BOSTON REGION MPO METROPOLITAN PLANNING ORGANIZATION

UNIFIED PLANNING WORK PROGRAM

FFY 2025

Unified Planning Work Program
Federal Fiscal Year 2025

Boston Region MPO
DRAFT FOR MAY 16, 2024

Prepared by
The Central Transportation Planning Staff:
Staff to the Boston Region Metropolitan Planning Organization

Directed by the Boston Region Metropolitan Planning Organization,
which is composed of the

Massachusetts Department of Transportation
Metropolitan Area Planning Council
Massachusetts Bay Transportation Authority
MBTA Advisory Board
Massachusetts Port Authority
Regional Transportation Advisory Council
City of Boston
City of Beverly
City of Everett
City of Framingham
City of Newton
City of Somerville
Town of Arlington
Town of Acton
Town of Brookline
Town of Burlington
Town of Hull
Town of Norwood
Town of Wrentham
Federal Highway Administration (nonvoting)
Federal Transit Administration (nonvoting)

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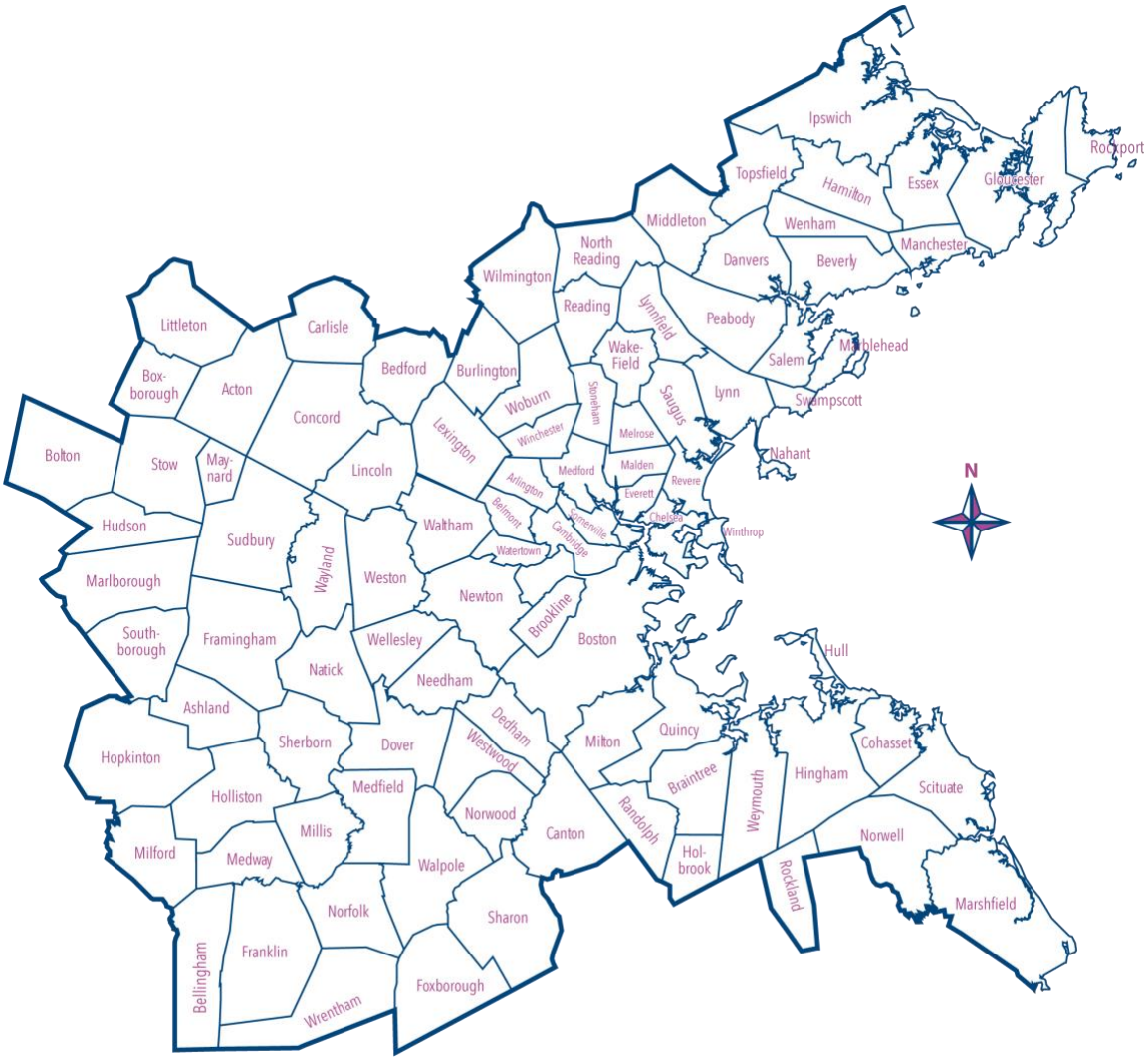

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION MUNICIPALITIES

NOTICE OF NONDISCRIMINATION RIGHTS AND PROTECTIONS

CIVIL RIGHTS NOTICE TO THE PUBLIC

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To request this information in a different language or format, please contact:

Boston Region MPO Title VI Specialist
10 Park Plaza, Suite 2150
Boston, MA 02116
Phone: 857.702.3700
Email: civilrights@ctps.org

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CONACT MPO STAFF

By mail:

Srilekha Murthy
UPWP Manager, Central Transportation Planning Staff
10 Park Plaza, Suite 2150
Boston, MA 02116

By telephone:

857.702.3700 (voice)

For people with hearing or speaking difficulties, connect through the state MassRelay service:

Relay Using TTY or Hearing Carry-over: 800.439.2370
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By email:

smurthy@ctps.org

ABBREVIATIONS

Abbreviations	Definition
3C	continuous, comprehensive, cooperative [metropolitan transportation planning process]
A&F	Administration and Finance Committee [Boston Region MPO]
AADT	Annual Average Daily Traffic
ADA	Americans with Disabilities Act of 1990
Advisory Council	Regional Transportation Advisory Council
AFC	automated fare collection [system]
BIL	Bipartisan Infrastructure Law
BRMPO	Boston Region Metropolitan Planning Organization
CAAA	Clean Air Act Amendments of 1990
CATA	Cape Ann Transportation Authority
CBD	central business district

Abbreviations	Definition
CMAQ	Congestion Mitigation and Air Quality Improvement
CMP	Congestion Management Process
CO	carbon monoxide
CO2	carbon dioxide
CPT–HST	Coordinated Public Transit--Human Services Transportation
CTPS	Central Transportation Planning Staff
DBMS	Database Management System
DCR	Department of Conservation and Recreation
DEP	Massachusetts Department of Environmental Protection
DI/DB	Disparate Impact and Disproportionate Burden
DOT	Department of Transportation
EEA	Energy and Environmental Affairs

Abbreviations	Definition
EJ	Environmental Justice
EMU	electric multiple unit
EO	Executive order
EPA	Environmental Protection Agency
ESG	Environmental, Social, and Governance
eSTIP	electronic State Transportation Improvement Programs
EV	Electric Vehicles
FFY	federal fiscal year
FHWA	Federal Highway Administration
FMCB	MBTA Fiscal and Management Control Board
FTA	Federal Transit Administration
GHG	greenhouse gas

Abbreviations	Definition
GIS	Geographic Information System
GTFS	General Transit Feed Specification
GWSA	Global Warming Solutions Act of 2008 [Massachusetts]
ICC	Inner Core Committee
ITI	Institute of Transportation Engineers
LAP	Language Assistance Plan
LBS	Location-based Services
LEP	limited English proficiency
LRTP	Long-Range Transportation Plan [MPO certification document]
MAGIC	Minuteman Advisory Group on Interlocal Coordination
MAPC	Metropolitan Area Planning Council
MARPA	Massachusetts Association of Regional Planning Agencies

Abbreviations	Definition
MassDOT	Massachusetts Department of Transportation
MassGIS	Massachusetts Bureau of Geographic Information
Massport	Massachusetts Port Authority
MBTA	Massachusetts Bay Transportation Authority
MCFRM	Massachusetts Coastal Flood Risk Model
MEPA	Massachusetts Environmental Policy Act
MOU	Memorandum of Understanding
MOVES	Motor Vehicle Emission Simulator
MPO	metropolitan planning organization
MWRC	MetroWest Regional Collaborative
MWRTA	MetroWest Regional Transit Authority
NAAQS	National Ambient Air Quality Standards

Abbreviations	Definition
NEPA	National Environmental Policy Act
NHS	National Highway System
NOx	nitrogen oxides
NSPC	North Suburban Planning Council
NSTF	North Shore Task Force
NTD	National Transit Database
OTP	MassDOT Office of Transportation Planning
PBPP	performance-based planning and programming
PEP	Public Engagement Plan
PEV	Pedestrian Environmental Variable
PL	metropolitan planning funds or public law funds [FHWA]
PPP	Public Participation Plan

Abbreviations	Definition
PRCA	Pedestrian Report Card Assessment
ROC	Rider Oversight Committee [MBTA]
ROW	right-of-way
RPA	Regional Planning Agency
RSA	Roadway Safety Audits
RTA	Regional Transit Authority
S	Safety
SFY	state fiscal year
SHSP	Strategic Highway Safety Plan
SIP	State Implementation Plan
SOV	single-occupancy vehicle
SPR	Statewide Planning and Research [FHWA]

Abbreviations	Definition
SS4A	Safe Streets for All
SSC	South Shore Coalition
SWAP	Southwest Advisory Planning Committee
TAZ	transportation analysis zone
TDM	travel demand management or travel demand model
TE	transportation equity
TIP	Transportation Improvement Program [MPO certification document]
TMA	transportation management association
TNC	transportation network company
TOD	Transit-Oriented Development
TRIC	Three Rivers Interlocal Council
UPWP	Unified Planning Work Program [MPO certification document]

Abbreviations	Definition
USDOT	United States Department of Transportation [oversees FHWA and FTA]
USGAO	United States Government Accountability Office
UTC	United States Department of Transportation's University Transportation Centers Program
VOC	volatile organic compounds
ZEV	zero emission vehicles

Executive Summary

THE BOSTON REGION MPO

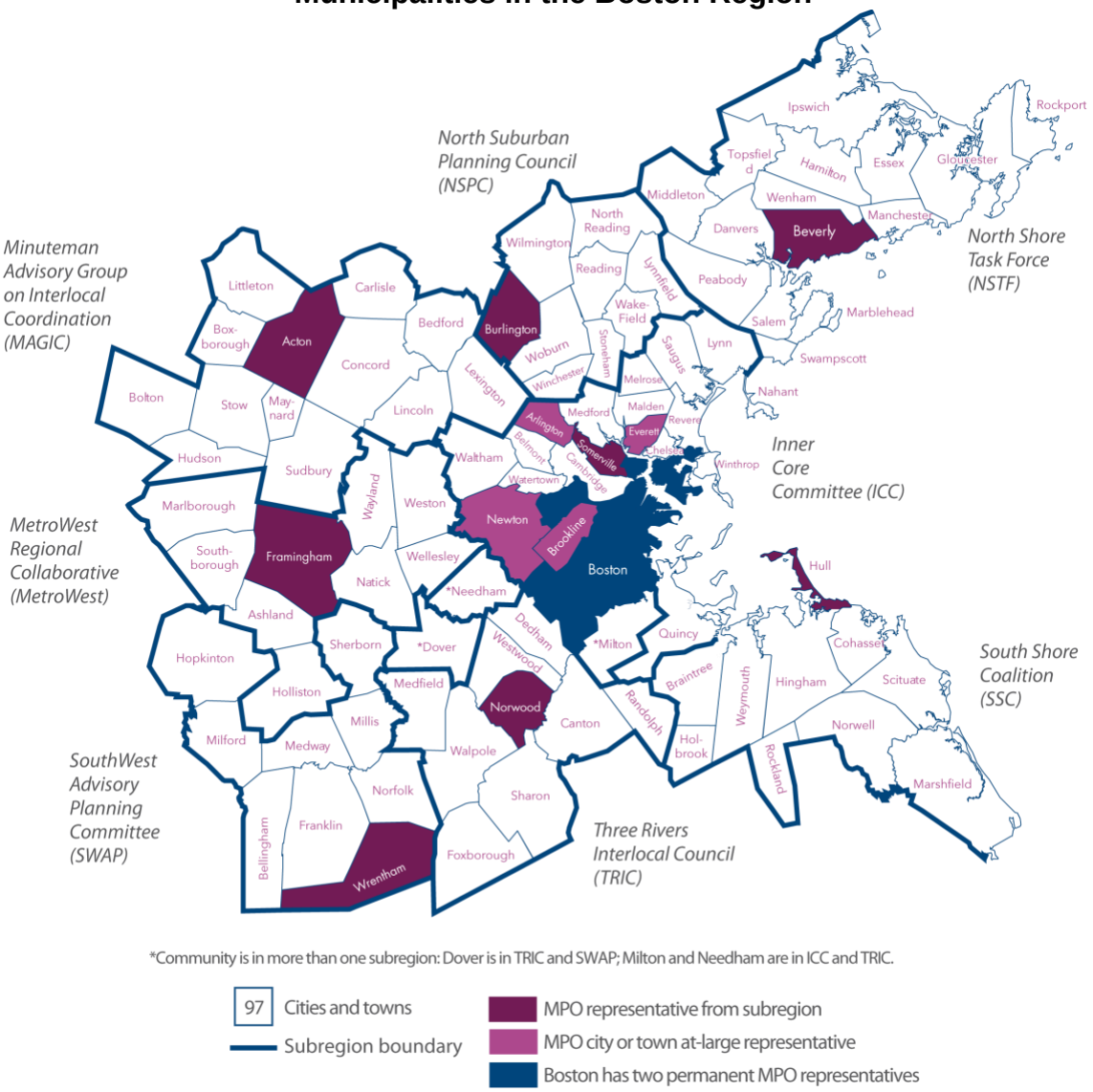
Metropolitan planning organizations (MPO) are responsible for providing forums for making decisions about how to allocate federal transportation funds for capital projects and planning studies in a metropolitan area through a continuing, comprehensive, and cooperative (3C) planning process. Each metropolitan area in the United States with a population of 50,000 or more—also known as an urbanized area—is required by federal legislation to establish an MPO.

The Boston Region MPO's planning area extends across 97 cities and towns from Boston north to Ipswich, south to Marshfield, and west to Interstate 495. Figure ES-1 shows the map of the Boston Region MPO's member municipalities.

The MPO's board has 22 voting members. Several state agencies, regional organizations, and the City of Boston are permanent voting members, while 12 municipalities are elected as voting members for three-year terms. Eight municipal members represent each of the eight subregions of the Boston region, and four represent at-large municipal seats. The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) participate on the MPO board as advisory, nonvoting, members.

The MPO is supported by the Central Transportation Planning Staff, a group of planners, data analysts, engineers, and other professionals.

Figure ES-1
Municipalities in the Boston Region



THE UNIFIED PLANNING WORK PROGRAM (UPWP)

The MPO's work is guided by a 20-year vision for a modern, safe, equitable, accessible, reliable, resilient, and sustainable transportation system for the region. This vision is described in the MPO's current Long-Range Transportation Plan (LRTP), *Destination 2050*. The transportation planning work funded through the UPWP is integral to achieving this regional vision.

The UPWP is a one-year planning document and financial plan that explains how the Boston region will spend its federal transportation planning funds in a given federal fiscal year (FFY) in alignment with its long-term vision, goals, and objectives.

The development of the UPWP involves the prioritization of all potential tasks in the MPO's ongoing transportation planning programs, studies, and technical analyses that could be undertaken to benefit the region in a given year. The scopes and budgets of the prioritized work are documented in the UPWP. The aim is to ensure that the work undertaken by the MPO supports the region's transportation goals.

In addition to MPO-funded work, CTPS performs planning analyses and studies funded by state transportation agencies, including MassDOT, the Massachusetts Bay Transportation Authority (MBTA), and the Massachusetts Port Authority (Massport).

UPWP PROGRAMS AND STUDIES

The total amount of funding (inclusive of federal funding and matching funds) programmed in this UPWP is $7,537,395. These funds come from both FHWA and FTA with MassDOT providing the required matching funds. Federal funds originating from FHWA, known as FHWA 3C Planning (PL) funds, are distributed across MPO regions using a formula developed by the Massachusetts Association of Regional Planning Agencies. All federal funds programmed in the UPWP are allocated to the Boston Region MPO by the Massachusetts Department of Transportation (MassDOT) as FHWA 3C PL funds. Federal funds originating from the FTA are known as FTA 3C Planning (Section 5303) funds. Both FHWA 3C PL funds and FTA 3C Planning funds programmed in this UPWP include a state match. Since 2019, MassDOT has transferred Section 5303 funds from FTA to FHWA to be administered as a Consolidated Planning Grant.

The MPO uses funding to conduct the following programs and plans:

Long-Range Transportation Plan (LRTP)

The LRTP guides transportation investments for the Boston region for at least the next 20 years and is updated every four years. It serves as the MPO's guiding document by establishing the regional transportation vision, goals, objectives, and investment approaches that the MPO operates under. The MPO adopted the current LRTP, *Destination 2050*, in 2023, and expects to adopt the next LRTP in 2027.

Transportation Improvement Program (TIP)

The TIP is a five-year, financially constrained program of planned investments in the metropolitan area's transportation system guided by the goals and objectives established in the LRTP and is updated annually.

Unified Planning Work Program (UPWP)

The UPWP is developed annually and includes descriptions and budgets for work that MPO staff will conduct to support the MPO's goals and objectives during the upcoming FFY.

Public Engagement Program

The MPO engages the public in the transportation planning process to improve decision-making by helping to illuminate the social, economic, and environmental impacts of transportation planning decisions. Staff coordinates public engagement efforts with the MPO's Transportation Equity Program and the Regional Transportation Advisory Council to ensure that all members of the public have meaningful opportunities to participate in the transportation planning process that shapes the Boston region.

Performance-Based Planning and Programming (PBPP)

CTPS's PBPP work involves using data to develop performance targets for roadway and transit safety, highway and transit assets, congestion management, travel time reliability, and air quality and emissions, in annual, two-year, and four-year horizons for the region's transportation system.

Transportation Equity Program

The equity program ensures that the needs of populations underserved by the transportation system and traditionally not represented in the transportation planning process are addressed throughout the planning process. These populations include minority populations, low-income populations, people with limited English proficiency, older adults, youth, and people with disabilities.

Air Quality Conformity and Support Activities

The air quality program ensures that the MPO complies with the Clean Air Act Amendments of 1990 and provides expertise and support in air quality and climate matters.

Congestion Management Process Program (CMP)

The CMP program is responsible for monitoring the congestion, mobility, and safety needs of the transportation system.

Climate Resilience Program

The resilience program assesses vulnerabilities and coordinates resilience improvements to address risks to the region posed by flooding, sea level rise, and rising temperatures.

Freight Planning Support

The freight program plans for the policies and infrastructure that enable the movement of freight and goods by road, rail, water, and air.

Regional Model Enhancement

This program supports the research and development that leads to improvements to the regional travel demand model maintained by the MPO.

Data Program

The data program leads strategic efforts to improve how data are used, developed, and shared at the MPO.

Bicycle and Pedestrian Planning Program

This program uses data collection, analysis, and technical assistance to improve safety and comfort for people walking, bicycling, or using mobility-assisted devices.

Multimodal Mobility Infrastructure Program

This program conducts studies of roadways, corridors, and intersections to address regional and community transportation needs.

Support to the MPO and its 3C Process

Under this program, staff implement MPO policies, plan and coordinate the delivery of information for MPO decision-making, and support the operation of the MPO and its committees. It also involves providing support for MPO meeting management and agenda planning.

Vision Zero Action Plan

The Boston Region MPO is creating a Vision Zero Action Plan for the 97 cities and towns in the Boston region. This work is funded by a Safe Streets and Roads for All (SS4A) planning grant from the United States Department of Transportation (USDOT). In developing the Vision Zero Action Plan, the MPO will adopt the Safe System approach that deems deaths and serious injuries unacceptable, focuses on safety for people, acknowledges that humans make

mistakes, and builds redundancies to prevent severe crashes. The Vision Zero Action Plan will include analysis of crash data to identify trends and high-risk corridors, engagement with communities disproportionately impacted by roadway safety issues, and the formulation of evidence-based, data-driven policy and project recommendations.

Technical Assistance

In addition to the above programs and studies, the MPO funds and conducts technical assistance work through the Community Transportation Technical Assistance program and the Regional Transit Service Planning Technical Support program.

FFY 2025 Discrete Studies

Bluebikes and MBTA Connections

MPO staff will apply an analytical framework to examine the effect of transit service disruptions on Bluebikes usage, with the aim of understanding to what extent did regular transit users opt for Bluebikes when transit was either unavailable or perceived to be too difficult to use.

Roadway Pricing: Balancing the Need for a Transition to Sustainable Mobility with Equity Considerations

MPO staff will build on a recent Roadway Pricing study to look more closely at vehicle miles traveled at the municipality level and aim to provide estimates of revenue generated by different pricing strategies. Staff will also examine the disparate impacts of roadway pricing policies on Environmental Justice communities.

Decarbonizing the Freight Sector: Exploring the potential for using e-cargo bikes for first-/last-mile freight deliveries

MPO staff will explore the potential for establishing neighborhood freight hubs and using e-cargo bikes for first-/last-mile freight deliveries across the Boston region. This system could address the urgent need to decarbonize the freight sector.

Table ES-1 contains the budget allocated for the MPO's 3C planning activities in FFY 2025. The table reflects the FHWA metropolitan PL funds and FTA Section 5303 funds, which CTPS and Metropolitan Area Planning Council (MAPC) expect to spend in FFY 2025. The table also reflects the work that CTPS will conduct with funds provided by other transportation agencies. The new studies chosen for funding in FFY 2025 are summarized below in Table ES-2.

Table ES-1
Unified Planning Work Program Budget for FFY 2025

3C Studies and Programs by Budget Categories	Proposed FFY 2025 CTPS Budget
Resource Management and Support Activities	$400,000
MPO Certification Requirements	$4,922,017
Ongoing MPO-Funded Technical Analyses	$148,500
New MPO-Funded Discrete Studies	$150,000
MassDOT-Directed PL Funds*	$352,367
Direct Support	$175,000
Total FFY 2025 CTPS Budget	**$6,147,884**

3C Studies and Programs by MAPC Budget Categories	Proposed FFY 2025 MAPC Budget
MAPC Planning Studies and Technical Analyses	$817,511
MAPC Administration, Resource Management, and Support Activities	$572,000
Total MAPC FFY 2025 UPWP Programmed Funds	**$1,389,511**

Agency Supporting MPO/3C Work	Proposed FFY 2025 Budget
CTPS	$6,147,884
MAPC	$1,389,511
3C Budget Subtotal	**$7,537,395**

FFY 2025 UPWP Budget	**$7,537,395**

Note: This budget includes salary, overhead, and direct support costs.
* Projects in this category are conducted on behalf of MassDOT but funded through the MPO 3C contract.

Table ES-2
New Discrete Funded Studies in FFY 2025

Universe ID	Project ID	Study or Program	Proposed FFY 2025 CTPS Budget
M-2	13819	Bluebikes and MBTA Connections	$60,000
M-4	13820	Roadway Pricing: Balancing the Need for a Transition to Sustainable Mobility with Equity Considerations	$50,000
F-1	13821	Decarbonizing the Freight Sector: Exploring the Potential for Using E-cargo Bikes for First-/Last-mile Freight Deliveries	$40,000
Total for New Discrete Studies			**$150,000**

DEVELOPING THE UPWP

The annual process of creating the UPWP includes both generating and evaluating ideas for discrete studies, as well as updating the scopes and anticipated deliverables for ongoing programs, technical analysis activities, certification requirements, and administrative support activities.

Ideas for studies, technical analysis activities, and deliverables for ongoing programs come from the following sources:

- Input gathered through public engagement
- Input gathered from the Regional Transportation Advisory Council
- Input gathered from the MPO's UPWP Committee, which oversees the development of the UPWP document
- Existing planning documents such as the LRTP Needs Assessment and MAPC's long-range plan for smart growth in the Boston region
- Guidance issued by FHWA and FTA
- Consultations with MassDOT, the MBTA, and MAPC

- MPO staff-identified needs that emerge from continual interactions between the MPO staff, state and local agencies, organizations, and community groups

PUBLIC ENGAGEMENT

Toward the end of the document development process, the MPO votes to release for public review a draft UPWP. MPO staff posts the document on the MPO's website (www.bostonmpo.org) and publicizes its release via an email distribution list that includes municipal contacts, interested members of the public, and other stakeholders in the region, and via social media. MPO staff also solicit public input during open houses, meetings with stakeholders, and at public events. MPO staff compile comments received during the public review period and present them to the MPO board. The public comment period for the FFY 2025 UPWP began on [ ] and ended on [ ].

MEASURING PROGRESS

The MPO monitors the progress of programs and studies by performing the following tasks:

- Approving detailed work programs and scopes
- Reviewing monthly progress reports
- Tracking program and study budgets and spending via quarterly reports
- Approving the release of deliverables based on whether the objectives stated in the work program or scope were met and whether the stated deliverables were produced

Chapter 1—3C Transportation Planning in the Boston Region

Decisions about how to allocate transportation funds in a metropolitan area are guided by information and ideas gathered from a broad group of people, including elected officials, municipal planners and engineers, transportation advocates, and interested residents. Metropolitan planning organizations (MPO) provide a forum for this decision-making process. Each metropolitan area in the United States with a population of 50,000 or more is required by federal legislation to establish an MPO, which decides how to spend federal transportation funds for capital projects and planning studies in the area.

The Boston Region Metropolitan Planning Organization performs this function for the 97 municipalities in eastern Massachusetts that comprise the MPO's planning area. This MPO develops plans for funding transportation projects and programs; maintains transportation models and data resources to support studies, system performance monitoring, and air quality determinations; and conducts an ongoing public engagement process.

THE TRANSPORTATION PLANNING PROCESS

The federal government regulates the funding, planning, and operation of the surface transportation system through the federal transportation program, which was enacted into law through Titles 23 and 49 of the United States Code. Section 134 of Title 23 of the Federal Aid Highway Act, as amended, and Section 5303 of Title 49 of the Federal Transit Act, as amended.

The most recent reauthorization of the federal surface transportation law is the Bipartisan Infrastructure Law (BIL).The BIL sets policies related to metropolitan transportation planning and requires that all MPOs carry out a continuing, comprehensive, and cooperative (3C) transportation planning process.

The Boston Region MPO, which is responsible for carrying out the 3C planning process in the Boston region, has established the following objectives for the process:

- Identify transportation problems and develop possible solutions
- Ensure that decision-making balances short- and long-range considerations and adequately reflects the range of possible future scenarios, options, and consequences

- Represent both regional and local considerations, and both transportation and non-transportation objectives and impacts, in the analysis of project issues
- Assist implementing agencies in effecting timely policy and project decisions with adequate consideration of environmental, social, fiscal, and economic impacts, and with adequate opportunity for participation by other agencies, local governments, and the public
- Help implementing agencies prioritize transportation activities in a manner consistent with the region's needs and resources
- Comply with the requirements of the BIL, the Americans with Disabilities Act of 1990, the Clean Air Act of 1990, the Civil Rights Act of 1964, Executive Order 12898 (regarding environmental justice), Executive Order 13166 (regarding outreach to populations with limited English-language proficiency), and Executive Order 13330 (regarding the coordination of human-services transportation)

More information about the federal, state, and regional guidance governing the transportation planning process, and about the regulatory framework in which the MPO operates can be found in Appendix E.

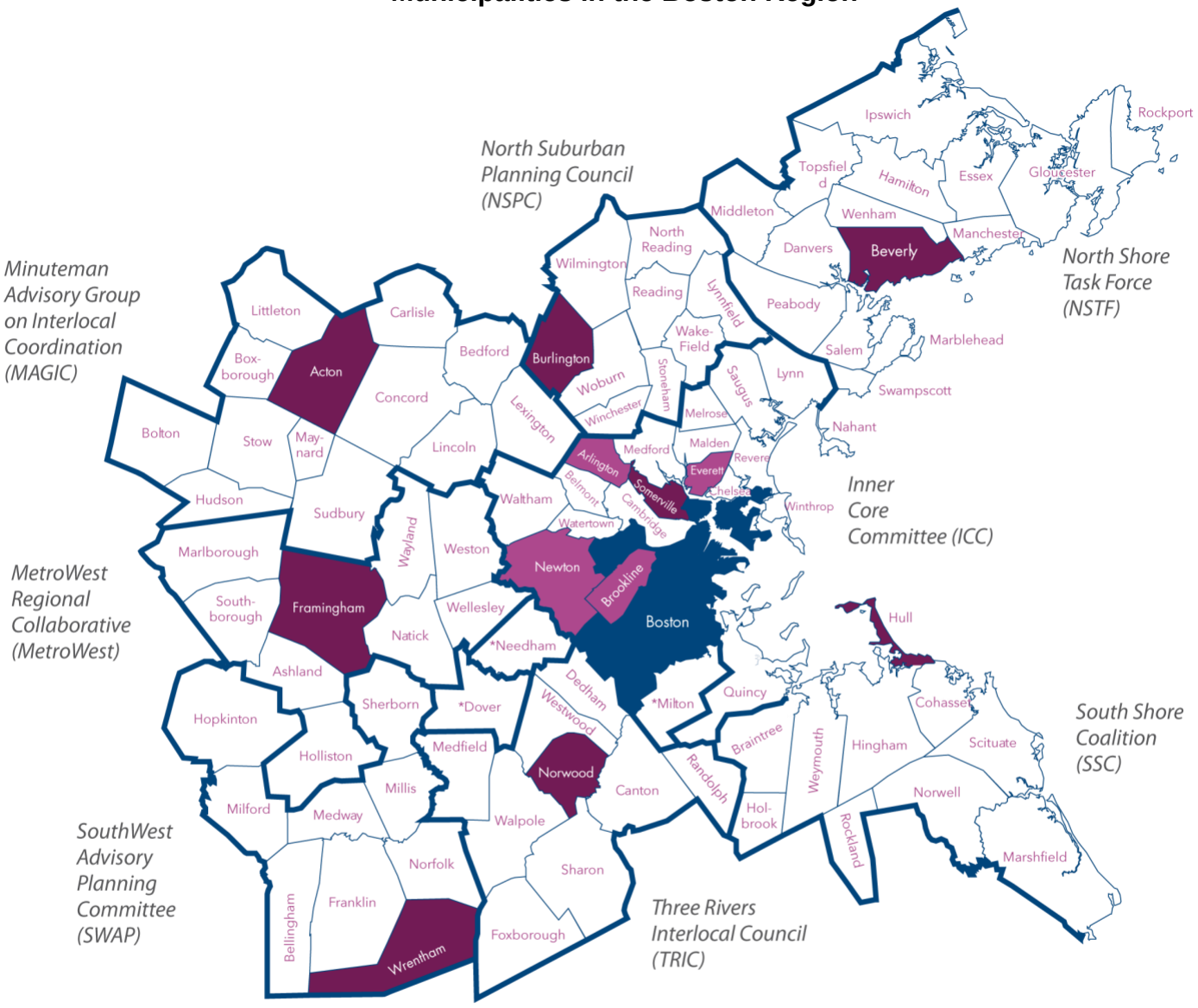
THE BOSTON REGION MPO

Planning Area

The Boston Region MPO's planning area extends across 97 cities and towns from Boston north to Ipswich, south to Marshfield, and west to Interstate 495.

Figure 1-1 shows the map of the Boston Region MPO's member municipalities.

Figure 1-1
Municipalities in the Boston Region



*Community is in more than one subregion: Dover is in TRIC and SWAP; Milton and Needham are in ICC and TRIC.

97 Cities and towns

Subregion boundary

MPO representative from subregion

MPO city or town at-large representative

Boston has two permanent MPO representatives

MPO Board Members and Staff

The MPO's board comprises 22 voting members. Several state agencies, regional organizations, and the City of Boston are permanent voting members, while 12 municipalities are elected as voting members for three-year terms. Eight municipal members represent each of the eight subregions of the Boston region, and there are four at-large municipal seats. The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) participate on the MPO board as advisory (nonvoting) members. More details about the MPO's permanent members can be found in Appendix F.

Figure 1-2 shows MPO membership and the organization of the Central Transportation Planning Staff, which serves as staff to the MPO.

MEMBERSHIP OF THE BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

- FEDERAL HIGHWAY ADMINISTRATION (nonvoting)
- FEDERAL TRANSIT ADMINISTRATION (nonvoting)
- CITY OF BOSTON
- CITY OF BOSTON
- MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (MBTA)
- MBTA ADVISORY BOARD
- MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MASSDOT) Chair
- AT-LARGE CITY Everett
- AT-LARGE CITY Newton
- AT-LARGE TOWN Arlington
- AT-LARGE TOWN Brookline
- INNER CORE COMMITTEE Somerville
- MINUTEMAN ADVISORY GROUP ON INTERLOCAL COORDINATION Acton
- MASSDOT
- MASSDOT Highway Division
- MASSACHUSETTS PORT AUTHORITY
- METROPOLITAN AREA PLANNING COUNCIL
- REGIONAL TRANSPORTATION ADVISORY COUNCIL
- METROWEST REGIONAL COLLABORATIVE Framingham
- NORTH SHORE TASK FORCE Beverly
- NORTH SUBURBAN PLANNING COUNCIL Burlington
- SOUTH SHORE COALITION Hull
- SOUTH WEST ADVISORY PLANNING COMMITTEE Wrentham
- THREE RIVERS INTERLOCAL COUNCIL Norwood

CENTRAL TRANSPORTATION PLANNING STAFF

- EXECUTIVE DIRECTOR
  - DEPUTY EXECUTIVE DIRECTOR
    - DIRECTOR OF POLICY AND PLANNING
      - MPO Activities
      - MPO Planning and Policy
    - DIRECTOR OF MODELING AND ANALYTICS
      - Travel Model Development
    - DIRECTOR OF PROJECTS AND PARTNERSHIPS
      - Data Management
      - Multimodal Planning and Design
      - Project Analysis and Applications
      - Vision Zero Action Plan
    - Communications and Engagement
    - Editorial
    - Graphics
    - DIRECTOR OF FINANCE AND OPERATIONS
      - Finance and Operations
      - Information Technology

February 2024

A VISION FOR THE REGION

The following paragraph is the MPO's vision statement, as adopted in *Destination 2050,* the MPO's current Long-Range Transportation Plan (LRTP), which was adopted in July 2023:

The Boston Region Metropolitan Planning Organization envisions an equitable, pollution-free, and modern regional transportation system that gets people to their destinations safely, easily, and reliably, and that supports an inclusive, resilient, healthy, and economically vibrant Boston Region.

When developing this vision statement, the MPO members took into consideration the significant public input received during the drafting of the Needs Assessment for *Destination 2050.* This statement also reflects the desire to emphasize the maintenance and resilience of the transportation system while supporting the MPO's six core goals: Transportation Equity; Safety; Mobility and Reliability; Access and Connectivity; Resiliency; and Clean Air and Healthy Communities.

More information on the MPO's vision, goals, and objectives for the transportation system is available in Figure 1-3.

Figure 1-3
LRTP Goals and Objective

VISION STATEMENT

The Boston Region Metropolitan Planning Organization envisions an equitable, pollution-free, and modern regional transportation system that gets people to their destinations safely, easily, and reliably, and that supports an inclusive, resilient, healthy, and economically vibrant Boston region.

GOALS	OBJECTIVES
EQUITY	
Facilitate an inclusive and transparent transportation-planning process and make investments that eliminate transportation-related disparities borne by people in disadvantaged communities.	• Facilitate an inclusive and transparent engagement process with a focus on involving people in disadvantaged communities.* • Ensure that people have meaningful opportunities to share needs and priorities in a way that influences MPO decisions. • Eliminate harmful environmental, health, and safety effects of the transportation system on people in disadvantaged communities. • Invest in high-quality transportation options in disadvantaged communities to fully meet residents' transportation needs.
SAFETY	
Achieve zero transportation-related fatalities and serious injuries and improve safety for all users of the transportation system.	• Eliminate fatalities, injuries, and safety incidents experienced by people who walk, bike, roll, use assistive mobility devices, travel by car, or take transit. • Prioritize investments that improve safety for the most vulnerable roadway users: people who walk, bike, roll, or use assistive mobility devices. • Prioritize investments that eliminate disparities in safety outcomes for people in disadvantaged communities.
MOBILITY AND RELIABILITY	
Support easy and reliable movement of people and freight.	• Enable people and goods to travel reliably on the region's transit and roadway networks. • Prioritize investments that address disparities in transit reliability and frequency for people in disadvantaged communities. • Reduce delay on the region's roadway network, emphasizing solutions that reduce single-occupancy-vehicle trips, such as travel demand management. • Prioritize investments that reduce delay on the region's transit network. • Support reliable, safe travel by keeping roadways, bridges, transit assets, and other infrastructure in a state of good repair, and prioritize these investments in disadvantaged communities. • Modernize transit systems and roadway facilities, including by incorporating new technology that supports the MPO's goals, such as electric-vehicle technologies.

*** Disadvantaged communities are those in which a significant portion of the population identifies as an MPO equity population—people who identify as minority, have limited English proficiency, are 75 years old or older or 17 years old or younger, or have a disability—or has low income.**

(Fig 1-3 cont.)

GOALS	OBJECTIVES
ACCESS AND CONNECTIVITY	
Provide transportation options and improve access to key destinations to support economic vitality and high quality of life.	• Improve multimodal access to jobs, affordable housing, essential services, education, logistics sites, open space, and other key destinations. • Prioritizing transportation investments that support the region's and the Commonwealth's goals for housing production, land use, and economic growth. • Increase people's access to transit, biking, walking, and other non-single-occupancy-vehicle transportation options to expand their travel choices and opportunities. • Prioritize investments that improve access to high quality, frequent transportation options that enable people in disadvantaged communities to easily get where they want to go. • Close gaps in walking, biking, and transit networks and support interorganizational coordination for seamless travel. • Remove barriers to make it easy for people of all abilities to use the transportation system, regardless of whether they walk, bike, roll, use assistive mobility devices, or take transit.
RESILIENCY	
Provide transportation that supports sustainable environments and enables people to respond and adapt to climate change and other changing conditions.	• Prioritize investments to make the region's roadway and transit infrastructure more resilient and responsive to current and future climate hazards, particularly within areas vulnerable to increased heat and precipitation, extreme storms, winter weather, and sea level rise. • Prioritize resiliency investments in disadvantaged communities and in areas that bear disproportionate climate and environmental burdens. • Prioritize investments in transportation resiliency that improve emergency access and protect evacuation routes. • Prioritize investments that include nature-based strategies such as low-impact design, pavement reduction, and landscape buffers to reduce runoff and negative impacts to water resources, open space, and environmentally sensitive areas.
CLEAN AIR AND HEALTHY COMMUNITIES	
Provide transportation free of greenhouse gas emissions and air pollutants and that supports good health.	• Reduce transportation-related greenhouse gases, other air pollutants, and growth in vehicle-miles traveled by encouraging people and goods to move by non-single-occupancy-vehicle modes. • Support transit vehicle electrification and use of electric vehicles throughout the transportation system to reduce greenhouse gases and other air pollutants. • Prioritize investments that address air pollution and environmental burdens experienced by disadvantaged and vulnerable communities. • Support public health through investments in transit and active transportation options and by improving access to outdoor space and healthcare.

Updated: February 2, 2023

CERTIFICATION DOCUMENTS

As part of its 3C process, the Boston Region MPO produces the Transportation Improvement Program (TIP) and the Unified Planning Work Program (UPWP) annually, and the Long-Range Transportation Plan every four years. These documents, referred to as *certification documents,* are required for the federal government to certify the MPO's planning process. This federal certification is a prerequisite for the MPO to receive federal transportation funds. An inclusive public engagement process accompanies the development of each certification document.

The Long-Range Transportation Plan

The LRTP guides decision-making on investments that will be made in the Boston region's transportation system over the next two decades. It defines an overarching vision of the future of transportation in the region, establishes goals and objectives that will lead to achieving that vision, and allocates projected revenue to transportation projects and programs consistent with the established goals and objectives.

Destination 2050, the current LRTP, was endorsed by the MPO board in July 2023 and went into effect on October 1, 2023.

The Transportation Improvement Program

The TIP is a multimodal program of transportation improvements, consistent with the LRTP, that describes and prioritizes transportation projects that are expected to be implemented during a five-year period. The TIP contains a financial plan that shows the current or proposed revenue sources for each project.
The types of transportation projects funded include major highway reconstruction and maintenance, arterial and intersection improvements, public transit expansion and maintenance, bicycle paths and facilities, improvements for pedestrians, and first- and last-mile connections to transit or other key destinations.

An MPO-endorsed TIP is incorporated into the State Transportation Improvement Program (STIP) for submission to the FHWA, FTA, United States Environmental Protection Agency, and the Massachusetts Department of Environmental Protection for approval. Investments programmed in the TIP and STIP are also reflected in Massachusetts Department of Transportation's (MassDOT) Capital Investment Plan, which shows capital expenditures in the state over a five-year period.

