion Management Process

Annual Management System Reporting will be prepared; Data collection, intersection data survey, roadway refinement, proposal strategies, progress report preparation, and congestion management team support; In-depth study of regional congestion at priority locations; Consistency with CMP requirement of Transportation Management Areas; Transportation Evaluation Criteria inputs; Locations for expansion of existing Park and Ride Lots; Locations for additional Park and Ride Lots; Establishment of Performances Measures and thresholds; and Measures to reduce greenhouse gas emissions, VMT, and congestion.

Pavement Management System

Annual Management System Reporting will be prepared; Continue data collection, analysis, and cost estimates for federal aid eligible roadways in the region and use of said data in evaluation of projects to be programmed in the TIP; Database refinement and information for incorporation into GIS; Operations and maintenance cost to maintain the federal aid roadway network; Technical assistance to local communities; and Establishment of Performances Measures and Thresholds, and Transportation Evaluation Criteria inputs.

Safety Management System

Annual Management System Reporting will be prepared; Road Safety Audits; Top 100 High Hazard Intersections and Corridors; Development of specific-safety recommendations for intersections, corridors, and pedestrian crossings; Inclusion of safety analyses as a component of the Transportation Evaluation Criteria in the development of the TIP; Establishment of Performances Measures and Thresholds; and Identification of safety specific projects for the Old Colony Region.

Travel Demand Modeling

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A completed refined/ recalibrated transportation model for the Old Colony region that can be expanded upon as needed, utilized for travel demand estimation, and forecasting; and Updated network models for the Old Colony region, and refinement of the Traffic Analysis Zones.

SCHEDULE:

Management Systems and processes, and travel demand modeling to be carried out throughout the year. Annual Reports, Road Safety Audits, and analyses to be completed by end of September 2021.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$74,533	\$18,633					\$93,166

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TASK 3000 - SHORT AND LONG RANGE TRANSPORTATION PLANNING ACTIVITIES

Task 3000 charts the direction for major transportation development activities in the region. As such, it is concerned with continuously updating projects dealing with the demand for transportation; development of a transportation plan which encompasses a Long Range Element and a Short-Range Element, both incorporating the concept of Transportation Systems Management; a further detailing of the broad findings and recommendations of the Plan in plan refinement; and special purpose plans addressing such items as air quality, energy, and seniors and individuals with disabilities.

Task 3100 - Regional Traffic Studies, ITS, and Intermodal Planning

Task 3200 - Local Highway Transportation Technical Assistance

Task 3300 - Road Safety Audits (RSAs) at Multiple Locations

Task 3400 - Active Transportation Study

Task 3400 - Climate Change Vulnerability Transportation Assessment

Task 3600 - Performance Based Planning and Management

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TASK 3100 - REGIONAL TRAFFIC STUDIES, ITS, AND INTERMODAL PLANNING

OBJECTIVE:

To provide planning services for highway, bicycle, pedestrian, transit, and movement of goods in the region designed to address immediate traffic and safety problems, and to conduct Intelligent Transportation Systems (ITS) planning. The LRTP identifies deficiencies in the region's transportation network. The deficiencies are shown in the plan including deficient bridges, dangerous intersections, congested highway corridors, and overcrowded transit facilities. Where projects have not been developed to correct these deficiencies, studies and intermodal planning will have to be undertaken to evaluate each problem in detail and to recommend the appropriate solution.

To provide a comprehensive inventory of roadway facilities that interact with the regional hydrologic network, including the condition, type, location, function, surrounding conditions, and environmental attributes of these facilities. Forthcoming EPA Phase II Stormwater Regulations will require communities to locate and map their roadway stormwater infrastructure.

To update an assessment of vulnerabilities and risks that climate change, and/ or extreme weather event pose to critical transportation infrastructure.

Staff will conduct traffic studies and intermodal planning to assist member communities and agencies in developing the appropriate solutions for any identified local transportation deficiencies. Staff also anticipates undertaking traffic studies at selected intersections and along selected roadway corridors identified in the Old Colony LRTP or as part of the CMP, as warranting further study. Continually, staff receives requests from communities to conduct traffic studies. For example, in the past, the town of Whitman requested that OCPC conduct a traffic study on Route 18 and for Whitman Town Center, and the town of Stoughton requested a circulation study in Stoughton Center.

PREVIOUS WORK:

2011 Major Bottleneck Study (Plymouth Route 3 at Exit 6, East Bridgewater Central Square, and West Bridgewater Route 106); 2012 Major Bottleneck Study (Bridgewater Route 104 and Stoughton Route 138); 2013 Major Bottleneck Study (Stoughton Central Street and Avon Harrison Boulevard); 2014 Southwest Brockton Corridor Study; 2014 Regional Freight and Goods Movement Study; Route 53 Corridor Study; Route 58 Corridor Study; Route 106 Corridor Study; Route 123 Corridor Study; Route 139 Corridor Study; Stoughton Square By-Pass Study; Stoughton Square Origin - Destination Study; Bridgewater Center Circulation Study; Bourne Road Corridor Study; 2013 participation in development Regional Intelligent Transportation System Architecture for the Metro Boston Area and Southeastern Massachusetts Area; 2007 Old Colony ITS Plan; Complete Streets Technical Assistance; Safe Route to School (SRTS) Technical Assistance; South Coast Rail Technical Assistance; Climate Change Transportation Impact Study; Climate Change Roadway Drainage and Runoff Program; and Avon and Halifax Stormwater Management System Mapping and Database.

PROCEDURES:

1. The following is an illustrative list of potential projects that could be undertaken as part of this task:
 - Before and After Route 44 Study
 - Bicycle and Pedestrian Planning, Levels of Service, Technical Assistance, and Education
 - Brockton Area Transit Planning and Technical Assistance
 - City/ town center circulation studies

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- Climate change adaptation strategies to enable the region to implement improvements
 - Collection and mapping of data on bus stops, routes, and ridership
 - Complete Streets Technical Assistance
 - Crash and Safety Studies
 - Development knowledge and skills, regarding the integration of goods movement
 - Follow-up studies to the Congestion, Land Use, Pavement, and Safety Management Systems
 - Freight Plan and Related Analyses
 - Meetings with stakeholders representing the freight community, in order to understand inefficiencies
 - Geographic analyses and attribute analysis of drainage facilities that includes capacity and adequacy structures with regard to extreme weather events and climate change
 - Identification and demarcation of roadway drainage and stormwater management systems
 - Identify transportation connectivity gaps in accessing essential services
 - Intermodal Connector Analysis (Intermodal interfaces examined for identification of necessary improvements)
 - Inventory of critical infrastructure vulnerable to extreme weather events and climate change
 - Inventory of gaps within the regional bicycle network
 - Intersection Sub-area Studies
 - Public Health Assessments
 - Regional Casino/ Gaming Impact Study
 - Regional Intersection Study
 - Regional ITS Architecture Plan
 - Safe Routes to School (SRTS) Technical Assistance
 - Various corridor-wide traffic studies and Sub-area Traffic Studies
2. Efforts will include undertaking transportation studies at locations and developing specific reports as products for intermodal connectors as requested by local communities, FHWA, FTA, and/ or MassDOT. Staff will work with community officials, MassDOT, and MassDOT District 5, and stakeholders to develop a scope of service for the proposed study.
 3. For each corridor study, staff will prepare a draft report, which outlines the Study's findings and recommendations. This report will be circulated for review and comment. Comments will be incorporated into a final report. The findings and recommendations contained in the final report will serve as the basis for including projects in the region's TIP and LRTP.
 4. For ITS, activities to include: Promote the implementation of Intelligent Transportation System solutions to regional transportation problems; Work with BAT, Cape Cod Commission, MAPC, MassDOT, MBTA, and SRPEDD on implementing and refining Intelligent Transportation System Architectures for Southeastern Massachusetts and the Metro Boston Area; Maintain Old Colony Intelligent Transportation System Plan; and Compile available information, studies and reports on Intelligent Transportation System strategies for the Old Colony Region.
 5. Conduct public health assessments and consider public health outcomes as part of ongoing planning and performance measures planning; and Assist communities in advancing bicycle and pedestrian projects into the MassDOT Highway Division project development process.

