



TRANSPORTATION IMPROVEMENT PROGRAM
Federal Fiscal Years 2017–2021

BOSTON REGION
METROPOLITAN
PLANNING
ORGANIZATION



Endorsed by the Boston Region
Metropolitan Planning Organization
on July 28, 2016

TRANSPORTATION
IMPROVEMENT PROGRAM
AND AIR QUALITY
CONFORMITY
DETERMINATION:
FEDERAL FISCAL YEARS
2017–21

Boston Region Metropolitan Planning Organization Staff

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

MassDOT Office of Planning and Programming

Massachusetts Bay Transportation Authority

Massachusetts Bay Transportation Authority Advisory Board

MassDOT Highway Department

Massachusetts Port Authority

Metropolitan Area Planning Council

Regional Transportation Advisory Council

City of Boston

City of Beverly (North Shore Task Force)

City of Everett (At-Large City)

City of Newton (At-Large City)

City of Somerville (Inner Core Committee)

City of Woburn (North Suburban Planning Council)

Town of Arlington (At-Large Town)

Town of Bedford

(Minuteman Advisory Group on Interlocal Coordination)

Town of Braintree (South Shore Coalition)

Town of Framingham (MetroWest Regional Collaborative)

Town of Lexington (At-Large Town)

Town of Medway (South West Advisory Planning Committee)

Town of Norwood (Three Rivers Interlocal Council)

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Please visit www.ctps.org to view the full TIP. To request a copy of the TIP in CD or accessible formats, please contact us by any of the following means:

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Telephone: *857.702.3700*

TTY: *617.973.7089*

Fax: *617.570.9192*

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This document was funded in part through grants from the Federal Highway Administration and Federal Transit Administration of the U.S. Department of Transportation. Its contents do not necessarily reflect the official views or policy of the U.S. DOT.



Certification of the Boston Region MPO Transportation Planning Process

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

1. 23 USC 134, 49 USC 5303, and this subpart.
2. Sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 USC 7504, 7506 (c) and (d) and 40 CFR Part 93.
3. Title VI of the Civil Rights Act of 1964, as amended (42 USC 2000d-1) and 49 CFR Part 21.
4. 49 USC 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity.
5. Section 1101(b) of the SAFETEA-LU (Pub. L. 109-59) and 49 CFR Part 26 regarding the involvement of disadvantaged business enterprises in U.S. DOT-funded projects.
6. The provisions of the Americans with Disabilities Act of 1990 (42 USC 12101 et seq.) and 49 CFR Parts 27, 37, and 38.
7. The Older Americans Act, as amended (42 USC 6101), prohibiting discrimination on the basis of age in programs or activities receiving federal financial assistance.
8. Section 324 of Title 23 USC regarding the prohibition of discrimination based on gender.
9. Section 504 of the Rehabilitation Act of 1973 (29 USC 794) and 49 CFR Part 27 regarding discrimination against individuals with disabilities.
10. Anti-lobbying restrictions found in 49 USC Part 20. No appropriated funds may be expended by a recipient to influence or attempt to influence an officer or employee of any agency, or a member of Congress, in connection with the awarding of any federal contract.

July 28, 2016

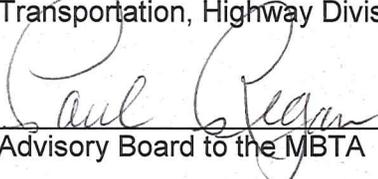
A handwritten signature in blue ink, appearing to read "Stephanie Pollack", is written over a horizontal line.

Stephanie Pollack, Secretary and Chief Executive Officer
Massachusetts Department of Transportation (MassDOT)
Chair, Boston Region MPO

The signatures of the other MPO members may be found on page 2.

Certification of the Boston Region MPO Transportation Planning Process, p. 2

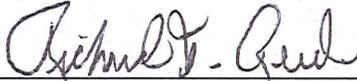

Massachusetts Department of
Transportation, Highway Division


Advisory Board to the MBTA

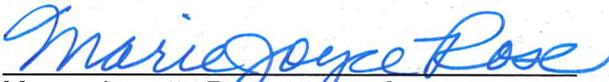
Regional Transportation Advisory Council

At-Large City – City of Everett

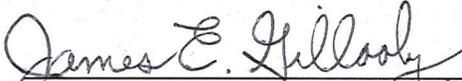

At-Large Town – Town of Lexington


Minuteman Advisory Group on Interlocal
Coordination – Town of Bedford

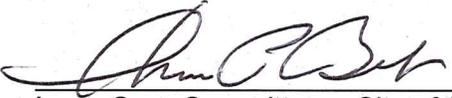
South Shore Coalition – Town of Braintree


Massachusetts Department of
Transportation
*for Deputy Chief Engineer
David Anderson*

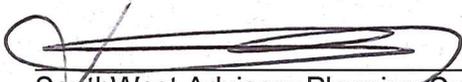
Massachusetts Bay Transportation
Authority (MBTA)


City of Boston *for Mayor Martin J. Walsh*

DKosts (for Mayor Seth Warren)
At-Large City – City of Newton

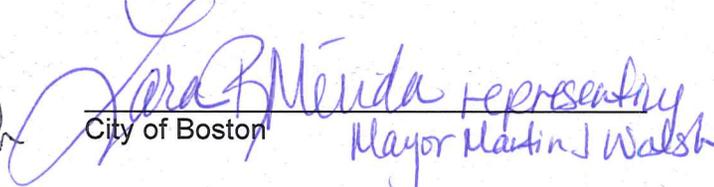

Inner Core Committee – City of Somerville

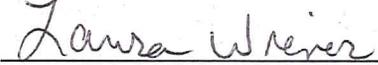
North Shore Task Force – City of Beverly


SouthWest Advisory Planning Committee –
Town of Medway

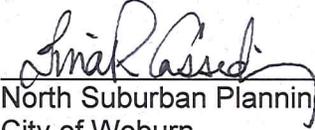

Metropolitan Area Planning Council
(MAPC)

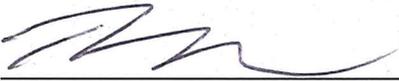

Massachusetts Port Authority


City of Boston *representing
Mayor Martin J. Walsh*


At-Large Town – Town of Arlington


MetroWest Regional Collaborative –
Town of Framingham


North Suburban Planning Council –
City of Woburn


Three Rivers Interlocal Council –
Town of Norwood



Certification of the Boston Region MPO Transportation Planning Process

310 CMR 60.05: Global Warming Solutions Act Requirements for the Transportation Sector and the Massachusetts Department of Transportation

This will certify that the Transportation Improvement Program and Air Quality Conformity Determination for the Boston Region Metropolitan Planning Organization (MPO) is in compliance with all applicable requirements in the State Regulation 310 CMR 60.05: Global Warming Solutions Act Requirements for the Transportation Sector and the Massachusetts Department of Transportation. The regulation requires MPO to:

1. 310 CMR 60.05, 3(b)(1)(a): Evaluate and track the GHG emissions and impacts of RTPs and TIPs;
2. 310 CMR 60.05, 3(b)(1)(b): In consultation with MassDOT, develop and utilize procedures to prioritize and select projects in RTPs, TIPs, and STIPs based on factors that include GHG emissions and impacts;
3. 310 CMR 60.05, 3(b)(1)(c): Quantify net GHG emissions and impacts resulting from the projects in RTPs and TIPs and have made efforts to minimize GHG emissions and impacts;
4. 310 CMR 60.05, 3(b)(1)(d): Determine in consultation with the RPA that the appropriate planning assumptions used for GHG emissions modeling are consistent with local land use policies, or that local authorities have made documented and credible commitments to establishing such consistency;
5. 310 CMR 60.05, 4(a)(2)(a): Develop RTPs and TIPs;
6. 310 CMR 60.05, 4(a)(2)(b): Ensure that RPAs are using appropriate planning assumptions;
7. 310 CMR 60.05, 4(a)(2)(c): Perform regional GHG emissions analysis of RTPs and TIPs;
8. 310 CMR 60.05, 4(a)(2)(d): Calculate GHG emissions for RTPs and TIPs;
9. 310 CMR 60.05, 4(a)(2)(e): Develop public consultation procedures for GHG reporting and related GWSA requirements consistent with current and approved regional public participation plans;
10. 310 CMR 60.05, 4(c): Prior to making final endorsements on the RTPs, TIPs, STIPs, and projects included in these plans, MassDOT and the MPOs shall include the GHG Assessment and information on related GWSA activities in RTPs, TIPs, and STIPs and provide an opportunity for public review and comment on the RTPs, TIPs, and STIPs.
11. 310 CMR 60.05, 6(a): After a final GHG assessment has been made by MassDOT and the MPOs, MassDOT and the MPOs shall submit MPO-endorsed RTPs, TIPs or projects within 30 days of endorsement to the Department for review of the GHG assessment.

July 28, 2016

A handwritten signature in blue ink, appearing to read "Stephanie Pollack", is written over a horizontal line.

Stephanie Pollack, Secretary and Chief Executive Officer
Massachusetts Department of Transportation
Chair, Boston Region MPO

The signatures of the other MPO members may be found on page 2.

John R. Romano

Massachusetts Department of
Transportation Highway Division

Paul Rega

Advisory Board to the MBTA

Marie Joyce Rose
for Deputy Chief Engineer
David Anderson

Massachusetts Department of Transportation

Massachusetts Bay Transportation Authority

E. F. Baum

Metropolitan Area Planning Council

Paul

Massachusetts Port Authority

Regional Transportation Advisory Council

James E. Gillsoly
for Mayor Martin J. Walsh

City of Boston

Lara Blerida representing
Mayor Martin J. Walsh

City of Boston

At-Large – City of Everett

D. Kosko (for Mayor Seth Warren)

At-Large – City of Newton

Laura Wiener

At-Large – Town of Arlington

Rohan Canaw

At-Large – Town of Lexington

Alan Coble

Inner Core – City of Somerville

St. M.

MetroWest Regional Collaborative – Town
of Framingham

Richard V. Reed

Minuteman Advisory Group on Interlocal
Coordination – Town of Bedford

North Shore Task Force – City of Beverly

Smil. Assad

North Suburban Planning Council – City of
Woburn

South Shore Coalition – Town of Braintree

[Signature]

SouthWest Advisory Planning Committee –
Town of Medway

[Signature]

Three Rivers Interlocal Council – Town of
Norwood

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EXECUTIVE SUMMARY

Federal Fiscal Years 2017-2021 Transportation Improvement Program

INTRODUCTION

The Boston Region Metropolitan Planning Organization's (MPO's) five-year transportation capital investment plan, the Transportation Improvement Program (TIP), is the near-term investment program for the region's transportation system. Guided by the MPO's vision, goals, and objectives, the TIP prioritizes investments that preserve the current transportation system in a state of good repair, provide safe transportation for all modes, enhance livability, and improve mobility throughout the region. These investments fund major highway reconstruction, arterial and intersection improvements, maintenance and expansion of the public transit system, bicycle path construction, and improvements for pedestrians.

The Boston Region MPO is a 22-member board with representatives of state agencies, regional organizations, and municipalities; its jurisdiction extends from Boston north to Ipswich, south to Duxbury, and west to Interstate 495. Each year, the MPO conducts a process to decide how to spend federal transportation funds for capital projects. The

Central Transportation Planning Staff (CTPS), which is the staff to the MPO, manages the TIP-development process.

MPO staff coordinate evaluation of project requests, propose programming of current and new projects based on anticipated funding levels, support the MPO in developing a draft document, and facilitate a public review of the draft before the MPO endorses the final document.

FEDERAL FISCAL YEARS 2017-2021 TIP OVERVIEW

The federal fiscal years (FFYs) 2017-2021 TIP consists of transportation investments in the Highway Program and Transit Program. These investments reflect the MPO's goal of targeting a majority of transportation resources to preserve and modernize the existing roadway and transit system and maintain them in a state of good repair.

This TIP also devotes a significant portion of funding for the targeted expansion of the rapid transit system and new shared-use paths. In addition, a number of the infrastructure investments in this TIP address

needs identified in the MPO's Long-Range Transportation Plan (LRTP), *Charting Progress to 2040*, or implement recommendations from past studies and reports that were funded through the MPO's Unified Planning Work Program (UPWP). The TIP also supports the Massachusetts Department of Transportation (MassDOT)'s strategic priorities of:

- **Reliability:** Maintain and improve overall condition and reliability of the transportation system
- **Modernization:** Modernize the transportation system to make it safer and more accessible to accommodate growth
- **Expansion:** Expand diverse transportation options for communities throughout the Commonwealth

FFYS 2017–2021 TIP INVESTMENTS

Transit Program

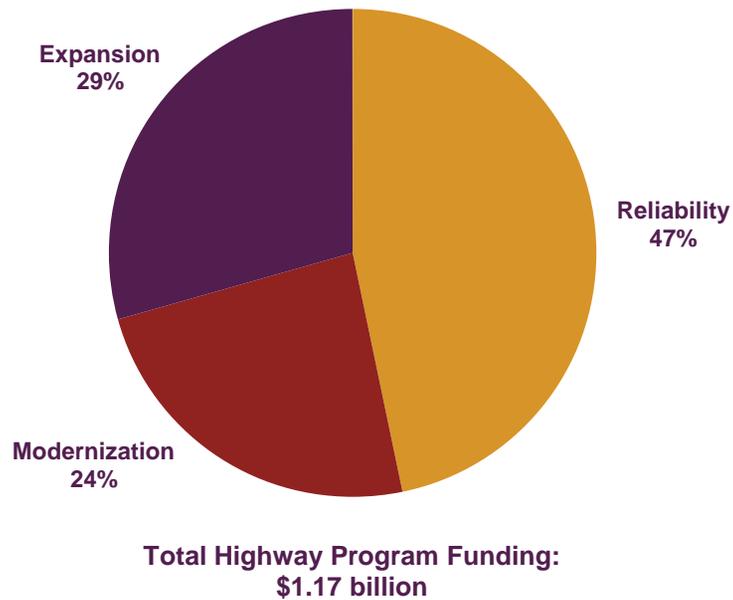
The Transit Program of the TIP provides funding for projects and programs that address the capital needs prioritized by the three transit agencies in the region: the Massachusetts Bay Transportation Authority (MBTA), the Cape Ann Transportation Authority (CATA), and the MetroWest Regional Transit Authority (MWRTA). The Transit Program is predominantly dedicated to achieving and maintaining a state of good repair for all assets throughout the transit system.

Highway Program

The Highway Program of the TIP funds the priority transportation projects advanced by MassDOT and the cities and towns within the 101-municipality MPO region. The program is devoted primarily to preserving and modernizing the existing roadway network through resurfacing highways, replacing bridges, and reconstructing arterial roadways.



FIGURE ES-1
FFYS 2017-21 TIP HIGHWAY PROGRAM FUNDING, BY
PROJECT PRIORITY TYPE



FINANCING THE FFYS 2017–2021 TIP

Transit Program

The Federal Transit Administration (FTA) allocates the funds programmed in the TIP Transit Program by formula. The three regional transit authorities in the Boston Region MPO area that are recipients of these funds are the MBTA, CATA, and MWRTA. The MBTA, with its extensive transit program and infrastructure, is the recipient of the preponderance of the region’s federal transit funds.

Under the federal transportation legislation, Fixing America’s Surface Transportation (FAST) Act, funding is allocated by the following categories:

- **Section 5307 (Urbanized Area Formula Grants):** Provides grants to urbanized areas to support public transportation based on their levels of transit service, population, and other factors
- **Section 5337 (Fixed Guideway/Bus):** Seeks to maintain public transportation systems in a state of good repair through replacement and rehabilitation capital projects
- **Section 5339 (Bus and Bus Facilities):** Provides funding to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities
- **Section 5309 (Fixed-Guideway Capital Investment Grants):** Provides grants for new and expanded rail, bus rapid transit, and ferry systems that reflect local priorities to improve transportation options in key corridors
- **Section 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities):** Provides funding to support transportation to meet the special needs of older adults and persons with disabilities

Highway Program

The TIP Highway Program was developed with the assumption that federal funding would range between \$615- and-\$640 million annually over the next five years. In Massachusetts, federal highway program

funding is allocated to several main funding categories.

First, MassDOT allocates federal funding to Grant Anticipation Notes (GANs) payments for the Accelerated Bridge Program. Annual GANs payments range between \$59 and \$82 million over the five years of this TIP. MassDOT matches the remaining amount of federal funding with an 80 percent (federal) and 20 percent (state) split, resulting in \$681 million to \$695 million available statewide for programming.

Next, MassDOT allocates funding across the following funding categories:

- **Statewide Infrastructure Items:** Interstate highway maintenance, intelligent transportation systems, Safe Routes to School programs, and other infrastructure needs
- **Bridge Program:** Replacement or rehabilitation of public bridges
- **Regional Major Infrastructure Projects:** Modernization of major highway infrastructure (funding for this category will conclude in 2017 after reconstruction of the I-91 Viaduct in Springfield has been completed)
- **Other Statewide Items:** Change orders for existing contracts

After these needs have been satisfied, MassDOT allocates the remaining funding among the state's MPOs for programming. This discretionary funding for MPOs is sub-allocated by formula to determine "Regional Target" amounts. MassDOT develops these

targets in consultation with the Massachusetts Association of Regional Planning Agencies.

Each MPO may decide how to prioritize their Regional Target funding. Given that the Regional Target funding is a subset of the Highway Program, the MPO typically programs the majority of funding on roadway projects; however, the MPO has recently flexed portions of its highway funding to the Transit Program for transit expansion projects. The TIP Highway Program details both the projects that will receive Regional Target funding from the Boston Region MPO and statewide infrastructure projects within the Boston Region MPO area.

THE TIP DEVELOPMENT PROCESS

Overview

In order to determine which projects to fund through the Regional Target funding process, MPO members collaborate with municipalities, state agencies, members of the public, advocacy groups, and other stakeholders. The MPO's project-selection process uses evaluation criteria to help identify and prioritize projects that advance the MPO's goals:

- Safety
- System Preservation
- Capacity Management/Mobility
- Clean Air/Clean Communities
- Transportation Equity
- Economic Vitality

These goals also shape a series of MPO investment programs, which are designed to direct Regional Target funding towards MPO priority areas over the next 25 years:

- Intersection Improvements
- Complete Streets
- Major Infrastructure
- Bicycle Network and Pedestrian Connections
- Community Transportation/Parking/Clean Air and Mobility

Projects that the MPO will select to receive Regional Target Funding through the MPO's TIP Development Process are included in one of these five programs.

Outreach and Data Collection

The outreach process begins early in the federal fiscal year, when cities and towns designate TIP contacts and begin developing a list of priority projects to be considered for federal funding. Each November, MPO staff ask the staffs of cities and towns in the region to identify their priority projects.

MPO staff compile the project funding requests into a Universe of Projects list for the MPO, which consists of all identified projects being advanced for possible funding. The Universe includes projects that are fully designed and ready to be advertised for construction, those that are undergoing preliminary engineering and design, as well as projects still in the conceptual or planning stage. MPO staff also collect data on each project in the Universe so that the projects can be evaluated.

Project Evaluation

Once project updates are complete, staff evaluates projects based on how well they address the MPO's goals.

This year, staff completed evaluations for more than 50 projects. A basic level of design is needed to provide enough information to fully evaluate a potential TIP project. The evaluation results are posted on the MPO's website, allowing municipal officials and members of the public to view them and provide feedback.

Staff Recommendation and Draft TIP

Using the evaluation ratings and information about project-readiness (when a project likely would be fully designed and ready for construction), staff prepare a First-Tier List of Projects. This list cites the projects that both earned the highest ratings, and which could be made ready for advertising within the TIP's time horizon—the next five federal fiscal years (FFYs).

MPO staff then prepare a recommendation for the TIP based on their First-Tier list, among other factors, such as whether a project was included in the LRTP, equity of investments across the region, and if sufficient funding is available for the proposed projects. The staff recommendation proposes the projects to be funded with the MPO's Regional Target funding over the next five years.

The staff recommendation is always financially constrained. This year, there was approximately \$440 million available for MPO Regional Target projects in FFYs 2017–2021. The MPO discussed the staff recommendation for the discretionary highway target program in June.

APPROVING THE TIP

The MPO considers the evaluation results, First-Tier List of Projects, and staff recommendation when prioritizing which projects should receive Regional Target funding. In addition to prioritizing the Regional Target funding, the MPO also reviews the Statewide Infrastructure Items and Bridge Programs, as well as the capital programs for the MBTA, CATA, and MWRTA before voting to release a draft TIP for public review.

In June 2016, the MPO voted to release the draft FFYs 2017–2021 TIP for a 30-day public comment period, during which the MPO invited members of the public, regional and local officials, and other stakeholders in the Boston region to review the proposed program. During the public comment period, MPO staff hosted “Office Hours” to discuss the draft document and solicit additional comments on the draft TIP.

After the comment period concluded, the MPO reviewed all municipal and public comments and made changes to the document as appropriate. It then endorsed the TIP and submitted it to Federal Highway Administration (FHWA) and the FTA for approval. MassDOT incorporates the MPO-endorsed TIP into the State Transportation Improvement Program (STIP). The FHWA, FTA and US Environmental Protection Agency (EPA) review the STIP for certification by September 30, the federal fiscal year-end.

REGIONAL TARGET PROGRAM DETAILS

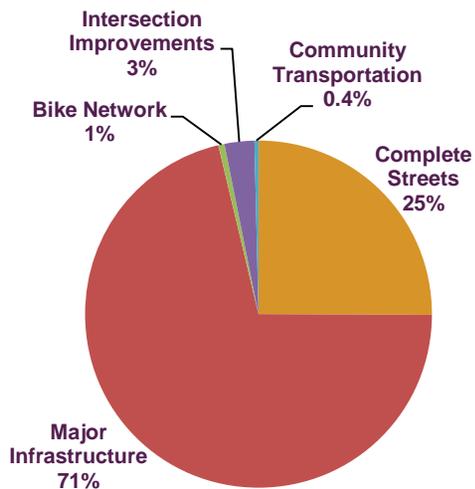
The MPO’s Target Program is devoted primarily to modernizing and expanding the transportation network through major infrastructure and Complete Streets investments, as shown in Figure ES-2 (which indicates how the Regional Target funding is distributed across these the MPO’s investment programs).

During FFYs 2017–2021, the Boston Region MPO plans to fund 28 projects and programs with its Regional Target funding:

- 14 Complete Streets projects, such as reconstructing Ferry Street in Everett
- Nine Major Infrastructure projects, such as reconstructing and widening Route 18 in Weymouth
- Three Intersection Improvements projects, such as Derby, Whiting, and Gardner Streets in Hingham
- One Bicycle Network and Pedestrian Infrastructure project to extend the Canal Street Rail Trail in Salem
- One Community Transportation program to support first-mile/last-mile connections across the region

Collectively, these investments will improve nearly 70 lane miles of substandard pavement and serve 780,000 vehicles daily (including more than 1400 bus trips). These improvements are anticipated to reduce passenger delay by nearly 7,900 hours and add more than 50 miles to the region’s bicycle network.

FIGURE ES-2
FFYS 2017-21 TIP REGIONAL TARGET FUNDING, BY
INVESTMENT PROGRAM TYPE



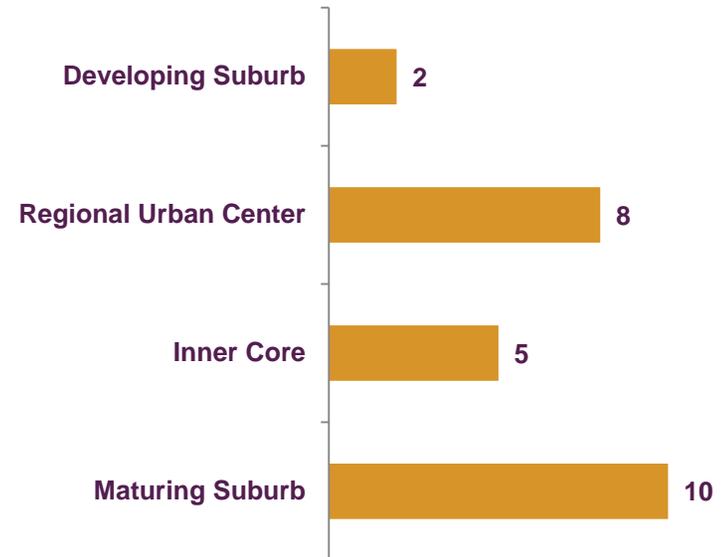
Boston Region Target Funds:
\$464 million

Data Source: CTPS.

These investments will be implemented in 25 cities and towns throughout the MPO region, ranging from high-density, built-out Inner Core communities to Developing Suburbs with large expanses of vacant

developable land. Figure ES-3 identifies these 25 municipalities by their Metropolitan Area Planning Council (MAPC) community type.

FIGURE ES-3
MPO MUNICIPALITIES CONTAINING FFYS 2017-2021 TIP
HIGHWAY PROGRAM PROJECTS, BY MAPC COMMUNITY
TYPE



Data Source: CTPS

- Developing Suburb investments consist of reconstructing Route 1A in Walpole and Route 135 in Hopkinton.
- Regional Urban Center investments include intersection improvements in Beverly and Norwood, corridor reconstructions in Framingham, Marlborough, Milford, and Woburn, and a rail trail extension in Salem.

- Inner Core investments include corridor reconstructions in Boston, Brookline, Everett, Lynn, and Newton.
- Maturing Suburb investments include corridor reconstructions in Ashland, Hingham, Holbrook, Needham, and Southborough, corridor widenings in Bedford, Burlington, and Weymouth, and interstate widening in Wellesley.

UPDATES TO THE TIP

Even after the TIP has been finalized, administrative modifications and amendments often must be introduced because of changes in project status, project cost, or available revenues. This may necessitate reprogramming a project to a later funding year or programming additional funds for a project.

Notices of amendments and administrative modifications are posted on the MPO's website. If an amendment is necessary, the Regional Transportation Advisory Council is informed, and the MPO notifies affected municipalities and other stakeholders via email. The MPO holds a 30-day public comment period before taking action on an amendment. Administrative modifications are generally minor adjustments that usually do not warrant a public comment period.

STAY INVOLVED WITH THE TIP

Public input is an important aspect of the transportation-planning process. Please visit

www.bostonmpo.org for more information about the MPO, to view the full TIP, and to submit your comments. You also may want to sign up for our email news updates by contacting us at publicinformation@ctps.org.

To request a copy of the TIP in CD or accessible formats, please contact us by any of the following means:

Mail: Boston Region MPO c/o CTPS
Certification Activities Group
10 Park Plaza, Suite 2150
Boston, MA 02116-3968

Telephone: 857.702.3700

TTY: 617.973.7089

Fax: 617.570.9192

Email: tip@ctps.org or
publicinformation@ctps.org

1 CHAPTER ONE

The 3C Process

INTRODUCTION TO THE 3C PROCESS

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

In order to be eligible for federal funds, metropolitan areas are required to maintain a continuous, comprehensive, and cooperative (3C) transportation-planning process that results in plans and programs consistent with the objectives of the metropolitan area.¹ The 3C transportation-planning process in the Boston region is the responsibility of the Boston Region MPO, which has established the following objectives for the process:

- Identify transportation problems and develop possible solutions.

- Balance short- and long-range considerations so that beneficial, incremental actions adequately reflect an understanding of probable future consequences and possible future options.
- Represent both regional and local considerations as well as both transportation and non-transportation objectives and impacts when analyzing project issues.
- Assist agencies responsible for implementing projects in effecting timely policy and project decisions with adequate consideration of environmental, land-use, social, fiscal, and economic impacts, and with adequate opportunity for participation by other agencies, local governments, and members of the public.
- Help implementing agencies to prioritize transportation activities in a manner consistent with the region's needs and resources.
- Comply with the requirements of Fixing America's Surface Transportation Act (FAST Act); Americans with Disabilities Act (ADA); Clean Air Act; Title VI of the Civil Rights Act of 1964; Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations; Executive Order 13330: Human Services Transportation Coordination; and

¹ Section 134 of the Federal-Aid Highway Act and Section 5303 of the Federal Transit Act, as amended.

Executive Order 13166: Improving Access to Services for Persons With Limited English Proficiency.

THE BOSTON REGION MPO

The Boston Region MPO is a 22-member board consisting of state agencies and regional and municipal organizations. Its jurisdiction extends from Boston north to Ipswich, south to Duxbury, and west to Interstate 495. There are 101 cities and towns that make up this area. Those municipalities are divided into eight subregional areas (as shown in Figure 1-1).

As part of its 3C process, the Boston Region MPO annually produces the Transportation Improvement Program (TIP) and the Unified Planning Work Program (UPWP). These documents, along with the Long-Range Transportation Plan (LRTP), are required for the MPO to be certified as meeting federal requirements, which, in turn, is a prerequisite for receiving federal transportation funds.

This TIP was developed and approved by the permanent and elected MPO voting members. The permanent voting members are:

- Massachusetts Department of Transportation (MassDOT)
- Metropolitan Area Planning Council (MAPC)
- Massachusetts Bay Transportation Authority (MBTA)
- MBTA Advisory Board
- Massachusetts Port Authority (Massport)
- City of Boston

- Regional Transportation Advisory Council (Advisory Council)

Municipal MPO members are elected by chief elected officials of the 101 municipalities in the MPO region to represent the entire region. There are seats designated for at-large cities and towns, which may be filled by any city and town in the region, as well as seats for cities and towns within specific subregions. The elected municipal MPO voting members and their respective seats are:

- Town of Arlington: At-Large Town
- Town of Bedford: Minuteman Advisory Group on Interlocal Coordination
- City of Beverly: North Shore Task Force
- Town of Braintree: South Shore Coalition
- City of Everett: At-Large City
- Town of Framingham: MetroWest Regional Collaborative
- Town of Lexington: At-Large Town
- Town of Medway: SouthWest Advisory Planning Committee
- City of Newton: At-Large City
- Town of Norwood: Three Rivers Interlocal Council
- City of Somerville: Inner Core Committee
- City of Woburn: North Suburban Planning Council

In addition, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) participate in the MPO as advisory (nonvoting) members. Figure 1-2 is an organization chart of MPO membership and of the MPO's staff, the Central Transportation Planning Staff (CTPS).

More details about the MPO's members are cited below. Apart from MassDOT and the City of Boston, which hold three seats and two seats, respectively, each entity holds one seat each.

MassDOT was established under Chapter 25 ("An Act Modernizing the Transportation Systems of the Commonwealth of Massachusetts") of the Acts of 2009. It includes four Divisions: Highway, Rail and Transit, Aeronautics, and Registry of Motor Vehicles. The MassDOT Board of Directors, comprised of 11 members appointed by the Governor, oversees all four divisions and all MassDOT operations, including the Massachusetts Bay Transportation Authority (MBTA).

- The *MassDOT Highway Division* has jurisdiction over the roadways, bridges, and tunnels of the former Massachusetts Highway Department and the Massachusetts Turnpike Authority. It also has jurisdiction over many bridges and parkways previously under the authority of the Department of Conservation and Recreation (DCR). 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 *Rail and Transit Division* oversees MassDOT's freight and passenger rail program and provides oversight for Massachusetts's 15 Regional Transit Authorities (RTAs), as well as for the intercity bus services, MBTA paratransit (THE RIDE), and the Massachusetts Mobility Management Center, a resource that helps communities develop the capacity to better serve people with mobility challenges.

MassDOT has three seats on the MPO, including one for the Highway Division.

The *MBTA* has the statutory responsibility within its district, under the provisions of Chapter 161A of the Massachusetts General Laws (MGLs), of preparing the engineering and architectural designs for transit development projects, constructing and operating transit development projects, and operating the public transportation system. The MBTA district comprises 175 communities, including all of the 101 cities and towns of the Boston Region MPO area. Starting in April 2015, as a result of an action plan to improve the MBTA, a five-member Fiscal and Management Control Board (FMCB) was created to oversee the MBTA's finances and management and to increase accountability over a three-to-five-year period. By statute, the MBTA FMCB consists of five members, one with experience in transportation finance, one with experience in mass transit operations, and three who are also members of the MassDOT Board.

The *MBTA Advisory Board* was created by the State Legislature in 1964 through the same legislation that created the MBTA. The Advisory Board consists of representatives from the 175 cities and towns that compose the MBTA district. Cities are represented by either the city manager or mayor, and towns are represented by the chairperson of the board of selectmen (a New England variation on the city council). Specific responsibilities of the Advisory Board include providing public oversight of MBTA expenditures; reviewing and offering advice on the MBTA's long-range plan, the Program for Mass Transportation (PMT); evaluating the MBTA's annual budget; evaluating proposed fare changes and substantial changes in transit service; and consulting with the MBTA about service quality standards.

Massport has the statutory responsibility under Chapter 465 of the Acts of 1956, as amended, of 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's Logan International Airport, Conley Terminal, Cruiseport Boston, Hanscom Field, Worcester Regional Airport, and various maritime/waterfront properties, including parks in East Boston, South Boston, and Charlestown.

The *Metropolitan Area Planning Council (MAPC)* is the regional planning agency for the 101 cities and towns in the MAPC/MPO district. It is composed of the chief executive officer (or their designee) of each city and town in the district, 21 gubernatorial appointees, and 12 ex officio members. It has

statutory responsibility for comprehensive regional planning in the district under Chapter 40B of the MGLs. 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. Its district also has been designated as 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 include technical assistance to communities, transportation planning, and the development of zoning, land use, and demographic and environmental studies.

The *City of Boston, six elected cities (currently Beverly, Braintree, Everett, Newton, Somerville, and Woburn), and six elected towns (currently Arlington, Bedford, Framingham, Lexington, Medway, and Norwood)* represent the region's 101 municipalities in the Boston Region MPO. The City of Boston is a permanent MPO member (with two seats). There is one elected municipal seat for each of the eight MAPC subregions, and there are four 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 public advisory group, provides the opportunity for transportation-related organizations, agencies, and municipal representatives to become actively involved in the MPO's decision-making processes for planning and programming transportation projects in the region. The Advisory Council reviews, comments on,

and makes recommendations for certification documents. It also provides information about transportation topics in the region, identifies issues, advocates for ways to address the region's transportation needs, and generates interest in the work of the MPO among members of the general public.

Two members participate in the Boston Region MPO in an advisory (nonvoting) capacity, reviewing the LRTP, the TIP, and the UPWP to ensure compliance with federal planning and programming requirements:

The *FHWA* and *FTA* oversee the highway and transit programs of the US Department of Transportation under the pertinent legislation and the provisions of FAST Act.

Two other entities assist MPO members in carrying out the responsibilities of the MPO's 3C planning process through policy implementation, technical support, and public participation:

- *CTPS* was created by the MPO to fulfill general and 3C transportation-planning activities on behalf of the MPO and to provide MPO member agencies with the analyses required for their decision-making.
- The *MAPC subregional groups* bring together representatives (usually appointed or elected officials or their staff) of the communities within a subregion of the MAPC district to address shared concerns about transportation and land-use issues. MAPC has promoted and supported the formation of subregional groups in order to foster

better communication and cooperation among communities. It has played an important role in the MPO's participatory process, including helping to develop the TIP and UPWP project priorities.

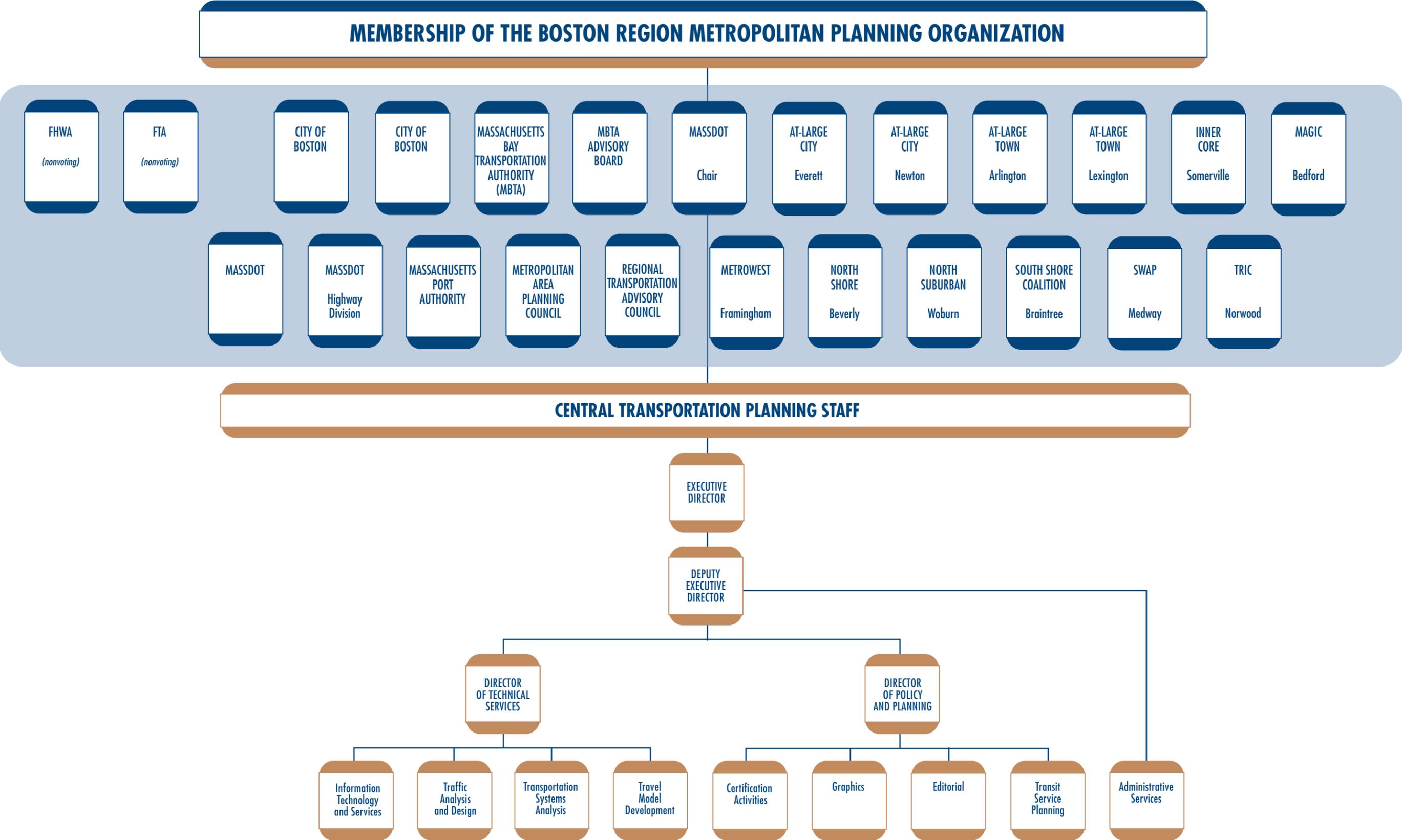
CERTIFICATION DOCUMENTS

The following section briefly describes the three documents produced by the MPO as part of its federally required 3C process:

- The *Long-Range Transportation Plan and Air Quality Conformity Determination (LRTP)* guides investment in the transportation system of the Boston metropolitan region for the next 25 years. It defines an overarching vision of the future of transportation in the region, establishes goals and objectives that will lead to achievement of that vision, and allocates projected revenue to transportation projects and programs consistent with established goals and objectives. The Boston Region MPO produces an LRTP every four years. *Charting Progress to 2040*, the current LRTP, which was endorsed by the MPO in 2015, guided the development of the document you are now reading.

The *Transportation Improvement Program and Air Quality Conformity Determination (TIP)* is a multiyear, intermodal program of transportation improvements that is consistent with the LRTP. It describes and prioritizes transportation projects that are expected to be implemented during a five-year period. The types of projects funded include major highway reconstruction and maintenance, arterial and

Figure 1-2:
Boston Region MPO Organizational Chart



intersection improvements, public transit expansion and maintenance, bicycle paths and related facilities, and improvements for pedestrians. The TIP contains a financial plan that shows the revenue source or sources, current or proposed, for each project. The TIP serves as the implementation arm of the MPO's LRTP; the Boston Region MPO updates the TIP annually. An MPO-endorsed TIP is incorporated into the State Transportation Improvement Program for submission to FHWA, FTA, and the Environmental Protection Agency for approval.

- The *Unified Planning Work Program (UPWP)* contains information about surface transportation planning projects that will be conducted in the Boston metropolitan region. The UPWP has a one-year scope, and is produced annually. The UPWP is an essential planning tool for the region and often a first step in determining whether or not a project will be implemented. It is integrally related to other planning initiatives conducted by the Boston Region MPO, as well as to initiatives by MassDOT, the MBTA, and Massport.

CONSISTENCY WITH FEDERAL PLANNING REGULATIONS

FAST Act Legislation

FAST Act legislation requires all MPOs to fulfill the 3C process. To meet this requirement, MPOs must perform the following activities:

- Produce the LRTP, the TIP, and the UPWP.
- Establish and oversee the public-participation process in the development of those documents.
- Maintain transportation models and data resources to support both air-quality conformity determinations and long- and short-range planning work.

FAST Act legislation also maintains national goals for federal highway programs, including:

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 enriching 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, eliminating delays in the development and delivery process, lessening regulatory burdens, and improving the work practices of the agencies involved.

In addition, the FAST Act maintains the federal planning factors established in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and adds two new planning factors. In accordance with the legislation, the MPO shall comply with the following factors:

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 quality of life,

and promote consistency between transportation improvements and state and local planned growth and economic development patterns.

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 stormwater impacts of surface transportation.
10. Enhance travel and tourism.

FAST Act continues to emphasize performance-based planning as an integral part of the metropolitan planning process: states are to develop performance goals, guided by the national goals, and then MPOs will work with state departments of transportation (DOTs) to develop MPO performance targets. The TIP will integrate the MPOs' performance measures and link transportation investment decisions to progress toward achieving performance goals.

CONSISTENCY WITH OTHER FEDERAL LEGISLATIVE REQUIREMENTS

The Clean Air Act of 1990

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 the MPO's LRTP and 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.

Transportation control measures identified in the Commonwealth's State Implementation Plan for the attainment of air-quality standards are federally enforceable and must be given first priority when using federal funds. Such projects include parking-freeze programs in Boston and Cambridge, statewide rideshare programs, rapid-transit and commuter-rail extension programs, park-and-ride facilities, residential parking-sticker programs, and operation of high-occupancy-vehicle lanes.

Nondiscrimination Mandates

The Boston Region MPO complies with Title VI of the Civil Rights Act of 1964, the ADA, and other federal and state nondiscrimination statutes and regulations in all of its programs and activities. The MPO does not discriminate based on race, color, national origin, English proficiency, income, religious creed, ancestry, disability, age, gender, sexual orientation, gender identity or expression, or military service. The major federal requirements are discussed below.

Title VI of the Civil Rights Act of 1964

This statute 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, dated August 11, 2000, extends Title VI protections to persons who, as a result of national origin, have limited English-language proficiency (LEP). Specifically, it calls for improved access to federally conducted and -assisted programs and activities and requires MPOs to develop and implement a system by which LEP persons can meaningfully participate in the transportation-planning process.

Environmental Justice Executive Orders

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

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

- Explicitly consider the effects of transportation decisions on minority and low-income populations.
- Provide meaningful opportunities for public involvement by members of minority and low-income populations.

- Gather (where relevant, appropriate, and practical) demographic information such as the race, color, national origin, and income level of the populations affected by transportation decisions.
- Minimize or mitigate any adverse impact on minority or low-income populations.

The Americans with Disabilities Act

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

Executive Order 13330

This executive order, dated February 26, 2004, calls for the establishment of the Interagency Transportation Coordinating Council on Access and Mobility, under the aegis of the Secretary of Transportation. This executive order reinforces both environmental justice and ADA requirements by charging the Council with developing policies and methods for improving access for people with disabilities, low-income persons, and older adults.

CONSISTENCY WITH STATE REQUIREMENTS

Global Warming Solutions Act

The Global Warming Solutions Act (GWSA) makes Massachusetts a leader in setting aggressive and enforceable greenhouse gas (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, 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, establishes the following targets for overall statewide GHG emissions:

- By 2020: 25 percent reduction below statewide 1990 GHG emission levels
- By 2050: 80 percent reduction below statewide 1990 GHG emission levels

GREENDOT POLICY

The transportation sector is the single largest contributor of GHGs—accounting for more than one-third—and therefore is a major focus of the Clean Energy and Climate Plan for 2020. MassDOT’s approach to fulfilling its part of the plan is presented in its GreenDOT Policy Directive, a comprehensive sustainability initiative that sets three principal objectives:

- **Reduce GHG emissions.** MassDOT will achieve this by taking GHG emissions into account in all of its responsibilities, from strategic planning to project design and construction and system operations.
- **Promote the healthy transportation modes of walking, bicycling, and taking public transit.** MassDOT will achieve this by pursuing multimodal Complete Streets design standards, providing choices in transportation services, and working

with MPOs and other partners to prioritize and program a balance among projects that serve drivers, pedestrians, bicyclists, and public transit riders.

- **Support smart-growth development.** MassDOT will achieve this by working with MPOs and other partners to invest in transportation projects that make denser smart-growth development patterns—which support reduced GHG emissions—possible.

The Commonwealth's 13 MPOs are integrally involved in helping MassDOT achieve its GreenDOT objectives and supporting the GHG reductions mandated under the GWSA. The MPOs seek to realize these objectives by prioritizing projects that will help accomplish them in the LRTP and TIP. The Boston Region MPO's TIP project evaluation criteria are used to score projects based on GHG emissions impacts, multimodal Complete Streets accommodations, and their ability to support smart-growth development. Tracking and evaluating GHG emissions by project will enable the MPOs to anticipate GHG impacts of the planned and programmed projects and also to use GHG impacts as a criterion for prioritizing transportation investments.

COORDINATION WITH OTHER PLANNING ACTIVITIES

Long-Range Transportation Plan

The MPO considers the degree to which a proposed TIP project would advance the goals and objectives of

its LRTP. The MPO also reviews TIP projects within the context of the recommended projects already included in the LRTP.

Unified Planning Work Program

The MPO aims to implement the findings and recommendations of the UPWP's past studies and reports in developing the TIP.