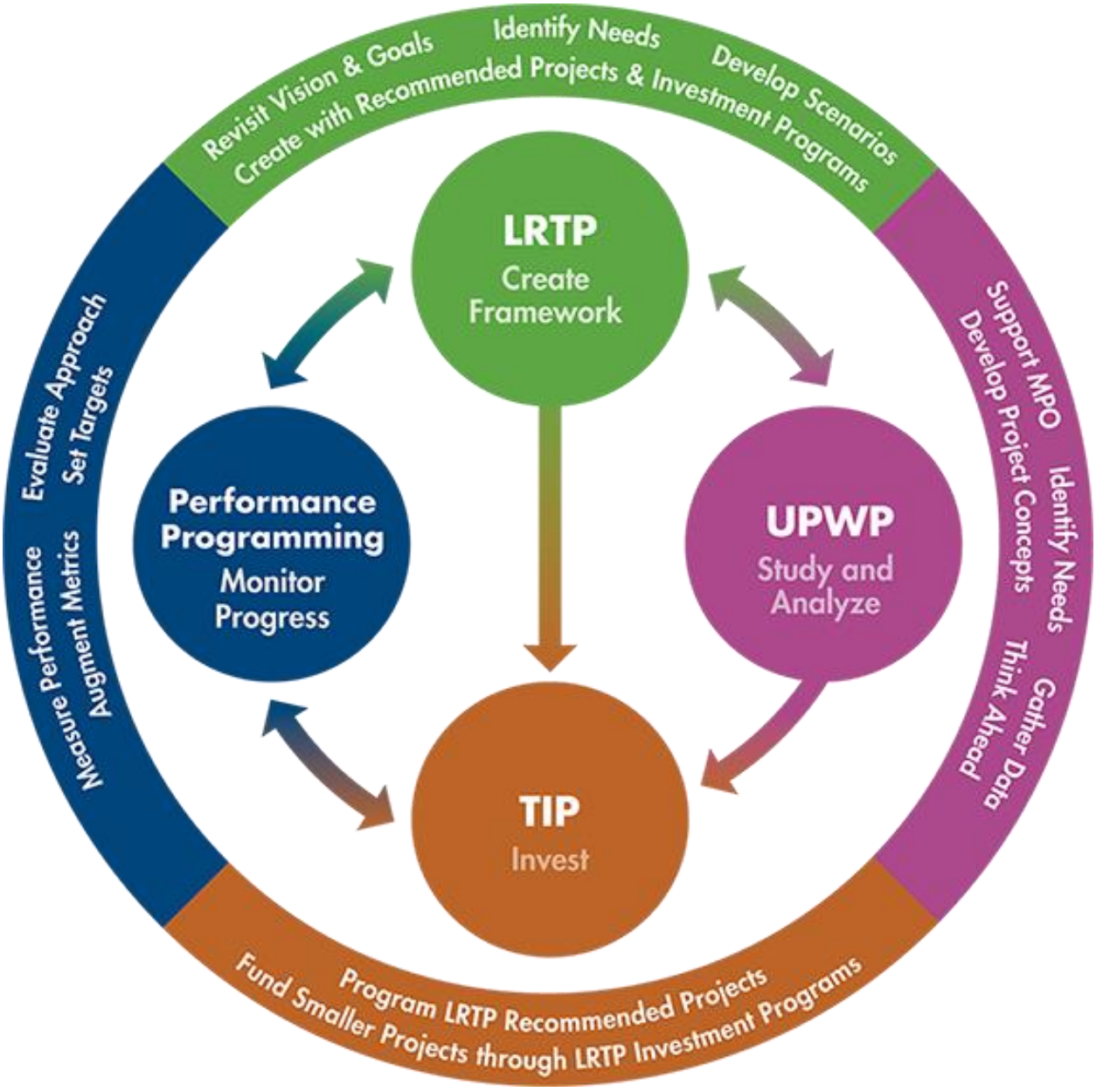
The Unified Planning Work Program

The UPWP contains information about transportation planning studies that will be conducted by MPO staff during the course of a federal fiscal year, which runs from October 1 through September 30. The UPWP describes all of the supportive planning activities undertaken by the MPO staff, including data resources management, preparation of the federally required certification documents, and ongoing regional transportation planning assistance.

The UPWP often offers a means to study transportation projects and alternatives before advancing to further design, construction, and possible future programming through the TIP. The studies and work products programmed for funding through the UPWP are integrally related to other planning initiatives conducted by the Boston Region MPO, MassDOT, the Massachusetts Bay Transportation Authority, the Massachusetts Port Authority, the Metropolitan Area Planning Council, and municipalities in the Boston region.

Figure 1-4 depicts the relationship between the three certification documents and the MPO's performance-based planning and programming process, which is a means to monitor progress towards the MPO's goals and to evaluate the MPO's approach to achieving those goals.

Figure 1-4
Relationship between the LRTP, TIP, UPWP, and Performance-Based Planning Process



Chapter 2

About the Unified Planning Work Program

BACKGROUND

This chapter explains the Unified Planning Work Program (UPWP) and its connection to the overall regional transportation vision developed in the Long-Range Transportation Plan (LRTP). As outlined in Chapter 1, the UPWP plays an integral part of achieving the Boston Region Metropolitan Planning Organization's (MPO) vision and mandate by documenting how the federal funding that will be spent on surface transportation studies and work programs in the Boston region during a given federal fiscal year (FFY) support this vision. This plan also serves as the basis for financing the ongoing work of the staff to the Boston Region MPO.

WHAT DOES THE UPWP DO?

The UPWP is a planning document that includes preliminary scopes of work and budgets that the MPO produces annually in compliance with the federally mandated continuing, cooperative, and comprehensive (3C) metropolitan planning process described in Chapter 1.

As the basis for transportation planning at the Boston Region MPO, the UPWP prioritizes federal funding for transportation planning work that will be implemented in the 97-municipality area of the Boston region. The Central Transportation Planning Staff (CTPS) or the staff of the Metropolitan Area Planning Council (MAPC) conduct this work (CTPS is the staff of the MPO and MAPC is the Boston region's regional planning agency). This work primarily consists of the following four parts.

Certification Requirements and Other MPO Support Activities. The UPWP includes activities that the federal government requires the MPO to conduct to remain certified as an MPO and to be eligible to receive and distribute federal transportation dollars. Work in this category includes preparing federally required plans such as the LRTP and the Transportation Improvement Program (TIP). The LRTP, which is updated every four years, establishes a vision for the Boston region's transportation system and allocates funding for transportation construction projects and programs over a 20-year period. The TIP, which is updated annually, allocates funding for the implementation of projects during the next five years. This section of the UPWP also includes air quality conformity and transportation equity-related compliance and other planning activities associated with the LRTP and TIP. In addition, the UPWP programs the MPO's public participation activities, including support to the Regional Transportation Advisory

Council (Advisory Council) and support to meetings of the MPO and its committees.

The UPWP also funds other activities that support MPO planning and certification requirements, including graphics and editing support; managing data and computer resources; and maintaining the MPO's regional travel demand model, which is used to forecast the potential impacts that changes to the transportation system will have on traffic congestion and transit ridership. See Chapters 3 and 5 for more detail about these areas of work.

Technical Analysis and Support. Ongoing and continuing work programs support technical analyses and planning studies for cities and towns in the region. Examples of these activities include Roadway Safety Audits, Regional Transit Service Planning Technical Support, and Community Transportation Technical Assistance. See Chapter 4 for more detail about these studies.

Discrete Studies. Every year, funds are available for the MPO staff to perform discrete studies. CTPS conducts these studies to enhance staff's and the MPO's knowledge of transportation planning practices, augment analytical methods, and evaluate transportation planning strategies. Examples of these studies in the FFY 2025 UPWP include Bikeshare and MBTA Connections and Decarbonizing the Freight Sector. See Chapter 4 for more detail about these studies.

Agency Studies and Technical Analyses. CTPS conducts planning analyses and studies funded by state transportation agencies, including the Massachusetts Department of Transportation (MassDOT), the Massachusetts Bay Transportation Authority (MBTA), and the Massachusetts Port Authority (Massport). CTPS also occasionally conducts planning analyses and studies funded by municipalities. See Appendix A for more details on these agency-funded studies.

THE PROCESS OF CREATING AND MONITORING THE UPWP

MPO staff produce the UPWP each year under the supervision and guidance of the MPO's UPWP Committee. The UPWP Committee, comprising a subset of MPO board members and supported by MPO staff, convened four meetings in FFY 2024 to consider and provide input on the FFY 2025 UPWP development process. Discussion included the following topics:

- proposed budgets for ongoing and continuing activities
- discrete study ideas and how to prioritize them
- discrete study ideas that could be further considered for potential incorporation in ongoing program work
- improvements to the UPWP outreach and development process

These meetings resulted in the committee's recommendation for the Draft FFY 2025 UPWP. The MPO approved the UPWP Committee's recommendations for public review of the Draft FFY 2025 UPWP on May 16, 2024.

Below are details about the process for selecting studies and programs for the FFY 2025 UPWP.

Developing the New FFY 2025 UPWP

The UPWP development process begins with planning our ongoing work to meet federal requirements and support the MPO's vision, goals, and objectives for transportation in our region. The ongoing programs and continuing activities include these sustained efforts and provide flexibility to be responsive to unforeseen changes and capitalize on opportunities to address emerging issues.

Updates to Ongoing Programs and Continuing Activities

MPO programs include the core, sustained work efforts carried out by MPO staff to meet federal requirements and advance the MPO's vision for transportation in the region. They make up the majority of the work conducted by MPO staff. Each year, the MPO reviews activities for ongoing programs and work, and MPO staff identify and develop budgets for the continuing and new activities that will be carried out in these programs in the upcoming FFY. Program budgets may vary from year to year based on planned activities, agency priorities, and available resources. Staff propose program budgets each year based on planned activities.

Examples of ongoing and continuing activities comprise work that is required of the MPO, including work that the MPO completes to fulfill the continuous, comprehensive, and cooperative (3C) transportation planning process and to maintain its certification (see Chapter 3), ongoing technical assistance to municipalities (see Chapter 4), and resource management and support activities (see Chapter 5).

The annual program review and budget development process defines the amount of 3C funding (from federal grants that support the 3C process) that is available for discrete studies in the UPWP. After accounting for 3C-funded continuing and ongoing programs, the remaining funding is available for discrete studies.

To develop study ideas for the FFY 2025 UPWP, the MPO drew from the following sources to generate ideas for potential inclusion in program work or in a listing known as the Universe of Proposed Studies (see Appendix C) for evaluation by MPO staff and the MPO's UPWP Committee.

1. **Public engagement:** Staff held meetings to gain input from subregional planning groups and other stakeholders. Subregional groups—organized by MAPC—include municipal representatives who are focused on regional planning topics (Figure 1-1). Staff also provided opportunities for input into ongoing program work at UPWP committee and Advisory Council meetings. Furthermore, staff distributed a survey to members of the public to solicit study ideas and proposals.
2. **Advisory Council:** MPO staff met several times with the Advisory Council throughout the development of the FFY 2025 UPWP to solicit ideas and priorities for study and program work, present preliminary drafts of the FFY 2025 Universe of Proposed Studies, and gain input on transportation planning priorities.
3. **UPWP Committee:** MPO staff met with the UPWP Committee of the MPO throughout development of the UPWP. The committee oversaw the entire document development process and contributed to generating, analyzing, and prioritizing discrete study ideas. The committee additionally provided comment and input on activities planned within the MPO's ongoing work programs.
4. **Existing planning documents:** Various plans and programs developed and conducted by the MPO and state agencies document transportation issues that require further study. These include the regional Congestion Management Process, which monitors the transportation network to identify locations and sources of congestion; *Focus40*, the MBTA's long-range capital plan; the MPO's long-range planning documents, including the current LRTP, *Destination 2050*; MetroCommon, MAPC's long-range plan for the region; MassDOT's statewide modal plans; MassDOT's Statewide Long-Range Transportation Plan, *Beyond Mobility*, and other recent studies.
5. **Past guidance:** The Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and MassDOT issue guidance on addressing the planning emphasis areas.
6. **FFY 2025 UPWP public comment letters and study proposals:** MPO staff received numerous emails and letters from the public regarding potential study ideas, which were integrated into the Universe of Proposed Studies.
7. **Consultations with MassDOT, the MBTA, and MAPC:** MPO staff consulted with its partner agencies to identify study ideas.
8. **MPO staff-identified needs:** MPO staff shared a survey with other CTPS staff to encourage discussion and sharing of study concepts.

MPO staff works continuously to enhance public participation in the UPWP and other MPO activities, and strives to achieve continued improvements in the volume, diversity, and quality of public input. More information about the MPO's public engagement process is available in Chapter 3, and at https://www.bostonmpo.org/public-engagement.

Evaluating and Selecting Discrete Studies

MPO staff evaluated each new proposal in the Universe of Proposed Discrete Studies based on how it helps the region accomplish the MPO's goals as laid out in the LRTP, whether staff has the capacity to carry it out, and a variety of other factors.

In addition to conducting the study evaluation process, MPO staff defined general scopes and estimated costs for proposed planning studies and considered potentially feasible issues to study. Staff considered these factors with input from the public, the Advisory Council, MPO members, and partner agencies, along with the relevance of a given study proposal to one of the MPO's ongoing programs (e.g., the Bicycle and Pedestrian Program or the Multimodal Mobility Infrastructure Program). Priority was given to study proposals that either align with ongoing MPO work or have the potential to inform future MPO work.

Proposed studies that did not align with one of the MPO's ongoing work programs were considered for funding as a discrete study and presented for review to the UPWP Committee.

Table 2-1 shows the studies in the FFY 2025 universe that were selected for funding as discrete studies in FFY 2025. Chapter 4 provides detailed descriptions of these studies.

Table 2-1
FFY 2025 New Discrete Funded Studies

Universe ID	Project ID	Study or Program	Proposed FFY 2025 CTPS Budget
M-2	13819	Bluebikes and MBTA Connections	$60,000
M-4	13820	Roadway Pricing: Balancing the Need for a Transition to Sustainable Mobility with Equity Considerations	$50,000
F-1	13821	Decarbonizing the Freight Sector: Exploring the Potential for Using E-cargo Bikes for First-/Last-mile Freight Deliveries	$40,000
Total for New Discrete Studies			**$150,000**

Public Review of the Draft UPWP

MPO staff incorporates into the draft UPWP descriptive and financial information about ongoing and new UPWP studies, information about the UPWP development process, and other major transportation planning studies that will occur in the region during the relevant federal fiscal year. Appendix D provides an analysis of the distribution of UPWP-funded work products by subregion and municipality. Once the MPO votes to release the draft for public review, MPO staff posts the document to the MPO website (www.bostonmpo.org) and provides notice of its availability through various communication outlets.

As previously noted, public engagement forms a major part of the input to the UPWP each FFY. After the MPO releases the draft UPWP, there is a public comment period. During this time, MPO staff members solicit public input via the MPO email list, the MPO website, and social media outlets. Staff compiles all public comments received during this period and presents them to the MPO.

Information about the public review process for the Draft FFY 2024 UPWP is available in Appendix B.

Other Regionally Significant Transportation Planning Studies

The UPWP also includes a list (Appendix A) of other federally funded and/or regionally significant transportation planning activities active in the region during the relevant FFY. These activities are not funded with the MPO's planning funds, but may be funded and implemented by individual transportation agencies, municipalities, or academic institutions. Often, these efforts make use of the expertise and tools that CTPS is uniquely able to provide.

Monitoring Progress of UPWP Studies

The MPO approved the following procedures for monitoring the studies in the FFY 2025 UPWP:

- Work programs for tasks that are not permanent (ongoing) MPO programs but are supported by federal 3C planning funds must be approved by the MPO prior to execution of work.
- CTPS work supported by other funding sources (for example, other governmental entities) should be approved by the MPO with the assurance that the new work will not interfere with other MPO-funded work.
- Monthly progress reports on all active studies and work programs must be submitted to the respective funding agency (FHWA or FTA) by the agency conducting the work (CTPS and/or MAPC). The reports must include the following information for each study or work program:

    - brief narrative describing the work accomplished
    - key personnel attendance at meeting(s) held during the reporting month
    - objectives and planned activities for the next month
    - percent of work completed
    - some measure of actual resources (for example, hours and funds) charged to the contract over the past month
    - comparison of actual cumulative resources expended compared to the contract budget
- MPO approval for release of a 3C-funded study's work products is based on whether the objectives stated in the work program were met and whether the stated deliverables were produced.

Amendments and Administrative Modifications to the UPWP

If necessary, MPO staff can make amendments and administrative modifications to the UPWP throughout the year. All 3C documents endorsed by MPOs, such as the TIP, LRTP, and the UPWP, must follow standardized procedures regarding amendments and/or administrative modifications. If an amendment is under consideration, MPO staff notifies the Advisory Council and other interested parties, including affected communities. The MPO follows the procedures specified in the MPO's Public Engagement Plan.

The following are the guidelines regarding the conditions that constitute an amendment to the UPWP, as received from FHWA by MassDOT and the MPO in FFY 2025 for future UPWPs.

Amendments to the UPWP, defined as significant changes to the overall UPWP that require federal approval, include the following:

- addition or deletion of a UPWP task or sub-task
- major changes to UPWP task descriptions, activities, and other information
- funding increase above the originally approved UPWP overall budget
- funding transfers between tasks equal to or greater than 25 percent of the UPWP task budget
- funding increase or decrease equal to or greater than 25 percent of the UPWP task budget

Administrative modifications to the UPWP, defined as minor adjustments to the overall UPWP that do not require federal approval, include the following:

- minor changes to UPWP task descriptions, activities, and other information
- funding transfers between UPWP tasks less than 25 percent of the UPWP task budget

- funding increase or decrease less than 25 percent of the UPWP task budget

Staff must present all proposed amendments and administrative modifications to the MPO for consultation prior to endorsement. The UPWP Committee will review both amendments and administrative modifications before forwarding them to the MPO. MPO members must vote to approve both amendments and administrative modifications. For amendments, the MPO will vote to either release the amendment for a 21-day public comment period or waive said comment period (upon recommendation from the UPWP Committee) prior to an endorsement vote. Members of the public may attend and provide comments at UPWP committee meetings and MPO meetings at which amendments and administrative modifications are discussed.

The MPO may make administrative modifications without a public review period at the MPO's discretion, although information will be shared with MassDOT's Office of Transportation Planning (OTP). When submitting the standard Budget Reallocation Request form to OTP, staff must complete all fields with clear indication that the MPO was consulted prior to submission. Staff must submit back-up documentation, including the UPWP description of task(s) affected, original budget, revised budget, and justification for the request. Amendments will go into effect after approval by FHWA. These procedures are additionally documented in the MPO's Public Engagement Plan.

FUNDING THE UPWP

The total federal funding programmed in this UPWP is $7,537,395. All federal funds programmed in the UPWP are allocated to the Boston Region MPO by MassDOT as FHWA 3C Planning (PL) funds. However, these federal funds initially come from two sources: the FHWA and the FTA. The federal funds, which are supplemented by a state match provided by MassDOT, include the following initial sources:

- FHWA 3C Planning (PL): FHWA planning funds are distributed to the MassDOT OTP, according to an allocation formula established by federal legislation, to carry out the 3C planning process. OTP distributes these funds to Massachusetts MPOs according to a formula that is primarily based on the region's road mileage and population. The formula was developed by the Massachusetts Association of Regional Planning Agencies (MARPA) and is known as the MARPA formula. The FFY 2025 3C PL funding allocation for the Boston region, including state matching funds, is $4,599,322. The total Boston region 3C PL allocation is split between CTPS, which receives $3,725,451, and MAPC, which receives $873,871.
- FTA 3C Planning (Section 5303): FTA provides 3C planning funds for transit projects to MPOs and Departments of Transportation under Section 5303 of the Federal Transit Act. These funds require a non-federal match

and are distributed according to an allocation formula. In Massachusetts, these funds are administered by MassDOT, which transfers them from FTA to FHWA to be administered as a Consolidated Planning Grant before distribution. The FFY 2025 FTA allocation for the Boston region, including a total local match, is $2,517,632. This amount is split into two categories:

- MPO and MassDOT FTA 3C Planning (Section 5303): The total amount of FTA funds, including a local match, programmed in this UPWP as PL for work conducted by the MPO staff is $2,076,561.
- MAPC FTA 3C Planning (Section 5303): A portion of the Boston region's FTA allocation is provided to MAPC. MAPC uses these funds to conduct its transit-planning studies programmed through the UPWP. The total amount of FTA-derived funds, including a local match, allocated to MAPC as PL funds for FFY 2024 is $441,071.

Contract Work

In addition to MPO-funded work, CTPS performs planning analyses and studies funded by state transportation agencies, including MassDOT, the MBTA, and Massport. More detail about these agency-funded studies can be found in Appendix A.

Chapter 3

MPO Support and 3C Planning

INTRODUCTION

The activities described in this chapter broadly cover work that the Boston Region Metropolitan Planning Organization (MPO) completes to fulfill the continuous, comprehensive, and cooperative (3C) transportation planning process and to maintain its certification by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). Activities are grouped into three areas: (1) those that support the core MPO planning and programming functions, (2) those that support the 3C planning process, and (3) those that support the MPO board and committee operations and their decision-making processes. Together, this body of work represents the agency's priorities in allocating resources to provide an equitable, pollution-free, and modern regional transportation system that gets people to their destinations safely, easily, and reliably, and that supports an inclusive, resilient, healthy, and economically vibrant Boston region.

Table 3-1 presents the funding in federal fiscal year (FFY) 2024 and FFY 2024 for each of these activities and includes a brief description of their work, progress, and products. Although ongoing programs and work may generally comprise similar tasks from year to year, often there are variations in budgets that reflect greater or lesser emphasis in certain tasks or incorporation of new tasks. For example, MPO staff may undertake new analyses under specific line items; expand or change the form of public engagement; fold tasks undertaken in one year into an ongoing activity in a subsequent year; take on a new initiative of the MPO; or experience fluctuations in staffing levels that account for budget changes. Where appropriate, the table and individual descriptions explain these differences.

The budget tables that accompany each activity description include the associated salary and overhead costs. Direct costs associated with the activities are found in Chapter 5.

Table 3-1
FFYs 2024–25 MPO Support and 3C Planning

Name	Project ID	FFY 2024 CTPS UPWP Budget	FFY 2024 Work Progress and Products	Proposed FFY 2025 CTPS Budget	FFY 2025 Planned Work Progress and Products
Long-Range Transportation Plan	8125	$106,000	• Developed, sought public feedback on, and finalized the 2023 LRTP, *Destination 2050* . The plan is effective as of October 1, 2023, and will remain in effect for four years • Finalized the Needs Assessment for *Destination 2050* , shared results and materials, and developed processes for maintaining and updating information over time • Reviewed and updated the MPO's planning framework • Continued public outreach to support *Destination 2050* activities, including scenario planning, creating a planning framework, and selecting investment programs and projects • Identified, evaluated, and selected projects and programs for the recommended LRTP • Analyzed the recommended plan with respect to greenhouse gas emissions and equity outcomes • Addressed comments on *Destination 2050* from state and federal agencies • Continued implementation of *Destination 2040* (the 2019 LRTP) • Continued to monitor best practices in planning and communication, as well as developments in key issue areas • Responded to changes to the SIP	$280,000	• Begin implementing *Destination 2050* , including by carrying out and refining investment programs and initiatives outlined in the LRTP • Conduct public outreach on LRTP topics, including Needs Assessment updates and the MPO's vision, goals, and objectives • Continue to monitor current state-of-the-practice communications methods, planning tools, and approaches • Conduct research and analysis and continue developing materials for ongoing updates to the Needs Assessment • Update the web page for the *Destination 2050* • Begin processes to develop and analyze scenarios to support the MPO's next LRTP • Coordinate with MassDOT, the MBTA, the region's RTAs, other MPOs, and other stakeholders regarding LRTP development
Transportation Improvement Program	8225	$321,000	• Developed the FFY 2025–29 TIP • Continued outreach to municipalities, subregions, regional transit authorities, MassDOT, and other partners to solicit ideas for inclusion in the FFY 2025–29 TIP and in the TIP Universe of Projects • Implemented the Transit Transformation Program. • Solicited applications and selected projects for the FFY 2025 Project Design Pilot. • Held workshops and internal discussions to inform the development of the FFY 2026–30 and subsequent TIPs with an eye towards the project pipeline, project readiness challenges, discretionary grant applications, and long term commitments to current and future major capital projects.	$330,000	The TIP is updated annually, and in FFY 2025 will be updated to the FFYs 2026–30 TIP document. This update will entail the repetition of some of the tasks performed in column D, including the deployment of the Project Design Pilot.
Unified Planning Work Program	8325	$132,000	• Developed the FFY 2025 UPWP • Conducted outreach to municipalities and other stakeholders in the region through MAPC subregional meetings, digital communications, and conversations with agencies to develop study ideas for the UPWP • Discussed UPWP matters with Regional Transportation Advisory Council, including development of study ideas for the UPWP and education about the UPWP products and process • Held internal discussions on updates to the UPWP process and document	$135,000	Activities generally remain the same year to year, with staff supporting the MPO in producing its annual (FFY 2026) UPWP.

Public Engagement Program	9625	$338,000	• Engaged advocates, community groups, municipal and agency stakeholders, and the general public in the MPO's decision-making processes and planning work • Provided timely communications and accessible engagement opportunities via public meetings and events, surveys, email, and social media • Developed partnerships with community-based organizations to engage underrepresented communities and reduce barriers to engagement • Conducted in-person engagement at community events with varied and accessible materials and activities • Expanded the program to support additional engagement across MPO programs and projects • Updated the Public Engagement Plan and Guidebook • Tracked, evaluated, and reported to the MPO board on the scope and effectiveness of engagement activities • Developed new data analysis and equity tools to identify and address gaps in engagement • Managed the Regional Transportation Advisory Council, providing both administrative and strategic planning support • Developed a pilot Community Leadership Institute educational program to engage underrepresented groups and create a pipeline for Advisory Council membership • Conducted the FFY24 discrete study *Strategies for Environmental Outreach and Engagement*, applied findings to program planning	$397,000	Activities generally remain the same year to year, with staff supporting public engagement in the MPO's decision-making processes and planning work. In FFY 2025, engagement staff will support engagement activities related to the implementation of the *Destination 2050* LRTP, the development of the next LRTP, the development of the FFY 2025 TIP and UPWP, and several transportation planning studies. Staff will also coordinate and support engagement for other MPO programs and projects, such as the Transportation Equity, Multimodal, Bicycle and Pedestrian, and Climate Resilience Programs and the Vision Zero Action Plan. The Public Engagement Program will continue managing and developing its sub-programs, the Regional Transportation Advisory Council and the Community Leadership Institute. Staff will continue to expand the program in coordination with the Transportation Equity Program to better reach communities underserved by the transportation system and those with limited English proficiency, and to increase the representation and participation of transportation equity communities in the planning process. The strategies and methods employed by engagement staff will continue to evolve with best practices to become more sophisticated. Changes to methodology will be included in updated versions of the MPO's Public Engagement Plan.
Performance-Based Planning and Programming	8825	$179,500	Developed annual, two-year, and four-year performance targets for several areas of measurement Incorporated performance targets and past performance into LRTP and TIP Replaced the Performance Dashboard with a new application that displays federally required performance measures and other regional performance data Published a Performance Based Planning and Programming Resource Guide, detailing strategies that municipalities and stakeholders can use in projects to improve regional performance Explored areas for setting performance targets in addition to those mandated by FTA.	$140,000	Activities generally remain the same year to year. Establishing performance targets for required measures in safety, infrastructure condition, asset management, congestion management, and air quality. Incorporating performance targets into TIP and LRTP processes. Exploring areas of performance target setting beyond those mandated by FTA. Exploring new tools and applications for performance reporting.
Transportation Equity Program	8525	$203,000	• Completed an update to the 2022 Title VI Triennial Report • Completed an online equity dashboard that identifies inequitable outcomes in the transportation system • Conducted DI/DB mitigation analysis • Supported the MPO's public engagement program in engagement with Title VI, EJ, and other nondiscrimination populations • Provided technical support to the TIP and other MPO programs • Maintained equity Census data for the MPO • Updated documentation of the MPO's LRTP DI/DB analysis • Presented on several conferences and panels to discuss accomplishments of the TE program	$215,000	• Activities generally remain the same year to year. • Respond to Title VI reporting requirements • Update metrics on the MPO's equity dashboard • Update the MPO's DI/DB Policy • Conduct a DI/DB mitigation analysis for the TIP • Monitor developments at USDOT regarding civil rights, Title VI, and EJ • Participate in workshops and conferences related to transportation equity

Air Quality Program	8425	$55,000	• Coordinated with external partners such as MassDOT, FHWA, and EPA on topics related to air quality, greenhouse gas emissions, and CMAQ • Provided technical support for the air quality conformity and greenhouse gas sections of the TIP and LRTP • Assessed regional projects in eSTIP for greenhouse gas reporting requirements • Conducted project-level air quality analysis for projects in the TIP. • Prepared material and voted on behalf of the Boston Region for CMAQ consultation committee meetings • Attended webinars and collected information related to new greenhouse gas performance measure	$50,000	Activities generally remain the same year to year, and will include coordination with external partners on air quality topics, performing project-level analyses to estimate emissions for the TIP and determine CMAQ eligibility, attending CMAQ consultation committee meetings, supporting a regional greenhouse gas analysis for the LRTP if needed, updating the air quality conformity language to reflect the most recent regulations, and other tasks as needed.
Congestion Management Process	2125	$113,500	• Attended monthly MassDOT/INRIX meetings • Hosted CMP committee meetings, including one that served as a workshop for the roadway pricing study • Completed the Learning From Roadway Pricing Experiences study • Completed the TIP Before-and-After study to examine the impact of TIP funded projects on the region	$125,000	With new staff leading the CMP, 2025 will be a year of reassessment and growth. Staff will create a 3-5 year plan for the program in addition to performing regurally scheduled work such as monitoring the CMP for all modes. The main objective is to complete an online CMP dashboard, which will show a snapshot of congestion on the CMP network. In addition, the CMP committee will meet several times a year to help promote the Boston Region MPO's CMP.
Core MPO Functions		**$1,448,000**		**$1,672,000**	
Climate Resilience Program	8725	$114,000.00	• Provided technical support for the TIP and the LRTP's Needs Assessment • Held a stakeholder workshop to collaboratively reevaluate the TIP's resilience project evaluation criteria • Developed new TIP resilience criteria and interactive guidance to support implementation • Began evaluating performance of new TIP resilience criteria • Began scoping a framework for assessing climate vulnerability and programming solutions • Developed new partnerships with regional organizations • Leveraged the Massachusetts Coast Flood Risk Model (MC-FRM) and other climate data to support analyses of transportation infrastructure exposed to climate hazards • Coordinated internally to discuss resilience themes, data sources, engagement, and resilience in the MPO's certification documents. • Coordinated with external partners such as MAPC, the MBTA, MA EOEEA, and MassDOT on resilience topics • Attended external events related to resilience and adaptation • Developed text and material to create a resilience-focused page on the MPO's website	$100,000	• Maintain connections with external partners • Continue collaboration among staff • Leverage new platforms and connections with regional stakeholders to drive program scope and discrete work • Continue scoping a framework for assessing climate vulnerability and programming solutions, including reviewing usability, data needs, outputs, and credibility of vulnerability assessment tools • Continue evaluating performance of new TIP resilience criteria • Provide technical support for the TIP

Freight Planning Program	2225	$119,000	• Completed an initial study on sustainability and decarbonization in the freight and logistics sector, focusing on the North Suffolk area. • Outreach and coordination with stakeholders. • Redesigned the landing page for the Freight Program to increase awareness of ongoing activities among stakeholders.	$125,000	• Multi-year work plan for the Freight Planning Program. • A follow-up study on the potential opportunities and challenges to decarbonizing the freight sector. • An interactive and user-friendly landing page for the Freight Program.Exploratory work on freight Travel Demand Modelling (TDM) to understand travel behavior, freight demand and community impact. • Ongoing outreach and coordination with stakeholders. • Coordination with municipalities to identify freight project candidates that could be eligible for TIP funding.
Regional Model Enhancement	7125	$837,000	• Released TDM23.1.0 with updated socio-economic data, roadway and transit networks, Logan enplanement projections, bugfixes, and refined calibration. • Developed model user agreement and external sharing process to provide access to TDM23.1.0 for external stakeholders. • Enhanced model summary report platform, content, and developed a user interface to select scenarios for comparison. • Developed report of model structure and performance to document TDM23.1.0 parameters, organization, and validation results. • Produced an online model users guide with background information on the model operation as well as specific installation, configuration, and use guidance. • “TDM23 Unveiled” webinar and “TDM23 Release Workshop” webinar and in-person training • Produced model program webpage	$850,000	Release, document, and support TDM23.1.1 with updated socio-economic data, roadway and transit networks, bugfixes, and refined calibration. Promote understanding and application of TDM23 through external model users workshops to share experiences in model application, exchange ideas on model enhancements, and communicate changes in TDM23 model platform. Develop methodology to prioritize maintenance and feature tasks for future model releases. Update model roadmap needs and refine plans for future model adoption and development. Complete high level design for TDM27, the next generation travel demand model to support the 2027 LRTP. Conduct exploratory analysis of household survey data as
Data Program	5025	$568,000	Maintained the data vision Engaged staff with standards for cataloguing data and documenting analysis processes Developed internal procedures for application development Created model frameworks for dashboard applications Established authoritative reference socioeconomic data sets and processing Responded to data requests from external stakeholders Piloted web infrastructure for analytical tools Launched Data User Group to explore data opportunities and challenges	$575,000	Develop guidelines for data request process for external stakeholders Develop data publication standards and explore new methods for sharing data publicly Ensure application of documentation standards within CTPS Deploy web infrastructure for analytical tools Research new data sources and analytic techniques

Bicycle and Pedestrian Planning Program*	2525	$152,000	• Launched the Bicycle and Pedestrian Advisory Group. • Engaged the Bicycle and Pedestrian Advisory Group to coordinate regional planning efforts and ensure the Boston Region MPO's plans align with the vision and goals outlined in the Massachusetts Bicycle and Pedestrian Statewide Transportation Plans. • Began collecting continuous bicycle and pedestrian count data for two-week periods at selected locations throughout the Boston MPO region. • Published updates to the 2014 regional bicycle network gap analysis. • Coordinated with state agencies, MAPC, other MPOs, MassDOT's Safe Routes to School Program, WalkBoston, MassBike, LivableStreets, municipalities, and other groups regarding bicycle and pedestrian planning for the region. • Provided ongoing technical support to communities for current tools and practices regarding bicycle and pedestrian issues, with particular focus on promoting safety.	$185,000	• Engage the Bicycle and Pedestrian Advisory Group to help inform the direction of the Bicycle and Pedestrian Planning Program. • Collect data on bicycle and pedestrian volumes at on-road and off-road facilities in the Boston region, and post collected count data to the Boston Region MPO's Bicycle and Pedestrian Count Database for public use. • Gather input and identify the needs and goals for a regional bicycle and pedestrian plan for the Boston MPO region that combines the vision and goals of the Boston MPO with the priorities outlined in the Massachusetts Bicycle and Pedestrian Statewide Transportation Plans and considers municipalities' existing bicycle and pedestrian plans. • Reassess gaps in the regional bicycle network to update the locations where bicycle facilities are needed in the Boston region. • Select the first bicycle and pedestrian guidebook topic; Begin research and development. • Coordinate with state agencies, MAPC, other MPOs, MassDOT's Safe Routes to School Program, WalkBoston, MassBike, LivableStreets, municipalities, and other groups regarding bicycle and pedestrian planning for the region. • Provide ongoing technical support to communities for current tools and practices regarding bicycle and pedestrian issues, with a particular focus on promoting
Multimodal Mobility Infrastructure Program*	2825	$332,000	• Updated the project selection criteria for corridor and intersection studies. • Evaluated corridors and intersections for project selection. • Conducted study of Route 37 in Braintree to develop concepts with short-term and long-term recommendations for the corridor. • Conducted study of Freeman Square in Lynn to develop concepts with short-term and long-term recommendations for the intersection. • Conducted study of the Washington Street (Route 129) at Hanover Street/Beacon Hill Avenue intersection in Lynn to develop concepts with short-term and long-term recommendations for the intersection. • Completed a exploratory investigation of roadway pricing case studies. • Explored large-scale mobility data to evaluate feasibility for high-resolution applications focused on people walking and biking.	$370,000	• Multi-year work plan for the Multimodal Mobility Infrastructure Program. • Automating the project selection workflow for corridor and intersection studies. • Recommendations for selected corridor improvements. • Recommendations for selected intersection improvements. • Ongoing contributions to transit service access, and priority assessments. • Guidebook(s) to support multimodal infrastructure studies. • Regional studies that support strategies to reduce auto-dependence and enhance multimodal travel opportunities for all residents.
Programs Supporting the 3C Process		**$2,122,000**		**$2,205,000**	

Support to the MPO and its Committees	9124	$460,186	Continued support to the meetings and activities of the MPO board and its committees. Work entailed • Preparing meeting and information materials, including agendas, minutes, notices, document translations, memoranda, reports, correspondence, summaries, website content, maps, charts, illustrations, and other visual materials as needed to support MPO discussion and actions • Posting meeting materials in digital form on the MPO meeting calendar webpage and in hard copies that are provided at meetings as appropriate • Hosting approximately 24 MPO meetings and 18 MPO subcommittee meetings, and performing the associated tasks and pre- and post-meeting logistics • Conducting activities to support compliance with federal requirements and guidance, including coordination with neighboring MPOs, MassDOT, and federal partners	$475,017	Tasks and work products generally remain the same from year to year, with variations to the level of effort based on the specific requests by the MPO and state and federal partners. Generally, the expected effort includes • Hosting approximately 24 MPO meetings and 10 MPO subcommittee meetings, and performing the associated tasks and pre- and post-meeting logistics • Coordinating 3C planning and programming activities and programs • Coordinating with state and federal partners • Coordinating with neighboring MPOs • Supporting the Transportation Policy Task Force
General Graphics	9224	$309,500	Provide graphics support to the MPO and its member agencies. This includes Designing and producing maps, charts, illustrations, report covers, brochures, slides, and photographs Applying other visualization techniques Creating standards and proof all MPO products both printed and online Producing finished layouts of MPO Documents Creating other products that improve communication within the agency and its member agencies Produce accessible materials in PDF and HTML formats for posting on the Boston Region MPO website Assist in producing materials, including meeting minutes, work scopes, memoranda, reports, and other public materials Review accessibility requirements and current CTPS standards and processes Implement standards within memorandum and report templates	$314,000	Tasks and work products generally remain the same from year to year.
General Editorial	9724	$230,000	Provide editorial support to the MPO staff. Review public-facing documents and make revisions to correct grammar and formatting, improve clarity and organization, and maintain consistent style. Products reviewed include certification plans, reports, memoranda, work scopes, meeting minutes, presentations, job advertisements, and other materials as required. Maintain and update document templates for use in the creation of accessible documents. Set editorial standards and maintain the CTPS Editorial Style Guide for staff's use.	$233,000	Tasks and work products generally remain the same year to year.

Transit Working Group Support	8924	$22,500.00	• Hosted four working group meetings and a series of small discussion groups ("coffee chats") and managed pre- and post-meeting communications and logistics • Updated the MPO about Transit Working Group development and activities • Updated the Transit Working Group web page • Summarized meeting discussions • Hosted a forum on microtransit in cooperation with MAPC and the MBTA Advisory Board • Researched topics and issues that may be relevant to future Transit Working Group meetings	$23,000	• Host quarterly working group meetings • Host one to two coffee chats per month • Host one-off additional events as proposed • Manage pre- and post-meeting logistics • Develop materials and resources to support working group meeting and activities, as needed • Provide updates to the MPO about the transit working group • Support communication for and about the group using email, social media, and the MPO website • Prepare documentation about pilot working group meetings, activities, and participant feedback for the MPO
Support to the MPO and its 3C Process		**$1,022,186**		**$1,045,017**	
Support to the MPO and its 3C Process Subtota				**$4,922,017**	

*Indicates that program fulfills Federal Highway Administration Complete Streets requirement

CORE MPO FUNCTIONS

The programs and activities included in this section include the core products required by the MPO's federal partners and related federally required reporting and monitoring activities for carrying out the MPO's 3C planning and programming functions. Programs supporting the 3C planning process, such as the Data Program and the Bicycle and Pedestrian Program, can be found in the following section, Programs Supporting the 3C Process.

- Long-Range Transportation Plan (LRTP)
- Transportation Improvement Program (TIP)
- Unified Planning Work Program (UPWP)
- Public Engagement Program (which includes Public Engagement Plan)
- Performance-Based Planning and Programming (PBPP)
- Transportation Equity Program (TE)
- Air Quality Program (which includes conformity determinations)
- Congestion Management Process (CMP)

Long-Range Transportation Plan

Project ID Number	8125
FFY 2025 Total Budget	$280,000
Schedule	Ongoing

Purpose

The LRTP establishes a vision for the Boston region's transportation system and guides both capital investments and research studies to support that vision. The LRTP guides transportation investments for at least the next 20 years and must be updated every four years per federal regulations. It serves as the MPO's guiding document, and it establishes regional transportation goals, objectives, and investment approaches that the MPO operates under. The MPO adopted the current LRTP, *Destination 2050*, in July 2023, and will continue early development activities for the next LRTP, which is anticipated to go into effect October 1, 2027.

Approach

LRTP Needs Assessment

The Needs Assessment provides a holistic view of the transportation needs of the Boston region through data analysis and public engagement. It guides the development of the LRTP and informs project investment decisions in the TIP and study selection in the UPWP. It also shapes the development of MPO programs, such as in the selection of corridor study locations.

In FFY 2025, staff will use the findings of the Needs Assessment to inform the development of land use and transportation options and scenarios for the next LRTP update. Staff will also update the Needs Assessment with new information as it becomes available and perform further analyses to keep the Needs Assessment current and provide updated information for future studies, reports, and deliberations. Staff will build on resources created as part of the *Destination 2050* Needs Assessment, with a focus on expanding the availability of data and findings to the public. This may involve integrating information from other MPO applications, data resources, and programmatic work into the Needs Assessment. Staff will also develop a process for maintaining and updating the

Needs Assessment over time, in coordination with the LRTP's four year release cycle.

Implement Destination 2050 and Amendments

Staff will continue implementing *Destination 2050* in FFY 2025 through the development of the TIP and UPWP (see these respective program descriptions). This will include supporting initiatives to develop guidelines for MPO investment programs and updating TIP project selection criteria, where applicable. MPO staff will also support public engagement about the adopted *Destination 2050* plan and its implementation, as needed.