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- Promote bicycle and pedestrian initiatives in the region; Develop bikeability measures and/ or quality of service metrics; and Coordinate activities within the MassDOT's bicycle and pedestrian planning efforts.

PRODUCTS:

Bicycle and Pedestrian Planning and Technical Assistance; Inventory of gaps within the regional bicycle network; Brockton Area Transit Planning and Technical Assistance; Complete Streets Technical Assistance; South Coast Rail Technical Assistance; Studies to identify solutions to traffic congestion and safety deficiencies on roadways within the region; Livability Measures; Performance Measures; Walk to Transit Analysis; Regional ITS Architecture Plan; Safe Routes to School Technical Assistance; Bicycle and Pedestrian Planning, Levels of Service and Education; Participation in updates to Regional Intelligent Transportation System Architectures; Climate Change Roadway Drainage and Runoff Report with recommendations for consideration for future implementation; Inventory of critical infrastructure vulnerable to extreme weather events and climate change; Stormwater management system mapping; Bikeability measures and/ or quality of service metrics; and Climate Change Adaptation.

SCHEDULE:

To be carried out throughout the year.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$66,089	\$16,522					\$82,611

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TASK 3200 - LOCAL HIGHWAY TRANSPORTATION PLANNING TECHNICAL ASSISTANCE

OBJECTIVE:

To provide a rapid and effective response mechanism to address special, short-term transportation issues and/or projects as they arise. This will include the development, upon request from communities, regional authorities, state agencies, and federal agencies, of detail technical data, analyses, and reports that will assist in improving the region's transportation infrastructure.

PREVIOUS WORK:

Route 123/Linwood/ Lorraine/ VA Hospital/ and Manley Streets Intersection analysis in Brockton; Washington Street (Route 138) and Elm Street Intersection Study in Easton; Route 138 and Route 106 Intersection Study in Easton; Elm Street and Furnace Street in Halifax; Long Pond Road Speed Study in Plymouth; West Bridgewater Route 106 at Howard Street Traffic Study; Brockton Main Street RSA; Kingston Smith’s Lane Traffic Study; Pembroke Mattakeesett Traffic Study; Pembroke and Duxbury Heavy Vehicle Pattern Study; Halifax Route 36 at Oak Street Safety Study; West Bridgewater South Street Safety Study; Plymouth Safe Routes to School Study; Stoughton Hansen School Circulation Study; East Bridgewater Summer Street at Belmont Street RSA; Pembroke Route 53 at Route 139 Traffic Study; Samoset Street Plymouth RSA, Nelson Street and Water Street Plymouth RSA; Route 27 Hanson RSA; Bay Road at Boulder Lane Stoughton/ Sharon RSA; Pembroke Plain Street and Lake Street Study; Plymouth Standish at Alden Street Study; Plymouth Standish at Cherry Street Study; Abington Hancock Street at Chestnut Street RSA; and numerous other transportation studies requested by communities.

PROCEDURES:

1. Provide technical planning analysis assistance to communities and MassDOT on highway, pedestrian, and bicycle transportation planning related matters in the form of meetings, data, analyses, and reports. The staff shall perform work on specific short-range highway planning tasks including but not limited to: Intersection and capacity analysis; Road Safety Audits; SYNCHRO analysis; Walk to transit analysis; Crash analysis; Air quality analysis, both commuter and municipal parking analysis; Carpool/ vanpool analysis; Trip generation estimation analysis; Sight distance analysis; Traffic impact analysis of proposed developments; Traffic analysis studies; and Other short-range studies to determine the need for traffic signals, traffic signs, traffic markings and the use of one-way streets.

2. Maintain and continue the collecting and reporting of crash statistics for communities.

PRODUCTS:

Local Technical Assistance Reports/ documents will be prepared. Included in these reports/ documents will be data, analyses and improvement recommendations (location improvements, speed zoning, heavy vehicle exclusions, etc.) for implementation, and inclusion in MassDOT Project Information Forms, as appropriate; and Technical assistance to member communities and crash reporting for participating communities will be provided.

SCHEDULE:

To be carried out throughout the program year.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$73,200	\$18,300					\$91,500

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TASK 3300 - ROAD SAFETY AUDITS (RSAs) AT MULTIPLE LOCATIONS

OBJECTIVE:

To conduct Road Safety Audits (RSAs) at multiple locations (at least 15) throughout the region at high crash locations. In an effort to reduce the number of crash-related fatalities and incapacitating injuries, Massachusetts Department of Transportation has developed a Strategic Highway Safety Plan. The mission of the Safety Plan is to “Develop, promote, implement, and evaluate data-driven, multidisciplinary strategies to maximize safety for users of the roadway system.” One of the many strategies noted in the current Safety Plan is to “conduct Road Safety Audits at high-crash locations throughout the Commonwealth.” A Road Safety Audit, as defined by the Federal Highway Administration (FHWA) is “a formal safety performance examination of an existing or future road or intersection by an independent audit team.” Simply stated, an RSA is a relatively quick process that identifies safety improvements focused on decreasing the number and severity of roadway crashes. The safety improvements recommended typically vary from low cost measures to significant improvement projects. Many States that have employed the RSA technique and implemented the recommendations, have seen measurable decreases in the number of incapacitating and fatal crashes as a result.

This task consists of a systematic process that has the goal of reducing the number of and severity of traffic crashes on roads, reducing transit crashes, reducing pedestrian crashes and injuries, and reducing bicyclist crashes and injuries. Recommended actions include providing information for selecting and implementing effective safety strategies and projects. Results of the Road Safety Audits will be included in the ongoing safety management system that incorporates roadway, human, and vehicle safety elements. Considered an ongoing effort, staff will collect and maintain data needed in the estimation of refined performance measures and the completion of road safety audits. Staff will identify both existing and future needs of the region’s multi-modal transportation system with regard to safety. This includes producing a “Top 100” crash locations list, including both intersections and corridors, based on regional criteria to develop a list of unsafe locations from a regional perspective, annual regional listings and monitoring of high hazard intersections and corridors, participation and implementation of the Strategic Highway Safety Plan and the Highway Safety Improvement Program, and evaluation of potential improvements.

PREVIOUS WORK:

Participation in development of Highway Safety Improvement Program; Safety analyses as part of Transportation Evaluation Criteria application; Crash Rate processing; Top 100 High Hazard Intersections; Road Safety Audits (RSAs); and Studies for communities warranting specific attention to safety.

PROCEDURES:

1. Develop and work with the Safety Management System (SMS) to identify and evaluate high crash locations and coordinate various work tasks, and prepare and participate in Road Safety Audits. Staff will continue to attend meetings (such as SHSP and TRCC, etc.), and training as appropriate since they serve as a forum for the dissemination of data produced by the system, and allow personnel from other RPAs to meet and share information on data collection, data sources, etc.
2. Review local and state crash data for intersections and corridors. Calculation of crash rates (crashes per million entering vehicles and crashes per hundred million miles) and comparison to both State and District Averages will be conducted. For corridors, the crashes per lane mile and fatality per lane mile will be used. Produce a “Top 100” crash locations list, including both intersections and corridors, based on regional criteria to develop a list of unsafe locations from a regional perspective.

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3. Conduct Road Safety Audits (RSAs), utilizing the MassDOT RSA Guidelines, and the MassDOT RSA Report Template, at multiple locations as a formal safety review of an existing, or planned road or intersection. During these audits, an independent, multidisciplinary team identifies potential safety issues and opportunities for safety improvements. In addition, the team develops both site specific and generalized recommendations in order to address safety deficiencies. This includes recommendations regarding geometric, speed reductions, traffic calming techniques, vegetation clearing, signage consolidation, pavement markings, pedestrian ramps and crossings, roundabouts and signalizations, as appropriate. Staff will utilize the Manual on Uniform Traffic Control Devices, the MassDOT Project Development and Design Guide Book, and the Governor’s Highway Safety Bureau.
4. Incorporate safety criteria in the transportation evaluation process used in the development of the TIP. Project specific recommendations will be discussed with local, regional and state officials as appropriate, in order to address safety issues and concerns.
 - Provide administrative and technical support during the implementation of safety management strategies.
 - Provide safety inputs to statewide and regional plans and TIPs.
5. Continue to develop and refine safety strategies, and develop both general and corridor specific recommendations for addressing safety on selected corridors.
6. Continue to measure identified safety at high hazard locations through a data collection effort, which includes, but is not limited to the following:
 - Conducting turning movement counts, vehicle volume studies, vehicle speed studies, vehicle classification studies and pedestrian studies.
 - Continuing to identify, evaluate, and select strategies that address safety.
 - Updating status of performance measures at locations where safety improvements have been implemented.