Congestion Management Process

The purpose of the Congestion Management Process (CMP) is to monitor and analyze the performance of transportation facilities and services; develop strategies to alleviate congestion; and move these strategies into the implementation stage by providing decision makers in the region with information and recommendations. The CMP monitors roadways and park-and-ride facilities in the MPO region for safety, congestion, and mobility, and identifies "problem" locations. Projects that help address problems identified in the most recent CMP monitoring endeavor were considered for inclusion in this TIP.

The MBTA's Program for Mass Transportation

In 2009, the MBTA adopted its current PMT. The PMT was developed with extensive public involvement and was approved by the MBTA Advisory Board.

The next PMT, Focus40, is under development. Focus40 is the 25-year strategic vision for MBTA investments. This process will engage customers—as well as elected officials, major employers and business leaders, academic institutions, the advocacy community, and other stakeholders—in developing a

financially responsible, long-term investment strategy that positions the MBTA to better serve the region's present concerns, as well as those of Greater Boston as projected for 2040. Focus40 will be an open and frank conversation about a number of critical issues, including:

- Necessary repair investments, in order to keep our system operating well and working safely.
- The Commonwealth's financial capacity to expand the system's footprint.
- The potential for transformative change on local streets through strong partnerships between the MBTA and municipalities.
- The Boston Region in 2040: Shifting demographics, new technology, and climate change all may affect how the MBTA must operate in the future.

The first phase of Focus40 will culminate in the release of the State of the System series of reports, which is intended to provide a clear picture of where the MBTA stands today in terms of asset inventory, condition, and service performance. The second phase of the Focus40 effort is centered on developing a better understanding of the world in which the MBTA will be operating in 2040. Finally, Focus40 will work with the public and stakeholders to develop and evaluate various investment strategies that address both current and future needs.

MetroFuture

MetroFuture, which was developed by MAPC and adopted in 2008, is the long-range plan for land use,

housing, economic development, and environmental preservation in the Boston region. It includes a vision for the region's future and a set of strategies for achieving that future, and it was adopted as the future land-use scenario for the MPO's LRTP, *Charting Progress to 2040*. MetroFuture's goals, objectives, and strategies were considered in the development of this TIP.

youMove Massachusetts and weMove Massachusetts

A statewide initiative designed as a bottom-up approach to transportation planning, youMove Massachusetts (YMM) derived 10 core themes from a broad-based public participation process that articulated the expressed concerns, needs, and aspirations of Massachusetts residents related to their transportation network. Those themes have been considered in the development of this TIP.

MassDOT's statewide strategic multimodal plan, weMove Massachusetts (WMM), is a product of the transportation reform legislation of 2009 and the YMM civic engagement process. In May 2014, MassDOT released *WMM: Planning for Performance*, the Commonwealth of Massachusetts' 2040 LRTP. WMM identifies high-level policy priorities that were considered in the development of this TIP. WMM also incorporates performance management into investment decision-making to calculate the differences in performance outcomes resulting from different funding levels available to MassDOT. In the future, MassDOT will use this scenario-based tool to update and refine investment priorities. The TIP builds on this data-driven method to prioritize transportation investments.

Healthy Transportation Compact

The Healthy Transportation Compact (HTC) is a major requirement of the Massachusetts landmark transportation reform legislation that took effect on November 1, 2009. It is an interagency initiative that will help ensure that the transportation decisions made by the Commonwealth balance the needs of all transportation users, expand mobility, improve public health, support a cleaner environment, and create stronger communities.

The agencies work together to achieve positive health outcomes by coordinating land use, transportation, and public health policy. HTC membership is made up of the secretary of transportation (co-chair), secretary of health and human services (co-chair), secretary of energy and environmental affairs, administrator of transportation for highways, administrator of transportation for mass transit, and the commissioner of public health (each of whom may select a representative to serve in their stead).

The HTC also promotes improved coordination among the public sector, private sector and advocacy groups, as well as among transportation, land-use, and public health stakeholders. As part of the framework for the HTC, MassDOT established a Healthy Transportation Advisory Group comprised of advocates and leaders in the fields of land use, transportation, and public health policy.

Accelerated Bridge Program

The \$3 billion Accelerated Bridge Program (ABP) represents a monumental investment in Massachusetts' bridges. This program has greatly

reduced the number of structurally deficient bridges in the state system while creating thousands of construction jobs.

In this program, MassDOT and the DCR have relied on innovative and accelerated project development and construction techniques. As a result, projects have been completed on time, on budget, and with minimal disruption to people and commerce.

When finished, the eight-year program, which began in 2008, will have resulted in the replacement or repair of more than 270 bridges in the Commonwealth.

MassDOT Mode Shift Goal

In the fall of 2012, MassDOT announced a statewide mode shift goal: to triple the share of travel modes in Massachusetts that uses bicycling, transit, and walking. The mode shift goal aims to foster improved quality of life by protecting our environment and preserving the capacity of our highway network. In addition, positive public health outcomes will be achieved by providing more healthy transportation options.

On September 9, 2013, MassDOT passed the Healthy Transportation Policy Directive to formalize its commitment to implementing and maintaining transportation networks that serve all mode choices. This directive will ensure that all MassDOT projects are designed and implemented in ways that provide all customers with access to safe and comfortable walking, bicycling, and transit options.

In November 2015, MassDOT released the Separated Bike Lane Planning & Design Guide. This guide

represents the next—but not the last—step in MassDOT’s continuing commitment to Complete Streets, sustainable transportation, and to creating more safe and convenient transportation options for Massachusetts’s 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.

CONSISTENCY WITH MPO GOALS AND OBJECTIVES

In the development of the LRTP, *Charting Progress to 2040* (endorsed in July 2015), the Boston Region MPO updated its vision, goals, and objectives. These updated goals and objectives, listed on the following page, guided this year’s update of the TIP evaluation criteria to better align with future investment decisions.

Investments in the FFYs 2017-2021 TIP will:

- Provide safe transportation for all modes.
- Maintain the transportation system.
- Use existing facility capacity more efficiently.
- Increase healthy transportation options.
- Create an environmentally friendly transportation system.
- Afford comparable access and service quality among communities, regardless of income level or minority population.

- Ensure that our transportation network serves as a strong foundation for economic vitality.

Chapter 4 demonstrates in detail how transportation investments over the next five years would advance the MPO’s goals and objectives.

Figure 1-3 Central Vision Statement

The Boston Region Metropolitan Planning Organization envisions a modern transportation system that is safe, uses new technologies, provides equitable access, excellent mobility, and varied transportation options—in support of a sustainable, healthy, livable, and economically vibrant region.

GOALS

OBJECTIVES

● SAFETY

Transportation by all modes will be safe

- Reduce number and severity of crashes, all modes
- Reduce serious injuries and fatalities from transportation
- Protect transportation customers and employees from safety and security threats
(Note: The MPO action will be to incorporate security investments into capital planning.)

● SYSTEM PRESERVATION

Maintain the transportation system

- Improve condition of on- and off-system bridges
- Improve pavement conditions on MassDOT-monitored roadway system
- Maintain and modernize capital assets, including transit assets, throughout the system
- Prioritize projects that support planned response capability to existing or future extreme conditions (sea level rise, flooding, and other natural and security-related man-made hazards)
- Protect freight network elements, such as port facilities, that are vulnerable to climate-change impacts

● CLEAN AIR/CLEAN COMMUNITIES

Create an environmentally friendly transportation system

- Reduce greenhouse gases generated in the Boston region by all transportation modes as outlined in the Global Warming Solutions Act
- Reduce other transportation-related pollutants
- Minimize negative environmental impacts of the transportation system
- Support land use policies consistent with smart and healthy growth

● TRANSPORTATION EQUITY

Provide comparable transportation access and service quality among communities, regardless of income level or minority population

- Target investments to areas that benefit a high percentage of low-income and minority populations
- Minimize any burdens associated with MPO-funded projects in low-income and minority areas
- Break down barriers to participation in MPO-decision making

2 CHAPTER TWO

The TIP Process

INTRODUCTION TO THE TIP PROCESS

In planning for its region's future, one of the most important decisions a Metropolitan Planning Organization (MPO) faces is deciding how to allocate limited funds to the region. Transportation improvements form part of the solution to many critical regional, state, national, and even global problems, such as traffic congestion, air pollution, traffic fatalities and injuries, climate change, and environmental justice. Because there is not nearly enough funding available to build all of the necessary and worthy projects that would address these problems, MPO investment choices must be guided by policies that help identify the most viable solutions.

Thus, each year, the Boston Region MPO conducts a Transportation Improvement Program (TIP) development process that prioritizes transportation investments and helps the MPO decide how to spend federal transportation funds for capital projects. The Central Transportation Planning Staff (CTPS) to the Boston Region MPO manages the annual development process for the TIP. MPO staff help evaluate project funding requests, propose programming for new and ongoing projects based on anticipated yearly funding levels, support the MPO by creating a draft TIP document, and facilitate a public

review of the draft before the MPO endorses the final document.

FINANCING THE PROGRAM

Federal Framework

The first step in allocating federal transportation funds is the passage by the United States Congress of a multiyear act that establishes a maximum level of federal transportation funding per federal fiscal year. The establishment of this level of funding is referred to as an authorization. The President signed the most recent authorization act, Fixing America's Surface Transportation Act (FAST Act), into law on December 4, 2015.

Once the authorization level has been established, the United States Department of Transportation allocates funding among the states annually, based on various federal formulas. This allocation is referred to as an apportionment. The annual apportionment rarely represents the actual amount of federal funds that are ultimately committed to a state: this is because of federally imposed limitations on spending in a given fiscal year, referred to as the obligation authority.

In Massachusetts, TIPs are developed based on the estimated obligation authority.

Two of the most important distinctions between apportionment and obligation authority are: 1) apportionment is allocated on a per-program basis, while obligation authority is generally allocated as a lump sum; and 2) unused apportionment carries forward into successive federal fiscal years (FFYs), but unused obligation authority does not. Unused apportionment that is carried forward is referred to as an unobligated balance. Although a state's unobligated balance can be used to increase the amount of federal aid programmed within a particular funding category in a given FFY, it cannot be used to increase the total amount of the state's highway apportionment.

Federal Highway Program

Federal regulations require states to “provide MPOs with estimates of Federal and State funds which the MPOs shall utilize in developing financial plans” for TIPs.¹ The FFYs 2017–21 TIP was developed with the assumption that the federal funding available would range from \$615 million to \$640 million annually over the next five years. In Massachusetts, federal highway program funding is allocated to several major funding categories.

First, MassDOT allocates federal funding to repay Grant Anticipation Notes (GANs), used to fund the Accelerated Bridge Program (ABP). (GANS are bonds issued by the state that are secured by anticipated

future federal highway funds.) Annual GANs payments range between \$59- and \$82 million over the five years of this TIP. MassDOT matches the remaining amount of federal funding with an 80 percent (federal) and 20 percent (state) split, resulting in \$681 million to \$695 million available statewide for programming.

Next, MassDOT allocates the remaining federal funding into the following categories:

- **Statewide Infrastructure Items:** interstate highway maintenance, intelligent transportation systems, highway safety improvements, congestion mitigation, and other infrastructure needs.
- **Bridge Program:** replacement or rehabilitation of public bridges.
- **Regional Major Infrastructure Projects:** modernization of major highway infrastructure.
- **Other Statewide Items:** change orders for existing contracts.
- **Regional Targets:** projects prioritized by MPOs.

In FFY 2017, MassDOT will end funding for the Regional Major Infrastructure Program after reconstruction of the I-91 Viaduct in Springfield has been completed. These funds will be reallocated to the Regional Target program for prioritization by MPOs across the state.

¹ From the 23 Code of Federal Regulations (CFR) 450.324(e).

The Regional Targets are discretionary funding for MPOs, suballocated by formula. MassDOT develops these regional targets in consultation with the Massachusetts Association of Regional Planning Agencies. Each MPO in the state can decide how to prioritize their Regional Target funding. Given that the Regional Target funding is a subset of the Highway Program, the MPO typically programs the majority of funding on roadway projects, however the MPO has recently flexed portions of its “highway” funding to the Transit Program for transit expansion projects. During the next five years, the Boston Region MPO’s total Regional Target Program funding will be approximately \$464 million, an average of \$92 million per year. To decide how to spend its Regional Target funding, the Boston Region MPO engages its 101 cities and towns in an annual development process.

Federal Transit Program

Federal aid for public transit authorities is allocated by formula to urbanized areas (UZAs). MassDOT is the recipient of this federal aid in the Boston UZA. In UZAs with populations greater than 200,000, such as

the Boston UZA, the distribution formula factors in passenger-miles travelled, population density, and other factors associated with each transit provider. The three regional transit authorities (RTAs) in the Boston Region MPO area are the Massachusetts Bay Transportation Authority (MBTA), MetroWest Regional Transit Authority (MWRTA), and Cape Ann Transportation Authority (CATA). The MBTA, with its extensive transit program and infrastructure, is the recipient of the preponderance of federal transit funds in the region.

Funding Programs

Metropolitan areas require support from many different federal-aid transportation programs, and each area has unique requirements and thus unique program characteristics. Non-federal aid (state funds) for statewide infrastructure items, the bridge program, and regional targets is derived from various sources, including the Commonwealth’s Transportation Bond Bill. Federal programs that fund projects in the FFYs 2017–21 TIP under the FAST Act are listed in the following two tables.

TABLE 2-1:
FEDERAL TRANSIT ADMINISTRATION PROGRAMS APPLICABLE TO THE FFYS 2017-21 TIP

FAST Act Program	Eligible Uses
Urbanized Area Formula Grants (Section 5307)	Transit capital and operating assistance in urbanized areas.
Fixed Guideway/Bus (Section 5337)	Replacement, rehabilitation, and other state-of-good-repair capital projects.
Bus and Bus Facilities(Section 5339)	Capital projects to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities.
Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310)	Capital expenses that support transportation to meet the special needs of older adults and persons with disabilities.
Fixed-Guideway Capital Investment Grants (Section 5309)	Provides grants for new and expanded rail, bus rapid transit, and ferry systems that reflect local priorities to improve transportation options in key corridors.

TABLE 2-2:
FEDERAL HIGHWAY ADMINISTRATION PROGRAMS APPLICABLE TO THE FFYS 2017-21 TIP

FAST Act Program	Eligible Uses
Congestion Mitigation and Air Quality Improvement (CMAQ)	A wide range of projects to reduce congestion and improve air quality in nonattainment and maintenance areas for ozone, carbon monoxide, and particulate matter.
Highway Safety Improvement Program (HSIP)	Implementation of infrastructure-related highway safety improvements.
National Highway Performance Program (NHPP)	Improvements to interstate routes, major urban and rural arterials, connectors to major intermodal facilities, and the national defense network. Also includes replacing or rehabilitating any public bridge, and the resurfacing, restoring, and rehabilitating of routes on the Interstate Highway System.
Surface Transportation Block Grant Program (STBGP) [formerly the Surface Transportation Program (STP)]	A broad range of surface transportation capital needs, including roads; transit, sea, and airport access; and vanpool, bicycle, and pedestrian facilities.
Transportation Alternatives Program (TAP)	A set-aside from the STBP, TAP funds the construction of infrastructure-related projects (for example, sidewalk, crossing, and on-road bicycle facility improvements).
Metropolitan Planning	For facilities that contribute to an intermodal transportation system, including intercity bus, pedestrian, and bicycle facilities.
National Highway Freight Program (NHFP)	For projects that improve the efficient movement of freight on the National Highway Freight Network.

DEVELOPING THE TIP

Highway Discretionary (“Regional Target”) Funding Project Selection Process

Overview

The MPO’s project selection process for highway discretionary (“regional target”) funding uses evaluation criteria to help identify and prioritize projects that advance the MPO’s goals. The criteria are based on the MPO’s goals and objectives, which were adopted for its current Long-Range Transportation Plan, *Charting Progress to 2040*.

All projects are required to show consistency with the Long-Range Transportation Plan and other statewide and regional plans.

The MPO staff evaluates each project that is considered for inclusion in the TIP based on the specific criteria that were developed by the MPO. Other criteria include project readiness for construction and municipal support for the project. Background information about the TIP project evaluation process is presented in Appendix B.

Outreach and Data Collection (November 2015–February 2016)

The outreach process begins early in the federal fiscal year, when cities and towns designate TIP contacts and begin developing a list of priority projects to be considered for federal funding. Each November, MPO staff asks the staff of cities and towns in the region to identify their priority projects for consideration for

federal funding. The MPO also solicits input from interested parties and members of the general public.

New projects must be initiated by the MassDOT Highway Division before they can be considered for programming in the TIP. MassDOT details the project initiation process and posts relevant documents on its Project Review Committee’s webpage, <www.massdot.state.ma.us/highway/Departments/ProjectManagement/ProjectReviewCommittee.aspx>. Municipal TIP Contacts and the MPO staff coordinate to update each project’s Project Funding Application Form through the MPO’s Interactive TIP Database, <www.bostonmpo.org/apps/tip11/tip_query.html>, which summarizes information about each project’s background, infrastructure condition and needs, development status, and ability to help the region attain the MPO’s goals and objectives. More information on the Project Funding Application Forms is presented in Appendix B.

MPO staff compiles the project funding requests into a Universe of Projects list for the MPO, which consists of all identified projects being advanced for possible funding. The Universe includes projects that are fully designed and ready to be advertised for construction, those that are undergoing preliminary engineering and design, and also projects still in the conceptual planning stage.

The MPO staff also monitors the anticipated greenhouse gas (GHG) emission impacts of each planned and programmed project in order to consider these impacts when prioritizing transportation

investments. For more information on GHG emission monitoring and evaluation, see Appendix C.

Project Evaluation (February–March 2016)

The MPO uses TIP project-evaluation criteria to logically and transparently evaluate and select projects for programming in the TIP that advance the transportation future envisioned by the MPO. This process favors projects that:

- Provide safe transportation for all modes.
- Maintain the transportation system.
- Use existing facility capacity more efficiently and increase the number of healthy transportation options.
- Create an environmentally friendly transportation system.
- Offer comparable access and service quality across communities, regardless of income level or minority population.
- Ensure that our transportation network serves as a strong foundation for economic vitality.

The project evaluation criteria consist of 28 questions that relate to six goals. A figure that illustrates the TIP evaluation criteria (on the following page) provides an overview of the goals, criteria, and their point values.

In order for MPO staff to conduct a complete project evaluation, the project must have a Functional Design Report. See MassDOT's Project Development and Design Guide for information about what is included in a Functional Design Report. This report is available at

www.massdot.state.ma.us/highway/DoingBusinessWithUs/ManualsPublicationsForms/ProjectDevelopmentDesignGuide.aspx.

The summary of evaluation results for projects being considered for the federal fiscal years (FFYs) 2017–21 TIP is available in Table A-1, Appendix A. The table contains the total project rating for each project. For more details about the evaluation criteria used to score projects, see Appendix B.

Staff Recommendation (April 2016)

Using the evaluation ratings and information gathered about project readiness (when a project likely would be fully designed and ready for construction), staff prepares a First-Tier List of Projects. This list cites the projects that both earned the highest ratings in the MPO's evaluation process, and which could be made ready for advertising within the TIP's time horizon—the next five federal fiscal years.

The MPO staff strongly considers the First-Tier List of Projects when preparing a recommendation to the MPO for projects to program in the TIP. Other factors considered include whether a project was included in the LRTP, equity of investments across the region, and whether sufficient funding is available for the proposed projects.

**Figure 2-1:
TIP Evaluation Criteria**

GOALS	CRITERIA	
Safety	<ul style="list-style-type: none"> • Crash Severity Value: EPDO index • Crash Severity Rate: EPDO index per VMT • Improves truck-related safety issue • Improves bicycle safety • Improves pedestrian safety • Improves safety or removes an at-grade railroad crossing 	30
System Preservation	<ul style="list-style-type: none"> • Improves substandard roadway bridge(s) • Improves substandard pavement • Improves substandard traffic signal equipment • Improves transit asset(s) • Improves substandard sidewalk(s) • Improves emergency response • Improves ability to respond to extreme conditions 	29
Capacity Management/ Mobility	<ul style="list-style-type: none"> • Reduces transit vehicle delay • Improves pedestrian network and ADA accessibility • Improves bicycle network • Improves intermodal accommodations/connections to transit • Improves truck movement • Reduces vehicle congestion 	29
Clean Air/ Clean Communities	<ul style="list-style-type: none"> • Reduces CO₂ • Reduces other transportation-related emissions • Addresses environmental impacts • Is in an EOEEA-certified "Green Community" 	16
Transportation Equity	<ul style="list-style-type: none"> • Serves Title VI/non-discrimination populations 	12
Economic Vitality	<ul style="list-style-type: none"> • Serves targeted development site • Consistent with the compact growth strategies of MetroFuture • Provides multimodal access to an activity center • Leverages other investments (non-TIP funding) 	18

Project Rating

Selection Process for State Prioritized Projects

The process of selecting transit, bridge, and statewide infrastructure projects to be programmed in the TIP draws primarily from MassDOT's Capital Investment Plan (CIP), which is a fully integrated capital plan produced by all MassDOT divisions and the MBTA.

Projects in the CIP are selected from MassDOT's Universe of Projects. They are prioritized based on a process recommended by the independent Project Selection Advisory Council and on data from asset management systems maintained by MassDOT agencies.

Projects that receive the highest priority are those that meet MassDOT's goals for maintaining and improving the overall condition and reliability of the system; modernizing the system to make it safer and more accessible and to accommodate growth; and expanding and diversifying transportation options for communities. The following criteria guide project selection:

- **System Preservation:** Projects should contribute to a state of good repair on the system.
- **Mobility:** Projects should provide efficient and effective modal options.
- **Cost Effectiveness:** Projects should result in benefits commensurate with costs and should be aimed at maximizing the return on the public's investment.

- **Economic Impact:** Projects should support strategic economic growth in the Commonwealth.
- **Safety:** Projects should contribute to the safety and security of people and goods in transit.
- **Social Equity and Fairness:** Projects should equitably distribute both the benefits and the burdens of investments among all communities.
- **Environment and Health Impacts:** Projects should maximize the potential positive health and environmental aspects of the transportation system.
- **Policy Support:** Projects should get credit if they support local or regional policies or plans or state policies not addressed through the other criteria.

The transit element of the TIP also includes the federal-aid programs of the other two transit authorities in the region, CATA and MWRTA. CATA and MWRTA coordinate with the MassDOT Rail and Transit Division to develop their capital programs.

APPROVING THE TIP

Approval of the Draft TIP for Public Review

The MPO considers the evaluation results, first-tier list of projects, and staff recommendation in prioritizing projects for regional target funding. The body also considers public input, regional importance, and other factors in developing the draft TIP. In addition to prioritizing the regional target funding, the MPO reviews statewide infrastructure items, the bridge program, and the capital programs for the MBTA,

CATA, and MWRTA before voting to release a draft TIP for public review.

The MPO votes to release the draft document for a 30-day public review and comment period and invites members of the public, regional and local officials, and other stakeholders in the Boston region to review the proposed program. MPO staff hosted “Office Hours” during the public comment period to solicit comments on the draft document; summaries of these are listed in Appendix F.

Approval of the Draft TIP

After the comment period ends, the MPO reviews all municipal and public comments and makes changes to the document as appropriate. It then endorses the TIP and submits it to FHWA and FTA for approval. MassDOT incorporates the MPO-endorsed TIP into the State Transportation Improvement Program (STIP). The FHWA, FTA and US Environmental Protection Agency (EPA) review the STIP for certification by September 30, the federal fiscal year-end.

UPDATING THE TIP

The TIP is a dynamic program that is amended and adjusted throughout the year. Administrative modifications and amendments often must be introduced because of changes in project status, project cost, or available revenues.

Consistent with federal guidelines, if a project is valued at \$5 million or less, the threshold for defining an amendment is a change of \$500,000 or more. The

threshold for projects valued at greater than \$5 million is 10 percent or more of the project value. Changes that are less than these thresholds may be considered in the form of administrative modifications. The MPO acts on administrative modifications, and although a public review period is not required, one may be provided at the MPO’s discretion.

Affected municipalities and constituencies and the public are notified of pending amendments at the start of an amendment’s 30-day public review period. The proposed amendments are posted on the MPO’s website, www.bostonmpo.org. Public notices are distributed to the media via press releases, and through MPOinfo, the MPO’s email contact list, which members of the public may join by signing up on the MPO’s website http://www.ctps.org/stay_connected. These notices provide a summary of the amendment’s contents, dates of the 30-day public review period, how to submit a comment to the MPO, and the date, time and location that the MPO will take a vote on that amendment. Also during the public review period, the MPO staff notifies and briefs the Regional Transportation Advisory Council on the amendment and provides comments from the Council to the MPO. Municipal representatives and members of the public are also invited to submit written or oral testimony at the MPO meetings at which amendments are discussed or voted upon.

The MPO’s website is the best place to find current information about the TIP.

All changes to the draft TIP that have been approved by the MPO, and changes to the endorsed TIP, such as amendments and modifications, that have been approved by the MPO, are available on the TIP webpage on the MPO's website, <http://www.bostonmpo.org/tip>. Comments or questions about the draft materials may be submitted directly through the website, voiced at MPO meetings, or submitted via US mail.

3 CHAPTER THREE

Summary of Highway and Transit Programming

This chapter begins with tables listing, by year, the projects and programs funded in FFYs 2017–21. (These are often referred to as the “TIP tables.”)

Following the tables, detail pages on each project and program funded in the TIP’s Highway Program are presented. Projects and programs funded under the Highway Program are listed by municipality.

2017 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 1A / Federal Aid Target Projects

► HSIP - Highway Safety Improvement Program

	607309	Boston	Hingham	HINGHAM- RECONSTRUCTION & RELATED WORK ON DERBY STREET, FROM POND PARK ROAD TO CUSHING STREET	5	HSIP	\$ 985,554	\$ 886,999	\$ 98,555	HSIP+CMAQ+TAP Total Cost = \$4,927,769
	604935	Boston	Woburn	WOBURN- RECONSTRUCTION OF MONTVALE AVENUE, FROM I-93 INTERCHANGE TO CENTRAL STREET (APPROX. 1,850 FT)	4	HSIP	\$ 3,564,628	\$ 3,208,165	\$ 356,463	STP+HSIP Total Cost = \$4,752,838
	604810	Boston	Marlborough	MARLBOROUGH- RECONSTRUCTION OF ROUTE 85 (MAPLE STREET)	3	HSIP	\$ 3,397,727	\$ 3,057,954	\$ 339,773	HSIP+CMAQ+STP Total Cost = \$5,613,636
HSIP Subtotal ►							\$ 7,947,909	\$ 7,153,118	\$ 794,791	◀ 90% Federal + 10% Non-Federal

► CMAQ - Congestion Mitigation and Air Quality Improvement Program

	607309	Boston	Hingham	HINGHAM- RECONSTRUCTION & RELATED WORK ON DERBY STREET, FROM POND PARK ROAD TO CUSHING STREET	5	CMAQ	\$ 3,195,430	\$ 2,556,344	\$ 639,086	HSIP+CMAQ+TAP Total Cost = \$4,927,769
	604810	Boston	Marlborough	MARLBOROUGH- RECONSTRUCTION OF ROUTE 85 (MAPLE STREET)	3	CMAQ	\$ 2,000,000	\$ 1,600,000	\$ 400,000	HSIP+CMAQ+STP Total Cost = \$5,613,636
	1570	Boston	Multiple	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	CMAQ	\$ 13,427,220	\$ 10,741,776	\$ 2,685,444	funding flexed to FTA; match provided by local contributions; STP+CMAQ+Section 5309 (Transit)
CMAQ Subtotal ►							\$ 18,622,650	\$ 14,898,120	\$ 3,724,530	◀ 80% Federal + 20% Non-Federal

► TAP - Transportation Alternatives Program

	29492	Boston	Multiple	BEDFORD- BILLERICA- MIDDLESEX TURNPIKE IMPROVEMENTS, FROM CROSBY DRIVE NORTH TO MANNING ROAD, INCLUDES RECONSTRUCTION OF B-04-006 (PHASE III)	4	TAP	\$ 2,808,721	\$ 2,246,977	\$ 561,744	AC Yr 2 of 2; STP+NHPP+TAP+Earmark+Statewide Infrastructure+Northern Middlesex Council of Governments contribution (\$1,000,000) Total Cost = \$36,735,048
	607309	Boston	Hingham	HINGHAM- RECONSTRUCTION & RELATED WORK ON DERBY STREET, FROM POND PARK ROAD TO CUSHING STREET	5	TAP	\$ 746,785	\$ 597,428	\$ 149,357	HSIP+CMAQ+TAP Total Cost = \$4,927,769
TAP Subtotal ►							\$ 3,555,506	\$ 2,844,405	\$ 711,101	◀ 80% Federal + 20% Non-Federal

► Non-CMAQ/HSIP/TAP (Other)

	29492	Boston	Multiple	BEDFORD- BILLERICA- MIDDLESEX TURNPIKE IMPROVEMENTS, FROM CROSBY DRIVE NORTH TO MANNING ROAD, INCLUDES RECONSTRUCTION OF B-04-006 (PHASE III)	4	STP	\$ 3,796,185	\$ 3,036,948	\$ 759,237	AC Yr 2 of 2; STP+NHPP+TAP+Earmark+Statewide Infrastructure+Northern Middlesex Council of Governments contribution (\$1,000,000) Total Cost = \$36,735,048
	601630	Boston	Multiple	WEYMOUTH- ABINGTON- RECONSTRUCTION & WIDENING ON ROUTE 18 (MAIN STREET) FROM HIGHLAND PLACE TO ROUTE 139 (4.0 MILES) INCLUDES REPLACING W-32-013, ROUTE 18 OVER THE OLD COLONY RAILROAD (MBTA)	6	STP	\$ 12,850,000	\$ 10,280,000	\$ 2,570,000	AC Yr 2 of 4; STP+HSIP+TEA-21 Earmark (MA1236)+BR Total Cost = \$81,812,268
	604935	Boston	Woburn	WOBURN- RECONSTRUCTION OF MONTVALE AVENUE, FROM I-93 INTERCHANGE TO CENTRAL STREET (APPROX. 1,850 FT)	4	STP	\$ 1,188,210	\$ 950,568	\$ 237,642	STP+HSIP Total Cost = \$4,752,838
	604810	Boston	Marlborough	MARLBOROUGH- RECONSTRUCTION OF ROUTE 85 (MAPLE STREET)	3	STP	\$ 215,909	\$ 172,727	\$ 43,182	HSIP+CMAQ+STP Total Cost = \$5,613,636
	1570	Boston	Multiple	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	STP	\$ 16,472,780	\$ 13,178,224	\$ 3,294,556	funding flexed to FTA; match provided by local contributions; STP+CMAQ+Section 5309 (Transit)
	603711	Boston	Multiple	NEEDHAM- WELLESLEY- REHAB/REPLACEMENT OF 6 BRIDGES ON I-95/ROUTE 128: N-04-020, N-04-021, N-04-022, N-04-026, N-04-027, N-04-037 & W-13-023 (ADD-A-LANE - CONTRACT V)	6	NHPP	\$ 24,539,816	\$ 19,631,853	\$ 4,907,963	AC Yr 4 of 5; NHPP+BR+Statewide Infrastructure Total Cost = \$164,919,140 (\$26,258,183 programmed within FFYs 2017-21 TIP)
Non-CMAQ/HSIP/TAP (Other) Subtotal ►							\$ 59,062,900	\$ 47,250,320	\$ 11,812,580	◀ 80% Federal + 20% Non-Federal

2017 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 1A / Fiscal Constraint Analysis

Total Federal Aid Target Funds Programmed ▶	\$ 89,188,965	\$ 89,188,965	◀ Total Target	\$ 0	Target Funds Available
Total Non-CMAQ/HSIP/TAP (Other) Programmed ▶	\$ 59,062,900	\$ -	◀ Max. Non-CMAQ/HSIP/TAP	\$ (68,562,975)	Non-CMAQ/HSIP/TAP (Other) Exceeds Maximum
Total HSIP Programmed ▶	\$ 7,947,909	\$ 4,296,710	◀ Min. HSIP	\$ (3,651,199)	HSIP Recommended Met
Total CMAQ Programmed ▶	\$ 18,622,650	\$ 13,427,220	◀ Min. CMAQ	\$ (5,195,430)	CMAQ Recommended Met
Total TAP Programmed ▶	\$ 3,555,506	\$ 2,902,060	◀ Min. TAP	\$ (653,446)	TAP Requirement Exceeded!

HSIP, CMAQ, TAP Overprogrammed \$ (9,500,075)

► Section 1B / Federal Aid Bridge Projects

► Statewide Systematic Maintenance Program

			No Projects Programmed			\$ -	\$ -	\$ -	
			No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Bridge Maintenance Program Subtotal ▶						\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► On System

	604173	Boston	BOSTON	BOSTON- BRIDGE REHABILITATION, B-16-016, NORTH WASHINGTON STREET OVER THE BOSTON INNER HARBOR	6	NHPP	\$ 24,237,956	\$ 19,390,365	\$ 4,847,591	AC YR 1 of 5, YOY \$112,400,000
	606553	Boston	HANOVER	HANOVER- NORWELL- SUPERSTRUCTURE REPLACEMENT, H-06-010, ST 3 OVER ST 123 (WEBSTER STREET) & N-24-003, ST 3 OVER ST 123 (HIGH STREET)	5	NHPP	\$ 12,955,600	\$ 10,364,480	\$ 2,591,120	AC YR 2 of 2
	607507	Boston	WAKEFIELD	WAKEFIELD- BRIDGE DECK REPLACEMENT, W-01-021 (2MF), HOPKINS STREET OVER I-95/ST 128	4	NHPP	\$ 2,646,360	\$ 2,117,088	\$ 529,272	
	607954	Boston	DANVERS	DANVERS- BRIDGE REPLACEMENT, D-03-018, ST 128 OVER WATERS RIVER	4	NHPP	\$ 8,625,000	\$ 6,900,000	\$ 1,725,000	
	601630	Boston	WEYMOUTH	WEYMOUTH- ABINGTON- RECONSTRUCTION & WIDENING ON ROUTE 18 (MAIN STREET) FROM HIGHLAND PLACE TO ROUTE 139 (4.0 MILES) INCLUDES REPLACING W-32-013, ROUTE 18 OVER THE OLD COLONY RAILROAD (MBTA)	6	NHPP	\$ 21,758,750	\$ 17,407,000	\$ 4,351,750	AC Yr 2 of 4; STP+HSIP+TEA-21 Earmark (MA1236)+BR Total Cost = \$81,812,268
On System Subtotal ▶							\$ 70,223,666	\$ 56,178,933	\$ 14,044,733	◀ 80% Federal + 20% Non-Federal

► Off-System

			No Projects Programmed			\$ -	\$ -	\$ -	
			No Projects Programmed			\$ -	\$ -	\$ -	
Off-System Subtotal ▶						\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Statewide Bridge Inspection Program

			No Projects Programmed			\$ -	\$ -	\$ -	
			No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Bridge Inspection Program Subtotal ▶						\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

2017 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 1C / Federal Aid Non-Target Projects

► Other Federal Aid

	601630	Boston	Multiple	WEYMOUTH- ABINGTON- RECONSTRUCTION & WIDENING ON ROUTE 18 (MAIN STREET) FROM HIGHLAND PLACE TO ROUTE 139 (4.0 MILES) INCLUDES REPLACING W-32-013, ROUTE 18 OVER THE OLD COLONY RAILROAD (MBTA)	6	HPP	\$ 6,171,760	\$ 4,937,408	\$ 1,234,352	Construction; (MA1236); AC Yr 2 of 4; STP+HSIP+TEA-21 Earmark+BR Total Cost = \$81,812,268
	29492	Boston	BEDFORD	BEDFORD- BILLERICA- BURLINGTON- MIDDLESEX TURNPIKE IMPROVEMENTS, FROM CROSBY DRIVE NORTH TO MANNING ROAD, INCLUDES RECONSTRUCTION OF B-04-006 (PHASE III)	4	HPP	\$ 1,001,475	\$ 801,180	\$ 200,295	Repurposed SAFETEA-LU earmark (MA171); AC Yr 2 of 2; STP+NHPP+TAP+Earmark+Statewide Infrastructure+Northern Middlesex Council of Governments contribution (\$1,000,000) Total Cost = \$36,735,048
Other Federal Aid Subtotal ►							\$ 7,173,235	\$ 5,738,588	\$ 1,434,647	◀ Funding Split Varies by Funding Source

► Section 1D / Federal Aid Major & State Category Projects

► Regional Major Infrastructure

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Regional Major Infrastructure Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Statewide Americans with Disability Act Implementation Plan

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide ADA Implementation Plan Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Statewide Congestion Mitigation and Air Quality

	602165	Boston	STONEHAM	STONEHAM- SIGNAL & INTERSECTION IMPROVEMENTS AT ROUTE 28/NORTH STREET	4	CMAQ	\$ 1,473,607	\$ 1,178,885	\$ 294,721	
	604761	Boston	BOSTON	BOSTON- MULTI-USE TRAIL CONSTRUCTION (SOUTH BAY HARBOR), FROM RUGGLES STATION TO FORT POINT CHANNEL	6	CMAQ	\$ 2,229,018	\$ 1,783,214	\$ 445,804	
Statewide CMAQ Subtotal ►							\$ 3,702,625	\$ 2,962,100	\$ 740,525	◀ 80% Federal + 20% Non-Federal

► Statewide HSIP Program

	607754	Boston	MILTON	MILTON- INTERSECTION & SIGNAL IMPROVEMENTS AT GRANITE AVENUE & SQUANTUM STREET	6	HSIP	\$ 550,000	\$ 495,000	\$ 55,000	
Statewide HSIP Program Subtotal ►							\$ 550,000	\$ 495,000	\$ 55,000	◀ 90% Federal + 10% Non-Federal

► Statewide Infrastructure Program

	603917	Boston	MEDFORD	MEDFORD- STONEHAM- WOBURN- READING- HIGHWAY LIGHTING REHABILITATION ON I-93 (PHASE II)	4	STP	\$ 1,024,274	\$ 819,419	\$ 204,855	AC Year 2 of 2. Total Cost = \$16,024,274
	29492	Boston	BEDFORD	BEDFORD- BILLERICA- BURLINGTON- MIDDLESEX TURNPIKE IMPROVEMENTS, FROM CROSBY DRIVE NORTH TO MANNING ROAD, INCLUDES RECONSTRUCTION OF B-04-006 (PHASE III)	4	STP	\$ 6,437,225	\$ 5,149,780	\$ 1,287,445	AC Yr 2 of 2; STP+NHPP+TAP+Earmark+Statewide Infrastructure+Northern Middlesex Council of Governments contribution (\$1,000,000) Total Cost = \$36,735,048
Statewide Infrastructure Program Subtotal ►							\$ 7,461,499	\$ 5,969,199	\$ 1,492,300	◀ 80% Federal + 20% Non-Federal

► Statewide Interstate Maintenance Program

	607481	Boston	MULTIPLE	RANDOLPH- QUINCY- BRAINTREE- INTERSTATE MAINTENANCE & RELATED WORK ON I-93 (SB)	6	NHPP	\$ 4,773,000	\$ 4,295,700	\$ 477,300	
Statewide Interstate Maintenance Program Subtotal ►							\$ 4,773,000	\$ 4,295,700	\$ 477,300	◀ 90% Federal + 10% Non-Federal

2017 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Statewide Intelligent Transportation Systems										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide ITS Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide National Freight Program										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide National Freight Program Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide National Highway System Preservation Program										
	607477	Boston	LYNNFIELD	LYNNFIELD- PEABODY- RESURFACING & RELATED WORK ON ROUTE 1	4	NHPP	\$ 7,235,800	\$ 5,788,640	\$ 1,447,160	
	607488	Boston	SOUTHBOROUGH	SOUTHBOROUGH- RESURFACING & RELATED WORK ON ROUTE 9, FROM THE FRAMINGHAM T.L TO WHITE BAGLEY ROAD	3	NHPP	\$ 4,760,219	\$ 3,808,175	\$ 952,044	
Statewide NHS Preservation Program Subtotal ►							\$ 11,996,019	\$ 9,596,815	\$ 2,399,204	◀ 80% Federal + 20% Non-Federal
► Statewide Planning Program										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Planning Program Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide Railroad Grade Crossings										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide RR Grade Crossings Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide Safe Routes to Schools Program										
	607998	Boston	EVERETT	EVERETT- IMPROVEMENTS AT MADELAINE ENGLISH (SRTS)	4	TAP	\$ 688,810	\$ 551,048	\$ 137,762	
	607999	Boston	REVERE	REVERE- IMPROVEMENTS AT GARFIELD ELEMENTARY & MIDDLE SCHOOL (SRTS)	4	TAP	\$ 825,000	\$ 660,000	\$ 165,000	
	608003	Boston	WEYMOUTH	WEYMOUTH- IMPROVEMENTS AT PINGREE ELEMENTARY SCHOOL (SRTS)	6	TAP	\$ 725,000	\$ 580,000	\$ 145,000	
	608004	Boston	WATERTOWN	WATERTOWN- IMPROVEMENTS AT HOSMER ELEMENTARY SCHOOL (SRTS)	6	TAP	\$ 868,750	\$ 695,000	\$ 173,750	
Statewide Safe Routes to Schools Program Subtotal ►							\$ 3,107,560	\$ 2,486,048	\$ 621,512	◀ Funding Split Varies by Funding Source
► Statewide Stormwater Retrofits										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Stormwater Retrofits Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide Transportation Enhancements										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Transportation Enhancements Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Other Statewide Items										
				ABP GANS Repayment			\$ -	\$ -	\$ -	
				Award Adjustments, Change Orders, Project Value Changes, Etc.			\$ -	\$ -	\$ -	
				DBEs, FAPO, Pavement Lab Retrofits, and Misc. Programs			\$ -	\$ -	\$ -	
				Planning			\$ -	\$ -	\$ -	
				Statewide Design and Right of Way			\$ -	\$ -	\$ -	
				Statewide Recreational Trails			\$ -	\$ -	\$ -	
Other Statewide Items Subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

2017 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 2A / Non-Federal Projects

► Non Federal Aid

				No Projects Programmed		NFA	\$ -		\$ -	
				No Projects Programmed		NFA	\$ -		\$ -	
Non-Federal Aid Subtotal►							\$ -		\$ -	◀100% Non-Federal

► Section 2B / Non-Federal Bridge Projects

► Section 2B / Non-Federal Bridge Projects

				No Projects Programmed		NFA	\$ -		\$ -	
				No Projects Programmed		NFA	\$ -		\$ -	
Section 2B / Non-Federal Bridge Projects Subtotal►							\$ -		\$ -	◀100% Non-Federal

2017 Boston Region MPO TIP Summary

	TIP Section 1: ▼	TIP Section 2: ▼	Total of All Projects ▼	
Total ►	\$ 198,176,569	\$ -	\$ 198,176,569	◀ Total Spending in Region
Federal Funds ►	\$ 159,868,346	\$ -	\$ 159,868,346	◀ Total Federal Spending in Region
Non-Federal Funds ►	\$ 38,308,223	\$ -	\$ 38,308,223	◀ Total Non-Federal Spending in Region

701 CMR 7.00 Use of Road Flaggers and Police Details on Public Works Projects / 701 CMR 7.00 (the Regulation) was promulgated and became law on October 3, 2008. Under this Regulation, the CMR is applicable to any Public works Project that is performed within the limits of, or that impact traffic on, any Public Road. The Municipal Limitation referenced in this Regulation is applicable only to projects where the Municipality is the Awarding Authority. For all projects contained in the TIP, the Commonwealth is the Awarding Authority. Therefore, all projects must be considered and implemented in accordance with 701 CMR 7.00, and the Road Flagger and Police Detail Guidelines. By placing a project on the TIP, the Municipality acknowledges that 701 CMR 7.00 is applicable to its project and design and construction will be fully compliant with this Regulation. This information, and additional information relative to guidance and implementation of the Regulation can be found at the following link on the MassDOT Highway Division website: <http://www.massdot.state.ma.us/Highway/flaggers/main.aspx>

Boston Region MPO Transportation Improvement Program (TIP)

Project List (FY2017)

FTA Program	Number	Transit Agency	Item	Project Description	(unobligated)	Federal Funds	Funds	TDC	Local Funds	Total Cost
5307										
	5307 RTD0004368	Cape Ann Transportation Authority	117A00	PREVENTIVE MAINTENANCE		\$350,000	\$0	\$0	\$87,500	\$437,500
	5307 RTD0004875	MetroWest Regional Transit Authority	117C00	NON FIXED ROUTE ADA PARA SERV ACQUISITION OF BUS SUPPORT		\$1,992,640	\$498,160	\$0	\$0	\$2,490,800
	5307 RTD0004878	MetroWest Regional Transit Authority	114200	EQUIP/FACILITIES		\$217,390	\$74,764	\$0	\$0	\$292,154
	5307 RTD0004852	Massachusetts Bay Transportation Authority (MBTA)	117A00	PREVENTIVE MAINTENANCE		\$12,000,000	\$0	\$0	\$3,000,000	\$15,000,000
	5307 RTD0004854	Massachusetts Bay Transportation Authority (MBTA)	119400	Systems Upgrades		\$58,685,516	\$0	\$0	\$14,671,379	\$73,356,895
				Subtotal		\$73,245,546	\$572,924	\$0	\$17,758,879	\$91,577,349
5309										
	5309 RTD0004873	Massachusetts Bay Transportation Authority (MBTA)	132303	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR		\$150,000,000	\$0	\$0	\$230,670,000	\$380,670,000
				Subtotal		\$150,000,000	\$0	\$0	\$230,670,000	\$380,670,000
5310										
				Subtotal		\$0	\$0	\$0	\$0	\$0
5311										
				Subtotal		\$0	\$0	\$0	\$0	\$0
5337										
	5337 RTD0004853	Massachusetts Bay Transportation Authority (MBTA)	122404	Bridge & Tunnel Program		\$100,000,000	\$0	\$0	\$25,000,000	\$125,000,000
	5337 RTD0004858	Massachusetts Bay Transportation Authority (MBTA)	119400	Systems Upgrades		\$21,190,546	\$0	\$0	\$5,297,637	\$26,488,183
				Subtotal		\$121,190,546	\$0	\$0	\$30,297,637	\$151,488,183
5339										
	5339 RTD0004859	Massachusetts Bay Transportation Authority (MBTA)	119400	Systems Upgrades		\$5,287,027	\$0	\$0	\$1,321,757	\$6,608,784
				Subtotal		\$5,287,027	\$0	\$0	\$1,321,757	\$6,608,784
5320										
				Subtotal		\$0	\$0	\$0	\$0	\$0
Other Federal										
				Subtotal		\$0	\$0	\$0	\$0	\$0
Other Non-Federal										
Other Non-Federal	RTD0004371	Cape Ann Transportation Authority	111203	BUY REPLACEMENT 30-FT BUS (3) ACQUIRE - MISC SUPPORT EQUIPMENT		\$0	\$1,275,000	\$0	\$0	\$1,275,000
Other Non-Federal	RTD0004374	Cape Ann Transportation Authority	114220	(MATCH IN FY16) ACQUIRE - SUPPORT VEHICLES (MATCH IN		\$0	\$5,832	\$0	\$0	\$5,832
Other Non-Federal	RTD0004378	Cape Ann Transportation Authority	114211	FY16)		\$0	\$13,000	\$0	\$0	\$13,000
Other Non-Federal	RTD0004379	Cape Ann Transportation Authority	114206	ACQUIRE - IT EQUIPMENT (Match in FY16) CONSTRUCTION OF BUS		\$0	\$10,000	\$0	\$0	\$10,000
Other Non-Federal	RTD0005166	MetroWest Regional Transit Authority	113300	STATIONS/TERMINALS		\$0	\$2,650,000	\$0	\$0	\$2,650,000
				Subtotal		\$0	\$3,953,832	\$0	\$0	\$3,953,832
				Total		\$349,723,119	\$4,526,756	\$0	\$280,048,273	\$634,298,148