If changes are made to the regionally significant projects funded in the FFYs 2025–29 TIP that meet criteria for being included in the LRTP, an amendment to *Destination 2050* may be required. Staff will prepare the informational materials for MPO decision-making and follow MPO procedures for informing and engaging the public, including posting materials on the MPO website.

Scenario Planning

In FFY 2022, MPO staff began exploratory scenario planning work to help the MPO envision multiple possible futures for the Boston region; understand the effects on transportation, air quality, climate change, mode shift, the economy, and land use; and assess how to best prepare for uncertainties while pursuing an overarching vision for the transportation network. Some findings from this process were incorporated into activities to develop *Destination 2050.* Continuing in FFY 2025, MPO staff will lead exploratory scenario work in partnership with Metropolitan Area Planning Council (MAPC) staff. This work is expected to make use of alternative socioeconomic and land use scenarios provided by MAPC, as well as tools such as the MPO's travel demand model. Staff will develop and analyze scenarios of interest to MPO members, staff, MAPC and other stakeholders; assess the effects of potential options for changes to the transportation network; develop materials to effectively communicate results; and engage MPO members and others in the process. This work will support MPO decision-making and lay the groundwork for future long-range transportation plans.

Monitoring Planning Best Practices

The LRTP program plays an important role in keeping the MPO abreast of the current state-of-the-practice communications methods, transportation issue areas, and planning tools. This information also supports work in other MPO

programs. In collaboration with MAPC, staff will continue to explore effective ways to assess and address the Boston region's needs, analyze transportation and land-use options, and apply best practices in long-range transportation planning.

Development of Next LRTP

In developing the next LRTP, staff will research, plan, coordinate with interested parties, and review the priorities of the MPO and other state and regional agencies. Staff will also begin compiling qualitative, quantitative, and public engagement data. Input will be shared through a periodic update to the MPO's Needs Assessment, updates to the MPO board, and deliberations to shape the MPO's stated vision, goals, and objectives for the region in the future. Through updating the Needs Assessment and scenario planning, MPO staff will generate information that will guide the investment strategies for the next LRTP.

FFY 2025 Anticipated Outcomes

- Support activities related to *Destination 2050* implementation
- Coordinate with staff and MPO members on revisions of criteria to be used in project selection for the LRTP and the TIP
- Update the Needs Assessment and related analyses
- Support public engagement activities related to the adopted *Destination 2050* plan, as needed, and the development of the next LRTP
- Continue the MPO's exploratory scenario planning work that will help the MPO in its decision-making for the next LRTP, including analyzing scenarios, presenting results, and engaging stakeholders
- Continue to explore state-of-the-practice methods for long-range transportation planning
- Begin gathering and compiling input to inform MPO decision-making for the development of the next LRTP
- Prepare amendment(s) to *Destination 2050*, if necessary

Transportation Improvement Program

Project ID Number	8225
FFY 2025 Total Budget	$330,000
Schedule	Ongoing

Purpose

The Boston Region MPO's TIP is a five-year, financially constrained program of planned investments in the metropolitan area's transportation system. Although federal regulations require that the TIP be updated every four years, Massachusetts MPOs produce annual updates.

Approach

Municipal Engagement and Compilation of the Universe of Projects

Staff communicate with the MPO region's municipalities through online TIP informational sessions and workshops, MAPC subregional meetings, and correspondence with municipal TIP contacts, Massachusetts Department of Transportation (MassDOT) staff, and elected officials to gather information on existing and new TIP project-funding requests. Staff then compile the projects into a Universe of Projects list for consideration by the MPO.

Project Evaluation

The MPO uses TIP project evaluation criteria to identify projects that help the region attain the vision, goals, and objectives established by the LRTP. The criteria support decision-making for the programming of transportation projects in the region by establishing a transparent, inclusive, and data-driven process through which funds are allocated. Staff updated project review criteria following the adoption of the MPO's LRTP, *Destination 2050*, in Summer 2023 and will utilize these evaluation criteria in the FFYs 2025–29 TIP cycle and future ones. Following the initial employment of this criteria, staff may revise and refine these measures in future TIP cycles, and work with project proponents to better navigate the criteria and project application process.

Project Prioritization

Staff develop a recommendation that proposes how to prioritize the MPO's Regional Target funding. Staff prepares a list of projects containing the evaluation scores and project-readiness information, then develops programming recommendations that include a selection of these projects taking into consideration the project scores, geographic distribution of investments across the region, project design status, LRTP-identified needs, and cost. Staff present the programming recommendations and work with board members to define the final program.

In addition to preparing the recommendation, staff prepare and present MassDOT state-prioritized projects and the capital programs for the Massachusetts Bay Transportation Authority (MBTA), the Cape Ann Transportation Authority, and the MetroWest Regional Transit Authority for the MPO's consideration.

TIP Document Preparation and Endorsement

Staff prepare a draft TIP that maintains compliance with federal regulations and requirements for a public review and comment period. During the public comment period, staff compile and summarize comments on the draft TIP and relay the comments to the MPO for consideration before endorsing the final TIP document.

Implementing Performance-Based Planning

The TIP document reports on the MPO's implementation of its performance-based planning program in Chapter 4. It highlights the results of monitoring trends in the region and notes any progress made toward established performance targets. The performance measures and targets, all of which are in alignment with federal Transportation Performance Management requirements, show relation to MPO goal areas, including safety, mobility and reliability, access and connectivity, clean air and healthy communities, and resilience.

Implementing Clean Air Analyses and Resilience Planning

The TIP document reports on the MPO's implementation of its Air Quality Program and Climate Resilience Programs in Chapter 5 and Appendix B. These sections indicate progress towards achieving regional goals such as reductions

in greenhouse gas emissions and advancement of resilience-centered investments.

Implementing Transportation Equity Metrics

The TIP document reports on the MPO's implementation of its transportation equity program in Chapter 6. The MPO employs transportation equity criteria in its evaluation of projects considered for regional prioritization, and conducts comprehensive equity analyses for the entire TIP.

Amendments and Administrative Modifications

In a typical year, various projects experience cost or schedule changes that require an amendment or administrative modification to the TIP. Staff prepare for the possibility of several amendments and/or administrative modifications to the FFYs 2025–29 TIP and manage public review processes as needed, including posting TIP materials on the MPO website.

FFY 2025 Anticipated Outcomes

- Develop the FFYs 2026–30 TIP, amend and make administrative modifications to the FFYs 2025–29 TIP
- Explore modernization of the TIP interactive database and other web-based TIP resources
- Document progress made on performance measures through the programming of TIP projects
- Refine and implement the MPO's investment programs as described in *Destination 2050,* including expanding project eligibility in the MPO's Community Connections investment program.
- Implement the projects funded by the FFY 2025 Project Design Pilot with MassDOT and monitor their progress.
- Continue to implement the MPO's project programming and cost-change policies, which were endorsed by the MPO in November 2021 and for which implementation began in FFY 2022
- Conduct additional analysis of the distribution of TIP funding and alignment with LRTP-identified needs to help pinpoint areas for targeted outreach to municipalities

- Use the equity analyses completed for the TIP to identify adjustments needed for the equity-related project evaluation criteria and any areas of focus for the TE program
- Refine and implement other needed adjustments related to project evaluation criteria to better reflect the MPO's goals and priorities and facilitate an accessible and comprehensive project application process.

Unified Planning Work Program

Project ID Number	8325
FFY 2025 Total Budget	$135,000
Schedule	Ongoing

Purpose

The UPWP, a federally required document that supports the 3C transportation planning process, has two main purposes:

- provide budget information to federal and state officials about the expenditure of federal funds for transportation planning projects being carried out by the Boston Region MPO, and
- provide information to government officials, local communities, and the general public about surface transportation planning projects expected to take place in the Boston Region MPO area.

The UPWP document includes descriptions and budgets for work that MPO staff will conduct during the upcoming federal fiscal year, including 3C-funded work conducted by Central Transportation Planning Staff (CTPS) for the MPO; and 3C-funded work executed by MAPC, which receives approximately 20 percent of the Boston region's allotment of 3C funding. Appendix A provides supplementary information about transportation studies happening in the Boston region that are regionally significant, and work conducted by CTPS and funded by state agencies or other entities.

Approach

Work on the UPWP is ongoing throughout the year, with the twin goals of developing the coming year's UPWP and supporting staff, the MPO, and its UPWP Committee in monitoring implementation of the current UPWP. Staff coordinates and prepares materials for all phases of development of the upcoming UPWP, including

- coordinating public participation in the UPWP process, such as

    - engaging state transportation agencies, municipalities, and the public, in conjunction with the MPO's Public Engagement Plan;
    - soliciting, evaluating, and recommending ideas for planning studies, ongoing program work, and technical assistance programs;
- conducting background research into planning needs;
- preparing budgets and project and program descriptions;
- coordinating document development with the MPO's UPWP Committee;
- responding to federal and state Department of Transportation guidance; and
- preparing, coordinating public review of, and distributing draft and final documents.

In support of the implementation of the current year's UPWP, staff

- support meetings of the MPO's UPWP Committee;
- regularly report on the implementation of the UPWP; and
- make adjustments, administrative modifications, and amendments as needed, according to federal regulations and guidance.

FFY 2025 Anticipated Outcomes

- Engage the public in development of the FFY 2026 UPWP
- Implement planned changes to the UPWP document and process
- Plan for and support meetings of the MPO's UPWP committee
- Report regularly on FFY 2025 UPWP implementation
- Complete amendments and administrative modifications to the FFY 2025 UPWP, as necessary
- Provide other informational materials as needed

Public Engagement Program

Project ID Number	9624
FFY 2025 Total Budget	$397,000
Schedule	Ongoing

Purpose

Public engagement is one of the core functions of an MPO. Engaging the public in the transportation planning process improves decision-making by helping to illuminate the social, economic, and environmental impacts of transportation planning decisions. Continuous engagement supports a communication loop that allows the MPO to build and maintain relationships with stakeholders, including advocates, community leaders, and members of the public. The MPO's vision for public engagement in the region is to hear, value, and consider, throughout all planning work, the needs and views of the full spectrum of the public and incorporate this input into decision-making.

Staff coordinates public engagement efforts with the MPO's TE Program to ensure that all members of the public—including populations that have been traditionally underserved by the transportation system and have historically lacked access to the decision-making process—have meaningful opportunities to participate in the transportation planning process that shapes the Boston region.

Approach

Implement the Public Engagement Program

Staff implement the MPO's Public Engagement Program according to the MPO's Public Engagement Plan through proactive engagement efforts tailored to varying audience needs, through meaningful relationship-building, and timely and accessible communications. This process provides information to individuals, organizations, and community representatives. The process also creates avenues for providing input and participating in the MPO's planning and decision-making. Staff continually evaluate the Public Engagement Plan and program

activities to ensure that they reflect current best practices and agency and LRTP goals, and address transportation inequities and gaps in participation.

Methods

Staff provide convenient, timely, and meaningful opportunities for members of the public to participate in the MPO's transportation planning process. These opportunities include the following:

- MPO-organized in-person and virtual open houses, workshops, and forums
- Electronic surveys and solicitation of comments and input via email campaigns, social media, and website content
- Public comment periods for certification documents
- Regular meetings with stakeholder organizations representing TE and other underrepresented populations to strengthen relationships and provide opportunities to influence the MPO's planning decisions
- In-person and virtual meetings, events, and engagement activities in partnership with other organizations
- Tabling at community events
- Attending and presenting at MAPC subregional municipal group meetings

To ensure that opportunities to participate in the transportation-planning process are equitable, accessible, and transparent, staff create content and disseminate information that is concise, current, and accessible regardless of ability. Staff regularly hold and attend events at convenient times and locations for various audiences, provide varied engagement activities and materials for different learning styles and abilities, and strive to provide incentives and compensation to reduce resource-related barriers to engagement and acknowledge the time and expertise of underrepresented populations.

Program Administration

Staff continually evaluate and refine the Public Engagement Program to increase public understanding of the MPO's work, improve its efforts to break down barriers to participation, and ensure that all MPO activities meet or exceed federal requirements for public participation. In consultation with the TE program, staff provide accommodations for people with disabilities at MPO-sponsored

meetings as requested and all materials—both digital and paper—in accessible formats.

Staff provide language access (both interpreter and translation services) at MPO-sponsored meetings and engagement events where engagement with populations with limited English proficiency is expected, and as requested. Staff also provide translations of engagement documents, surveys, emails, the MPO website, and other materials that allow for participation that is comparable to those with English language fluency. (These accommodations are funded as direct costs; see Chapter 6.)

Regional Transportation Advisory Council (Advisory Council)

Staff plan and facilitate monthly Advisory Council meetings in collaboration with the Advisory Council Chair and Vice Chair. This includes administrative support, (handling meeting logistics, scheduling speakers, and preparing and distributing agendas, meeting notices, materials, and minutes) as well as strategic planning to advance the Advisory Council's mission and goals in coordination with Public Engagement Program, agency, and LRTP goals. Staff regularly provide information, updates, and briefings on MPO activities at meetings and solicit feedback and advice from members on programs and projects. Staff also manage the administration of the Advisory Council by soliciting new members, implementing and updating bylaws, coordinating Advisory Council elections, and maintaining contact and attendance lists. During public comment periods on MPO documents, staff work with the Advisory Council and its committees as they develop and submit their comments.

Community Leadership Institute

Staff manage the Community Leadership Institute, an educational program that empowers stakeholders representing communities whose voices are currently underrepresented in the planning process to more effectively engage with the MPO, primarily via the Advisory Council, by equipping them with the knowledge and tools to effectively engage with the MPO planning process and developing a pipeline for soliciting and onboarding new Advisory Council members. The Community Leadership Institute, piloted in FFY 2024, will continue to develop in FFY 2025.

FFY 2025 Anticipated Outcomes

- Carry out federally required engagement activities, such as public comment periods, to support the 3C planning process in accordance with the Public Engagement Plan
- Conduct engagement activities such as meetings, surveys, events, workshops, and community tabling and interactive pop-up activities to support MPO plans, programs, and projects
- Build and expand relationships and partnerships with stakeholders, with a focus on organizations representing TE communities and populations with limited-English proficiency
- Employ innovative, creative, and varied strategies to expand and deepen engagement with members of the public
- Continuously track and analyze the reach and effectiveness of engagement activities, adjust strategies to address gaps in engagement, and provide regular updates on engagement to the MPO board
- Develop and deploy transparent and accessible communication and engagement materials
- Increase understanding of and engagement with the MPO's work via communication campaigns
- Provide support and advice to MPO staff to improve engagement in all MPO processes
- Host approximately 12 Advisory Council meetings and provide support for the associated tasks and pre- and post-meeting logistics
- Solicit and onboard new Advisory Council members with diverse perspectives
- Create and facilitate meaningful opportunities for the Advisory Council to provide input on the MPO's planning processes
- Develop the Community Leadership Institute and facilitate an engaging educational program for a new cohort of stakeholders

Performance-Based Planning and Programming

Project ID Number	8825
FFY 2025 Total Budget	$140,000
Schedule	Ongoing

Purpose

PBPP applies data to inform decisions aimed at helping to achieve desired outcomes for the region's transportation system. Federal legislation directs states, public transportation providers, and MPOs to use this performance-driven, outcome-based approach in their transportation planning processes. The Boston Region MPO can use PBPP practices to help achieve its goals for providing an equitable, pollution-free, and modern regional transportation system that gets people to their destinations safely, easily, and reliably, and that supports an inclusive, resilient, healthy, and economically vibrant Boston region.

Approach

Develop Targets for Federally Required Performance Measures

Staff provides information and recommendations to MPO members as they set, revisit, or update targets for federally required performance measures. This includes annual updates to targets pertaining to roadway safety, transit asset management, and transit safety, as well as targets that have two-year or four-year time horizons, including those related to National Highway System infrastructure condition, travel time reliability, congestion, and transportation-related emissions. MPO staff review and respond to federal regulations and guidance; gather and analyze data; develop performance baselines; and explore ways to improve target-setting methodologies. Staff coordinate with MassDOT, federal agencies, other MPOs and states, the region's public transportation providers, and other stakeholders as part of this work.

Continue to Integrate PBPP Elements into MPO Planning

Building upon prior work to integrate PBPP into the TIP and LRTP, MPO staff examine the links between capital projects that the MPO funds and potential improvements in various performance areas. Activities include

- analyzing how MPO investments and other factors may influence changes in performance outcomes and what strategies could help the MPO achieve established targets;
- exploring ways to conduct ongoing evaluation of the impacts of MPO-funded TIP projects in relation to MPO goal areas;
- identifying ways to refine project and program selection criteria and working with program managers to make desired changes in future LRTP and TIP development cycles;
- researching and defining metrics that relate to the MPO's goals and can be incorporated into the next LRTP;
- managing data to support performance analysis in MPO programs;
- coordinating performance-based planning and programming work with the MPO's CMP; and
- coordinating with the TE program in the development of equity performance measures that assess the MPO's progress in improving transportation outcomes for equity populations.

Monitor and Report on Performance

The MPO reports on performance in *Destination 2050* and TIP documents, through the CMP, and on its web-based Performance Dashboard. To do so, staff

- provide a performance report for the TIP;
- develop Congestion Mitigation and Air Quality performance plans and reports, and other federally required reports, as needed;
- provide access to performance outcomes via a web-based Performance Dashboard;
- continue to update the MPO website with new PBPP targets; and
- explore new methods for sharing performance data via the web.

Staff enhance these existing reports and tools by adding and/or updating baseline and trend data and may create additional reports or tools. When developing these resources, staff incorporate information on performance targets and, to the extent practicable, describe the effect that MPO investments may have on performance.

Enhance the MPO's PBPP Practice

The MPO's PBPP practice can expand beyond meeting federal requirements to address other aspects of the MPO's goals and objectives. These efforts include

- exploring the PBPP practices and measures used by other planning agencies and institutions by conducting peer reviews, including attending conferences and participating in working groups;
- creating materials to describe the MPO's PBPP framework and to help guide the MPO board through its PBPP decision-making processes;
- providing resources for municipalities and planners on strategies for regional performance improvement through local projects;
- exploring new tools and data sets available to analyze performance data and set targets; and
- supporting the MPO in setting additional performance targets, as desired.

FFY 2025 Anticipated Outcomes

- Support the MPO in setting targets for federally required measures and additional measures, as desired
- Enhance activities to integrate performance management into MPO project and program evaluations, to manage data, and to anticipate and monitor the outcomes of MPO investments
- Produce or update performance reports, such as those required for the TIP
- Develop and or update MPO web applications that include performance data
- Explore additional measures and methods that the MPO could incorporate into its PBPP process, as well as tools the MPO can apply to PBPP work
- Develop or update materials to explain PBPP concepts and activities, including the MPO's PBPP web page
- Coordinate with MPO program managers, MPO board members, MassDOT, and public transportation providers to research measures, identify investment strategies, set targets, and implement PBPP practices
- Work with MPO staff, the MPO, and other stakeholders to link MPO investment decision-making processes more closely to performance outcomes and produce memoranda and presentations describing recommendations

Transportation Equity Program

Project ID Number	8525
FFY 2025 Total Budget	$215,000
Schedule	Ongoing

Purpose

The TE program facilitates progress toward the MPO's equity goal, which is to facilitate an inclusive and transparent transportation-planning process and make investments that eliminate transportation-related disparities borne by people in disadvantaged communities.

Both within the program and by collaborating with staff across the agency, staff in the TE program advance this goal by ensuring the transportation needs of populations underserved by the transportation system and underrepresented in the planning process are addressed throughout all of the MPO's activities. These populations—referred to as TE populations—include minority populations, low-income populations, people with LEP, older adults, youth, and people with disabilities.[1] These populations are covered by the federal mandates below:

- Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on race, color, and national origin, including people with LEP, in programs and activities that receive federal financial assistance.
- Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations," which directs

[1] Equity populations are as follows:

- Minority population: People who identify as a minority include those who identify as Hispanic or Latino/a/x and/or a race other than White.
- Low-income population: A person is considered to have a low income if their annual family income is less than or equal to 200 percent of the poverty level for their family size.
- People with LEP: A person is considered to have a low income if their annual family income is less than or equal to 200 percent of the poverty level for their family size.
- Older adults are people aged 75 and older.
- Youth are people aged 17 and younger.

recipients of federal financial assistance to identify and address disproportionate burdens on low-income and minority populations.

- The Americans with Disabilities Act, which prohibits discrimination against individuals with disabilities by recipients of federal financial assistance.
- United States Department of Transportation (USDOT) nondiscrimination regulations that prohibit discrimination on the basis of sex and age under other federal authorities.

The goal of the program is to not only ensure that the MPO complies with minimum federal regulations, but also advances an equitable transportation system in the Boston region that serves all people, regardless of their background, age, and disability status, while working toward eliminating harmful disparities in transportation impacts and access.

Approach

Implement MPO Title VI Program

Staff implements the MPO's Title VI program and responds to MassDOT requests regarding program updates and submission of a Title VI report as requested. The report documents the MPO's compliance with FTA and FHWA's Title VI, EJ, and other nondiscrimination requirements, as well as civil rights-related areas of focus of import to MassDOT.

Support Equitable Public Engagement

Staff work in collaboration with the MPO's Public Engagement Program to expand meaningful opportunities to TE populations for participation in the MPO's planning processes. Staff continue to expand engagement through providing translated written and digital materials, establishing relationships with new organizations and supporting existing ones, focusing on TE populations, and developing nontechnical materials that are accessible and easily digestible. These engagement activities are described in more detail in the Public Engagement Program in this chapter.

Develop and Refine Equity-Related Analytical Techniques

To improve the effectiveness of equity analyses and expand understanding of the impact of transportation on TE populations, staff refine current analysis methods and develop new ones to further the TE goal. Staff collaborate with programs across the agency to develop analyses appropriate for that work, focusing on

analyses that help the MPO board and other decision-makers make more informed and equitable transportation decisions. Anticipated work includes but is not limited to

- analyzing new demographic data for MPO TE populations;
- developing new and refining existing analyses to support MPO programs
- coordinating with the Data Management Program to ensure demographic data analysis processes are consistent and well-documented, and to support consistent use of demographic data across CTPS; and
- supporting staff across CTPS to address TE through data analysis in their projects, studies, and programs.

Enhance the Equity Dashboard

In FFY 2024, staff will release an equity dashboard that tracks transportation outcomes in the Boston Region for different demographic groups to better understand how the transportation system affects people in the region and where inequities exist. In FFY 2025, staff will update the dashboard with additional metrics, as resources allow, and refine existing ones. The dashboard was developed in collaboration with the Data Management Program and supports efforts to establish consistency with how the MPO analyzes equity-related data and how the results are reported and visualized on data dashboards.

Refine the Disparate Impact and Disproportionate Burden (DI/DB) Analysis and Policy

Staff will continue work to refine the DI/DB mitigation analysis for the TIP, begun in FFY 2024, and conduct the analysis on the FFYs 2026–30 TIP. Disparate impacts and disproportionate burdens on minority and low-income populations, respectively, were identified in the 2023 LRTP, *Destination 2050*, necessitating the MPO to mitigate these impacts. Staff will also update the MPO's DI/DB Policy to reflect the agency's approach to DI/DB mitigation, as well as update metrics that are analyzed for disparate impacts and disproportionate burdens.

Coordinate with and Support Other Agencies

Staff coordinate with MassDOT's Office of Diversity and Civil Rights to promote consistency of MPO Title VI-related processes, procedures, and activities with MassDOT's own practices. Staff also continue to support the MassDOT Rail and

Transit Division in its evaluation of applications for funding from the Community Transit Grant Program.

FFY 2025 Anticipated Outcomes

- Submit a Title VI report to MassDOT, as requested
- Gather and analyze data related to equity from the United States Census Bureau and other sources, and explore new sources of data that support this program and inform the MPO's planning and programming decision-making
- Update the MPO's equity dashboard
- Refine the MPO's DI/DB mitigation analysis for the TIP, conduct the analysis for the FFYs 2026–30 TIP, and update the MPO's DI/DB policy to reflect the MPO's approach to DI/DB mitigation
- Update the MPO's equity dashboard
- Monitor developments at USDOT regarding civil rights, Title VI, and EJ; participate in workshops and conferences; and use this knowledge to inform MPO activities
- Support MassDOT's evaluations of funding applications for the Community Transit Grant Program

Air Quality Program

Project ID Number	8425
FFY 2025 Total Budget	$50,000
Schedule	Ongoing

Purpose

This program maintains technical expertise and supports MPO work related to air quality, air pollution, and climate change, including conformity with federal air quality requirements, the state's climate change policies, and regional air quality trends. It also ensures that the MPO's plans, programs, and projects comply with the Clean Air Act Amendments (CAAA) of 1990 to secure federal funding for the Boston Region MPO's transportation system.

Approach

Federal and State Requirements

Staff demonstrate that the MPO meets federal air quality conformity requirements for the TIP and for the LRTP. Under the CAAA, states must monitor emissions from transportation vehicles and other sources to determine whether ambient emissions levels exceed allowable levels of air pollutants. Areas in which emissions exceed these levels are designated as nonattainment areas. For nonattainment areas, the Massachusetts Department of Environmental Protection (DEP) must develop a State Implementation Plan (SIP) that establishes emissions budgets and shows how the plan would reduce emissions in the area sufficiently to comply with national ambient air quality standards. MPOs with nonattainment areas must complete air quality conformity determinations to demonstrate the conformity of transportation plans, programs, and projects with the Massachusetts SIP. The Boston region was reclassified as an attainment area under the United States Environmental Protection Agency's (EPA) 2008 ozone standard. The Boston region also recently achieved attainment for carbon monoxide (CO) after the 20-year maintenance period for CO in Waltham expired in April 2022. Even though the MPO is in attainment for the EPA's criteria pollutants, it must still show that it is complying with transportation control measure requirements outlined in the SIP. This program

provides support for this conformity determination and for any future determinations if the region's attainment status changes.

The program also provides support for greenhouse gas emissions reporting required by the state's Global Warming Solutions Act, as well as eligibility determination for the use of Congestion Mitigation and Air Quality (CMAQ) funding for select transportation projects. This includes coordination with MassDOT and municipalities on the emissions reduction potential of new projects, project-specific air quality analyses, and organization of results in the TIP.

Additional Air Quality Support

Staff provide expertise in air quality and climate change so the MPO can respond to changing requirements and trends in air quality in its planning, analysis, and reporting. This includes current initiatives, such as the state's goal to reach net zero emissions by 2050 and the ability to participate in issues that might emerge during the year. Staff also support the implementation of air quality-related transportation programs and projects, and provide consultation, research, and coordination between the MPO and federal, state, local, and private entities.

FFY 2025 Anticipated Outcomes

- Prepare a systemwide conformity determination if there are changes to regionally significant projects in the LRTP (if needed) and the TIP
- Conduct a detailed project-level analysis for each project to receive Congestion Mitigation and Air Quality Program funding in the TIP and for any projects to help meet the requirements of the Global Warming Solutions Act of 2008
- Support MassDOT and Massachusetts Port Authority, as requested, in the analysis of air quality benefits for projects throughout the Boston Region MPO area, as well as evaluation of emerging and innovative highway and transit clean-air activities
- Integrate climate change concerns and opportunities for emissions reduction into the MPO's planning process
- Contribute as needed to the development of the Massachusetts SIP by supporting the development of MOVES emissions factors, among other activities
- Integrate stakeholder feedback and coordination platforms identified through the FFY 2024 environmental engagement discrete study to inform

and expand the program’s future scope of work, including identifying air quality-related research needs

Congestion Management Process

Project ID Number	2125
FFY 2025 Total Budget	$125,000
Schedule	Ongoing

Purpose

The MPO's CMP is a federally mandated requirement to monitor congestion, mobility, and safety needs of the Boston region's transportation network. Within the program, staff recommend strategies for reducing congestion while accounting for equity, uncertainty, and resiliency of the MPO's multimodal transportation network. The CMP is developed in an integrated manner along with the MPO's certification documents (LRTP, TIP, and UPWP) to ensure a cohesive strategy for evaluation and implementation of program priorities.

Approach

In the Boston Region MPO area, the CMP follows federal guidelines and recommendations from the MPO's CMP Committee to fulfill the following activities:

- set goals, objectives, and performance measures related to the region's multimodal congestion in collaboration with the Performance-Based Planning and Programming program
- identify congested locations on the multimodal transportation network
- determine the causes of congestion
- recommend the strategies that best address the causes and impacts of congestion
- coordinate with and support development of the LRTP, TIP, and UPWP
- identify needs and priorities for planning studies and data collection to achieve congestion-reduction goals

Depending on CMP Committee recommendations, staff monitor and analyze data for highways, arterial roads, transit, park-and-ride lots, freight movements, and bicycle and pedestrian facilities. CMP activities include using electronic travel-time and speed data to monitor roadways and transit, identify existing conditions, and recommend appropriate improvements in accordance with federal guidelines.

FFY 2025 Anticipated Outcomes

- Create a roadmap for the CMP program that identifies program priorities for the next three to five years
- Monitor the performance of MPO-region arterial roadways and freeways using electronic travel-time and speed data
- Map and tabulate data for analysis and performance evaluation
- Identify data and analysis needs to analyze congestion for non-vehicular transportation networks
- Coordinate with the MPO's certification activities (including the LRTP, TIP, PBPP, and UPWP programs and documents) to ensure that the MPO's transportation system is safe, equitable, resilient, and prepared for uncertainty
- Support and strengthen the CMP Committee of the MPO

PROGRAMS SUPPORTING THE 3C PROCESS

These programs are designed to supplement and enhance the MPO's core 3C planning and programming activities. The programs in this section include the following:

- Climate Resilience Program
- Freight Planning Program
- Regional Model Enhancement Program
- Data Program
- Bicycle and Pedestrian Planning Program
- Multimodal Mobility Infrastructure Program

Climate Resilience Program

Project ID Number	8725
FFY 2025 Total Budget	$100,000
Schedule	Ongoing

Purpose

Climate resilience describes an entity's, such as a transportation system, ability to anticipate extreme weather events under uncertainty, absorb impacts, recover in a timely and efficient manner, and adapt to better withstand future disturbances. The Climate Resilience Program assesses vulnerability and coordinates regional resilience improvements in the face of climate change, which brings increasing risk to transportation assets in the Boston region from flooding, sea level rise, and rising temperatures. Investments in resilience can reinforce equity and safety goals by prioritizing improvements in disadvantaged areas and supporting a more reliable, safe system for all transportation users.

Climate resilience was listed as one of the MPO's six goals for the Boston region's transportation system as part of the current LRTP, *Destination 2050*, indicating the priority of ensuring the Boston region and its people are able to withstand the impacts of climate change.

Approach

The 2015 FAST Act, or Fixing America's Surface Transportation Act, requires agencies to consider climate resilience in transportation planning, which has been interpreted by staff to include

- coordination within CTPS and with agency partners and regional environmental stakeholders on resilience work and needs;
- strengthening the environmental components of the TIP, UPWP, LRTP, and other planning activities;
- increasing the consideration for climate change and resilience in all aspects of the MPO's long-range planning process;

- providing technical support, interactive data tools, and discrete analyses related to regional climate vulnerability as needed; and
- processing climate hazard data such as the Massachusetts Coast Flood Risk Model for agency-wide use.

FFY 2025 Anticipated Outcomes

- Continue to inventory climate resilience activities in the municipalities in the MPO region
- Collaborate on resilience planning efforts at the state, local, and regional levels
- Pursue educational opportunities to gain subject-matter expertise
- Host monthly internal Climate Resilience Committee meetings
- Expand engagement with environmental agencies at the local, municipal, state, and federal level
- Integrate stakeholder feedback and coordination platforms identified through the FFY 2024 environmental engagement study to inform and expand the program's future scope of work, including identifying resilience-related research needs
- Maintain existing and add new climate resilience resources on the MPO's website
- Work towards adopting a framework for assessing climate vulnerabilities in the region, engaging with stakeholders, and programing resilience solutions. Early deliverables will include scoping resource needs to develop the framework, identifying regional needs and gaps to legitimize the development of the framework, and exploring examples of similar frameworks adopted by peer agencies.
- Increase consideration of safety, equity, and uncertainty themes as they relate to climate resilience
- Coordinate with municipalities on resilience needs and identify potential projects for TIP funding

Freight Planning Program

Project ID Number	2225
FFY 2025 Total Budget	$125,000
Schedule	Ongoing

Purpose

Freight planning at the Boston Region MPO is a mandatory part of the federal 3C (continuing, comprehensive, and cooperative) planning process. Freight movements are interregional and require coordinated efforts across MPO staff, regional stakeholders, and decision-makers. The goals for the MPO freight planning program are to

- fulfill the Boston Region MPO's freight planning needs;
- coordinate and complement planning efforts with MAPC, MassDOT, municipal partners, and other stakeholders regarding freight planning for the region;
- study specific freight-related concerns;
- fulfill analysis requirements of federal surface transportation legislation;
- address the lack of freight data for the MPO region, including developing enhanced technical capabilities for MPO staff to use in estimating freight demand; and
- explore pathways to decarbonize the freight sector.

Approach

The MPO's freight planning activities are guided by the 2013 Freight Planning Action Plan and its 2019 update, and are aligned with the 2023 Massachusetts State Freight Plan and the newly released National Zero-Emission Freight Corridor Strategy. MPO staff plan to leverage data and stakeholder input from the updated statewide plan in regional freight planning efforts. The MPO's freight planning and analysis is ongoing and conducted on a multi-year basis. Typical activities include

- freight-specific studies;
- data collection;
- participation in working groups and coordination efforts;
- research on new and evolving elements of freight planning practice;
- advising MPO staff and partner agencies on freight-related elements of studies, and
- supporting model development efforts related to freight.

Freight planning at the MPO focuses on freight movement between municipalities in the Boston metropolitan area, as well as regional and local distribution of goods and packages (first- and last-mile deliveries). Freight planning frequently includes investigation, analysis, and classification of truck movement, including commercial and service vehicles.

Specific study topics for FFY 2025 are chosen based on

- recommendations from prior freight studies;
- emerging topics of interest on freight; and
- topics that emerge from freight engagement, stakeholder meetings, and forum discussions.

FFY 2025 Anticipated Outcomes

- Technical assistance, data collection, analysis, review of materials, and attendance at state, regional, and local forums and committee meetings.
- Research on the potential opportunities and challenges to decarbonizing the freight sector, building on the recently completed study focused on the North Suffolk area.
- An interactive and user-friendly webpage redesigned for the freight program, along with a freight data dashboard.
- Coordination with model development to determine a roadmap to incorporate freight as an additional component to the Travel Demand Model (TDM) 2023 to eventually understand and analyze travel behavior, freight demand, and community impacts.
- Exploration of industrial land uses in the region and corresponding interregional freight traffic volumes.

- Continued outreach and coordination with stakeholders.
- Coordination with municipalities to identify freight projects that could be eligible for TIP funding.

Regional Model Enhancement

Project ID Number	7125
FFY 2025 Total Budget	$850,000
Schedule	Ongoing

Purpose

The long-term goal of the travel demand modeling practice at CTPS is to have a reliable, robust set of well-documented travel demand tools, data, and procedures that address a diverse set of needs for transportation planning in the Boston region and statewide with engaged and informed stakeholders and a coordinated team of modelers who have the skills, knowledge, and experience to effectively

- maintain the set of tools, data, and procedures;
- develop new components in the tool platforms;
- apply the tools and data appropriately on projects; and
- communicate all things related to travel demand modeling.

Through the Regional Model Enhancement Program, CTPS supports the research, maintenance, and development aspects of the long-term goal. This has been realized through the development and maintenance of a regional travel demand model (TDM23) as well as the preparation for the next generation model (TDM27) along with support of other tools for assessing the area's transportation needs and evaluating alternatives to improve the transportation system.

The regional travel demand model estimates the millions of individual decisions that generate travel throughout the region and simulates the impact of those decisions on an abstracted representation of the region's roadway and transit networks. Through variations of the inputs and assumptions, the regional travel demand model provides planners with insights to current and future travel activity and conditions. Metrics produced by the model aid in developing policy, performing technical and equity analyses, and meeting federal reporting requirements, including the MPO's certification requirements. Regional travel

demand models are also used by the MPO and state and regional agencies to support planning and policy analysis.

Approach

Model enhancement work is balanced across research of new model components, approaches, and data; development of new tools to enhance and complement the regional model; and maintenance of the regional model for MPO and application needs.

CTPS will continue to refine the modeling roadmap with a framework to evaluate and prioritize new model investments, maintenance and feature priorities for existing models, and the key design and development milestones for the next generation travel demand model (TDM27). The roadmap is refined with input from the model steering committee, which is composed of stakeholders internal and external to the agency, as well as a broader group of stakeholders including other public agencies, researchers, and consultants.

Research

The TDM23 development process began with the identification of planning needs for model support. Not all of the identified needs will be met by TDM23 because of time and resource constraints as well as the limitations intrinsic in the model structure. CTPS will work to address those needs through complementary tools and data and endeavor to maintain a suite of next generation practices and tools that will serve regional transportation planning needs. The suite will define practice areas, procedures, and tools for common activities. The potential tools and data to be included in this suite include

- dynamic traffic assignment models that can provide a more detailed representation of the roadway and transit networks;
- activity-based models that can provide a more detailed representation of travel behavior;
- model platforms such as the FTA's Simplified Trips-on-Project Software model and FHWA's VisionEval that can provide insight into specific aspects of travel behavior with less effort than a full regional travel demand model;
- big data products and platforms providing origin-destination tables, trip patterns, and travel times that can inform understanding of the existing transportation system to improve the accuracy of the models and could directly support some near-term applications;

- focused sketch and post-processor tools that leverage the regional model outputs into more useful products; and
- cloud computing pipeline capable of transforming massive model outputs into a set of accessible, explorable deliverables, facilitating engagement with a wider range of stakeholders and model users.

CTPS Staff will also work to advance exploratory model applications, leveraging the integration of TMIP-EMAT with TDM23 to support testing scenarios across a range of potential inputs and evaluating programs in a robust manner.

Development

Development activities will include refinements and enhancements to TDM23 as identified through the development and calibration process and by stakeholders.

Development of TDM27 will begin with a high level design that will specify key features of the model and determine broad functionality and implementation requirements. The high level design will answer questions around

- base year for calibration,
- demand structure and key components,
- software platform, and
- key sensitivities.

Several model components have a long development lead time and thus must be started well in advance of assembling the full model. An area of focus for FFY 2025 will be to update the transportation analysis zones and the associated roadway and transit networks to be consistent with the 2020 Census Block boundaries.

Maintenance

The major maintenance activity will be to define, document, and release versions of TDM23 on a regular basis. Versions will include bug fixes, network updates, and enhancements.

As part of maintenance, CTPS staff will also continue to develop model documentation and training materials to promote proper use of TDM23.

CTPS will continue development of a post-pandemic model base year to complement the 2019 pre-pandemic calibration year. A post-pandemic model base year would be useful for growth rate calculations and project applications.

Model adjustments needed to develop the post-pandemic base year will provide valuable insights for TDM27 development.

FFY 2025 Anticipated Outcomes

Staff will continue to develop and refine accessible materials to communicate the TDM23 capabilities to various stakeholders and advance a model roadmap for future enhancements and complementary model tools. Documented versions of TDM23 will be released throughout the year to deploy the latest enhancements, bug fixes, and new inputs. A high level design of TDM27 will be developed and shared with model stakeholders. Staff will continue work to develop and define exploratory modeling approaches to support the LRTP scenario analysis and enhance the MPO's ability to provide state-of-the-practice support for MPO staff, member agencies, and partner organizations.

Data Program

Project ID Number	5025
FFY 2025 Total Budget	$575,000
Schedule	Ongoing

Purpose

The Data Program is a set of consolidated efforts to improve how data are obtained, developed, used, and shared at the agency. The purpose of the program is to support the data needs of the MPO and its stakeholders. There are four main areas of focus for this program:

- Data planning—identifying data needs and updating CTPS's data vision, strategy, and roadmap
- Data pipeline—providing structural support for data practices including obtaining, managing, using, and sharing data, and documenting processes and procedures
- Data exploration—exploring leading-edge data and analytical techniques and assessing their application and usefulness for the MPO
- Data partnerships—collaborating internally with staff, the MPO, partner agencies, and other stakeholders on data-related topics

This program allows MPO staff to effectively

- maintain and update existing data, infrastructure, and documentation;
- explore new data and consider how they apply to our work;
- develop best practices around the management and use of data; and
- apply data in a comprehensive and strategic way that will benefit the MPO, regional stakeholders, and partner agencies.

Approach

Data Vision, Strategy, and Roadmap

Staff review the program's data vision, strategy, and roadmap for CTPS and assess where changes are needed. These guiding documents are updated each year to ensure the Data Program meets the current needs of the MPO and its stakeholders and keeps up with the evolution of data and analysis in the industry.

Manage and Respond to Data Requests

Data requests are one of the services CTPS provides to municipalities, peer agencies, private sector consultants, research institutions, and the broader public. While CTPS has made more data publicly available, there is still a need to respond to ad hoc, quick-response data gathering, processing, and analysis requests throughout the year. Staff continue to review established policies, procedures, and structures in this area.

Data Exploration

The goal of this ongoing effort is to conduct coordinated, strategic assessments of continuously evolving data sources and analytical techniques to address current and future needs. These assessments inform CTPS's long-term investments in the staff skills that are required to meet the evolving needs of the MPO and its stakeholders. This work allows MPO staff to explore new data and analysis methods, consider how they apply to MPO work, document findings, and develop best practices around the management and use of these data.