PRODUCTS:

Road Safety Audits; Top 100 High Hazard Intersections and Corridors; Development of specific-safety recommendations for intersections, corridors, and pedestrian crossings; Inclusion of safety analyses as a component of the Transportation Evaluation Criteria in the development of the TIP; Establishment of Performances Measures and Thresholds; and Identification of safety specific projects for the Old Colony Region.

PRODUCT:

Road Safety Audits; Top 100 High Hazard Intersections and Corridors; Development of specific-safety recommendations for intersections, corridors, and pedestrian crossings; Inclusion of safety analyses and countermeasures for implementation as a component of the Transportation Evaluation Criteria, and for inclusion in MassDOT Project Initiation Form Data for MaPIT in the development of the TIP; Establishment of Performances Measures and Thresholds; and Identification of safety specific projects for the Old Colony Region.

SCHEDULE:

To be carried out throughout the year and completed by the end of September 2021.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$71,422	\$17,855					\$89,277

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TASK 3400 - ACTIVE TRANSPORTATION STUDY

OBJECTIVE:

To provide an analysis of the bicycle, pedestrian, and transit network within a connectivity, public health, and safety context. OCPC will prepare an Active Transportation Network Study to understand how the region can improve the bicycle and pedestrian network to increase its utility for recreational and transportation purposes. Additionally, OCPC will work on the development of projects that can be advanced by communities into the MassDOT Highway Division project development process for funding with statewide funding resources. The process includes collecting data through bicycle level of service (BLOS), pedestrian level of service (PLOS), MassDOT crash clusters, intersection analysis, and heat map data provided by third party data providers. The data inventory will be developed in village centers, downtowns, and in proximity to schools, transit and commuter facilities, and community facilities and assist in the determination of measurements of safety.

PREVIOUS WORK:

Bicycle and Pedestrian Connectivity and Safety Study, Congestion Management Process; Safety Management System; Regional Traffic Studies; Local Technical Assistance Studies; Bicycle and Pedestrian Task Force; Bicycle and Pedestrian Connectivity and Livability Study; Regional Transportation Plan; Corridor Studies.

PROCEDURES:

1. Existing Conditions and Problem Identification

All relevant and attainable data will be collected and reported during this phase of the project. Relevant data to the project will include any data that has an impact on current conditions, levels of service, safety in village centers, downtowns, and in proximity to schools, transit and commuter facilities, and other community facilities. Data collection techniques to be utilized during this phase will include but are not limited to automated traffic counts, turning movement counts, windshield surveys, survey of land use maps, ADA accommodations review, and analysis of crash data, travel time studies, and third party data providers. The data compiled for the existing conditions will be tested to document the deficiencies along roadways, transit links, pedestrian and bicycle facilities, and to identify their causes and their impact on bicycle and pedestrian connectivity and flow, safety, and accessibility.

2. Identify critical sidewalk gaps in the region and assist communities in utilizing any available regional TIP funds to connect gaps along federally aid eligible roadways.

3. Forecast Conditions and Future Problems

Traffic volumes, pedestrian volumes, population, area employment, turning movements, and other factors affecting active transportation users that may be forecasted to determine the future conditions and performance of the system if no action is taken. Reviewing past trends and comparing them to the current conditions will complete forecasts. Problems will be examined to determine the effects forecasted traffic conditions will have on them. Areas that are not currently identified as traffic problem areas, but considered borderline, will be examined in order to determine if future operations will be below acceptable levels.

4. Alternatives Development

Various alternatives for mitigation will be developed specific to problems identified in the study areas. These alternatives will include recommendations that are cost effective as well as recommendations

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that will produce the closest to ideal conditions. The work completed under this task is the development of various plans to improve bicycle and pedestrian connectivity, bicycle and pedestrian levels of service, and bicycle and pedestrian safety. The work will also include the investigation of the feasibility of developing key bicycle routes that facilitate interurban connections throughout the region in order to facilitate travel by bicycle for transportation and recreational purposes as well as full bicycle network build out. The sidewalk network will be reviewed to see at minimum where sidewalks should be developed to facilitate walkability to commercial areas and transportation facilities along with a full sidewalk network build out.

5. Conduct development of projects that can be advanced by communities into the MassDOT Highway Division project development process for funding with statewide funding resources.
6. Conduct public health assessments and consider public health outcomes as part of ongoing planning and performance measures planning.
7. Recommend studies that seek to connect the Old Colony Region with neighboring regions, such as MAPC and SRPEDD with a network of bicycle lanes and paths.
8. Prepare Conclusions and Recommendations
The product is a study with recommendations for implementation that provide a framework for the alleviation traffic congestion and improvement of safety for bicycles and pedestrians on the local and numbered routes, and to provide information for the stakeholders to move projects forward in the initiation phases. A report will include program that will outline how and when recommendations of the plan will be implemented and identify potential funding sources.

PRODUCT:

Preparation of Active Transportation Study that will identify areas in need of connectivity and safety improvements and that will include recommendations for consideration for implementation.

SCHEDULE:

To be carried out throughout the year and completed by the end of September 2021.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$52,755	\$13,189					\$65,944

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TASK 3500 - CLIMATE CHANGE VULNERABILITY TRANSPORTATION ASSESSMENT

OBJECTIVE:

To examine and identify to impacts of climate change on the transportation system and to conduct vulnerability assessments of said system. All modes of transportation will be affected as the climate changes, but potentially the greatest impact will be flooding of roads, railways, transit systems, and airport runways in coastal areas because of rising sea levels and surges brought on by storms. Coastal highways are already exposed to periodic storm flooding, and erosion and loss of wetlands have removed crucial buffer zones that once protected many roads. Warming temperatures trigger new weather and climate extremes. Infrastructure pushed beyond the range for which it was designed can become stressed and fail. As such, this study will provide an analysis of the impact of climate change on the transportation and formulate recommendations for planning, design, construction, evacuation, operation, and maintenance of transportation systems.

PREVIOUS WORK:

Climate Change Transportation Impact Study; Long Range Transportation Plans; Municipal Preparedness Plans; Pre-Disaster Mitigation Plans;

PROCEDURES:

1. Existing Conditions and Future Problem Identification

Examine and identify the root causes of the climate change, and estimate its impact on the transportation system. Tasks to include:

- Providing an overview of climate change and its likely impact on southeastern Massachusetts
- Developing a vulnerable assessment of the transportation system
- Identifying and mapping existing modes of transportation
- Identifying and mapping coastal areas susceptible to flooding, surge, and, erosion
- Analyzing impact on operations and maintenance
- Developing both short and long term infrastructure needs
- Preparing a recommendations as to evacuation plan

2. Strategy and Policy Development

Develop strategies and policies to reduce and manage climate change. Tasks to include:

- Preparing strategies to reduce growth in VMT by expanding transit service, identifying alternatives to single occupant auto travel, and changes in land use patterns.
- Developing operation strategies to provide for congestion relief and driver behavior.
- Preparing a Policy Toolbox that incorporates research and development, vehicle emission standards, road pricing, VMT tax, consumer incentives and education campaigns.

3. Prepare Conclusions and Recommendations

Prepare study that includes an overview of root causes of climate change and provides an analysis of its potential impacts on the transportation system. The study shall include an analysis of the impact of climate change on the transportation and formulate recommendations for planning, design, construction, evacuation, operation, and maintenance of transportation systems.

PRODUCT:

The product will be a report entitled, Climate Change Vulnerability Transportation Assessment that will include both conclusions and recommendations.