Funds listed under the Carry Over column are included in the Federal Amount

2018 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 1A / Federal Aid Target Projects

► HSIP - Highway Safety Improvement Program

	606635	Boston	Multiple	NEEDHAM- NEWTON- RECONSTRUCTION OF HIGHLAND AVENUE, NEEDHAM STREET & CHARLES RIVER BRIDGE, N-04-002, FROM WEBSTER STREET (NEEDHAM) TO ROUTE 9 (NEWTON)	6	HSIP	\$ 2,319,644	\$ 2,087,679	\$ 231,964	CMAQ+HSIP+TAP+STP Total Cost = 15,464,292
	600518	Boston	Hingham	HINGHAM- INTERSECTION IMPROVEMENTS AT DERBY STREET, WHITING STREET (ROUTE 53) AND GARDNER STREET	5	HSIP	\$ 611,547	\$ 550,392	\$ 61,155	
HSIP Subtotal ►							\$ 2,931,191	\$ 2,638,072	\$ 293,119	◄ 90% Federal + 10% Non-Federal

► CMAQ - Congestion Mitigation and Air Quality Improvement Program

	1570	Boston	Multiple	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	CMAQ	\$ 13,427,220	\$ 10,741,776	\$ 2,685,444	funding flexed to FTA; match provided by local contributions; STP+CMAQ+Section 5309 (Transit)
	606635	Boston	Multiple	NEEDHAM- NEWTON- RECONSTRUCTION OF HIGHLAND AVENUE, NEEDHAM STREET & CHARLES RIVER BRIDGE, N-04-002, FROM WEBSTER STREET (NEEDHAM) TO ROUTE 9 (NEWTON)	6	CMAQ	\$ 2,000,000	\$ 1,600,000	\$ 400,000	CMAQ+HSIP+TAP+STP Total Cost = 15,464,292
	604989	Boston	Southborough	SOUTHBOROUGH- RECONSTRUCTION OF MAIN STREET (ROUTE 30), FROM SEARS ROAD TO PARK STREET	3	CMAQ	\$ 1,000,000	\$ 800,000	\$ 200,000	CMAQ+TAP+STP Total Cost = \$7,281,248
	605110	Boston	Brookline	BROOKLINE- INTERSECTION & SIGNAL IMPROVEMENTS @ ROUTE 9 & VILLAGE SQUARE (GATEWAY EAST)	6	CMAQ	\$ 1,000,000	\$ 800,000	\$ 200,000	TAP+STP+CMAQ+Private Sector Contribution (\$1,000,000) Total Cost = \$6,273,202
CMAQ Subtotal ►							\$ 17,427,220	\$ 13,941,776	\$ 3,485,444	◄ 80% Federal + 20% Non-Federal

► TAP - Transportation Alternatives Program

	604989	Boston	Southborough	SOUTHBOROUGH- RECONSTRUCTION OF MAIN STREET (ROUTE 30), FROM SEARS ROAD TO PARK STREET	3	TAP	\$ 1,456,250	\$ 1,165,000	\$ 291,250	CMAQ+TAP+STP Total Cost = \$7,281,248
	606635	Boston	Multiple	NEEDHAM- NEWTON- RECONSTRUCTION OF HIGHLAND AVENUE, NEEDHAM STREET & CHARLES RIVER BRIDGE, N-04-002, FROM WEBSTER STREET (NEEDHAM) TO ROUTE 9 (NEWTON)	6	TAP	\$ 1,546,492	\$ 1,237,194	\$ 309,298	CMAQ+HSIP+TAP+STP Total Cost = 15,464,292
	605110	Boston	Brookline	BROOKLINE- INTERSECTION & SIGNAL IMPROVEMENTS @ ROUTE 9 & VILLAGE SQUARE (GATEWAY EAST)	6	TAP	\$ 1,255,000	\$ 1,004,000	\$ 251,000	TAP+STP+CMAQ+Private Sector Contribution (\$1,000,000) Total Cost = \$6,273,202
TAP Subtotal ►							\$ 4,257,742	\$ 3,406,194	\$ 851,548	◄ 80% Federal + 20% Non-Federal

2018 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Non-CMAQ/HSIP/TAP (Other)										
	601630	Boston	Multiple	WEYMOUTH- ABINGTON- RECONSTRUCTION & WIDENING ON ROUTE 18 (MAIN STREET) FROM HIGHLAND PLACE TO ROUTE 139 (4.0 MILES) INCLUDES REPLACING W-32-013, ROUTE 18 OVER THE OLD COLONY RAILROAD (MBTA)	6	STP	\$ 19,591,490	\$ 15,673,192	\$ 3,918,298	AC Yr 3 of 4; STP+HSIP+TEA-21 Earmark+BR Total Cost = \$81,812,268
	1570	Boston	Multiple	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	STP	\$ 26,572,780	\$ 21,258,224	\$ 5,314,556	funding flexed to FTA; match provided by local contributions; STP+CMAQ+Section 5309 (Transit)
	603711	Boston	Multiple	NEEDHAM- WELLESLEY- REHAB/REPLACEMENT OF 6 BRIDGES ON I-95/ROUTE 128: N-04-020, N-04-021, N-04-022, N-04-026, N-04-027, N-04-037 & W-13-023 (ADD-A-LANE - CONTRACT V)	6	NHPP	\$ 1,988,367	\$ 1,590,694	\$ 397,673	AC Yr 5 of 5; NHPP+BR+Statewide Infrastructure Total Cost = \$164,919,140 (\$26,258,183 programmed within FFYs 2017-21 TIP)
	604989	Boston	Southborough	SOUTHBOROUGH- RECONSTRUCTION OF MAIN STREET (ROUTE 30), FROM SEARS ROAD TO PARK STREET	3	STP	\$ 4,824,998	\$ 3,859,998	\$ 965,000	CMAQ+TAP+STP Total Cost = \$7,281,248
	606635	Boston	Multiple	NEEDHAM- NEWTON- RECONSTRUCTION OF HIGHLAND AVENUE, NEEDHAM STREET & CHARLES RIVER BRIDGE, N-04-002, FROM WEBSTER STREET (NEEDHAM) TO ROUTE 9 (NEWTON)	6	STP	\$ 9,598,156	\$ 7,678,525	\$ 1,919,631	CMAQ+HSIP+TAP+STP Total Cost = 15,464,292
	600518	Boston	Hingham	HINGHAM- INTERSECTION IMPROVEMENTS AT DERBY STREET, WHITING STREET (ROUTE 53) AND GARDNER STREET	5	STP	\$ 2,446,188	\$ 1,956,950	\$ 489,238	STP+HSIP Total Cost = \$3,057,735
	605110	Boston	Brookline	BROOKLINE- INTERSECTION & SIGNAL IMPROVEMENTS @ ROUTE 9 & VILLAGE SQUARE (GATEWAY EAST)	6	STP	\$ 3,018,202	\$ 2,414,562	\$ 603,640	TAP+STP+CMAQ+Private Sector Contribution (\$1,000,000) Total Cost = \$6,273,202
Non-CMAQ/HSIP/TAP (Other) Subtotal ►							\$ 68,040,181	\$ 54,432,145	\$ 13,608,036	◀ 80% Federal + 20% Non-Federal

► Section 1A / Fiscal Constraint Analysis

Total Federal Aid Target Funds Programmed ►	\$ 92,656,334	\$ 92,656,334	◀ Total Target	\$ 0	Target Funds Available
Total Non-CMAQ/HSIP/TAP (Other) Programmed ►	\$ 68,040,181	\$ -	◀ Max. Non-CMAQ/HSIP/TAP	\$ (74,690,294)	Non-CMAQ/HSIP/TAP (Other) Exceeds Maximum
Total HSIP Programmed ►	\$ 2,931,191	\$ 4,296,710	◀ Min. HSIP	\$ 1,365,519	HSIP Recommended Not Met
Total CMAQ Programmed ►	\$ 17,427,220	\$ 10,741,776	◀ Min. CMAQ	\$ (6,685,444)	CMAQ Recommended Met
Total TAP Programmed ►	\$ 4,257,742	\$ 2,927,554	◀ Min. TAP	\$ (1,330,188)	TAP Requirement Exceeded!

HSIP, CMAQ, TAP Overprogrammed \$ (6,650,113)

► Section 1B / Federal Aid Bridge Projects

► Statewide Systematic Maintenance Program

	607915	Boston	MULTIPLE	NEWTON- WELLESLEY- WESTON- BRIDGE MAINTENANCE OF N-12-063, N-12-054, N-12-055 & N-12-056 ON I-95/ROUTE 128	6	NHPP	\$ 1,660,534	\$ 1,328,427	\$ 332,107	
	608521	Boston	SALEM	SALEM - BRIDGE MAINTENANCE, S-01-018 (32T), (ST 114) NORTH STREET OVER (ST 107) BRIDGE STREET & MBTA	4	NHPP	\$ 2,400,000	\$ 1,920,000	\$ 480,000	
Statewide Bridge Maintenance Program Subtotal ►							\$ 4,060,534	\$ 3,248,427	\$ 812,107	◀ 80% Federal + 20% Non-Federal

► On System

	604173	Boston	BOSTON	BOSTON- BRIDGE REHABILITATION, B-16-016, NORTH WASHINGTON STREET OVER THE BOSTON INNER HARBOR	6	NHPP	\$ 24,900,000	\$ 19,920,000	\$ 4,980,000	AC YR 2 of 5, YOY \$112,400,000
	604952	Boston	MULTIPLE	LYNN- SAUGUS- BRIDGE REPLACEMENT, L-18-016=S-05-008, ROUTE 107 OVER THE SAUGUS RIVER (AKA - BELDEN G. BLY BRIDGE)	4	NHPP	\$ 25,764,000	\$ 20,611,200	\$ 5,152,800	AC YR 1 of 2, YOY \$51,527,391
	608149	Boston	BURLINGTON	BURLINGTON- BRIDGE REPLACEMENT, B-29-010, I-95/ST 128 (NB) & I-95/ST128 (SB) OVER ROUTE 3A (CAMBRIDGE STREET)	4	NHPP	\$ 23,920,000	\$ 19,136,000	\$ 4,784,000	
	608522	Boston	MIDDLETON	MIDDLETON- BRIDGE REPLACEMENT- M-20-003, RT 62/MAPLE STREET OVER Ipswich RIVER	4	NHPP	\$ 4,160,000	\$ 3,328,000	\$ 832,000	
On System Subtotal ►							\$ 78,744,000	\$ 62,995,200	\$ 15,748,800	◀ 80% Federal + 20% Non-Federal

2018 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► **Off-System**

	604655	Boston	MARSHFIELD	MARSHFIELD- BRIDGE REPLACEMENT, M-07-007, BEACH STREET OVER THE CUT RIVER	5	STP-BR-OFF	\$ 3,023,938	\$ 2,419,150	\$ 604,788	
	606632	Boston	HOPKINTON	HOPKINTON- WESTBOROUGH- BRIDGE REPLACEMENT, H-23-006=W-24-016, FRUIT STREET OVER CSX & SUDBURY RIVER	3	STP-BR-OFF	\$ 7,964,164	\$ 6,371,331	\$ 1,592,833	
	607133	Boston	QUINCY	QUINCY- SUPERSTRUCTURE REPLACEMENT, Q-01-039, ROBERTSON STREET OVER I-93/US 1/SR 3	6	STP-BR-OFF	\$ 3,260,452	\$ 2,608,361	\$ 652,090	
	607533	Boston	WALTHAM	WALTHAM- BRIDGE REPLACEMENT, W-04-006, WOERD AVENUE OVER CHARLES RIVER	4	STP-BR-OFF	\$ 2,344,742	\$ 1,875,794	\$ 468,948	
Off-System Subtotal ►							\$ 16,593,296	\$ 13,274,637	\$ 3,318,659	◀ 80% Federal + 20% Non-Federal

► **Statewide Bridge Inspection Program**

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Bridge Inspection Program Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► **Section 1C / Federal Aid Non-Target Projects**

► **Other Federal Aid**

	606134	Boston	Boston	BOSTON- TRAFFIC SIGNAL IMPROVEMENTS ON BLUE HILL AVENUE AND WARREN STREET	6	HPP	\$ 2,501,046	\$ 2,000,837	\$ 500,209	Construction; HPP 2129 (MA155)
				No Projects Programmed			\$ -	\$ -	\$ -	
Other Federal Aid Subtotal ►							\$ 2,501,046	\$ 2,000,837	\$ 500,209	◀ Funding Split Varies by Funding Source

► **Section 1D / Federal Aid Major & State Category Projects**

► **Regional Major Infrastructure**

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Regional Major Infrastructure Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► **Statewide Americans with Disability Act Implementation Plan**

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide ADA Implementation Plan Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► **Statewide Congestion Mitigation and Air Quality**

	606223	Boston	MULTIPLE	ACTON- CONCORD- BRUCE FREEMAN RAIL TRAIL CONSTRUCTION (PHASE II-B)	4	CMAQ	\$ 5,990,400	\$ 4,792,320	\$ 1,198,080	
	607732	Boston	MULTIPLE	FRAMINGHAM- NATICK- COCHITUATE RAIL TRAIL CONSTRUCTION INCLUDING PEDESTRIAN BRIDGE, N-03-014, OVER ROUTE 9 & F-07-033=N-03-029 OVER ROUTE 30	3	CMAQ	\$ 7,797,960	\$ 6,238,368	\$ 1,559,592	
	606316	Boston	BROOKLINE	BROOKLINE- PEDESTRIAN BRIDGE REHABILITATION, B-27-016, OVER MBTA OFF CARLTON STREET	6	CMAQ	\$ 3,838,130	\$ 3,070,504	\$ 767,626	
Statewide CMAQ Subtotal ►							\$ 17,626,490	\$ 14,101,192	\$ 3,525,298	◀ 80% Federal + 20% Non-Federal

► **Statewide HSIP Program**

	607748	Boston	ACTON	ACTON- INTERSECTION & SIGNAL IMPROVEMENTS ON SR 2 & SR 111 (MASSACHUSETTS AVENUE) AT PIPER ROAD & TAYLOR ROAD	3	HSIP	\$ 561,600	\$ 505,440	\$ 56,160	
	607761	Boston	SWAMPSCOTT	Swampscott- INTERSECTION & SIGNAL IMPROVEMENTS AT SR 1A (PARADISE ROAD) AT Swampscott MALL	4	HSIP	\$ 572,000	\$ 514,800	\$ 57,200	
Statewide HSIP Program Subtotal ►							\$ 1,133,600	\$ 1,020,240	\$ 113,360	◀ 90% Federal + 10% Non-Federal

2018 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► **Statewide Infrastructure Program**

	606381	Boston	MULTIPLE	ARLINGTON- BELMONT- HIGHWAY LIGHTING REPAIR & MAINTENANCE ON ROUTE 2	4	STP	\$ 9,100,506	\$ 7,280,405	\$ 1,820,101	
Statewide Infrastructure Program Subtotal ►							\$ 9,100,506	\$ 7,280,405	\$ 1,820,101	◀ 80% Federal + 20% Non-Federal

► **Statewide Interstate Maintenance Program**

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Interstate Maintenance Program Subtotal ►							\$ -	\$ -	\$ -	◀ 90% Federal + 10% Non-Federal

► **Statewide Intelligent Transportation Systems**

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide ITS Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► **Statewide National Freight Program**

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide National Freight Program Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► **Statewide National Highway System Preservation Program**

	605608	Boston	DEDHAM	DEDHAM- RESURFACING & RELATED WORK ON ROUTE 109	6	NHPP	\$ 234,407	\$ 187,526	\$ 46,881	
	608008	Boston	SAUGUS	SAUGUS - RESURFACING AND RELATED WORK ON ROUTE 1	4	NHPP	\$ 9,945,936	\$ 7,956,749	\$ 1,989,187	
	608069	Boston	MULTIPLE	MARSHFIELD- PEMBROKE- NORWELL- HANOVER- ROCKLAND- HINGHAM- RESURFACING & RELATED WORK ON ROUTE 3	5	NHPP	\$ 16,504,800	\$ 13,203,840	\$ 3,300,960	
	608220	Boston	CONCORD	CONCORD- RESURFACING & RELATED WORK ON ROUTE 2	4	NHPP	\$ 1,747,200	\$ 1,397,760	\$ 349,440	
	608379	Boston	MULTIPLE	LEXINGTON- BELMONT- ARLINGTON- CAMBRIDGE- PAVEMENT PRESERVATION ON ROUTE 2	4	NHPP	\$ 7,706,400	\$ 6,165,120	\$ 1,541,280	NHS + Stormwater = \$8,906,400
Statewide NHS Preservation Program Subtotal ►							\$ 36,138,743	\$ 28,910,994	\$ 7,227,749	◀ 80% Federal + 20% Non-Federal

► **Statewide Planning Program**

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Planning Program Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► **Statewide Railroad Grade Crossings**

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide RR Grade Crossings Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► **Statewide Safe Routes to Schools Program**

				No Projects Programmed		SRTS	\$ -	\$ -	\$ -	
				No Projects Programmed		SRTS	\$ -	\$ -	\$ -	
Statewide Safe Routes to Schools Program Subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

2018 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► **Statewide Stormwater Retrofits**

	608217	Boston	MULTIPLE	MARLBOROUGH- SUDBURY- STORMWATER IMPROVEMENTS ALONG ROUTE 20	3	STP-TE	\$ 683,488	\$ 546,790	\$ 136,698	
	608379	Boston	MULTIPLE	LEXINGTON- BELMONT- ARLINGTON- CAMBRIDGE- PAVEMENT PRESERVATION ON ROUTE 2	4	STP-TE	\$ 1,200,000	\$ 960,000	\$ 240,000	NHS + Stormwater = \$8,906,400
Statewide Stormwater Retrofits Subtotal ►							\$ 1,883,488	\$ 1,506,790	\$ 376,698	◀ 80% Federal + 20% Non-Federal

► **Statewide Transportation Enhancements**

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Transportation Enhancements Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► **Other Statewide Items**

				ABP GANS Repayment			\$ -	\$ -	\$ -	
				Award Adjustments, Change Orders, Project Value Changes, Etc.			\$ -	\$ -	\$ -	
				DBEs, FAPO, Pavement Lab Retrofits, and Misc. Programs			\$ -	\$ -	\$ -	
				Planning			\$ -	\$ -	\$ -	
				Statewide Design and Right of Way			\$ -	\$ -	\$ -	
				Statewide Recreational Trails			\$ -	\$ -	\$ -	
Other Statewide Items Subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► **Section 2A / Non-Federal Projects**

► **Non Federal Aid**

				No Projects Programmed		NFA	\$ -	\$ -	\$ -	
				No Projects Programmed		NFA	\$ -	\$ -	\$ -	
Non-Federal Aid Subtotal ►							\$ -	\$ -	\$ -	◀ 100% Non-Federal

► **Section 2B / Non-Federal Bridge Projects**

► **Section 2B / Non-Federal Bridge Projects**

				No Projects Programmed		NFA	\$ -	\$ -	\$ -	
				No Projects Programmed		NFA	\$ -	\$ -	\$ -	
Section 2B / Non-Federal Bridge Projects Subtotal ►							\$ -	\$ -	\$ -	◀ 100% Non-Federal

2018 Boston Region MPO TIP Summary

	TIP Section 1: ▼	TIP Section 2: ▼	Total of All Projects ▼	
Total ►	\$ 260,438,036	\$ -	\$ 260,438,036	◀ Total Spending in Region
Federal Funds ►	\$ 208,756,908	\$ -	\$ 208,756,908	◀ Total Federal Spending in Region
Non-Federal Funds ►	\$ 51,681,128	\$ -	\$ 51,681,128	◀ Total Non-Federal Spending in Region

701 CMR 7.00 Use of Road Flaggers and Police Details on Public Works Projects / 701 CMR 7.00 (the Regulation) was promulgated and became law on October 3, 2008. Under this Regulation, the CMR is applicable to any Public works Project that is performed within the limits of, or that impact traffic on, any Public Road. The Municipal Limitation referenced in this Regulation is applicable only to projects where the Municipality is the Awarding Authority. For all projects contained in the TIP, the Commonwealth is the Awarding Authority. Therefore, all projects must be considered and implemented in accordance with 701 CMR 7.00, and the Road Flagger and Police Detail Guidelines. By placing a project on the TIP, the Municipality acknowledges that 701 CMR 7.00 is applicable to its project and design and construction will be fully compliant with this Regulation. This information, and additional information relative to guidance and implementation of the Regulation can be found at the following link on the MassDOT Highway Division website: <http://www.massdot.state.ma.us/Highway/flaggers/main.aspx>

**Boston Region MPO Transportation Improvement Program (TIP)
Project List (FY2018)**

FTA Program	Number	Transit Agency	Item	Project Description	(unobligated)	Federal Funds	Funds	TDC	Local Funds	Total Cost
5307										
	5307 RTD0004369	Cape Ann Transportation Authority	117A00	PREVENTIVE MAINTENANCE	2017 - \$350,000	\$350,000	\$0	\$0	\$87,500	\$437,500
	5307 RTD0004372	Cape Ann Transportation Authority	114206	ACQUIRE - SHOP EQ/SOFTWARE MAINT	2017 - \$40,000	\$40,000	\$10,000	\$0	\$0	\$50,000
	5307 RTD0004375	Cape Ann Transportation Authority	114220	ACQUIRE - MISC SUPPORT EQUIPMENT	2017 - \$27,267	\$27,267	\$6,817	\$0	\$0	\$34,084
	5307 RTD0004381	Cape Ann Transportation Authority	114206	ACQUIRE - SHOP EQUIPMENT	2017 - \$52,000	\$52,000	\$13,000	\$0	\$0	\$65,000
				REHAB- SHELTERS Railroad, P&R, Emerson						
	5307 RTD0004977	Cape Ann Transportation Authority	113410	Ave	2016 - \$33,600	\$33,600	\$8,400	\$0	\$0	\$42,000
	5307 RTD0004978	Cape Ann Transportation Authority	113310	CONSTRUCT - BUS SHELTER-CATA HUB/COA	2016 - \$14,400	\$14,400	\$3,600	\$0	\$0	\$18,000
				REHAB/RENOVATE - BUS PASSENGER						
	5307 RTD0004979	Cape Ann Transportation Authority	113410	SHELTERS	2017 - \$9,600	\$9,600	\$2,400	\$0	\$0	\$12,000
	5307 RTD0004879	MetroWest Regional Transit Authority	113403	TERMINAL, INTERMODAL (TRANSIT)	2017 - \$150,000	\$150,000	\$37,500	\$0	\$0	\$187,500
	5307 RTD0004880	MetroWest Regional Transit Authority	117C00	NON FIXED ROUTE ADA PARA SERV	2017 - \$1,300,000	\$1,300,000	\$325,000	\$0	\$0	\$1,625,000
				ACQUISITION OF BUS SUPPORT						
	5307 RTD0004881	MetroWest Regional Transit Authority	114200	EQUIP/FACILITIES	2017 - \$248,415	\$248,415	\$62,104	\$0	\$0	\$310,519
	5307 RTD0004882	MetroWest Regional Transit Authority	440000	Mobility Management	2017 - \$25,000	\$25,000	\$6,250	\$0	\$0	\$31,250
				Massachusetts Bay Transportation						
	5307 RTD0004855	Authority (MBTA)	117A00	PREVENTIVE MAINTENANCE		\$12,000,000	\$0	\$0	\$3,000,000	\$15,000,000
				Massachusetts Bay Transportation						
	5307 RTD0004857	Authority (MBTA)	119400	Systems Upgrades		\$58,685,516	\$0	\$0	\$14,671,379	\$73,356,895
				Subtotal		\$72,935,798	\$475,071	\$0	\$17,758,879	\$91,169,748
5309										
				GREEN LINE EXTENSION PROJECT-						
				EXTENSION TO COLLEGE AVENUE WITH THE						
	5309 RTD0004874	Massachusetts Bay Transportation Authority (MBTA)	132303	UNION SQUARE SPUR		\$150,000,000	\$0	\$0	\$195,558,000	\$345,558,000
				Subtotal		\$150,000,000	\$0	\$0	\$195,558,000	\$345,558,000
5310										
				Subtotal		\$0	\$0	\$0	\$0	\$0
5311										
				Subtotal		\$0	\$0	\$0	\$0	\$0
5337										
	5337 RTD0004856	Massachusetts Bay Transportation Authority (MBTA)	122404	Bridge & Tunnel Program		\$60,000,000	\$0	\$0	\$15,000,000	\$75,000,000
	5337 RTD0004860	Massachusetts Bay Transportation Authority (MBTA)	119400	Systems Upgrades		\$61,190,546	\$0	\$0	\$15,297,637	\$76,488,183
				Subtotal		\$121,190,546	\$0	\$0	\$30,297,637	\$151,488,183
5339										
	5339 RTD0004861	Massachusetts Bay Transportation Authority (MBTA)	119400	Systems Upgrades		\$5,287,027	\$0	\$0	\$1,321,757	\$6,608,784
				Subtotal		\$5,287,027	\$0	\$0	\$1,321,757	\$6,608,784
5320										
				Subtotal		\$0	\$0	\$0	\$0	\$0
Other Federal										
				Subtotal		\$0	\$0	\$0	\$0	\$0
Other Non-Federal										
Other Non-Federal	RTD0004373	Cape Ann Transportation Authority	111209	BUY REPLACEMENT TROLLEY BUS (2)		\$0	\$900,000	\$0	\$0	\$900,000
				CONSTRUCTION OF BUS						
Other Non-Federal	RTD0005158	MetroWest Regional Transit Authority	113300	STATIONS/TERMINALS		\$0	\$1,000,000	\$0	\$0	\$1,000,000
Other Non-Federal	RTD0005159	MetroWest Regional Transit Authority	115320	CONSTRUCT MISC ELEC/POWER EQUIP		\$0	\$750,000	\$0	\$0	\$750,000
				Subtotal		\$0	\$2,650,000	\$0	\$0	\$2,650,000
				Total		\$349,413,371	\$3,125,071	\$0	\$244,936,273	\$597,474,715

Funds listed under the Carry Over column are included in the Federal Amount

2019 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 1A / Federal Aid Target Projects

► HSIP - Highway Safety Improvement Program

	607428	Boston	Multiple	HOPEDALE- MILFORD- RESURFACING & INTERSECTION IMPROVEMENTS ON ROUTE 16 (MAIN STREET), FROM WATER STREET WEST TO APPROXIMATELY 120 FEET WEST OF THE MILFORD/HOPEDALE T.L AND THE INTERSECTION OF ROUTE 140.	3	HSIP	\$ 2,362,214	\$ 2,125,993	\$ 236,221	CMAQ+HSIP Total Cost = \$3,149,619
	607652	Boston	Everett	EVERETT- RECONSTRUCTION OF FERRY STREET, SOUTH FERRY STREET AND A PORTION OF ELM STREET	4	HSIP	\$ 1,448,825	\$ 1,303,943	\$ 144,883	CMAQ+STP+HSIP+TAP Total Cost = \$7,244,124
	606043	Boston	Hopkinton	HOPKINTON- SIGNAL & INTERSECTION IMPROVEMENTS ON ROUTE 135	3	HSIP	\$ 1,275,206	\$ 1,147,686	\$ 127,521	CMAQ+HSIP+STP Total Cost = \$8,501,376
HSIP Subtotal ►							\$ 5,086,246	\$ 4,577,621	\$ 508,625	◀ 90% Federal + 10% Non-Federal

► CMAQ - Congestion Mitigation and Air Quality Improvement Program

	1570	Boston	Multiple	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	CMAQ	\$ 13,427,220	\$ 10,741,776	\$ 2,685,444	funding flexed to FTA; match provided by local contributions; STP+CMAQ+Section 5309 (Transit)
	605034	Boston	Natick	NATICK- RECONSTRUCTION OF ROUTE 27 (NORTH MAIN STREET), FROM NORTH AVENUE TO THE WAYLAND T.L.	3	CMAQ	\$ 2,415,334	\$ 1,932,267	\$ 483,067	CMAQ+TAP+STP Total Cost = \$15,459,553
	607428	Boston	Multiple	HOPEDALE- MILFORD- RESURFACING & INTERSECTION IMPROVEMENTS ON ROUTE 16 (MAIN STREET), FROM WATER STREET WEST TO APPROXIMATELY 120 FEET WEST OF THE MILFORD/HOPEDALE T.L AND THE INTERSECTION OF ROUTE 140.	3	CMAQ	\$ 787,405	\$ 629,924	\$ 157,481	CMAQ+HSIP Total Cost = \$3,149,619
	607652	Boston	Everett	EVERETT- RECONSTRUCTION OF FERRY STREET, SOUTH FERRY STREET AND A PORTION OF ELM STREET	4	CMAQ	\$ 1,275,588	\$ 1,020,470	\$ 255,118	CMAQ+STP+HSIP+TAP Total Cost = \$7,244,124
	606043	Boston	Hopkinton	HOPKINTON- SIGNAL & INTERSECTION IMPROVEMENTS ON ROUTE 135	3	CMAQ	\$ 1,000,000	\$ 800,000	\$ 200,000	CMAQ+HSIP+STP Total Cost = \$8,501,376
CMAQ Subtotal ►							\$ 18,905,547	\$ 15,124,438	\$ 3,781,109	◀ 80% Federal + 20% Non-Federal

► TAP - Transportation Alternatives Program

	605034	Boston	Natick	NATICK- RECONSTRUCTION OF ROUTE 27 (NORTH MAIN STREET), FROM NORTH AVENUE TO THE WAYLAND T.L.	3	TAP	\$ 1,318,933	\$ 1,055,146	\$ 263,787	CMAQ+TAP+STP Total Cost = \$15,459,553
	607652	Boston	Everett	EVERETT- RECONSTRUCTION OF FERRY STREET, SOUTH FERRY STREET AND A PORTION OF ELM STREET	4	TAP	\$ 724,412	\$ 579,530	\$ 144,882	CMAQ+STP+HSIP+TAP Total Cost = \$7,244,124
	608352	Boston	Salem	SALEM- CANAL STREET RAIL TRAIL CONSTRUCTION (PHASE 2)	4	TAP	\$ 2,595,840	\$ 2,076,672	\$ 519,168	
TAP Subtotal ►							\$ 4,639,185	\$ 3,711,348	\$ 927,837	◀ 80% Federal + 20% Non-Federal

2019 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Non-CMAQ/HSIP/TAP (Other)										
	601630	Boston	Multiple	WEYMOUTH- ABINGTON- RECONSTRUCTION & WIDENING ON ROUTE 18 (MAIN STREET) FROM HIGHLAND PLACE TO ROUTE 139 (4.0 MILES) INCLUDES REPLACING W-32-013, ROUTE 18 OVER THE OLD COLONY RAILROAD (MBTA)	6	STP	\$ 8,040,268	\$ 6,432,214	\$ 1,608,054	AC Yr 4 of 4; STP+HSIP+TEA-21 Earmark+BR Total Cost = \$81,812,268
	1570	Boston	Multiple	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	STP	\$ 26,572,780	\$ 21,258,224	\$ 5,314,556	funding flexed to FTA; match provided by local contributions; STP+CMAQ+Section 5309 (Transit)
	605034	Boston	Natick	NATICK- RECONSTRUCTION OF ROUTE 27 (NORTH MAIN STREET), FROM NORTH AVENUE TO THE WAYLAND T.L.	3	STP	\$ 11,725,286	\$ 9,380,229	\$ 2,345,057	CMAQ+TAP+STP Total Cost = \$15,459,553
	607652	Boston	Everett	EVERETT- RECONSTRUCTION OF FERRY STREET, SOUTH FERRY STREET AND A PORTION OF ELM STREET	4	STP	\$ 3,795,299	\$ 3,036,239	\$ 759,060	CMAQ+STP+HSIP+TAP Total Cost = \$7,244,124
	606043	Boston	Hopkinton	HOPKINTON- SIGNAL & INTERSECTION IMPROVEMENTS ON ROUTE 135	3	STP	\$ 6,226,170	\$ 4,980,936	\$ 1,245,234	CMAQ+HSIP+STP Total Cost = \$8,501,376
	605789	Boston	Boston	BOSTON- RECONSTRUCTION OF MELNEA CASS BOULEVARD	6	STP	\$ 7,853,499	\$ 6,282,799	\$ 1,570,700	STP+Earmarks Total Cost = \$25,297,839
Non-CMAQ/HSIP/TAP (Other) Subtotal ►							\$ 64,213,303	\$ 51,370,642	\$ 12,842,661	◄ 80% Federal + 20% Non-Federal

► Section 1A / Fiscal Constraint Analysis

Total Federal Aid Target Funds Programmed ►	\$ 92,844,280	\$ 92,626,333	◄ Total Target	\$ (217,947)	Funds Over Programmed
Total Non-CMAQ/HSIP/TAP (Other) Programmed ►	\$ 64,213,303	\$ -	◄ Max. Non-CMAQ/HSIP/TAP	\$ (74,923,454)	Non-CMAQ/HSIP/TAP (Other) Exceeds Maximum
Total HSIP Programmed ►	\$ 5,086,246	\$ 4,296,710	◄ Min. HSIP	\$ (789,536)	HSIP Recommended Met
Total CMAQ Programmed ►	\$ 18,905,547	\$ 10,741,776	◄ Min. CMAQ	\$ (8,163,771)	CMAQ Recommended Met
Total TAP Programmed ►	\$ 4,639,185	\$ 2,882,340	◄ Min. TAP	\$ (1,756,845)	TAP Requirement Exceeded!

HSIP, CMAQ, TAP Overprogrammed \$ (10,710,152)

► Section 1B / Federal Aid Bridge Projects

► Statewide Systematic Maintenance Program

	608234	Boston	MULTIPLE	BOSTON- RANDOLPH- BRIDGE PRESERVATION OF 3 BRIDGES: B-16-165, R-01-005 & R-01-007	6	NHPP	\$ 2,487,857	\$ 1,990,285	\$ 497,571	
Statewide Bridge Maintenance Program Subtotal ►							\$ 2,487,857	\$ 1,990,285	\$ 497,571	◄ 80% Federal + 20% Non-Federal

► On System

	604173	Boston	BOSTON	BOSTON- BRIDGE REHABILITATION, B-16-016, NORTH WASHINGTON STREET OVER THE BOSTON INNER HARBOR	6	NHPP	\$ 24,900,000	\$ 19,920,000	\$ 4,980,000	AC YR 3 of 5, YOY \$112,400,000
	604952	Boston	MULTIPLE	LYNN- SAUGUS- BRIDGE REPLACEMENT, L-18-016=S-05-008, ROUTE 107 OVER THE SAUGUS RIVER (AKA - BELDEN G. BLY BRIDGE)	4	NHPP	\$ 25,763,391	\$ 20,610,713	\$ 5,152,678	AC YR 2 of 2, YOY \$51,527,391
On System Subtotal ►							\$ 50,663,391	\$ 40,530,713	\$ 10,132,678	◄ 80% Federal + 20% Non-Federal

► Off-System

	608079	Boston	SHARON	SHARON- BRIDGE REPLACEMENT, S-09-003 (40N), MASKWONICUT STREET OVER AMTRAK/MBTA	5	STP-BR-OFF	\$ 5,637,492	\$ 4,509,994	\$ 1,127,498	
	608255	Boston	STOW	STOW- BRIDGE REPLACEMENT, S-29-011, BOX MILL ROAD OVER ELIZABETH BROOK	3	STP-BR-OFF	\$ 1,600,560	\$ 1,280,448	\$ 320,112	
Off-System Subtotal ►							\$ 7,238,052	\$ 5,790,442	\$ 1,447,610	◄ 80% Federal + 20% Non-Federal

► Statewide Bridge Inspection Program

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Bridge Inspection Program Subtotal ►							\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal

2019 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 1C / Federal Aid Non-Target Projects

► Other Federal Aid

	605789	Boston	Boston	BOSTON- RECONSTRUCTION OF MELNEA CASS BOULEVARD	6	HPP	\$ 5,007,375	\$ 4,005,900	\$ 1,001,475	Construction; HPP 4284 (MA203); STP+Earmarks Total Cost = \$25,297,839
	605789	Boston	Boston	BOSTON- RECONSTRUCTION OF MELNEA CASS BOULEVARD	6	HPP	\$ 2,703,983	\$ 2,163,186	\$ 540,797	Construction; HPP 756 (MA126); STP+Earmarks Total Cost = \$25,297,839
	605789	Boston	Boston	BOSTON- RECONSTRUCTION OF MELNEA CASS BOULEVARD	6	HPP	\$ 6,259,219	\$ 5,007,375	\$ 1,251,844	Construction; (MA154); STP+Earmarks Total Cost = \$25,297,839
	605789	Boston	Boston	BOSTON- RECONSTRUCTION OF MELNEA CASS BOULEVARD	6	HPP	\$ 3,473,764	\$ 2,779,011	\$ 694,753	Construction; (MA194); STP+Earmarks Total Cost = \$25,297,839
Other Federal Aid Subtotal ►							\$ 17,444,340	\$ 13,955,472	\$ 3,488,868	◀ Funding Split Varies by Funding Source

► Section 1D / Federal Aid Major & State Category Projects

► Regional Major Infrastructure

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Regional Major Infrastructure Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Statewide Americans with Disability Act Implementation Plan

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide ADA Implementation Plan Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Statewide Congestion Mitigation and Air Quality

	607888	Boston	MULTIPLE	BOSTON- BROOKLINE- MULTI-USE PATH CONSTRUCTION ON NEW FENWAY	6	CMAQ	\$ 1,838,827	\$ 1,471,062	\$ 367,765	
Statewide CMAQ Subtotal ►							\$ 1,838,827	\$ 1,471,062	\$ 367,765	◀ 80% Federal + 20% Non-Federal

► Statewide HSIP Program

	607759	Boston	BOSTON	BOSTON- INTERSECTION & SIGNAL IMPROVEMENTS AT THE VFW PARKWAY & SPRING STREET	6	HSIP	\$ 594,000	\$ 534,600	\$ 59,400	
	607763	Boston	MILTON	MILTON- INTERSECTION & SIGNAL IMPROVEMENTS AT 2 LOCATIONS: SR 138 (BLUE HILL AVENUE) AT ATHERTON STREET & BRADLEE ROAD AND SR 138 (BLUE HILL AVENUE) AT MILTON STREET & DOLLAR LANE	6	HSIP	\$ 1,188,000	\$ 1,069,200	\$ 118,800	
	608052	Boston	NORWOOD	NORWOOD- INTERSECTION & SIGNAL IMPROVEMENTS AT US 1 (PROVIDENCE HIGHWAY) & MORSE STREET	5	HSIP	\$ 594,000	\$ 534,600	\$ 59,400	
	608205	Boston	MULTIPLE	READING TO LYNNFIELD- GUIDE AND TRAFFIC SIGN REPLACEMENT ON A SECTION OF I-95 (SR 128)	4	HSIP	\$ 4,686,876	\$ 4,218,188	\$ 468,688	
	608206	Boston	MULTIPLE	CHELSEA TO DANVERS- GUIDE AND TRAFFIC SIGN REPLACEMENT ON A SECTION OF US ROUTE 1	4	HSIP	\$ 7,471,818	\$ 6,724,636	\$ 747,182	
Statewide HSIP Program Subtotal ►							\$ 14,534,694	\$ 13,081,225	\$ 1,453,469	◀ 90% Federal + 10% Non-Federal

► Statewide Infrastructure Program

	608608	Boston	BRAINTREE	Braintree - Highway Lighting Improvements at I-93/ Route 3 Interchange	6	STP	\$ 7,500,000	\$ 6,000,000	\$ 1,500,000	AC Year 1 of 2. Total Cost = \$9,697,229.16.
Statewide Infrastructure Program Subtotal ►							\$ 7,500,000	\$ 6,000,000	\$ 1,500,000	◀ 80% Federal + 20% Non-Federal

► Statewide Interstate Maintenance Program

	608219	Boston	MULTIPLE	READING- WAKEFIELD- INTERSTATE MAINTENANCE AND RELATED WORK ON I-95	4	NHPP	\$ 4,717,440	\$ 4,245,696	\$ 471,744	
Statewide Interstate Maintenance Program Subtotal ►							\$ 4,717,440	\$ 4,245,696	\$ 471,744	◀ 90% Federal + 10% Non-Federal

2019 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Statewide Intelligent Transportation Systems										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide ITS Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide National Freight Program										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide National Freight Program Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide National Highway System Preservation Program										
	608467	Boston	MULTIPLE	MARLBOROUGH- SUDBURY- RESURFACING AND RELATED WORK ON ROUTE 20	3	NHPP	\$ 10,681,200	\$ 8,544,960	\$ 2,136,240	
	608468	Boston	MULTIPLE	PEABODY- DANVERS- RESURFACING AND RELATED WORK ON ROUTE 1	4	NHPP	\$ 13,016,160	\$ 10,412,928	\$ 2,603,232	
Statewide NHS Preservation Program Subtotal ►							\$ 23,697,360	\$ 18,957,888	\$ 4,739,472	◀ 80% Federal + 20% Non-Federal
► Statewide Planning Program										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Planning Program Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide Railroad Grade Crossings										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide RR Grade Crossings Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide Safe Routes to Schools Program										
				No Projects Programmed		SRTS	\$ -	\$ -	\$ -	
				No Projects Programmed		SRTS	\$ -	\$ -	\$ -	
Statewide Safe Routes to Schools Program Subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Statewide Stormwater Retrofits										
	608214	Boston	WINCHESTER	WINCHESTER- STORMWATER IMPROVEMENTS ALONG ROUTE 3	4	STP-TE	\$ 241,920	\$ 193,536	\$ 48,384	
	608599	Boston	MULTIPLE	CANTON-FOXBOROUGH-NORWOOD-WALPOLE- STORMWATER IMPROVEMENTS ALONG ROUTE 1, ROUTE 1A, AND INTERSTATE 95	5	STP-TE	\$ 506,000	\$ 404,800	\$ 101,200	
Statewide Stormwater Retrofits Subtotal ►							\$ 747,920	\$ 598,336	\$ 149,584	◀ 80% Federal + 20% Non-Federal
► Statewide Transportation Enhancements										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Transportation Enhancements Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Other Statewide Items										
				ABP GANS Repayment			\$ -	\$ -	\$ -	
				Award Adjustments, Change Orders, Project Value Changes, Etc.			\$ -	\$ -	\$ -	
				DBEs, FAPO, Pavement Lab Retrofits, and Misc. Programs			\$ -	\$ -	\$ -	
				Planning			\$ -	\$ -	\$ -	
				Statewide Design and Right of Way			\$ -	\$ -	\$ -	
				Statewide Recreational Trails			\$ -	\$ -	\$ -	
Other Statewide Items Subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

2019 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 2A / Non-Federal Projects

► Non Federal Aid

				No Projects Programmed		NFA	\$ -		\$ -	
				No Projects Programmed		NFA	\$ -		\$ -	
Non-Federal Aid Subtotal►							\$ -		\$ -	◀100% Non-Federal

► Section 2B / Non-Federal Bridge Projects

► Section 2B / Non-Federal Bridge Projects

				No Projects Programmed		NFA	\$ -		\$ -	
				No Projects Programmed		NFA	\$ -		\$ -	
Section 2B / Non-Federal Bridge Projects Subtotal►							\$ -		\$ -	◀100% Non-Federal

2019 Boston Region MPO TIP Summary

	TIP Section 1: ▼	TIP Section 2: ▼	Total of All Projects ▼	
Total ►	\$ 223,714,161	\$ -	\$ 223,714,161	◀ Total Spending in Region
Federal Funds ►	\$ 181,405,167	\$ -	\$ 181,405,167	◀ Total Federal Spending in Region
Non-Federal Funds ►	\$ 42,308,994	\$ -	\$ 42,308,994	◀ Total Non-Federal Spending in Region

701 CMR 7.00 Use of Road Flaggers and Police Details on Public Works Projects / 701 CMR 7.00 (the Regulation) was promulgated and became law on October 3, 2008. Under this Regulation, the CMR is applicable to any Public works Project that is performed within the limits of, or that impact traffic on, any Public Road. The Municipal Limitation referenced in this Regulation is applicable only to projects where the Municipality is the Awarding Authority. For all projects contained in the TIP, the Commonwealth is the Awarding Authority. Therefore, all projects must be considered and implemented in accordance with 701 CMR 7.00, and the Road Flagger and Police Detail Guidelines. By placing a project on the TIP, the Municipality acknowledges that 701 CMR 7.00 is applicable to its project and design and construction will be fully compliant with this Regulation. This information, and additional information relative to guidance and implementation of the Regulation can be found at the following link on the MassDOT Highway Division website: <http://www.massdot.state.ma.us/Highway/flaggers/main.aspx>