Data Management, Coordination, and Support

Staff conduct foundational work that supports data users across CTPS. Consolidating this effort under this program ensures that staff is making decisions about key datasets in a thoughtful, collaborative manner. Datasets and work activities managed under this program include the following:

- Socioeconomic Data and Products—support staff members in maintaining foundational work associated with the US Census Bureau's Decennial Census and American Community Survey, and products derived from these sources.
- Geographic Information System/Database Management System (GIS/DBMS)—develop, curate, and enhance stores of spatial and tabular reference data, along with associated tools.
- Requirements for Processes, Services, and Platforms—review CTPS's processes, services, and platforms to determine whether they serve the ongoing needs of the organization. Staff determine requirements,

investigate alternatives, and evaluate whether and how the platforms should be adopted.

- Data User Group meetings and workshops—engage staff members to explore common opportunities and challenges and work collaboratively in responding to them.
- Collaboration with Partners and Other Agencies—work with CTPS partner agencies to share ideas, datasets, and techniques.

FFY 2025 Anticipated Outcomes

- Update CTPS's guiding vision for data and related processes
- Update CTPS's data strategy plan for progressing towards the vision
- Update CTPS's Data Roadmap
- Update CTPS process and guidelines for serving data requests
- Respond to requests for data and small-scale data processing studies
- Assess existing and emerging datasets and analytical techniques
- Create a framework for selecting, assessing, and documenting findings from new analytical techniques and data sets
- Recommend data for planning application
- Continue foundational work on socioeconomic datasets
- Maintain, curate, and enhance spatial and tabular reference data, tools, and distribution channels
- Create design requirement specifications for new processes, services, and platforms
- Promote consistent staff use of documentation platforms following adopted standards and procedures for use
- Finalize and adopt a data publication platform and data publication standards
- Identify data infrastructure needs to streamline data access and use

Bicycle and Pedestrian Planning Program

Project ID Number	2525
FFY 2025 Total Budget	$185,000
Schedule	Ongoing

Purpose

The Bicycle and Pedestrian Planning Program aims to improve accessibility, safety, convenience, and comfort for people walking, bicycling, and rolling in the Boston metropolitan region. The program leverages the MPO's unique position as the regional transportation planning agency to study bicycle and pedestrian travel in the Boston metro area as a whole and facilitate connections between and across neighboring municipalities. We seek to empower communities to better plan for people walking, bicycling, and rolling within their municipalities and provide recommendations to increase the use of active travel modes for daily trips by residents, employees, and visitors.

We prioritize the needs of disadvantaged populations through this work to improve regional active transportation because every community deserves to be able to walk, bike, and roll safely within their neighborhood and enjoy the numerous benefits associated with living in walkable and bikeable areas. The Bicycle and Pedestrian Planning Program strives to reduce auto congestion and greenhouse gas emissions, increase physical activity, and shape more livable communities by increasing the safety and comfort of people walking, bicycling, and rolling. Our work is aimed at facilitating greater adoption of active modes and informing investment in climate-resilient active transport infrastructure throughout the Boston metro region.

Approach

In FFY 2025, the program will learn from its first year of convening the Bicycle and Pedestrian Steering Committee to solidify member expectations and guidelines. MPO staff will engage the Steering Committee to learn its preferences and determine the roles and responsibilities that best suit the purposes of the group. Members will help inform the direction of the Bicycle and

Pedestrian Planning Program, ensure that the interests of people walking, biking, and rolling in the region are represented in work produced through the Program, provide insight into how the Program can best serve municipalities in the region, and guide the development of a regional bicycle and pedestrian transportation plan. MPO staff will also engage the Steering Committee to help select the topic for the first bicycle and pedestrian guidebook.

In FFY 2025, the Bicycle and Pedestrian Planning Program will begin to analyze the data gathered through the first year of continuous bicycle and pedestrian count collection efforts. MPO staff will study temporal variations and compare volumes at sites while considering various characteristics as potential factors that influence people's decisions to walk, roll, or bike at a location.

While the direction of future bicycle and pedestrian work will be influenced by conversations with the Bicycle and Pedestrian Steering Committee, MPO staff plan to complete the following work as part of the Bicycle and Pedestrian Planning Program during FFY 2025:

- Coordinate with state agencies, MAPC, other Massachusetts MPOs, MassDOT's Safe Routes to School Program, WalkMassachusetts, MassBike, LivableStreets, municipalities, and other groups regarding bicycle and pedestrian planning for the region.
- Collect data on bicycle and pedestrian volumes at on-road and off-road facilities in the Boston region, and post collected count data to the Boston Region MPO's Bicycle and Pedestrian Count Database for public use.
- Gather input and identify the needs and goals for a regional bicycle and pedestrian plan for the Boston MPO region that combines the vision, goals, and needs of the Boston MPO with the priorities outlined in the Massachusetts Bicycle and Pedestrian Statewide Transportation Plans and consider municipalities' existing bicycle and pedestrian plans.
- Reassess gaps in the regional bicycle network to update the locations where bicycle facilities are needed in the Boston region.
- Select the first bicycle and pedestrian guidebook topic and begin research and development of the guidebook.
- Provide ongoing technical support to communities for current tools and practices regarding bicycle and pedestrian issues, with a particular focus on promoting safety and comfort.

FFY 2025 Anticipated Outcomes

- Convening quarterly Steering Committee meetings and documenting input and recommendations for the program work.
- Completing the first year of continuous Boston region bicycle and pedestrian count data collection.
- Analyzing regional bicycle and pedestrian counts.
- Updating the Boston region bicycle network gaps dataset.
- Conducting research and engagement to develop a strategy for the Boston Region MPO's bicycle and pedestrian plan development.
- Coordinating with municipalities to identify bicycle and pedestrian project candidates that could be eligible for TIP funding.

Multimodal Mobility Infrastructure Program

Project ID Number	2825
FFY 2025 Total Budget	$370,000
Schedule	Ongoing

Purpose

The Multimodal Mobility Infrastructure Program aims to address gaps in both regional and community multimodal transportation needs, and identify opportunities to advance towards a safe, integrated, sustainable, and accessible regional multimodal transportation system. Communities often identify transportation problems and issues relating to safety, congestion, bottlenecks, and lack of access to multimodal transportation facilities in their areas. One of the major focus areas of this program is to develop conceptual design recommendations that address identified regional multimodal transportation needs with an emphasis on the most vulnerable roadway users. Another key focus area of the program is to explore potential strategies to mitigate the challenges that hinder residents from using multimodal transportation, especially non-auto modes such as walking, rolling, biking, and transit. The program strives to provide tools and resources to build capacity among stakeholders to enhance the planning and design of multimodal transportation infrastructure in the region.

Approach

Site-specific studies

Each year, the MPO undertakes two to three site-specific studies as part of the Multimodal Mobility Infrastructure Program. Staff use a range of factors to determine which particular studies to undertake. For targeted study selection, MPO staff typically reach out to MAPC subregions, municipalities, and other groups to identify corridors, intersections, curbs, and other areas of interest. MPO staff also refer to the LRTP Needs Assessment, MassDOT's IMPACT portal, multimodal travel data, and other tools to identify further candidate locations. Study locations are screened by staff drawing on criteria used in the

TIP scoring process, with particular emphasis placed on safety and equity. Final study selections are made in coordination with selected stakeholders. In addition to Complete Streets guidelines and operational and safety considerations, the analysis will concentrate on transit services, nonmotorized modes of transportation, curb usage, and truck activity along roadway segments.

Site-specific studies will provide communities with the opportunity to review the requirements of a specific study area, starting at the conceptual level, before committing design and engineering funds to a project. If the project qualifies for federal funds for construction of the recommended upgrades, the study's documentation will be useful to MassDOT and the community.

Capacity-building tools and resources

Although MPO staff can study only two to three locations in a single year, staff has created a large repository of corridor and intersection studies over the last two decades. One goal through the Multimodal Mobility Infrastructure Program is to build capacity among our stakeholders, primarily municipal partners, to enable them to conduct similar studies on their own, especially if the scope of the study is relatively small. To that end, staff plan to develop a guidebook for designing and implementing a Complete Streets corridor, improved intersections, curb management, and other multimodal infrastructure projects. This guidebook will be provided to communities and implementing agencies, who may choose to fund improvements through various federal, state, and local sources, either separately or in combination.

Regional studies

Regional studies will explore various roadblocks to achieving a well-functioning multimodal transportation system. MPO staff plan to conduct one to two regional studies every year. Potential study topics will be selected with an eye towards supporting multimodal transportation and reducing auto-dependence. In addition to focusing on surface transportation modes (such as transit, walking, biking, and vehicles), staff plan to include marine transportation modes (such as ferries and water taxis) in the scope of our exploration to identify opportunities to shift more people away from using cars. MPO staff also plan to begin exploring connections between transportation and land use at a regional level, with a particular focus on transit-proximate areas in light of the recently passed MBTA Communities Act (Section 3A of MGL c. 40A).

Potential regional study topics may include investigating the dynamics of roadway pricing, exploring how people walking and biking may be exposed to dangerous levels of heat during heatwaves, understanding how bikesharing can facilitate higher public transit ridership, learning from mode shift efforts by peer agencies, and examining the effects of car-free streets.

FFY 2025 Anticipated Outcomes

Anticipated FFY 2025 efforts include

- identifying specific locations to study using the revised selection criteria;
- providing recommendations for selected corridor improvements;
- providing recommendations for selected intersection improvements;
- contributing to transit service, access, and priority assessments through site-specific studies;
- learning from mode shift efforts by peer agencies;
- exploring how people walking and biking are affected by extreme heat; and
- creating the blueprint for a guidebook that can provide a roadmap for stakeholders interested in the planning and design of multimodal infrastructure.

SUPPORT TO THE MPO AND ITS 3C PROCESS

The activities described in this section support core MPO programs as well as those supporting the 3C planning process in general, collaboration with other agencies, and compliance with federal requirements. These activities include technical and administrative support to the MPO and its committees, as well as the development of materials supporting all MPO work.

- Support to the MPO and its Committees
- General Graphics
- General Editorial
- Transit Working Group (TWG) Support

Project ID Number	9125 (Support to the MPO and its Committees) 9225 (General Graphics) 9725 (General Editorial) 8925 (Transit Working Group Support)
FFY 2025 Total Budget	$1,045,017
Schedule	Ongoing

Purpose

Under this program, staff implement MPO policies, plan and coordinate the delivery of information for MPO decision-making, and support the operation of the MPO and its committees. It also involves providing support for MPO meeting management and agenda planning.

Approach

Support to the MPO and its Committees

MPO staff perform the following tasks related to MPO board and committee meetings.

- Develop meeting agendas

- Prepare and distribute informational materials via email and the MPO's website
- Plan in-person/hybrid meetings
- Set up digital arrangements for virtual meetings and audio/visual equipment for in-person meetings
- Attend and record meetings
- Complete meeting follow-up activities, such as maintaining the information flow for members of the MPO and the public, processing approved work scopes, preparing video-recording files, and documenting meeting minutes

Technical and process support is provided to the MPO's UPWP Committee; Administration and Finance (A&F) Committee; CMP Committee; TIP Process, Engagement, and Readiness Committee; and other ad hoc committees. These committees conduct their work as follows:

- The UPWP Committee meets as needed to develop a UPWP for the upcoming FFY and to monitor expenditures and the progress of studies and programs in the current fiscal year.
- The A&F Committee meets periodically to make recommendations to the MPO on the staff's operating budget, legal matters, and other administrative functions.
- The CMP Committee meets as needed to discuss the federally required CMP. Activities include developing and reviewing its TIP Intersection Improvement Program and making recommendations to the MPO.
- The TIP Process, Engagement, and Readiness Committee facilitates discussion about the TIP development process and improvements.

Staff also provide administrative activities that ensure the MPO's compliance with federal requirements. This includes researching, analyzing, and reporting information on 3C planning topics and responding to federal recommendations from the MPO's Certification Review, among others. Staff also implement federal and state legislation, such as the Bipartisan Infrastructure Law requirements (see Chapter 2 and Appendix E).

This work also includes collaboration with other agencies involved in 3C planning activities, other Massachusetts MPOs (particularly those in the Boston region urbanized area), and MAPC subregional municipal groups. To support this collaboration, staff support updates to governing Memoranda of Understanding between the Boston MPO and partner agencies when necessary.

Other activities include overseeing 3C program-related activities, collecting and fielding comments and inquiries, and responding to requests for information and support.

General Graphics

The graphic design staff develop presentations, maps, charts, illustrations, reports, guidebooks, and a range of other public-facing designed materials in support of MPO programs and projects. Staff monitor the consistent use of the MPO name, logo, and color palette in print and digital products. The MPO conducts its transportation planning activities and public engagement process in accordance with federal regulations governing accessibility standards. Staff produce materials that adhere to these regulations as appropriate to ensure all people have access to MPO materials and therefore can meaningfully engage with the transportation planning process, regardless of background or ability.

General Editorial

The editorial staff review and edit reports, memoranda, work scopes, guidebooks, presentations, meeting agendas, and other public-facing materials, as well as documents internal to CTPS. The editorial process focuses on producing clear and understandable content, making improvements to document structure, correcting grammar, ensuring proper word usage, and adhering to accessibility requirements. The editorial staff apply the *Chicago Manual of Style* rules and guidelines from the CTPS Editorial Style Guide when reviewing copy. Other guidelines are produced as needed for staff to refer to when producing documents.

Transit Working Group Support

The TWG meets as needed to discuss trending topics in transportation or pressing issues around the region. MPO staff support includes the following activities:

- planning programs and meetings,
- scheduling speakers and developing presentations,
- preparing and distributing agendas, meeting notices, informational packets, and meeting summaries,

- facilitating and presenting at meetings,
- soliciting new members and maintaining contact lists,
- implementing and updating transit working group procedures, as necessary,
- gathering feedback from the TWG participants to inform MPO activities and decision-making,
- assessing the success and direction of transit working group activities, and
- updating the MPO on TWG activities.

FFY 2024 Anticipated Outcomes

- Host approximately 24 MPO meetings and 20 MPO subcommittee meetings, and perform the associated tasks and pre- and post-meeting logistics
- Coordinate 3C planning and programming activities and programs
- Coordinate with state and federal partners
- Coordinate with neighboring MPOs, including participating in coordination meetings with our northern, southern, and western neighboring MPOs and attendance at monthly Transportation Managers' Group meetings
- Produce maps, charts, illustrations, report covers, brochures, slides, StoryMaps, guidebooks, presentations, photographs, and other products that enhance the communication of MPO work to the public
- Produce materials in accessible formats for public meetings and website postings
- Maintain accessible document templates
- Maintain and update accessibility guidelines and standards for MPO products as needed
- Provide quality control for written materials
- Maintain standards for accessibility in written materials
- Maintain editorial guidelines and update as necessary
- Develop resources to support working group meetings and activities
- Hold TWG meetings and update the MPO board about TWG discussions and concerns

- Support communication for and about MPO work using email, social media, and the MPO website
- Provide information for the MPO about TWG meetings
- Provide regular updates on the Certification Review Action Plan

Chapter 4—Boston Region MPO Discrete Studies and Technical Support

INTRODUCTION

As described in Chapter 1, each federal fiscal year (FFY), the Boston Region Metropolitan Planning Organization (MPO) receives federal transportation planning funds from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). Combined with the local Massachusetts Department of Transportation (MassDOT) matching amount, these funds form the budget that allows the MPO staff—Central Transportation Planning Staff (CTPS)—to accomplish the MPO support and 3C planning activities described in Chapter 3; the discrete studies and technical support activities described in this chapter; and the administrative tasks and information technology resource management described in Chapter 5.

This chapter describes two types of work—the discrete studies that are selected for the fiscal year based on the engagement process described in Appendix C, and the ongoing technical analysis and support studies that staff will conduct for communities or transportation providers in the region. Each UPWP documents progress on the previous year's studies and describes upcoming discrete studies and types of work to be undertaken in the ongoing technical analysis and support activities. The MPO tracks the progress of these studies, which are categorized as follows:

- Completed Discrete Studies: Completed studies are either already complete or expected to be completed by October 1, 2024, when the FFY 2025 UPWP document goes into effect. Table 4-1 (MPO-funded discrete studies) provides a summary of these studies, their funding amounts, and their work products or activities.
- FFY 2025 Technical Analyses and Support Studies: MPO staff provide technical assistance to communities or transportation agencies throughout the region each year. Table 4-2 summarizes the salary and overhead costs for these studies in FFY 2024 and FFY 2025, as well as the completed and planned work products.
- FFY 2025 Discrete Studies: Each year, discrete studies are selected through a prioritization process applied to a broad range of ideas collected through MPO engagement of staff and stakeholders. More information about the process can be found in Appendix C. These studies are approved for funding as one-time studies with clearly defined deliverables in a given fiscal year. Table 4-3 contains a summary of the discrete studies for FFY 2025.

In addition, the Metropolitan Area Planning Council (MAPC), an MPO member organization, conducts planning studies and technical assistance throughout the region (see Chapter 6, Metropolitan Area Planning Council Activities).

The project descriptions throughout this chapter describe new transportation planning studies chosen for funding in FFY 2025. They also provide detailed descriptions for the FFY 2025 funding and work products for the MPO's ongoing programs.

Some titles of these products and activities may change as they are finalized. All certification documents and many other work products are, or will be, available for download from the MPO website (www.bostonmpo.org). Work products not found on the MPO website may be requested by contacting CTPS at 857.702.3700 (voice), 711 (MassRelay), or ctps@ctps.org (email).

Table 4-1
Completed MPO Funded Discrete Transportation Planning Studies,
FFYs 2023–24

Project Name	ID	FFY 2023 Budgeted Total Funding	Work Products (reports, technical memoranda, and other work products or activities)
FFY 2024 Studies			
Lab and Municipal Parking Phase II	14001	$45,000	Technical memorandum detailing the results from the data collection and analysis of parking at lab and life sciences facilitites, as well as recommendations for policy makers and municipal planners who make decisions about parking requirements at these types of properties.
Parking in Bike Lanes: Strategies for Safety and Prevention	14002	$20,000	StoryMap and report summarizing findings of literature review and outreach, with recommendations for interventions that could be piloted by Boston area municipalities.
Strategies for Environmental Outreach and Engagement	14003	$25,000	Memo summarizing the results of the literature review and outreach, with recommendations on how to incoporate regular engagement on environmental topics into the MPO's existing programs.
Applying Conveyal to TIP Project Scoring	14004	$60,000	The anticipated deliverable is a technical memorandum detailing the process for using Conveyal to examine TIP projects, as well as a GitHub repository for technical documentation.
FFY 2023 Studies			
Learning from Roadway Pricing Experiences	13807	$45,000	The anticipated deliverable is a memorandum summarizing the results of the interviews, workshops, MPO’s intended goals for roadway pricing, and ways to incorporate roadway pricing into the various MPO planning processes.
Sustainability and Decarbonization in the Freight and Logistics Sector in the North Suffolk Region	13808	$67,500	StoryMap or technical memo with stakeholder identified needs, data gaps, and recommendations for next steps

Bicycle and Pedestrian Count Database Update	13803	$80,000	An updated web application for bicycle and pedestrian counts and recommendations for updating current counting practices
Lab and Municipal Parking Study	13806	$80,000	A technical memorandum that recommends a methodology for conducting parking utilization studies at lab and life science facilities

Table 4-2
FFY 2025 Boston Region MPO Technical Analyses and Support

Project Name	ID	FFY 2024 Funding	FFY 2024 Work Products and Progress	FFY 2025 Funding	FFY 2025 Planned Work Products and Progress
CTPS Activities					
Community Transportation Technical Assistance Program*	2425	$67,000	Responded to various communities' inquiries related to transportation issues: • Wrentham—Provided assistance regarding recommendations for truck exclusion at the intersection of Route 1(Washington St.) and Hawes St. • Sharon—Provided assistance regarding the redesign of the intersection of Massapoag Avenue / Pond Street at Quincy Street and East Street • Hamilton/Ipswich—Provided assistance regarding traffic calming at the intersections of Highland Street at Waldingfield Road, Waldingfield Road at Goodhue Street, and Goodhue Street at Highland Street	$70,000	Provide technical assistance to municipal staff in the Boston metro region on challenges around multimodal transportation planning and design.
Regional Transit Service Planning Technical Support	4125	$40,500	Provided support to municipal staff, attended meetings to support with ideas and challenges arounc regional transit planning.	$63,500	Provide technical assistance to municipal staff in the Boston metro region on challenges around regional transit planning.
Roadway Safety Audits	2325	$17,000	Provided support to MassDOT and communities for roadway safety audits conducted in Dedham, Milton, Quincy, Randolph, Weymouth, Boston, Holbrook, Rockland, and Hingham.	$15,000	Provide support to MassDOT and communities for safety audits conducted in the Boston metro region.

*This program is shared between MAPC and CTPS. The description for this work can be found in Chapter 4, while the funding amount shown here reflects the combined funding from MAPC and CTPS.

Table 4-3
FFY 2025 MPO Funded Discrete Transportation Planning Studies

Universe ID	Project ID	Study or Program	Proposed FFY 2024 CTPS Budget
M-2	13819	Bluebikes and MBTA Connections	$60,000
M-4	13820	Roadway Pricing: Balancing the Need for a Transition to Sustainable Mobility with Equity Considerations	$50,000
F-1	13821	Decarbonizing the Freight Sector: Exploring the Potential for Using E-cargo Bikes for First-/Last-mile Freight Deliveries	$40,000
Total for New Discrete Studies			**$150,000**

DISCRETE PLANNING STUDIES

The project descriptions in this section describe the discrete studies chosen by the MPO for funding in FFY 2025. As described in Chapter 2 and Appendix B, CTPS gathers discrete study ideas each year and classifies them into the following categories: active transportation; land use, environment, and economy; multimodal mobility; transit; other technical work; resiliency; and transportation equity. Each of the project descriptions on the following pages begins with a funding table that shows the project identification number, category, funding sources, and total budget.

Bluebikes and MBTA Connections

Project ID Number	13819
Category	Multimodal Mobility
FFY 2025 Total Budget	$60,000
Schedule	October 2024 through September 2025

Purpose

One of the most often cited challenges to using urban rail transit is the lack of first- and last-mile connections. Public bikesharing systems, such as Bluebikes, have the potential to address this concern by making it easier for some people to access rail transit stations. Of course, much depends on where the stations are located and who has the ability and willingness to bike (amidst valid concerns about safety and inclement weather). In recent years, MPO staff have engaged in several projects relating to bikesharing use in the region. Building on these prior efforts, it is time to examine several questions: What is the relationship between Bluebikes and the MBTA? Do Bluebikes improve connectivity to the MBTA, and, if so, what are the conditions that enable such a relationship? Do people use Bluebikes as an alternative to the MBTA and, if so, what kinds of transit trips are most likely to be substituted?

This study is a fundamental exploration to gain a better understanding of multimodality in the region, so that a more efficient regional transportation system that accounts for the complementary as well as competitive nature of other non-auto modes can be designed. Extending this exploration, MPO staff could apply an analytic framework to examine the effect of transit service disruptions (such as the Orange Line shutdown or more recent service disruptions, especially along the Green Line) on Bluebikes usage. This exploration could reveal to what extent regular transit riders use Bluebikes when transit is not available or simply too onerous to use.

Approach

MPO staff will leverage openly accessible Bluebikes trip data and station location data, in addition to transit station location and route data from the MBTA, to construct a framework that can classify which Bluebikes trips can be categorized as complementary and which ones seem to be substituting for transit. We intend to apply this framework to understand how these relationships change by space (across different neighborhoods) and time (across seasons). Time permitting, we may also explore the application of this framework to examine the effect of recent transit service disruptions.

FFY 2025 Anticipated Outcomes

The anticipated outcome of this study is a report that describes the framework and outlines the findings from the application of this framework. Additionally, the report will include recommendations about how more complementary connections can be designed between Bluebikes and transit, which will help inform the expansion of the Bluebikes network to new municipalities.

Roadway Pricing: Balancing the Need for a Transition to Sustainable Mobility with Equity Considerations

Project ID Number	13820
Category	Multimodal Mobility
FFY 2025 Total Budget	$50,000
Schedule	October 2024 through September 2025

Purpose

MPO staff recently presented their takeaways from interviews with a range of roadway-pricing program administrators around the country and proposed key recommendations for things to consider if a similar strategy were to be adopted in the Boston region. With the possibility of widespread adoption of electric vehicles looming on the horizon (and being encouraged by both the State and the Federal administrations), the gas tax may not remain a viable fiscal source to support public transit. While electric vehicles may have lower tailpipe emissions than their fossil fuel-fueled counterparts, they are unlikely to entirely solve the many challenges associated with auto-dependence. MPO staff will build on their recent study to further explore the idea of roadway pricing but with more focused attention to the Boston region. The objective of this study is to analyze current driving patterns and explore the effects of hypothetical roadway-pricing scenarios on revenue generated, reduction in vehicle-miles traveled, and equity.

Approach

Using data from the Massachusetts Vehicle Census and Replica (a large mobility data provider), MPO staff intend to examine vehicle-miles traveled by different communities within our region. Such an analysis will allow us to provide estimates of revenue generated by different pricing strategies (such as cordon pricing around a particular central zone, or a direct tax on miles traveled). It would also be possible to examine the disparate impacts of such policies on different communities and, thereby, advocate for targeted discounts or subsidies

for environmental justice communities and those who are forced into car ownership by a lack of high-quality alternatives.

FFY 2025 Anticipated Outcomes

The anticipated outcome of this study is an interactive visual document (such as a StoryMap) or report describing the different hypothetical roadway-pricing scenarios that were considered and summarizing the results of the scenario analysis.

Decarbonizing the Freight Sector: Exploring the Potential for Using E-cargo Bikes for First- and Last-Mile Freight Deliveries

Project ID Number	13821
Category	Freight
FFY 2025 Total Budget	$40,000
Schedule	October 2024 through September 2025

Purpose

Globalization coupled with a post-pandemic shift to online shopping has increased our dependence on freight, especially in urban areas. While freight vehicles deliver a wide variety of products, including food, consumer goods, and fuel, residents in the Boston region have expressed concerns about the growing number of trucks as well as small- and medium-sized freight delivery vehicles passing through and stopping in their neighborhoods. Some regions, both within the U.S. and around the world, are experimenting with a regional freight delivery system. Such a system depends on the establishment of neighborhood freight hubs where freight vehicles transport cargo that is then transported by e-cargo bikes to final destinations and peoples' homes.

In addition to "traditional" freight deliveries, e-cargo bikes are also thought of as a promising alternative to car-oriented food delivery systems. The City of Boston is currently running a pilot called 'Boston Delivers" for local businesses in Allston and Brighton. Building on this recent effort, MPO staff will explore the potential for establishing neighborhood freight hubs and using e-cargo bikes for first- and last-mile freight deliveries across the Boston region (or in the Inner Core of the region, at the very least). This system could help address the urgent need to decarbonize the freight sector and mitigate the various other concerns residents regularly voice over the increased presence of freight vehicles near their homes.

Approach

MPO staff will identify past, ongoing, and planned e-cargo bike pilots and programs across the country. Having created this list, staff will reach out to key personnel involved in these efforts to interview them about their experience of the

key challenges and opportunities associated with such initiatives. These interviews will inform a follow-up analysis of which locations in the Boston region (or the Inner Core) might be suitable for establishing neighborhood freight hubs. Finally, MPO staff will provide recommendations for municipalities aiming to establish such hubs and use e-cargo bikes for first- and last-mile freight deliveries.

FFY 2025 Anticipated Outcomes

The anticipated outcome of this study is a report that will describe past, ongoing, and planned e-cargo bike pilots across the country, summarize the key findings from the interviews, and provide recommendations for the establishment of neighborhood freight hubs supported by e-cargo bikes for first- and last-mile freight deliveries in the Boston metropolitan region.

TECHNICAL ANALYSIS AND SUPPORT

The project descriptions in this section consist of ongoing MPO programs that provide technical planning assistance, support, and analyses to cities, towns, and other entities throughout the region. The major areas of technical analyses include transit service planning and community-level transportation planning and technical assistance.

Roadway Safety Audits

Project ID Number	2325
FFY 2025 Total Budget	$15,000
Schedule	Ongoing

Purpose

This program supports MPO staff participation in roadway safety audits (RSAs).

Approach

An RSA, as defined by FHWA, is a formal safety performance examination of an existing or future road or intersection by an independent audit team. MassDOT guidelines require RSAs to be conducted where Highway Safety Improvement Program-eligible crash clusters are present. The program has expanded to cover additional high-crash locations and individual crash types, such as pedestrian- and bicycle-crash hot spots. The RSA examines the location to develop both short- and long-term recommendations to improve safety for vehicles, for people walking and for people biking. These recommendations help communities identify safety improvements that can be implemented in the short term and determine if more substantial improvements are needed as part of a larger, long-term improvement process.

Audit teams include MassDOT headquarters and district office staff, MassDOT consultants, municipal planners and engineers, local and state police, local emergency response personnel, and CTPS personnel, as requested. In the RSA process, the audit team (1) reviews available crash data; (2) meets and communicates with local officials, planners, engineers, and other stakeholders; (3) visits the site to observe traffic operations and identify safety issues; and (4) develops and documents recommendations.

FFY 2025 Anticipated Outcomes

Anticipated outcomes include the following:

- Participate in RSAs as requested by MassDOT
- Document RSA recommendations

Community Transportation Technical Assistance Program

Project ID Number	2425, MAPC5
FFY 2025 Total Budget	$70,000
Schedule	Ongoing

Purpose

Through this ongoing program, MPO staff and MAPC staff provide technical advice to municipalities throughout the region on local transportation issues of concern.

Approach

In this program, a team of MPO staff and MAPC engineers and planners will meet with community officials to learn more about the transportation problems that the community identified, such as those related to parking, traffic calming, freight movement, walking, bicycling, and transit locations.

Technical assistance activities may include the following:

- A site visit with local officials to understand the potential problem, review existing data, and make suggestions for additional data that may be needed
- Analysis of the problem and identification of potential solutions including conceptual designs for some project locations
- Support with the various planning processes at MassDOT, the MBTA, the MPO, and MAPC, as well as guidance on how communities can get involved.

The number of technical assistance cases will depend on the funding amount and the complexity of the specific technical assistance requests from municipalities. MAPC and CTPS will coordinate and collaborate on a case-by-case basis.

FFY 2025 Anticipated Outcomes

MPO staff will provide technical assistance to municipalities as described above and will document the work, recommendations, and outcomes of these consultations in the form of technical memoranda.

Regional Transit Service Planning Technical Support

Project ID Number	4125
FFY 2025 Total Budget	$63,500
Schedule	Ongoing

Purpose

Through this ongoing program, the MPO provides technical support to regional transit authorities (RTAs), municipalities, MAPC subregions, and transportation management associations (TMAs). This work is focused on improving or expanding transit service and reducing single-occupancy-vehicle (SOV) travel in the region.

Approach

The MPO's policy is to support transit services and reduce SOV travel in the region. As such, MPO staff provide technical support to RTAs to promote best practices and address issues of ridership, cost effectiveness, route planning, first- and last-mile strategies, and other service characteristics. The MPO also extends support to TMAs, MAPC subregions, and municipalities seeking to improve the transit services that they operate or fund. Past technical assistance work has resulted in memoranda such as MWRTA Sunday Service Feasibility Report (FFY 2020), Analysis of Potential Shuttle Service in Hingham (FFY 2020), City of Peabody Transit Feasibility Study and Survey on Transit Demand (FFY 2022), as well as support to the Town of Sudbury (FFY 2023).

FFY 2025 Anticipated Outcomes

MPO staff will provide technical assistance to RTAs, municipalities, MAPC subregions, and TMAs as described above and will document the work, recommendations, and outcomes of these consultations in the form of technical memoranda.

Chapter 5—Resource Management and Support Activities

INTRODUCTION

Central Transportation Planning Staff (CTPS) conducts ongoing information technology (IT) and other activities to support the core activities and studies of the Boston Region Metropolitan Planning Organization (MPO).

For each activity described in this chapter, we cite the purpose of the work, explain how the work is accomplished, and provide a summary of the anticipated federal fiscal year (FFY) 2025 work products. The budget tables at the head of each project description give salary and overhead costs associated with the projects. The Direct Support section includes direct costs related to the projects.

Table 5-1 provides a summary of the funding assigned to each of the activities described in this chapter that were also assigned in FFY 2024, a summary of the work products and/or progress made in FFY 2024, the funding proposed for each of these activities in FFY 2025, and the anticipated work products and/or progress in FFY 2025.

Although many of the activities in this chapter generally comprise similar tasks from year to year, budget variations often reflect more significant or lesser emphasis on certain efforts. Where appropriate, these differences are explained in Table 5-1.

Table 5-1
CTPS Ongoing Resource Management and Support Activities, FFY 2025

Project Name	ID	FFY 2024 Funding	FFY 2024 Work Products and Progress	FFY 2025 Funding	FFY 2025 Planned Work Progress and Products
CTPS Activities					
Information Technology Resource Management	6025	$315,500	Provided maintenance and enhancements to CTPS's laptops, workstations, server systems; network infrastructure, and printers. Migrated server systems into the cloud.	$320,000	Tasks and work products generally remain the same from year to year.
Professional Development	9525	$85,500	Cover the labor expenses of staff attending conferences and seminars related to MPO work.	$80,000	Cover the labor expenses of staff attending conferences and seminars related to MPO work.

CTPS ACTIVITIES

The following sections contain details on the administration, resource management, and support activities undertaken by CTPS each FFY.

Information Technology Resource Management

Project ID Number	6025
FFY 2025 Total Budget	$320,000

Purpose

Managing IT resources involves inventory management, resource allocation, performance monitoring, cost management, security implementation, disaster recovery planning, compliance adherence, vendor management, and user support to optimize utilization, mitigate risks, and align IT strategies with agency needs.

Approach

CTPS performs the following subtasks as part of information technology resource management.

6025 Information Technology (IT) Resource Management

01 Project Coordination

Meetings are held with internal staff and occasionally MAPC staff to coordinate and discuss IT-related projects.

02 System Administration

System administration encompasses the setup, configuration, maintenance, and optimization of IT infrastructure, including servers, networks, operating systems, and databases, to ensure their reliability, availability, and performance in support of agency goals and user requirements. Based on the IT strategy plan, the implementation of these tasks, including updating the disaster recovery plan for the agency, are included in system administration.

03 Security Administration

Security administration involves overseeing the setup, maintenance, and protection of IT systems, networks, and data through user management, system

configuration, patch management, access control, vulnerability scanning, incident response, and security policy enforcement to ensure optimal performance and security against cyber threats. Review all reports generated from cybersecurity-related tools.

04 IT Documentation

IT documentation involves creating, maintaining, and organizing comprehensive records and guides detailing IT systems, networks, applications, configurations, procedures, and policies to facilitate effective communication, troubleshooting, knowledge transfer, and compliance adherence within the agency.

05 IT Resource Management

IT resource management entails strategically allocating, optimizing, and overseeing IT assets, including hardware, software, personnel, and budget, to support agency objectives and maximize efficiency. It also requires managing relationships with IT vendors to ensure timely delivery of products and services. This includes negotiating contracts, evaluating vendor performance, and resolving disputes. This also includes creating an implementation plan for the IT strategy and website infrastructure accessibility review.

06 User Support and Assistance

This subtask includes providing technical support to end-users to help them resolve IT-related issues. This may involve troubleshooting hardware or software problems, training on new technologies, and providing user manuals.

07 Website Administration

Website administration consists of managing and maintaining the technical aspects of a website, including server configuration, content updates, user management, security protocols, performance optimization, and troubleshooting, to ensure its functionality, accessibility, security, and overall effectiveness in meeting agency goals and user needs. Staff will research and evaluate alternatives for a new website platform. Other distribution channels for information delivery may also be considered.

08 Database Administration

Database administration involves tasks such as user management, monitoring database performance, allocating storage, and applying patches and upgrades.

FFY 2025 Anticipated Outcomes

In addition to working on the above-mentioned tasks, staff will produce an updated disaster recovery plan and implement the recommendations from the IT strategy plan.

Professional Development

Project ID	9525
FFY 2025 Total Budget	$80,000
Schedule	Ongoing

Purpose and Approach

CTPS maintains its technical expertise in part by participating in courses, programs, and workshops offered by the Federal Highway Administration, the Federal Transit Administration, the Transportation Research Board, the Association of Metropolitan Planning Organizations (AMPO), the Institute of Transportation Engineers, and other public, private, and nonprofit organizations. Previous professional development endeavors have been related to topics such as performance-based planning, traffic engineering issues and applications, regional modeling, bicycle and pedestrian issues, transit planning, public involvement, environmental justice, air quality, computer operations and maintenance, database applications, and other areas related to the provision of technical support services.

FFY 2025 Anticipated Outcomes

Staff will attend conferences, peer exchanges, training, and other enrichment and professional advancement opportunities.

Direct Support

Project ID Number	Varies
MPO 3C Planning Funds	$175,000
3C-Funded Work Direct Support Total	**$175,000**
MBTA Funds	$1,500
Safe Streets for All Grant Funds	$967,800
Agency-Funded Work Direct Support Total	**$969,300**

Purpose

Through this activity, CTPS provides integral direct support for all CTPS projects and functions.

Approach

IT Equipment

IT needs are included in the CTPS Three-Year Plan for IT Resource Development. The three-year plan includes hardware and software that are considered major reinvestments or that cost more than $5,000 per single item.

Consultants

Consultants are hired periodically to perform specialized, time-specific tasks as project work demands.

Membership Dues

Annual membership dues are paid to the Association of Metropolitan Planning Organizations, which is the transportation advocate for the metropolitan regions, committed to enhancing the MPOs' abilities to improve metropolitan transportation systems.

Printing

Project-specific printing costs, such as those for surveys, maps, reports, presentation boards, and other informational materials, are included in this budget.

Travel

Periodically, the US Department of Transportation, Association of Metropolitan Planning Organizations, Transportation Research Board, and other organizations sponsor courses and seminars that enhance staff's ability to do project work. The costs of registration, travel, and lodging associated with attending such programs are direct-support expenditures. Mileage, tolls, and parking expenses related to project work are also charged as direct-support expenditures.

Translation and Interpretation Services

To meet the needs of people with limited English proficiency, CTPS translates vital documents into the six most widely spoken non-English languages in the MPO region, currently Chinese (both traditional and simplified), Haitian Creole, Portuguese, Spanish, and Vietnamese. Translation expenses are considered a direct cost. CTPS also provides real-time interpretation of meetings and events upon request with one week of advance notice, which is also considered a direct cost.

Other

Other expenditures may become necessary during the term of this Unified Planning Work Program, such as software for particular project work, equipment for conducting passenger surveys, or data collection equipment, which may be funded through this line item.

FFY 2025 Anticipated Outcomes

Direct costs include computers, AMPO membership dues, in-state project-related travel, out-of-state travel associated with staff attendance at professional and training conferences, translation and interpreter services, and other appropriate costs.

Chapter 6

Metropolitan Area Planning Council Activities

INTRODUCTION

The Metropolitan Area Planning Council (MAPC) receives approximately 20 percent of the Boston region's annual combined 3C PL and §5303 funding. With this funding, MAPC staff conduct various studies, technical analyses, and outreach and support activities to help fulfill the Boston Region Metropolitan Planning Organization's (MPO) functions as a regional planning body. The Massachusetts Department of Transportation (MassDOT) provides the match to both the Federal Transit Administration and Federal Highway Administration funds described in this chapter.

Table 6-1
UPWP-Funded MAPC Activities, FFY 2025

Project Name	ID	FFY 2024 Funding	FFY 2024 Work Products and Progress	FFY 2025 Funding	FFY 2025 Planned Work Products and Progress
MAPC Planning Studies and Technical Analyses					
Corridor/Subarea Planning Studies	MAPC1	$260,000	Local parking management plans; data collection and analysis to repurpose on-street parking spaces for dedicated bus and bike lanes; planning products and engagement support for MBTA Better Bus Project; multimodal transportation plans for select corridors or subregions.	$260,000	Parking use data collection, analysis of data, and recommendations to municipalities in the form of a report; coordination meetings, corridor level data collection and technical memos, community engagement meetings, survey information, and data visualization; identifying mobility solutions, conceptual designs, pilot projects, data and analysis to inform recommendations, and a technical report summarizing findings; new zoning and transportation plans that enable transit-oriented housing.
Active and Carbon-Free Planning and Coordination	MAPC2	$245,000	Planning to support the advancement of zero-emission vehicles; bicycle- and pedestrian-planning support; expansion of the LandLine regional greenway system through planning and mapping efforts.	$275,000	Planning to support deployment of ZEVs and related infrastructure; data collection, research, and analysis to support completed bicycle and pedestrian plans in selected municipalies; technical support for bicycle and pedestrian improvements; support for regional trail and greenway development; support, technical analysis, coordination, and research in support of the Bluebikes bikeshare system.
MetroCommon 2050	MAPC3	$120,000	Final updated plan with policy recommendations and identification of planning needs to mitigate impacts of scenarios.	$135,000	Anticipated outcomes include a stronger constituency for sustainable land use and transportation investments and programs; case studies or best practices for regional and local mobility; and local commitments to implement the regional plan's recommendations.
Land Use Development Project Reviews	MAPC4	$94,942	Technical memos with transportation recommendations for development projects and large transportation infrastructure projects with a land use component.	$97,511	Analyses and reports of MEPA reviews, development of mitigation recommendations, coordination with municipalities and transportation agencies, maintenance and updates of MAPC's development database, and input into the project evaluations for the TIP and LRTP. In addition, MAPC will continue to review and respond to notices of offered railroad property.
Community Transportation Technical Assistance Program*	MAPC5	$50,000	Responded to various communities' inquiries related to transportation issues: • Wrentham—Provided assistance regarding recommendations for truck exclusion at the intersection of Route 1(Washington St.) and Hawes St. • Sharon—Provided assistance regarding the redesign of the intersection of Massapoag Avenue / Pond Street at Quincy Street and East Street • Hamilton/Ipswich—Provided assistance regarding traffic calming at the intersections of Highland Street at Waldingfield Road, Waldingfield Road at Goodhue Street, and Goodhue Street at Highland Street	$50,000	Provide technical assistance to municipal staff in the Boston metro region on challenges around multimodal transportation planning and design.
MAPC Administration and Support					
MPO/MAPC Liaison and Support Activities	MAPC6	$190,000	Continue to support the MPO process to develop the TIP, UPWP, and LRTP with robust public engagement, as well as participate in related regional planning efforts conducted by MassDOT, MBTA, municipalities, or federal partners.	$198,000	Outcomes of this program will result in interagency coordination; work scopes and agendas; participation in advisory and corridor committees; public participation and outreach; reports to the MAPC executive committee, MAPC Council members, MAPC subregions, and MAPC staff; MPO elections; PBPP targets and data; LRTP scenarios; TIP criteria update and project evaluations; and attendance at relevant meetings.
UPWP Support	MAPC7	$15,000	Support the UPWP development process and attend relevant meetings.	$15,000	Tasks and work products generally remain the same from year to year.