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SCHEDULE:

To be carried out throughout the year and completed by the end of September 2021.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$47,422	\$11,855					\$59,277

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TASK 3600 - PERFORMANCE BASED PLANNING AND MANAGEMENT

The cornerstone of the Federal transportation program transformation is the transition to a performance based outcome program. States and regions invest in projects to achieve targets that collectively will make progress towards national goals. Therefore, the objective is to develop performance measures and targets for the Old Colony Region for utilization in the planning process and inclusion in the Long Range Transportation Plan. Projects and service implemented through the TIP will help to achieve the performance targets for Safety (PM1), Bridge and Pavement Condition (PM2), System Performance Measures (PM3), and Transit Asset Management State of Good Repair.

Performance based planning and management increases the accountability and transparency of the Federal-aid highway program and provides for a framework to support improved investment decision making through a focus on performance outcomes for key national transportation goals. The FAST Act supports and continues an overall performance management approach, within which states invest resources in projects that collectively will make progress toward national goals.

The national performance goals for the Federal highway program include:

- Safety - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- Infrastructure condition (pavement, bridge, and transit) - To maintain a highway and transit infrastructure asset system in a state of good repair.
- Congestion reduction - To achieve a significant reduction in congestion on the NHS.
- System reliability - To improve the efficiency of the surface transportation system.
- Freight movement and economic vitality - To improve the nation freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- Environmental sustainability - To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- Reduced project delivery delays - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.
- Resiliency and Reliability of the Transportation System - improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
- Travel and Tourism - Enhance travel and tourism.

In March 2016, FHWA published rules on safety performance measures and integration of performance management into the Highway Safety Improvement Program (HSIP). In May 2016, FHWA and the FTA published a rule implementing changes to the planning process.

In January 2017, FHWA published the final rules for the last two national performance management measure regulations. One rule establishes regulations to assess the condition and performance of bridges on the NHS and of pavements on the Interstate and non-Interstate NHS. The other establishes regulations to assess the performance of the NHS, Freight Movement on the Interstate System, and the Congestion Mitigation and Air Quality Improvement Program.

Performance based planning will include working with BAT, FHWA, FTA, and MassDOT, and to establish thresholds for performance measures or goals that meet state and national criteria. The objective of performance measures is to insure that investments in future transportation improvements effectively

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address transportation issues in a cost effective and timely manner. The ultimate goal will be to develop projects that relieve congestion, improve safety, provide efficient alternative travel choices, preserve and maintain the existing system, promote economic development and protect the environment. This effort will coordinate information and studies developed in other planning tasks such as, but not limited to Congestion Management, Safety Management, Pavement Management, and ITS/ Freight/ Intermodal Planning. The effort will also include MEPA reviews, gaming reviews and technical assistance, coordination of transportation planning activities with other local and state agencies, and other MPOs.

Pavement and Bridge Condition Performance Measures Final Rule

The Pavement and Bridge Condition Performance Measures Final Rule establishes measures for State DOTs to use to carry out the National Highway Performance Program (NHPP) and to assess the condition of the following: Pavements on the NHS (excluding the Interstate System), bridges carrying the NHS that includes on-and off-ramps connected to the NHS, and pavements on the Interstate System.

State DOTs and MPOs will be expected to use the information and data generated because of the new regulations to inform their transportation planning and programming decisions.

System Performance/ Freight/ CMAQ Performance Measures Final Rule

The System Performance/ Freight/ CMAQ Performance Measures Final Rule establishes a set of performance measures for State DOTs and MPOs to use as required by the MAP-21 and the FAST Act. The measures in this final rule will be used by State DOTs and MPOs to assess the performance of the Interstate and non-Interstate NHS for the purpose of carrying out the National Highway Performance Program (NHPP); to assess freight movement on the Interstate System; and to assess traffic congestion and on-road mobile source emissions for the purpose of carrying out the CMAQ Program.

State DOTs and MPOs will be expected to use the information and data generated because of the new regulations to inform their transportation planning and programming decisions.

HSIP and Safety Performance Management Measures Final Rule

The HSIP and Safety Performance Management Measures Final Rules adds Part 490 to title 23 of the Code of Federal Regulations to implement the performance management requirements under 23 U.S.C. 150, including the specific safety performance measure requirements for the purpose of carrying out the HSIP to assess serious injuries and fatalities on all public roads. The Safety PM Final Rule establishes the process for State DOTs and MPOs to establish and report their safety targets, and the process that FHWA will use to assess whether State DOTs have met or made significant progress toward meeting their safety targets. The Safety PM Final Rule also establishes a common national definition for serious injuries.

Planning Final Rule

The transition to a performance-driven, outcome-based program that provides for a greater level of transparency and accountability, improved project decision-making, and more efficient investment of Federal transportation funds. As part of this new performance-based approach, recipients of Federal-aid highway program funds and Federal transit funds are required to link the investment priorities contained in the STIP and TIP to achievement of performance targets. In a series of rulemakings, FHWA and FTA

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established national performance measures in key areas, including safety, infrastructure condition, congestion, system reliability, emissions, and freight movement.

States, MPOs, and operators of public transportation must use these measures to establish targets in the key national performance areas to document expectations for future performance. The final rule further establishes that States and MPOs must coordinate their respective targets with each other to ensure consistency to the maximum extent practicable. The final rule requires that for transit-related targets, States and MPOs must coordinate their selection of targets relating to transit safety and transit state of good repair to the maximum extent practicable with operators of public transportation to ensure consistency with other performance-based provisions applicable to operators of public transportation.

MPOs must identify how they will cooperatively implement these performance-based planning provisions with States and operators of public transportation. The final rule provides the option documenting it either as part of the metropolitan planning agreements, or documenting it in some other means outside of the metropolitan planning agreements as determined cooperatively by the MPO(s), State(s), and providers of public transportation. Whichever option is selected, the MPO(s), the State(s), and the providers of public transportation must jointly agree upon and document in writing the coordinated processes for the collection of performance data, the selection of performance targets for the metropolitan area, the reporting of metropolitan area targets, and the reporting of actual system performance related to those targets. The documentation must also describe the roles and responsibilities for the collection of data for the NHS.

In the final rule, once performance targets are selected by MPOs, MPOs must reflect those targets in their MTPs. Accordingly, in their transportation plans, MPOs need to describe these performance targets, evaluate the condition and performance of the transportation system, and report on progress toward the achievement of their performance targets. States must include similar information in their transportation plans.

Asset Management Plan Final Rule

Asset management is defined as “a strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on both engineering and economic analysis based on quality information, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a desired state of good repair over the life cycle of the assets at minimum practicable cost.”

Transit Asset Management Final Rule

The FTA published a final rule to define the term state of good repair and to establish minimum Federal requirements for transit asset management that will apply to all recipients and sub recipients that own, operate, or manage public transportation capital assets. This final rule requires public transportation providers to develop and implement out transit asset management plans. TAM plans must include an asset inventory, condition assessments of inventoried assets, and a prioritized list of investments to improve the state of good repair of their capital assets. This final rule also establishes state good repair standards and four state of good repair performance measures. Transit providers are required to set performance targets for their capital assets based on the SGR measures and report their targets, as well as information related to the condition of their capital assets, to the National Transit Database.

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Public Transportation Safety Program Final Rule

The Public Transportation Safety Program Final Rule final rule to establish substantive and procedural rules for FTA's administration of a comprehensive safety program to improve the safety of the Nation's public transportation systems. This final rule provides the framework for FTA to monitor, oversee, and enforce transit safety, based on the methods and principles of Safety Management Systems.

PREVIOUS WORK:

MPO coordination, review and adoption of Statewide Performance Measures and Targets (PM1, PM2, and PM3, and Performance Measures and Targets for Transit Asset Management (BAT); Long Range Transportation Plan; Regional Policy Plan; Congestion Management Process; Land Use Management System; Safety Management System; Pavement Management Systems; Road Safety Audits; and Reviews, comments, and site visits relating to Environmental Notification Forms and MEPA Environmental Impact Reports/ Environmental Impact Statements.