Boston Region MPO Transportation Improvement Program (TIP)

Project List (FY2019)

FTA Program	Number	Transit Agency	Item	Project Description	(unobligated)	Federal Funds	Funds	TDC	Local Funds	Total Cost
5307										
	5307 RTD0004370	Cape Ann Transportation Authority	117A00	PREVENTIVE MAINTENANCE	2018 - \$350,000	\$350,000	\$0	\$0	\$87,500	\$437,500
	5307 RTD0004376	Cape Ann Transportation Authority	114206	ACQUIRE - SHOP EQ/COMPUTER/SFTWR	2018 - \$44,000	\$44,000	\$11,000	\$0	\$0	\$55,000
	5307 RTD0004377	Cape Ann Transportation Authority	114220	ACQUIRE - MISC SUPPORT EQUIPMENT	2018 - \$30,055	\$30,055	\$7,514	\$0	\$0	\$37,569
				TERMINAL, INTERMODAL (TRANSIT): Facil.						
	5307 RTD0004883	MetroWest Regional Transit Authority	113303	Improvements	2018 - \$150,000	\$150,000	\$37,500	\$0	\$0	\$187,500
	5307 RTD0004884	MetroWest Regional Transit Authority	117C00	NON FIXED ROUTE ADA PARA SERV	2018 - \$1,300,000	\$1,300,000	\$325,000	\$0	\$0	\$1,625,000
				ACQUISITION OF BUS SUPPORT						
	5307 RTD0004885	MetroWest Regional Transit Authority	114200	EQUIP/FACILITIES	2018 - \$248,415	\$248,415	\$62,104	\$0	\$0	\$310,519
	5307 RTD0004886	MetroWest Regional Transit Authority	440000	Mobility Management	2018 - \$25,000	\$25,000	\$6,250	\$0	\$0	\$31,250
				ACQUISITION OF BUS SUPPORT						
	5307 RTD0004862	Massachusetts Bay Transportation Authority (MBTA)	117A00	PREVENTIVE MAINTENANCE		\$12,000,000	\$0	\$0	\$3,000,000	\$15,000,000
				Massachusetts Bay Transportation Authority (MBTA)						
	5307 RTD0004863	Massachusetts Bay Transportation Authority (MBTA)	119400	Systems Upgrades		\$58,685,516	\$0	\$0	\$14,671,379	\$73,356,895
				Subtotal		\$72,832,986	\$449,368	\$0	\$17,758,879	\$91,041,233
5309										
				GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE						
	5309 RTD0004872	Massachusetts Bay Transportation Authority (MBTA)	132303	UNION SQUARE SPUR		\$150,000,000	\$0	\$0	\$26,196,000	\$176,196,000
				Subtotal		\$150,000,000	\$0	\$0	\$26,196,000	\$176,196,000
5310										
				Subtotal		\$0	\$0	\$0	\$0	\$0
5311										
				Subtotal		\$0	\$0	\$0	\$0	\$0
5337										
	5337 RTD0004864	Massachusetts Bay Transportation Authority (MBTA)	112204	Bridge & Tunnel Program		\$60,000,000	\$0	\$0	\$15,000,000	\$75,000,000
				Massachusetts Bay Transportation Authority (MBTA)						
	5337 RTD0004865	Massachusetts Bay Transportation Authority (MBTA)	119400	Systems Upgrades		\$61,190,546	\$0	\$0	\$15,297,637	\$76,488,183
				Subtotal		\$121,190,546	\$0	\$0	\$30,297,637	\$151,488,183
5339										
	5339 RTD0004866	Massachusetts Bay Transportation Authority (MBTA)	119400	Systems Upgrades		\$5,287,027	\$0	\$0	\$1,321,757	\$6,608,784
				Subtotal		\$5,287,027	\$0	\$0	\$1,321,757	\$6,608,784
5320										
				Subtotal		\$0	\$0	\$0	\$0	\$0
Other Federal										
				Subtotal		\$0	\$0	\$0	\$0	\$0
Other Non-Federal										
				Subtotal		\$0	\$0	\$0	\$0	\$0
				Total		\$349,310,559	\$449,368	\$0	\$75,574,273	\$425,334,200

Funds listed under the Carry Over column are included in the Federal Amount

2020 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 1A / Federal Aid Target Projects

► HSIP - Highway Safety Improvement Program

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
HSIP Subtotal ►							\$ -	\$ -	\$ -	◀ 90% Federal + 10% Non-Federal

► CMAQ - Congestion Mitigation and Air Quality Improvement Program

	1570	Boston	Multiple	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	CMAQ	\$ 13,427,220	\$ 10,741,776	\$ 2,685,444	funding flexed to FTA; match provided by local contributions; STP+CMAQ+Section 5309 (Transit)
	604123	Boston	Ashland	ASHLAND- RECONSTRUCTION ON ROUTE 126 (POND STREET), FROM THE FRAMINGHAM T.L. TO THE HOLLISTON T.L.	3	CMAQ	\$ 1,000,000	\$ 800,000	\$ 200,000	STP+CMAQ+TAP Total Cost = \$15,532,405
	602077	Boston	Lynn	LYNN- RECONSTRUCTION ON ROUTE 129 (LYNNFIELD STREET), FROM GREAT WOODS ROAD TO WYOMA SQUARE	4	CMAQ	\$ 1,000,000	\$ 800,000	\$ 200,000	CMAQ+STP Total Cost = \$4,953,270
	602261	Boston	Walpole	WALPOLE- RECONSTRUCTION ON ROUTE 1A (MAIN STREET), FROM THE NORWOOD T.L. TO ROUTE 27, INCLUDES W-03-024 OVER THE NEPONSET RIVER	5	CMAQ	\$ 1,000,000	\$ 800,000	\$ 200,000	STP+CMAQ+TAP Total Cost = \$18,584,373
	606453	Boston	Boston	BOSTON- IMPROVEMENTS ON BOYLSTON STREET, FROM INTERSECTION OF BROOKLINE AVENUE & PARK DRIVE TO IPSWICH STREET	6	CMAQ	\$ 1,000,000	\$ 800,000	\$ 200,000	CMAQ+TAP+STP Total Cost = \$8,214,319
CMAQ Subtotal ►							\$ 17,427,220	\$ 13,941,776	\$ 3,485,444	◀ 80% Federal + 20% Non-Federal

► TAP - Transportation Alternatives Program

	604123	Boston	Ashland	ASHLAND- RECONSTRUCTION ON ROUTE 126 (POND STREET), FROM THE FRAMINGHAM T.L. TO THE HOLLISTON T.L.	3	TAP	\$ 2,106,481	\$ 1,685,185	\$ 421,296	STP+CMAQ+TAP Total Cost = \$15,532,405
	602261	Boston	Walpole	WALPOLE- RECONSTRUCTION ON ROUTE 1A (MAIN STREET), FROM THE NORWOOD T.L. TO ROUTE 27, INCLUDES W-03-024 OVER THE NEPONSET RIVER	5	TAP	\$ 1,858,437	\$ 1,486,750	\$ 371,687	STP+CMAQ+TAP Total Cost = \$18,584,373
	606453	Boston	Boston	BOSTON- IMPROVEMENTS ON BOYLSTON STREET, FROM INTERSECTION OF BROOKLINE AVENUE & PARK DRIVE TO IPSWICH STREET	6	TAP	\$ 812,432	\$ 649,946	\$ 162,486	CMAQ+TAP+STP Total Cost = \$8,214,319
TAP Subtotal ►							\$ 4,777,350	\$ 3,821,880	\$ 955,470	◀ 80% Federal + 20% Non-Federal

► Non-CMAQ/HSIP/TAP (Other)

	1570	Boston	Multiple	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	STP	\$ 26,572,780	\$ 21,258,224	\$ 5,314,556	funding flexed to FTA; match provided by local contributions; STP+CMAQ+Section 5309 (Transit)
	604123	Boston	Ashland	ASHLAND- RECONSTRUCTION ON ROUTE 126 (POND STREET), FROM THE FRAMINGHAM T.L. TO THE HOLLISTON T.L.	3	STP	\$ 12,425,924	\$ 9,940,739	\$ 2,485,185	STP+CMAQ+TAP Total Cost = \$15,532,405
	602077	Boston	Lynn	LYNN- RECONSTRUCTION ON ROUTE 129 (LYNNFIELD STREET), FROM GREAT WOODS ROAD TO WYOMA SQUARE	4	STP	\$ 3,953,270	\$ 3,162,616	\$ 790,654	CMAQ+STP Total Cost = \$4,953,270
	602261	Boston	Walpole	WALPOLE- RECONSTRUCTION ON ROUTE 1A (MAIN STREET), FROM THE NORWOOD T.L. TO ROUTE 27, INCLUDES W-03-024 OVER THE NEPONSET RIVER	5	STP	\$ 15,725,936	\$ 12,580,749	\$ 3,145,187	STP+CMAQ+TAP Total Cost = \$18,584,373
	606453	Boston	Boston	BOSTON- IMPROVEMENTS ON BOYLSTON STREET, FROM INTERSECTION OF BROOKLINE AVENUE & PARK DRIVE TO IPSWICH STREET	6	STP	\$ 6,401,887	\$ 5,121,510	\$ 1,280,377	CMAQ+TAP+STP Total Cost = \$8,214,319
	606226	Boston	Boston	BOSTON- RECONSTRUCTION OF RUTHERFORD AVENUE, FROM CITY SQUARE TO SULLIVAN SQUARE	6	STP	\$ 7,000,000	\$ 5,600,000	\$ 1,400,000	Yr 1 of 5; TAP+STP+Earmarks Total Cost = \$37,411,459
Non-CMAQ/HSIP/TAP (Other) Subtotal ►							\$ 72,079,797	\$ 57,663,838	\$ 14,415,959	◀ 80% Federal + 20% Non-Federal

2020 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 1A / Fiscal Constraint Analysis

Total Federal Aid Target Funds Programmed ▶	\$ 94,284,367	\$ 94,819,913	◀ Total Target	\$ 535,546	Target Funds Available
Total Non-CMAQ/HSIP/TAP (Other) Programmed ▶	\$ 72,079,797	\$ -	◀ Max. Non-CMAQ/HSIP/TAP	\$ (75,986,775)	Non-CMAQ/HSIP/TAP (Other) Exceeds Maximum
Total HSIP Programmed ▶	\$ -	\$ 4,296,710	◀ Min. HSIP	\$ 4,296,710	HSIP Recommended Not Met
Total CMAQ Programmed ▶	\$ 17,427,220	\$ 10,741,776	◀ Min. CMAQ	\$ (6,685,444)	CMAQ Recommended Met
Total TAP Programmed ▶	\$ 4,777,350	\$ 3,259,106	◀ Min. TAP	\$ (1,518,244)	TAP Requirement Exceeded!

HSIP, CMAQ, TAP Overprogrammed \$ (3,906,978)

► Section 1B / Federal Aid Bridge Projects

► Statewide Systematic Maintenance Program

608609	Boston	MULTIPLE	NEWTON - WESTWOOD, BRIDGE NO. N-12-0056 AND W-31-006: CLEA AND PAIT STRUCTURAL STEEL	6	NHPP	\$ 2,400,000	\$ 1,920,000	\$ 480,000		
608596	Boston	ESSEX	ESSEX- BRIDGE PRESERVATION, E-11-001, ROUTE 133/MAIN STREET OVER ESSEX RIVER	4	NHPP	\$ 2,688,000	\$ 2,150,400	\$ 537,600		
Statewide Bridge Maintenance Program Subtotal ▶							\$ 5,088,000	\$ 4,070,400	\$ 1,017,600	◀ 80% Federal + 20% Non-Federal

► On System

604173	Boston	BOSTON	BOSTON- BRIDGE REHABILITATION, B-16-016, NORTH WASHINGTON STREET OVER THE BOSTON INNER HARBOR	6	NHPP	\$ 24,900,000	\$ 19,920,000	\$ 4,980,000	AC YR 4 of 5, YOY \$112,400,000	
608009	Boston	BOXBOROUGH	BOXBOROUGH- BRIDGE REPLACEMENT, B-18-002, ROUTE 111 OVER I-495	3	NHPP	\$ 8,000,000	\$ 6,400,000	\$ 1,600,000	AC YR 1 of 2. Total Cost = 14,295,000	
608097	Boston	WOBURN	WOBURN- BRIDGE REPLACEMENT & RELATED WORK, W-43-028, WASHINGTON STREET OVER I-95	4	NHPP	\$ 14,000,000	\$ 11,200,000	\$ 2,800,000		
605342	Boston	STOW	STOW - BRIDGE REPLACEMENT, S-29-001, (ST 62) GLEASONDALE ROAD OVER THE ASSABET RIVER	3	NHPP	\$ 6,706,560	\$ 5,365,248	\$ 1,341,312		
608613	Boston	STONEHAM	STONEHAM - BRIDGE REPLACEMENT, S-27-008, MARBLE STREET OVER I-93	4	NHPP	\$ 15,523,120	\$ 12,418,496	\$ 3,104,624		
608614	Boston	BOSTON	BOSTON - SUPERSTRUCTURE REPLACEMENT, B-16-179, AUSTIN STREET OVER I-93 RAMPS, MBTA COMMUTER RAIL AND ORANGE LINE	6	NHPP	\$ 19,673,600	\$ 15,738,880	\$ 3,934,720		
On System Subtotal ▶							\$ 88,803,280	\$ 71,042,624	\$ 17,760,656	◀ 80% Federal + 20% Non-Federal

► Off-System

			No Projects Programmed			\$ -	\$ -	\$ -		
			No Projects Programmed			\$ -	\$ -	\$ -		
Off-System Subtotal ▶							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Statewide Bridge Inspection Program

			No Projects Programmed			\$ -	\$ -	\$ -		
			No Projects Programmed			\$ -	\$ -	\$ -		
Statewide Bridge Inspection Program Subtotal ▶							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Section 1C / Federal Aid Non-Target Projects

► Other Federal Aid

			No Projects Programmed			\$ -	\$ -	\$ -		
			No Projects Programmed			\$ -	\$ -	\$ -		
Other Federal Aid Subtotal ▶							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

2020 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 1D / Federal Aid Major & State Category Projects

► Regional Major Infrastructure

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Regional Major Infrastructure Subtotal ►							\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal

► Statewide Americans with Disability Act Implementation Plan

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide ADA Implementation Plan Subtotal ►							\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal

► Statewide Congestion Mitigation and Air Quality

	607329	Boston	MULTIPLE	WAKEFIELD- LYNNFIELD- RAIL TRAIL EXTENSION, FROM THE GALVIN MIDDLE SCHOOL TO LYNNFIELD/PEABODY T.L.	4	CMAQ	\$ 7,084,000	\$ 5,667,200	\$ 1,416,800	
Statewide CMAQ Subtotal ►							\$ 7,084,000	\$ 5,667,200	\$ 1,416,800	◄ 80% Federal + 20% Non-Federal

► Statewide HSIP Program

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide HSIP Program Subtotal ►							\$ -	\$ -	\$ -	◄ 90% Federal + 10% Non-Federal

► Statewide Infrastructure Program

	608611	Boston	MULTIPLE	CANTON-MILTON-RANDOLPH, REPLACEMENT AND REHABILITATION OF THE HIGHWAY LIGHTING SYSTEM AT THE ROUTE 24/ROUTE1/I-93 INTERCHANGE.	6	STP	\$ 9,591,791	\$ 7,757,783	\$ 1,834,008	
	608608	Boston	BRAINTREE	BRAINTREE - HIGHWAY LIGHTING IMPROVEMENTS AT I-93/ ROUTE 3 INTERCHANGE	6	STP	\$ 2,197,229	\$ 1,757,783	\$ 439,446	AC Year 2 of 2. Total Cost = \$9,697,229.16.
	607977	Boston	MULTIPLE	HOPKINTON- WESTBOROUGH- RECONSTRUCTION OF I-90/I-495 INTERCHANGE	3	NHPP	\$ 1,000,000	\$ 800,000	\$ 200,000	AC YEAR 1 OF 5. \$269M total cost. \$161.4M TFPC, 107.6M NFA.
Statewide Infrastructure Program Subtotal ►							\$ 12,789,020	\$ 10,315,567	\$ 2,473,454	◄ 80% Federal + 20% Non-Federal

► Statewide Interstate Maintenance Program

	608208	Boston	MULTIPLE	QUINCY- MILTON- BOSTON- INTERSTATE MAINTENANCE & RELATED WORK ON I-93	6	NHPP	\$20,123,712	\$18,111,341	\$2,012,371	IM + Stormwater = \$20,625,472
Statewide Interstate Maintenance Program Subtotal ►							\$ 20,123,712	\$ 18,111,341	\$ 2,012,371	◄ 90% Federal + 10% Non-Federal

► Statewide Intelligent Transportation Systems

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide ITS Subtotal ►							\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal

► Statewide National Freight Program

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide National Freight Program Subtotal ►							\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal

2020 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Statewide National Highway System Preservation Program										
	608478	Boston	CONCORD	CONCORD- RESURFACING AND RELATED WORK ON ROUTE 2	4	NHPP	\$ 5,241,600	\$ 4,193,280	\$ 1,048,320	
	608480	Boston	FOXBOROUGH	FOXBOROUGH- WALPOLE- RESURFACING AND RELATED WORK ON ROUTE 1	5	NHPP	\$ 8,578,080	\$ 6,862,464	\$ 1,715,616	
	608482	Boston	MULTIPLE	CAMBRIDGE- SOMERVILLE- RESURFACING AND RELATED WORK ON ROUTE 28	6	NHPP	\$ 7,843,920	\$ 6,275,136	\$ 1,568,784	
	608483	Boston	WEYMOUTH	WEYMOUTH- RESURFACING AND RELATED WORK ON ROUTE 3A	6	NHPP	\$ 2,576,000	\$ 2,060,800	\$ 515,200	
Statewide NHS Preservation Program Subtotal ►							\$ 24,239,600	\$ 19,391,680	\$ 4,847,920	◀ 80% Federal + 20% Non-Federal
► Statewide Planning Program										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Planning Program Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide Railroad Grade Crossings										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide RR Grade Crossings Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide Safe Routes to Schools Program										
				No Projects Programmed		SRTS	\$ -	\$ -	\$ -	
				No Projects Programmed		SRTS	\$ -	\$ -	\$ -	
Statewide Safe Routes to Schools Program Subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Statewide Stormwater Retrofits										
	608208	Boston	MULTIPLE	QUINCY- MILTON- BOSTON- INTERSTATE MAINTENANCE & RELATED WORK ON I-93	6	STP-TE	\$ 501,760	\$ 401,408	\$ 100,352	IM + Stormwater = \$20,625,472
Statewide Stormwater Retrofits Subtotal ►							\$ 501,760	\$ 401,408	\$ 100,352	◀ 80% Federal + 20% Non-Federal
► Statewide Transportation Enhancements										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Transportation Enhancements Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Other Statewide Items										
				ABP GANS Repayment			\$ -	\$ -	\$ -	
				Award Adjustments, Change Orders, Project Value Changes, Etc.			\$ -	\$ -	\$ -	
				DBEs, FAPO, Pavement Lab Retrofits, and Misc. Programs			\$ -	\$ -	\$ -	
				Planning			\$ -	\$ -	\$ -	
				Statewide Design and Right of Way			\$ -	\$ -	\$ -	
				Statewide Recreational Trails			\$ -	\$ -	\$ -	
Other Statewide Items Subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Section 2A / Non-Federal Projects										
► Non Federal Aid										
				No Projects Programmed			\$ -	\$ -	\$ -	
Non-Federal Aid Subtotal ►							\$ -	\$ -	\$ -	◀ 100% Non-Federal

2020 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 2B / Non-Federal Bridge Projects

► Section 2B / Non-Federal Bridge Projects

				No Projects Programmed		NFA	\$ -		\$ -	
				No Projects Programmed		NFA	\$ -		\$ -	
Section 2B / Non-Federal Bridge Projects Subtotal►							\$ -		\$ -	◀100% Non-Federal

2020 Boston Region MPO TIP Summary

	TIP Section 1: ▼	TIP Section 2: ▼	Total of All Projects ▼	
Total ►	\$ 252,913,739	\$ -	\$ 252,913,739	◀ Total Spending in Region
Federal Funds ►	\$ 204,427,713		\$ 204,427,713	◀ Total Federal Spending in Region
Non-Federal Funds ►	\$ 48,486,026	\$ -	\$ 48,486,026	◀ Total Non-Federal Spending in Region

701 CMR 7.00 Use of Road Flaggers and Police Details on Public Works Projects / 701 CMR 7.00 (the Regulation) was promulgated and became law on October 3, 2008. Under this Regulation, the CMR is applicable to any Public works Project that is performed within the limits of, or that impact traffic on, any Public Road. The Municipal Limitation referenced in this Regulation is applicable only to projects where the Municipality is the Awarding Authority. For all projects contained in the TIP, the Commonwealth is the Awarding Authority. Therefore, all projects must be considered and implemented in accordance with 701 CMR 7.00, and the Road Flagger and Police Detail Guidelines. By placing a project on the TIP, the Municipality acknowledges that 701 CMR 7.00 is applicable to its project and design and construction will be fully compliant with this Regulation. This information, and additional information relative to guidance and implementation of the Regulation can be found at the following link on the MassDOT Highway Division website: <http://www.massdot.state.ma.us/Highway/flaggers/main.aspx>

Boston Region MPO Transportation Improvement Program (TIP)

Project List (FY2020)

FTA Program	Number	Transit Agency	Item	Project Description	(unobligated)	Federal Funds	Funds	TDC	Local Funds	Total Cost
5307										
	5307 RTD0004380	Cape Ann Transportation Authority	117A00	PREVENTIVE MAINTENANCE	2019 - \$350,000	\$350,000	\$0	\$0	\$87,500	\$437,500
	5307 RTD0004986	Cape Ann Transportation Authority		114206 ACQUIRE - SHOP EQ/COMP/SFTWR	2019 - \$40,000	\$40,000	\$10,000	\$0	\$0	\$50,000
	5307 RTD0004982	Cape Ann Transportation Authority		114220 ACQUIRE - MISC SUPPORT EQUIPMENT	2019 - \$11,296	\$11,296	\$2,824	\$0	\$0	\$14,120
	5307 RTD0004887	MetroWest Regional Transit Authority		114200 EQUIP/FACILITIES	2019 - \$248,415	\$248,415	\$62,104	\$0	\$0	\$310,519
	5307 RTD0004888	MetroWest Regional Transit Authority		440000 Mobility Management	2019 - \$25,000	\$25,000	\$6,250	\$0	\$0	\$31,250
	5307 RTD0004889	MetroWest Regional Transit Authority	117C00	NON FIXED ROUTE ADA PARA SERV	2019 - \$1,300,000	\$1,300,000	\$325,000	\$0	\$0	\$1,625,000
	5307 RTD0004890	MetroWest Regional Transit Authority		113303 TERMINAL, INTERMODAL (TRANSIT)	2019 - \$150,000	\$150,000	\$37,500	\$0	\$0	\$187,500
	5307 RTD0005413	Massachusetts Bay Transportation Authority (MBTA)		119400 Revenue Vehicles Program		\$144,557,710	\$0	\$0	\$36,139,428	\$180,697,138
				Subtotal		\$146,682,421	\$443,678	\$0	\$36,226,928	\$183,353,027
5309										
	5309 RTD0005419	Massachusetts Bay Transportation Authority (MBTA)		132303 Green Line Extension Project	2019 - \$150,000,000	\$150,000,000	\$0	\$0	\$100,000,000	\$250,000,000
				Subtotal		\$150,000,000	\$0	\$0	\$100,000,000	\$250,000,000
5310										
				Subtotal		\$0	\$0	\$0	\$0	\$0
5311										
				Subtotal		\$0	\$0	\$0	\$0	\$0
5337										
	5337 RTD0005414	Massachusetts Bay Transportation Authority (MBTA)		119400 Systems Upgrades		\$145,271,551	\$0	\$0	\$36,317,888	\$181,589,439
				Subtotal		\$145,271,551	\$0	\$0	\$36,317,888	\$181,589,439
5339										
	5339 RTD0005415	Massachusetts Bay Transportation Authority (MBTA)		119400 Systems Upgrades		\$5,799,449	\$0	\$0	\$1,449,862	\$7,249,311
				Subtotal		\$5,799,449	\$0	\$0	\$1,449,862	\$7,249,311
5320										
				Subtotal		\$0	\$0	\$0	\$0	\$0
Other Federal										
				Subtotal		\$0	\$0	\$0	\$0	\$0
Other Non-Federal										
				Subtotal		\$0	\$0	\$0	\$0	\$0
				Total		\$447,753,421	\$443,678	\$0	\$173,994,678	\$622,191,777

Funds listed under the Carry Over column are included in the Federal Amount

2021 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 1A / Federal Aid Target Projects

► HSIP - Highway Safety Improvement Program

	608228	Boston	Framingham	FRAMINGHAM- RECONSTRUCTION OF UNION AVENUE, FROM PROCTOR STREET TO MAIN STREET	3	HSIP	\$ 1,509,587	\$ 1,358,628	\$ 150,959	STP+HSIP+TAP Total Cost = \$10,063,912
	605857	Boston	Norwood	NORWOOD- INTERSECTION IMPROVEMENTS @ ROUTE 1 & UNIVERSITY AVENUE/EVERETT STREET	5	HSIP	\$ 631,724	\$ 568,552	\$ 63,172	HSIP+CMAQ+STP Total Cost = \$6,317,236
	608347	Boston	Beverly	BEVERLY- INTERSECTION IMPROVEMENTS @ 3 LOCATIONS: CABOT STREET (ROUTE 1A/97) @ DODGE STREET (ROUTE 1A), COUNTY WAY, LONGMEADOW ROAD & SCOTT STREET, MCKAY STREET @ BALCH STREET & VETERANS MEMORIAL BRIDGE (ROUTE 1A) AT RANTOUL, CABOT, WATER & FRONT STREETS	4	HSIP	\$ 2,339,729	\$ 2,105,756	\$ 233,973	HSIP+CMAQ Total Cost = \$3,509,576
HSIP Subtotal ►							\$ 4,481,040	\$ 4,032,936	\$ 448,104	◀ 90% Federal + 10% Non-Federal

► CMAQ - Congestion Mitigation and Air Quality Improvement Program

	BN0001	Boston	Multiple	Community Transportation Program	N/A	CMAQ	\$ 1,750,000	\$ 1,400,000	\$ 350,000	
	1570	Boston	Multiple	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	CMAQ	\$ 10,000,000	\$ 8,000,000	\$ 2,000,000	funding flexed to FTA; match provided by local contributions; STP+CMAQ+Section 5309 (Transit)
	605857	Boston	Norwood	NORWOOD- INTERSECTION IMPROVEMENTS @ ROUTE 1 & UNIVERSITY AVENUE/EVERETT STREET	5	CMAQ	\$ 3,000,000	\$ 2,400,000	\$ 600,000	HSIP+CMAQ+STP Total Cost = \$6,317,236
	608347	Boston	Beverly	BEVERLY- INTERSECTION IMPROVEMENTS @ 3 LOCATIONS: CABOT STREET (ROUTE 1A/97) @ DODGE STREET (ROUTE 1A), COUNTY WAY, LONGMEADOW ROAD & SCOTT STREET, MCKAY STREET @ BALCH STREET & VETERANS MEMORIAL BRIDGE (ROUTE 1A) AT RANTOUL, CABOT, WATER & FRONT STREETS	4	CMAQ	\$ 1,169,847	\$ 935,878	\$ 233,969	HSIP+CMAQ Total Cost = \$3,509,576
CMAQ Subtotal ►							\$ 15,919,847	\$ 12,735,878	\$ 3,183,969	◀ 80% Federal + 20% Non-Federal

► TAP - Transportation Alternatives Program

	608228	Boston	Framingham	FRAMINGHAM- RECONSTRUCTION OF UNION AVENUE, FROM PROCTOR STREET TO MAIN STREET	3	TAP	\$ 1,006,391	\$ 805,113	\$ 201,278	STP+HSIP+TAP Total Cost = \$10,063,912
	606501	Boston	Holbrook	HOLBROOK- RECONSTRUCTION OF UNION STREET (ROUTE 139), FROM LINFIELD STREET TO CENTRE STREET/WATER STREET	5	TAP	\$ 289,088	\$ 231,270	\$ 57,818	TAP+STP+Earmark Total Cost = \$2,890,880
	606226	Boston	Boston	BOSTON- RECONSTRUCTION OF RUTHERFORD AVENUE, FROM CITY SQUARE TO SULLIVAN SQUARE	6	TAP	\$ 2,183,253	\$ 1,746,602	\$ 436,651	Yr 2 of 5; TAP+STP+Earmarks Total Cost = \$37,411,459
TAP Subtotal ►							\$ 3,478,732	\$ 2,782,986	\$ 695,746	◀ 80% Federal + 20% Non-Federal

2021 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Non-CMAQ/HSIP/TAP (Other)										
	1570	Boston	Multiple	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	STP	\$ 22,000,000	\$ 17,600,000	\$ 4,400,000	funding flexed to FTA; match provided by local contributions; STP+CMAQ+Section 5309 (Transit)
	606226	Boston	Boston	BOSTON- RECONSTRUCTION OF RUTHERFORD AVENUE, FROM CITY SQUARE TO SULLIVAN SQUARE	6	STP	\$ 19,649,276	\$ 15,719,421	\$ 3,929,855	Yr 2 of 5; TAP+STP+Earmarks Total Cost = \$37,411,459
	604996	Boston	Woburn	WOBURN- BRIDGE REPLACEMENT, W-43-017, NEW BOSTON STREET OVER MBTA	4	STP	\$ 17,784,392	\$ 14,227,514	\$ 3,556,878	
	608228	Boston	Framingham	FRAMINGHAM- RECONSTRUCTION OF UNION AVENUE, FROM PROCTOR STREET TO MAIN STREET	3	STP	\$ 7,547,934	\$ 6,038,347	\$ 1,509,587	STP+HSIP+TAP Total Cost = \$10,063,912
	605857	Boston	Norwood	NORWOOD- INTERSECTION IMPROVEMENTS @ ROUTE 1 & UNIVERSITY AVENUE/EVERETT STREET	5	STP	\$ 2,685,512	\$ 2,148,410	\$ 537,102	HSIP+CMAQ+STP Total Cost = \$6,317,236
	606501	Boston	Holbrook	HOLBROOK- RECONSTRUCTION OF UNION STREET (ROUTE 139), FROM LINFIELD STREET TO CENTRE STREET/WATER STREET	5	STP	\$ 1,074,542	\$ 859,634	\$ 214,908	TAP+STP+Earmark Total Cost = \$2,890,880
Non-CMAQ/HSIP/TAP (Other) Subtotal ►							\$ 70,741,656	\$ 56,593,325	\$ 14,148,331	◀ 80% Federal + 20% Non-Federal

► Section 1A / Fiscal Constraint Analysis

Total Federal Aid Target Funds Programmed ►	\$ 94,621,275	\$ 94,819,913	◀ Total Target	\$ 198,638	Target Funds Available
Total Non-CMAQ/HSIP/TAP (Other) Programmed ►	\$ 70,741,656		◀ Max. Non-CMAQ/HSIP/TAP	\$ (76,586,668)	Non-CMAQ/HSIP/TAP (Other) Exceeds Maximum
Total HSIP Programmed ►	\$ 4,481,040	\$ 4,296,710	◀ Min. HSIP	\$ (184,330)	HSIP Recommended Met
Total CMAQ Programmed ►	\$ 15,919,847	\$ 10,741,776	◀ Min. CMAQ	\$ (5,178,071)	CMAQ Recommended Met
Total TAP Programmed ►	\$ 3,478,732	\$ 2,996,121	◀ Min. TAP	\$ (482,611)	TAP Requirement Exceeded!

HSIP, CMAQ, TAP Overprogrammed \$ (5,845,012)

► Section 1B / Federal Aid Bridge Projects

► Statewide Systematic Maintenance Program

	608610	Boston	NEWTON	NEWTON, BRIDGE NUMBER N-12-055: CLEAN AND PAINT STRUCTURAL STEEL	6	NHPP	\$ 2,308,000	\$ 1,846,400	\$ 461,600	
Statewide Bridge Maintenance Program Subtotal ►							\$ 2,308,000	\$ 1,846,400	\$ 461,600	◀ 80% Federal + 20% Non-Federal

► On System

	604173	Boston	BOSTON	BOSTON- BRIDGE REHABILITATION, B-16-016, NORTH WASHINGTON STREET OVER THE BOSTON INNER HARBOR	6	NHPP	\$ 13,462,044	\$ 10,769,635	\$ 2,692,409	AC YR 5 of 5, YOY \$112,400,000
	608009	Boston	BOXBOROUGH	BOXBOROUGH- BRIDGE REPLACEMENT, B-18-002, ROUTE 111 OVER I-495	3	NHPP	\$ 6,295,000	\$ 5,036,000	\$ 1,259,000	AC YR 2 of 2. Total Cost = 14,295,000
On System Subtotal ►							\$ 19,757,044	\$ 15,805,635	\$ 3,951,409	◀ 80% Federal + 20% Non-Federal

► Off-System

	608637	Boston	MAYNARD	MAYNARD - BRIDGE REPLACEMENT, M-10-006, FLORIDA ROAD OVER ASSABET RIVER	D3	STP-BR-OFF	\$ 1,646,620	\$ 1,317,296	\$ 329,324	
Off-System Subtotal ►							\$ 1,646,620	\$ 1,317,296	\$ 329,324	◀ 80% Federal + 20% Non-Federal

► Statewide Bridge Inspection Program

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Bridge Inspection Program Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

2021 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 1C / Federal Aid Non-Target Projects

► Other Federal Aid

	606501	Boston	Holbrook	HOLBROOK- RECONSTRUCTION OF UNION STREET (ROUTE 139), FROM LINFIELD STREET TO CENTRE STREET/WATER STREET	5	HPP	\$ 1,527,250	\$ 1,221,800	\$ 305,450	Construction; TAP+STP+Earmark (MA177) Total Cost = \$2,890,880
	606226	Boston	Boston	BOSTON- RECONSTRUCTION OF RUTHERFORD AVENUE, FROM CITY SQUARE TO SULLIVAN SQUARE	6	HPP	\$ 126,970	\$ 101,576	\$ 25,394	Construction; (MA183); Yr 2 of 5; TAP+STP+Earmarks Total Cost = \$37,411,459
	606226	Boston	Boston	BOSTON- RECONSTRUCTION OF RUTHERFORD AVENUE, FROM CITY SQUARE TO SULLIVAN SQUARE	6	HPP	\$ 8,451,960	\$ 6,761,568	\$ 1,690,392	Construction; (MA210); Yr 2 of 5; TAP+STP+Earmarks Total Cost = \$37,411,459
Other Federal Aid Subtotal ►							\$ 10,106,180	\$ 8,084,944	\$ 2,021,236	◀ Funding Split Varies by Funding Source

► Section 1D / Federal Aid Major & State Category Projects

► Regional Major Infrastructure

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Regional Major Infrastructure Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Statewide Americans with Disability Act Implementation Plan

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide ADA Implementation Plan Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Statewide Congestion Mitigation and Air Quality

	607901	Boston	DEDHAM	DEDHAM- PEDESTRIAN IMPROVEMENTS ALONG ELM STREET & RUSTCRAFT ROAD CORRIDORS	6	CMAQ	\$ 2,581,113	\$ 2,064,891	\$ 516,223	
Statewide CMAQ Subtotal ►							\$ 2,581,113	\$ 2,064,891	\$ 516,223	◀ 80% Federal + 20% Non-Federal

► Statewide HSIP Program

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide HSIP Program Subtotal ►							\$ -	\$ -	\$ -	◀ 90% Federal + 10% Non-Federal

► Statewide Infrastructure Program

	607977	Boston	MULTIPLE	HOPKINTON- WESTBOROUGH- RECONSTRUCTION OF I-90/I-495 INTERCHANGE	3	NHPP	\$ 37,500,000	\$ 30,000,000	\$ 7,500,000	AC YEAR 2 OF 5, \$269M total cost, \$161.4M TFPC, 107.6M NFA.
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Infrastructure Program Subtotal ►							\$ 37,500,000	\$ 30,000,000	\$ 7,500,000	◀ 80% Federal + 20% Non-Federal

► Statewide Interstate Maintenance Program

	608210	Boston	MULTIPLE	FOXBOROUGH- PLAINVILLE- WRENTHAM- FRANKLIN- INTERSTATE MAINTENANCE & RELATED WORK ON I-495	5	NHPP	\$ 26,680,000	\$ 24,012,000	\$ 2,668,000	
Statewide Interstate Maintenance Program Subtotal ►							\$ 26,680,000	\$ 24,012,000	\$ 2,668,000	◀ 90% Federal + 10% Non-Federal

► Statewide Intelligent Transportation Systems

				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide ITS Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

2021 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Statewide National Freight Program										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide National Freight Program Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide National Highway System Preservation Program										
	608484	Boston	MULTIPLE	CANTON- MILTON- RESURFACING AND RELATED WORK ON ROUTE 138	6	NHPP	\$ 13,766,880	\$ 11,013,504	\$ 2,753,376	
	608476	Boston	SOUTHBOROUGH	SOUTHBOROUGH- RESURFACING AND RELATED WORK ON ROUTE 30	3	NHPP	\$ 2,784,000	\$ 2,227,200	\$ 556,800	
Statewide NHS Preservation Program Subtotal ►							\$ 16,550,880	\$ 13,240,704	\$ 3,310,176	◀ 80% Federal + 20% Non-Federal
► Statewide Planning Program										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Planning Program Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide Railroad Grade Crossings										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide RR Grade Crossings Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide Safe Routes to Schools Program										
				No Projects Programmed		SRTS	\$ -	\$ -	\$ -	
				No Projects Programmed		SRTS	\$ -	\$ -	\$ -	
Statewide Safe Routes to Schools Program Subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Statewide Stormwater Retrofits										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Stormwater Retrofits Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Statewide Transportation Enhancements										
				No Projects Programmed			\$ -	\$ -	\$ -	
				No Projects Programmed			\$ -	\$ -	\$ -	
Statewide Transportation Enhancements Subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Other Statewide Items										
				ABP GANS Repayment			\$ -	\$ -	\$ -	
				Award Adjustments, Change Orders, Project Value Changes, Etc.			\$ -	\$ -	\$ -	
				DBEs, FAPO, Pavement Lab Retrofits, and Misc. Programs			\$ -	\$ -	\$ -	
				Planning			\$ -	\$ -	\$ -	
				Statewide Design and Right of Way			\$ -	\$ -	\$ -	
				Statewide Recreational Trails			\$ -	\$ -	\$ -	
Other Statewide Items Subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Section 2A / Non-Federal Projects										
► Non Federal Aid										
				No Projects Programmed			\$ -	\$ -	\$ -	
Non-Federal Aid Subtotal ►							\$ -	\$ -	\$ -	◀ 100% Non-Federal

2021 Boston Region MPO Transportation Improvement Program

07/28/2016 Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MPO ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
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► Section 2B / Non-Federal Bridge Projects

► Section 2B / Non-Federal Bridge Projects

				No Projects Programmed		NFA	\$ -		\$ -	
				No Projects Programmed		NFA	\$ -		\$ -	
Section 2B / Non-Federal Bridge Projects Subtotal►							\$ -		\$ -	◀100% Non-Federal

2021 Boston Region MPO TIP Summary

	TIP Section 1: ▼	TIP Section 2: ▼	Total of All Projects ▼	
Total ►	\$ 211,751,112	\$ -	\$ 211,751,112	◀ Total Spending in Region
Federal Funds ►	\$ 172,516,993		\$ 172,516,993	◀ Total Federal Spending in Region
Non-Federal Funds ►	\$ 39,234,118	\$ -	\$ 39,234,118	◀ Total Non-Federal Spending in Region

701 CMR 7.00 Use of Road Flaggers and Police Details on Public Works Projects / 701 CMR 7.00 (the Regulation) was promulgated and became law on October 3, 2008. Under this Regulation, the CMR is applicable to any Public works Project that is performed within the limits of, or that impact traffic on, any Public Road. The Municipal Limitation referenced in this Regulation is applicable only to projects where the Municipality is the Awarding Authority. For all projects contained in the TIP, the Commonwealth is the Awarding Authority. Therefore, all projects must be considered and implemented in accordance with 701 CMR 7.00, and the Road Flagger and Police Detail Guidelines. By placing a project on the TIP, the Municipality acknowledges that 701 CMR 7.00 is applicable to its project and design and construction will be fully compliant with this Regulation. This information, and additional information relative to guidance and implementation of the Regulation can be found at the following link on the MassDOT Highway Division website: <http://www.massdot.state.ma.us/Highway/flaggers/main.aspx>

Boston Region MPO Transportation Improvement Program (TIP)

Project List (FY2021)

FTA Program	Number	Transit Agency	Item	Project Description	(unobligated)	Federal Funds	Funds	TDC	Local Funds	Total Cost
5307										
	5307 RTD0004984	Cape Ann Transportation Authority	117A00	PREVENTIVE MAINTENANCE	2020 - \$350,000	\$350,000	\$87,500	\$0	\$0	\$437,500
	5307 RTD0004985	Cape Ann Transportation Authority		114206 ACQUIRE - SHOP EQ/COMP/SFTWR	2020 - \$40,000	\$40,000	\$10,000	\$0	\$0	\$50,000
	5307 RTD0005162	MetroWest Regional Transit Authority	117C00	NON FIXED ROUTE ADA PARA SERV	2020 - \$1,300,000	\$1,300,000	\$325,000	\$0	\$0	\$1,625,000
	5307 RTD0005164	MetroWest Regional Transit Authority		113403 TERMINAL, INTERMODAL (TRANSIT) ACQUISITION OF BUS SUPPORT	2020 - \$150,000	\$150,000	\$37,500	\$0	\$0	\$187,500
	5307 RTD0005165	MetroWest Regional Transit Authority		114200 EQUIP/FACILITIES	2020 - \$248,415	\$248,415	\$62,104	\$0	\$0	\$310,519
	5307 RTD0005416	Massachusetts Bay Transportation Authority (MBTA)		119400 Revenue Vehicles Program		\$144,557,710	\$0	\$0	\$36,139,428	\$180,697,138
				Subtotal		\$146,646,125	\$522,104	\$0	\$36,139,428	\$183,307,657
5309										
	5309 RTD0005420	Massachusetts Bay Transportation Authority (MBTA)		132303 Green Line Extension Project		\$150,000,000	\$0	\$0	\$100,000,000	\$250,000,000
				Subtotal		\$150,000,000	\$0	\$0	\$100,000,000	\$250,000,000
5310										
				Subtotal		\$0	\$0	\$0	\$0	\$0
5311										
				Subtotal		\$0	\$0	\$0	\$0	\$0
5337										
	5337 RTD0005417	Massachusetts Bay Transportation Authority (MBTA)		119400 Systems Upgrades		\$145,271,551	\$0	\$0	\$36,317,888	\$181,589,439
				Subtotal		\$145,271,551	\$0	\$0	\$36,317,888	\$181,589,439
5339										
	5339 RTD0005418	Massachusetts Bay Transportation Authority (MBTA)		119400 Systems Upgrades		\$5,799,449	\$0	\$0	\$1,449,862	\$7,249,311
				Subtotal		\$5,799,449	\$0	\$0	\$1,449,862	\$7,249,311
5320										
				Subtotal		\$0	\$0	\$0	\$0	\$0
Other Federal										
				Subtotal		\$0	\$0	\$0	\$0	\$0
Other Non-Federal										
				Subtotal		\$0	\$0	\$0	\$0	\$0
				Total		\$447,717,125	\$522,104	\$0	\$173,907,178	\$622,146,407

Funds listed under the Carry Over column are included in the Federal Amount

ID Number : 601630

Municipality(ies): Abington , Weymouth

Project Name: Reconstruction & Widening on Route 18 (Main Street), from Highland Place to Route 139

Project Type: Arterial and Intersection

Air Quality Status: Model

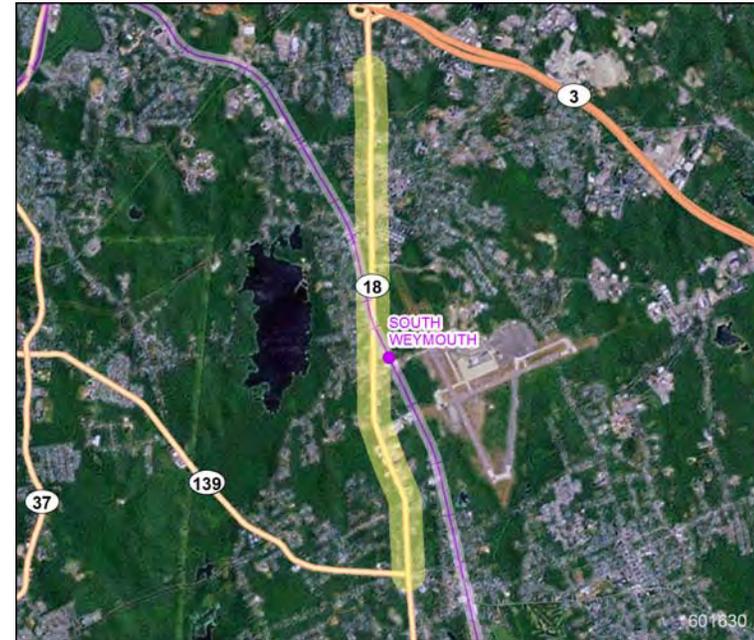
CO2 Impact: -179

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length: 4.18



Project Description:

The proposed project consists of reconstructing and widening Route 18 from Highland Place in Weymouth to Route 139 in Abington including the replacement of Bridge W-32-13 over the MBTA. The roadway widening will provide an additional travel lane in each direction. A temporary alignment will be constructed adjacent to the bridge to the east to carry Route 18 traffic while the existing bridge is being replaced. A long three day weekend shutdown of MBTA service and detour of Route 18 traffic will be required to slide the new bridge superstructure onto the final bridge supports. The proposed roadway cross section consists of four 11.5-foot travel lanes, two 5-foot shoulders and two 5.5-foot sidewalks. Shared accommodations for all users have been provided in accordance with applicable guidelines.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Bridge	\$17,407,000	\$4,351,750	\$21,758,750
2017	Earmark High Priority Project (1998)	\$4,937,408	\$1,234,352	\$6,171,760
2017	Surface Transportation Program	\$10,280,000	\$2,570,000	\$12,850,000
2018	Surface Transportation Program	\$15,673,192	\$3,918,298	\$19,591,490
2019	Surface Transportation Program	\$6,432,214	\$1,608,054	\$8,040,268
Total Funding Programmed		\$54,729,814	\$13,682,454	\$68,412,268

ID Number : 607748
Municipality(ies): Acton
Project Name: Intersection & Signal Improvements on SR 2 & SR 111 (Massachusetts Avenue) at Piper Road & Taylor Road
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: To Be Determined
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.21



Project Description:

Work consists of intersection safety upgrades for signs, pavement markings, and traffic signals as identified through a Road Safety Audit process in the Town of Acton.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Statewide Highway Safety Improvement Program	\$505,440	\$56,160	\$561,600
Total Funding Programmed		\$505,440	\$56,160	\$561,600

ID Number : 606223
Municipality(ies): Acton , Concord
Project Name: Bruce Freeman Rail Trail Construction (Phase II-B)
Project Type: Bicycle and Pedestrian
Air Quality Status: Exempt
CO2 Impact: To Be Determined
Evaluation Rating:
MPO / CTPS Study:
LRTP Status:
Project Length: 1.04

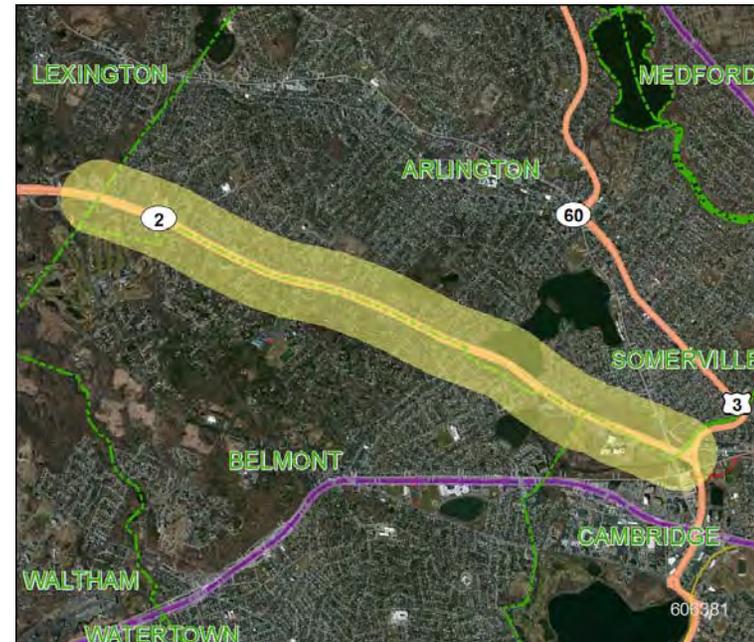


Project Description:

This rail to trail project begins at the intersection of Weatherbee Street and Great Road in Acton and continues across Route 2 to Commonwealth Avenue in Concord. This portion of the trail will connect the Bruce Freeman trail across Route 2 between Concord and Acton. The total approximate project length is 5500 feet, 1.04 Miles.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Statewide Congestion Mitigation and Air Quality Program	\$4,792,320	\$1,198,080	\$5,990,400
Total Funding Programmed		\$4,792,320	\$1,198,080	\$5,990,400

ID Number : 606381
Municipality(ies): Arlington , Belmont
Project Name: Highway Lighting Repair & Maintenance on Route 2
Project Type: Major Highway
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length:



Project Description:

This project consists of highway lighting repair and maintenance along Route 2 in Arlington and Belmont.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Statewide Infrastructure Program	\$7,280,405	\$1,820,101	\$9,100,506
Total Funding Programmed		\$7,280,405	\$1,820,101	\$9,100,506

ID Number : 604123

Municipality(ies): Ashland

Project Name: Reconstruction on Route 126 (Pond Street), from the Framingham T.L. to the Holliston T.L.