Land Use Data and Forecasts for Transportation Modeling	MAPC8	$120,000	Improved land use allocation model; multiple demographic and land use scenarios for transportation modeling; updated development data and analysis; documentation; and mapping products to support advanced transportation modeling year to year.	$125,000	New data sources; an improved land use allocation model; multiple demographic and land use scenarios for transportation modeling; updated development data and analysis; documentation; and mapping products to support advanced transportation modeling.
Subregional Support Activities	MAPC9	$220,000	Support subregional groups. Includes preparing agendas, coordinating with transportation agencies, reviewing transportation studies in subregions, and helping to set subregional transportation priorities.	$234,000	Tasks and work products generally remain the same from year to year.

* Asterisk denotes that this section is also included in Chapter 5.

MAPC PLANNING STUDIES AND TECHNICAL ANALYSES

MAPC conducts transportation planning studies through four ongoing programs: Corridor/Subarea Planning Studies, Alternative Mode Planning and Coordination, MetroCommon 2050 Implementation, and Land Use Development Project Reviews. MAPC and Central Transportation Planning Staff (CTPS) also collaborate on the Community Transportation Technical Assistance Program (MAPC5), which is described in Chapter 4.

Corridor/Subarea Planning Studies

Project ID Number	MAPC1
FFY 2025 Total Budget	$260,000

Purpose

These studies include funding to support MAPC's work on several corridor and subarea studies in the region. Some of these projects will be funded jointly through the UPWP and other funding that MAPC receives through its assessment on municipalities, state contracts, and other planning grants.

Approach

This task is accomplished through the following subtasks.

Parking Planning and Research in Selected Communities ($55,000)

The goal is to address the challenges that municipalities face from both requiring too much parking through local regulation and not managing their existing parking supply, both on and off-street. This work may also identify whether space that is currently dedicated for parked cars could be more efficiently used for other transportation or land use purposes. MAPC will work with selected municipalities to conduct research and data collection to develop parking plans and policy changes to build more housing, stimulate local economic prosperity, reduce

congestion caused by circling vehicles, help municipalities plan for greater land use density, and encourage mode shift away from single-occupant vehicle trips. This work will involve on- and off-street parking, as well as understanding trade-offs associated with repurposing on-street parking for dedicated bus lanes, bike lanes, or wider sidewalks. This work would benefit local air quality and congestion by managing parking supply and demand and creating places where people can park once and then walk to multiple destinations. In locations where parking requirements can be reduced, the number of households with one or more vehicles could decline, which could result in higher percentages of walking, biking, and transit ridership.

Supporting MBTA Bus Network Redesign Implementation ($55,000)

MAPC will support the Massachusetts Bay Transportation Authority's (MBTA) Bus Network Redesign, a multifaceted planning effort to improve the bus system through bus priority infrastructure, a redesigned bus network with changed and new routes, and improved bus stops. MAPC will help convene municipal officials and other stakeholders to coordinate planning. MAPC will provide technical assistance at the corridor level to understand the trade-off of repurposing parking or travel lanes for more dedicated bus space. MAPC will support community engagement and related planning at the corridor level.

Corridor/Subarea Multimodal Transportation Planning ($75,000)

MAPC will work in a selected subregion or roadway corridor to coordinate multimodal transportation planning, safety improvements, and transit service operations to be implemented by MassDOT, MBTA, regional transit authorities, transportation management agencies, the Department of Conservation and Recreation (DCR), employers, and/or municipalities with local land use planning to achieve livability and smart growth goals. This work will also include identification of areas in the region that face "transportation insecurity" with low auto ownership rates, lack of convenient public transit, and poor pedestrian infrastructure. The goal is to provide more mobility options for a variety of different users and trip types, as well as safer conditions for all users.

Coordinated Housing and Transportation Planning ($75,000)

MAPC will work with selected municipalities to help them comply with the new state requirement to allow for multifamily residential development near MBTA transit stations. MAPC will support zoning, transportation planning, transportation demand management, and other activities to establish transit-oriented housing as required by Section 3A of M.G.L. Chapter 40A. MAPC will also conduct

regional research on topics related to this new state law to support more cities and towns to comply with the requirement and create transit-oriented neighborhoods. MAPC selects municipalities that respond to the Technical Assistance Program's annual call for concepts.

FFY 2025 Anticipated Outcomes

- Activities and expected work products related to Local Parking Plans and Policy, including parking use data collection, analysis of data, and recommendations to municipalities in the form of a report.
- Activities and expected work products related to Supporting MBTA Bus Network Redesign include coordination meetings, corridor level data collection and technical memos, community engagement meetings, survey information, and data visualization.
- Activities and expected work products related to Corridor/Subarea Multimodal Transportation Planning include identifying mobility solutions, conceptual designs, pilot projects, data and analysis to inform recommendations, and a technical report summarizing findings.
- Activities and expected work products related to Coordinated Housing and Transportation Planning, including new zoning and transportation plans that enable transit-oriented housing.

Active and Carbon-Free Planning and Coordination

Project ID Number	MAPC2
FFY 2025 Total Budget	$275,000

Purpose

MAPC provides alternative-mode transportation-planning support to the Boston Region MPO and municipalities that focuses on non-single-occupancy vehicle modes and promoting zero emission vehicles (ZEV). This work benefits bicycle and pedestrian transportation, encourages transit in areas that currently are underserved by existing regional transit authorities, improves the region's understanding of transportation network companies, advances ZEVs, and identifies and supports transportation demand management strategies.

Approach

This area of work is accomplished through the following subtasks.

Zero Emission Vehicle Support ($95,000)

MAPC will support municipalities in planning for ZEVs, such as electric vehicle charging infrastructure, transitioning or retrofitting municipal fleets, advancing electric school buses and electric cargo bikes, promoting zero emission car sharing and ride-hailing, and other initiatives. This work will increase the number of ZEVs in the region, thereby helping the state meet greenhouse gas (GHG) emission reduction goals.

Bicycle and Pedestrian Planning ($30,000)

MAPC will work with municipalities to identify local bicycle and pedestrian improvements with a focus on closing sidewalk gaps, implementing separated bicycle facilities, supporting bike and pedestrian safety plans, complete streets prioritization plans, and other improvements at the local level. This work will lead to safer infrastructure, increase the rate of cycling and walking in the region, and decrease bicycle and pedestrian injuries.

Regional Bike Share Planning ($40,000)

MAPC will continue to support municipalities in the region to plan for the implementation and expansion of the Bluebikes bicycle sharing program. This work will include analyzing trip data, coordinating funding opportunities, planning for additional electric bikes, and supporting the next procurement process for a system operator.

Regional Greenway Planning and Mapping ($110,000)

MAPC will continue to work with MassDOT, CTPS, DCR, Executive Office of Energy and Environmental Affairs, municipalities, other regional planning agencies, and trail organizations to plan, map, design, and implement portions of a regional bicycle and pedestrian network of off-road and on-road connections (a greenway) that form a contiguous system around greater Boston. In 2015, MAPC worked with the above-cited partners to develop the branding of this system named the LandLine. The trails consist of shared-use paths along former railroad rights-of-way, hiking trails through conservation land, and historic corridors that connect points of interest. The binding theme of the proposed and completed corridors is creating attractive places to walk, bike, or otherwise travel through low-traffic or no-traffic green areas.

FFY 2025 Anticipated Outcomes

- Planning to support deployment of ZEVs and related infrastructure.
- Data collection, research, and analysis to support completed bicycle and pedestrian plans in selected municipalities.
- Technical support for bicycle and pedestrian improvements.
- Support for regional trail and greenway development.
- Support, technical analysis, coordination, and research in support of the Bluebikes bikeshare system.

MetroCommon 2050: Greater Boston's Next Regional Vision

Project ID Number	MAPC3
FFY 2025 Total Budget	$135,000

Purpose

This task continues to support the ongoing coordination and implementation of our regional plan, MetroCommon 2050, the Boston region's 30-year comprehensive plan (through the year 2050) for sustainable, equitable growth and development. The new plan establishes goals for topics including mobility, climate mitigation, and resiliency, as well as actionable recommendations needed to accomplish these goals. The agency is developing a new strategic plan and aligning its annual workplan and technical assistance priorities to implement the recommendations of MetroCommon.

Approach

This work is accomplished through the following subtasks.

MetroCommon 2050 Implementation and Education ($45,000)

Changing demographics and location preferences, planned investments in public transportation, and emerging transportation technologies will have a profound influence on the Boston region in the decades ahead. The regional plan includes recommendations for improving mobility, reducing GHG emissions from the transportation sector, and expanding the access, capacity, and affordability of public and active transportation. This task will include outreach and education to municipal leaders about the mobility-focused recommendations, including opportunities to identify transportation investments that will help unlock redevelopment in mixed-use locations. Examples of planning processes that we will be supporting include the MBTA, 3A Communities rezoning work, and regional development and preservation priority plans.

Building Constituencies for Local, Regional, and State Decisions that Enable Livable Communities and Sustainable Transportation ($45,000)

MAPC will continue to work with municipal and state officials and residents to seek changes in land use that will support livable communities and sustainable transportation. This will include engaging the public in planning and dialogue that enhances equitable transit-oriented development planning, and influences other decision-making to improve development outcomes, transportation opportunities, and reduction of GHG emissions. As part of the plan update, MAPC will hold regional discussions regarding challenges and opportunities in making long-term improvements to the Boston region's transportation system, including restoring and expanding service to equitable transit-oriented development locations. This is especially critical with the new state law that requires cities and towns to zone for multifamily districts around transit stations. Task outputs are expected to include engaging at least 500 people with a focus on diverse and underserved communities and partnering with organizations that serve those communities. Outputs also include hosting at least 10 different events or activities as part of the engagement.

Research and Evaluation that Support Livable Communities and Sustainable Transportation ($45,000)

Incorporation of best practices and evaluation is important to improving MAPC's work and for advancing implementation at the local and state levels. Transportation and integrated land use planning practices will be evaluated to determine if improvements can be made to our practices, with a particular emphasis on evaluating the equity outcomes and processes of these plans. Best practices from other regions will also be evaluated for their applicability in Greater Boston.

FFY 2025 Anticipated Outcomes

Anticipated outcomes include a stronger constituency for sustainable land use and transportation investments and programs; case studies or best practices for regional and local mobility; and local commitments to implement the regional plan's recommendations.

Land Use Development Project Reviews

Project ID Number	MAPC4
FFY 2025 Total Budget	$97,511

Purpose

This task supports MAPC's review of potential development projects in the region. In particular, MAPC will review projects for consistency with its sustainable land use and transportation goals, impacts on the transportation network and projects identified in the Transportation Improvement Program (TIP) and Long-Range Transportation Plan (LRTP), and consistency with the MPO's Economic Vitality goals.

Approach

MAPC tracks all projects reviewed in the region under the Massachusetts Environmental Policy Act (MEPA) and provides a regional-planning analysis to MassDOT and the Secretary of Energy and Environmental Affairs for all developments considered to have significant impact. Special attention is given to mitigation and planning requirements that serve to reduce auto travel by encouraging carpooling, transit, parking regulations, and other travel demand management techniques. MAPC coordinates these reviews with MassDOT and the municipalities, and works with MassDOT to identify updated requirements to be included in the transportation impact assessments that must be conducted by developers.

MAPC also reviews notices of offered railroad property from MassDOT, consults with municipalities as necessary, and provides appropriate input. Often, these notices involve rail trails, but they also may involve other types of proposed developments.

FFY 2025 Anticipated Outcomes

Anticipated outcomes include analyses and reports of MEPA reviews, development of mitigation recommendations, coordination with municipalities and transportation agencies, maintenance and updates of MAPC's development database, and input into the project evaluations for the TIP and LRTP. In addition, MAPC will continue to review and respond to notices of offered railroad property.

MAPC ADMINISTRATION AND SUPPORT ACTIVITIES

The following section contains details on the administration, resource management, and support activities undertaken by MAPC every federal fiscal year.

MPO/MAPC Liaison and Support Activities

Project ID Number	MAPC6
FFY 2025 Total Budget	$198,000

Purpose

This task includes working with MPO members and staff to establish work priorities and meeting agendas. It also includes implementing the continuous, comprehensive, and cooperative (3C) transportation planning process and engagement in regional transportation planning led by MassDOT, the MBTA, or municipalities in the region. It also includes reporting to the MAPC executive committee, MAPC council members, MAPC subregions, and MAPC staff on MPO activities to ensure strong coordination of land use and transportation planning across the region.

Approach

Statewide and Regional Planning Committees and Processes ($108,000)

In addition to participating in the Boston MPO process, MAPC actively participates in and attends statewide and regional planning committees, task forces, working groups, and commissions to represent the interests of the region, with a particular focus on the critical links between land use and transportation. These committees include the Massachusetts Association of Regional Planning Agencies; Regional Coordinating Councils; MassDOT and MBTA board meetings; and various MassDOT, MBTA, or municipally led transportation working groups or study advisory committees. MAPC will also be actively involved in regional transportation plans and programs related to land use and transportation. Advisory committees may change from year to year as studies are

started or completed, but participation in various advisory committees is an ongoing task.

Support the Public Participation Process for Metropolitan Planning Documents ($10,000)

MAPC provides education and outreach for a wide variety of transportation-related and land use-related topics in the region, with emphasis on outreach through the subregions to municipal officials. MAPC also supports CTPS in its outreach to environmental justice communities, older adults, and people with disabilities.

MPO Elections ($10,000)

Working with the MBTA Advisory Board, MAPC will coordinate and implement annual elections for municipal representatives in the MPO.

Performance-Based Planning and Programming (PBPP) ($10,000)

MAPC will review PBPP targets and follow progress toward meeting targets and objectives, with a focus on coordinating state, local, and regional safety planning and goal setting.

TIP Development and Project Evaluation ($35,000)

MAPC will work with CTPS to advance the Transportation Improvement Plan via an annual process that is transparent and engaging for MPO members and the public. MAPC will support CTPS to update the TIP scoring criteria as necessary and to advise CTPS about the land use and economic-development aspects of the TIP evaluation. MAPC will evaluate and work with municipalities to advance TIP projects.

MPO Agenda Setting, Meetings, and Coordination ($25,000)

MAPC will work with CTPS and MassDOT to develop MPO meeting agendas and presentations and participate in MPO processes.

FFY 2025 Anticipated Outcomes

Outcomes of this program will result in interagency coordination; work scopes and agendas; participation in advisory and corridor committees; public

participation and outreach; reports to the MAPC executive committee, MAPC Council members, MAPC subregions, and MAPC staff; MPO elections; PBPP targets and data; LRTP scenarios; TIP criteria update and project evaluations; and attendance at relevant meetings.

UPWP Support

Project ID Number	MAPC7
FFY 2025 Total Budget	$15,000

Purpose

This task supports MAPC's management and oversight of UPWP-funded planning studies, projects, and programs, including preparing updates and budget information in monthly reports to MassDOT.

Approach

MAPC assists with the annual development of the UPWP and coordinates with MassDOT and CTPS to support development of UPWP project ideas and specific work scopes. Through community liaison and subregional support activities, MAPC staff also help communities identify and develop studies for inclusion in the UPWP.

FFY 2025 Anticipated Outcomes

MAPC staff will prepare UPWP project listings and monthly reports on UPWP activities. MAPC will assist with annual development of the UPWP and support development of specific project proposals and work scopes. MAPC staff will also assist communities in identifying and developing studies to be included in the UPWP through community liaison and subregional support activities.

Land Use Data and Forecasts for Transportation Modeling

Project ID Number	MAPC8
FFY 2025 Total Budget	$125,000

Purpose

This task allows MAPC to support the MPO's planning and decision-making by providing CTPS with detailed population, household, employment, and land use data (current conditions and scenarios of future growth) for transportation modeling and project evaluation. It also supports forecasting applications for municipal and subregional planning initiatives throughout the MPO and RPA region such as Housing Production Plans.

Approach

MAPC will continue to investigate, acquire, and improve additional sources of employment and built environment data to inform land use allocation modeling. MAPC will continue to refine and improve Zoning Atlas data and corresponding development capacity estimates that serve as key inputs to the land use allocation model. A major focus this year will be on collecting information about new zoning districts adopted pursuant to the MBTA Communities Multifamily mandate as they are approved and released by the Executive Office of Housing and Livable Communities.

MAPC will continue to monitor development projects that are being planned across the region and will maintain an up-to-date development database in an online portal at https://www.massbuilds.com/map. MAPC will support CTPS and MassDOT in applying these data for project evaluation or updates to the regional travel demand model.

MAPC will maintain the UrbanSim land use allocation model and will make incremental improvements as necessary. MAPC has developed methods to prepare updated land use forecasts on an as-needed basis for transportation project analysis, environmental permitting (MEPA modeling), or scenario

modeling. As the 2027 Long-Range Transportation Plan socioeconomic projections update process approaches, MAPC will coordinate with UrbanSim on larger necessary upgrades and improvements to the model.

MAPC will continue frequent and regular communication and coordination with the CTPS modeling staff to support travel model improvements and integration of the land use allocation and travel demand models. MAPC will also help to plan and participate in webinars and other peer exchange opportunities, such as the Association of Metropolitan Planning Organizations Socioeconomic Forecasting subgroup quarterly meetings, involving other state, regional, and local agencies to improve our understanding of the state of the practice regarding demographic and land use forecasting.

FFY 2025 Anticipated Outcomes

Anticipated outcomes include new data sources; an improved land use allocation model; multiple demographic and land use scenarios for transportation modeling; updated development data and analysis; documentation; and mapping products to support advanced transportation modeling.

Subregional Support Activities (MAPC)

Project ID Number	MAPC9
FFY 2025 Total Budget	$234,000

Purpose

The Boston Region MPO area consists of 97 cities and towns. The region is subdivided into eight geographic areas that are represented by subregional councils comprising municipal officials, business leaders, community-based organizations, and other local participants. MAPC staff planners are assigned as coordinators to each of the subregional groups to help members develop an understanding of subregional and regional transportation and land use issues. This project supports community involvement in the development of transportation planning documents.

Approach

Subregions jointly identify and review the transportation priorities in their areas and recommend subregional projects and priorities for the TIP, LRTP, UPWP, and the MassDOT and MBTA capital investment plans.

Subregional coordinators and MAPC transportation staff report to the MPO through formal and informal communications. MAPC subregional groups will continue to participate in local corridor advisory committees whenever these committees are appropriate vehicles for working on projects in their areas. The subregions will continue to identify priority transportation needs, plan for first- and last-mile connections to transit, identify regional trail connections, pilot new technology to support increased mobility, and support planning for transit-oriented housing around MBTA stations.

MAPC staff ensures timely discussions of transportation-related issues by placing the topics on meeting agendas, leading and participating in the discussions, and distributing appropriate documents and notices relating to region and statewide transportation meetings.

FFY 2025 Anticipated Outcomes

Outcomes of this program include preparing monthly meeting agendas for transportation topics at subregional meetings; coordinating with transportation agencies; reviewing transportation studies in subregions; supporting subregional and corridor advisory committee meetings; generating public input on MPO processes and certification documents; and helping to set subregional transportation priorities.

Chapter 7—Boston Region MPO Budget and Operating Summaries

This chapter contains overall budget information for the Boston Region Metropolitan Planning Organization's (MPO) federal fiscal year (FFY) 2025 activities. The information is organized according to the Unified Planning Work Program (UPWP) categories described in Chapters 3 through 6. Recipient agencies and funding sources are indicated.

The funding for the projects, programs, and activities listed in Chapters 3 through 6 comes from the following sources, which are described in Chapter 2.

UPWP Work Areas	Total Budget
MPO Support and 3C Planning	$4,922,017
MassDOT-Directed PL Projects	$352,367
Ongoing MPO-Funded Technical Analyses	$148,500
MAPC Planning Studies and Technical Analyses	$817,511
New MPO-Funded Discrete Studies	$150,000
Resource Management and Support Activities	$400,000
MAPC Resource Management and Support Activities	$572,000
Direct Costs (3C)	$175,000
Total	**$7,537,395**

Funding Source	Total Programmed Funds
FHWA 3C PL/MassDOT Local Match	$4,660,818
FTA 3C PL (Section 5303)/MassDOT Local Match	$2,876,577
Total	**$7,537,395**

Tables 7-1 through 7-9 on the following pages summarize the funding information presented in the preceding chapters. There is one table for each UPWP category of work conducted by Central Transportation Planning Staff (CTPS), and one for each UPWP category of work conducted by Metropolitan Area Planning Council (MAPC).

The total federal funding programmed in this UPWP is $7,537,395. All federal funds programmed in the UPWP are allocated to the Boston Region MPO by the Massachusetts Department of Transportation (MassDOT) as Federal Highway Administration (FHWA) 3C Planning (PL) funds. However, these federal funds initially come from two sources: the FHWA and the Federal Transit Administration (FTA). The federal funds, which are supplemented by a non-federal match provided by MassDOT, include the following initial sources:

- FHWA 3C PL: FHWA planning funds are distributed to the MassDOT Office of Transportation Planning (OTP), according to an allocation formula established by federal legislation, to carry out the 3C planning process. OTP distributes these funds to Massachusetts MPOs according to a formula that is primarily based on the region's road mileage and population. The formula was developed by the Massachusetts Association of Regional Planning Agencies (MARPA) and is known as the MARPA formula. The FFY 2025 3C PL funding allocation for the Boston region, including state matching funds, is $4,660,818. The total Boston region 3C PL allocation is split between CTPS, which receives $3,775,263, and MAPC, which receives $885,555.
- FTA 3C Planning (§5303): FTA provides 3C planning funds for transit projects to MPOs and state departments of transportation under Section 5303 of the Federal Transit Act. These funds require a state match, are distributed according to an allocation formula, and are administered by MassDOT. These funds are converted to PL planning funds by MassDOT before distribution. The FFY 2025 FTA allocation for the Boston region, including a total local match, is $2,876,577. As the 3C PL funds, these funds are split into two categories:
    - MPO and MassDOT FTA 3C Planning (§5303): The total amount of FTA funds, including a local match, programmed in this UPWP as PL for work conducted by the MPO staff is $2,372,621.
    - MAPC FTA 3C Planning (§5303): A portion of the Boston region's FTA allocation also goes to MAPC. MAPC uses these funds to conduct its transit-planning studies programmed through the UPWP. The total amount of FTA-derived funds, including a local match, allocated to MAPC as PL for FFY 2023 is $503,956.

Project status and financial data reported in the following tables are subject to change.

Table 7-1
UPWP Budget—MPO Support and 3C Planning for FFY 2025

Project ID	Name	FFY 2024 CTPS UPWP Budget	Expected Project Status as of 10/1/2024	Proposed FFY 2025 CTPS Budget
8125	Long-Range Transportation Plan	$106,000	Ongoing	$280,000
8225	Transportation Improvement Program	$321,000	Ongoing	$330,000
8325	Unified Planning Work Program	$132,000	Ongoing	$135,000
9625	Public Engagement Program	$338,000	Ongoing	$397,000
8825	Performance-Based Planning and Programming	$179,500	Ongoing	$140,000
8525	Transportation Equity Program	$203,000	Ongoing	$215,000
8425	Air Quality Program	$55,000	Ongoing	$50,000
2125	Congestion Management Process	$113,500	Ongoing	$125,000
Core MPO Functions Subtotal		**$1,448,000**		**$1,672,000**
8725	Climate Resilience Program	$114,000	Ongoing	$100,000
2225	Freight Planning Support	$119,000	Ongoing	$125,000
7125	Regional Model Enhancement	$837,000	Ongoing	$850,000
5025	Data Program	$568,000	Ongoing	$575,000
2525	Bicycle and Pedestrian Planning Program	$152,000	Ongoing	$185,000
2825	Multimodal Mobility Infrasructure Program	$332,000	Ongoing	$370,000
Programs Supporting the 3C Process Subtotal		**$2,122,000**		**$2,205,000**
9125	Support to the MPO and its Committees	$460,186	Ongoing	$475,017
9225	General Graphics	$309,500	Ongoing	$314,000
9725	General Editorial	$230,000		$233,000
8925	Transit Working Group Support	$22,500	Ongoing	$23,000
Support to the MPO and its 3C Process Subtotal		**$1,022,186**		**$1,045,017**
Certification Requirements Subtotal		**$3,144,186**		**$4,922,017**

Table 7-2
UPWP Budget—Ongoing Technical Analyses for FFY 2025

Project ID	Name	FFY 2024 CTPS UPWP Budget	Expected Project Status/Completion as of 10/1/2024	Proposed FFY 2025 CTPS Budget
2325	Roadway Safety Audits	$17,000	Ongoing	$15,000
2425	Community Transportation Technical Assistance	$67,000	Ongoing	$70,000
4125	Regional Transit Service Planning Technical Support	$40,500	Ongoing	$63,500
MPO-Funded Ongoing Technical Analyses Subtotal		**$124,500**		**$148,500**

Table 7-3
UPWP Budget—MPO New Discrete Studies for FFY 2025

Universe ID	Project ID	Study or Program	Proposed FFY 2025 CTPS Budget
M-2	13819	Bluebikes and MBTA Connections	$60,000
M-4	13820	Roadway Pricing: Balancing the Need for a Transition to Sustainable Mobility with Equity Considerations	$50,000
F-1	13821	Decarbonizing the Freight Sector: Exploring the Potential for Using E-cargo Bikes for First-/Last-mile Freight Deliveries	$40,000
Total for New Discrete Studies			**$150,000**

Table 7-4
UPWP Budget—Resource Management and Support Activities for FFY 2025

Project ID	Name	FFY 2024 CTPS UPWP Budget	Expected Project Status as of 10/1/2024	Proposed FFY 2025 CTPS Budget
6025	IT Resource Management	$315,500	Ongoing	$320,000
9525	Professional Development	$85,500	Ongoing	$80,000
Resource Management and Support Activities Subtotal*		**$401,000**		**$400,000**

*Does not include Direct Support.

Table 7-5
UPWP Budget—MAPC Planning Studies and Technical Analyses for FFY 2025

Project ID	Name	Proposed FFY 2024 MAPC Budget	Proposed FFY 2025 MAPC Budget
MAPC1	Corridor/Subarea Planning Studies	$260,000.00	$260,000
MAPC2	Active and Carbon-Free Planning and Coordination	$245,000.00	$275,000
MAPC3	MetroCommon 2050	$120,000.00	$135,000
MAPC4	Land Use Development Project Reviews	$94,942.00	$97,511
MAPC5, 2424*	Community Transportation Technical Assistance Program*	$50,000.00	$50,000
MAPC Planning Studies and Technical Analyses Subtotal		**$769,942**	**$817,511**

* This project is shared with MAPC.

Table 7-6
UPWP Budget—MAPC Resource Management and Support Activities for FFY 2025

Project ID	Name	Proposed FFY 2024 MAPC Budget	Proposed FFY 2025 MAPC Budget
MAPC6	MPO/MAPC Liaison and Support Activities	$190,000.00	$198,000
MAPC7	UPWP Support	$15,000.00	$15,000
MAPC8	Land Use Data and Forecasts for Transportation Modeling	$120,000.00	$125,000
MAPC9	Subregional Support Activities	$220,000.00	$234,000
MAPC Resource Management and Support Activities		**$545,000**	**$572,000**

Table 7-7
UPWP Budget—Summary of FFY 2025 Budgets for CTPS

3C Studies and Programs by Budget Categories	Proposed FFY 2025 CTPS Budget
Resource Management and Support Activities	$400,000
MPO Certification Requirements	$4,922,017
Ongoing MPO-Funded Technical Analyses	$148,500
New MPO-Funded Discrete Studies	$150,000
MassDOT-Directed PL Funds*	$352,367
Direct Support	$175,000
Total FFY 2025 CTPS Budget	**$6,147,884**

Note: Budget figures include salary, overhead, and direct support.
* This project is conducted on behalf of MassDOT but funded through the MPO 3C contract.

Table 7-8
UPWP Budget—Summary of FFY 2025 Budgets for MAPC

3C Studies and Programs by MAPC Budget Categories	Proposed FFY 2025 MAPC Budget
MAPC Planning Studies and Technical Analyses	$817,511
MAPC Administration, Resource Management, and Support Activities	$572,000
Total MAPC FFY 2025 UPWP Programmed Funds	**$1,389,511**

Table 7-9
UPWP Budget—3C Budget and Overall Budget for FFY 2025

Agency Supporting MPO/3C Work	Proposed FFY 2025 Budget
CTPS	$6,147,884
MAPC	$1,389,511
3C Budget Subtotal	**$7,537,395**

FFY 2025 UPWP Budget	**$7,537,395**

Appendix A

Other Boston Region Transportation Planning Studies

This appendix consists of transportation studies and technical analysis work that MPO staff will conduct to support the work of various transportation agencies in the Boston Region Metropolitan Planning Organization (MPO) area, as well as brief descriptions of planning studies that will be conducted in the Boston Region MPO area by individual agencies, such as the Massachusetts Department of Transportation (MassDOT) and the Massachusetts Bay Transportation Authority (MBTA), during federal fiscal year (FFY) 2025. This appendix is divided into two sections. The first describes contract-based work that MPO staff will undertake to support the planning work of other agencies, while the second describes studies supported by federal planning (but not MPO) funds and/or studies that MPO and partner agency staff have determined to be of regional significance.

The project listings in Section 1 are organized by funding agency and include studies and technical analyses for MassDOT, the MBTA, and other agencies in the Boston region. The project listings in Section 2 indicate whether components of the projects will be conducted by CTPS, and are organized hierarchically: first by type of study, then by geography, then by the entity organizing or leading the study effort.

SECTION 1: AGENCY AND CLIENT-FUNDED TRANSPORTATION STUDIES

The transportation studies and technical analysis work described in this section will be conducted to support the work of various transportation agencies in the Boston Region MPO area.

Some of the contracts described in this section are issued to the Central Transportation Planning Staff (CTPS) every year and generally coincide with either the FFY or the state fiscal year (SFY). Examples include MassDOT PL and MassDOT Statewide Planning and Research (SPR) contracts. Other contracts are issued for tasks and technical support to be conducted over a multiyear period, and they might be renewed with the agencies after several years. A third contract type covers the work for discrete studies or technical analyses intended to be completed within a specified timeframe. These may either be one-time contracts in which CTPS conducts analysis or technical support to further a specific agency project, such as MassDOT's Interstate 90 (I-90) Allston

Multimodal Modeling Support project, or they can be contracts in which CTPS provides technical support to an agency for data collection and analysis that is undertaken annually, such as the MBTA National Transit Database (NTD): Data Collection and Analysis contract.

The work conducted on behalf of the agencies includes data collection and analyses covering a broad range of topics, including travel demand modeling, air quality, traffic engineering, Title VI, and environmental justice. The products of this work are vital to support compliance with federal and state regulations such as the Massachusetts Environmental Policy Act and Title VI of the Civil Rights Act of 1964. CTPS also enhances regional understanding of critical transportation issues through the preparation of graphics, maps, and other materials for agency studies and presentations. The work described in this section is organized by agency and includes studies and technical analyses for MassDOT, the MBTA, and other agencies in the Boston region.

Table A-1
Unified Planning Work Program Budget—New and Continuing Agency Transportation Planning Studies and Technical Analyses for FFY 2025

Project ID	Name	Total Contract	FFY 2025 Spending	Funding Source
Varies by project	MassDOT SPR Program Support	$500,000		SPR
13155	MassDOT Title VI Program	$95,000	$20,000	MassDOT
Varies by project	MassDOT-Directed Planning Assistance	$359,326		MassDOT 3C PL
13809	I-90 Allston Multimodal Modeling	$336,037	$75,000	MassDOT
MassDOT Projects		**$1,290,363**	**$95,000**	
11415	AFC 2.0 Equity Analysis	$116,972	$19,000	MBTA
11432	MBTA 2024 and 2025 Title VI Program Monitoring	$197,964	$90,700	MBTA
11496	MBTA Mapping Support	$18,000	$6,000	MBTA
11500	MBTA Map and Signage Support to Bus Network Redesign	$20,000	$20,000	MBTA
14376	MBTA Rider Oversight Committee Support IV	$31,342	$7,000	MBTA
TBD	MBTA North Shore Busway	$108,819	$80,000	MBTA
14378	MBTA SFY 2024 National Transit Database (NTD) Support	$204,782	$9,260	MBTA
14379	MBTA SFY 2025 National Transit Database (NTD) Support	$234,184	$166,220	MBTA
11430	MBTA Transit Service Data Collection XI	$1,130,000	$198,000	MBTA
14358	Service Equity Analysis Support to the MBTA	$115,000	$25,000	MBTA
22217	Red Blue Connector Study	$213,000	$15,000	MBTA
MBTA Projects		**$2,390,063**	**$636,180**	
	Other (SS4A, Municipalities, etc.)	$350,000	$350,000	Other
Other Projects		**350,000**		
Agency-Funded and Client-Funded Subtotal		**$4,030,426**		

MassDOT

The contracts and technical analyses in this section are being undertaken for MassDOT.

MassDOT Statewide Planning and Research Program Support

Project ID Number	Varies
Funding Source	MassDOT SPR
FFY 2025 Total Budget	$490,000

Purpose

CTPS provides support to MassDOT's SPR program as requested. These contracts will include multiple individual projects or tasks throughout the federal fiscal year.

Approach

CTPS will conduct studies and analyses and provide technical assistance upon request. Two projects that are either underway or expected to begin in FFY 2025 are the Roadway Inventory and Related Support Maintenance and the Statewide Model Assistance Project. Other projects may be added throughout FFY 2025.

FFY 2025 Anticipated Outcomes

Activities and work products will depend on tasks requested by MassDOT's Office of Transportation Planning.

MassDOT Title VI Program

Project ID Number	13155
Funding Source	MassDOT Other
Total Contract Amount	$95,000
FFY 2025 Total Budget	$20,000

Purpose

Under this contract, CTPS will continue to provide technical support to MassDOT for developing and implementing its Title VI Program for both the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

Approach

MassDOT, as a recipient of federal funds from both FHWA and the FTA, is required to comply with Title VI of the Civil Rights Act of 1964, and with protections enacted through several other laws and executive orders that prohibit discrimination based on gender, age, income, and disability. Through this technical support work, CTPS will assist MassDOT in complying with these nondiscrimination laws.

FFY 2025 Anticipated Outcomes

Staff will provide technical support to MassDOT as described above.

MassDOT-Directed Planning

Project ID Number	Varies
Funding Source	MassDOT-Direct PL
FFY 2025 Total Budget	$359,326

Purpose

CTPS will provide transit-planning assistance to MassDOT and the MBTA by conducting various studies under MassDOT's FHWA-funded PL Program. This task will include multiple individual projects or tasks throughout the federal fiscal year.

Approach

Projects will be added throughout FFY 2025 to support transit-related research, planning, data collection, and analysis.

FFY 2025 Anticipated Outcomes

Activities and work products will depend on tasks requested by MassDOT and the MBTA.

I-90 Allston Multimodal Modeling

Project ID Number	13809
Funding Source	MassDOT
Total Contract	$400,000
FFY 2025 Total Budget	$75,000

Purpose

MassDOT and its project team are currently developing a Supplemental Draft Environmental Impact Report for the Allston Multimodal project. CTPS will produce travel-demand forecasts in support of this environmental filing.

Approach

CTPS will support MassDOT by using the CTPS regional travel demand model set to estimate highway volumes, transit volumes, and mode splits for horizon-year (2050) scenarios of the Allston Multimodal project.

FFY 2025 Anticipated Outcomes

In FFY 2025 staff will finalize the analysis and study documentation and support the environmental filing preparation and engagement as needed.

Massachusetts Bay Transportation Authority

The contracts and technical analyses in this section are being undertaken for the MBTA.

MBTA National Transit Database Support

Project ID Number	14378 (SFY 2024) 14379 (SFY 2025) TBD (SFY 2026)
Funding Source	MBTA
Total Contract*	$684,859
FFY 2025 Total Budget	$9,260 (SFY 2024) $166,220 (SFY 2025) $50,496 (SFY 2026)

*Multiple contract years are represented.

Purpose

For many years, in support of the MBTA's NTD submittals to the FTA, CTPS has produced passenger-miles traveled and unlinked trip estimates for MBTA services. This project will develop these estimates for the following modes:

- directly operated MBTA transportation (including motor bus, heavy and light rail, and bus rapid transit)
- purchased-service bus routes (that is, local routes for which the MBTA contracts with a private carrier)
- commuter rail

Approach

CTPS will use the following methods to collect the data on which these estimates will be based:

- ridechecks on a sample of automatic passenger counter-equipped buses on the directly operated bus, rapid bus, and purchased service bus modes
- full-route ridechecks, including farebox fare-mix surveys, on the purchased service bus mode for the routes without automatic passenger counter-equipped buses
- transit trip surveys on heavy rail, light rail, and rapid-bus modes to determine origin-destination information (transfer rates and average trip lengths)
- faregate noninteraction, farebox noninteraction, and rear-door entry surveys from stations or Green Line vehicles
- inferred origin-destination information from automated fare collection (AFC) data, if available from the MBTA or its partners, to determine origin-destination information (transfer rates and average trip lengths)
- commuter rail ridership data from passenger counts conducted by the MBTA or its contractors or from the MBTA's mobile ticketing vendor
- counts of temporary bus bridge passengers during sample periods when portions of rail service are temporarily suspended for maintenance and replaced with bus service

The MBTA will submit its SFY 2024 NTD passenger-miles traveled and unlinked trip estimates for various transit modes to the FTA with the aid of CTPS during FFY 2025. The final technical memoranda for SFY 2025 NTD will be completed in FFY 2026.

FFY 2025 Anticipated Outcomes

CTPS will complete the final technical memoranda and auditing process for SFY 2024 NTD reporting and will complete data collection begun in FFY 2024 for SFY 2025. Field staff will begin collecting data for SFY 2026 NTD reporting.

MBTA Title VI Program Monitoring

Project ID Number	11432
Funding Source	MBTA
Total Contract	$197,964
FFY 2025 Total Budget	$90,700

Purpose

Under this contract, CTPS provides the MBTA with technical assistance by collecting and analyzing MBTA service data to compare service provided to minority riders with service provided to nonminority riders. This work supports the MBTA's compliance with Title VI requirements.

Approach

Staff will collect and analyze data on the following service indicators:

- service coverage
- vehicle load
- vehicle headway
- on-time performance
- station conditions and amenities
- distribution and operability of AFC faregates and fare vending machines
- distribution of AFC retail sales terminals
- station elevator and escalator locations and operability
- vehicle age and condition

The data-collection and analysis activities will help to fulfill monitoring required as part of the MBTA's ongoing Title VI Program. The results of the data collection efforts and analyses will be reported in a memorandum to the MBTA for internal review and follow up and will be included in the next triennial program.

CTPS will incorporate relevant demographic data from the MBTA's 2022 passenger survey and subsequent updates where appropriate as they become available.

FFY 2025 Anticipated Outcomes

CTPS will provide documentation about selected service monitoring evaluations for SFY 2023 and 2024 MBTA service and amenities.

MBTA Transit Service Data Collection

Project ID Number	11422
Funding Source	MBTA
Total Contract	$1,130,000
FFY 2025 Total Budget	$198,000

Purpose

The work conducted under this contract will help the MBTA to assess bus and rapid transit service changes.

Approach

The MBTA requires ongoing data collection regarding its transit system to assess service changes. As part of this project, CTPS collects ridership and performance data to support future MBTA service changes. Work may also include support for improving the ridecheck database so that it will be compatible with new software and data sources. CTPS also may provide analytical assistance to the MBTA as requested.

FFY 2025 Anticipated Outcomes

- Point checks (observations of the arrival times, departure times, and passenger loads of a transit service at a single location) and other data collection as requested by the MBTA for planning purposes
- Improvements to the ridecheck database
- Analytical assistance as requested

MBTA Rider Oversight Committee Support

Project ID Number	14376 (SFY 2022–25)
Funding Source	MBTA
Total Contract	$31,342
FFY 2025Total Budget	$7,000

Purpose

The MBTA established a Rider Oversight Committee (ROC) in 2004 to provide ongoing public input on a number of different issues, including strategies for increasing ridership, developing new fare structures, and prioritizing capital improvements. Through this contract, CTPS supports the MBTA by providing ongoing technical assistance to the ROC.

Approach

Assistance provided by CTPS has included offering insights into the MBTA's planning processes, providing data analysis, and attending committee meetings, at which staff may respond directly to ROC members' questions.

FFY 2025 Anticipated Outcomes

CTPS will continue to provide technical assistance to the MBTA ROC and attend committee and subcommittee meetings.

Service Equity Analysis Support to the MBTA II

Project ID Number	TBD
Funding Source	MBTA
Total Contract	$115,000
FFY 2025 Total Budget	$25,000

Purpose

CTPS will support the MBTA in conducting the required Title VI service equity analyses for major service changes that take place during the duration of this contract.

Approach

CTPS will conduct service equity analyses for MBTA major service changes. CTPS will follow the new Service and Fare Equity policy in conducting its analyses.

CTPS will incorporate relevant demographic data from the MBTA's 2022 passenger survey and subsequent updates where appropriate as they become available.