PROCEDURES:

1. Establish and refine performance measures and thresholds for pavement conditions and performance of the federal aid network, bridge conditions, injuries, and fatalities, traffic congestion. The federal rulemaking process will establish performance measures for each of these items. As such, this does not preclude the region from establishing additional measures for use locally, and the Old Colony MPO will continue to review the supplement the performance measures developed and included in the 2020 Long Range Transportation Plan. Using information collected annually through other tasks outlined in this document, implement, and maintain a comprehensive strategy to evaluate the effectiveness of transportation improvements throughout the region.
2. Determine and set performance measures and thresholds in support of the performance measures framework and describe how program and project selection will help achieve the targets. With acceptable thresholds or targets for performance measures, staff will continue to maintain relevant data for safety, pavement, and congestion management and provide comparison analyses before and after the implementation of projects.
3. Review and comment on traffic studies submitted to member municipalities by developers under the Massachusetts Environmental Protection Agency (MEPA) process or as needed/requested for local permits. Review projects for consistency with the regional transportation goals and objectives, program consistency, etc.
4. Consider utilizing INVEST TOOL - Projects will also be potentially evaluated on their sustainability through the FHWA web-based tool known as Infrastructure Voluntary Evaluation Sustainability Tool. Although voluntary, this information will be useful to determine the long-term effectiveness of improvement projects.
5. Conduct public health assessments and consider public health outcomes as part of ongoing planning and performance measures planning.

PRODUCTS:

Development and refinement of Performance Measures and Targets for the Old Colony Region; Review and comment on traffic studies submitted to member municipalities by developers under the Massachusetts Environmental Protection Agency; and Public Health Assessments. Performance

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measurement progress will be documented in the Old Colony Transportation Improvement Program, contained within relevant 3C planning documents, and summarized in the Old Colony UPWP Annual Progress Report.

SCHEDULE:

To be carried out throughout the year and completed by the end of September 2021.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$26,089	\$6,522					\$32,611

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TASK 4000 - OTHER TRANSPORTATION TECHNICAL ACTIVITIES, PLANNING STAFF, FUNDING SOURCES, BUDGETS, AND TASKS

In the course of conducting transportation and transportation related planning activities, it is often the case that certain activities are called for which do not fit into the existing work program elements. When this is the case, those activities are programmed under the element heading of Other Transportation Technical Activities, Planning Staff, Funding Sources, Budgets, and Tasks.

Task 4100 - Transit Technical Assistance, and Seniors and Individuals with Disabilities Support

Task 4200 - BAT Planning and Technical Studies

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TASK 4100 - TRANSIT TECHNICAL ASSISTANCE, AND SENIOR AND INDIVIDUALS WITH DISABILITIES SUPPORT AND ASSISTANCE

OBJECTIVE:

To respond to short-range transit planning needs upon request from communities, BAT, GATRA, MassDOT, and MBTA. To maintain an understanding of the region's transit system in order to provide an accurate basis for future forecasting, planning and program analysis, and project evaluation.

To maintain and update the Coordinated Public Transit - Human Service Transportation Plan.

To ensure the accessibility to public transit services for seniors and individuals with disabilities; Attend meetings of the senior and disability committees; Provide technical assistance to BAT, GATRA, region's municipalities, human service agencies, Councils on Aging, private non-profit agencies, and other parties involved in meeting special transportation needs.

To conduct Community Transit Grant reviews, rankings, and related coordination.

To maintain and operate a Congestion Management Process.

PREVIOUS WORK:

BAT - Aging in Place Studies; Comprehensive Regional Transit Plan; Fare Elasticity and Equity Study; Fixed Route Ridership Analyses; Service Change Equity Analysis; Title VI Studies; Air quality analysis for CMAQ and Transportation Demand Management proposals; Rockland Transit Feasibility Study; System Time Study; Route 2A Analysis; Abington Transportation Study; Paratransit Expansion; Regional Coordinating Committee participation; and Human Services Coordination Plan.

GATRA - Ridership analysis; Human Services Coordination Plan.

Other - Assisted Communities, COAs and other public and private agencies with the Section 5310, 5317, and MAP; Transit Directories; RTA Fare Comparison; Queset Commons Transit Study; Rockland Transit Study; Senior and Individuals with Disabilities Neighborhood Sourcebook; Technical assistance to public and private non-profit organizations in preparing Federal Transit Administration applications for Section 5310, and Mobility Assistance; Regional map showing the locations with high density of senior population (60+); Compilation of U.S Census data of senior population; Air quality analysis for CMAQ proposals; Abington Transportation Study; Human Services Coordination Plan; and Community Transit Grant solicitations, reviews, rankings, and related coordination.

PROCEDURES:

1. Provide technical planning assistance to transit providers and member communities on transit matters. This assistance may take the form of assistance in meeting federal reporting requirements and in assessing and evaluating routes; Title VI update; Fare change and service change equity analyses; Schedule and fare changes; Assessing manpower and equipment needs; Access-to-jobs; 2010 census update; Provide and improve BAT's analytical and forecasting capabilities; Assist BAT with the Americans with Disabilities Act Plan update; Title VI Trend Analysis; and Service Area Demographic Trend Profiles.
2. Provide technical planning assistance to area communities outside the transit authority service areas, on transit matters. This assistance can take the form of helping the communities in: Assessing

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potential membership in a transit authority; Assisting the communities in providing for private carrier service; Identifying and assessing park-and-ride lots; Assessing commuter rail lots; Encouraging private enterprise participation; Encouraging minority business participation; and 2010 Census and journey-to-work update, etc.

3. Prepare information as needed for FTA reports, State Implementation Plan submissions, MassDOT reports, and other routine reporting.
4. Provide transit input into regional transit and transportation modeling efforts, and conduct air quality analysis as needed for transit projects.
5. Continue to provide assistance and guidance to applicants for Community Transit Grant Program in preparing applications and coordinating service.
6. Provide technical assistance to public and private non-profit agencies in the development, maintenance, and expansion of senior and/ or individuals with disabilities services in the region.
7. Continue to provide support for the replacement of Section 5310 and Mobility Assistance Program vehicles, which have outlived their usual life.
8. Develop updates for the Coordinated Public Transit Human Service Coordination Plan in coordination with communities, transit providers, and regional coordination committees, as appropriate. Plan shall be reflective of the FAST Act.
9. Operate and maintain a Congestion Management Process.
10. Conduct public health assessments and consider public health outcomes as part of ongoing planning and performance measures planning.
11. Collection and mapping of data on bus stops, routes, and ridership.

PRODUCTS:

Provide technical assistance to BAT, GATRA, MBTA, SSCAC, and to area communities as needed; Develop information for compliance with federal and state requirements for the TIP; BAT/ GATRA (Brockton/ Taunton) Intercity Feasibility Study; Coordinated Public Transit - Human Service Coordination Plan Updates; Community Transit Grant Program Education, Reviews and related Rankings; and Travel Demand Model, and LRTP updates, as appropriate.

SCHEDULE:

To be carried out throughout the year.

FUNDING:

FHWA PL	MassDOT					TOTAL
\$33,085	\$8,271					\$41,356

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TASK 4200 - BAT PLANNING, TECHNICAL ASSISTANCE, AND STUDIES

OBJECTIVE:

To provide transit-planning services, prepare technical studies, comprehensive service assessments, and provide assistance in other planning related activities that are called for during the year which presently are not specifically identified in work program.

PREVIOUS WORK:

BAT Aging in Place Studies; BAT Comprehensive Regional Transit Plan (CRTP); BAT fixed-route ridership analyses; Brockton Area Transit Farebox Analyses; Title VI Reports; BAT Service Change Equity Study; BAT Fare Equity and Elasticity Study; Air quality analysis for CMAQ and Transportation Demand Management proposals; Route 2A Study; Rockland Transit Feasibility Study; System Time Study; Abington Transportation Study; and Human Services Coordination Plan.