Project Type: Arterial and Intersection

Air Quality Status: Exempt

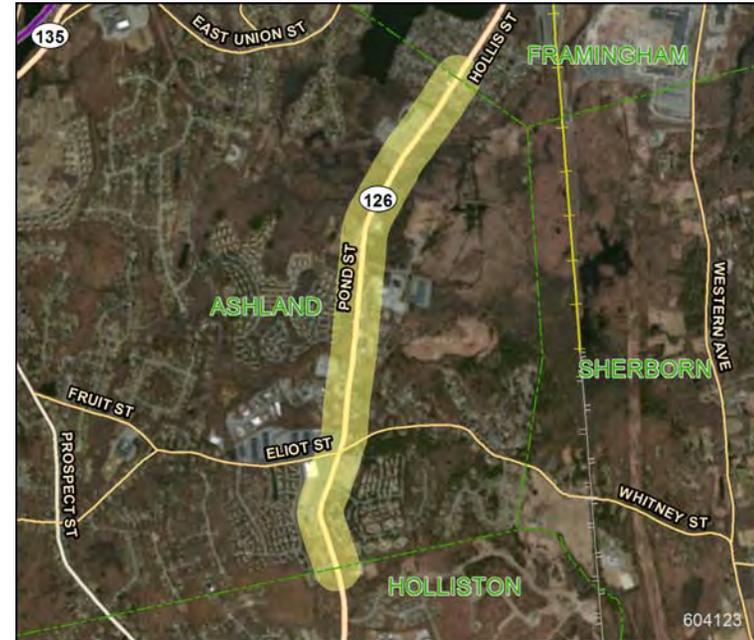
CO2 Impact: 155

Evaluation Rating: 57

MPO / CTPS Study: Route 126 Corridor: Transportation Improvement Study

L RTP Status:

Project Length: 1.71

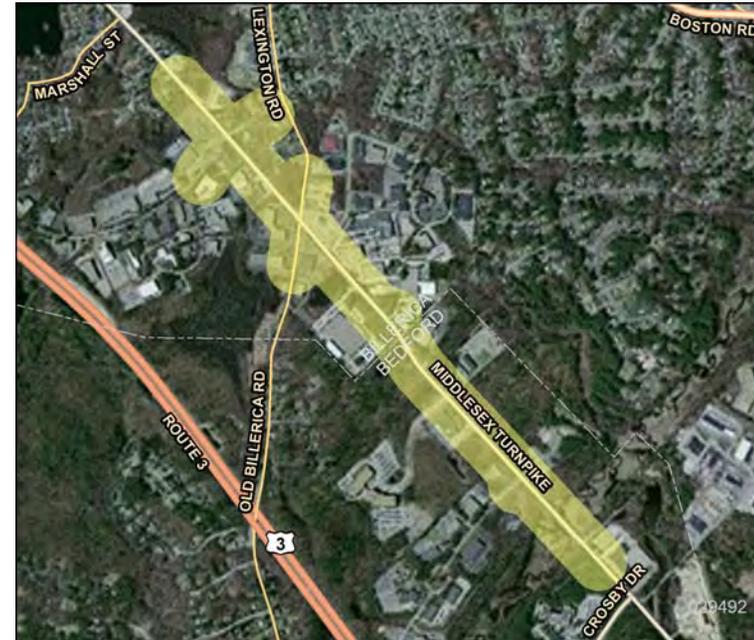


Project Description:

The project limits are from the Framingham T.L. to the Holliston T.L., a distance of 1.7 miles. The project consists of milling and resurfacing with minor box widening. Traffic improvements at the intersection of Route 126 and Elliot Street entail signalization, stone masonry retaining wall construction, minor drainage improvements, installation of granite curbing and edging, construction of sidewalks and the resetting of guardrail.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Congestion Mitigation and Air Quality Program	\$800,000	\$200,000	\$1,000,000
2020	Surface Transportation Program	\$9,940,739	\$2,485,185	\$12,425,924
2020	Transportation Alternatives	\$1,685,185	\$421,296	\$2,106,481
Total Funding Programmed		\$12,425,924	\$3,106,481	\$15,532,405

ID Number : 029492
Municipality(ies): Bedford , Billerica , Burlington
Project Name: Middlesex Turnpike Improvements, from Crosby Drive North to Manning Road (Phase III)
Project Type: Arterial and Intersection
Air Quality Status: Model
CO2 Impact: Model
Evaluation Rating: 55
MPO / CTPS Study:
L RTP Status: 2016-20
Project Length: 1.96



Project Description:

The proposed roadway improvements begin 800 feet north of the Plank Street/Middlesex Turnpike/Crosby Drive intersection to approximately 900 feet north of Manning Road. On Lexington Road, approximately 550 feet on each approach to the Middlesex Turnpike. On Manning Road, approximately 550 feet on each approach to Middlesex Turnpike. The intersections that will be improved within this section are the Middlesex Turnpike/Oak Park intersection, the Middlesex Turnpike/900 Middlesex Turnpike drive intersection, the Middlesex Turnpike/Lexington Road intersection and the Middlesex Turnpike/Manning Road intersection. The traffic signal improvements at the Middlesex Turnpike/Albion Way intersection will be completed by others, and therefore are included in this scope of work. The proposed work includes two travel lanes in each direction with the addition of turning lanes for safety and signalized intersections, a median and landscaping. Reconstruction of the bridge over the Shawsheen River is included with this project.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Earmark High Priority Project (2005)	\$801,180	\$200,295	\$1,001,475
2017	Other	\$800,000	\$200,000	\$1,000,000
2017	Statewide Infrastructure Program	\$5,149,780	\$1,287,445	\$6,437,225
2017	Surface Transportation Program	\$3,036,948	\$759,237	\$3,796,185
2017	Transportation Alternatives	\$2,246,977	\$561,744	\$2,808,721
Total Funding Programmed		\$12,034,885	\$3,008,721	\$15,043,606

ID Number : 608347

Municipality(ies): Beverly

Project Name: Intersection Improvements at Three Locations: Cabot St. (Route 1A/97) at Dodge St. (Route 1A), County Way, Longmeadow Rd and Scott St., McKay St. at Balch St. and Veterans Memorial Bridge (Route 1A) at Rantoul, Cabot, Water and Front Sts.

Project Type: Arterial and Intersection

Air Quality Status: Exempt

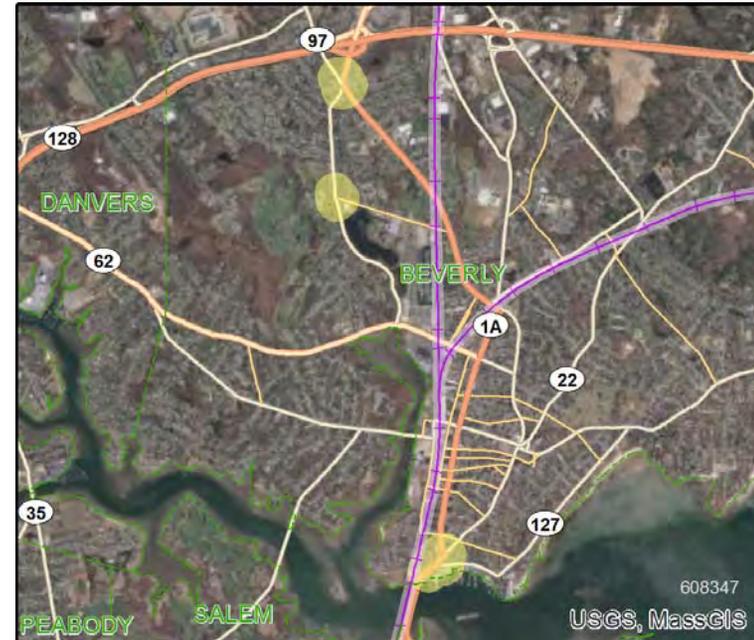
CO2 Impact: 642

Evaluation Rating: 63

MPO / CTPS Study:

L RTP Status: N/A

Project Length: 0.38

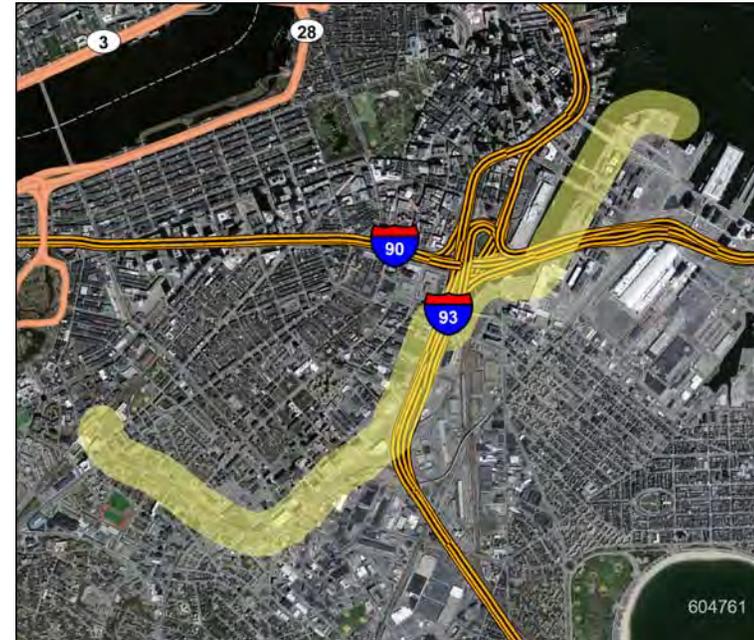


Project Description:

The project involves updating and modernizing traffic signal equipment at the intersections of Cabot Street at Dodge Street/County Way/Longmeadow Road and Cabot Street at Rantoul Street/Front Street/Water Street/Goat Hill Lane; signaling or installing a modern roundabout at the intersection of McKay Street at Balch Street; and providing on-street bicycle accommodations and ADA compliant wheelchair ramps at sidewalks at each intersection. Pavement milling and overlay at each intersection is also included in this work.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2021	Congestion Mitigation and Air Quality Program	\$935,878	\$233,969	\$1,169,847
2021	Highway Safety Improvement Program	\$2,105,756	\$233,973	\$2,339,729
Total Funding Programmed		\$3,041,634	\$467,942	\$3,509,576

ID Number : 604761
Municipality(ies): Boston
Project Name: Multi-Use Trail Construction (South Bay Harbor) From Ruggles Station to Fort Point Channel
Project Type: Bicycle and Pedestrian
Air Quality Status: Exempt
CO2 Impact: 846
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 3.36

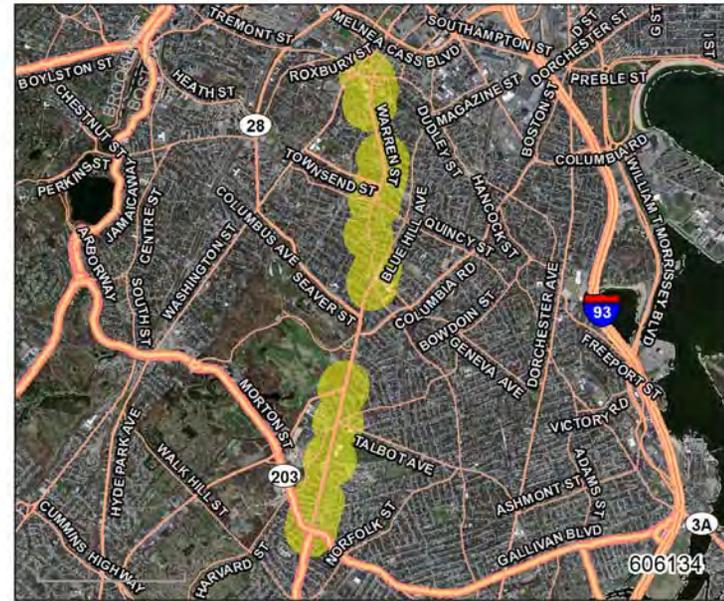


Project Description:

The South Bay Harbor Trail Project provides a trail system including a multi-use trail and a pedestrian trail originating at Ruggles Station and connecting to the Fort Point Channel. In some locations these trails are separated and in some locations they are joined, particularly at roadway intersections and in the more urban stretches of the corridor. The South Bay Harbor Trail can be characterized as a trail system accommodated within public roadway right of way, upon public sidewalks and upon Chapter 91 access corridors across private property. The project proposes to accomplish the following: Reconstruct existing trails because of wear and tear of these existing features using appropriate design criteria; Improve dimensioning and placement of the trails as allowed within the available ROW to achieve appropriate design criteria for trails; Improve accessibility with expanded ramps at roadway intersections and other necessary locations; Utilize existing traffic control systems to facilitate safe travel by trail users; Improve landscape features; Add safety features, including lighting, as needed; Add trail equipment to accentuate usage (benches, bike racks, etc.); Mark trails with the use of appropriate travel signage, striping and markings.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Statewide Congestion Mitigation and Air Quality Program	\$1,783,214	\$445,804	\$2,229,018
Total Funding Programmed		\$1,783,214	\$445,804	\$2,229,018

ID Number : 606134
Municipality(ies): Boston
Project Name: Traffic Signal Improvements on Blue Hill Avenue and Warren Street
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: To Be Determined
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 1.27



Project Description:

The project provides for the upgrade of traffic signal control equipment at multiple locations along Blue Hill Ave. and Warren St. as well as the installation of a traffic signal system at one location. In addition to replacing outdated equipment that limits functionality the project will connect signals along the project area to the BTD traffic control center. The locations are Blue Hill Avenue at Morton Street; Blue Hill Avenue at Baird Street; Blue Hill Avenue at Balsaam and Johnston Streets; Blue Hill Avenue at Stratton and Westview Streets; Blue Hill Avenue at Talbot Avenue; Blue Hill Avenue at American Legion Highway; Blue Hill Avenue at Warren Street; Blue Hill Avenue at Washington Street; Warren Street at Waumbeck and Elm Hill Avenue; Warren Street at Quincy and Townsend Streets; Warren Street at Martin L. King Jr. Blvd.; Warren Street at #330 Mall Driveway; Warren Street at Clifford and Dale Streets; Warren Street at Moreland, Regent and St. James Streets; Warren Street at Keasarge Street and Warren Street at Dudley Street.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Earmark High Priority Project (2005)	\$2,000,837	\$500,209	\$2,501,046
Total Funding Programmed		\$2,000,837	\$500,209	\$2,501,046

ID Number : 606453

Municipality(ies): Boston

Project Name: Improvements on Boylston Street, from Intersection of Brookline Avenue & Park Drive to Ipswich Street

Project Type: Arterial and Intersection

Air Quality Status: Exempt

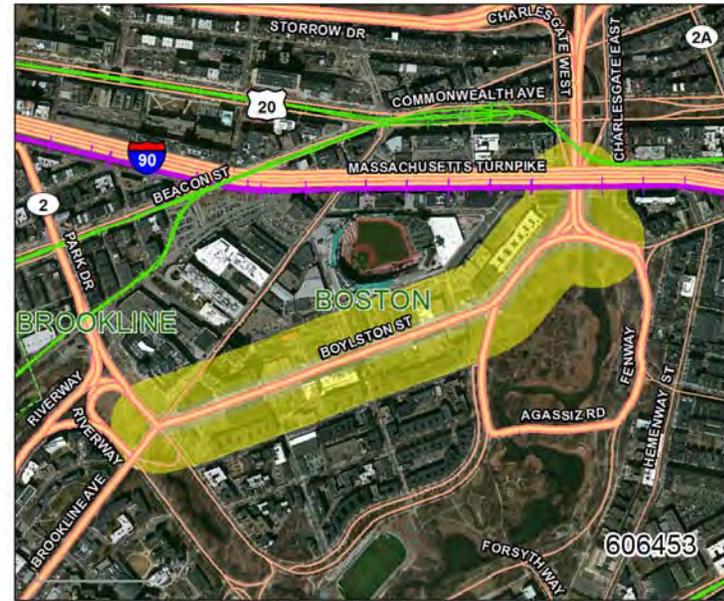
CO2 Impact: 1963

Evaluation Rating: 60

MPO / CTPS Study:

L RTP Status:

Project Length: 0.63

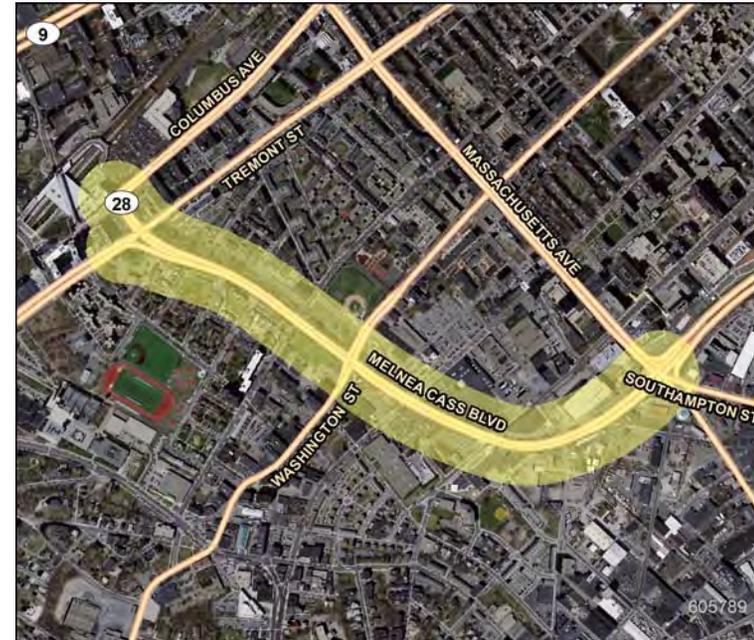


Project Description:

This Boylston Street roadway improvement project which will improve pedestrian mobility, encourage local and regional bicycle travel, and improve vehicular congestion.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Congestion Mitigation and Air Quality Program	\$800,000	\$200,000	\$1,000,000
2020	Surface Transportation Program	\$5,121,510	\$1,280,377	\$6,401,887
2020	Transportation Alternatives	\$649,946	\$162,486	\$812,432
Total Funding Programmed		\$6,571,455	\$1,642,864	\$8,214,319

ID Number : 605789
Municipality(ies): Boston
Project Name: Reconstruction of Melnea Cass Boulevard
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: To Be Determined
Evaluation Rating: 61
MPO / CTPS Study:
L RTP Status:
Project Length: 0.94

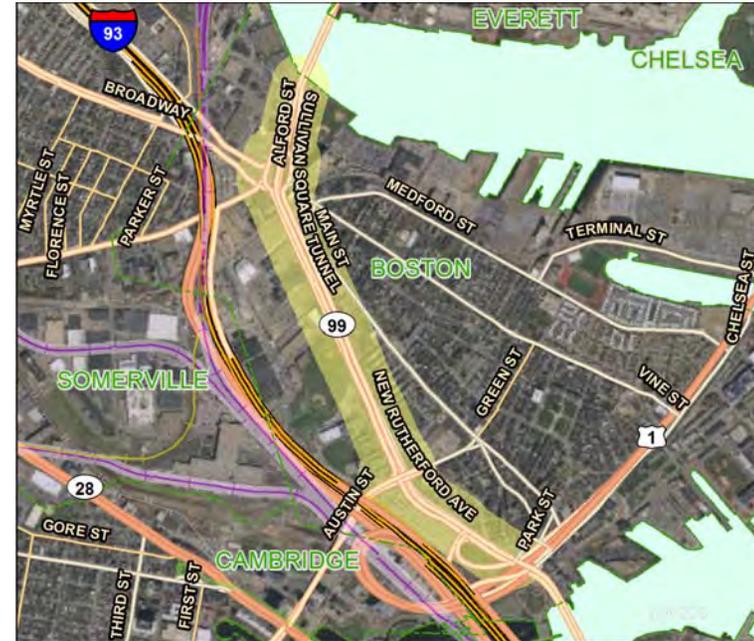


Project Description:

The project calls for the construction of a Bus Rapid Transit system to be constructed within existing ROW, improved pedestrian facilities, traffic operation enhancements, and improved bicycle accommodations as well ITS measures.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Earmark High Priority Project (2005)	\$4,005,900	\$1,001,475	\$5,007,375
2019	Earmark High Priority Project (2005)	\$2,779,011	\$694,753	\$3,473,763
2019	Earmark High Priority Project (2005)	\$2,163,186	\$540,797	\$2,703,983
2019	Earmark High Priority Project (2005)	\$5,007,375	\$1,251,844	\$6,259,219
2019	Surface Transportation Program	\$6,282,799	\$1,570,700	\$7,853,499
Total Funding Programmed		\$20,238,271	\$5,059,568	\$25,297,838

ID Number : 606226
Municipality(ies): Boston
Project Name: Reconstruction of Rutherford Avenue, from City Square to Sullivan Square
Project Type: Arterial and Intersection
Air Quality Status: Model
CO2 Impact: Model
Evaluation Rating:
MPO / CTPS Study:
L RTP Status: 2016-25
Project Length: 2.94

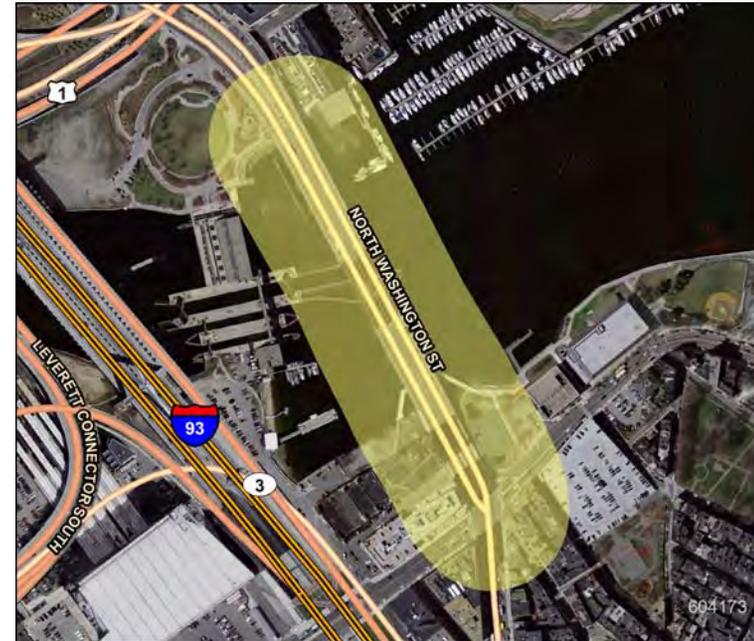


Project Description:

The project involves reconstructing Rutherford Ave from the N. Washington Street bridge to Sullivan Square. It involves making the roadway narrower and eliminating six (6) bridges & creating (in their places) at-grade crossings.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Surface Transportation Program	\$5,600,000	\$1,400,000	\$7,000,000
2021	Earmark High Priority Project (2005)	\$101,576	\$25,394	\$126,970
2021	Earmark High Priority Project (2005)	\$6,761,568	\$1,690,392	\$8,451,960
2021	Surface Transportation Program	\$15,719,421	\$3,929,855	\$19,649,276
2021	Transportation Alternatives	\$1,746,602	\$436,651	\$2,183,253
Total Funding Programmed		\$29,929,167	\$7,482,292	\$37,411,459

ID Number : 604173
Municipality(ies): Boston
Project Name: Bridge Rehabilitation, North Washington Street over the Charles River
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: Assumed Nominal Reduction
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.24

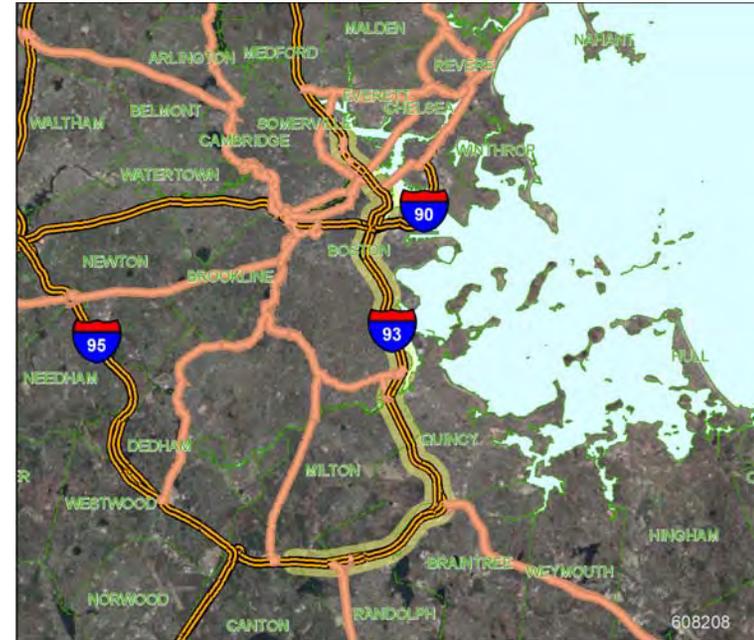


Project Description:

The North Washington Street Bridge is a historic structure constructed in 1898. The bridge consists of 10 approach spans and a swing span, which is not operational. The bridge is structurally deficient and is posted for restricted loads. There have been extensive emergency repairs done to the bridge in the past few years. Currently the two center lanes on the swing span are closed due to steel deterioration. The City of Boston proposes to replace the bridge. On the approach spans this replacement will include replacement of the existing granite/concrete bridge piers with reinforced concrete V piers and continuous trapezoidal steel box girders. Proposed deck will provide for increased bicycle and pedestrian accommodations between Kearney Square and Rutherford Ave.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Bridge	\$19,390,365	\$4,847,591	\$24,237,956
2018	Bridge	\$19,920,000	\$4,980,000	\$24,900,000
2019	Bridge	\$19,920,000	\$4,980,000	\$24,900,000
2020	Bridge	\$19,920,000	\$4,980,000	\$24,900,000
2021	Bridge	\$10,769,635	\$2,692,409	\$13,462,044
Total Funding Programmed		\$89,920,000	\$22,480,000	\$112,400,000

ID Number : 608208
Municipality(ies): Boston , Braintree , Milton , Quincy , Randolph , Somerville
Project Name: Interstate Maintenance Resurfacing and Related Work on I-93
Project Type: Major Highway
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 17.62

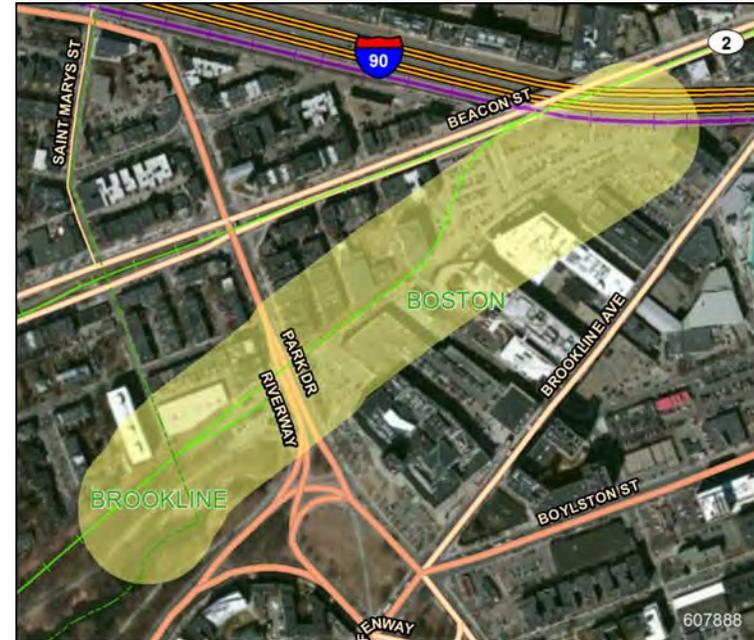


Project Description:

I-93 SE Expressway interstate maintenance resurfacing is proposed with a preservation treatment or thin bonded overlay to extend the pavement service life and improve safety.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Interstate Maintenance	\$18,111,341	\$2,012,371	\$20,123,712
2020	Statewide Transportation Enhancement	\$401,408	\$100,352	\$501,760
Total Funding Programmed		\$18,512,749	\$2,112,723	\$20,625,472

ID Number : 607888
Municipality(ies): Boston , Brookline
Project Name: Multi-use Path Construction on New Fenway
Project Type: Bicycle and Pedestrian
Air Quality Status: Exempt
CO2 Impact: 106
Evaluation Rating: 44
MPO / CTPS Study:
L RTP Status:
Project Length: 0.41



Project Description:

This project will construct a new multi-use bike/pedestrian pathway from the Muddy River in Brookline to Maitland Street in Boston for a total of 1,700 feet. The project will improve access to the Fenway MBTA Station and the Yawkey Commuter Rail station and provide a non-motorized transportation link to key job centers and new mixed-use developments planned for the Fenway area.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Congestion Mitigation and Air Quality Program	\$1,471,062	\$367,765	\$1,838,827
Total Funding Programmed		\$1,471,062	\$367,765	\$1,838,827

ID Number : 608614
Municipality(ies): Boston , Cambridge
Project Name: Superstructure Replacement, B-16-179, Austin Street over I-93 Ramps, MBTA Commuter Rail and Orange Line
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.31

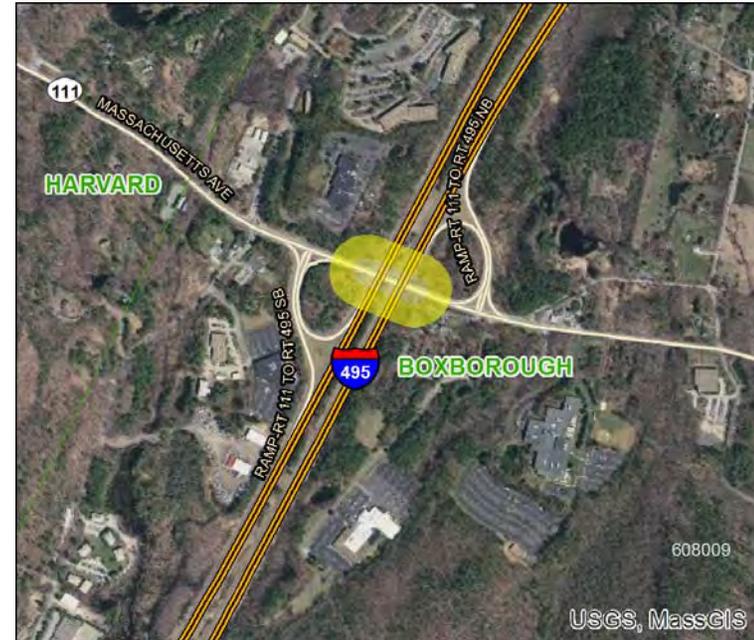


Project Description:

Work consists of superstructure replacement of Austin Street over I-93 ramps, MBTA Commuter Rail and Orange Line in Boston.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Bridge	\$15,738,880	\$3,934,720	\$19,673,600
Total Funding Programmed		\$15,738,880	\$3,934,720	\$19,673,600

ID Number : 608009
Municipality(ies): Boxborough
Project Name: Bridge Replacement, Route 111 over I-495
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact:
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.07

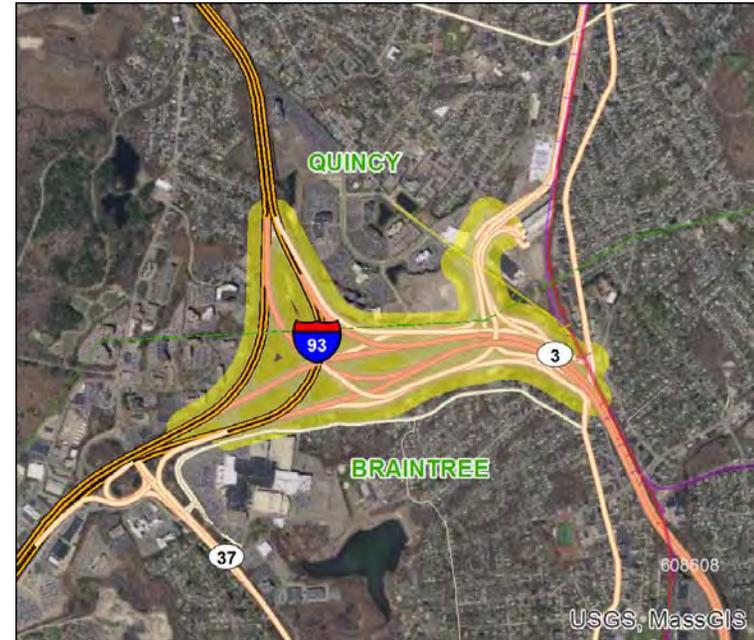


Project Description:

The existing bridge was built in 1963 and is now structurally deficient (4-6-5). It consists of 5 simple spans with two abutments and three piers. It is proposed to replace the bridge with an integral abutment two span continuous structure. It is also proposed to increase the existing vertical clearance from 15 feet to 16.5 feet. The existing curb to curb width is 48 feet. The four travel lanes are 11 feet wide which only provides for two - 2 foot shoulders. There are no sidewalks. At a minimum the bridge needs to be widened to provide 5 foot shoulders for bicycle accommodation. It has not yet been determined if there is a need for one or two sidewalks.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Bridge	\$6,400,000	\$1,600,000	\$8,000,000
2021	Bridge	\$5,036,000	\$1,259,000	\$6,295,000
Total Funding Programmed		\$11,436,000	\$2,859,000	\$14,295,000

ID Number : 608608
Municipality(ies): Braintree , Quincy
Project Name: Highway Lighting Improvements at I-93/Route 3 Interchange
Project Type: Major Highway
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 8.14

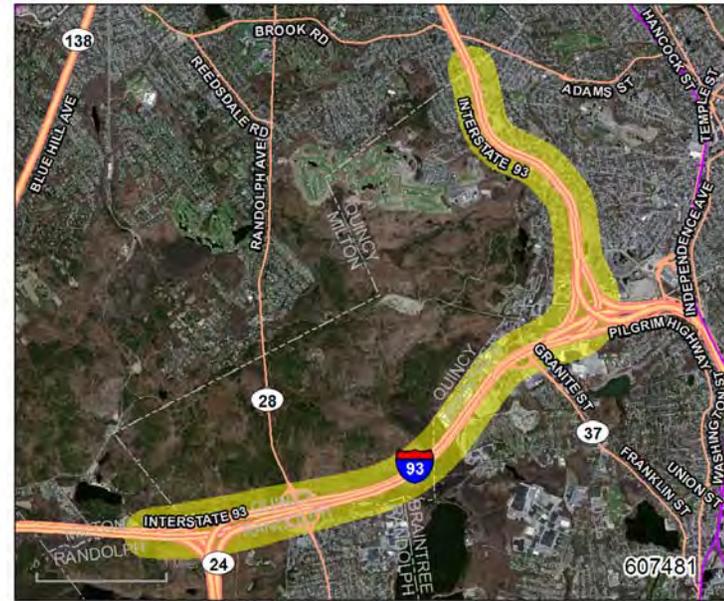


Project Description:

Work consists of highway lighting improvements at the I-93/Route 3 interchange in Braintree.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Infrastructure Program	\$6,000,000	\$1,500,000	\$7,500,000
2020	Statewide Infrastructure Program	\$1,757,783	\$439,446	\$2,197,229
Total Funding Programmed		\$7,757,783	\$1,939,446	\$9,697,229

ID Number : 607481
Municipality(ies): Braintree , Quincy , Randolph
Project Name: Resurfacing and Related Work on I-93
Project Type: Major Highway
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 4.3

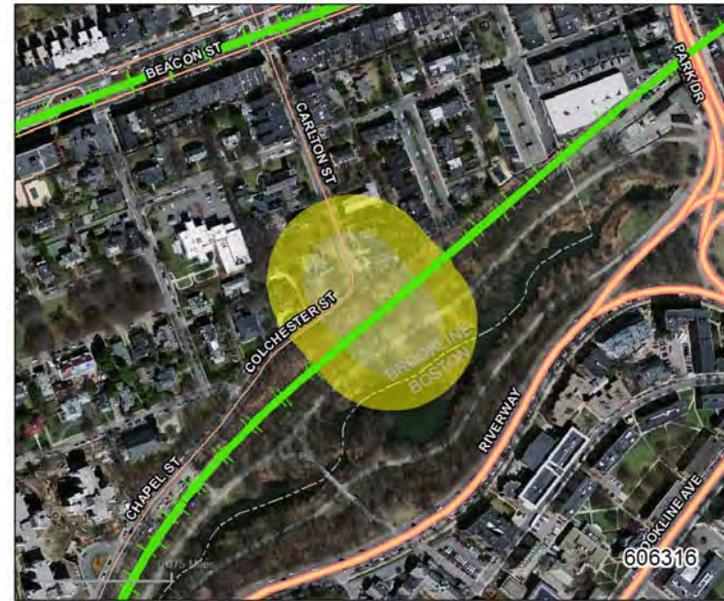


Project Description:

The project will resurface I-93 southbound in Randolph, Quincy, and Braintree from milepoint 3.5 to 7.8 for a project length of 4.3 miles.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Interstate Maintenance	\$4,295,700	\$477,300	\$4,773,000
Total Funding Programmed		\$4,295,700	\$477,300	\$4,773,000

ID Number : 606316
Municipality(ies): Brookline
Project Name: Pedestrian Bridge Rehabilitation over MBTA off Carlton Street
Project Type: Bicycle and Pedestrian
Air Quality Status: Exempt
CO2 Impact: Assumed Nominal Reduction
Evaluation Rating: 41
MPO / CTPS Study:
L RTP Status:
Project Length: 0.03



Project Description:

This project involves the rehabilitation of a historic steel truss pedestrian bridge built in 1894. Due to the poor condition it is currently closed to pedestrian traffic since 1976. This project will restore this bridge as a pedestrian connection.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Statewide Congestion Mitigation and Air Quality Program	\$3,070,504	\$767,626	\$3,838,130
Total Funding Programmed		\$3,070,504	\$767,626	\$3,838,130

ID Number : 605110
Municipality(ies): Brookline
Project Name: Intersection & Signal Improvements at Route 9 & Village Square (Gateway East)
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: 73
Evaluation Rating: 70
MPO / CTPS Study:
L RTP Status:
Project Length: 0.47

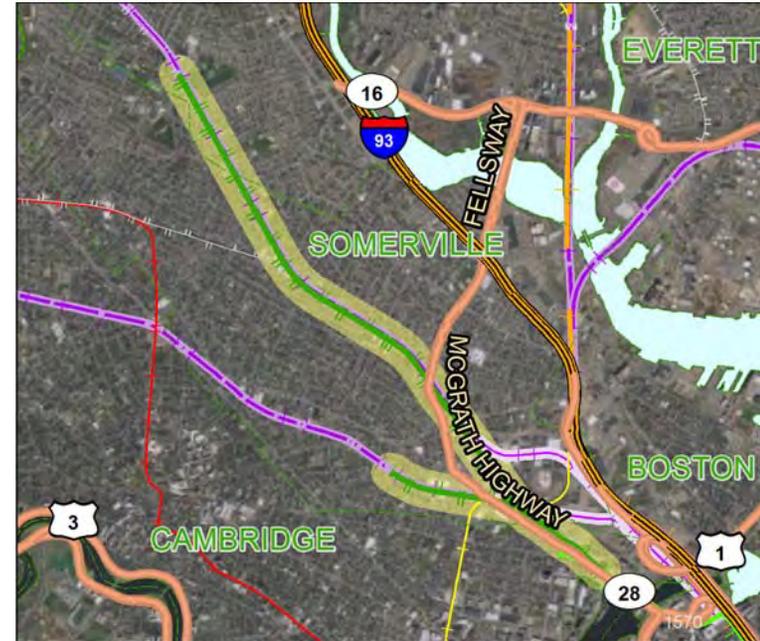


Project Description:

The project is located on Route 9 in the Gateway East or Village Square area of Brookline. The project will revitalize the corridor, improve the livability for residents and businesses, improve regional connections for bicycles and pedestrians and improve the overall streetscape. The project will demolish the pedestrian bridge which is currently closed. Walnut Street will be realigned to intersection Route 9 opposite Pearl Street forming a four way intersection. The signals at Washington Street and at Brookline Avenue will be upgraded and interconnected with new signals at the Walnut/Pearl Street intersection.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Congestion Mitigation and Air Quality Program	\$800,000	\$200,000	\$1,000,000
2018	Other	\$800,000	\$200,000	\$1,000,000
2018	Surface Transportation Program	\$2,414,562	\$603,640	\$3,018,202
2018	Transportation Alternatives	\$1,004,000	\$251,000	\$1,255,000
Total Funding Programmed		\$5,018,562	\$1,254,640	\$6,273,202

ID Number : 1570
Municipality(ies): Cambridge , Somerville
Project Name: Green Line Extension Project - Extension to College Avenue with the Union Square Spur
Project Type: Transit
Air Quality Status: Model
CO2 Impact: Model
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 4.12

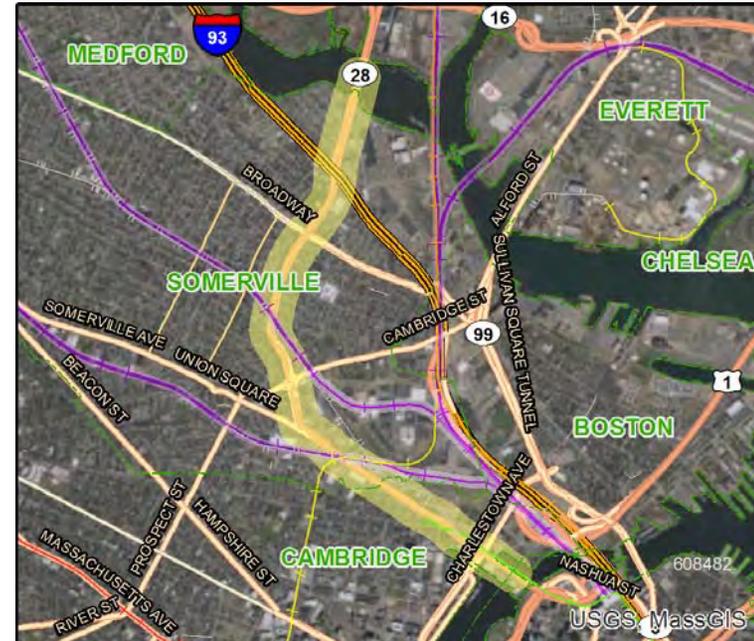


Project Description:

This project - the purpose of which is to improve corridor mobility, boost transit ridership, improve regional air quality, ensure equitable distribution of transit services, and support opportunities for sustainable development - will extend the MBTA Green Line from a relocated Lechmere Station in East Cambridge to College Avenue in Medford, with a branch to Union Square in Somerville.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Congestion Mitigation and Air Quality Program	\$10,741,776	\$2,685,444	\$13,427,220
2017	Other State Implementation Plan	\$150,000,000	\$225,454,000	\$375,454,000
2017	Surface Transportation Program	\$13,178,224	\$3,294,556	\$16,472,780
2018	Congestion Mitigation and Air Quality Program	\$10,741,776	\$2,685,444	\$13,427,220
2018	Other State Implementation Plan	\$150,000,000	\$196,101,000	\$346,101,000
2018	Surface Transportation Program	\$21,258,224	\$5,314,556	\$26,572,780
2019	Congestion Mitigation and Air Quality Program	\$10,741,776	\$2,685,444	\$13,427,220
2019	Other State Implementation Plan	\$150,000,000	\$27,390,000	\$177,390,000
2019	Surface Transportation Program	\$21,258,224	\$5,314,556	\$26,572,780
2020	Congestion Mitigation and Air Quality Program	\$10,741,776	\$2,685,444	\$13,427,220
2020	Surface Transportation Program	\$21,258,224	\$5,314,556	\$26,572,780

ID Number : 608482
 Municipality(ies): Cambridge , Somerville
 Project Name: Resurfacing and Related Work on Route 28
 Project Type: Arterial and Intersection
 Air Quality Status: Exempt
 CO2 Impact: No CO2 Impact
 Evaluation Rating:
 MPO / CTPS Study:
 LRTP Status:
 Project Length: 2.78
 Project Description:



Work consists of resurfacing on Route 28 in Cambridge and Somerville.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	National Highway Performance Program	\$6,275,136	\$1,568,784	\$7,843,920
Total Funding Programmed		\$6,275,136	\$1,568,784	\$7,843,920

ID Number : 608599

Municipality(ies): Canton , Foxborough , Norwood , Sharon , Walpole

Project Name: Stormwater Improvements along Route 1, Route 1A, and Interstate 95

Project Type: Major Highway

Air Quality Status: Exempt

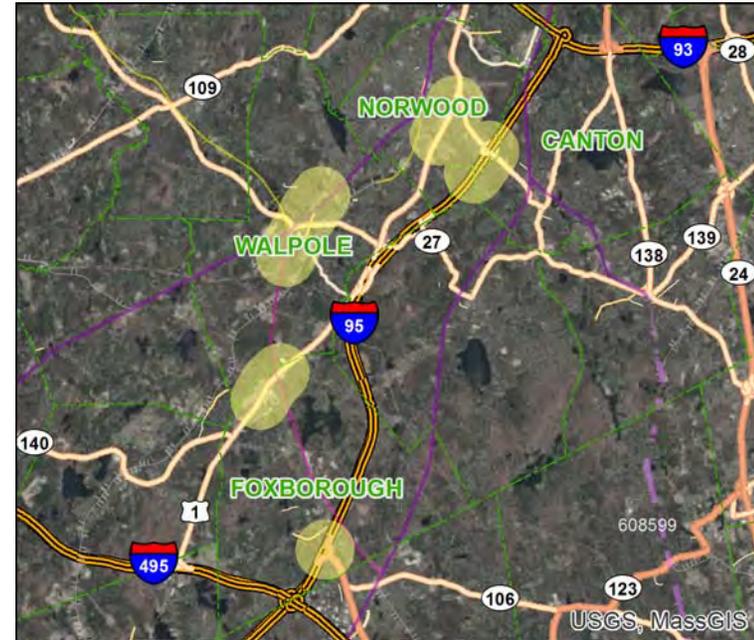
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length: 3.36

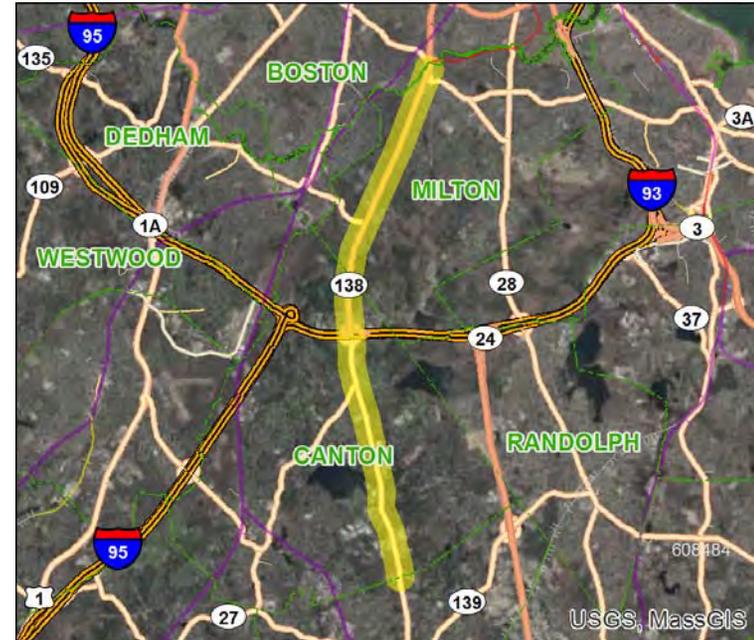


Project Description:

Work consists of stormwater improvements along Route 1, Route 1A, and I-95.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Transportation Enhancement	\$404,800	\$101,200	\$506,000
Total Funding Programmed		\$404,800	\$101,200	\$506,000

ID Number : 608484
Municipality(ies): Canton , Milton
Project Name: Resurfacing and Related Work on Route 138
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 8.62
Project Description:



Work consists of resurfacing on Route 138 in Canton and Milton.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2021	National Highway Performance Program	\$11,013,504	\$2,753,376	\$13,766,880
Total Funding Programmed		\$11,013,504	\$2,753,376	\$13,766,880

ID Number : 608206

Municipality(ies): Chelsea , Danvers , Lynnfield , Malden , Peabody , Revere , Saugus

Project Name: Guide and Traffic Sign Replacement on a Section of Route 1

Project Type: Major Highway

Air Quality Status: Exempt

CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length: 17.15



Project Description:

The project will consist of replacing guide and traffic signs, and supports, on Route 1 between the Tobin Bridge in Chelsea and Interstate 95 at the Danvers/Topsfield town line, including applicable signing on intersecting secondary roads. To ensure continued driver safety, new signs and supports meeting current retroreflectivity and design standards will be provided.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Highway Safety Improvement Program	\$6,724,636	\$747,182	\$7,471,818
Total Funding Programmed		\$6,724,636	\$747,182	\$7,471,818

ID Number : 608220
Municipality(ies): Concord
Project Name: Resurfacing and Related Work on Route 2
Project Type: Major Highway
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 5.23

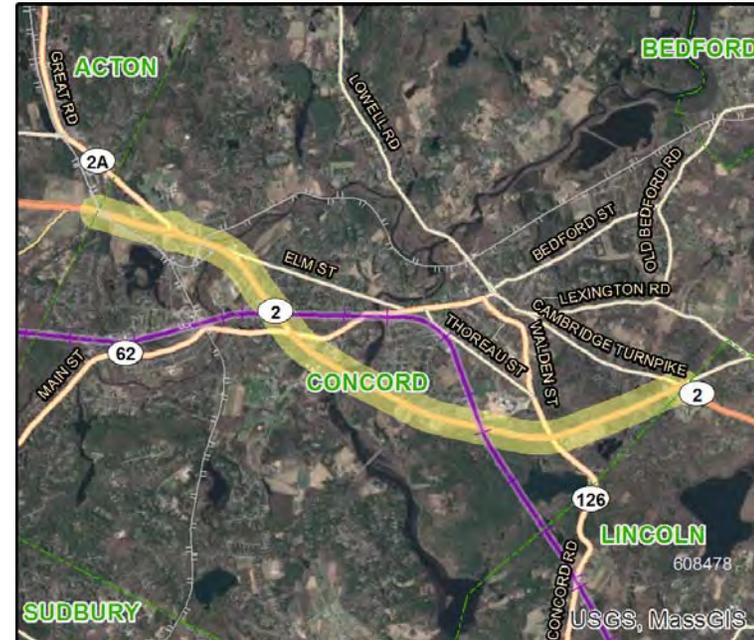


Project Description:

The existing pavement is composite section with HMA surface and cement concrete base. The proposed work is resurfacing to remove reflective cracking and improve safety.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	National Highway Performance Program	\$1,397,760	\$349,440	\$1,747,200
Total Funding Programmed		\$1,397,760	\$349,440	\$1,747,200

ID Number : 608478
 Municipality(ies): Concord
 Project Name: Resurfacing and Related Work on Route 2
 Project Type: Major Highway
 Air Quality Status: Exempt
 CO2 Impact: No CO2 Impact
 Evaluation Rating:
 MPO / CTPS Study:
 LRTP Status:
 Project Length: 5.23



Project Description:
 Work consists of resurfacing on Route 2 in Concord.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	National Highway Performance Program	\$4,193,280	\$1,048,320	\$5,241,600
Total Funding Programmed		\$4,193,280	\$1,048,320	\$5,241,600

ID Number : 607954
Municipality(ies): Danvers
Project Name: Bridge Replacement, D-03-018, Route 128 over Waters River
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.01



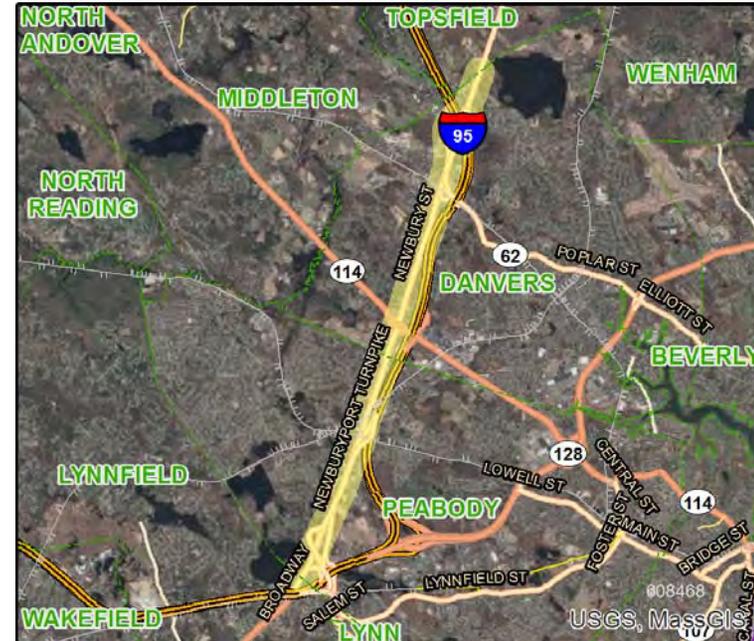
Project Description:

Work will consist of replacing D-03-018 in Danvers.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Bridge	\$6,900,000	\$1,725,000	\$8,625,000
Total Funding Programmed		\$6,900,000	\$1,725,000	\$8,625,000

ID Number : 608468
 Municipality(ies): Danvers , Peabody
 Project Name: Resurfacing and Related Work on Route 1
 Project Type: Major Highway
 Air Quality Status: Exempt
 CO2 Impact: No CO2 Impact
 Evaluation Rating:
 MPO / CTPS Study:
 LRTP Status:
 Project Length: 6.2
 Project Description:

Work consists of resurfacing on Route 1 in Danvers and Peabody.



Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	National Highway Performance Program	\$10,412,928	\$2,603,232	\$13,016,160
Total Funding Programmed		\$10,412,928	\$2,603,232	\$13,016,160

ID Number : 605608
Municipality(ies): Dedham
Project Name: Resurfacing & Related Work on Route 109
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
LRTP Status:
Project Length: 2.2



Project Description:

The purpose of this project is to resurface Ames Street and Bridge Street (Route 109) in Dedham from milemarker 18 to milemarker 20.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	National Highway Performance Program	\$187,526	\$46,881	\$234,407
Total Funding Programmed		\$187,526	\$46,881	\$234,407

ID Number : 607901
Municipality(ies): Dedham
Project Name: Pedestrian Improvements along Elm Street & Rustcraft Road Corridors
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact:
Evaluation Rating: 44
MPO / CTPS Study:
L RTP Status: N/A
Project Length: 1.75

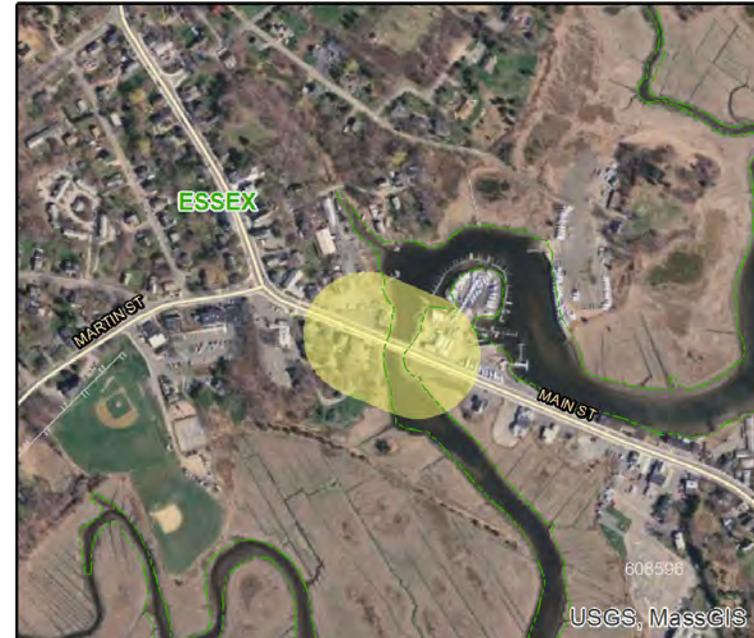


Project Description:

Improvements along Elm Street /Rust Craft Road corridor will primarily consist of installation of new curbing, sidewalks and ramps on both sides of the corridor. This area will also require drainage improvements to modify storm water management from sheet flow to catch basins necessary with the installation of new curb and sidewalk. Minor roadway widening is anticipated to achieve a minimum roadway width to accommodate a 5-foot bicycle lane. An off-road area for the drop off and pick up at the Dedham Corporate Center MBTA Commuter Rail station has already been constructed by the town.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2021	Statewide Congestion Mitigation and Air Quality Program	\$2,064,891	\$516,223	\$2,581,113
Total Funding Programmed		\$2,064,891	\$516,223	\$2,581,113

ID Number : 608596
Municipality(ies): Essex
Project Name: Bridge Preservation, E-11-001, Route 133/Main Street over Essex River
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.4



Project Description:

Work consists of bridge preservation of Route 133/Main Street over the Essex River in Essex.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Bridge	\$2,150,400	\$537,600	\$2,688,000
Total Funding Programmed		\$2,150,400	\$537,600	\$2,688,000

ID Number : 607652

Municipality(ies): Everett

Project Name: Reconstruction of Ferry Street, South Ferry Street and a Portion of Elm Street

Project Type: Arterial and Intersection

Air Quality Status: Exempt

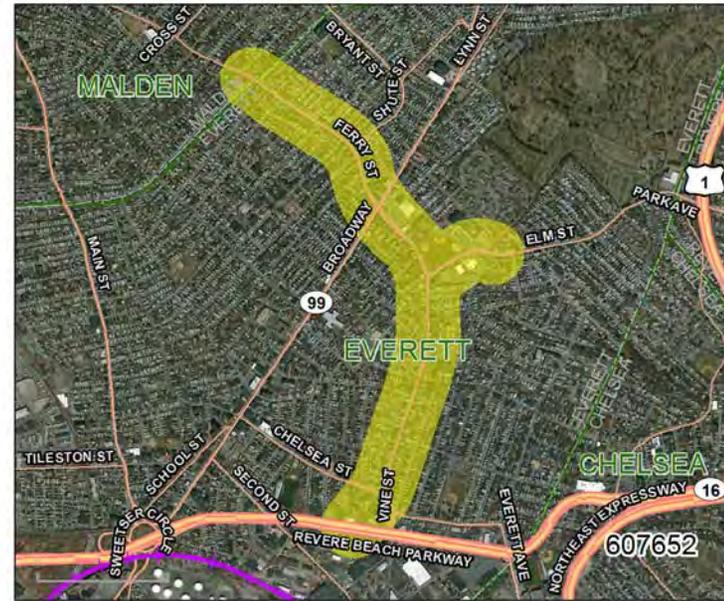
CO2 Impact: 458

Evaluation Rating: 75

MPO / CTPS Study: Community Transportation Technical Assistance Program (2013)

L RTP Status:

Project Length: 1.63

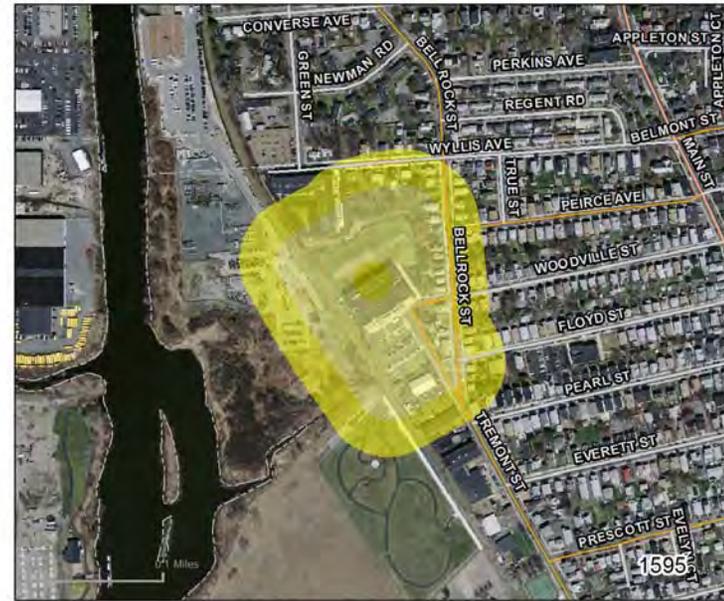


Project Description:

The project will reconstruct Ferry Street from the Malden city line (Belmont Street) to Route 16 and Elm Street between Ferry Street and Woodlawn Street. The work will include resurfacing, new sidewalks, wheelchair ramps and curb extensions. The traffic signals at five locations and the fire station will be upgraded. Signals at Chelsea Street will be replaced by a roundabout.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Congestion Mitigation and Air Quality Program	\$1,020,470	\$255,118	\$1,275,588
2019	Highway Safety Improvement Program	\$1,303,943	\$144,883	\$1,448,825
2019	Surface Transportation Program	\$3,036,239	\$759,060	\$3,795,299
2019	Transportation Alternatives	\$579,530	\$144,882	\$724,412
Total Funding Programmed		\$5,940,182	\$1,303,942	\$7,244,124

ID Number : 607998
Municipality(ies): Everett
Project Name: Safe Routes to School (Madelaine English)
Project Type: Bicycle and Pedestrian
Air Quality Status: Exempt
CO2 Impact: Assumed Nominal Reduction
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length:



Project Description:

This project includes the construction of 8-10 foot wide ramps with retaining walls from the school to the Northern Strand Community Trail, reconstruction of existing sidewalk along the southern perimeter of the school property, reconstruction of the Tremont Street / Bell Rock Street intersection to improve traffic flow, and the installation of five foot wide sidewalk connections with vertical granite curb along Wyliss Avenue, Prescott Street, and Waters Avenue.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Safe Routes to School	\$551,048	\$137,762	\$688,810
Total Funding Programmed		\$551,048	\$137,762	\$688,810

ID Number : 608210
Municipality(ies): Foxborough , Franklin , Plainville , Wrentham
Project Name: Interstate Maintenance Resurfacing and Related Work on I-495
Project Type: Major Highway
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 11.65

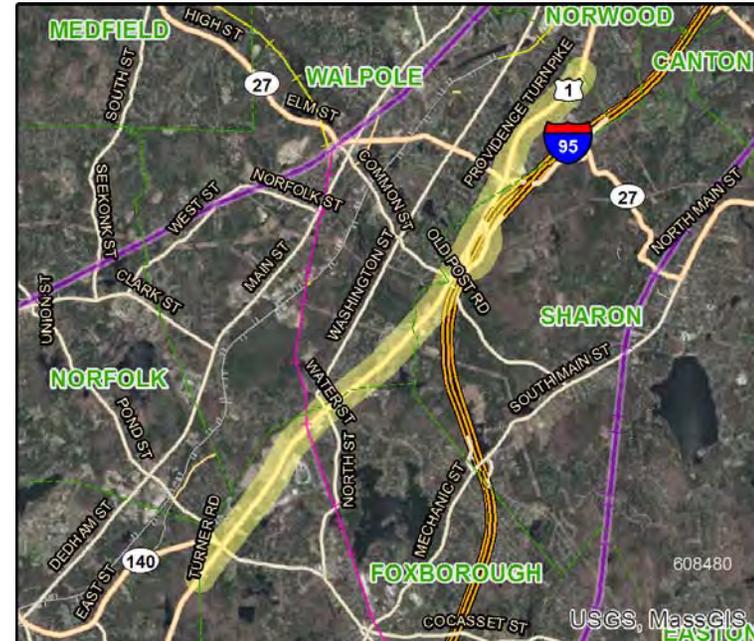


Project Description:

The interstate maintenance resurfacing project consists of resurfacing the pavement with friction course and improving safety.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2021	Interstate Maintenance	\$24,012,000	\$2,668,000	\$26,680,000
Total Funding Programmed		\$24,012,000	\$2,668,000	\$26,680,000

ID Number : 608480
Municipality(ies): Foxborough , Sharon , Walpole
Project Name: Resurfacing and Related Work on Route 1
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 7.54



Project Description:
 Work consists of resurfacing on Route 1 in Foxborough and Walpole.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	National Highway Performance Program	\$6,862,464	\$1,715,616	\$8,578,080
Total Funding Programmed		\$6,862,464	\$1,715,616	\$8,578,080

ID Number : 608228

Municipality(ies): Framingham

Project Name: Reconstruction of Union Avenue, from Proctor Street to Main Street

Project Type: Arterial and Intersection

Air Quality Status: Exempt

CO2 Impact: -217

Evaluation Rating: 60

MPO / CTPS Study: Safety and Operational Improvements at Selected Intersections (2011)

LRTP Status: N/A

Project Length: 1.36



Project Description:

The project involves improvements to Union Ave from Proctor Street to Main Street, with limited work on intersecting local roadways. Specifically, the proposed improvements include full depth pavement reconstruction, sidewalk reconstruction, traffic signal improvements, streetscape improvements, bicycle accommodation, warning and regulatory signing and pavement markings. The existing traffic signal at Mt. Wayte Avenue will be reconstructed and new traffic signals will be constructed at the Union Ave intersections with Lincoln Street and Walnut Street. Streetscape and ornamental lighting improvements will be constructed from the southerly beginning of the project up to the intersection with Lincoln Street. Minor roadway widening of less than 2 feet is proposed between Proctor St and Lexington St in order to provide a sufficient cross section for travel lanes, bike lanes and on-street parking. The Town is constructing significant stormwater improvements as part of a separate utility project to be completed prior to the roadway improvements.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2021	Highway Safety Improvement Program	\$1,358,628	\$150,959	\$1,509,587
2021	Surface Transportation Program	\$6,038,347	\$1,509,587	\$7,547,934
2021	Transportation Alternatives	\$805,113	\$201,278	\$1,006,391
Total Funding Programmed		\$8,202,088	\$1,861,824	\$10,063,912

ID Number : 608467

Municipality(ies): Framingham , Marlborough , Sudbury , Wayland

Project Name: Resurfacing and Related Work on Route 20

Project Type: Arterial and Intersection

Air Quality Status: Exempt

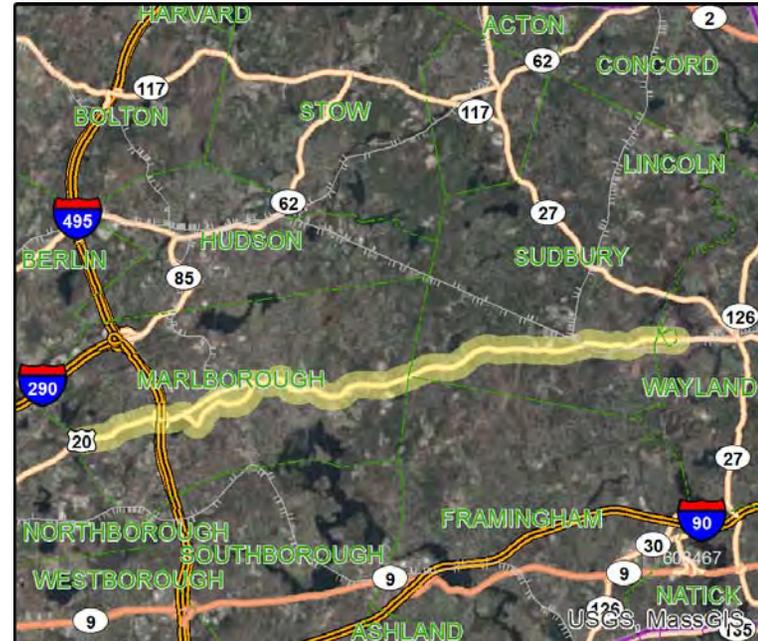
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length: 12.41



Project Description:

Work consists of resurfacing on Route 20 in Sudbury and Marlborough.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	National Highway Performance Program	\$8,544,960	\$2,136,240	\$10,681,200
Total Funding Programmed		\$8,544,960	\$2,136,240	\$10,681,200

ID Number : 607732

Municipality(ies): Framingham , Natick

Project Name: Cochituate Rail Trail, Phase Two

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

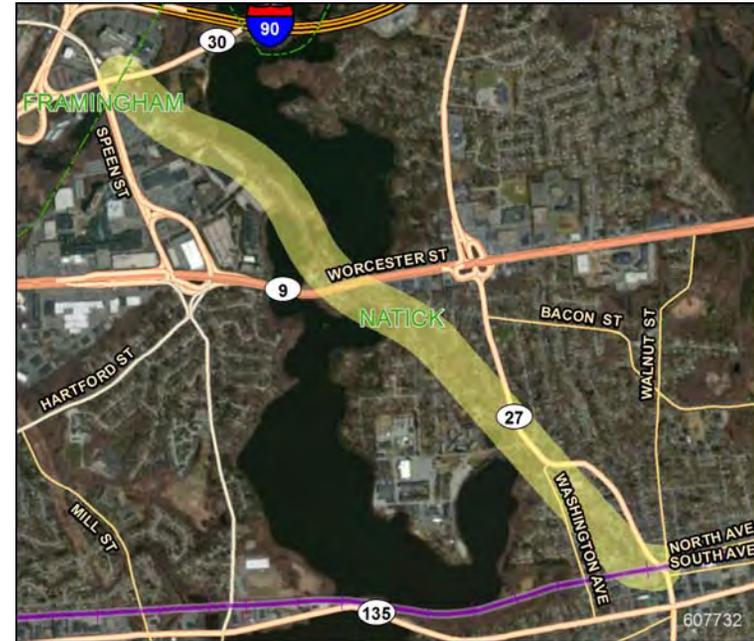
CO2 Impact: 86

Evaluation Rating: 38

MPO / CTPS Study: Reconnaissance Study of the Saxonville Branch ROW, aka the Cochituate Rail Trail (2000)

L RTP Status:

Project Length: 2.41

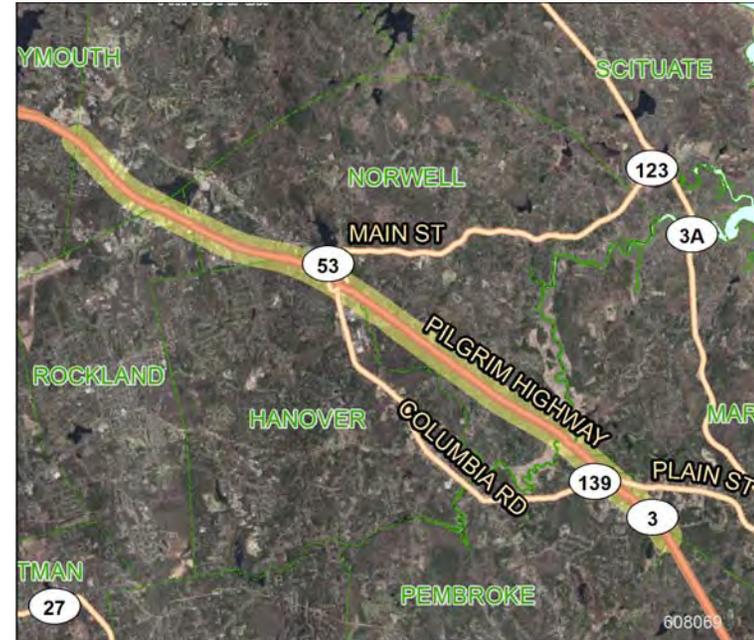


Project Description:

The project involves construction of 2.4 miles of rail trail and includes a grade separated crossing at Route 30, as well as rehabilitation of the CSX bridge over Route 9. A section of the trail also includes a spur line connecting to the Natick Mall at Speen Street. The Trail will be, for the most part, off road with 4 at- grade roadway and 2 driveway crossings. At the northerly end, a grade separated crossing of Route 30 will be constructed to provide the connection to the Framingham section of the CRT. At its southerly end, the CRT will connect to North Main Street (Route 27) on a retained fill section approximately opposite the North Street intersection.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Statewide Congestion Mitigation and Air Quality Program	\$6,238,368	\$1,559,592	\$7,797,960
Total Funding Programmed		\$6,238,368	\$1,559,592	\$7,797,960

ID Number : 608069
Municipality(ies): Hanover , Hingham , Marshfield , Norwell ,
 Pembroke , Rockland
Project Name: Resurfacing and Related Work on Route 3
Project Type: Major Highway
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 10.74



Project Description:

The scope of work is a pavement preservation project with a highway safety purpose. Travel is permitted in the breakdown lane to handle directional peak hour traffic volumes.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	National Highway Performance Program	\$13,203,840	\$3,300,960	\$16,504,800
Total Funding Programmed		\$13,203,840	\$3,300,960	\$16,504,800

ID Number : 606553

Municipality(ies): Hanover , Norwell

Project Name: Superstructure Replacement, H-06-010, St 3 Over St 123 (Webster Street) & N-24-003, St 3 Over St 123 (High Street)

Project Type: Bridge

Air Quality Status: Exempt

CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length: 0.07



Project Description:

The proposed project will include removing and replacing the existing superstructure. The existing simply supported spans shall be replaced with a continuous superstructure to eliminate joints over the piers. Also widening of the abutment is anticipated to accommodate future widening of Route 3. Crash-tested barriers will replace the existing non-standard barriers.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Bridge	\$10,364,480	\$2,591,120	\$12,955,600
Total Funding Programmed		\$10,364,480	\$2,591,120	\$12,955,600

ID Number : 607309
Municipality(ies): Hingham
Project Name: Reconstruction and Related Work on Derby Street from Pond Park Road to Cushing Street
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: 388
Evaluation Rating: 54
MPO / CTPS Study:
L RTP Status:
Project Length: 0.83



Project Description:

This project is proposed to address ongoing safety and capacity issues at the Derby Street/Route 3 ramps. Ramp modifications including signalization of ramps are proposed. In addition, there is a need to provide improved multi-modal accommodation on this targeted segment of Derby Street.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Congestion Mitigation and Air Quality Program	\$2,556,344	\$639,086	\$3,195,430
2017	Highway Safety Improvement Program	\$886,999	\$98,555	\$985,554
2017	Transportation Alternatives	\$597,428	\$149,357	\$746,785
Total Funding Programmed		\$4,040,771	\$886,998	\$4,927,769

ID Number : 600518

Municipality(ies): Hingham

Project Name: Intersection Improvements at Derby Street, Whiting Street (Route 53) and Gardner Street

Project Type: Arterial and Intersection

Air Quality Status: Exempt

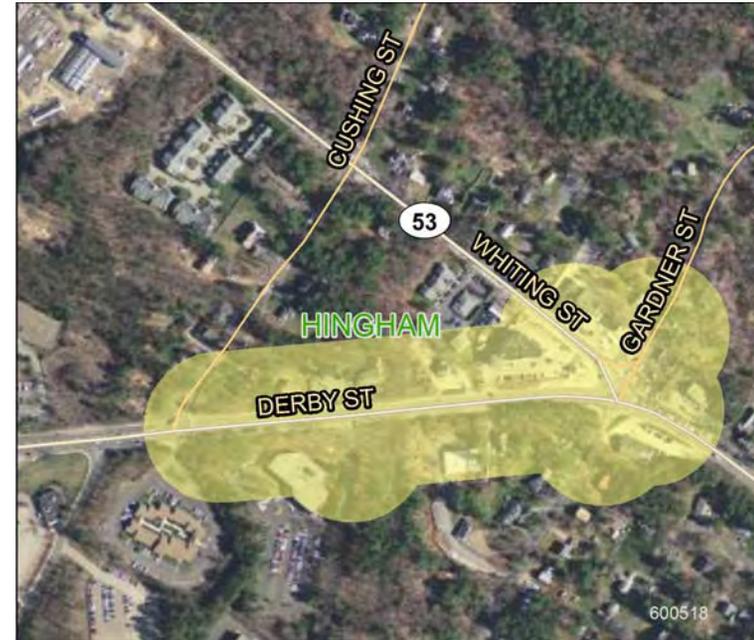
CO2 Impact: -125

Evaluation Rating: 28

MPO / CTPS Study: Route 53 Corridor Transportation Plan (2003)

L RTP Status:

Project Length: 0.38

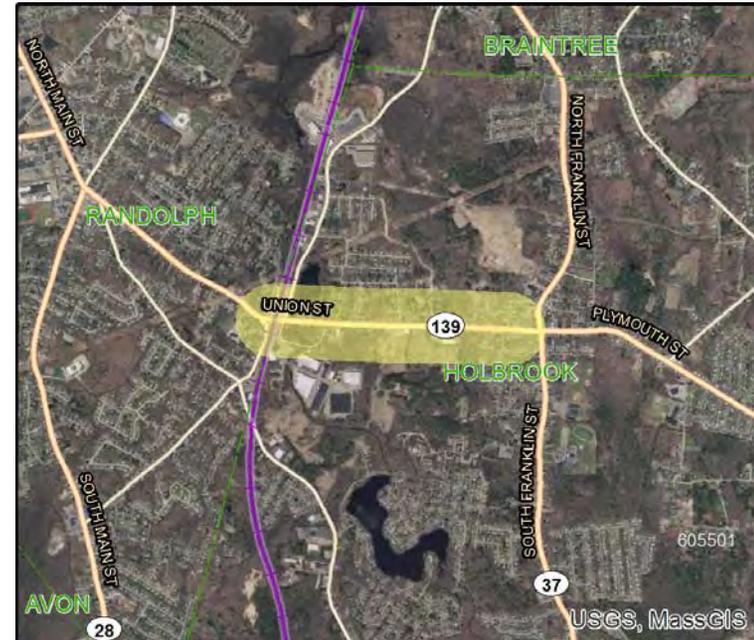


Project Description:

Work on this project will consist of intersection improvements at Derby Street, Whiting Street (Route 53) and Gardner Street. Work includes the installation of a new traffic signal system and geometric modifications at the intersection, including left turn lanes on Derby Street. The project extends to the Cushing Street intersection and will also provide a turn lane at Recreation Park Road. The project will also include improved accommodation for bicycles and pedestrians.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Highway Safety Improvement Program	\$550,392	\$61,155	\$611,547
2018	Surface Transportation Program	\$1,956,950	\$489,238	\$2,446,188
Total Funding Programmed		\$2,507,343	\$550,392	\$3,057,735

ID Number : 606501
Municipality(ies): Holbrook
Project Name: Reconstruction of Union Street (Route 139), from Linfield Street to Centre Street/Water Street
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: 5
Evaluation Rating: 46
MPO / CTPS Study:
L RTP Status: N/A
Project Length: 0.87



Project Description:

The purpose of this project is to rehabilitate a segment of Union Street from Linfield Street to Centre Street/Water Street. The proposed improvements will address poor roadway pavement conditions, deteriorating sidewalks, a lack of curbing and needed drainage improvements. The project will also address the need for upgraded pavement markings, signage and guard rail.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2021	Earmark High Priority Project (2005)	\$1,221,800	\$305,450	\$1,527,250
2021	Surface Transportation Program	\$859,634	\$214,908	\$1,074,542
2021	Transportation Alternatives	\$231,270	\$57,818	\$289,088
Total Funding Programmed		\$2,312,704	\$578,176	\$2,890,880

ID Number : 607428

Municipality(ies): Hopedale , Milford

Project Name: Resurfacing & Intersection Improvements on Route 16 (Main Street), from Water Street to the Hopedale T.L.

Project Type: Arterial and Intersection

Air Quality Status: Exempt

CO2 Impact: 206

Evaluation Rating: 55

MPO / CTPS Study:

L RTP Status:

Project Length: 0.62



Project Description:

The project involves resurfacing along Route 16, from Water Street to just west of the Hopedale Town line, a distance of 0.6 miles. Additional work includes sidewalk reconstruction, culvert repairs and related work. The project includes improvements to the intersection of Route 16 and Route 140, including upgraded signal equipment and widening where feasible.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Congestion Mitigation and Air Quality Program	\$629,924	\$157,481	\$787,405
2019	Highway Safety Improvement Program	\$2,125,993	\$236,221	\$2,362,214
Total Funding Programmed		\$2,755,917	\$393,702	\$3,149,619

ID Number : 606043
Municipality(ies): Hopkinton
Project Name: Signal & Intersection Improvements on Route 135
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: 1317
Evaluation Rating: 65
MPO / CTPS Study:
L RTP Status:
Project Length: 0.82

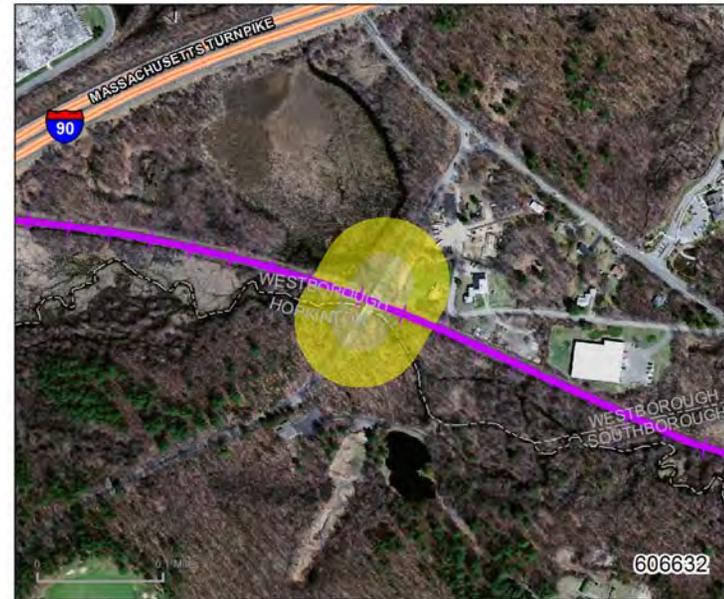


Project Description:

The project involves intersection improvements at Route 85, Pleasant Street and Wood Street. The improvements include signal equipment upgrade, geometric modifications, and additional lanes at Route 85, possible signalization at Pleasant Street, and minor widening, geometric modifications and equipment upgrades at Wood Street. The project includes pavement rehabilitation from Ash Street to Wood Street, drainage improvements as needed, reconstructed sidewalks and wheelchair ramps, and streetscape enhancements in the town center.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Congestion Mitigation and Air Quality Program	\$800,000	\$200,000	\$1,000,000
2019	Highway Safety Improvement Program	\$1,147,685	\$127,521	\$1,275,206
2019	Surface Transportation Program	\$4,980,936	\$1,245,234	\$6,226,170
Total Funding Programmed		\$6,928,621	\$1,572,755	\$8,501,376

ID Number : 606632
Municipality(ies): Hopkinton , Westborough
Project Name: Bridge Replacement, Fruit Street Over CSX & Sudbury River
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.03

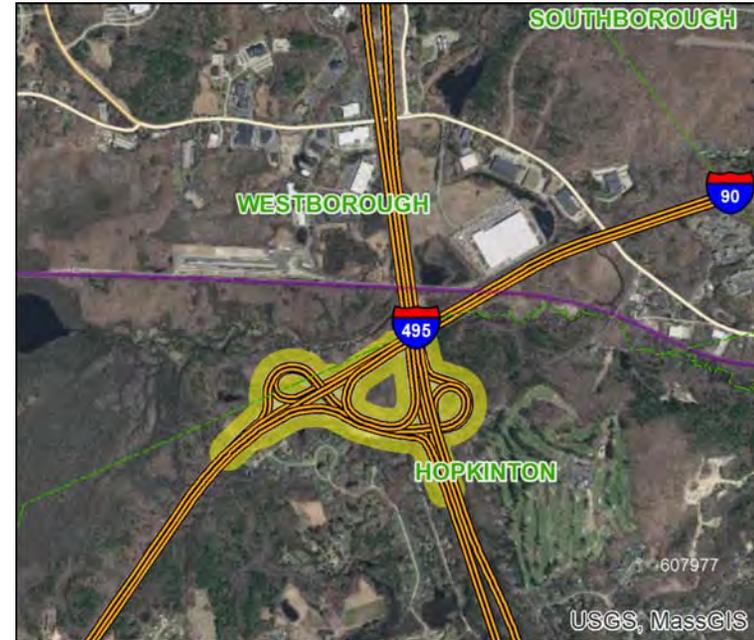


Project Description:

Bridge H-23-006=W-24-016 is both posted and structurally deficient. It is currently posted for 9-16-26 tons. It is currently rated 6-4-4. This structure has 4 spans and 3 piers. It spans both the CSX Railroad & Sudbury River. It has been recommended for replacement by the District 3 DBIE & DBE.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Bridge	\$6,371,331	\$1,592,833	\$7,964,164
Total Funding Programmed		\$6,371,331	\$1,592,833	\$7,964,164

ID Number : 607977
Municipality(ies): Hopkinton , Westborough
Project Name: Reconstruction of I-90/I-495 Interchange
Project Type: Major Highway
Air Quality Status: Model
CO2 Impact:
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 3.61



Project Description:

The project proposes to improve the interchange of I-90 and I-495. A number of alternatives are being developed and evaluated in the current feasibility study.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Statewide Infrastructure Program	\$800,000	\$200,000	\$1,000,000
2021	Statewide Infrastructure Program	\$30,000,000	\$7,500,000	\$37,500,000
Total Funding Programmed		\$30,800,000	\$7,700,000	\$38,500,000

ID Number : 602077
Municipality(ies): Lynn
Project Name: Reconstruction on Route 129 (Lynnfield Street), from Great Woods Road to Wyoma Square
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: 17
Evaluation Rating: 41
MPO / CTPS Study:
L RTP Status:
Project Length: 0.72



Project Description:

This roadway and safety improvement project includes drainage improvements, curbing, new sidewalks, wheelchair ramps, intersection improvements, pavement markings, signing, landscaping, and other incidental work. Project limits are from Colonial Avenue to about 150 feet south of Floyd Avenue (between Floyd and Cowdrey Road). The total project length is approximately 0.72 miles.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Congestion Mitigation and Air Quality Program	\$800,000	\$200,000	\$1,000,000
2020	Surface Transportation Program	\$3,162,616	\$790,654	\$3,953,270
Total Funding Programmed		\$3,962,616	\$990,654	\$4,953,270

ID Number : 604952

Municipality(ies): Lynn , Saugus

Project Name: Bridge Replacement, Route 107 over the Saugus River (AKA Belden G. Bly Bridge)

Project Type: Bridge

Air Quality Status: Exempt

CO2 Impact: Assumed Nominal Reduction

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length: 0.17

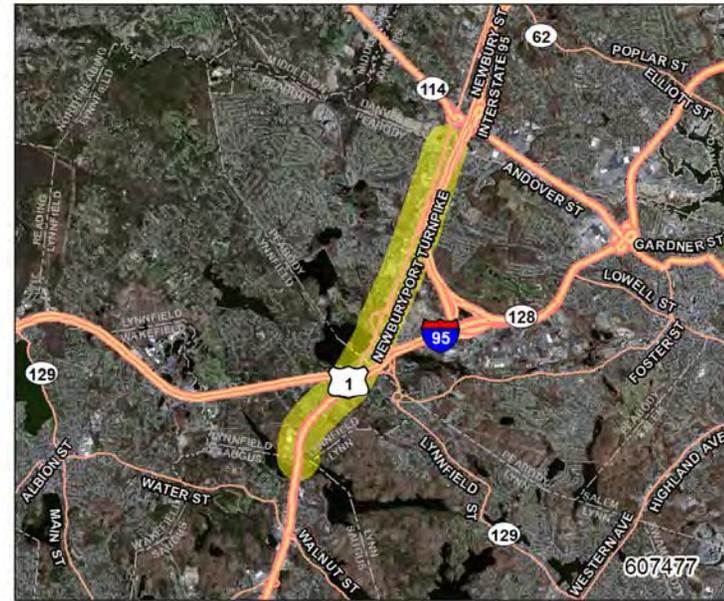


Project Description:

This project consists of the construction of the Route 107 (Fox Hill bridge) which spans the Saugus River. The new bridge will serve as the permanent replacement for the proposed Temporary drawbridge. The new bridge (AKA Belden G. Bly bridge) will be a single leaf bascule drawbridge.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Bridge	\$20,611,200	\$5,152,800	\$25,764,000
2019	Bridge	\$20,610,713	\$5,152,678	\$25,763,391
Total Funding Programmed		\$41,221,913	\$10,305,478	\$51,527,391