FFY 2025 Anticipated Outcomes

CTPS will prepare technical memoranda documenting service equity analyses for each major service change.

MBTA Mapping Support

Project ID Number	11496
Funding Source	MBTA
Total Contract	$18,000
FFY 2025 Total Budget	$6,000

Purpose

The objective of this work is to provide map-making support upon request from the MBTA. At the time of each request, CTPS will provide the MBTA with an estimate of the specific cost and schedule for completing the map(s).

Approach

CTPS will update MBTA maps, upon request from the MBTA, within the budget provided for this project.

FFY 2025 Anticipated Outcomes

Updated district maps to reflect changes in bus routes and bus route garage assignments. Upon request from the MBTA, CTPS staff will update other existing CTPS-created MBTA maps within the budget provided for this project.

Map and Signage Support to the MBTA Bus Network Redesign

Project ID Number	11500
Funding Source	MBTA
Total Contract	$20,000
FFY 2024 Total Budget	$20,000

Purpose

The objective of this work is to provide map-making support, upon request from the MBTA.

Approach

CTPS will update MBTA maps, upon request from the MBTA, within the budget provided for this project.

FFY 2025 Anticipated Outcomes

Updated rapid transit system, bus, and neighborhood maps to reflect changes to bus routes in accordance with the MBTA Bus Network Redesign. Upon request from the MBTA, CTPS staff will update other existing CTPS-created MBTA maps within the budget provided for this project.

Red Blue Connector Study

Project ID Number	22217
Funding Source	MBTA
Total Contract	$213,000
FFY 2025 Total Budget	$15,000

Purpose

CTPS is supporting the MBTA in preparation for environmental filings for the proposed connection between the Red and Blue Lines at the Charles/MGH Station. CTPS will continue to be engaged in developing traffic and transit projections for this work in FFY 2025.

Approach

CTPS will use the Boston Region MPO's travel demand model to analyze the traffic and transit impact of the proposed connection between the Red and Blue Lines and the closure of Bowdoin Station.

FFY 2024 Anticipated Outcomes

The primary analysis for this study was completed in FFY 2024. Staff will continue to support preparation of the environmental filing, grant applications, and public engagement as needed.

North Shore Busway Study

Project ID Number	11498
Funding Source	MBTA
Total Contract	$108,819
FFY 2025 Total Budget	$80,000

Purpose

The MBTA has proposed a center-running bus lane facility linking Wonderland Station in Revere to Lynn (at the intersection of Broad and Chestnut Street/Atlantic Street) via North Shore Road, General Edwards Bridge, the Lynnway, and Broad Street. This bus rapid transit facility would produce a two-seat rapid-transit service between downtown Lynn and Boston.

Approach

Using the Boston Region MPO's regional travel demand model set and other tools, CTPS will support MBTA and its project team by assessing the existing traffic conditions and travel patterns, and by providing modeling results and analyses for use in the evaluation of the proposed reconstruction scenario.

FFY 2025 Anticipated Outcomes

A technical memorandum summarizing the general modeling methodology and the results of the analysis will be provided to the MBTA and the project team.

AFC 2.0 Equity Analysis

Project ID Number	11415
Funding Source	MBTA
Total Contract	$116,972
FFY 2025 Total Budget	$19,000

Purpose

As part of the Fare Transformation initiative, the MBTA is developing a new AFC system, known as AFC 2.0, to supplant its existing fare payment system. In late 2017, the contract for the design, integration, and implementation of AFC 2.0 was awarded to Cubic | John Laing. This change in the MBTA's fare payment system will also lead to changes that may negatively affect some riders. The MBTA has requested that CTPS analyze the equity of the impacts of the following components of AFC 2.0: elimination of cash on board, fee for specific fare media, and potential changes in fare structure.

Approach

CTPS will evaluate the distribution of fare vending machines and other fare media sales locations, the equity impacts of charging for a fare card, and a package of various fare structure changes that may be implemented with AFC 2.0. Tasks in this project include

- participating in meetings and providing technical support;
- analyzing the distribution of fare vending machines and/or sales locations;
- analyzing the impacts of charging for fare media; and
- analyzing other fare structure changes.

CTPS will follow the new Service and Fare Equity policy in conducting its analyses.

CTPS will incorporate relevant demographic data from the MBTA's 2022 passenger survey and subsequent updates where appropriate as they become available.

FFY 2025 Anticipated Outcomes

CTPS will produce technical memoranda documenting the equity analysis of the proposed fare structure changes, the equity analysis of the fare card fee, and the equity analysis of proposed fare sales locations.

SECTION 2: OTHER BOSTON REGIONAL TRANSPORTATION PLANNING STUDIES

This section consists of brief descriptions of planning studies that will be conducted in the Boston Region MPO area by individual agencies, such as MassDOT and the MBTA, during FFY 2024. This section describes studies supported by federal planning (but not MPO) funds, and/or studies that MPO and partner agency staff have determined to be of regional significance. The project listings in this indicate whether components of the projects will be conducted by CTPS, and are organized hierarchically: first by type of study, then by geography, then by the entity organizing or leading the study effort.

The projects in this section are not subject to the MPO's public participation process. Rather, they follow their own public processes, parts of which may be required by the Massachusetts Environmental Policy Act. They are included here to provide a more complete picture of the surface-transportation-planning projects occurring in the region. The listings contained in this section were provided to CTPS prior to July 1, 2023.

Safe Streets and Roads for All Discretionary Grant Program (SS4A)

In 2023, the Boston Region MPO received funding through the Safe Streets and Roads for All Grant Program in the amount of $2,160,435 to develop a Safety Action Plan. MassDOT is providing the required 20 percent match of $540,109, which brings the total budget for this work to $2,700,544. The MPO will adopt the Safe System approach in developing the Action Plan. Recommendations will focus on high-risk corridors and include low-cost, high-impact countermeasures that can be widely implemented, new processes and policies, continuous monitoring of crash data, innovative technologies, and collaborative conceptual plans for multi-jurisdictional corridors. A Task Force responsible for Action Plan oversight will be established and include diverse representation from municipalities, advocacy and community groups, underserved communities, public health organizations, and vulnerable roadway users. The MPO will work with a variety of stakeholders to develop a Safety Action Plan for the region and facilitate collaboration across jurisdictions to meet the region's Vision Zero goal.

Other municipalities that received this grant in the Boston region are listed below:

- City of Salem (Action Plan Grant), $200,000
- City of Somerville (Supplemental Action Plan Grant), $116,800
- Town of Dedham (Action Plan) , $207,841.44
- Weymouth (Action Plan Grant), $336,000

- City of Boston (Implementation Grant), $9,000,000

Multimodal or Roadway Studies

Statewide Studies

MassDOT

Beyond Mobility: Massachusetts 2050 Statewide Long-Range Transportation Plan

Beyond Mobility, the Massachusetts 2050 Long-Range Transportation Plan, is a planning process that will result in a blueprint for guiding transportation decision-making and investments in Massachusetts in a way that advances MassDOT's goals and maximizes the equity and resiliency of the transportation system. The Plan will serve as a strategic plan for MassDOT and document the most pressing transportation priorities for MassDOT to address between now and 2050, relying heavily on input from the public.

The project team, considering what the world will be like in 2050, analyzed previous plans, public engagement responses, and results from a needs assessment and identified six key priority areas of Massachusetts to focus on over the long term. These are safety, destination connectivity, travel experience, reliability, supporting clean transportation, and resiliency. Within the Plan, vision statements, values, problem statements, and more than 100 action items have been developed and are organized by these six priority areas.

Beyond Mobility was finalized in June 2024 and the full plan and executive summary are available on the plan webpage https://www.mass.gov/beyond-mobility.

Impact of Teleworking

The Impact of Teleworking Study is developing plausible future scenarios for teleworking in Massachusetts and will use a modeling approach to understand the effects that teleworking changes may have on the Commonwealth's transportation system. This study will examine how anticipated increases and/or decreases in teleworking could change household and aggregate travel behavior through measures that include overall vehicle-miles traveled, trip attributes, and mode share. The potential macroeconomics impact of these changes in travel behavior will also be analyzed. The modeled projections for each scenario could

assist MassDOT in future decision-making by providing information about how the demands on the transportation system will change and how the mix of transportation investment may need to respond.

MassDOT National Electric Vehicle Infrastructure (NEVI) Plan

MassDOT has developed an Electric Vehicle (EV) Infrastructure Deployment Plan for Massachusetts as required by the NEVI Program. Key activities during the initial plan development process included modeling EV charging demand on highway corridors in Massachusetts, analyzing economic factors associated with direct current fast charging technology, prioritizing highway corridor segments for investment of NEVI funds, and seeking stakeholder input on key questions. The MassDOT NEVI Plan has been approved. MassDOT is now proceeding with a planning process to determine the role of MassDOT-owned sites in the NEVI network buildout and to develop a model solicitation and contracting approach for partnering with a private entity to install fast charging infrastructure on EV Alternative Fuel Corridors in Massachusetts, which may help to ease range anxiety for drivers on long-distance trips.

Regional or Subregional Studies

MassDOT

Newton Corner Long-Term Planning Study

MassDOT's Office of Transportation Planning is conducting a study to determine long-term multimodal transportation and safety improvements to the Newton Corner I-90: Exit 127 (formerly Exit 17) Interchange in Newton, Massachusetts, bordering Brighton and Watertown.

This conceptual planning study will examine ways to improve mobility, system reliability, safety, connectivity, equity, economic opportunity, accessibility, efficiency, and climate resiliency in the study area.

Morrissey Boulevard/Kosciuszko Circle Study

MassDOT, the Executive Office of Environmental Affairs/Department of Conservation and Recreation, and the City of Boston have partnered to conduct a multimodal transportation study, and engage a recently created legislative (Morrissey) commission dedicated to long-term comprehensive planning for Morrissey Boulevard and the surrounding area in Dorchester, Massachusetts.

This effort will build on past designs for the study area and contribute to preliminary, conceptual designs to improve the public realm, mobility, connectivity, safety, and climate resiliency in the corridor. This effort will also incorporate ongoing and future developments in the area to balance these projects with the local community. The resulting transportation alternatives will be presented as part of a public involvement process.

Maurice J. Tobin Bridge Long-Term Strategic Planning Study

MassDOT's Office of Transportation Planning is conducting a study of long-term alternatives for the replacement of the Maurice J. Tobin Memorial Bridge ("Tobin Bridge"). The Tobin Bridge carries US Route 1 over the Mystic River and connects Boston and Chelsea. In tangent with developing future means for Route 1 to cross the river, this study will consider opportunities to implement and improve transit priority and multimodal travel over the future bridge or its alternative and accommodate existing and future vehicle traffic levels.

Transit Studies

MBTA Transit Analysis Methodology and Mitigation Strategies Study

MassDOT's Office of Transportation Planning is conducting a study to develop a framework, methodology, and web-based tool for estimating the impacts of land use developments, including public and private developments, on the delivery and performance of transit services in Massachusetts. The deliverables from this project will inform MassDOT, MBTA, and regional transit authority decision-making and help these agencies take a more proactive approach to development mitigation.

Program for Mass Transportation

The Program for Mass Transportation (PMT) is the MBTA's long-range capital planning document. It defines a 25-year vision for public transportation in eastern Massachusetts. Massachusetts General Law requires the MBTA to update the PMT every five years and to implement the policies and priorities outlined in it through the annual Capital Investment Program (CIP). MassDOT's Office of Transportation Planning will lead the process for updating the new PMT.

Regional or Subregional Studies

MassDOT

Gilmore Bridge Mobility Improvements Study

MassDOT's Office of Transportation Planning is conducting a study to examine opportunities to improve and implement transit priority and multimodal travel over the Gilmore Bridge in Boston and Cambridge, as well as explore the feasibility of building a new bridge between Charlestown and Cambridge to serve transit, walking, and biking trips.

The Gilmore Bridge Mobility Improvements Study will examine existing mobility and other travel conditions within the study area and evaluate short-, medium-, and long-term recommendations intended to address the needs of current and anticipated future travelers along the corridor, with a particular emphasis on providing dedicated bus lanes. In addition to exploring opportunities for transit priority measures and active transportation improvements on the Gilmore Bridge, the study will assess the feasibility of constructing a new bridge between Charlestown and Cambridge to serve transit, walking, and biking trips.

MBTA

Areas of Persistent Poverty—Ashmont Station Study

In March 2023, the MBTA submitted a grant application to the Federal Transit Administration's Areas of Persistent Poverty Program (APP). The APP Program is focused on providing funds for projects to assist areas of persistent poverty or historically disadvantaged communities. Eligible projects include things such as improvements to transit facilities, planning for low- or no-emission buses, and funding for coordinated public transit human service transportation plans. The MBTA submitted an application requesting $470,000 to design on-route battery electric bus (BEB) charging at Forest Hills and Ashmont stations. In July 2023, the MBTA received notice of an award under the APP Program for $127,366 to design electric bus charging at Ashmont Station.

Ashmont Station is a pivotal MBTA station in terms of its mobility benefits facilitating transfers to numerous local bus routes as well as to subway and commuter rail. Ensuring BEBs operate efficiently and continuously throughout the service area is paramount to guaranteeing access to employment opportunities for new and existing riders alike. In addition, a majority of the bus ridership on routes serving the station originate from areas designated by the United States Department of Transportation as Areas of Persistent Poverty and Historically Disadvantaged Communities. The funding to design on-route BEB charging at Ashmont Station is an important step in improving the reliability of bus service and decreasing the air quality impacts of diesel buses in and around the routes that serve the station. The MBTA's full transition to BEBs relies on the design and construction of on-route BEB charging throughout the bus network.

FTA requires that any grants related to planning work (such as this one) be amended into the appropriate regional Unified Planning Work Program (UPWP). As such, this proposed UPWP amendment will add this project to the Appendix of the Boston Region MPO's Federal Fiscal Year (FFY) 2024 UPWP. Since the study will be grant-funded, it will not impact funding for any other studies programmed in the FFY 2024 UPWP.

Corridor, Area, or General Studies

Regional or Subregional Studies

Municipal Studies

City of Boston

Rutherford Avenue—Sullivan Square Design Project

The City of Boston is progressing with the redesign of the Rutherford Avenue corridor in Charlestown, which extends approximately 1.5 miles from the North Washington Street Bridge to Sullivan Square and provides a critical connection between Everett, Somerville, suburbs north and east of Boston, and Boston's downtown business area. Reconstruction of this corridor is currently programmed in the Transportation Improvement Program beginning in 2022. The corridor's highway-like design is inconsistent with present-day design preferences and local circumstances, and the function and design of the Sullivan Square rotary is problematic. Pedestrian mobility is limited, and bicycle travel is not compatible with the high-speed road. The corridor is eight- to 10-lanes wide (120 to 140 feet), presenting a significant barrier between areas on either side of the roadway, such as the Bunker Hill Community College, Paul Revere Park, the Hood Business Park employment area, and MBTA rapid transit stations.

There are significant transit-oriented development opportunities along the corridor, and public investment in new infrastructure will support development of commercial and residential uses, whose tenants otherwise probably would not, or could not, locate to the area. A number of major structural elements in the corridor were constructed more than 60 years ago; they are approaching the end of their life cycle and will need to be replaced. With the Central Artery/Tunnel project now complete, more traffic remains on facilities such as Interstate 93 and US Route 1; therefore, reduced traffic volumes along Rutherford Avenue present a unique opportunity to transform the corridor's character from a 1950s-era, automobile-oriented facility to a twenty-first century, multimodal, urban boulevard corridor that will accommodate private development.

City of Boston

Reconnecting Chinatown

Planning

RCP Award: $1,800,000

The project will develop a plan to connect across the open-cut highway by building an open space for the community and prepare design guidelines to reconnect the Chinatown neighborhood separated by the construction of Interstate 90 in the 1960s. Construction of I-90 displaced hundreds of Chinese American families through land seizure and demolition, including removal of the thriving Hudson Street neighborhood, for the installation of a ramp and retaining wall. In the Leather District, another thriving and historically Chinese American community, roughly 20 percent of Chinese American family homes were impacted by the construction. As a result, Boston's Chinatown now lacks access to safe and open greenspace, affordable housing, and is disproportionately impacted by traffic and unclean air.

This project is intended to directly address the longstanding physical division in Boston's historic Chinatown and to repair and enrich the area located between Shawmut Avenue and Washington Street, a disadvantaged community that has been marginalized, underserved, and overburdened by pollution. This project would also increase greenery and safe and accessible walking routes, improve safety, and decrease the use of motorized vehicles. The City of Boston proposes to create a steering committee of city and community members in the planning process. The application suggests that the air rights created by the connection could be used to create housing and job opportunities for the neighborhood.

Miscellaneous Studies and Planning Activities

Statewide Studies

MassDOT

Flood Risk Assessment

This is a planning-level analysis of which transportation assets are at risk of flooding over the coming century. This study identifies flood exposure for in-state National Highway System roads, bridges, and large culverts; MassDOT- and MBTA-owned rail; MassDOT facilities; and many public-use airports. It assesses damage and repair costs, time estimates for repairs, and considers the consequences from loss of service. Specifically, this study will estimate "do nothing" costs and qualitative consequences of at-risk transportation assets under future conditions assuming no intervention. This information can be used during the capital planning process to prioritize investments that avoid or reduce long-term climatic impacts associated with flooding.

Shared Travel Network

This study will develop recommendations about where and how to leverage existing facilities and resources that could contribute to the development of a shared travel network, as well as where these existing facilities could be expanded and where new facilities and assets could be introduced.

Regional or Subregional Studies

Colleges and Universities

New England University Transportation Center (Region One)

The New England University Transportation Center (Region One) is a research consortium that includes the Massachusetts Institute of Technology (lead university), Harvard University, and the state universities of Massachusetts, Connecticut, and Maine. It is funded by the US Department of Transportation's University Transportation Centers (UTC) Program. The New England UTC conducts multiyear research programs that seek to assess and make improvements for transportation safety as well as develop a systems-level understanding of livable communities. For more information, visit the New England University Transportation Center's website at http://utc.mit.edu/.

Appendix B—Public Engagement and Public Comments

In the course of developing the Unified Planning Work Program (UPWP), the staff of the Boston Region Metropolitan Planning Organization (MPO) followed the procedures set forth in the MPO's Public Engagement Plan to ensure early, active, and continuous public involvement in the transportation planning process.

The Federal Fiscal Year (FFY) 2025 UPWP development process began in October 2023. Staff solicited input on topics and priorities for study and program development through the following engagement activities:

- Metropolitan Area Planning Council subregional group meetings
- Regional Transportation Advisory Council (Advisory Council) meetings
- A public survey soliciting study ideas and topics, which was distributed to MPO stakeholders and the public through email and social media, and during meetings and engagement events
- Topics generated from recently completed planning studies and documents

Ideas received through these engagement activities were compiled into the FFY 2025 UPWP Universe of Proposed Studies. The ideas were further refined and prioritized through a process that included public meetings with the UPWP Committee and the Advisory Council. In addition to collecting ideas via the channels listed above, staff held a series of public discussions with the UPWP Committee and the Advisory Council to provide more information and solicit feedback about MPO programs and the program activities planned in FFY 2025.

The document development process, described in Chapter 2, culminated in the MPO board's recommendation for the FFY 2025 UPWP. On May 18, 2024, the MPO board voted to release the draft UPWP document for public review. This vote initiated an official 21-day public review period.

Information about engagement conducted during the public review period and comments received will be included in the final version of the document, which will be posted to the MPO's website following a vote for endorsement.

Appendix C—Universe of Proposed Discrete Studies for Federal Fiscal Year 2025 UPWP

This appendix describes the Universe of Proposed Discrete Studies (the Universe), which is prepared as a step in the development of the federal fiscal year (FFY) Unified Planning Work Program (UPWP). Each year, the Boston Region Metropolitan Planning Organization (MPO) invites stakeholders in the region to submit ideas for study concepts that may be of benefit to the region. Study suggestions are collected through email and a public survey, and at Metropolitan Area Planning Council (MAPC) subregional committee meetings and Regional Transportation Advisory Council meetings. Those who submit ideas are asked to include a summary of the purpose of the study they are proposing. Where feasible in terms of alignment with MPO priorities, staff capacity, and resources, MPO staff will further consider integrating study ideas from the Universe into the MPO's work.

Studies in the Universe, shown in Table C-1, are organized into the following categories:

- Active Transportation
- Freight
- Roadway and Multimodal Mobility
- Transit
- Resilience

Studies collected in the Universe are further categorized according to whether they are suited to be considered as stand-alone, discrete studies to be completed in a single federal fiscal year with clearly identifiable deliverables or to be further considered for potential incorporation within ongoing program work. In either case, all ideas captured in the Universe are assessed for feasibility in the context of consistency with MPO priorities, staff capacity, and resources. In addition, study ideas are assessed in the context of work that is occurring in other agencies to avoid redundancy.

Table C-2 tracks the breakdown of studies chosen for funding in the UPWP from FFY 2018 to the present by category.

One important framework that MPO staff and the UPWP Committee use to evaluate each proposed study in the Universe is the extent to which a study concept addresses each of the six Long-Range Transportation Plan goal areas:

- Equity
- Safety
- Mobility and Reliability
- Access and Connectivity
- Resiliency
- Clean Air and Healthy Communities

A subset of the proposed studies in the Universe that may be suitable as discrete studies is refined into a final list to be considered for funding in the annual UPWP. Most of the MPO's annual planning budget is dedicated to ongoing and evolving core and programmatic work; the budget set-aside for discrete studies represents a small but important percentage of the overall budget. The discrete study set-aside offers opportunities for staff to explore relevant and timely topics that may not already be embedded in existing work but that align with the MPO's goals and priorities and are feasible in terms of staff's capacity to complete the studies in the federal fiscal year.

These various factors, along with the availability of funds for new discrete studies in the context of resources needed for required and programmatic work, inform the staff's recommendation of scenarios of discrete studies for review by the UPWP Committee. For more information about the process of developing and evaluating the Universe, please see Chapter 2.

FFY 2025 UPWP Universe of Proposed Studies

ID	Project Name	Project Purpose and Outcome	Source
		I think the MPO should study all the private transportation options (college shuttles, commuter shuttles, and even and particularly school buses) and evaluate if/when we would be better off if these services/resources were transitioned to a PUBLIC transportation system. This is not to say that these private services are never needed, but given the plethora that exist (with some school district bus systems almost equal in size to small RTAs), and given the shortage of funding for public transportation, yet the need and desire for more public transportation, shouldn't we be checking on the balance of resources? Additionally, with a shortage of drivers, wouldn't it be better to have job opportunities that offer 8 hours of work rather than multiple split shifts, which are usually the situation with school transportation and commuter shuttles? Additionally, with private services filling in gaps in service, but most not being open to the public, we still have gaps in service, except for a minority of people, and even then, the private services cannot fill all their transportation needs. Thank you!	Susan Barrett, sbarrett@lexingtonma.gov
		The MPO should study opportunities to create improved equity in electric vehicle charging infrastructure by embracing Level 1 charging. Level 1 charging is much less expensive and has a low impact on streetscapes and properties than Level 2 particularly in currently underserved areas such as urban curbside and multifamily residential parking. But there are a number of policy and structural barriers that hamper this technology from being easily adopted in the Boston area. In the study I would look at: the technical aspects (such as streetlight or parking lot light connected chargers), financial aspects (business models and public/private partnerships), funding recommendations such as including Level 1 in local/regional grants which are only budgeting for Level 2 or 3 chargers, policy objectives like including Level 1 in local building code / EV readiness, and more. I run a company building a public-facing Level 1 EV charger that is based in Newton and am creating a type of charger that can be deployed in currently underserved areas at scale due to much lower cost and project complexity. Many residents and municipal stakeholders in our area that I have spoken to are excited about this technology and view Level 1 as a viable option for a number of use cases. However there are a number of structural and policy barriers to implementing this at scale that planning studies could help to assess and influence. I would be happy to discuss this topic at further length with the MPO to share some of what I have learned that might help the MPO determine areas of focus for their research.	Ross Bloom, ross@revvit.net
		Creating a regionwide freight priority network map of all roadways classified as major arterial or greater (and time-permitting, minor arterial). The study could be phased into specific corridors or based on subregions. Many available resources, including the 2023 Massachusetts Freight Plan (https://www.mass.gov/doc/draft-2023-massachusetts-freight-plan/download) focus on interstates that carry the majority of truck traffic, but do not reflect the roadways that are subject to many MPO studies and capital project investments.	Ethan Lapointe, elapointe@ctps.org
		A coordinated study effort with the Metropolitan Area Planning Council to review how Section 3A MBTA Communities zoning in a given subregion may impact demand for all forms of transit services. Findings would be able to be used in recommendations to prioritize certain transit investments or service expansions (including new service).	Ethan Lapointe, elapointe@ctps.org

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
		Changes in mode split on arterials where bus lanes and bike lanes have been implemented by eliminating a travel lane. How did LOS and queues change and what was the impact on air quality.	Anne L. McKinnon, am103477556@cs.com
		It's been 6 years since Greater Boston saw it's first pop-up dedicated bus lane in Everett- using cones and a few cops. Since then, bus lanes have sprouted up, in various forms, throughout the region, and many more are planned. Most of the research to date focuses solely on the immediate impacts of the bus lanes on time savings and reliability improvements for bus riders, and, to a lesser degree, ridership. Little data exists on how dedicated bus and bus/bike lanes have impacted general traffic or road safety. Now that most of these bus lanes have been in operation for at least 1-3 years, the time is right to study not just how bus lanes improve travel for bus riders, but for everyone using the street. MAPC can collaborate on this with you!	Julia Wallerce, jwallerce@mapc.org
		Investigate the use TILE2NET (https://github.com/VIDA-NYU/tile2net) for greatly improving the extent and accuracy of the MPO's database of pedestrian facilities (i.e., sidewalks and crosswalks). The only source for this data currently available to the MPO is the MassDOT Road Inventory. Although work has been done on the sidewalk data in the Road Inventory, it has been a relatively low priority for MassDOT, and most if not all of the work has been done manually. TILE2NET offers the opportunity to generate sidewalk (and crosswalk) data from aerial imagery automatically. Given the availability of high-reslolution (15 cm) aerial imagery for the entire state, and TILE2NET's success in generating sidewalk and crosswalk data for Cambridge and Washington, D.C. (among other places), employing it systematically to generate this data for a representative sample of MPO cities and towns seems like a logical next step. In order to 'scope' the project, rather than undertaking running TILE2NET on the entire MPO region (or entire state) for starters, we propose to do it on a representative sample of cities and towns in the MPO region - possibly one city or town in each MPO subregion - in order to evaluate the effectiveness of the tool on a variety of landscapes. The results would then be shared with the TILE2NET development team, which could use this information to further refine their algorithms if needed. (If TILE2NET is shown to be effective, the MPO might considering work on TILE2NET by the TILE2NET development team directly in future.) The results would also be compared with the sidewalk data in the Road Inventory and shared with MassDOT for the purpose of updating the sidewalk data in the Road Inventory as needed.	Benjamin Krepp, bkrepp@ctps.org
		There should also be a study looking at the existing bike network across municipalities and developing a plan to better connect it and expand upon it.	Cole Rainey-Slavick, c.raineyslavick@gmail.com
		There should be a study of the performance of different types of bus lanes, determining their relative effectiveness and making suggestions for future projects.	Cole Rainey-Slavick, c.raineyslavick@gmail.com
		Produce a study of privately owned and operated parking in the metro-Boston region. Using fire department permits, or other publicly available information, calculate the number of parking spots available for public use in Boston and surrounding communities. This can be utilized by policy makers to determine the feasibility of a parking surcharge for parking in privately owned garages/lots in the future to fund local transportation initiatives.	Brian Kane, bkane@mbtaadvisoryboard.gov
		How to identify long-term operation funding sources for on-demand transit options and how to expand on-demand transit in other regions, understanding that grants are not feasible for long-term operational funding.	Darlene Wynne, dwynne@beverlyma.gov
		Take counts at key locations entering Boston inner of Bluebikes, regular bikes, skateboards, scooters and helmet use on each.	Jeffrey Ferris, jeffrey@ferriswheelbikeshop.com

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
		Continue the freight decarbonization study for Boston Harbor North beyond the literature review to develop an actionable plan	Karl Allen, kallen@chelseama.gov
		I work at UMass Boston as the Sustainability & Resiliency Planner. We draw students, staff, and faculty from a wide metropolitan area and want to provide a flexible range of commuter options. We also, for equity reasons, want to expand options to our first-generation, low-income students to have access to cost-saving and lower-carbon transportation modes through public transit and newer options such as electric bikes. Many studies are focused on traditional employees' commute times, but college students (especially ours, who often work full time too) have many different schedules than regular commute modes. We run a campus shuttle to the nearest T stop because the MBTA bus options are not sufficient. I would be interested in partnering with MPO to study this issue further and figuring out how public universities can partner with public transit entities to expand access to low-carbon commute options.	Janna Cohen-Rosenthal, janna.cohenrosenthal@umb.edu
		Title: Comparative Analysis of Sidewalk Infrastructure Expenditure in MPO Communities: A Case for Pedestrian Infrastructure Investments and Local Implementation of Complete Streets Design Standards Introduction: The Boston Region Metropolitan Planning Organization (MPO) plays a crucial role in transportation planning and investment decisions in the region. As part of its commitment to promoting sustainable and accessible transportation options, it is essential to understand the current state of sidewalk infrastructure and the investment patterns of MPO communities. This study aims to conduct a comparative analysis of sidewalk infrastructure expenditure across MPO communities, with the goal of highlighting the need for pedestrian infrastructure investments and advocating for local implementation of Complete Streets design standards. Objectives: a) To assess the current state of sidewalk infrastructure in MPO communities. b) To compare and analyze the expenditure patterns of MPO communities on sidewalk infrastructure. c) To evaluate the correlation between sidewalk infrastructure expenditure and pedestrian safety and accessibility. d) To identify best practices and successful strategies for local implementation of Complete Streets design standards. e) To provide evidence-based recommendations for prioritizing pedestrian infrastructure investments and advocating for the adoption of Complete Streets design standards at the local level. Methodology: a) Data Collection: i) Conduct a comprehensive review of existing literature, reports, and studies on sidewalk infrastructure expenditure and Complete Streets design standards. ii) Collaborate with MPO communities to collect data on sidewalk infrastructure expenditure, including capital investments, maintenance costs, and repair expenses. iii) Gather information on pedestrian safety and accessibility indicators, such as pedestrian accidents and injuries, sidewalk conditions, and connectivity to key destinations. iv) Identify communities that have successfully implemented Complete Streets design standards and gather data on their experiences and outcomes.	Iolando Spinola, *(cont.)* ispinola@walkboston.org

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
		(cont.) Data Analysis: i) Analyze the collected data to determine the variation in sidewalk infrastructure expenditure among MPO communities. ii) Examine the correlation between sidewalk infrastructure expenditure and pedestrian safety and accessibility indicators. iii) Compare the outcomes and benefits of communities that have implemented Complete Streets design standards with those that have not. Expected Outcomes: a) A comprehensive understanding of the current state of sidewalk infrastructure in MPO communities b) Identification of the variation in sidewalk infrastructure expenditure among MPO communities. c) Assessment of the correlation between sidewalk infrastructure expenditure and pedestrian safety and accessibility indicators. d) Identification of best practices and successful strategies for local implementation of Complete Streets design standards. e) Evidence-based recommendations for prioritizing pedestrian infrastructure investments and advocating for the adoption of Complete Streets design standards at the local level. Conclusion: This study could to provide valuable insights into the expenditure patterns of MPO communities on sidewalk infrastructure and highlight the need for pedestrian infrastructure investments and local implementation of Complete Streets design standards. The findings and recommendations from this study will help the Boston Region Metropolitan Planning Organization make informed decisions regarding transportation planning, prioritization of investments, and policy advocacy for pedestrian-friendly infrastructure.	Iolando Spinola, ispinola@walkboston.org

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ID	Project Name	Project Purpose and Outcome	Source
		Realize and unlock the massive environmental and economic benefits of restoring rail-based mass transportation on existing abandoned and linear-park-converted railroad right of ways. It has long been touted that rail to trail conversion "preserves the right of way for future mass transportation use". That "future mass transportation use" need arrived years ago and it is well past the time to put these irreplaceable transportation corridors to good use in order to --fight climate change --provide practical, year round transportation for all citizens (instead of seasonal, recreational use which, for all intents and purposes, is how rail-trails are being used with little impact to car-based commuting - the MPO / MAPC's own project evaluation data supports this fact) --create practical alternatives to reduce freight movement by highway All it takes is an admission by the MPO that the above points are far more important than creating exclusive-use recreational linear parks used only by a tiny fraction of Massachusetts citizens. Climate change and transportation solutions must be driven with a holistic approach and cannot be derailed by individual special interests. Do the right thing MPO.....for all of us!	Kurt Marden, kurtm22@gmail.com
		In FFY 2023, the MPO took on a study titled "Sustainability and Decarbonization in the North Suffolk Region." This entry proposes a continuation of this study, focused on developing a regional freight decarbonization action plan. Stakeholder engagement in this study revealed strong interest in advancing decarbonization strategies such as electric fleet transitions. At the same time, there are long standing challenges that various areas within the Boston region that have on-going initiatives to address. This study will convene a group of stakeholders in the freight industry throughout the Boston region, including Environmental Justice advocacy groups/CBOs, interested municipalities, and industry actors. MPO staff are well positioned to facilitate larger conversations throughout the region outlining actionable steps to achieve emissions reductions goals.	Erin Maguire, emaguire@ctps.org
		The MPO funds dozens of projects each year, several of which aim to reduce congestion and improve air quality. While the MPO often makes projections about how air quality may improve after the completion of a project, the organization lacks a process for evaluating these outcomes in air quality on a project or localized basis. A study that evaluates the change in air quality metrics in close proximity to recently completed projects in the region would help inform future planning decisions. We would evaluate the change in air quality using PurpleAir monitors, which are small devices that can be installed on structures near roadways. These monitors can report Particulate Matter (pm 2.5 and pm 10) and Ozone levels, and both metrics are reported as part of Congestion Management and Air Quality performance reporting. Placing PurpleAir monitors near recently completed projects, especially Complete Streets-type projects that have a quantified estimate of decreased emissions, would allow MPO staff to evaluate the effectiveness of programs and projects that aim to reduce emissions. Since improving air quality is a function of both the Climate Resilience and Air Quality Program, as well as Performance-Based Planning and Programming, it is possible that such work would need only be partially funded by the UPWP, and that some funds for staff time could be found within those two programs. Funds for the study would be spent in three main areas: purchasing PurpleAir monitor equipment, MPO staff time, and Communications and Engagement outreach to local planners and organizations in municipalities where air quality would be evaluated.	Sam Taylor, staylor@ctps.org

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
		Micro-Mobility impacts, outlook, and planning implications. Electric micro-mobility, from scooters to e-bikes, is spreading rapidly across the region. Last mile distances are stretching to 'last miles.' How does this impact station 'walk sheds?' How are transit stations impacted? (micro-mobility storage? bike lane access? e-bike share locations?) Policies to accommodate micro-mobility on transit - Size? Batteries (safety)? Where? If not accommodate on transit - storage at stations? Policies to accommodate micro-mobility on existing bike infrastructure - Bike lane usage? Dedicated bike path usage? Speed restrictions? Conflict risk with other modes on this infrastructure? What are the maximum distances travelers are willing to travel on micro-mobility? Does it replace transit? Reg bikes? Walkers? Drivers? Can micro-mobility improve access to transit from 'transit deserts?' or underserved populations/areas? What are the impediments to broader adoption? Storage? Safety? Distance? Mode switching? Are there any safety risks associated with micro-mobility vehicles?	Chris Counihan, chris.h.counihan@gmail.com
		Hey MPO Team: I am very interested to understand current levels of multi-modal trips that occur between active modes (bikeshare, personal bikes or other micromobility form factors) and the MBTA. For example, how well utilized are T bike parking facilities? How about bike racks on MBTA buses? We know that most people – with the exception of drivers – do the same thing every day or on every trip. What we need to understand is how people are making mid-trip connections and what we can do to encourage and support those types of trips more. Happy to chat in person, if helpful! Best, Mully	Scott Mullen, mully@abettercity.org
		What should bike parking/storage look like that accounts for the growing popularity of e-bikes? E-bikes are growing in popularity in some areas of the United States. Yet, they are heavier, more expensive, and (in some cases, mostly refurbished bikes) have resulted in fires. Given these considerations, what does safe, secure bike infrastructure look like that could be built at scale in multi-family housing, including affordable housing?	Katharine Lusk, katharine.lusk@boston.gov
		Expanding bike-share: As the BlueBikes system has matured in Metro Boston, the benefits for sustainable mobility have been amazing for myself personally. Going to cities like Salem has also been fantastic given the existence of a micro BlueBike network there has really expanded my mobility options and quality of life (taking the train to Salem and then being able to pick up a BlueBike to get where I need to go in town). What can be done to expand this to the rest of the commuter rail network, such that most of the major cities and towns outside of Boston are benefiting from a similar system (Lowell, Lawrence, Fitchburg, Lynn, Brockton, Worcester, Framingham, Norwood, etc.). I think the key really is having a unified, integrated system that spans the commonwealth, not 5+ different bikeshare systems operated by different jurisdictions. What can be done to integrate MBTA payment methods with BlueBikes fares? A study exploring options for expansion models, potential benefits and barriers, and formulating some recommended next steps/a pilot would be fantastic.	Andrew
		Exploring the potential for 15-minute neighborhoods to promoting socio-economic benefits in Metro Boston. Where could the work and have the best outcomes? What would be needed to pull them off? Where could they be piloted?	Andrew

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
		Study potential Infill locations along transit and commuter rail lines. This study should take into account both gaps in the walk zone, existing housing and job density and future development plans, as well as transit depended and vulnerable populations. Some intuitive locations to study on the rapid transit lines are around Medford Street in Malden or Rivers Edge in Medford on the Orange Line, Morrissey Boulevard and Redfield Street on the Braintree branch of the Red Line, near Mt Auburn Street and between Kendall and central (preferably close to the likely location of a station for any version of transit on the grand junction) on the trunk of the red line, and around Byron Street on the blue line. Additionally many commuter rail lines pass through areas of higher density with a further stop spacing than for of many of their stops in less urban locations. If the MBTA is serious about a regional rail transformation that needs to be rectified. The commuter rail has served as a viable alternative during shutdowns on the Orange Line and other track work for some people. In order to enable more people to take advantage of this, and provide necessary redundancy as the T works to rebuild after decades of disinvestment. Many commuter rail lines have locations worth studying as well. On the Haverhill line & Newburyport/Rockport line Sullivan Square should likely be prioritized. The Fairmount line, as the only commuter rail line entirely in the city of Boston and in an area of the city otherwise lacking rapid transit should also be prioritized in moving towards a regional rail style service. Locations at River street and Columbia Road should be examined. On the Newburyport/Rockport lines locations to analyze for stations could be somewhere in Everett, Eastern Ave in Chelsea, Between Winthrop Ave and VFW Parkway and/or near Wonderland in Revere, and somewhere in southern Salem. Additionally making Riverworks a full stop and moving it north should be analyzed. Somerville has been left out on the Lowell line and stations should be considered at Tufts, East Somerville/Brickbottom, and possibly somewhere in between. Additionally a station at Montvale Ave in Woburn should be considered. Fitchburg line also has locations worthy of consideration including Union Square, Alewife, Brighton Street in Belmont, and Beaver Street in Waltham. It is good to see more concrete plans for West station on the Worcester line however there are more locations worth consideration such as around Brooks street, Parsons Street, or North Beacon street in Brighton, Newton corner, and around Shrewsbury street and Plantation street in Worcester. Finally on the Franklin/Foxboro & Providence/ Stoughton lines a station you should study if a station should be returned to Canterbury Street/Cummins Highway. Any infill station conceivably improves accessibility to and utility of these lines but you should study potential locations and develop a priority list of infill stations to begin moving through development phases.	Cole Rainey-Slavick, c.raineyslavick@gmail.com
		The MPO should make a regional study of the various bicycle plans in the area: Boston Bike Network Plan, Cambridge Bicycle Plan, Somerville Bicycle Network Plan, Connect Arlington, the Sustainable Transportation Plan, Brookline Green Routes Bicycle Network Plan, Medford's Bicycle Infrastructure Master Plan, Lynn Walking and Bicycling Network Plan, Salem Bicycle Master Plan, City of Quincy Bicycle and Pedestrian Network Plan, Town of Milton Bicycle and Pedestrian Master Plan, Lexington's Town-wide Bicycle and Pedestrian Plan, Newton's Bicycle/Pedestrian Network Plan, Towns of Dedham & Westwood Bicycle and Pedestrian Network Plan, Needham Bike plan, Etc. This study should analyze whether these plans meet current standards and best practices in bike infrastructure, particularly the Separated Bike Lane Planning & Design Guide from MassDOT. It should also look at the proposed bike improvements on a regional scale, finding and proposing fixes for gaps in the networks created by municipal boundaries.	Cole Rainey-Slavick, c.raineyslavick@gmail.com