PROCEDURES:

1. Develop a detail study(s) design/ estimated work time effort and cost for planning tasks requested by Brockton Area Transit. The following is a list of planning/ projects that could be undertaken as part of this task: Americans with Disabilities Act Plan Update; Route Evaluation Study/ Survey; Fare Increase Analysis; Title VI Report Update; Title VI Trend Analysis; Transfer Study; Financial Plan Update; Demographic/ Urban Area Analysis; Manley Street Industrial Park Route Analyses; Technical assistance to BAT, as needed, on the Intermodal Facility; BAT/ GATRA (Brockton/ Taunton) Intercity Feasibility Study; Avon/ Stoughton Route extension planning; Fare Modeling Study; Massasoit Study; Comprehensive Regional Transit Plan (CRTP); Planning assistance and alternatives analyses as identified in the CRTP; and Stoughton Fixed Route Study.
2. Prepare analyses, reports, maps, charts, as appropriate.
3. Coordinate with BAT on the identification and prioritization of potentially needed rider amenities.
4. Undertake planning, studies, and comprehensive service assessments in accordance with study requirements and available funding.

PRODUCTS:

Fixed Route Evaluation Study; Fixed Route Ridership Report; Fare Change Equity Study; Service Change Equity Study; South Shore Medical Transportation Options Study; Avon/ Stoughton Route Extension Planning Study; Bridgewater State University Transit Route Expansion Study; Massasoit Reverse Commute Study; BAT/ GATRA (Brockton/ Taunton) Intercity Feasibility Study; BAT Comprehensive Regional Transit Plan (CRTP), and Provision of planning assistance and alternatives analyses as identified in the CRTP.

SCHEDULE:

To be carried out throughout the year. Schedules are contract dependent and vary throughout the year.

FUNDING:

FHWA PL	MassDOT	BAT				TOTAL
		\$50,000				\$50,000

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TRANSPORTATION PLANNING STAFF

The following OCPC staff members will be working on the FFY 2020 Unified Planning Work Program. The percent effort represents the approximate time devoted to the 3C Transportation Planning Tasks.

<u>Name</u>	<u>Title</u>	<u>% Effort</u>
Shawn Bailey	Transportation Planner	100%
Paul Chenard	Senior Transportation Planner	100%
Raymond Guarino	Principal Transportation Planner	100%
Bruce Hughes	Economic Development/ Community Planner	25%
Charles Kilmer, AICP	Assistant Director/ Transportation Program Manager	100%
William McNulty	Principal Transportation Planner	100%
Kyle Mowatt	Senior Transportation Planner	100%
Laurie Muncy, AICP	Principal Comprehensive Planner	25%
Jimmy Pereira	Community/ Transportation Planner	100%
Joanne Zygmunt	Senior Planner	25%
Andrew Vidal	GIS Manager	75%

**FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)
ESTIMATED BUDGET**

TASK DESCRIPTION	FHWA PL	MassDOT NFA	BAT					TOTAL
TASK								
1000 - Management & Support of Planning and Certification Activities								
1100 3C Program Support	\$ 45,645	\$ 11,411	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 57,056
1200 Unified Planning Work Program (UPWP)	\$ 11,867	\$ 2,967	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,834
1300 Public Participation Program (PPP)	\$ 49,200	\$ 12,300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 61,500
1400 Transportation Improvement Program (TIP)	\$ 36,756	\$ 9,189	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 45,945
1500 Title VI and Environmental Justice (EJ)	\$ 35,778	\$ 8,945	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 44,723
Element 1000 Subtotals	\$ 179,246	\$ 44,812	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 224,058
TASK								
2000 - Data Reconnaissance, Acquisition, and Analysis Activities								
2100 Demographic Surveillance & Road Inventory Update	\$ 17,200	\$ 4,300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,500
2200 Multi-Modal Data Surveillance and System Monitoring	\$ 62,533	\$ 15,633	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 78,166
2300 System Planning and Resource Activities	\$ 39,422	\$ 9,855	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 49,277
2400 Geographic Information System (GIS)	\$ 50,978	\$ 12,744	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 63,722
2500 Management Systems and Travel Demand Modeling	\$ 74,533	\$ 18,633	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 93,166
Element 2000 Subtotals	\$ 244,665	\$ 61,166	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 305,831
TASK								
3000 - Short and Long Range Transportation Planning Activities								
3100 Regional Traffic Studies, ITS, and, Intermodal Planning	\$ 66,089	\$ 16,522	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 82,611
3200 Local Highway Transportation Technical Assistance (LTA)	\$ 73,200	\$ 18,300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 91,500
3300 Road Safety Audits (RSAs) at Multiple Locations	\$ 71,422	\$ 17,855	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 89,277
3400 Active Transportation Study	\$ 52,755	\$ 13,189	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 65,944
3500 Climate Change Vulnerability Transportation Assessment	\$ 47,422	\$ 11,855	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 59,277
3600 Performance Based Planning	\$ 26,089	\$ 6,522	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 32,611
Element 3000 Subtotals	\$ 336,976	\$ 84,244	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 421,220
TASK								
4000 - Other Transportation Technical Activities								
4100 Transit Technical Assistance and Coordination, and Seniors and Individuals with Disabilities Support	\$ 33,085	\$ 8,271	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 41,356
4200 BAT Planning, Technical Assistance, and Studies	\$ -	\$ -	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000
Element 4000 Subtotals	\$ 33,085	\$ 8,271	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 91,356
Total of All Elements	\$ 793,972	\$ 198,493	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 1,042,465

FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)

APPENDICES

Appendix A

FFY 2021 Old Colony Unified Planning Work Program Endorsement

Appendix B

§450.336 - Self-Certification Compliance Statement - 3C Process

Appendix C

Estimates of Other Funding Sources, and Other Transportation Planning Activities

Appendix D

Glossary of Terms and Acronyms

Appendix E

Public Review Period and Public Comments

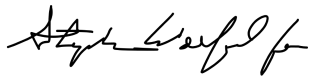
FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)

APPENDIX A - FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM ENDORSEMENT

OLD COLONY METROPOLITAN PLANNING ORGANIZATION (MPO)

**ENDORSEMENT OF
FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)**

This is to certify that the Signatories of the Old Colony Metropolitan Planning Organization, at their Old Colony MPO meeting on June 16, 2020 hereby approve and endorse the FFY 2021 Old Colony Unified Planning Work Program in its entirety for the Old Colony Region, in accordance with the certified 3C Transportation Planning Process.



Stephanie Pollack, Secretary and CEO
Massachusetts Department of Transportation (MassDOT);
Chair, Old Colony Metropolitan Planning Organization (OCMPO)

6/24/20

Date

Ex-Officio Non-Voting Members

Noreen O'Toole, Chairperson
Old Colony Joint Transportation Committee (JTC)

Jeff McEwen, Massachusetts Division Administrator
Federal Highway Administration (FHWA)

Peter Butler, Region 1 Administrator
Federal Transit Administration (FTA)

FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)

APPENDIX B - §450.336 - SELF CERTIFICATION COMPLIANCE STATEMENT - 3C PROCESS

§450.336 - Old Colony MPO Self Certification Compliance Statement

The Old Colony Metropolitan Planning Organization certifies that its conduct of the metropolitan transportation planning process complies with all applicable requirements, which are listed below, and that this process includes activities to support the development and implementation of the Regional Long-Range Transportation Plan and Air Quality Conformity Determination, the Transportation Improvement Program and Air Quality Conformity Determination, and the Unified Planning Work Program.

1. 23 USC 134, 49 USC 5303, and this subpart.
2. Sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 USC 7504, 7506 (c) and (d) and 40 CFR Part 93 regarding conformity in maintenance areas and for applicable State Implementation Plan projects.
3. Title VI of the Civil Rights Act of 1964, as amended (42 USC 2000d-1) and 49 CFR Part 21.
4. 49 USC 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity.
5. Section 1101(b) of the Fast Act (Pub. L. 114-94) and 49 CFR Part 26 regarding the involvement of disadvantaged business enterprises in U.S. DOT-funded projects.
6. The provisions of the Americans with Disabilities Act of 1990 (42 USC 12101 et seq.) and 49 CFR Parts 27, 37, and 38.
7. The Older Americans Act, as amended (42 USC 6101), prohibiting discrimination on the basis of age in programs or activities receiving federal financial assistance.
8. Section 324 of Title 23 USC regarding the prohibition of discrimination based on gender.
9. Section 504 of the Rehabilitation Act of 1973 (29 USC 794) and 49 CFR Part 27 regarding discrimination against individuals with disabilities.
10. Anti-lobbying restrictions found in 49 USC Part 20. No appropriated funds may be expended by a recipient to influence or attempt to influence an officer or employee of any agency, or a member of Congress, in connection with the awarding of any federal contract.