ID Number : 607477
Municipality(ies): Lynnfield , Peabody
Project Name: Resurfacing and Related Work on Route 1
Project Type: Major Highway
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
LRTP Status:
Project Length: 2.7

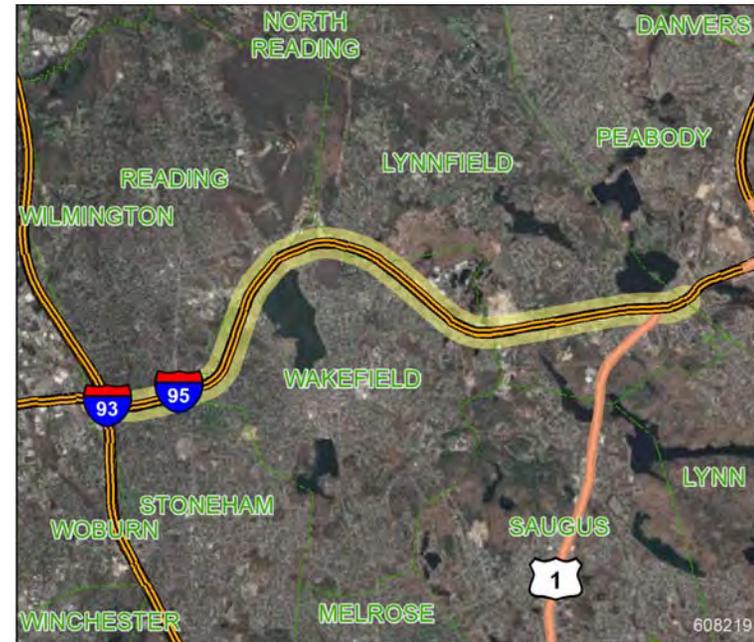


Project Description:

The project will resurface Route 1 in Lynnfield and Peabody from milepoint 58.8 to 61.5 for a project length of 2.7 miles.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	National Highway Performance Program	\$5,788,640	\$1,447,160	\$7,235,800
Total Funding Programmed		\$5,788,640	\$1,447,160	\$7,235,800

ID Number : 608219
Municipality(ies): Lynnfield , Reading , Wakefield
Project Name: Interstate Maintenance Resurfacing and Related Work on I-95
Project Type: Major Highway
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 7.49

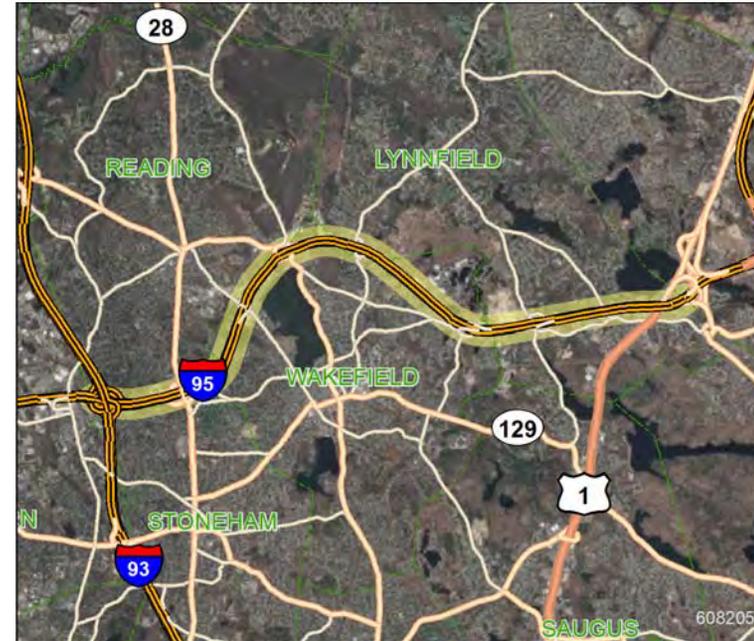


Project Description:

The interstate maintenance resurfacing proposes resurfacing and safety improvements.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Interstate Maintenance	\$4,245,696	\$471,744	\$4,717,440
Total Funding Programmed		\$4,245,696	\$471,744	\$4,717,440

ID Number : 608205
Municipality(ies): Lynnfield , Reading , Wakefield
Project Name: Guide and Traffic Sign Replacement on a Section of Interstate 95
Project Type: Major Highway
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 7.58



Project Description:

This project consists of replacing guide and traffic signs, and supports, on Interstate Route 95 (Route 128) between Route 28 (Exit 38) in Reading and Route 1 (Exit 44) in Lynnfield, including applicable signs on intersecting secondary roads. To ensure driver safety, new signs and supports will meet current retroreflectivity and design standards.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Highway Safety Improvement Program	\$4,218,188	\$468,688	\$4,686,876
Total Funding Programmed		\$4,218,188	\$468,688	\$4,686,876

ID Number : 607329

Municipality(ies): Lynnfield , Wakefield

Project Name: Rail Trail Extension, from the Galvin Middle School to Lynnfield/Peabody Town Line

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

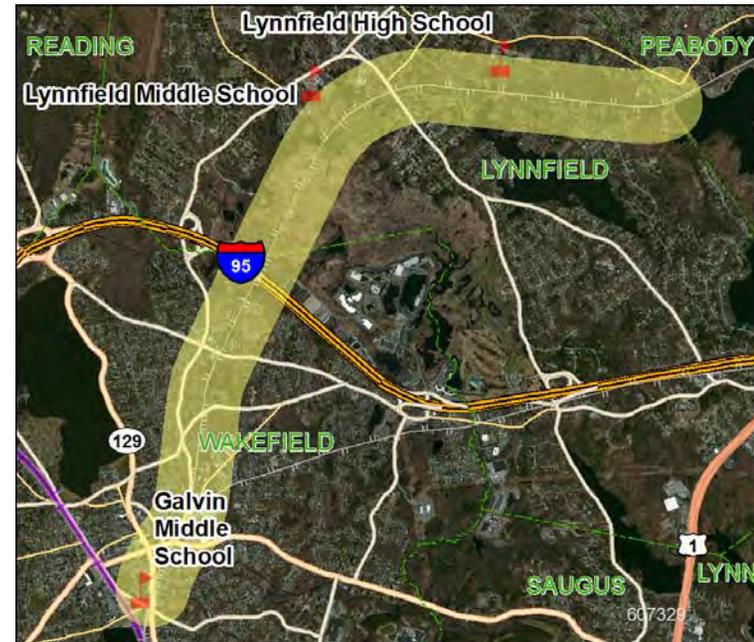
CO2 Impact: To Be Determined

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length: 4.35

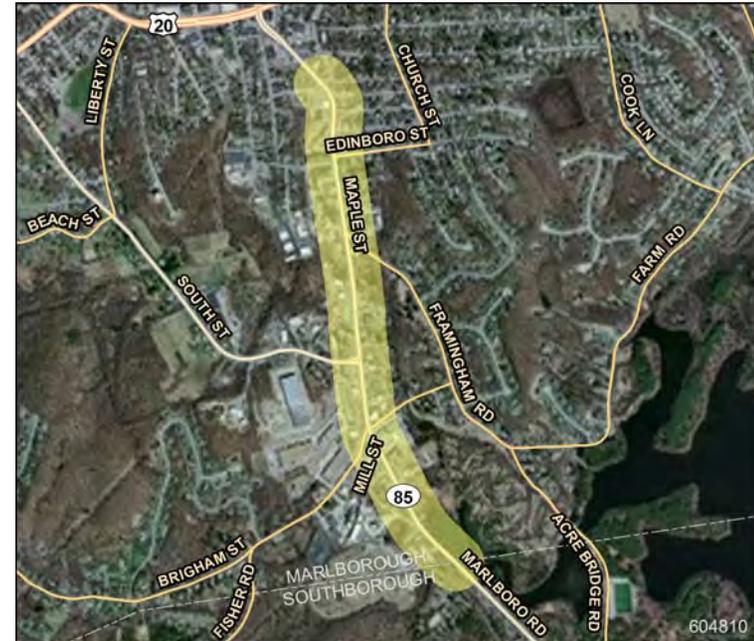


Project Description:

The proposed Wakefield/Lynnfield Rail Trail extends from the Galvin Middle School in Wakefield north to the Lynnfield/Peabody Town Line, a distance of approximately 4.4 miles. Approximately 1.9 miles of the trail is located within Wakefield and 2.5 miles in Lynnfield. The corridor is the southern section of the former Newburyport Railroad and will connect to Peabody and the regional Border to Boston Trail.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Statewide Congestion Mitigation and Air Quality Program	\$5,667,200	\$1,416,800	\$7,084,000
Total Funding Programmed		\$5,667,200	\$1,416,800	\$7,084,000

ID Number : 604810
Municipality(ies): Marlborough
Project Name: Reconstruction of Route 85 (Maple Street)
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: 650
Evaluation Rating: 59
MPO / CTPS Study:
L RTP Status:
Project Length: 1.14



Project Description:

The project limits are from John Street southerly to Southborough town line, total of 1.1 miles. The project includes reconstruction and resurfacing and sidewalk reconstruction.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Congestion Mitigation and Air Quality Program	\$1,600,000	\$400,000	\$2,000,000
2017	Highway Safety Improvement Program	\$3,057,954	\$339,773	\$3,397,727
2017	Surface Transportation Program	\$172,727	\$43,182	\$215,909
Total Funding Programmed		\$4,830,682	\$782,955	\$5,613,636

ID Number : 604655
Municipality(ies): Marshfield
Project Name: Bridge Replacement, Beach Street over the Cut River
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: Assumed Nominal Reduction
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.02

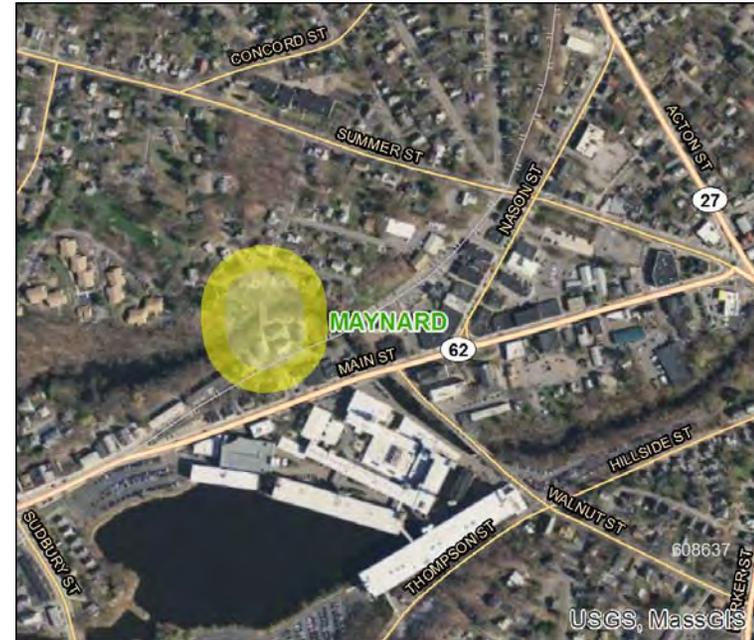


Project Description:

The purpose of this project is to replace a locally owned, structurally deficient bridge carrying Beach Street over the Cut River in Marshfield in the same location with two sidewalks.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Bridge	\$2,419,150	\$604,788	\$3,023,938
Total Funding Programmed		\$2,419,150	\$604,788	\$3,023,938

ID Number : 608637
Municipality(ies): Maynard
Project Name: Bridge Replacement, M-10-006, Florida Road over Assabet River
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
LRTP Status:
Project Length: 0.01



Project Description:

Work consists of bridge replacement of Florida Road over the Assabet River in Maynard.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2021	Bridge	\$1,317,296	\$329,324	\$1,646,620
Total Funding Programmed		\$1,317,296	\$329,324	\$1,646,620

ID Number : 603917

Municipality(ies): Medford , Reading , Stoneham , Winchester , Woburn

Project Name: Highway Lighting Rehabilitation on I-93 (Phase II)

Project Type: Major Highway

Air Quality Status: Exempt

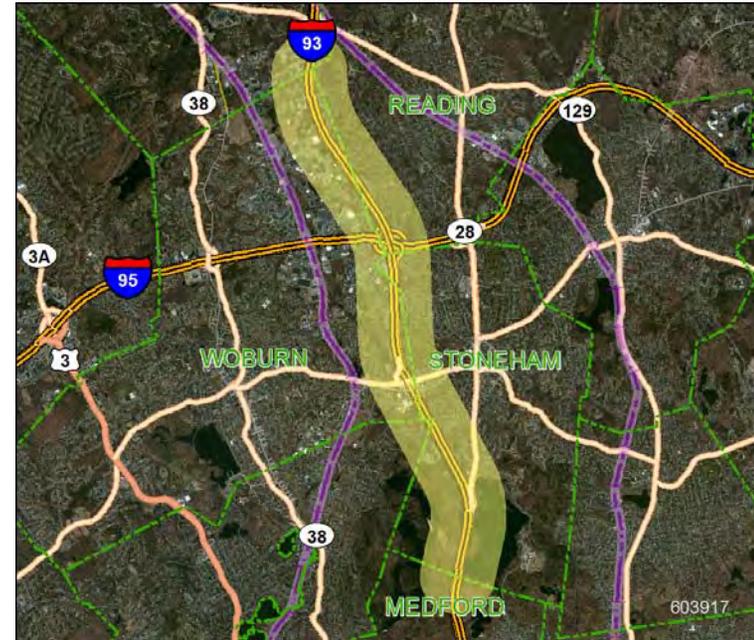
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length: 9.62

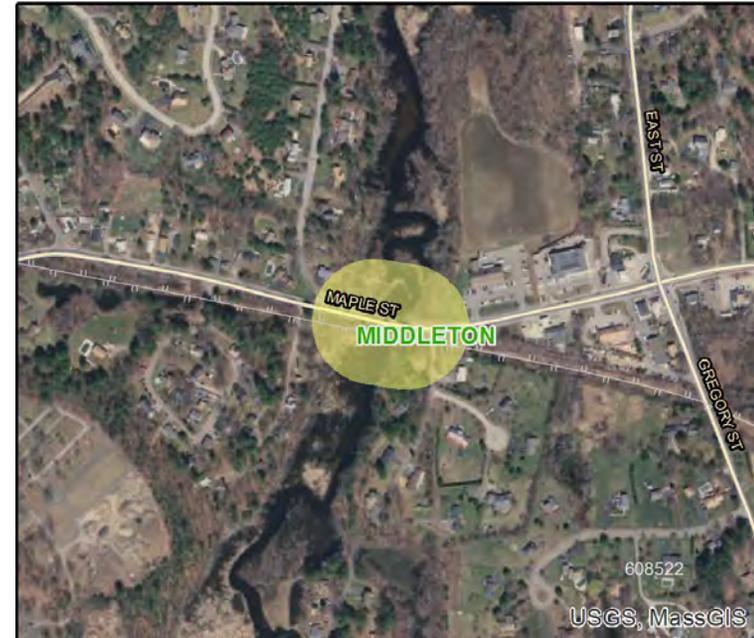


Project Description:

This project updates and replaces the highway lighting system on Interstate 93 in the municipalities of Medford, Stoneham, Woburn and Reading.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Statewide Infrastructure Program	\$819,419	\$204,855	\$1,024,274
Total Funding Programmed		\$819,419	\$204,855	\$1,024,274

ID Number : 608522
Municipality(ies): Middleton
Project Name: Bridge Replacement, M-20-003, Route 62/Maple Street over Ipswich River
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.02

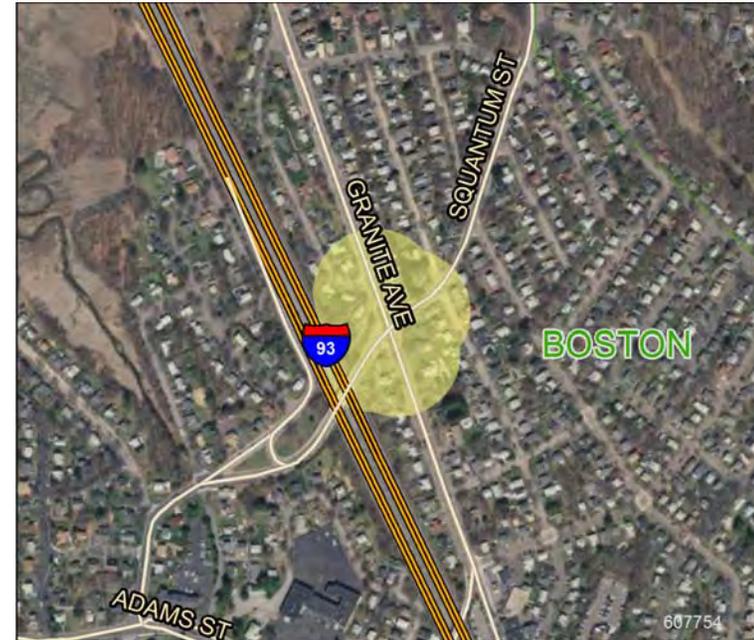


Project Description:

Work consists of bridge replacement of Route 62/Maple Street over the Ipswich River in Middleton.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Bridge	\$3,328,000	\$832,000	\$4,160,000
Total Funding Programmed		\$3,328,000	\$832,000	\$4,160,000

ID Number : 607754
Municipality(ies): Milton
Project Name: Intersection & Signal Improvements at Granite Avenue & Squantum Street
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: To Be Determined
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.08



Project Description:

Work consists of intersection safety upgrades for signs, pavement markings, and traffic signals as identified through a Road Safety Audit Process.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Statewide Highway Safety Improvement Program	\$495,000	\$55,000	\$550,000
Total Funding Programmed		\$495,000	\$55,000	\$550,000

ID Number : 607763

Municipality(ies): Milton

Project Name: Intersection & Signal Improvements at 2 Locations: SR 138 (Blue Hill Avenue) at Atherton Street & Bradlee Road and SR 138 (Blue Hill Avenue) at Milton Street & Dollar Lane

Project Type: Arterial and Intersection

Air Quality Status: Exempt

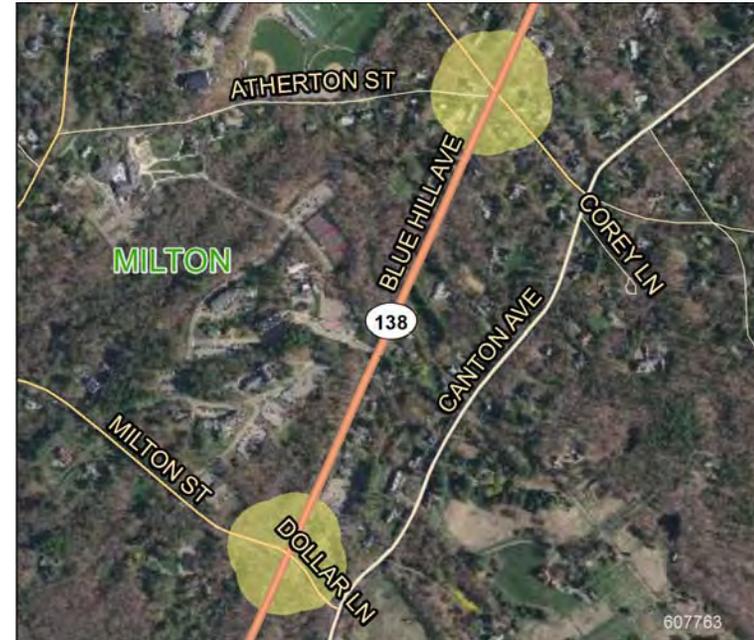
CO2 Impact: To Be Determined

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length: 0.17



Project Description:

Work consists of intersection safety upgrades for signs, pavement markings, and traffic signals as identified through a Road Safety Audit Process.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Highway Safety Improvement Program	\$1,069,200	\$118,800	\$1,188,000
Total Funding Programmed		\$1,069,200	\$118,800	\$1,188,000

ID Number : 605034

Municipality(ies): Natick

Project Name: Reconstruction of Route 27 (North Main Street), from North Avenue to the Wayland Town Line

Project Type: Arterial and Intersection

Air Quality Status: Exempt

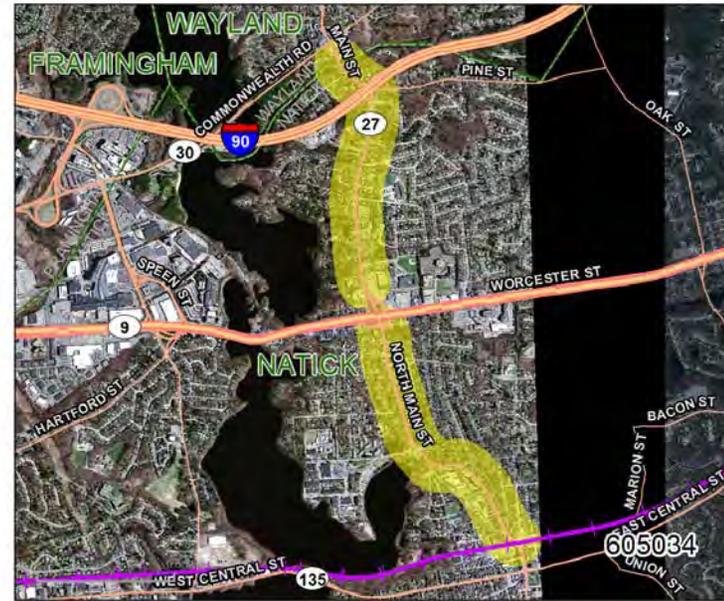
CO2 Impact: 196

Evaluation Rating: 61

MPO / CTPS Study:

L RTP Status:

Project Length: 2.18



Project Description:

The project begins on Route 27 (North Main Street) at North Avenue and extends northerly 2.2 miles to the Wayland town line, excluding the Route 9 interchange. The proposed improvements include minor widening of the section of roadway south of Route 9 to a more consistent cross-section. The pavement will be reconstructed utilizing reclaimed base course. Cement concrete sidewalks will be constructed on both sides of the roadway throughout the length of the project. The existing signals will be upgraded and, if warrants are met, new signals will be installed at Lake Street, Rutledge Road and Pine Street.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Congestion Mitigation and Air Quality Program	\$1,932,267	\$483,067	\$2,415,334
2019	Surface Transportation Program	\$9,380,229	\$2,345,057	\$11,725,286
2019	Transportation Alternatives	\$1,055,146	\$263,787	\$1,318,933
Total Funding Programmed		\$12,367,643	\$3,091,911	\$15,459,553

ID Number : 606635

Municipality(ies): Needham , Newton

Project Name: Reconstruction of Highland Avenue, Needham Street & Charles River Bridge, from Webster Street to Route 9

Project Type: Arterial and Intersection

Air Quality Status: Model

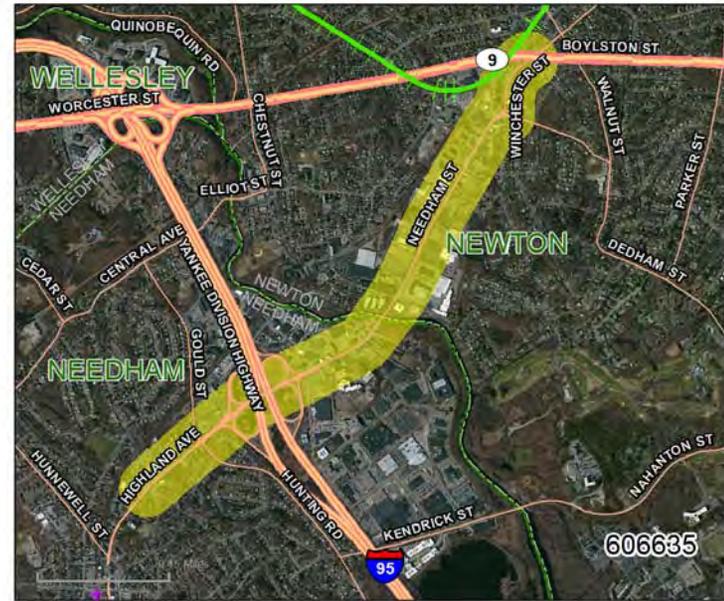
CO2 Impact: 804

Evaluation Rating: 77

MPO / CTPS Study:

L RTP Status: 2016-20

Project Length: 1.44



Project Description:

(Replaces #601827 & #604344). Work will consist of reconstruction on Highland Avenue starting at Webster Street in Needham and continue onto Needham Street and in Newton. Also includes the rehabilitation of the bridge, N-04-002.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Congestion Mitigation and Air Quality Program	\$1,600,000	\$400,000	\$2,000,000
2018	Highway Safety Improvement Program	\$2,087,680	\$231,964	\$2,319,644
2018	Surface Transportation Program	\$7,678,525	\$1,919,631	\$9,598,156
2018	Transportation Alternatives	\$1,237,194	\$309,298	\$1,546,492
Total Funding Programmed		\$12,603,398	\$2,860,894	\$15,464,292

ID Number : 603711

Municipality(ies): Needham , Wellesley

Project Name: Rehab/Replacement of 6 Bridges on I-95/Route 128 (Add-a-Lane Contract 5)

Project Type: Major Highway

Air Quality Status: Model

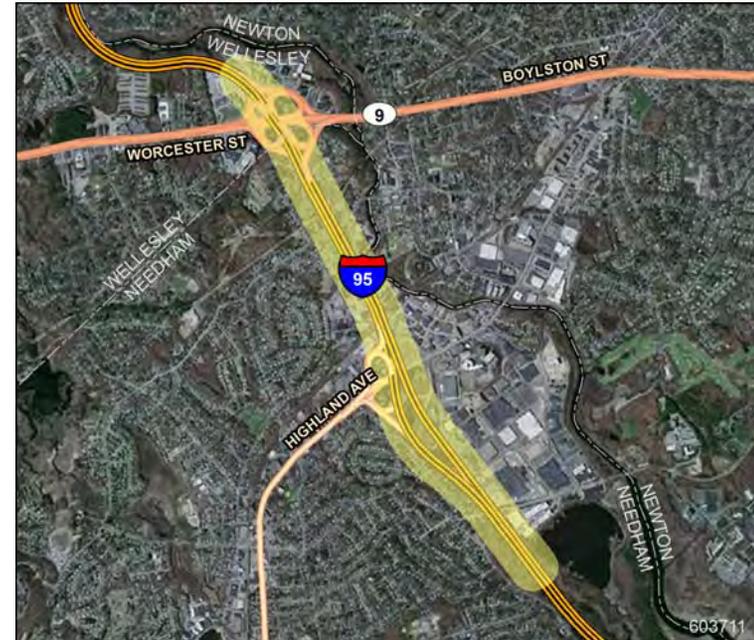
CO2 Impact: Model

Evaluation Rating:

MPO / CTPS Study:

L RTP Status: 2016-20

Project Length: 3.25



Project Description:

This project is the final bridge contract (Bridge V) for the I-95/93 (Route 128) Transportation Improvement Project. The work includes six bridge locations and approximately 3.25 miles of I-95 roadway reconstruction. The roadway work on I-95, from just south of Kendrick Street to just north of Route 9, includes the installation of an additional 12 foot travel lane and 10 foot shoulder in each direction toward the median, along with new collector/distributor roads between Highland Avenue and Kendrick Street. The collector roads will provide safer weaving movements between the interchanges and provide safer traffic movements to and from the adjacent business park. The bridge locations include the following: Kendrick Street over I-95 (Route 128) in Needham; Highland Avenue over I-95 (Route 128) in Needham; MBTA RR (Newton Upper Falls Branch) over I-95 (Route 128) in Needham (BRIDGE REMOVAL); I-95 (Route 128) over Central Street in Needham; Ramp K-1 Bridge over CD Road, and I-95 (Route 128) over Route 9 in Wellesley.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	National Highway Performance Program	\$19,631,853	\$4,907,963	\$24,539,816
2018	National Highway Performance Program	\$1,590,694	\$397,673	\$1,988,367
Total Funding Programmed		\$21,222,546	\$5,305,637	\$26,528,183

ID Number : 608610
Municipality(ies): Newton
Project Name: Bridge Maintenance, N-12-055, Clean and Paint Structural Steel
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.06

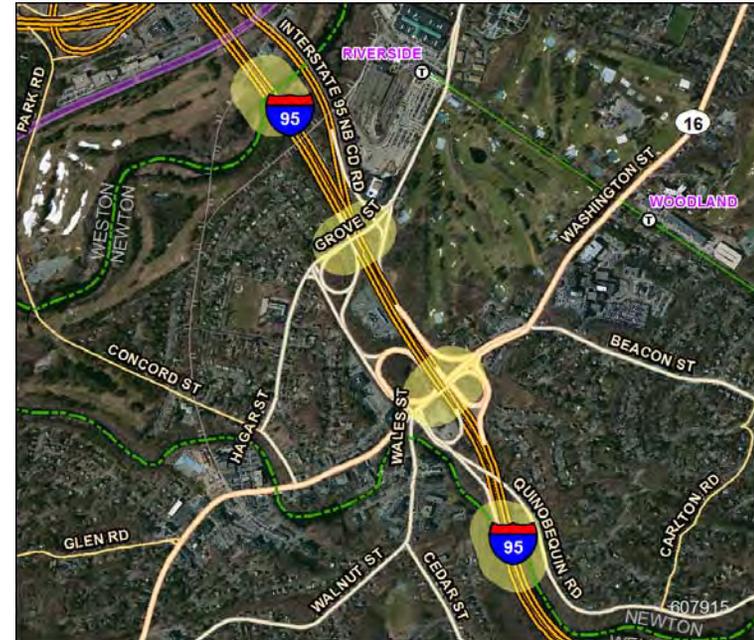


Project Description:

Work consists of bridge cleaning and painting of structural steel in Newton.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2021	Bridge	\$1,846,400	\$461,600	\$2,308,000
Total Funding Programmed		\$1,846,400	\$461,600	\$2,308,000

ID Number : 607915
Municipality(ies): Newton , Wellesley , Weston
Project Name: Bridge Maintenance of N-12-063, N-12-054, N-12-055 & N-12-056 on I-95/Route 128
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.21

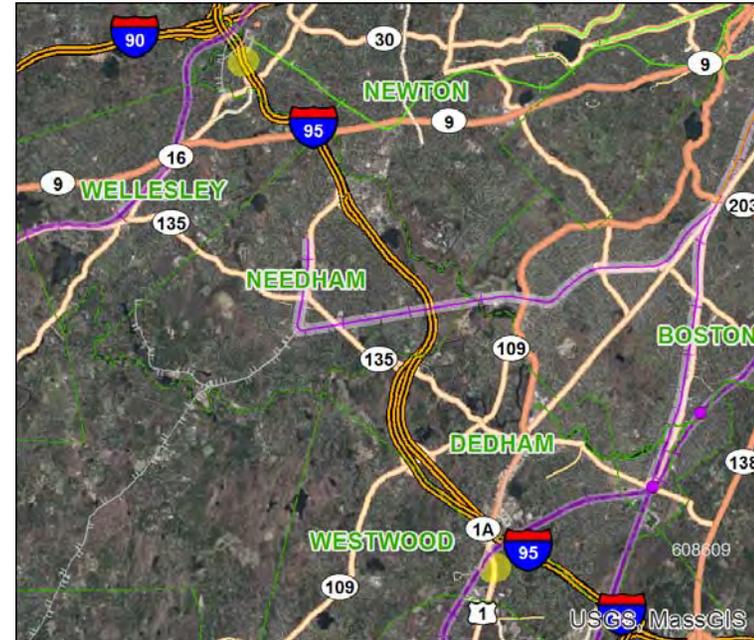


Project Description:

This project involves the systematic bridge maintenance of 4 bridges. N-12-063, N-12-054, N-12-055 and N-12-056.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Bridge	\$1,328,427	\$332,107	\$1,660,534
Total Funding Programmed		\$1,328,427	\$332,107	\$1,660,534

ID Number : 608609
Municipality(ies): Newton , Westwood
Project Name: Bridge Maintenance, N-12-0056 and W-31-006, Clean and Paint Structural Steel
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.13



Project Description:

Work consists of bridge cleaning and painting of structural steel in Newton and Westwood.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Bridge	\$1,920,000	\$480,000	\$2,400,000
Total Funding Programmed		\$1,920,000	\$480,000	\$2,400,000

ID Number : 608052

Municipality(ies): Norwood

Project Name: Intersection and Traffic Signal Improvements at Providence Highway (Route 1) and Morse Street

Project Type: Arterial and Intersection

Air Quality Status: Exempt

CO2 Impact: To Be Determined

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length: 0.13

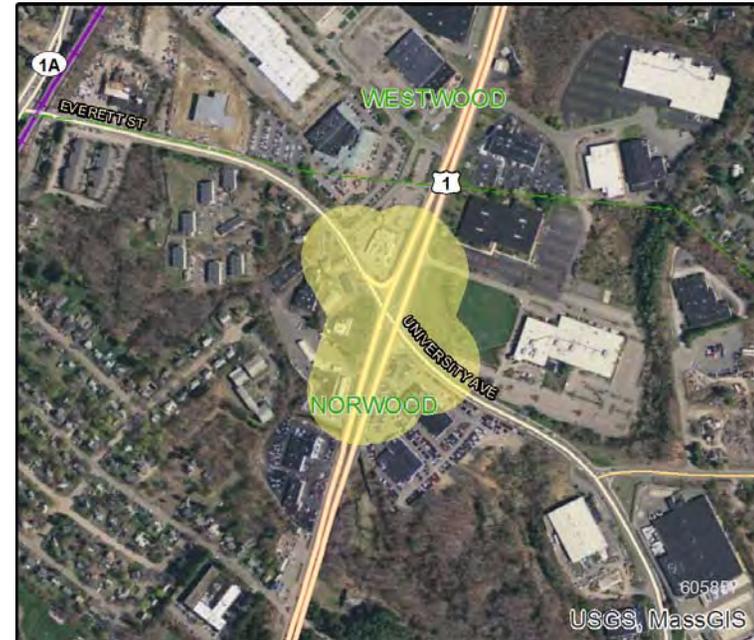


Project Description:

Work will consist of improving the intersection and signals at US Route 1 (Providence Highway) and Morse Street.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Highway Safety Improvement Program	\$534,600	\$59,400	\$594,000
Total Funding Programmed		\$534,600	\$59,400	\$594,000

ID Number : 605857
Municipality(ies): Norwood
Project Name: Intersection Improvements at Route 1 & University Avenue/ Everett Street
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: 1106
Evaluation Rating: 55
MPO / CTPS Study: University Ave./I-95/I-93 Regional Traffic Study (1999)
L RTP Status:
Project Length: 0.23

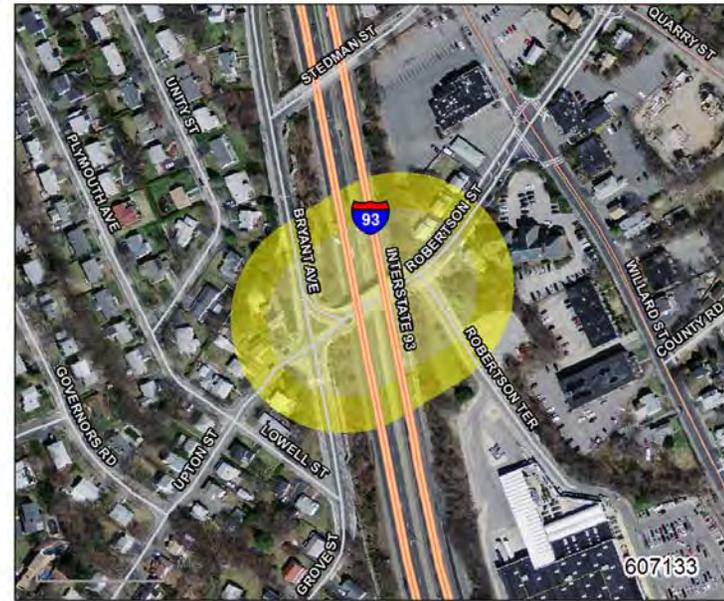


Project Description:

Work on this project includes traffic signal upgrades and associated geometric improvements. Related improvements include constructing an additional travel lane in each direction on Route 1, upgrading of traffic signals, lengthening of left turn lanes on Route 1, upgrading of pedestrian crossings at each leg of the intersection, and upgrading of bicycle amenities (loop detectors) at intersection. Rehabilitation of sidewalks, curbing, median structures, lighting and guard rail are also proposed.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2021	Congestion Mitigation and Air Quality Program	\$2,400,000	\$600,000	\$3,000,000
2021	Highway Safety Improvement Program	\$568,552	\$63,172	\$631,724
2021	Surface Transportation Program	\$2,148,410	\$537,102	\$2,685,512
Total Funding Programmed		\$5,116,961	\$1,200,275	\$6,317,236

ID Number : 607133
Municipality(ies): Quincy
Project Name: Bridge Replacement, Robertson Street over I-93/US 1/SR 3
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.02



Project Description:

The existing structure, two continuous spans, was constructed in 1958. The superstructure consists of 7 rolled steel beams composite with an exposed 8 inch reinforced concrete deck. The substructure consists of two concrete gravity type abutments, gravity type wingwalls, and a reinforced concrete solid wall type pier. From the SI&A, the overall structure length is approximately 139 feet, the maximum span length is 67 feet, the out-to-out deck width is 48.5 feet, the curb-to curb width is 36 feet, and each sidewalk width is 5 feet. The bridge is structurally deficient and functionally obsolete. The new structure (either deck replacement or superstructure replacement) shall be designed using the AASHTO LRFD Bridge Design Specifications, 6th edition with all current interims, and the MassDOT 2013 LRFD Bridge Manual. Upon verification of the adequacy of the existing substructure, the Consultant shall investigate either superstructure replacement with new steel weathering steel stringers composite with a reinforced concrete exposed deck or deck replacement and clean and paint the existing beams. Substructure elements shall be repaired as required, and limited approach roadway reconstruction shall be reviewed and included, as necessary.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Bridge	\$2,608,361	\$652,090	\$3,260,452
Total Funding Programmed		\$2,608,361	\$652,090	\$3,260,452

ID Number : 608611

Municipality(ies): Randolph

Project Name: Replacement and Rehabilitation of the Highway Lighting System at the Route 24/Route 1/I-93 Interchange

Project Type: Major Highway

Air Quality Status: Exempt

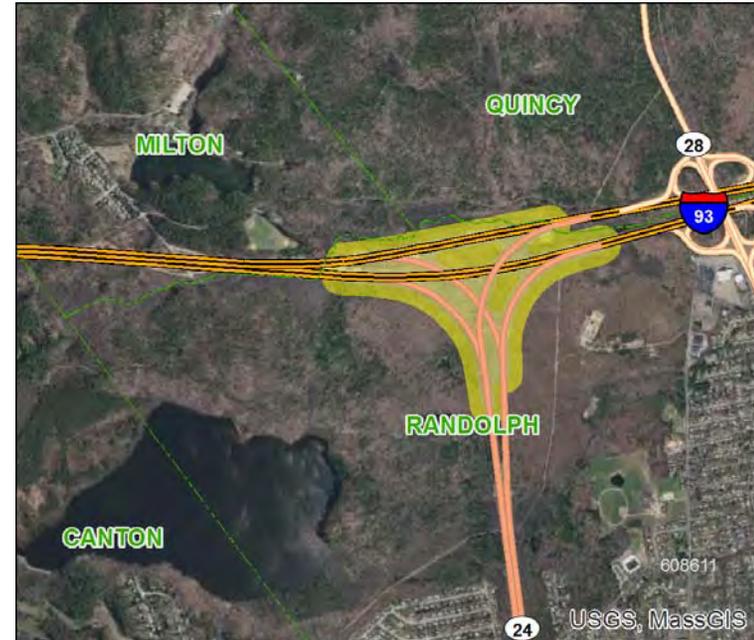
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length: 1.99



Project Description:

Work consists of replacement of rehabilitation of the highway lighting system at the Route 24/Route 1/I-93 interchange in Canton, Milton, and Randolph.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Statewide Infrastructure Program	\$7,757,783	\$1,834,008	\$9,591,791
Total Funding Programmed		\$7,757,783	\$1,834,008	\$9,591,791

ID Number : 1729
Municipality(ies): Regional
Project Name: Community Transportation Program
Project Type:
Air Quality Status: Exempt
CO2 Impact:
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length:
Project Description:

Community Transportation Program (projects will be identified through a competitive process).