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
	Regional Bicycle LTS Analysis	The Level of Traffic Stress (LTS) is a metric used to categorize how stressful it is to travel on a road or path. A bicycle LTS metric is often used in bike network planning to identify safe, comfortable bike routes throughout an area. Bike LTS metrics are currently used within Conveyal's routing algorithm and in different municipalities to support bicycle network planning (Boston and Cambridge). This study would allow the BRMPO to help coordinate a regional perspective to bike LTS assignment that could help identify regional needs for bike facility improvements. This project will 1) assess similarities and differences in existing bike LTS assignments in the Boston region, 2) develop a region-wide bike LTS metric for MPO planning efforts, and 3) identify a workflow to assess the impact of proposed bike facility improvements. Similar effort from DVRPC as reference: Bicycle LTS & Connectivity Analysis (https://www.dvrpc.org/webmaps/bike-lts/)	Emily Domanico, edomanico@ctps.org
		Improving approaches to public engagement for planning and envisioning transportation projects. This can include not only in-person or hybrid local and sub-regional planning activities or events, but efforts for novel regionwide public engagement to improve general awareness of MPO activities. This may not only include general 'branding' activities, but also efforts to adopt novel technologies such as project dashboards or new comment tracking software to improve two-way communications between the MPO and the public. 'Branding' efforts could incorporate additional attendance at public events or public awareness campaigns conducted in tandem with peer agencies. Investments in engagement materials (fliers, interactive displays, mascots/iconography) could be considered or evaluated for efficacy.	Ethan Lapointe, elapointe@ctps.org
	Title: Modeling Flood Impact on Destination Access	Motivation/Approach: CTPS has recently gained access to and begun analyzing the Woods Hole Group's Massachusetts Coastal Flood Risk Model (MC-FRM) outputs, which detail exposure to coastal flood risk from 2018 to 2070. While initial work in the agency has estimated total population exposure to this risk, there has not yet been work in identifying how potential flooding might impact the transportation system for different populations in terms of destination access. Using the MC-FRM with other data sources (e.g., demographic data, elevation data, the Road Inventory, the OSM network, GTFS data, MBTA service alerts), staff would utilize Conveyal to measure this impact regionwide. Depending on data availability, this work could extend to include inland flooding as well, potentially as a future phase. Outcomes: Technical memo detailing motivation, methodology and initial results; potential for a relatively simple interactive app Notes: The primary unexplored analytical aspect of this work is devising a methodology for what links in the transportation system (including transit) might become flooded and unable to travel through as a result. Estimated budget of $60-70K. Supporting Work: This study builds well upon previous data work using MC-FRM or Conveyal (e.g. Equity Metrics dashboard, Applying Conveyal to TIP Scoring study). It could also build a foundation for future work to create modified GTFS files that reflect accessibility limitations. Additionally, this study could complement work involving the travel demand model and the MC-FRM. Applicable Themes/Programs: Resiliency, Equity	Tanner Bonner, tbonner@ctps.org

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
		Following on from work in the BPDA Plan:East Boston document, I think it is worth devoting some time to exploring different blue line extensions westward. Unlike many other recent transit extensions, such as the Green Line Extention, there is no historical route or 1950's plan for the blue line to be extended west that we can follow. Instead, we as a metro area have a unique opportunity to develop a completely new routing free from historic precedent, and can try to connect the areas we think need connecting. Any transit extension will take a long time from planning to construction, but studying blue line extension routings now will put us a year or two ahead of the green line extension schedule, which first published extension route maps in 1926.	Sam Ghildardi, samghilardi@gmail.com
		I would like to see a study about region wide rail with trails feasibility along side the regions rail lines. The Needham line, the Framingham/Worcester line, Walpole/Foxboro, Providence/Stoughton Braintree/Quincy, D Line from Newton, Fitchburg line, Lowell line ...etc all have potential to create a network of off street paths for active commuting. These paths could connect communities for short distance trips and offer longer distance active commuting trips to and from Boston. Gaps in service could be replaced with biking/micromobility. Most trains on these can handle a bike on board for true multimodal options. The MBTA generally allows a path offset 10' from center from the rail lines and most of these rail lines have the space to accommodate that offset. Review the success of the GLX community path in Somerville!	Timothy Bulger, tsbulger@gmail.com
		Regional networks: are there bike/ped/transit corridors/connections that could exist across municipalities but don't? (because of differences in policy/funding/other limitations among municipalities) Where are the opportunities to make big impacts in our sustainable transportation networks?	Ryan McKinnon, rmckinnon@cambridgema.gov

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
	The Future of the Curb Phase IV - Exploring Electric Vehicle Charging and Car Sharing Curb Uses	Purpose The Future of the Curb Phase IV - Exploring Electric Vehicle Charging and Car Sharing Curb Uses will build on the previous Future of the Curb studies that provided references for planners as they adapt and manage curb space. Within the guidebook (Future of the Curb II), CTPS identified potential metrics to evaluate the success of curb management changes, and in this new study CTPS staff would continue to further these test methods. This phase would focus specifically on the effects of dedicating curb space towards the charging for EVs, as well as the effect of dedicating curb space towards dedicated car sharing parking. Both uses of curb space require limiting the curb available for novel uses of the curb, and the effectiveness and efficiency of these dedicated spaces should be measured to gain a better understanding of their value compared to other curb uses. With over $5 Billion allocated for EV charging so far, the National Electric Vehicle Infrastructure (NEVI) Formula and Grant Program is a necessary tool in our nation's struggle to reduce our carbon emissions, to achieve the national and state goal of Net Zero by 2050. This massive volume of new funding specifically dedicated for EV charging opens the opportunity for communities to radically change the way vehicles are fueled. Similarly, recent debate around the transition to net zero has highlighted the need of mode shift, in addition to the transition from combustion vehicles to EVs. Car share has become a hot topic as a way to reduce private vehicle ownership, reduce SOV travel and greenhouse emissions, induce mode shift, and potentially subsidize access to the automobile network for low-income or no-vehicle household users. This study addresses resiliency, and uncertainty within our transportation network. This study relates to resilience efforts around the transition from fossil fuel based transportation to electric based transportation. Similarly, this study would support the uncertainty within these under-studied technologies and would help to further our Region's understanding of the value of EV charging and dedicated Car Sharing parking. EV Charging is a novel use of the curb and this study could further the best practices created by previous iterations of Future of the Curb work. This study advances the MPO goals for Mobility and Reliability by helping planners adapt curb space to meet changing demands and expanding the realm of data available on these currently niche, but soon to be important curb uses. The study would further support the MPO's goal of Clean Air and Healthy Communities, by supporting the further study of new fueling infrastructure that will be required as part of the goals to reach net zero emissions by 2050. Approach Staff will collect data to measure their efficacy through digital data sources available (such as municipal EV charging station session data and carsharing bookings through car sharing entities) and through in-person data collection efforts (such as turnover counts in parking spaces). Many factors could play into the usage of curbside public EV charging, such as the power and speed the EV charger is able to provide (Level 2 vs Level 3 charging), the cost of charging, additional parking fees, and whether the charging is located on a street curb or in a parking lot. For car sharing, factors such as vehicle utilization and cost of usage could be explored to understand utilization of dedicated car sharing spaces. CTPS staff will then analyze the results to compare the metrics throughout the region and generate a model to estimate the effect curb management changes will have on different community types.	Logan Casey, lkcmaine@gmail.com

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
		Purpose The need to plan for and respond to emergency situations in the Boston region is becoming more urgent year after year. Even the definition of an "emergency" could be expanded beyond traditional definitions to include MBTA maintenance shutdowns, weather-related incidents, climate impacts, and public health events, such as the need for social-distancing during the COVID-19 pandemic. Specifically, recent closures such as the MBTA's Orange Line shutdown in August of 2022, as well as the closure of the Green Line Central Tunnel in January 2024 for emergency repair work has highlighted the need for additional transportation resilience strategies when critical transportation infrastructure are reduced or unavailable. In response to these significant closures in August of 2022, the MBTA and the City of Boston, among other partners, provided alternative transportation options including replacement bus services, as well as free, 45 minute Bluebike bikeshare trips to supplement service provided by the Orange Line. Additionally, the City implemented quick-build bike and bus lanes to ensure the replacement services were efficient, safe, and effective. These solutions helped to ease the discomfort related to the closure and offered a variety of ways for users to navigate the diversion. Looking forward, the region is expecting many additional maintenance closures, as well as ever-increasing risks of extreme weather, which continue to threaten the continuity and access afforded by the transit network. This study would be an opportunity to learn from past transit closure experiences, and provide recommendations on how to provide better substitute services and provide continuity of the transit network. The goals of this study will be to Study and document best practices and effective strategies (locally and nationally) for public transportation access during a variety of emergency situations Document how the use of temporary infrastructure during an emergency can be used as a demonstration project for permanent street changes This study advances the MPO goals for Reliability and Uncertainty by helping planners adapt to closure of significant parts of the transportation network and expanding the realm of knowledge and data regarding how to respond to these closure events. Furthermore, the study will help to clarify effective strategies to respond to planned closures, unexpected or emergency events. The study would further support the MPO's goals of Mobility and Reliability, Access and Connectivity by supporting the continued availability and utility of the public transit network during times of emergency or unexpected outages. Further, it would support the MPO's goal of resilience, by exploring potential substitutions and solutions for public transit when parts of the network are unavailable.	
	Learning from Transit Outage and Closure Experiences	*(cont.)*	Logan Casey, lkcmaine@gmail.com

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
		(cont.) Approach Staff will collect data to measure the effects of transit network shutdowns through data sources available (such as Bluebike trip data, MBTA shuttle replacement service data, cell phone data [such as StreetLight]) and potentially in-person data collection efforts (such as rider interviews) to better understand how the Bluebikes network can support the resilience of the transit network in emergency or unexpected circumstances. Further, CTPS could also document quick-build actions that were taken as part of the closure response, such as the implementation of quick-build bike and bus lanes. CTPS staff will then analyze the results to understand the effectiveness of the resilience strategies, such as creating alternative bus service, dedicated bus and bike lanes, and increasing service in the Bluebikes network to support public transportation needs during emergency situations. CTPS staff will generate a report to summarize the data and create recommendations of best practices for future closures or emergency events affecting all or portions of the transit network. Final deliverables will include: Case studies including local and national examples of how public transportation systems have approached a variety of closures and emergencies A "how-to" guidebook to share with municipal staff, transit agencies, and regional planners to help them prepare for and respond to emergency situations	Logan Casey, lkcmaine@gmail.com
	Multimodal Mobility Hub Feasibility	Multimodal mobility hub provides an integrated platform of mobility services, amenities, and activities to maximize transportation network and the first- and last-mile connectivity. They are integrated as a community focal point in the network for all modes of transportation. Multimodal mobility hubs are usually categorized into two types: A passenger hub and a freight hub. A passenger hub can include infrastructure for pedestrians, bicyclists, transit users, and others such as e-cargo bikes, bike share, electric scooter share, bus connections, park-and-ride facility (personal vehicles, personal bikes, personal e-scooters, etc). Examples of important activities supported by a freight hub includes the transition of goods from large trucks to more small and sustainable vehicles like e-cargo bikes and electric commercial vehicles for last-mile delivery. These considerations in how we use transportation for daily trips as well as the movement of goods help in improving safety, noise and air quality conditions.	Shravanthi Gopalan Narayanan, sgnarayanan@ctps.org
	Future of the Curb Phase IV	Future of the Curb Phase IV- Transit—This would be an extension of phase three of the future of the curb work, this time focusing on a transit-related project, such as one that would implement bus priority curb management strategies. The project would involve identifying the project, collecting before and after data, and performing analyses to asses the changes in curb space usage as a result of the intervention. This would most likely culminate in a technical memo.	Sophie Fox, sfox@ctps.org

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
	Decarbonizing the Freight Sector: Exploring the potential for using e-cargo bikes for first-/last-mile freight deliveries	Growing globalization coupled with a post-pandemic shift to online shopping has increased our dependence on freight, especially in urban areas. Urban societies rely on freight to serve a wide variety of needs, including but not limited to food, consumer goods, and fuel. However, residents have expressed concerns about the growing number of large trucks and freight delivery vehicles (e.g., Amazon vans) passing through and stopping in their neighborhoods. Some regions, both within the United States and around the world, are experimenting with a regional freight delivery system. Such a system depends on the establishment of neighborhood freight hubs to which freight vehicles transport their cargo, following which e-cargo bikes are used to provide the first-/last-mile connection from these hubs directly to people's homes. In addition to 'traditional' freight deliveries, e-cargo bikes are also thought of as a promising alternative to car-oriented food delivery systems (e.g., Doordash, Uber Eats). The City of Boston is currently running a pilot called 'Boston Delivers' to this effect for local businesses in Allston and Brighton. Building on these recent efforts, MPO staff should explore the potential for establishing neighborhood freight hubs and using e-cargo bikes for first-/last-mile freight deliveries across the Boston region (or in the Inner Core, at the very least). This system could address the urgent need to decarbonize the freight sector, in addition to mitigating the various other concerns residents regularly voice over the increased presence of freight vehicles near their homes.	Rounaq Basu, rbasu@ctps.org
	Making the Data Walk: Improving the use of the Bike-Ped Count Data Application	MPO staff presented an enhanced version of the Bike-Ped Count Data Application in the February Board Meeting. While this was a much needed and welcome effort, we still have work to do to improve the use of this application so that diverse stakeholders can access and engage with the data for a wide variety of purposes without requiring programming, data analysis, or spatial analysis skills. Some useful features to include in the next version of this application include the ability to summarize data across a range of years, filter data by location and facility type, compare data across different locations and time, and visualize counts by mode succinctly. An important update to the "middleware" is also necessary to enable some of these features. In addition to these technical updates, staff need to work on expanding the data inventory using both manual and automated methods and improving stakeholder engagement with this application. Such an effort would be key to improving our knowledge of active mobility patterns and informing better active transportation planning in our region.	Rounaq Basu, rbasu@ctps.org
	Bikes and Trains: A marriage made in heaven, at loggerheads, or a mix of both (like most marriages)?	One of the most often cited challenges to using urban rail transit is the lack of decent first-/last-mile connections. Public bikesharing systems (such as Bluebikes) have the potential to address this concern by making it easier for some people to access rail transit stations. Of course, much depends on where the stations are located and who has the ability and willingness to bike (amidst valid concerns around safety and inclement weather, especially in our region). In recent years, MPO staff have engaged in several projects around bikesharing use in the region. Building on these prior efforts, it is time to examine a fundamental question: What is the relationship between Bluebikes and the T? Do Bluebikes really improve connectivity to the T, and, if so, what are the conditions that enable such a relationship? On the other hand, do people use Bluebikes as an alternative to the T, and, if so, what kinds of transit trips are most likely to be substituted? (As an aside, my money is on shorter trips, especially by bus.) This is a fundamental exploration to a better understanding of multimodality in the region, so that we can design a more efficient transit system that also accounts for the complementary as well as competitive nature of other modes. Extending this research, MPO staff could apply their analytic framework to examine the effect of transit service disruptions (such as the Orange Line shutdown or more recent service disruptions, especially along the Green Line) on Bluebikes usage. To what extent did 'usual' transit riders use Bluebikes when transit was not available or was simply too onerous to use?	Rounaq Basu, rbasu@ctps.org

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
	Mode Shift: What would it take to move the needle?	Several municipalities across the country, including the City of Boston, have released Climate Action Plans that include ambitious mode shift targets. For example, the City of Boston hopes to achieve a mode shift to the effect of 75% of trips being made by non-auto modes by 2030. How are these cities going to get there? What mix of policy strategies can help them hit these lofty goals? How are they monitoring progress towards these goals? MPO staff should conduct a literature review of some of these Climate Action Plans to find answers to these questions, and explore case studies of successful mode shift implementation both within and beyond the United States with an eye towards parsing out what would be most valuable and effective for our region. While many of us know what policy levers would be needed to achieve these targets (e.g., more reliable and expanded transit service, safer conditions for walking and biking, parking space reductions, land use changes), we need to learn from those who have been more successful than us about how they were able to move from idea conceptualization to successful operationalization. How did they manage and coordinate interactions with partner agencies and synergistic policy goals? Perhaps a high-level analysis, along the lines of the 'Sources of Community Value' study, could also be done to estimate the impact of each individual policy strategy (e.g., to what extent would Bluebikes network expansion aid in mode shift?).	Rounaq Basu, rbasu@ctps.org
	Roadway Pricing: Balancing the need for a transition to sustainable mobility with equity considerations	MPO staff recently presented their takeaways from interviews with a range of roadway pricing program administrators around the country and proposed key recommendations for us to keep in mind as we think about a similar strategy in our region. With widespread adoption of electric vehicles looming on the horizon (and being encouraged by both the State and the Federal administrations), the gas tax is unlikely to remain a viable fiscal source to support public transit. While electric vehicles may have lower tailpipe emissions than their fossil fuel-fueled counterparts, they are unlikely to be a silver bullet for the many challenges associated with auto-dependence. MPO staff can build on their recent study to further explore the idea of roadway pricing, but with more focused attention to the Boston region. Using data from the MA Vehicle Census and Replica, MPO staff should be able to examine vehicle miles traveled by different communities within our region. Such an analysis could allow us to provide rough estimates of revenue generated by different pricing strategies (such as cordon pricing around a particular central zone, or a direct tax on miles traveled). It would also be possible to examine the disparate impacts of such policies on different communities and, thereby, advocate for targeted discounts or subsidies for EJ communities and those who are forced into car ownership by a lack of high-quality alternatives.	Rounaq Basu, rbasu@ctps.org

(cont.)

ID	Project Name	Project Purpose and Outcome	Source
	MBTA Study Concepts, Winter 2024: Understanding Suburban Change and Impacts to Transit Demand	(Updated from a 2024 proposal) There is a common narrative that the suburbs, both nationally and in the Boston area, are changing. MBTA would like to better understand how that change is happening; to what extent, and where, narratives of change and available demographic data match up; and what that means for transit demand current and future. Tasks may include 1. Task 1: Qualitative engagement with suburban stakeholders to identify perceptions of change and changing need 2. Task 2: Analysis of demographic data 3. Task 3: Analysis of suburban transit provision, by MBTA, RTAs, or other operators, relative to peer metros 4. Task 4: Identifying priority areas for transit improvement This concept partially follows up on the work done in the FFY 2022 UPWP study "An Exploration of Destination Access and Transportation Cost Analyses." Among other things, that study examined demographic change from the 2010 Census to the 2020 Census, and used 2020 Census data to examine destination access for protected populations. We propose expanding the analysis to include the 2000 Census, giving a longer-term view of demographic change over time, and exploring the ability to use destination access tools and past transit schedule data to examine change in destination access over time. In turn, this analysis would be used to analyze the impact those changes might have on demand for transit. It could also draw on a scope Steven Andrews has previously developed to analyze the quantitative elements of this type of research.	Sandy Johnston, sjohnston2@mbta.com

BPDA = Boston Planning & Development Agency. BRMPO = Boston Region Metropolitan Planning Organization. CBO = community-based organizations. CTPS = Central Transportation Planning Staff. DVRPC = Delaware Valley Regional Planning Commission. EJ = environmental justice. EV = electric vehicles. FFY = federal fiscal year. GLX = Green Line extension. GTFS = General Transit Feed Specification. LOS = level of service. MAPC = Metropolitan Area Planning Council. MassDOT = Massachusetts Department of Transportation. MBTA = Massachusetts Bay Transportation Authority. MPO = Metropolitan Planning Organization. OSM = OpenStreet Map. RTA = regional transportation authority. SOV = single occupancy vehicles. TIP = Transportation Improvement Plan.

Table C-2
Studies Funded in the UPWP, by Category, FFYs 2018–25

	FFY 2018	FFY 2019	FFY 2020	FFY 2021	FFY 2022	FFY 2023	FFY 2024	FFY 2025
Active Transportation	1	1	1	1	1	3	1	
Land Use, Environment, and Economy	1	1	0	1	3	0	0	
Roadway and Multimodal Mobility	5	6	4	5	5	1	1	2
Transit	2	1	3	2	1	4	0	
Transportation Equity	–	0	1	0	1	4	1	
Resilience	–	0	1	1	0	0	1	
Other	1	1	1	3	1	0	0	1
Total	**10**	**10**	**11**	**13**	**12**	**12**	**4**	**3**

Appendix D

Geographic Distribution of UPWP Studies and Technical Analyses

INTRODUCTION

This Appendix summarizes the geographic distribution of the Metropolitan Planning Organization (MPO)-funded work products produced by MPO staff (the Central Transportation Planning Staff) and the staff of the Metropolitan Area Planning Council (MAPC) during federal fiscal years (FFY) 2020 through 2024, as well as work products expected to be completed by the end of FFY 2024. The narrative below describes the methodology used to compile this information, as well as potential use cases for these data to inform and guide public involvement and regional equity considerations.

PURPOSE AND METHODOLOGY

Purpose

The purpose of this data collection is to better understand the geographic spread of Unified Planning Work Program (UPWP) work products (that is, reports and technical memoranda) throughout the Boston region. This analysis provides an initial glimpse at which communities and areas of the metropolitan region have benefited from transportation studies and analyses (or have received technical support) conducted by the MPO staff with continuing, comprehensive, and cooperative (3C) planning funds.

In addition, this Appendix includes a preliminary analysis of the distribution of MPO work products to minority populations, low-income populations, and people with limited English proficiency (LEP) based on their share of the population and the median income in each municipality. This is an initial approach to assess how MPO studies may benefit these populations. To further analyze this work, a pair of maps were developed that display the geographic spread of the 2024 work products.

Table D-1 presents a summary of UPWP tasks completed from FFY 2020 through FFY 2024 that resulted in benefits to specific municipalities, aggregated to the subregional level. Figure D-1 is a map that displays the 2024 results geographically. Table D-2 presents the information from Table D-1 disaggregated by municipality, and Figure D-2 maps these results. Studies that had a regional focus are presented in Table D-3.

The geographic distribution of UPWP studies (those benefiting specific communities and those benefiting a wider portion of the region) can inform the UPWP funding decisions made for each FFY. When considered in combination with other information, the geographic distribution of MPO-funded UPWP studies can help guide the MPO's public outreach to ensure that, over time, we are meeting needs throughout the region.

Table D-1
Summary of Distribution of Work Products by FFY and Subregion

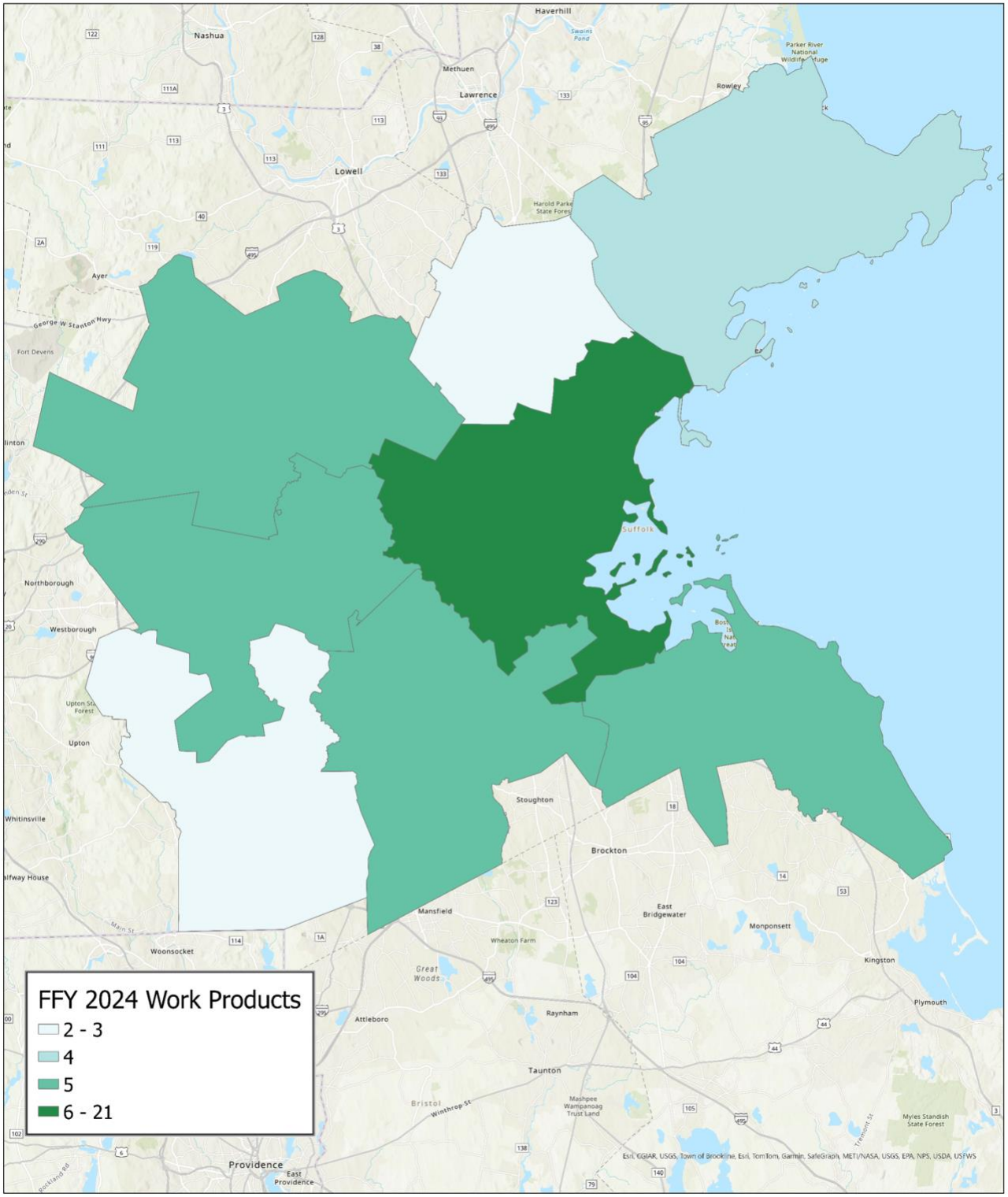
Subregion	Number of Work Products						Demographics			
Name	FFY 2020	FFY 2021	FFY 2022	FFY 2023	FFY 2024	FFYs 2020-24 Total	Total Population	Percent Minority	Percentage of Residents in Poverty	Percentage of Residents with LEP
ICC	17	14	20	46	21	118	1,759,970	48.20%	25.40%	16.10%
MAGIC	9	6	4	13	5	37	181,858	26.80%	9.20%	5.40%
MWRC	0	9	3	4	5	21	250,783	33.80%	14.70%	11.40%
NSPC	1	1	1	2	3	8	217,978	19.80%	10.90%	5.20%
NSTF	4	1	6	4	4	19	297,068	16.90%	16.70%	5.80%
SSC	3	1	9	2	5	20	224,764	17.50%	13.00%	4.40%
SWAP	0	3	1	1	2	7	149,159	19.60%	11.40%	5.90%
TRIC	14	10	10	7	5	46	275,614	29.10%	12.50%	6.70%
Regionwide Total	**48**	**45**	**54**	**79**	**50**	**276**	**3,357,194**	**36.50%**	**19.50%**	**11.50%**

Notes:
LEP is tabulated for the population aged five years and older, the minority population and population in poverty are for the entire region.
People who identify as minority are those who identify as a race other than White or as Hispanic or Latino/a/x.

Sources:
Minority population: U.S. Census Bureau; Decennial Census, Table P2 (Race); generated by CTPS; using api.census.gov (2023-03-27).
Low-income population: U.S. Census Bureau; American Community Survey, 2017-2021 American Community Survey 5-Year Estimates, Table C17002 (Income Level), generated by CTPS; using api.census.gov; (2023-03-27).
People with LEP: U.S. Census Bureau; American Community Survey, 2017-2021 American Community Survey 5-Year Estimates, Table B16004 (Limited English Proficiency), generated by CTPS; using api.census.gov; (2023-03-27).

Median Household Income: U.S. Census Bureau; American Community Survey, 2017-2021 American Community Survey 5-Year Estimates, Table B19013 (Median Household Income), generated by CTPS; using api.census.gov; (2023-03-27).

Figure D-1
Map of 2024 Work Products by Subregion



Methodology

As noted above, this analysis examined work conducted in FFYs 2020 through 2024. To generate information on the number of UPWP studies during these FFYs that benefitted specific cities and towns in the Boston region, MPO staff performed the following tasks:

- reviewed all work products listed as complete in UPWPs from FFYs 2020 through 2024
- excluded all agency and other client-funded studies and technical analyses to focus the analysis on MPO-funded work only
- excluded all work products with a focus that was regional or not limited to a specific subregion
- excluded all work related to certification requirements (Chapter 3), resource management, and support activities (Chapter 5), which consist of programs and activities that support the MPO, its staff operations, and its planning and programming activities
- compiled a count of all reports and technical memoranda completed specifically for one municipality or reports and technical memoranda directly benefiting multiple municipalities. In the case where multiple municipalities directly benefit from a report or technical memoranda, the work product was counted once for each municipality that benefited
- reviewed and discussed the status and focus of studies, technical memoranda, and reports with project managers and technical staff
- refreshed demographic data using 2020 Decennial Census counts and American Community Survey 2017–21 five-year estimates

PLANNING STUDIES AND TECHNICAL ANALYSES BY COMMUNITY

Table D-2 shows the number of completed MPO-funded UPWP work products from FFY 2020 through FFY 2024 that are determined to provide benefits to specific municipalities. Studies and technical analyses are grouped by the year in which they were completed, rather than the year in which they were first programmed in the UPWP. Examples of the types of studies and work in the table include the following:

- Bicycle and Pedestrian Support Activities
- Technical support for Regional Transit Service Planning
- Complete Streets analyses for specific municipalities
- Roadway Safety Audits

Figure D-2 maps these results for FFY 2023.

The data in the tables show that there is not a strong relationship between the percent of the population in municipalities who identify as minority and the number of studies conducted in the municipality since 2019. The same is true for the percent of the population in poverty or with LEP. This suggests that studies are not always distributed equitably; if they were, we would expect to see the number of studies increase with the percent of people who identify as minority, have a low income, or have LEP, and where there is a lower median income.

With regards to geographic distribution, the Inner Core Committee (ICC) subregion, has had the most studies since 2019, with 557, but also the highest population, with 1,759,970 people. It also has the highest ratio of studies per person, followed by the Minuteman Advisory Group on Interlocal Coordination (MAGIC) and the Three Rivers Interlocal Council (TRIC). The South West Advisory Planning Committee (SWAP) has the lowest. This suggests that municipalities in the ICC, MAGIC, and TRIC subregions receive disproportionately more studies than municipalities in other subregions.

As the MPO considers studies to fund in future years, it should consider prioritizing funding in those municipalities that have received less funding in the past and where many minority, low-income, and/or people with LEP live.

Table D-2
Number of UPWP Tasks by FFY and Municipality, Grouped by Subregion

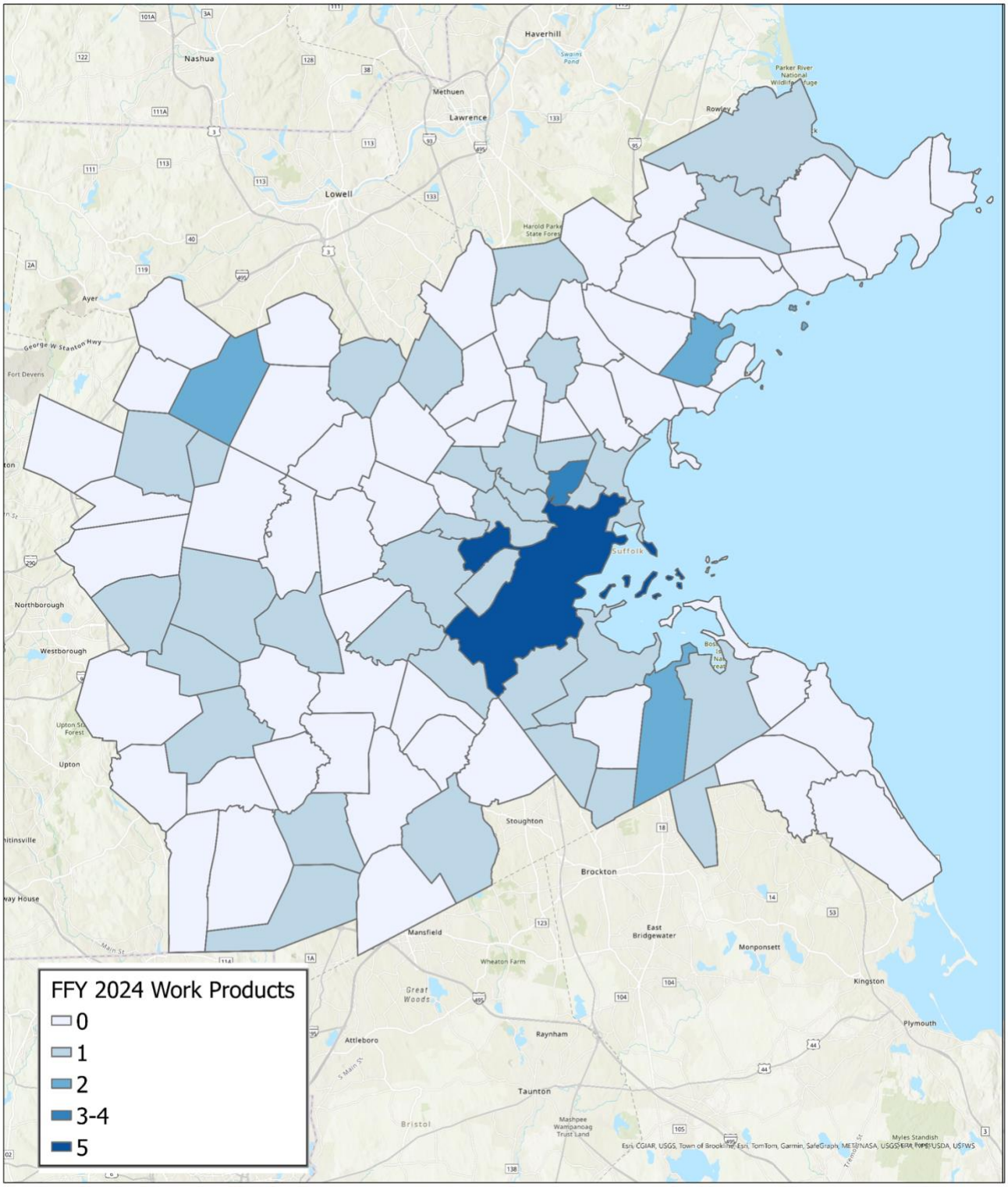
Municipality	Number of Work Products						Demographics				
	2020	2021	2022	2023	2024	2020-24 Total	Total Population	Percent Minority	Percentage of Residents in Poverty	Percentage of Residents with LEP	Median Income
Arlington	1	0	0	3	1	5	46,308	24.80%	11.20%	6.00%	$136,312
Belmont	0	0	1	0	0	1	27,295	30.40%	7.80%	8.30%	$164,918
Boston	3	5	11	8	5	32	675,647	55.40%	31.20%	16.10%	$89,212
Brookline	3	0	1	2	1	7	63,191	34.70%	16.30%	8.40%	$130,600
Cambridge	1	0	0	2	1	4	118,403	44.60%	19.80%	8.30%	$121,539
Chelsea	2	1	0	3	1	7	40,787	79.80%	42.10%	42.60%	$71,051
Everett	2	0	0	3	4	9	49,075	65.90%	35.90%	31.40%	$77,796
Lynn	0	1	1	2	0	4	101,253	65.90%	33.40%	27.00%	$70,046
Malden	0	1	0	3	1	5	66,263	60.00%	29.80%	26.30%	$90,295
Medford	1	0	0	1	1	3	59,659	33.20%	18.60%	9.70%	$114,863
Melrose	0	1	0	2	0	3	29,817	20.40%	11.30%	6.10%	$126,305
Newton	1	0	1	2	1	5	88,923	29.90%	9.30%	6.80%	$176,373
Quincy	1	2	3	3	1	10	101,636	45.80%	23.80%	20.50%	$90,668
Revere	1	1	0	3	1	6	62,186	55.10%	29.60%	32.70%	$78,968
Saugus	0	0	0	0	0	0	28,619	24.90%	17.20%	8.20%	$96,064
Somerville	0	2	0	5	1	8	81,045	34.80%	19.60%	10.00%	$120,778
Waltham	0	0	1	0	0	1	65,218	39.60%	19.90%	9.70%	$113,443
Watertown	1	0	1	2	1	5	35,329	26.90%	12.90%	9.90%	$117,625
Winthrop	0	0	0	2	1	3	19,316	21.10%	17.80%	7.20%	$98,901
ICC Subtotals	**17**	**14**	**20**	**46**	**21**	**118**	**1,759,970**	**48.20%**	**25.40%**	**16.10%**	**N/A**
Acton	3	0	0	1	2	6	24,021	36.90%	10.00%	8.30%	$150,482
Bedford	0	0	1	2	1	4	14,383	26.50%	11.50%	7.50%	$143,736
Bolton	0	0	0	0	0	0	5,665	13.50%	6.80%	2.20%	$191,208
Boxborough	0	0	0	0	0	0	5,506	32.90%	8.60%	6.00%	$151,207
Carlisle	0	0	0	0	0	0	5,237	21.20%	5.60%	2.70%	$247,656

Concord	1	2	1	3	0	7	18,491	18.20%	7.50%	2.70%	$184,086
Hudson	0	1	0	0	0	1	20,092	21.40%	13.40%	9.60%	$103,086
Lexington	1	1	1	1	0	4	34,454	43.30%	7.20%	7.30%	$206,323
Lincoln	1	1	0	1	0	3	7,014	23.80%	15.60%	4.50%	$158,894
Littleton	1	0	0	1	0	2	10,141	16.90%	12.50%	1.40%	$151,488
Maynard	1	0	0	1	1	3	10,746	17.00%	13.60%	2.80%	$112,524
Stow	0	0	0	0	1	1	7,174	14.30%	7.10%	2.20%	$166,833
Sudbury	1	1	1	3	0	6	18,934	19.10%	3.00%	1.90%	$234,427
MAGIC Subtotals	**9**	**6**	**4**	**13**	**5**	**37**	**181,858**	**26.80%**	**9.20%**	**5.40%**	**N/A**
Ashland	0	1	0	1	1	3	18,832	31.50%	8.90%	8.90%	$124,311
Framingham	0	1	1	2	1	5	72,362	46.30%	21.60%	18.60%	$94,909
Holliston	0	1	0	0	1	2	14,996	15.80%	8.50%	3.70%	$149,614
Marlborough	0	1	0	0	0	1	41,793	40.90%	24.30%	17.30%	$94,199
Natick	0	1	1	0	1	3	37,006	24.40%	9.60%	7.20%	$133,605
Southborough	0	1	0	0	1	2	10,450	24.50%	7.20%	6.20%	$186,432
Wayland	0	1	1	0	0	2	13,943	23.20%	6.10%	3.90%	$208,750
Wellesley	0	1	0	0	0	1	29,550	26.70%	6.20%	4.80%	$250,001
Weston	0	1	0	1	0	2	11,851	26.00%	10.60%	4.40%	$250,001
MWRC Subtotals	**0**	**9**	**3**	**4**	**5**	**21**	**250,783**	**33.80%**	**14.70%**	**11.40%**	**N/A**
Burlington	0	0	0	0	1	1	26,377	30.00%	13.40%	4.80%	$133,936
Lynnfield	0	0	0	0	0	0	13,000	13.50%	14.10%	5.10%	$160,931
North Reading	0	0	0	0	1	1	15,554	11.50%	6.50%	2.80%	$141,442
Reading	0	0	0	0	0	0	25,518	12.80%	8.40%	2.90%	$154,662
Stoneham	0	0	0	0	0	0	23,244	18.60%	11.70%	7.00%	$112,935
Wakefield	0	1	1	2	1	5	27,090	14.30%	10.40%	3.20%	$125,592
Wilmington	1	0	0	0	0	1	23,349	13.80%	8.90%	2.50%	$151,034
Winchester	0	0	0	0	0	0	22,970	25.40%	7.20%	5.30%	$208,531
Woburn	0	0	0	0	0	0	40,876	27.20%	14.30%	9.70%	$104,780
NSPC Subtotals	**1**	**1**	**1**	**2**	**3**	**8**	**217,978**	**19.80%**	**10.90%**	**5.20%**	**N/A**
Beverly	1	0	1	1	0	3	42,670	15.40%	19.20%	4.20%	$99,525

Danvers	0	0	1	0	0	1	28,087	12.70%	10.10%	3.40%	$116,636
Essex	0	0	0	0	0	0	3,675	7.50%	15.70%	1.30%	$133,553
Gloucester	0	0	0	0	0	0	29,729	11.70%	22.20%	5.00%	$84,465
Hamilton	0	0	0	0	1	1	7,561	11.10%	8.40%	0.80%	$138,250
Ipswich	0	0	0	0	1	1	13,785	9.00%	12.60%	1.90%	$123,266
Manchester-by-the-Sea	0	0	1	1	0	2	5,395	6.70%	7.10%	0.90%	$209,052
Marblehead	0	0	0	0	0	0	20,441	9.20%	9.90%	2.20%	$164,104
Middleton	0	0	0	0	0	0	9,779	15.70%	8.50%	6.00%	$168,245
Nahant	0	0	0	0	0	0	3,334	9.00%	11.90%	1.20%	$105,867
Peabody	1	0	1	0	0	2	54,481	22.70%	17.10%	9.80%	$91,125
Rockport	0	0	0	0	0	0	6,992	6.90%	13.60%	0.40%	$95,091
Salem	1	1	2	2	2	8	44,480	31.50%	26.70%	10.00%	$79,196
Swampscott	1	0	0	0	0	1	15,111	14.20%	14.80%	9.80%	$118,646
Topsfield	0	0	0	0	0	0	6,569	10.00%	8.50%	3.80%	$162,734
Wenham	0	0	0	0	0	0	4,979	12.60%	9.70%	2.00%	$181,982
NSTF Subtotals	**4**	**1**	**6**	**4**	**4**	**19**	**297,068**	**16.90%**	**16.70%**	**5.80%**	**N/A**
Braintree	1	0	1	1	0	3	39,143	29.90%	13.20%	9.20%	$120,593
Cohasset	0	0	1	0	0	1	8,381	7.20%	8.00%	1.40%	$178,013
Hingham	1	1	2	0	1	5	24,284	8.50%	7.40%	2.10%	$170,326
Holbrook	0	0	0	0	1	1	11,405	34.40%	17.60%	3.30%	$96,920
Hull	0	0	1	1	0	2	10,072	8.30%	9.30%	0.40%	$128,022
Marshfield	0	0	1	0	0	1	25,825	6.80%	14.50%	0.90%	$118,750
Norwell	1	1	1	0	0	3	11,351	8.80%	6.80%	1.90%	$179,777
Rockland	0	0	0	0	1	1	17,803	17.50%	17.70%	2.90%	$98,295
Scituate	0	0	1	0	0	1	19,063	6.60%	9.80%	1.90%	$127,173
Weymouth	0	0	1	0	2	3	57,437	22.60%	16.00%	6.60%	$95,879
SSC Subtotals	**3**	**1**	**9**	**2**	**5**	**20**	**224,764**	**17.50%**	**13.00%**	**4.40%**	**N/A**
Bellingham	0	0	0	0	0	0	16,945	14.60%	13.50%	3.80%	$116,152
Franklin	0	0	0	0	0	0	33,261	14.90%	9.40%	3.10%	$138,062
Hopkinton	0	0	0	0	0	0	18,758	26.80%	7.70%	3.10%	$191,439

Medway	0	0	1	1	0	2	13,115	11.70%	10.10%	3.10%	$165,614
Milford	0	1	0	0	0	1	30,379	34.00%	20.80%	17.70%	$92,843
Millis	0	0	0	0	0	0	8,460	12.00%	13.00%	5.30%	$140,816
Norfolk	0	0	0	0	1	1	11,662	15.90%	3.00%	0.80%	$182,716
Sherborn	0	1	0	0	0	1	4,401	18.30%	2.80%	1.30%	$242,688
Wrentham	0	1	0	0	1	2	12,178	10.40%	8.30%	0.80%	$151,833
SWAP Subtotals	**0**	**3**	**1**	**1**	**2**	**7**	**149,159**	**19.60%**	**11.40%**	**5.90%**	**N/A**
Canton	3	0	1	1	0	5	24,370	27.10%	10.20%	5.30%	$130,134
Dedham	2	1	1	0	1	5	25,364	22.00%	13.70%	5.90%	$118,877
Dover	0	1	0	0	0	1	5,923	19.20%	4.20%	3.30%	$250,001
Foxborough	2	1	0	0	0	3	18,618	16.40%	17.10%	3.10%	$104,350
Medfield	0	1	0	0	0	1	12,799	12.50%	9.10%	1.00%	$215,099
Milton	1	3	2	1	1	8	28,630	29.00%	12.30%	4.10%	$170,531
Needham	0	0	1	1	1	3	32,091	18.90%	6.60%	4.60%	$206,261
Norwood	2	1	2	2	0	7	31,611	27.50%	18.70%	11.30%	$98,653
Randolph	0	0	1	1	1	3	34,984	73.40%	21.30%	17.10%	$94,905
Sharon	0	0	0	1	1	2	18,575	33.20%	3.40%	5.90%	$181,545
Walpole	2	1	1	0	0	4	26,383	17.10%	10.90%	3.40%	$151,875
Westwood	2	1	1	0	0	4	16,266	17.20%	9.20%	3.00%	$192,887
TRIC Subtotals	**14**	**10**	**10**	**7**	**5**	**46**	**275,614**	**29.10%**	**12.50%**	**6.70%**	**N/A**
Grand Total	**48**	**45**	**54**	**79**	**50**	**276**	**3,357,194**	**36.50%**	**19.50%**	**11.50%**	**N/A**

Figure D-2
Map of 2023 UPWP Tasks by Municipality



REGIONWIDE PLANNING STUDIES AND TECHNICAL ANALYSES

In addition to work that benefits specific municipalities, many projects funded by the MPO through the UPWP have a regional focus. Table D-3 lists MPO-funded UPWP studies completed from 2019 through 2023 that were regional in focus, meaning that they provided benefit to multiple communities and types of municipalities. Some regionally focused studies may have work products that overlap with those analyzed in the tables above.