Stephen Woelfel for
Stephanie Pollack, Secretary and CEO
Massachusetts Department of Transportation

2/18/2020
Date

The Honorable Robert Sullivan, Mayor
City of Brockton

2/18/2020
Date

Pamela Haznar for
Jonathan Gulliver, Highway Administrator
Massachusetts Department of Transportation

2/18/2020
Date

Lee Hartmann for
Kenneth Tavares, Chairman
Plymouth, Board of Selectmen

2/18/2020
Date

Michael Lambert
Michael Lambert, Administrator
Brockton Area Transit

2/18/2020
Date

Eldon Moreira
Eldon Moreira, Chairman
West Bridgewater, Board of Selectmen

2/18/2020
Date

Mary Waldron for
Christine Joy, President
Old Colony Planning Council

2/18/2020
Date

Daniel Salvucci
Daniel Salvucci, Vice-Chairman
Whitman, Board of Selectmen

2/18/2020
Date

FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)

APPENDIX C - OTHER OLD COLONY PLANNING COUNCIL FUNDING SOURCES AND OTHER PLANNING STUDIES

The OCPC is a comprehensive planning agency serving communities located in Southeastern Massachusetts. In addition to the range of transportation planning studies and activities described in this report, OCPC performs land use, economic development, elder services, environmental, and, comprehensive planning.

Estimates of Other OCPC Funding Sources

1. Economic Development Administration (EDA)	\$70,000
2. Executive Of Elder Affairs (EOEA)	
a. Administration	\$147,500
b. Ombudsman Program	\$135,000
3. District Local Technical Assistance (DLTA)	\$194,932
4. Municipal Energy Technical Assistance (META)	\$ 52,000
5. Septic Repair Program	\$ 25,000

Listing of Other Transportation Planning Activities

The following is a listing of other transportation planning activities underway in the region that are not being funded with FHWA and/ or FTA funds included in the FFY 2021 Old Colony Unified Planning Work Program.

1. MassDOT South Coast Rail Project Design and Environmental Permitting
2. MassDOT State Bicycle Plan
3. MassDOT State Freight Plan
4. MassDOT State Pedestrian Plan
5. MassDOT State Rail Plan

FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)

APPENDIX D - GLOSSARY OF TERMS AND ACRONYMS

List of Acronyms

3C:	Comprehensive, Cooperative, and Continuing Planning Process
ADA:	Americans with Disabilities Act
BAT:	Brockton Area Transit Authority
CAAA:	Clean Air Act Amendments of 1990
CIP:	Capital Investment Plan
CMAQ:	Congestion Mitigation and Air Quality Improvement Program
CMP:	Congestion Management Process
CTGP:	Community Transit Grant Program
DEP:	Department of Environmental Protection
EIR:	Environmental Impact Report
EJ:	Environmental Justice
ENF:	Environmental Notification Form
EPA:	Environmental Protection Agency
FHWA:	Federal Highway Administration
FTA:	Federal Transit Administration
GATRA:	Greater Attleboro-Taunton Regional Transit Authority
GHG:	Greenhouse Gases
GWSA:	Global Warming Solutions Act
HPMS:	Highway Performance Monitoring System
HSIP:	Highway Safety Improvement Program
IRI:	International Roughness Index
JTC:	Joint Transportation Committee
LAP:	Language Access Plan
LEP:	Limited English Proficient
LOS:	Level of Service
LRTP:	Long Range Transportation Plan
MAP:	Mobility Assistance Program
MARPA:	Massachusetts Association of Regional Planning Agencies
MassDOT:	Massachusetts Department of Transportation
MBTA:	Massachusetts Bay Transportation Authority
MOU:	Memorandum of Understanding
MPO:	Metropolitan Planning Organization
NAAQS:	National Ambient Air Quality Standards
NBIS:	National Bridge Inventory Standards
NFA:	Non-Federal Aid
NFP:	National Freight Program
NHPP:	National Highway Performance Program
NHS:	National Highway System
NOx:	Nitrogen Oxides
PM1:	Safety Performance Measures

FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)

PM2:	System Preservation Performance Measures
PM3:	System Performance Measures (Congestion, Reliability, and Emissions)
PMS:	Pavement Management System
PPP:	Public Participation Plan
PRC:	Project Review Committee
PSI:	Pavement Serviceability Index
SGR:	State of Good Repair
SIP:	State Implementation Plan
SMS:	Safety Management System
SSCAC:	South Shore Community Action Council
STBG:	Surface Transportation Block Grant Program
TAM	Transit Asset Management
TAMP	Transportation Asset Management Plan
TAN:	Transportation Advisory Network
TAP:	Transportation Alternatives Program
TCM:	Transportation Control Measure
TERM:	Transit Economic Requirements Model
TIP:	Transportation Improvement Program
TMA:	Transportation Management Area
ULB:	Useful Life Benchmark
VMT:	Vehicle Miles Traveled
VOCs:	Volatile Organic Compounds

FFY 2021 OLD COLONY UNIFIED PLANNING WORK PROGRAM (UPWP)

APPENDIX E - PUBLIC REVIEW PERIOD AND PUBLIC COMMENTS

OLD COLONY PLANNING COUNCIL

Christine M. Joy
President
70 School Street
Brockton, MA 02301-4097

Mary V. Waldron
Executive Director
Telephone: (508) 583-1833
Fax: (508) 559-8768
Email: mwaldro@ocpcrpa.org

May 19, 2020 and June 11, 2020

NOTICE OF PUBLIC REVIEW AND COMMENT PERIOD

▪ FFY 2021 UNIFIED PLANNING WORK PROGRAM (UPWP)

In accordance with the Public Participation Process developed by the Old Colony Metropolitan Planning Organization (MPO), Old Colony Planning Council (OCPC) is making the FFY 2021 UPWP available for public review and comment. Copies of are available for review at <http://www.ocpcrpa.org/>, and/or upon request. This notice will initiate a 21-Day Public Review and Comment Period. This process will also be used as Brockton Area Transit Authority's (BAT) public participation process. BAT, the Federal Transit Administration (FTA) Section 5307(c) applicant, has consulted with the Old Colony MPO and concurs that the public involvement process adopted by the Old Colony MPO for development of the TIP satisfies the public hearing requirements that pertain to the development of the Program of Projects for the regular Section 5307, Urbanized Area Formula Program, grant applications including the provisions for public notice and the time established for public review and comment. Public notice of public involvement activities and time established for public review and comments on the TIP will satisfy the program of projects (POP) requirements. The public discussion of the TIP at Old Colony JTC, Old Colony MPO, and transportation meetings satisfies the Program of Projects (POP) public hearing requirements of the FTA. A public meeting of the Old Colony MPO is scheduled for June 16, 2020 at 10 AM to hear public comments and consider endorsement. Please contact Charles Kilmer at 508-583-1833 Extension 206 for further information.

Please send written comments to:

Charles Kilmer
Old Colony Planning Council (OCPC)
70 School Street
Brockton, MA 02301

The Old Colony MPO fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. The Old Colony MPO operates without regard to race, color, or national origin (including limited English proficiency), age, sex, disability, ancestry, ethnicity, gender, gender identity or expression, sexual orientation, religion, creed, veteran's status, or background. Any person who believes him/herself or any specific class of persons, to be subject to discrimination prohibited by Title VI may by him/herself or by representative file a written complaint with the Old Colony MPO. Complaints are to be filed no later than 180 days from the date of the alleged discrimination. Please contact Pat Ciaramella at 508-583-1833 Extension 202 for more information.