More information on these studies and other work can be found on the MPO's website (https://www.bostonmpo.org/recent_studies) or by contacting Srilekha Murthy, UPWP Manager, at smurthy@ctps.org.

Table D-3
Regionally Focused MPO-Funded UPWP Studies

FFY 2024	
CTPS	**MAPC**
• Lab and Municipal Parking Phase II • Parking in Bike Lanes: Strategies for Safety and Prevention • Strategies for Environmental Outreach and Engagement • Applying Conveyal to TIP Project Scoring	
FFY 2023	
CTPS	**MAPC**
• Update Bicycle/Pedestrian Count Database • Flexible Fixed-Route Bus Service • Transit Modernization Program • Lab and Municipal Parking Study • Learning from Roadway Pricing Experiences	

FFY 2022	
CTPS	**MAPC**
• Trip Generation Follow-up • Travel Demand Management Follow-up • The Future of the Curb Phase 3 • Identifying Transportation Inequities in the Boston Region • Staff-Generated Research Topics	• MetroCommon 2050: Greater Boston's Next Regional Vision
FFY 2021	
CTPS	**MAPC**
• Improving Pedestrian Variables in the Travel Demand Model • Regional TDM Strategies • Trip Generation Rate Research • Access to CBDs Phase 2 • The Future of the Curb Phase 2 • Multimodal Resilience and Emergency Planning • MPO Staff-Generated Research Topics • Mapping Major Transportation Infrastructure Projects in the Boston Region • Exploring Resilience in MPO-Funded Corridor and Intersection Studies	• Rideshare Electrification Working Group • Impacts of E-commerce in Massachusetts • Planning Successful Bus Priority • Projects in Greater Boston • MetroCommon Regional Plan Development
FFY 2020	
CTPS	**MAPC**

• Operating a Successful Shuttle Program • Further Development of the MPOs Community Transportation Program • Disparate Impact Metrics Analysis • Pedestrian Report Card Assessment Dashboard • Innovations in Estimating Trip Generation Rates • Review of Vision Zero Strategies	• Participation in Rail Vision Study • Participation in East-West Rail Study • MetroCommon Regional Plan Development • Review of Institute of Traffic Engineers Trip Generation Estimates • Inventory of National TNC Fee Structures • Analysis of How Local and State Governments in North America Use TNC Data for Regulation • Literature Review of Initiatives to Incentivize Zero Emission TNC Vehicles

USES FOR THE DATA

MPO staff collects these data annually. These data can potentially be used to inform UPWP funding decisions and could be used in concert with other data in the following future analyses:

- Compare the number of tasks per community to the presence and size of a municipal planning department in each city and town.
- Examine the use of different measures to understand the geographic distribution of benefits derived from funding programmed through the UPWP. For example, in addition to analyzing the number of tasks per community, the MPO could consider the magnitude of benefits that could be derived from UPWP studies (such as congestion reduction or air quality improvement).
- Examine in greater detail the geographic distribution of UPWP studies and technical analyses per subregion or per MAPC community type to understand the type of tasks being completed and how these compare to municipally identified needs.
- Examine the number of tasks per community and compare the data to the number of road miles or amount of transit service provided in the municipality.
- Develop graphics illustrating the geographic distribution of UPWP studies, spending, and a map that shows the distribution relative to Environmental Justice and Transportation Equity concern areas.

- Compare the number of tasks directly benefiting each municipality with the geographic distribution of transportation needs identified in the most recent Long-Range Transportation Plan (LRTP), *Destination 2050*. The transportation needs of the region for the next 25 years are identified and organized in the LRTP according to the MPO's goal areas, which are
    - Equity,
    - Safety,
    - Mobility and Reliability,
    - Access and Connectivity,
    - Resiliency, and
    - Clean Air and Healthy Communities.
- Compare the data analyzed in this appendix to the data collected through the MPO's UPWP Study Recommendations Tracking Database, which classifies tasks differently and provides a higher level of detail but is reliant on provision of data by municipalities.

Analyses such as these would provide the MPO with a clearer understanding of how the work programmed through the UPWP addresses the needs of the region.

Appendix E
Regulatory and Policy Framework

This appendix contains detailed background on the regulatory documents, legislation, and guidance that shape the Boston Region Metropolitan Planning Organization's (MPO) transportation planning process.

REGULATORY FRAMEWORK

The Boston Region MPO is charged with executing its planning activities in line with federal and state regulatory guidance. Maintaining compliance with these regulations allows the MPO to directly support the work of these critical partners and ensures its continued role in helping the region move closer to achieving federal, state, and regional transportation goals. This appendix describes the regulations, policies, and guidance taken into consideration by the MPO during development of the certification documents and other core work the MPO will undertake during federal fiscal year (FFY) 2025.

Federal Regulations and Guidance

The MPO's planning processes are guided by provisions in federal transportation authorization bills, which are codified in federal statutes and supported by guidance from federal agencies. The Bipartisan Infrastructure Law (BIL) was signed into law on November 15, 2021 as the nation's five-year surface transportation bill, and covers FFYs 2022–26. This section describes new provisions established in the BIL.

Bipartisan Infrastructure Law: National Goals

The purpose of the national transportation goals, outlined in Title 23, section 150, of the United States Code (23 USC § 150), is to increase the accountability and transparency of the Federal-Aid Highway Program and to improve decision-making through performance-based planning and programming. The national transportation goals include the following:

1. **Safety:** Achieve significant reduction in traffic fatalities and serious injuries on all public roads
2. **Infrastructure condition:** Maintain the highway infrastructure asset system in a state of good repair
3. **Congestion reduction:** Achieve significant reduction in congestion on the National Highway System

4. **System reliability:** Improve efficiency of the surface transportation system
5. **Freight movement and economic vitality:** Improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
6. **Environmental sustainability:** Enhance performance of the transportation system while protecting and enhancing the natural environment
7. **Reduced project delivery delays:** Reduce project costs, promote jobs and the economy, and expedite movement of people and goods by accelerating project completion by eliminating delays in the project development and delivery process, including by reducing regulatory burdens and improving agencies' work practices

The Boston Region MPO has incorporated these national goals, where practicable, into its vision, goals, and objectives, which provide a framework for the MPO's planning processes. More information about the MPO's vision, goals, and objectives is included in Chapter 1.

Federal Planning Factors

The MPO gives specific consideration to the federal planning factors, described in Title 23, section 134, of the US Code (23 USC § 134), when developing all documents that program federal transportation funds. In accordance with the legislation, studies and strategies undertaken by the MPO shall

1. Support the economic vitality of the metropolitan area, especially by enabling global competition, productivity, and efficiency
2. Increase the safety of the transportation system for all motorized and nonmotorized users
3. Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and nonmotorized users
4. Increase accessibility and mobility of people and freight
5. Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns
6. Enhance integration and connectivity of the transportation system, across and between modes, for people and freight

7. Promote efficient system management and operation
8. Emphasize preservation of the existing transportation system
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
10. Enhance travel and tourism

The Boston Region MPO has also incorporated these federal planning factors into its vision, goals, and objectives. Table E-1 shows the relationships between FFY 2024 MPO studies and activities and these federal planning factors.

Table E-1
FFY 2025 3C-Funded UPWP Studies and Programs—Relationship to Federal Planning Factors

		3C-funded Certification Activities																	Ongoing Technical Assistance			New and Recurring 3C-funded Planning Studies*			Administration and Resource Management		MAPC Activities							
	Federal Planning Factor	Support to the MPO and its	General Editorial	General Graphics	Public Engagement Program	Long-Range Transportation Plan	Transportation Improvement	Performance-Based Planning	Air Quality Program	Unified Planning Work	Transportation Equity Program	Congestion Management Process	Multimodal Mobility Infrastructu	Freight Planning Support	Data Program	Transit Working Group	Bicycle and Pedestrian Planning	Climate Resilience Program	Roadway Safety Audits	Community Transportation	Regional Transit Service	Bluebikes and MBTA Connection	Roadway Pricing: Balancing	Decarbonizing the Freight	IT Resource Manageme	Professional Developme	Corridor/Subarea Planning	Alternative Mode Planning	MetroCommon 2050	Land-Use Development Project	MPO/MAPC Liaison Activities	UPWP Support	Land-use Data and Forecasts	Subregional Support Activities
1	Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	•				•	•	•		•		•		•	•	•	•	•	•	•	•			•		•		•	•			•	•
2	Increase the safety of the transportation system for all motorized and nonmotorized users.	•				•	•	•		•	•	•	•				•	•	•	•		•			•			•	•			•	•	•
3	Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and nonmotorized users.	•				•	•			•	•							•														•		
4	Increase accessibility and mobility of people and freight.	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•		•	•	•	•
5	Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and	•			•	•	•	•	•	•	•	•			•		•	•	•	•	•	•	•	•			•	•	•	•	•	•	•	•
6	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	•		•		•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•			•	•		•
7	Promote efficient system management and operation.	•				•	•	•	•	•		•	•	•	•	•			•	•	•	•		•			•	•			•	•		•
8	Emphasize the preservation of the existing transportation system.	•				•	•	•		•			•	•			•	•	•	•		•	•						•		•	•		•
9	Improve the resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation.	•				•	•	•	•	•			•					•	•	•			•	•	•		•		•	•	•	•		•
10	Enhance travel and tourism.	•				•	•			•		•					•			•	•								•			•		•

* For ongoing FFY 2024 3C-funded studies, see FFY 2024 UPWP
** Includes Support to the MPO and its Committees, Public Participation Process, and Regional Transportation Advisory Council Support
FFY = Federal Fiscal Year. UPWP = Unified Planning Work Program.

FAST Act: Performance-Based Planning and Programming

The United States Department of Transportation (USDOT), in consultation with states, MPOs, and other stakeholders, established performance measures relevant to the national goals established in the FAST Act. These performance topic areas include roadway safety, transit system safety, National Highway System (NHS) bridge and pavement condition, transit asset condition, NHS reliability for both passenger and freight travel, traffic congestion, and on-road mobile source emissions. The FAST Act and related federal rulemakings require states, MPOs, and public transportation operators to follow performance-based planning and programming practices—such as setting targets—to ensure that transportation investments support progress towards these goals. See Chapter 3 for more information about how the MPO has and will continue to conduct performance-based planning and programming.

Bipartisan Infrastructure Law (BIL): Planning Emphasis Areas

On December 30, 2021, the Federal Highway Administration and Federal Transit Administration jointly issued updated planning emphasis areas for use in MPOs' transportation planning process, following the enactment of the BIL. Those planning emphasis areas include the following:

1. **Tackling the Climate Crisis—Transition to a Clean Energy, Resilient Future:** Ensure that transportation plans and infrastructure investments help achieve the national greenhouse gas (GHG) reduction goals of 50–52 percent below 2005 levels by 2030, and net-zero emissions by 2050, and increase resilience to extreme weather events and other disasters resulting from the increasing effects of climate change.
2. **Equity and Justice40 in Transportation Planning:** Ensure public involvement in the planning process and that plans and strategies reflect various perspectives, concerns, and priorities from impacted areas.
3. **Complete Streets:** Review current policies, rules, and procedures to determine their impact on safety for all road users. This effort should work to include provisions for safety in future transportation infrastructure, particularly for those outside automobiles.
4. **Public Involvement:** Increase meaningful public involvement in transportation planning by integrating virtual engagement tools into the overall approach while ensuring continued participation by individuals without access to computers and mobile devices.
5. **Strategic Highway Network (STRAHNET)/US Department of Defense (DOD) Coordination:** Coordinate with representatives from DOD in the transportation planning and project programming process on infrastructure

needs for STRAHNET routes and other public roads that connect to DOD facilities.

6. **Federal Land Management Agency (FLMA) Coordination:** Coordinate with FLMAs in the transportation planning and project programming process on infrastructure and connectivity needs related to access routes and other public roads and transportation services that connect to Federal lands.
7. **Planning and Environment Linkages:** Use a collaborative and integrated approach to transportation decision-making that considers environmental, community, and economic goals early in the transportation planning process, and use the information, analysis, and products developed during planning to inform the environmental review process.
8. **Data in Transportation Planning:** Incorporate data sharing considerations into the transportation planning process.

1990 Clean Air Act Amendments

The Clean Air Act, most recently amended in 1990, forms the basis of the United States' air pollution control policy. The act identifies air quality standards, and the US Environmental Protection Agency (EPA) designates geographic areas as *attainment* (in compliance) or *nonattainment* (not in compliance) areas with respect to these standards. If air quality in a nonattainment area improves such that it meets EPA standards, the EPA may redesignate that area as being a *maintenance* area for a 20-year period to ensure that the standard is maintained in that area.

The conformity provisions of the Clean Air Act "require that those areas that have poor air quality, or had it in the past, should examine the long-term air quality impacts of their transportation system and ensure its compatibility with the area's clean air goals." Agencies responsible for Clean Air Act requirements for nonattainment and maintenance areas must conduct air quality conformity determinations, which are demonstrations that transportation plans, programs, and projects addressing that area are consistent with a State Implementation Plan (SIP) for attaining air quality standards.

Air quality conformity determinations must be performed for capital improvement projects that receive federal funding and for those that are considered regionally significant, regardless of the funding source. These determinations must show that projects in the MPO's Long-Range Transportation Plan (LRTP) and Transportation Improvement Program (TIP) will not cause or contribute to any new air quality violations; will not increase the frequency or severity of any existing air quality violations in any area; and will not delay the timely attainment

of air quality standards in any area. The policy, criteria, and procedures for demonstrating air quality conformity in the Boston region were established in Title 40, parts 51 and 53, of the Code of Federal Regulations (40. C.F.R. 51, 40 C.F.R. 53).

On April 1, 1996, the EPA classified the cities of Boston, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, and Somerville as in attainment for carbon monoxide (CO) emissions. Subsequently, the Commonwealth established a CO maintenance plan through the Massachusetts SIP process to ensure that emission levels did not increase. While the maintenance plan was in effect, past TIPs and LRTPs included an air quality conformity analysis for these communities. As of April 1, 2016, the 20-year maintenance period for this maintenance area expired and transportation conformity is no longer required for carbon monoxide in these communities. This ruling is documented in a letter from the EPA dated May 12, 2016.

On April 22, 2002, the EPA classified the City of Waltham as being in attainment for CO emissions with an EPA-approved limited-maintenance plan. In areas that have approved limited-maintenance plans, federal actions requiring conformity determinations under the EPA's transportation conformity rule are considered to satisfy the conformity test. The MPO is not required to perform a modeling analysis for a conformity determination for carbon monoxide, but it has been required to provide a status report on the timely implementation of projects and programs that will reduce emissions from transportation sources—so-called transportation control measures—which are included in the Massachusetts SIP. In April 2022, the EPA issued a letter explaining that the carbon monoxide limited maintenance area in Waltham has expired. Therefore, the MPO is no longer required to demonstrate transportation conformity for this area, but the rest of the maintenance plan requirements, however, continue to apply, in accordance with the SIP.

On February 16, 2018, the US Court of Appeals for the DC Circuit issued a decision in *South Coast Air Quality Management District v. EPA*, which struck down portions of the 2008 Ozone National Ambient Air Quality Standards (NAAQS) SIP Requirements Rule concerning the ozone NAAQS. Those portions of the SIP Requirements Rule included transportation conformity requirements associated with the EPA's revocation of the 1997 ozone NAAQS. Massachusetts was designated as an attainment area in accord with the 2008 ozone NAAQS but as a nonattainment or maintenance area as relates to the 1997 ozone NAAQS. As a result of this court ruling, MPOs in Massachusetts must once again demonstrate conformity for ozone when developing LRTPs and TIPs.

MPOs must also perform conformity determinations if transportation control measures (TCM) are in effect in the region. TCMs are strategies that reduce transportation-related air pollution and fuel use by reducing vehicle-miles traveled and improving roadway operations. The Massachusetts SIP identifies TCMs in the Boston region. SIP-identified TCMs are federally enforceable and projects that address the identified air quality issues must be given first priority when federal transportation dollars are spent. Examples of TCMs that were programmed in previous TIPs include rapid-transit and commuter-rail extension programs (such as the Green Line Extension in Cambridge, Medford, and Somerville, and the Fairmount Line improvements in Boston), parking-freeze programs in Boston and Cambridge, statewide rideshare programs, park-and-ride facilities, residential parking-sticker programs, and the operation of high-occupancy-vehicle (HOV) lanes.

In addition to reporting on the pollutants identified in the 1990 Clean Air Act Amendments, the MPOs in Massachusetts are also required to perform air quality analyses for carbon dioxide as part of the state's Global Warming Solutions Act (GWSA) (see below).

Nondiscrimination Mandates

The Boston Region MPO complies with Title VI of the Civil Rights Act of 1964, the American with Disabilities Act of 1990 (ADA), Executive Order 12898—*Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations* (EJ EO), and other federal and state nondiscrimination statutes and regulations in all programs and activities it conducts. Per federal and state law, the MPO does not discriminate on the basis of race, color, national origin (including limited-English proficiency), religion, creed, gender, ancestry, ethnicity, disability, age, sex, sexual orientation, gender identity or expression, veteran's status, or background. The MPO strives to provide meaningful opportunities for participation of all persons in the region, including those protected by Title VI, the ADA, the EJ EO, and other nondiscrimination mandates.

The MPO also assesses the likely benefits and adverse effects of transportation projects on equity populations (populations covered by federal regulations, as identified in the MPO's Transportation Equity program) when deciding which projects to fund. This is done through the MPO's project selection criteria. MPO staff also evaluate the projects that are selected for funding, in the aggregate, to determine their overall impacts and whether they improve transportation outcomes for equity populations. The major federal requirements pertaining to nondiscrimination are discussed below.

Title VI of the Civil Rights Act of 1964

Title VI of the Civil Rights Act of 1964 requires that no person be excluded from participation in, be denied the benefits of, or be subjected to discrimination on the basis of race, color, or national origin, under any program or activity provided by an agency receiving federal financial assistance. Executive Order 13166—I*mproving Access to Services for Persons with Limited English Proficiency*, dated August 11, 2000, extends Title VI protections to people who, as a result of their nationality, have limited English proficiency. Specifically, it calls for improved access to federally assisted programs and activities, and it requires MPOs to develop and implement a system through which people with limited English proficiency can meaningfully participate in the transportation planning process. This requirement includes the development of a Language Assistance Plan that documents the organization's process for providing meaningful language access to people with limited English proficiency who access their services and programs.

Environmental Justice Executive Order

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

On April 15, 1997, the USDOT 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 race, color, national origin, and income level of populations affected by transportation decisions; and
- minimize or mitigate any adverse impact on minority or low-income populations.

The 1997 Final Order was updated in 2012 with USDOT Order 5610.2(a), which provided clarification while maintaining the original framework and procedures.

Americans with Disabilities Act

Title III of the ADA "prohibits states, MPOs, and other public entities from discriminating on the basis of disability in the entities' services, programs, or activities," and requires all transportation projects, plans, and programs to be accessible to people with disabilities. Therefore, MPOs must consider the mobility needs of people with disabilities when programming federal funding for studies and capital projects. MPO-sponsored meetings must also be held in accessible venues and be conducted in a manner that provides for accessibility. Also, MPO materials must be made available in accessible formats.

Other Nondiscrimination Mandates

The Age Discrimination Act of 1975 prohibits discrimination on the basis of age in programs or activities that receive federal financial assistance. In addition, the Rehabilitation Act of 1975, and Title 23, section 324, of the US Code (23 USC § 324) prohibit discrimination based on sex.

State Guidance and Priorities

Much of the MPO's work focuses on encouraging mode shift and diminishing GHG emissions through improving transit service, enhancing bicycle and pedestrian networks, and studying emerging transportation technologies. All of this work helps the Boston region contribute to statewide progress towards the priorities discussed in this section.

Beyond Mobility

Beyond Mobility, the Massachusetts 2050 Transportation Plan, is a planning process that will result in a blueprint for guiding transportation decision-making and investments in Massachusetts in a way that advances MassDOT's goals and maximizes the equity and resiliency of the transportation system. MPO staff continue to coordinate with MassDOT staff so that *Destination 2050*, the MPO's Long-Range Transportation Plan, is aligned with the Beyond Mobility plan.

Choices for Stewardship: Recommendations to Meet the Transportation Future

The Commission on the Future of Transportation in the Commonwealth—established by Massachusetts Governor Charlie Baker's Executive Order 579—published *Choices for Stewardship* in 2019. This report makes 18 recommendations across the following five thematic categories to adapt the transportation system in the Commonwealth to emerging needs:

1. Modernize existing transportation assets to move more people

2. Create a mobility infrastructure to capitalize on emerging transportation technology and behavior trends
3. Reduce transportation-related GHG emissions and improve the climate resiliency of the transportation network
4. Coordinate land use, housing, economic development, and transportation policy
5. Alter current governance structures to better manage emerging and anticipated transportation trends

Beyond Mobility will build upon the Commission report's recommendations. The Boston Region MPO supports these statewide goals by conducting planning work and making investment decisions that complement MassDOT's efforts and reflect the evolving needs of the transportation system in the region.

Massachusetts Strategic Highway Safety Plan

The *Massachusetts 2023 Strategic Highway Safety Plan* (SHSP) identifies the state's key safety needs and guides investment decisions to achieve significant reductions in highway fatalities and serious injuries on all public roads. The SHSP establishes statewide safety goals and objectives and key safety emphasis areas, and it draws on the strengths of all highway safety partners in the Commonwealth to align and leverage resources to address the state's safety challenges collectively. The Boston Region MPO considers SHSP goals, emphasis areas, and strategies when developing its plans, programs, and activities.

Massachusetts Transportation Asset Management Plan

The Massachusetts Transportation Asset Management Plan (TAMP) is a risk-based asset management plan for the bridges and pavement that are in the NHS inventory. The plan describes the condition of these assets, identifies assets that are particularly vulnerable following declared emergencies such as extreme weather, and discusses MassDOT's financial plan and risk management strategy for these assets. The Boston Region MPO considers MassDOT TAMP goals, targets, and strategies when developing its plans, programs, and activities. MassDOT's TAMP was most recently updated in 2023.

MassDOT Modal Plans

In 2017, MassDOT finalized the *Massachusetts Freight Plan*, which defines the short- and long-term vision for the Commonwealth's freight transportation system. In 2018, MassDOT released the related *Commonwealth of Massachusetts State Rail Plan*, which outlines short- and long-term investment strategies for Massachusetts' freight and passenger rail systems (excluding the

commuter rail system). In 2019, MassDOT released the *Massachusetts Bicycle Transportation Plan* and the *Massachusetts Pedestrian Transportation Plan*, both of which define roadmaps, initiatives, and action plans to improve bicycle and pedestrian transportation in the Commonwealth. These plans were updated in 2021 to reflect new investments in bicycle and pedestrian projects made by MassDOT since their release. In 2023, MassDOT released the *Massachusetts Freight Plan,* which identifies short- and long-term improvements and strategies for the state's freight systems. The MPO considers the findings and strategies of MassDOT's modal plans when conducting its planning, including through its Freight Planning Support and Bicycle/Pedestrian Support Activities programs.

Global Warming Solutions Act

The GWSA makes Massachusetts a leader in setting aggressive and enforceable GHG reduction targets and implementing policies and initiatives to achieve these targets. In keeping with this law, the Massachusetts Executive Office of Energy and Environmental Affairs (EEA), in consultation with other state agencies and the public, developed the *Massachusetts Clean Energy and Climate Plan for 2020*. This implementation plan, released on December 29, 2010, and updated in 2022 to reflect new interim targets, establishes the following targets for overall statewide GHG emission reductions:

- 33 percent reduction below statewide 1990 GHG emission levels by 2025
- 50 percent reduction below statewide 1990 GHG emission levels by 2030
- 75 percent reduction below statewide 1990 GHG emission levels by 2040
- 85 percent reduction below statewide 1990 GHG emission levels by 2050

In 2018, EEA published its GWSA 10-year Progress Report and the GHG Inventory estimated that 2018 GHG emissions were 22 percent below the 1990 baseline level.

On June 30, 2022, EEA certified its compliance with the 2020 emissions limit of 25 percent below the 1990 levels, noting that there was an estimated emissions reduction of 31.4 percent below the 1990 level in 2020.

MassDOT fulfills its responsibilities, defined in the *Massachusetts Clean Energy and Climate Plan for 2050*, through a policy directive that sets three principal objectives:

1. To reduce GHG emissions by reducing emissions from construction and operations, using more efficient fleets, implementing travel demand

management programs, encouraging eco-driving, and providing mitigation for development projects

2. To promote healthy transportation modes by improving pedestrian, bicycle, and public transit infrastructure and operations
3. To support smart growth development by making transportation investments that enable denser, smart growth development patterns that can support reduced GHG emissions

In January 2015, the Massachusetts Department of Environmental Protection amended Title 310, section 7.00, of the Code of Massachusetts Regulations (310 CMR 60.05), *Global Warming Solutions Act Requirements for the Transportation Sector and the Massachusetts Department of Transportation*, which was subsequently amended in August 2017. This regulation places a range of obligations on MassDOT and MPOs to support achievement of the Commonwealth's climate change goals through the programming of transportation funds. For example, MPOs must use GHG impact as a selection criterion when they review projects to be programmed in their TIPs, and they must evaluate and report the GHG emissions impacts of transportation projects in LRTPs and TIPs.

The Commonwealth's 10 MPOs (and three non-metropolitan planning regions) are integrally involved in supporting the GHG reductions mandated under the GWSA. The MPOs seek to realize these objectives by prioritizing projects in the LRTP and TIP that will help reduce emissions from the transportation sector. The Boston Region MPO uses its TIP project evaluation criteria to score projects based on their GHG emissions impacts, multimodal Complete Streets accommodations, and ability to support smart growth development. Tracking and evaluating GHG emissions by project will enable the MPO to anticipate GHG impacts of planned and programmed projects. See Chapter 3 for more details related to how the MPO conducts GHG monitoring and evaluation.

Healthy Transportation Policy Initiatives

On September 9, 2013, MassDOT passed the Healthy Transportation Policy Directive to formalize its commitment to implementing and maintaining transportation networks that allow for various mode choices. This directive will ensure that all MassDOT projects are designed and implemented in ways that provide all users with access to safe and comfortable walking, bicycling, and transit options. MassDOT's design justification process, which established controlling criteria for bicycle and pedestrian facilities, transit provisions and the length of off- and on-ramps, has helped to operationalize and further the goals of the original Healthy Transportation Policy Directive.

In November 2015, MassDOT released the *Separated Bike Lane Planning & Design Guide*. This guide represents a step in MassDOT's continuing commitment to Complete Streets, sustainable transportation, and the creation of more safe and convenient transportation options for Massachusetts' residents. This guide may be used by project planners and designers as a resource for considering, evaluating, and designing separated bike lanes as part of a Complete Streets approach.

In the current LRTP, *Destination 2050*, the Boston Region MPO continues to use investment programs—particularly its Complete Streets and Bicycle Network and Pedestrian Connections programs—that support the implementation of Complete Streets projects. In the Unified Planning Work Program, the MPO budgets to support these projects, such as the MPO's Bicycle and Pedestrian Support Activities program, corridor studies undertaken by MPO staff to make conceptual recommendations for Complete Streets treatments, and various discrete studies aimed at improving pedestrian and bicycle accommodations.

Congestion in the Commonwealth 2019

MassDOT developed the *Congestion in the Commonwealth 2019* report to identify specific causes of and impacts from traffic congestion on the NHS. The report also made recommendations for reducing congestion, including addressing local and regional bottlenecks, redesigning bus networks within the systems operated by the Massachusetts Bay Transportation Authority (MBTA) and the other regional transit authorities, increasing MBTA capacity, and investigating congestion pricing mechanisms such as managed lanes. These recommendations guide multiple new efforts within MassDOT and the MBTA and are actively considered by the Boston Region MPO when making planning and investment decisions.

Regional Guidance and Priorities

Focus40, The MBTA's Program for Mass Transportation

On March 18, 2019, MassDOT and the MBTA released *Focus40*, the MBTA's Program for Mass Transportation, which is the 25-year investment plan that aims to position the MBTA to meet the transit needs of the Greater Boston region through 2040. Complemented by the MBTA's Strategic Plan and other internal and external policy and planning initiatives, *Focus40* serves as a comprehensive plan guiding all capital planning initiatives at the MBTA. These initiatives include the Rail Vision plan, which will inform the vision for the future of the MBTA's commuter rail system; the Bus Network Redesign (formerly the Better Bus Project), the plan to re-envision and improve the MBTA's bus network; and other plans. The next update of the Program for Mass Transportation is planned for

development in 2024.The Boston Region MPO continues to monitor the status of *Focus40* and related MBTA modal plans to inform its decision-making about transit capital investments, which are incorporated into the TIP and LRTP.

MetroCommon 2050

MetroCommon 2050, which was developed by the Metropolitan Area Planning Council (MAPC) and adopted in 2021, is Greater Boston's regional land use and policy plan. MetroCommon 2050 builds upon MAPC's previous plan, MetroFuture (adopted in 2008), and includes an updated set of strategies for achieving sustainable growth and equitable prosperity in the region. The MPO considers MetroCommon 2050's goals, objectives, and strategies in its planning and activities. See Chapter 7 for more information about MetroCommon 2050 development activities.

MetroCommon 2050 is the foundation for land use projections in the MPO's LRTP, *Destination 2050*.

The Boston Region MPO's Congestion Management Process

The purpose of the Congestion Management Process (CMP) is to monitor and analyze the mobility of people using transportation facilities and services, develop strategies for managing congestion based on the results of traffic monitoring, and move those strategies into the implementation stage by providing decision-makers in the region with information and recommendations for improving the transportation system's performance. The CMP monitors roadways, transit, and park-and-ride facilities in the Boston region for safety, congestion, and mobility, and identifies problem locations. See Chapter 3 for more information about the MPO's CMP.

Coordinated Public Transit–Human Services Transportation Plan

Every four years, the Boston Region MPO completes a Coordinated Public Transit-Human Services Transportation Plan (CPT–HST), in coordination with the development of the LRTP. The CPT–HST supports improved coordination of transportation for seniors and people with disabilities in the Boston region by guiding transportation providers in their development of proposals for funding from the Federal Transit Administration's Section 5310 Program (known in Massachusetts as the Community Transit Grant Program). To be eligible for funding, a proposal must meet a need identified in the CPT–HST. The CPT–HST contains information about

- current transportation providers in the Boston region;
- unmet transportation needs for seniors and people with disabilities;

- strategies and actions to meet the unmet needs; and
- priorities for implementing those needs.

The MPO adopted its current CPT–HST in 2023.

MBTA and Regional Transit Authority (RTA) Transit Asset Management Plans

The MBTA and the region's RTAs—the Cape Ann Transportation Authority (CATA) and the MetroWest Regional Transit Authority (MWRTA)—are responsible for producing transit asset management plans that describe their asset inventories and the condition of these assets, strategies, and priorities for improving the state of good repair of these assets. The Boston Region MPO considers goals and priorities established in these plans when developing its plans, programs, and activities.

MBTA and RTA Public Transit Agency Safety Plans

The MBTA, CATA, and MWRTA are required to create and annually update Public Transit Agency Safety Plans that describe their approaches for implementing Safety Management Systems on their transit systems. The Boston Region MPO considers goals, targets, and priorities established in these plans when developing its plans, programs, and activities.

State and Regional COVID-19 Adaptations

The COVID-19 pandemic has radically shifted the way many people in the Boston region interact with the regional transportation system. The pandemic's effect on everyday life has had short-term impacts on the system and how people travel, but it may also have other lasting effects. Four years on from the beginning of the pandemic, travel patterns have shifted to reflect a hybrid working schedule for many workers. Some changes made in response to the pandemic may become permanent, such as the expansion of bicycle, bus, sidewalk, and plaza networks. As the region recovers from the impacts of the COVID-19 pandemic and the long-term effects become apparent, state and regional partners' guidance and priorities are likely to be adjusted.

Appendix F
Boston Region Metropolitan Planning Organization Membership

VOTING MEMBERS

The Boston Region Metropolitan Planning Organization (MPO) includes both permanent members and municipal members who are elected for three-year terms. Details about the MPO's members are listed below.

The **Massachusetts Department of Transportation (MassDOT)** was established under *Chapter 25 (An Act Modernizing the Transportation Systems of the Commonwealth of Massachusetts)* of the Acts of 2009. MassDOT has four divisions: Highway, Rail and Transit, Aeronautics, and the Registry of Motor Vehicles. The MassDOT Board of Directors, composed of 11 members appointed by the governor, oversees all four divisions and MassDOT operations and works closely with the Massachusetts Bay Transportation Authority (MBTA) Board of Directors. The MassDOT Board of Directors was expanded to 11 members by the Legislature in 2015, a group of transportation leaders assembled to review structural problems with the MBTA and deliver recommendations for improvements. MassDOT has three seats on the MPO board, including seats for the Highway Division.

The **MassDOT Highway Division** has jurisdiction over the roadways, bridges, and tunnels that were overseen by the former Massachusetts Highway Department and Massachusetts Turnpike Authority. The Highway Division also has jurisdiction over many bridges and parkways that previously were under the authority of the Department of Conservation and Recreation. The Highway Division is responsible for the design, construction, and maintenance of the Commonwealth's state highways and bridges. It is also responsible for overseeing traffic safety and engineering activities for the state highway system. These activities include operating the Highway Operations Control Center to ensure safe road and travel conditions.

The **MBTA**, created in 1964, is a body politic and corporate, and a political subdivision of the Commonwealth. Under the provisions of Chapter 161A of the Massachusetts General Laws, it has the statutory responsibility within its district of operating the public transportation system in the Boston region, preparing the engineering and architectural designs for transit development projects, and constructing and operating transit development projects. The MBTA district

comprises 177 communities, including all of the 97 cities and towns of the Boston Region MPO area.

In April 2015, as a result of a plan of action to improve the MBTA, a five-member Fiscal and Management Control Board (FMCB) was created. The FMCB was created to oversee and improve the finances, management, and operations of the MBTA. The FMCB's authorizing statute called for an initial three-year term, with the option for the board to request that the governor approve a single two-year extension. In 2017, the FMCB's initial mandate, which would have expired in June 2018, was extended for two years, through June 30, 2020. In 2020, the FMCB's mandate was extended a second time for an additional period of one year, through June 30, 2021.

Following the expiration of the FMCB's extended mandate, the MBTA Board of Directors was formed as a permanent replacement to provide oversight for the agency. By statute, the board consists of nine members, including the Secretary of Transportation as an ex-officio member. The MBTA Advisory Board appoints one member who has municipal government experience in the MBTA's service area and experience in transportation operations, transportation planning, housing policy, urban planning, or public or private finance. The Governor appoints the remaining seven board members, which include an MBTA rider and member of an environmental justice population, and a person recommended by the President of the American Federation of Labor and Congress of Industrial Organizations.

The **MBTA Advisory Board** was created by the Massachusetts Legislature in 1964 through the same legislation that created the MBTA. The Advisory Board consists of representatives of the 175 cities and towns that compose the MBTA's service area. Cities are represented by either the city manager or mayor, and towns are represented by the chairperson of the board of selectmen. Specific responsibilities of the Advisory Board include reviewing and commenting on the MBTA's long-range plan, the Program for Mass Transportation; proposed fare increases; the annual MBTA Capital Investment Program; the MBTA's documentation of net operating investment per passenger; and the MBTA's operating budget. The MBTA Advisory Board advocates for the transit needs of its member communities and the riding public.

The **Massachusetts Port Authority (Massport)** has the statutory responsibility under Chapter 465 of the Acts of 1956, as amended, for planning, constructing, owning, and operating such transportation and related facilities as may be necessary for developing and improving commerce in Boston and the surrounding metropolitan area. Massport owns and operates Boston Logan International Airport, the Port of Boston's Conley Terminal, Flynn Cruiseport

Boston, Hanscom Field, Worcester Regional Airport, and various maritime and waterfront properties, including parks in the Boston neighborhoods of East Boston, South Boston, and Charlestown.

The **Metropolitan Area Planning Council (MAPC)** is the regional planning agency for the Boston region. It is composed of the chief executive officer (or a designee) of each of the cities and towns in the MAPC's planning region, 21 gubernatorial appointees, and 12 ex-officio members. It has statutory responsibility for comprehensive regional planning in its region under Chapter 40B of the Massachusetts General Laws. It is the Boston Metropolitan Clearinghouse under Section 204 of the Demonstration Cities and Metropolitan Development Act of 1966 and Title VI of the Intergovernmental Cooperation Act of 1968. Also, its region has been designated an economic development district under Title IV of the Public Works and Economic Development Act of 1965, as amended. MAPC's responsibilities for comprehensive planning encompass the areas of technical assistance to communities, transportation planning, and development of zoning, land use, demographic, and environmental studies. MAPC activities that are funded with federal metropolitan transportation planning dollars are documented in the Boston Region MPO's Unified Planning Work Program.

The **City of Boston**, six elected cities (currently **Beverly, Everett, Framingham, Newton, Somerville,** and **Burlington**), and six elected towns (currently **Acton, Arlington, Brookline, Hull, Wrentham,** and **Norwood,**) represent the 97 municipalities in the Boston Region MPO area. The City of Boston is a permanent MPO member and has two seats. There is one elected municipal seat for each of the eight MAPC subregions and four seats for at-large elected municipalities (two cities and two towns). The elected at-large municipalities serve staggered three-year terms, as do the eight municipalities representing the MAPC subregions.

The **Regional Transportation Advisory Council**, the MPO's citizen advisory group, provides the opportunity for transportation-related organizations, non-MPO member agencies, and municipal representatives to become actively involved in the decision-making processes of the MPO as it develops plans and prioritizes the implementation of transportation projects in the region. The Advisory Council reviews, comments on, and makes recommendations regarding certification documents. It also serves as a forum for providing information on transportation topics in the region, identifying issues, advocating for ways to address the region's transportation needs, and generating interest among members of the general public in the work of the MPO.

The **Federal Highway Administration (FHWA)** and **Federal Transit Administration (FTA)** participate in the Boston Region MPO in an advisory (nonvoting) capacity, reviewing the Long-Range Transportation Plan, Transportation Improvement Program, and Unified Planning Work Program, and other facets of the MPO's planning process to ensure compliance with federal planning and programming requirements. These two agencies oversee the highway and transit programs, respectively, of the United States Department of Transportation (USDOT) under pertinent legislation and the provisions of the Bipartisan Infrastructure Law (BIL).