LEGAL ADVERTISEMENTS

Notice of Public Review and Comment Period appeared in the following:

- **The Brockton Enterprise**
- **The Patriot Ledger**

PUBLIC COMMENTS

Draft FFY 2021 Old Colony Unified Planning Work Program (UPWP) Public Comment Matrix

Date	Name	Representation	Comment or Comment Summary	Response
5/27/2020	Old Colony Planning Council (OCPC) Board of Directors	Old Colony Region	The OCPC Board of Directors, at their public meeting on May 27, 2020, reviewed and approved the Draft FFY 2021 Old Colony UPWP.	Noted.
6/4/2020	Old Colony Joint Transportation Committee (JTC)	Old Colony Region	The Old Colony JTC, at their public meeting on June 4, 2020, reviewed and approved the Draft FFY 2021 Old Colony UPWP.	Noted.
6/11/2020	Pine duBois	Jones River Watershed Association	<p>Task 2100 (1300 - Public Participation Program)</p> <p>I do think this would be valuable as a way to expand participation. Even having surveys to collect public ideas and forums to discuss unfulfilled planning goals like the MEPA requirement in 1989 that the Old Colony RR be electrified as soon as possible.</p> <p>Now that MBTA and the town are considering various development options near the Kingston layover station and yard, electrification will be more important for health reasons—not to mention the continued impact on climate change from fossil fuel use.</p> <p>This is strengthened in Task 1400 where: Air quality significance and relationship of the TIP, State Transportation Improvement Program, and State Implementation Plan; and, Results of Greenhouse Gas (GHG) Emission Analyses must be reported.</p> <p>Task 1500 - Title VI and Environmental Justice</p> <p>We and regional watershed groups are beginning to work with Native</p>	<p>Noted.</p> <p>OCPC is seeking ways to expand its public participation. Recently, OCPC began issuing a weekly newsletter.</p> <p>The TIP includes the Results of Greenhouse Gas (GHG) Emission Analyses.</p> <p>Noted.</p>

Draft FFY 2021 Old Colony Unified Planning Work Program (UPWP) Public Comment Matrix

			<p>Americans - the forgotten, neglected and minority people that are left out of planning, recruitment, and consideration.</p> <p>We are beginning to work with the Herring Pond Wampanoag Tribe in Plymouth. I don't know much, but I do know they have ancestral lands that should be included on the GIS maps and they have difficult social issues such as impacts from the coronavirus that should be recognized. I urge you to connect with them and see how OCPC should help. Melissa Ferretti is their</p> <p>Task 2200 - Multi-Modal Transportation System Surveillance and System Monitoring</p> <p>This section does not seem forward thinking to me. It appears to be based on and report on existing uses and propose ways to facilitate travel by vehicle that is too fast and too dangerous in residential and trail network areas.</p> <p>As an example: a request from Kingston residents to review the speed and usage on Landing Road in Kingston produced the Road Safety Audit by OCPC in 2008. Although I can't find our comments on the fact that this is the last leg of the 200-mile Bay Circuit Trail and active bike route and designated Scenic Road~ I'm sure we made them.</p> <p>The complexity of the audit is admirable, however, the use of the audit is based on convenience of</p>	<p>OCPC is expanding its contact list and seeking to include coordination with the Native Americans (including the Herring Pond Wampanoag Tribe in Plymouth). The Mashpee Wampanoag Tribe is already included on our contact list.</p> <p>This section includes bicycle and pedestrian transportation. Staff will review section and revise.</p> <p>Noted. OCPC will consider conducting an updated Road Safety Audit and include additional participation and modes.</p>
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Draft FFY 2021 Old Colony Unified Planning Work Program (UPWP) Public Comment Matrix

			<p>drivers, and not about public safety or the livability of our community, or preservation of the historic and scenic area along the river. I believe that the OCPC (and MassDOT) should review its prejudice that favors cars over other modes of travel that includes walking in one’s neighborhood, riding bicycles, and hiking Massachusetts trails. Now of course, flooding is in the equation and we will be revisiting this issue in the near future.</p> <p>Task 2400 - Geographic Information System (GIS)</p> <p>I’m glad to see that “environmentally sensitive areas” will be included in the updated work products—but I’m not clear what this means to you.</p> <p>We use GIS as a tool to understand a variety of issues and I am so glad that it has evolved to the state it is, with the abundance of information—but I always find anomalies and I am not aware of a process to contribute information and to whom—usually the town is not able to do anything with the info, so guidance along these lines may help bolster and add to the usefulness of the system.</p>	<p>Noted. OCPC considers and includes the identification and inclusion of Environmental Sensitive areas in planning studies, project analyses, the TIP, and the LRTP.</p> <p>Noted. OCPC is available to coordinate with member communities to provide GIS technical assistance and mapping.</p>
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Draft FFY 2021 Old Colony Unified Planning Work Program (UPWP) Public Comment Matrix

			<p>Task 2500 - Management Systems (Congestion, Pavement, And Safety), and Travel Demand Modeling</p> <p>Any crash or congestion southbound leads the GIS traveler to hop off Exit 10 and try 3A—if that is backed-up they get “smart” and travel the by-ways leading to Landing Road where they speed to a jam when the traffic has to stop because 3A is slammed too. There needs to be a plan to manage this type of situation—and I know it is not just here. But when the traveler tries to escape the inevitable, the problem spreads, it does not diminish. We need to invest in alternative crash management that will keep people moving on the highways or provide a system for managing the congestion better.</p> <p>Task 3100 - Regional Traffic Studies, ITS, And Intermodal Planning</p> <p>There is so much here but still need to include or recognize the issue of the spent nuclear fuel that may need transport from the region. The OCPC Executive Director is on the State’s Pilgrim Nuclear Decommissioning Advisory Panel. This extensive decommissioning project should be highlighted with evaluation of the transportation options, including, (road or rail) and potential for at sea conveyance of components and spent nuclear fuel. Pros and Cons are complex.</p> <p>At JRWA, we are particularly interested in the climate change</p>	<p>Noted. OCPC will consider undertaking an update to the Route 3A Corridor (circa 2007).</p> <p>Noted.</p>
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Draft FFY 2021 Old Colony Unified Planning Work Program (UPWP) Public Comment Matrix

			<p>adaptation strategies - as a current example, I am attaching our recent proposal to the Seaport Economic Council to address sea level rise and flooding impacts along Landing Rd.</p> <p># 4. Does not include MAPC though I know they work on the corridors in the region.</p> <p>Task 3400 - Active Transportation Study As mentioned previously this should include connectivity corridor with recommendations to support the Bay Circuit Trail network that is pedestrian and occasionally bicycle use. Sections 11-14 of map guide should be of interest and may offer thoughts about support potential https://www.baycircuit.org/mapsguides/</p> <p>Task 3500 - Climate Change Vulnerability Transportation Assessment 1. Existing Conditions and Future Problem Identification This should include transitioning away from fossil fuels for all transportation modes and amplifying green energy infrastructure to support a greener transportation network as well as incentivize the use of electric vehicles in the region.</p> <p>2. Strategy and Policy Development Develop strategies and policies to reduce and manage climate change.</p> <p>We really need a program to make electric vehicles more affordable -</p>	<p>Will include reference to MAPC and regional coordination.</p> <p>Noted. As part of the study, recommendations to support the Bay Circuit Trail network will be developed and considered.</p> <p>Noted.</p> <p>Noted.</p>
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Draft FFY 2021 Old Colony Unified Planning Work Program (UPWP) Public Comment Matrix

			<p>including pickup trucks and the SUV phenomenon!</p> <p>3. Prepare Conclusions and Recommendations It would help to include an analysis of how our existing uses contribute to the problem, so that the people of the region will support and invest in a greener infrastructure.</p> <p>Thank you for your consideration of these comments. Our SEC application is attached as I believe OCPC is interested in the Landing Road issues we seek to address. There are other road issues here too, such as our ten year effort to get MDOT to address the tide gate under Route 3, the Route 3 overpass over the Jones River (that DOT will be working on this summer) that includes an amenity built for the boatyard we now own that should be repaired for its intended function, the bridge over Stony Brook that is too low for rising tides, and under the RR bridge that floods, and the safety issues of concern that OCPC looked at in its 2008 Road Safety Audit.</p>	<p>Noted. Such an analysis will be considered for inclusion.</p> <p>Noted.</p>
June 15, 2020	Ben Muller	MassDOT	The FTA 5303 funds should be combined into the PL funding in all task budgets and in the overall financial summary, as the 5303 funds are transferred at the federal level now. FTA and FHWA have requested that we no longer show them as separate funding sources in UPWPs.	The funds will be combined and presented in the Final Version.

Comments as of Close of Business (COB) on June 15, 2020