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2021	Congestion Mitigation and Air Quality Program	\$1,400,000	\$350,000	\$1,750,000
Total Funding Programmed		\$1,400,000	\$350,000	\$1,750,000

ID Number : 607999

Municipality(ies): Revere

Project Name: Safe Routes to School (Garfield Elementary & Middle School)

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

CO2 Impact: Assumed Nominal Reduction

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length:

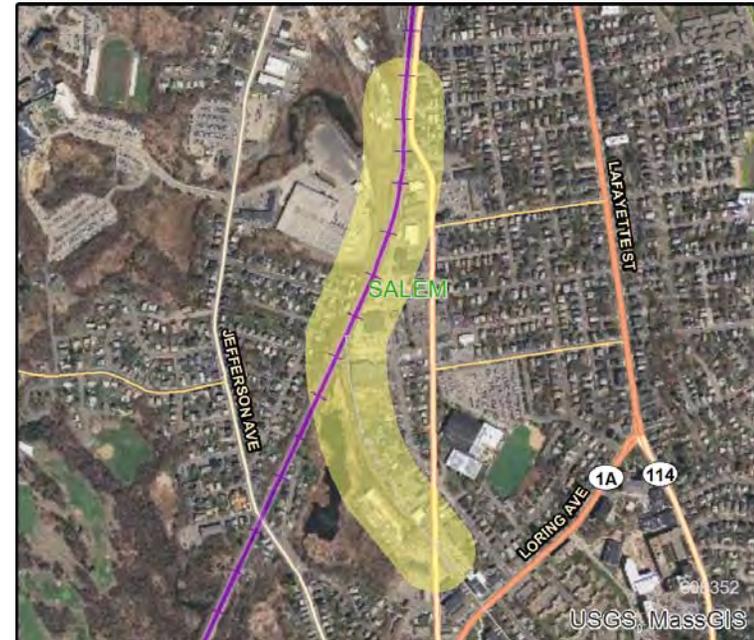


Project Description:

The project includes the reconstruction of the concrete sidewalk with vertical granite curb along the west side of Waverly Avenue from Centennial Avenue to the intersection of North Shore Road and Dana Street, reconstruction of concrete sidewalk with vertical granite curb along the south side of Dix Street and the reconstruction of concrete sidewalk with vertical granite curb along the east side of Garfield Avenue from Dix Street to the school driveway. High-visibility crosswalks will be constructed and existing signage will be upgraded where applicable. New crosswalk and stop line pavement markings will be applied where faded. ADA-compliant accessible ramps will be constructed for all perpendicular pedestrian crossings and a traffic signal with countdown pedestrian indicators will be installed at the intersection of Waverly Avenue, North Shore Road, and Dana Street. The existing traffic signal at the intersection of North Shore Road and Dix Street will be removed and finally, MUTCD-compliant warning and regulatory signs will be installed throughout the project. All-way stop control will be considered at the intersections of Garfield Avenue with Blake Street and Dix Street.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Safe Routes to School	\$660,000	\$165,000	\$825,000
Total Funding Programmed		\$660,000	\$165,000	\$825,000

ID Number : 608352
Municipality(ies): Salem
Project Name: Canal Street Rail Trail Construction (Phase 2)
Project Type: Bicycle and Pedestrian
Air Quality Status: Exempt
CO2 Impact: 11
Evaluation Rating: 40
MPO / CTPS Study:
L RTP Status: N/A
Project Length: 0.64

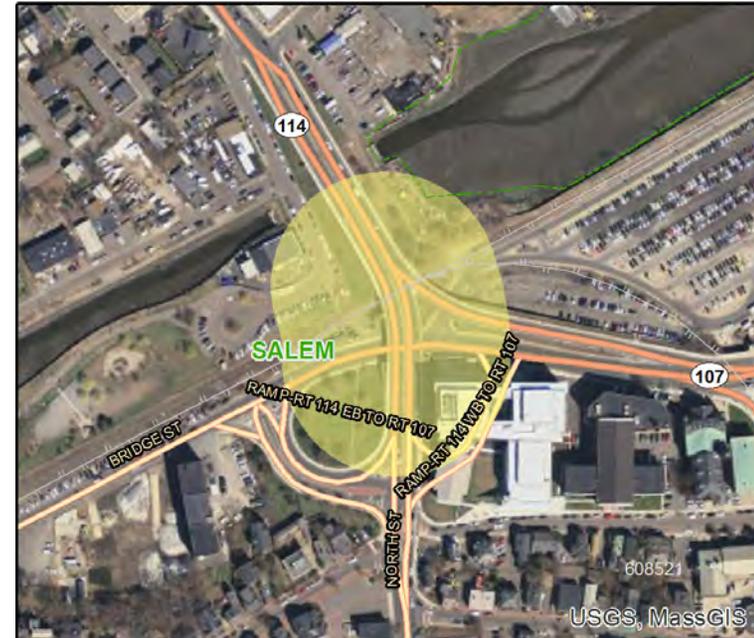


Project Description:

The project will construct 0.6 miles of shared off road path closing the gap between the existing Marblehead Rail Trail and the shared use path constructed along side Canal Street to Mill Street. The path will be 10 feet wide with 2 foot shoulders. The project includes the relocation of a railroad spur.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Transportation Alternatives	\$2,076,672	\$519,168	\$2,595,840
Total Funding Programmed		\$2,076,672	\$519,168	\$2,595,840

ID Number : 608521
Municipality(ies): Salem
Project Name: Bridge Maintenance, No. S-01-018,
 Structural Steel Repairs
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.03



Project Description:

Work consists of structural steel repairs to bridge in Salem.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Bridge	\$1,920,000	\$480,000	\$2,400,000
Total Funding Programmed		\$1,920,000	\$480,000	\$2,400,000

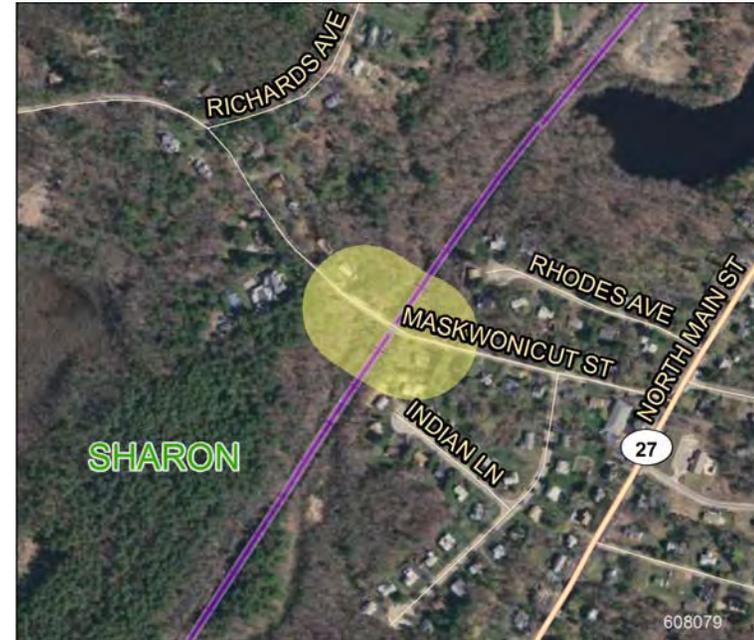
ID Number : 608008
Municipality(ies): Saugus
Project Name: Resurfacing & Related Work on Route 1
Project Type: Major Highway
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
LRTP Status:
Project Length: 4.03
Project Description:



This project consists of resurfacing and related work along Route 1 in Saugus.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	National Highway Performance Program	\$7,956,749	\$1,989,187	\$9,945,936
Total Funding Programmed		\$7,956,749	\$1,989,187	\$9,945,936

ID Number : 608079
Municipality(ies): Sharon
Project Name: Bridge Replacement, Maskwonicut Street over Amtrak/MBTA
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.04



Project Description:

Work on this project shall consist of replacing the bridge that is currently closed due to deterioration.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Bridge	\$4,509,994	\$1,127,498	\$5,637,492
Total Funding Programmed		\$4,509,994	\$1,127,498	\$5,637,492

ID Number : 607488

Municipality(ies): Southborough

Project Name: Resurfacing & Related Work on Route 9, from the Framingham Townline to White Bagley Road

Project Type: Arterial and Intersection

Air Quality Status: Exempt

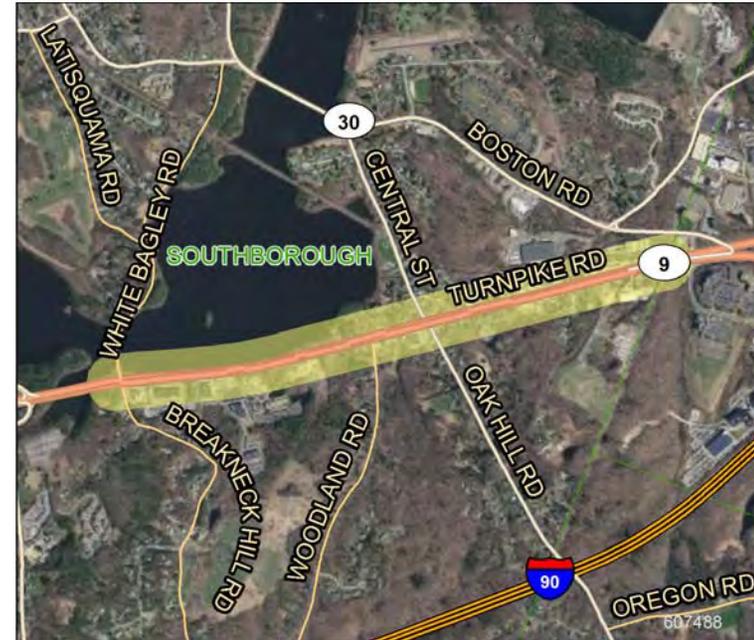
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

L RTP Status:

Project Length: 1.6



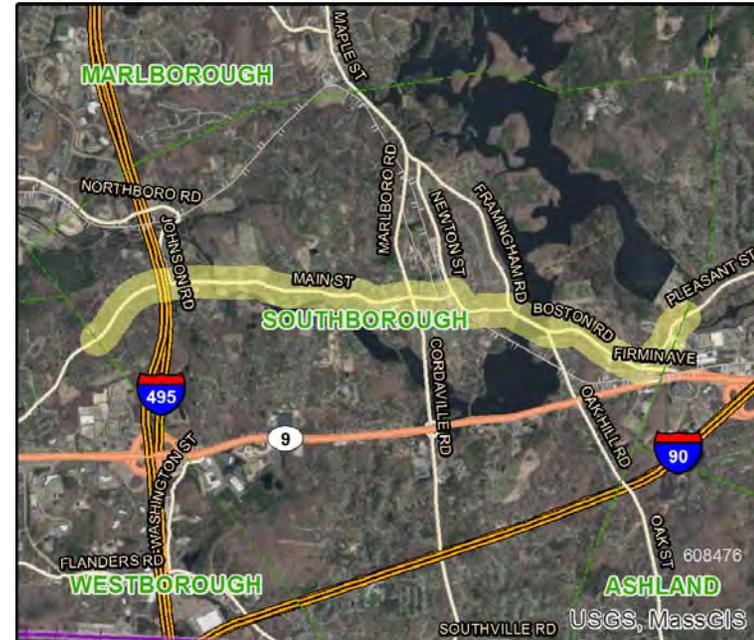
Project Description:

The proposed project involves resurfacing and related work on Route 9 in Southborough. The project begins just west of White Bagley/Breakneck Hill Road (mm 111.4±) and ends at the Framingham/Southborough town line (mm113.0±) for a distance of 1.6 miles. The proposed improvements also include minor improvements to existing traffic signals, reconstruction of existing sidewalk and may include construction of additional sidewalk if feasible. Related work includes upgrades to guardrail and signs.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	National Highway Performance Program	\$3,808,175	\$952,044	\$4,760,219
Total Funding Programmed		\$3,808,175	\$952,044	\$4,760,219

ID Number : 608476
Municipality(ies): Southborough
Project Name: Resurfacing and Related Work on Route 30
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 4.96
Project Description:

Work consists of resurfacing on Route 30 in Southborough.



Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2021	National Highway Performance Program	\$2,227,200	\$556,800	\$2,784,000
Total Funding Programmed		\$2,227,200	\$556,800	\$2,784,000

ID Number : 604989

Municipality(ies): Southborough

Project Name: Reconstruction of Main Street (Route 30), from Sears Road to Park Street

Project Type: Arterial and Intersection

Air Quality Status: Exempt

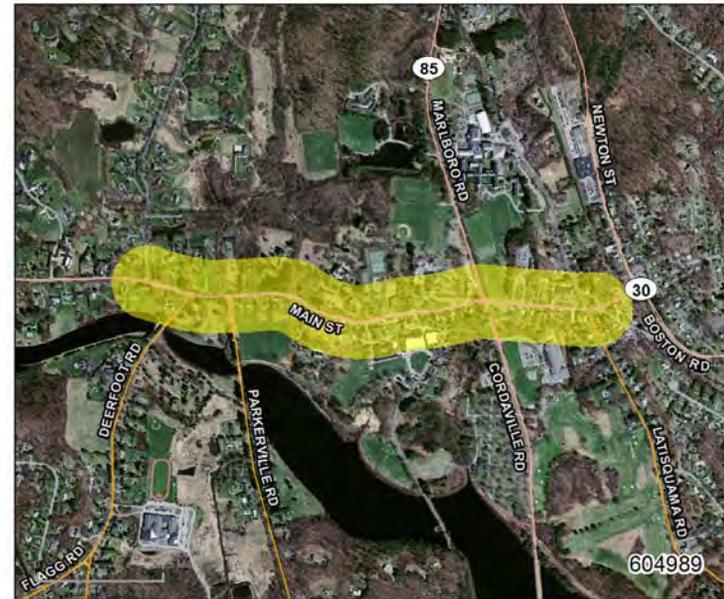
CO2 Impact: 235

Evaluation Rating: 43

MPO / CTPS Study: Bicycle and Pedestrian Improvements in Town Centers (2007)

LRTP Status:

Project Length: 0.91

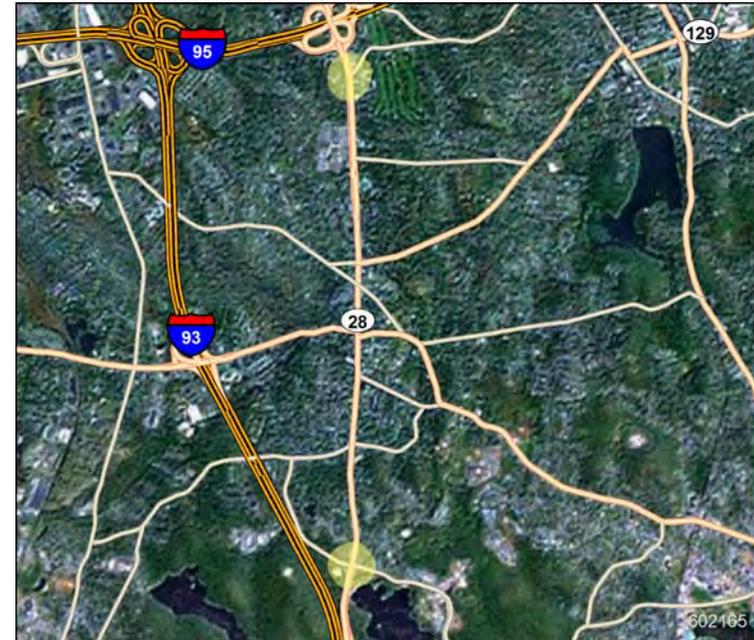


Project Description:

The purpose of this project is to reconstruct Main Street in Southborough with the intent to create a consistent roadway width. A continuous sidewalk will also be constructed along the southern side of the project. The intersection of Main Street (Route 30) and Marlborough Street/Cordaville Road (Route 85) are proposed to be realigned to include a new traffic signal system and left turn only lanes.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Congestion Mitigation and Air Quality Program	\$800,000	\$200,000	\$1,000,000
2018	Surface Transportation Program	\$3,859,998	\$965,000	\$4,824,998
2018	Transportation Alternatives	\$1,165,000	\$291,250	\$1,456,250
Total Funding Programmed		\$5,824,998	\$1,456,250	\$7,281,248

ID Number : 602165
Municipality(ies): Stoneham
Project Name: Signal & Intersection Improvements at Route 28/North Street
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: 154
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.15

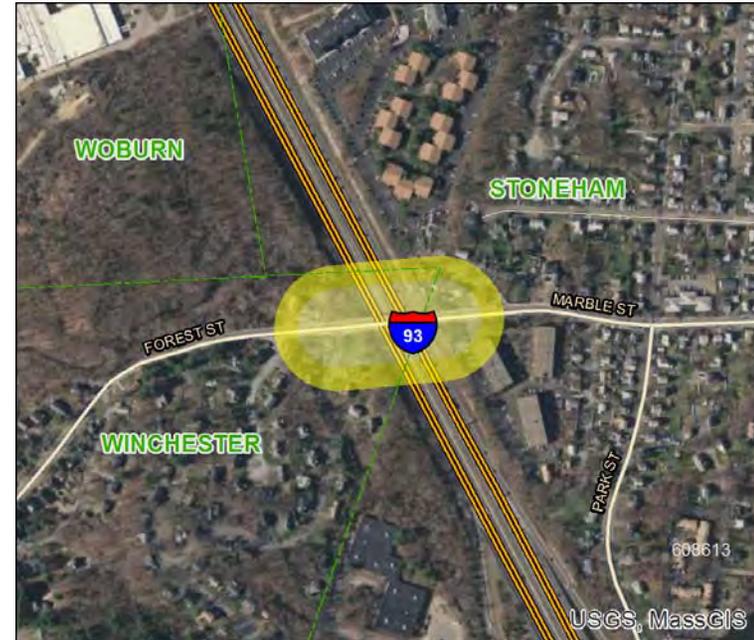


Project Description:

This project will address intersection deficiencies on Route 28 at two Locations: Route 28 at North Street and Route 28 at North Border and South Streets. Widening may be necessary to accommodate more traffic volume. Signal timing improvements and pavement markings will improve intersection efficiency. Route 28 at North Border Street and South Street is on the top 1000 high accident location lists.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Statewide Congestion Mitigation and Air Quality Program	\$1,178,885	\$294,721	\$1,473,607
Total Funding Programmed		\$1,178,885	\$294,721	\$1,473,607

ID Number : 608613
Municipality(ies): Stoneham , Winchester
Project Name: Bridge Replacement, S-27-008, Marble Street over I-93
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.08



Project Description:

Work consists of bridge replacement of Marble Street over I-93 in Stoneham.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Bridge	\$12,418,496	\$3,104,624	\$15,523,120
Total Funding Programmed		\$12,418,496	\$3,104,624	\$15,523,120

ID Number : 605342
Municipality(ies): Stow
Project Name: Bridge Rehabilitation, S-29-001, (ST 62)
 Gleasndle Road over the Assabet River
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact:
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.04

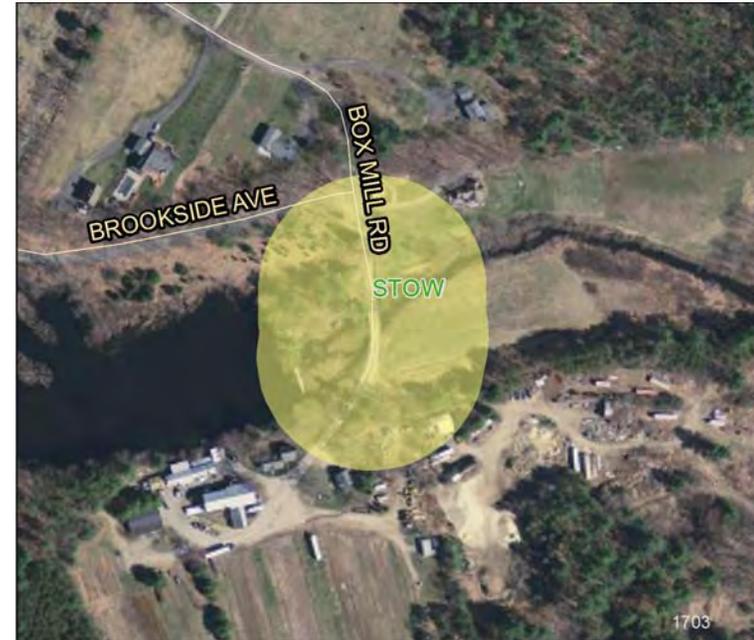


Project Description:

Work consists of replacing S-29-001.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Bridge	\$5,365,248	\$1,341,312	\$6,706,560
Total Funding Programmed		\$5,365,248	\$1,341,312	\$6,706,560

ID Number : 608255
Municipality(ies): Stow
Project Name: Bridge Replacement, S-29-11, Box Mill Road over Elizabeth Brook
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.02

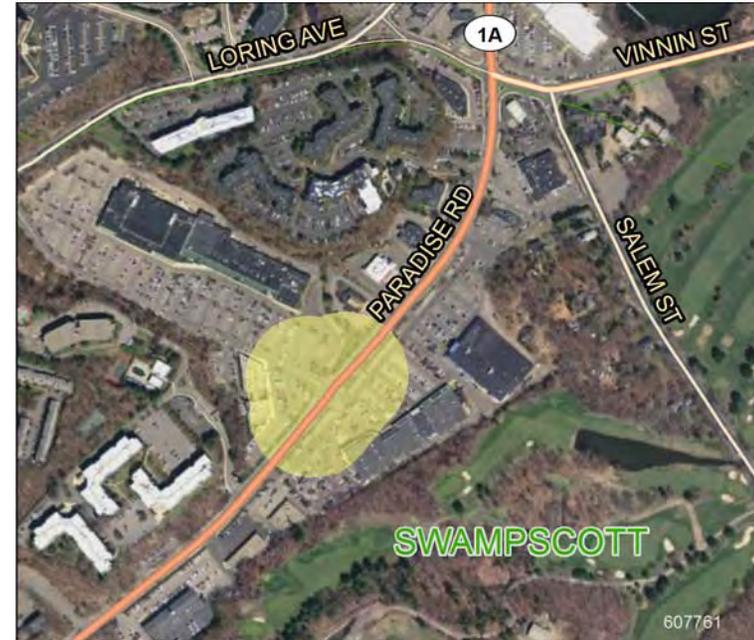


Project Description:

Box Mill Road over Elizabeth Brook is a structurally deficient bridge. The full replacement will include new substructure, steel beams and concrete deck. One sidewalk will be added to the structure.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Bridge	\$1,280,448	\$320,112	\$1,600,560
Total Funding Programmed		\$1,280,448	\$320,112	\$1,600,560

ID Number : 607761
Municipality(ies): Swampscott
Project Name: Intersection & Signal Improvements at SR 1A (Paradise Road) at Swampscott Mall
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: To Be Determined
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.05

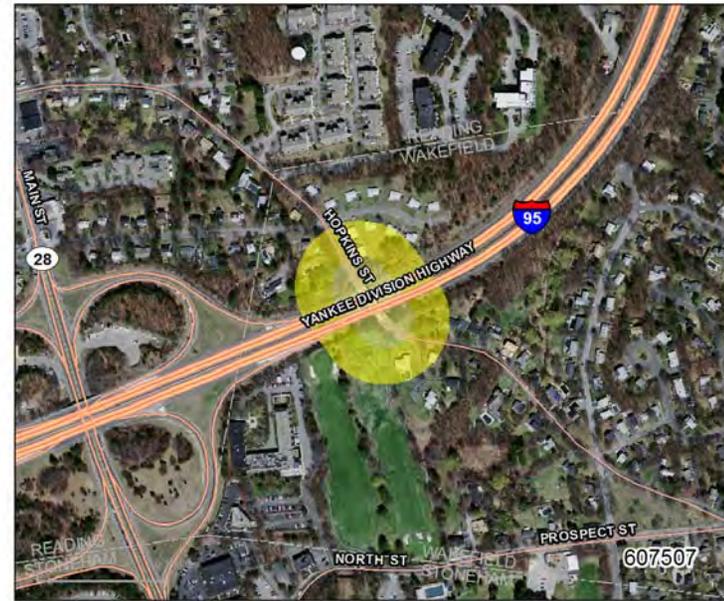


Project Description:

Work consists of intersection safety upgrades for signs, pavement markings, and traffic signals as identified through a Road Safety Audit Process.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Statewide Highway Safety Improvement Program	\$514,800	\$57,200	\$572,000
Total Funding Programmed		\$514,800	\$57,200	\$572,000

ID Number : 607507
Municipality(ies): Wakefield
Project Name: Bridge Deck Replacement, W-01-021 (2MF)
 Hopkins Street over I-95 / ST 128
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: Assumed Nominal Reduction
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.03



Project Description:

This bridge is structurally deficient and the work involves removing the old deck and replacing it with a new deck along with some structural steel repairs and substructure repairs to bring it out of the structurally deficient list.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Bridge	\$2,117,088	\$529,272	\$2,646,360
Total Funding Programmed		\$2,117,088	\$529,272	\$2,646,360

ID Number : 602261
Municipality(ies): Walpole
Project Name: Reconstruction on Route 1A (Main Street), from the Norwood Town Line to Route 27
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: 237
Evaluation Rating: 52
MPO / CTPS Study:
L RTP Status:
Project Length: 2.33



Project Description:

The proposed project consists of reconstructing 8000 feet of Route 1A including intersection and approach improvements at Fisher, Gould, North and Bullard/Willet Streets and at the Stop and Shop Plaza. The Route 1A bridge over the Neponset River, near the intersection with North Street, will be analyzed to determine if it can be rehabilitated or if it requires replacement. The limits of work are from approximately 2,000 feet north of Route 27 northerly to the Norwood town line.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Congestion Mitigation and Air Quality Program	\$800,000	\$200,000	\$1,000,000
2020	Surface Transportation Program	\$12,580,749	\$3,145,187	\$15,725,936
2020	Transportation Alternatives	\$1,486,750	\$371,687	\$1,858,437
Total Funding Programmed		\$14,867,498	\$3,716,875	\$18,584,373

ID Number : 607533
Municipality(ies): Waltham
Project Name: Woerd Avenue over the Charles River
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
LRTP Status:
Project Length: 0.02



Project Description:

This work consists of a bridge replacement with a modular pre-cast concrete system, with sidewalks on both sides and approach work.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Bridge	\$1,875,794	\$468,948	\$2,344,742
Total Funding Programmed		\$1,875,794	\$468,948	\$2,344,742

ID Number : 608004
Municipality(ies): Watertown
Project Name: Safe Routes to School (Hosmer Elementary)
Project Type: Bicycle and Pedestrian
Air Quality Status: Exempt
CO2 Impact: Assumed Nominal Reduction
Evaluation Rating:
MPO / CTPS Study:
LRTP Status:
Project Length:
Project Description:



This project will provide bicycle and pedestrian improvements around Hosmer Elementary in Watertown.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Safe Routes to School	\$695,000	\$173,750	\$868,750
Total Funding Programmed		\$695,000	\$173,750	\$868,750

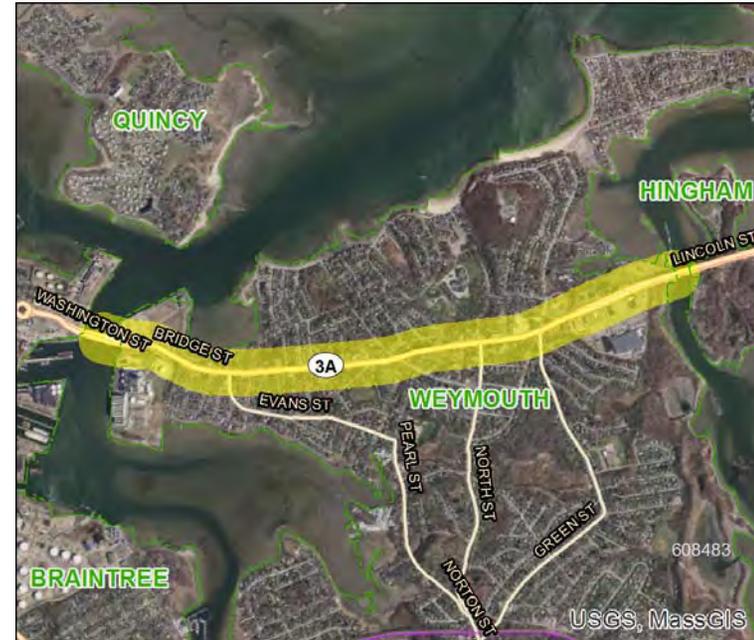
ID Number : 608003
Municipality(ies): Weymouth
Project Name: Safe Routes to School (Pingree Elementary)
Project Type: Bicycle and Pedestrian
Air Quality Status: Exempt
CO2 Impact: Assumed Nominal Reduction
Evaluation Rating:
MPO / CTPS Study:
LRTP Status:
Project Length:
Project Description:



This project includes mill and overlay along Commercial Street from 500 ft north of Cottage Street to approximately 350 ft south of the school driveway. Pedestrian improvements will include wheelchair ramp and sidewalk reconstruction to meet ADA requirements. The curb bump out will narrow the roadway and reduce crossing distance. Share the road signs will be constructed.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Safe Routes to School	\$580,000	\$145,000	\$725,000
Total Funding Programmed		\$580,000	\$145,000	\$725,000

ID Number : 608483
Municipality(ies): Weymouth
Project Name: Resurfacing and Related Work on Route 3A
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 1.89
Project Description:



Work consists of resurfacing on Route 3A in Weymouth.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	National Highway Performance Program	\$2,060,800	\$515,200	\$2,576,000
Total Funding Programmed		\$2,060,800	\$515,200	\$2,576,000

ID Number : 608214
Municipality(ies): Winchester
Project Name: Stormwater Improvements along Route 3
Project Type: Arterial and Intersection
Air Quality Status: Exempt
CO2 Impact: No CO2 Impact
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.55

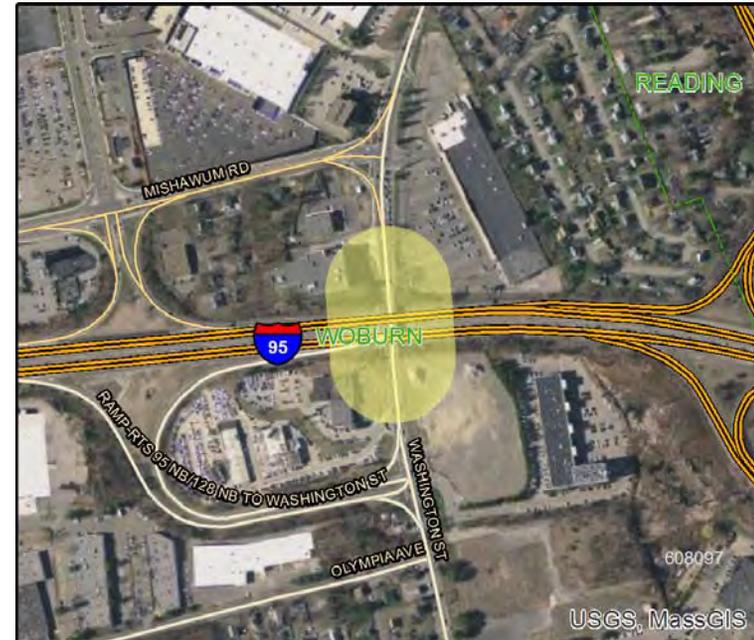


Project Description:

This project consists of stormwater improvements to treat roadway runoff discharging to Upper Mystic Lake.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Transportation Enhancement	\$193,536	\$48,384	\$241,920
Total Funding Programmed		\$193,536	\$48,384	\$241,920

ID Number : 608097
Municipality(ies): Woburn
Project Name: Bridge Replacement & Related Work, W-43-028, Washington Street over I-95
Project Type: Bridge
Air Quality Status: Exempt
CO2 Impact:
Evaluation Rating:
MPO / CTPS Study:
L RTP Status:
Project Length: 0.05



Project Description:

The replacement of the Washington Street Bridge over I-95 is an initial phase of a larger project to re-configure the I-93/I-95 Interchange. The span of Washington Street must be widened to allow space for an Collector-Distributor roadway which will carry all I-95 northbound traffic headed for both directions of I-93 separate from I-95 northbound to eliminate weaves from just after Exit 35 to Exit 37 (I-93). In addition, the Washington Street bridge over I-95 between Mishawum Road and the I-95 northbound narrows to 40 feet wide, undesirable to handle the four lanes of traffic that need and wish to pass.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2020	Bridge	\$11,200,000	\$2,800,000	\$14,000,000
Total Funding Programmed		\$11,200,000	\$2,800,000	\$14,000,000

ID Number : 604996
Municipality(ies): Woburn
Project Name: Bridge Replacement, New Boston Street over MBTA
Project Type: Bridge
Air Quality Status: Model
CO2 Impact: Model (1501)
Evaluation Rating: 55
MPO / CTPS Study:
L RTP Status: 2016-20
Project Length: 0.34



Project Description:

The work proposed in this project consists of constructing a new bridge over the NH Main Line of the MBTA Commuter Rail. Also included is the reconstruction of approximately 1,850 feet of New Boston Street.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2021	Surface Transportation Program	\$14,227,514	\$3,556,878	\$17,784,392
Total Funding Programmed		\$14,227,514	\$3,556,878	\$17,784,392

ID Number : 604935
Municipality(ies): Woburn
Project Name: Reconstruction of Montvale Avenue, from I-93 Interchange to Central Street
Project Type: Arterial and Intersection
Air Quality Status: Model
CO2 Impact: 109
Evaluation Rating: 51
MPO / CTPS Study:
LRTP Status: 2016-20
Project Length: 0.37



Project Description:

This project will widen Montvale Avenue to 4 lanes and provide turning lanes at Washington Street. New traffic signals will be installed along with new sidewalks, wheelchair ramps and new roadway pavement

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Highway Safety Improvement Program	\$3,208,166	\$356,463	\$3,564,629
2017	Surface Transportation Program	\$950,568	\$237,642	\$1,188,210
Total Funding Programmed		\$4,158,734	\$594,105	\$4,752,838

4

CHAPTER FOUR

Using Performance Measures to Track and Demonstrate Progress

OVERVIEW OF PERFORMANCE-BASED PLANNING

Increasingly, over the past two decades, transportation agencies have been applying “performance management”—a strategic approach that uses performance data to help achieve desired outcomes—to support decision-making. Performance management is credited with improving project and program delivery, informing investment decision making, focusing staff on leadership priorities, and providing greater transparency and accountability to the public.

Performance-based planning and programming (PBPP) refers to transportation agencies’ application of performance management in their planning and programming to achieve desired outcomes for the multimodal transportation system. For MPOs, this embraces a range of activities and products together with other agencies, stakeholders, and the public as part of the 3C Metropolitan Transportation Planning Process. This includes developing:

- long-range transportation plans (LRTPs)

- other plans and processes (including those that are federally required, such as Strategic Highway Safety Plans, Asset Management Plans, the Congestion Management Process, Transit Agency Asset Management Plans, and Transit Agency Safety Plans, as well as others that are not required)
- programming documents, including state and metropolitan Transportation Improvement Programs (STIPs and TIPs)

The goal of PBPP is to ensure that transportation investment decisions—both long-term planning and short-term programming—are based on their ability to meet established goals.

The cornerstone of *Moving Ahead for Progress in the 21st Century’s* (MAP-21) highway program transformation is this movement to performance- and outcome-based results. The current transportation authorization legislation, the Fixing America’s Surface Transportation (FAST) Act, continues the performance-based planning and programming provisions established under MAP-21.

States will invest resources in projects to achieve individual state targets that collectively will make

progress toward national goals, as detailed in the FAST Act:

- **Safety**—Achieve significant reduction in traffic fatalities and serious injuries on all public roads
- **Infrastructure condition**—Maintain the highway infrastructure asset system in a state of good repair
- **Congestion reduction**—Achieve significant reduction in congestion on the (NHS)
- **System reliability**—Improve efficiency of surface transportation system
- **Freight movement and economic vitality**—Improve national freight network, strengthen ability of rural communities to access national and international trade markets, support regional economic development
- **Environmental sustainability**—Enhance performance of transportation system while protecting/enhancing the natural environment
- **Reduced project delivery delays**—Reduce project costs, promote jobs and the economy, expedite movement of people and goods by accelerating project completion; eliminate delays in project development/delivery process, including reducing regulatory burdens and improving agencies’ work practices

REQUIREMENTS OF PERFORMANCE-BASED PLANNING

The U.S. Secretary of Transportation, in consultation with states, MPOs, and other stakeholders, has: (1) established safety performance measures to carry out the Highway Safety Improvement Program and assess fatalities and serious injuries on all public roads; (2) proposed performance measures for Interstate and NHS pavement and bridge conditions, and general performance of the Interstate and NHS; and (3) proposed performance measures to assess traffic congestion and on-road mobile-source emissions.

States and MPOs will set performance targets to support these measures; and state and metropolitan plans will describe how program and project selection would help to achieve the targets.

TABLE 4-1:
NATIONAL AND MPO PERFORMANCE GOALS

National Goal	MPO Goal
Safety	Safety
Infrastructure Condition, System Reliability	System Preservation
Congestion Reduction	Capacity Management/Mobility
Environmental Sustainability	Clean Air/Clean Communities
Freight Movement/ Economic Vitality	Economic Vitality

STATUS OF PERFORMANCE-BASED PLANNING

The Boston Region MPO’s transition to performance-based planning is underway in anticipation of FAST Act performance-measure requirements. The MPO has:

- established goals and objectives that align with national goals (indicated in Table 4-1)
- developed performance measures
- analyzed some performance-measure trends over time to identify priorities and prioritize investments that advance goals and objectives

MPO goals provide the foundation for the TIP criteria used in the project selection process, as described in Chapter 2. These criteria describe the ways that individual projects are expected to help the MPO advance its various goals. Over time, the contributions made by TIP projects are expected to generate changes in the transportation system’s performance.

In *Charting Progress to 2040*, the MPO’s most recent LRTP, the MPO strengthened the link between its spending and improving transportation performance by establishing a series of investment programs. These programs each support multiple MPO goals, and include:

- Complete Streets
- Intersection Improvements
- Bicycle Network and Pedestrian Connections

- Major Infrastructure (*including highways funds flexed to transit infrastructure*)
- Community Transportation/Parking/Clean Air and Mobility

As part of developing the LRTP, the MPO allocated a large portion of its discretionary funds to these investment programs over the LRTP’s 25-year life span. In turn, these fund TIP projects that meet the investment program’s criteria. Detail about these programs and their relationship to MPO goals is shown in Figure 4-1 on the following page. Table 4-2, below, and Figure 4-2 show how FFYs 2017–2021 regional target funding is distributed across MPO investment programs.

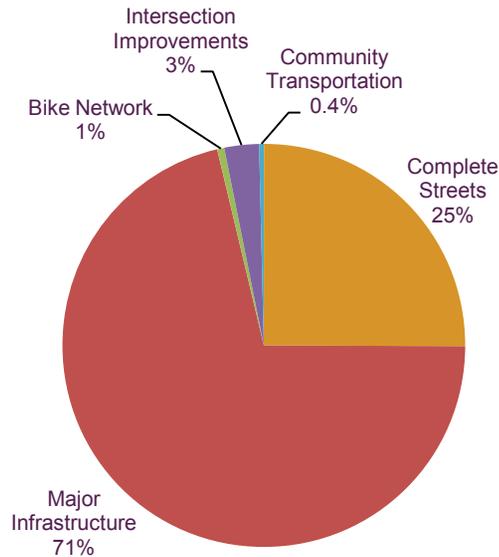
TABLE 4-2:
PROJECTS AND FUNDING, BY INVESTMENT PROGRAM

Investment Program	Number of Projects	Funding for Projects
Major Infrastructure	9	\$330.2 million
Complete Streets	14	\$116.1 million
Intersection Improvements	3	\$12.9 million
Bicycle Network and Pedestrian Connections	1	\$2.6 million
Community Transportation / Parking / Clean Air and Mobility	1	\$1.75 million

Figure 4-1:
MPO Investment Programs

Intersection Improvements	Complete Streets	Bicycle Network and Pedestrian Connections	Community Transportation/ Parking/ Clean Air and Mobility Program	Major Infrastructure
				
<p>Funds projects to modernize existing traffic signals or add signals to improve safety and mobility.</p> <p>Improvements may include:</p> <ul style="list-style-type: none"> • Adding turning lanes • Shortening crossing distances for pedestrians • Improving sidewalks • Adding curb cuts • Updating signal operations 	<p>Funds projects that modernize roadways to improve safety and mobility for all users.</p> <p>Improvements may include:</p> <ul style="list-style-type: none"> • Providing continuous sidewalks and bicycle lanes, cycle tracks, and other bicycle facilities • Updating signals at intersections along a corridor • Improving other corridor infrastructure, such as bridges, drainage, pavement, and roadway geometry 	<p>Funds projects to expand bicycle and pedestrian networks to improve safe access to transit, school, employment centers, and shopping destinations.</p> <p>Improvements may include:</p> <ul style="list-style-type: none"> • Constructing new, off-road bicycle or multi-use paths • Improving bicycle and pedestrian crossings, or building new sidewalks • Providing Traffic calming, sidewalk network expansion, and other Complete Streets type upgrades • Enhancing signage and lighting 	<p>Supports variety of project types:</p> <p>Community Transportation: Provides funding to launch locally developed transit services that support first-mile/last-mile connections to existing transit services and other destinations by purchasing shuttle buses and/or funding operating costs.</p> <p>Park-and-Ride: Targets funding to construct additional parking at transit stations that are at capacity, or at other viable locations.</p> <p>Clean Air and Mobility Program: Funds projects that improve mobility and air quality and promote mode shift (e.g. bike-share projects or shuttle-bus services.)</p>	<p>Funds projects that modernize and/ or expands major highways and arterials to reduce congestion and improve safety.</p> <p>Improvements may include:</p> <ul style="list-style-type: none"> • Constructing expressway interchanges to eliminate weaving and reduce the likelihood of rollovers • Adding travel lanes on expressways • Adding/removing grade separations on major arterials. <p>May also support transit by flexing highway funds to transit and bridge projects.</p>
<p>KEY: MPO GOALS</p> <ul style="list-style-type: none">  Safety  System Preservation  Capacity Management/Congestion Reduction  Clean Air/Clean Communities  Transportation Equity  Economic Vitality 				

FIGURE 4-2:
FFYS 2017–2021 TIP REGIONAL MPO TARGET FUNDING, BY
INVESTMENT PROGRAM



**Boston Region Target
Program: \$464 million**

The following sections of this chapter track performance measures and demonstrate how transportation investments for the next five years would advance the MPO’s goals and objectives.

TRACKING PERFORMANCE MEASURES AND DEMONSTRATING PROGRESS TOWARD GOALS AND OBJECTIVES

Safety—Using Performance Measures to Track Progress

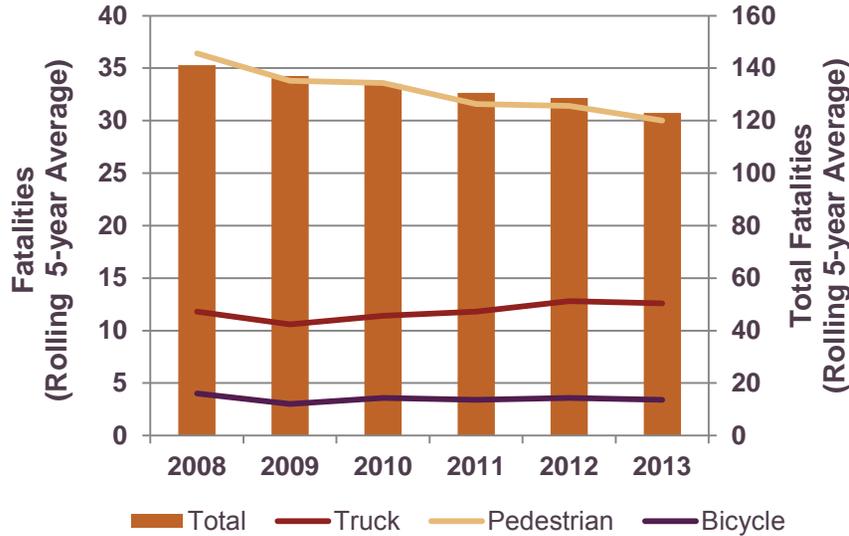
Safety for all transportation modes continues to be a top priority for the MPO. MPO goals commit to investing in projects and programs that reduce the severity of crashes for all modes.

The MPO tracks traffic fatalities and serious injuries in the Boston region to examine past trends, identify regional safety issues, and set future targets for preferred performance. Tracking these measures helps to gauge the effectiveness of MPO transportation investments in reducing fatalities and serious injuries.

Between 2008 and 2013, traffic fatalities (based on a rolling five-year average) decreased from 141 fatalities in 2008 to 123 in 2013. Figure 4-3 shows the change in traffic fatalities by mode during this period and indicates that the 13 percent decline in fatalities included fewer automobile, pedestrian, and bicycle fatalities. Similarly, total traffic crashes and injuries declined by 26 percent and 27 percent, respectively between 2008 and 2013.

FIGURE 4-3:

TRAFFIC FATALITIES IN THE BOSTON REGION BY MODE, 2008-2013



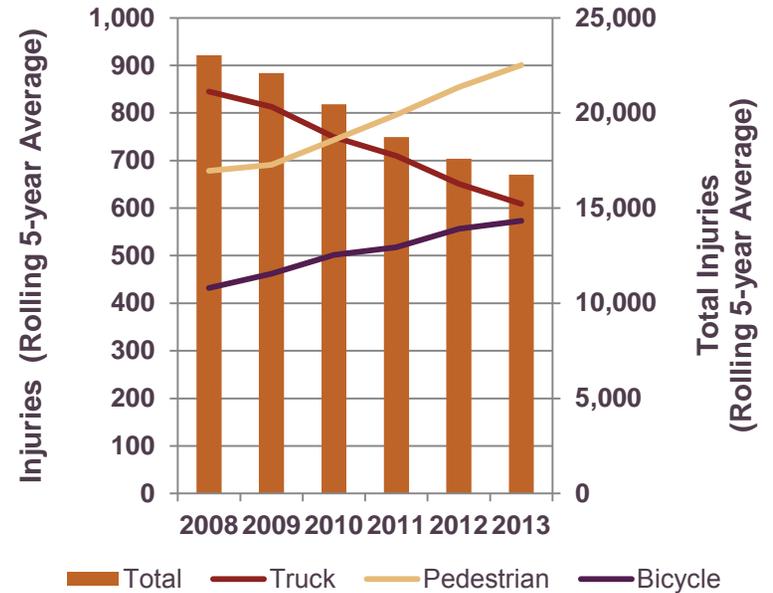
Sources: MassDOT, National Highway Traffic Safety Administration Fatality Reporting System, and the MassDOT Crash Data System.

Despite these overall gains, crashes and injuries for pedestrians and bicyclists rose during this same period, as shown in Figure 4-4. Between 2008 and 2013, roughly two-thirds of pedestrian and bicycle crashes resulted in an injury. For pedestrians, the number of crashes increased by 17 percent and injuries grew by 33 percent. For bicycles, the number of crashes increased by 25 percent and injuries also jumped by 33 percent.

In addition to pedestrian and bicycle safety issues, there are still a number of high-crash locations throughout the Boston Region MPO area, including nearly 80 of the Top-200 Crash Locations statewide.

FIGURE 4-4:

TRAFFIC INJURIES IN THE BOSTON REGION BY MODE, 2008-2013

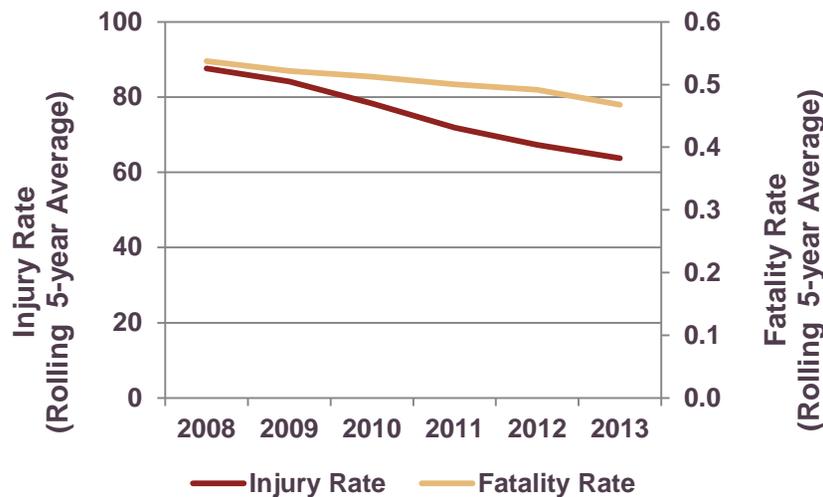


Sources: MassDOT, National Highway Traffic Safety Administration Fatality Reporting System, and the MassDOT Crash Data System.

The rate of traffic fatalities and injuries also has declined steadily between 2008 and 2013. Figure 4-5 shows the change in the traffic fatality rate and traffic injury rate (based on 100 million vehicle-miles traveled (VMT)) in the Boston region between 2008 and 2013. During this period, the traffic fatality rate

steadily declined by 13 percent from 0.55 fatalities per 100 million VMT to 0.47 fatalities per 100 million VMT. The traffic injury rate dropped by 27 percent from 90 injuries per 100 million VMT to 63 injuries per 100 million VMT between 2008 and 2013.

FIGURE 4-5:
TOTAL TRAFFIC INJURY RATE AND TRAFFIC FATALITY RATE (PER 100 MILLION VMT) IN THE BOSTON REGION, 2008-13



Sources: MassDOT, National Highway Traffic Safety Administration Fatality Reporting System, and the MassDOT Crash Data System.

In prioritizing its capital investments, the MPO uses TIP project-evaluation criteria to support the goal of reducing crash severity for all modes. These criteria assess severity of the safety need by capturing the weighted index of crashes in the project area; and assess the safety impact of proposed projects by considering the proposed safety countermeasures.

Safety—Using Performance Measures to Demonstrate Progress

Within the TIP’s MPO Target Program, 16 proposed investments will improve safety at 35 high-crash locations to reduce crash severity for all modes.

Intersection Improvements

This intersection investment will provide safety improvements for automobiles, trucks, bicyclists, and pedestrians by implementing safety countermeasures at four high-crash locations: Derby Street, Whiting Street (Route 53) and Gardner Street in Hingham, Cabot Street at Dodge Street and Cabot Street at Rantoul Street in Beverly, and Route 1 at University Avenue in Norwood.

Major Infrastructure

The Route 128 Add-a-Lane project will widen 3.25 miles of I-95 in Needham and Wellesley to install an additional 12-foot travel lane and 10-foot shoulder in each direction to address serious safety issues. The addition of a fourth full-time travel lane will eliminate use of the breakdown lane during peak periods; and adding collector roads between Highland Avenue and Kendrick Streets will provide safer weaving movements between the interchanges.

Complete Streets

The FFYs 2017–21 TIP MPO Target Program proposes 15 Complete Streets projects that would implement safety improvements at 12 high-crash locations along corridors across the region. These corridor investments will provide safety improvements for automobiles, trucks, bicyclists, and pedestrians. In addition, improvements at these 15 corridors would

provide safe and continuous accommodations for non-motorized users by adding 33 miles of new bicycle facilities and eight miles of new sidewalk.

For example, reconstruction of Route 85 (Maple St.) in Marlborough will implement safety countermeasures at two high-crash locations along the 1.1-mile corridor, as well as add new bicycle lanes and improve existing sidewalks. In addition, reconstruction of Ferry St. in Everett will improve safe access for pedestrians to businesses, schools, and bus stops along the corridor by providing continuous sidewalks and improved crossings.

System Preservation—Tracking Performance Measures

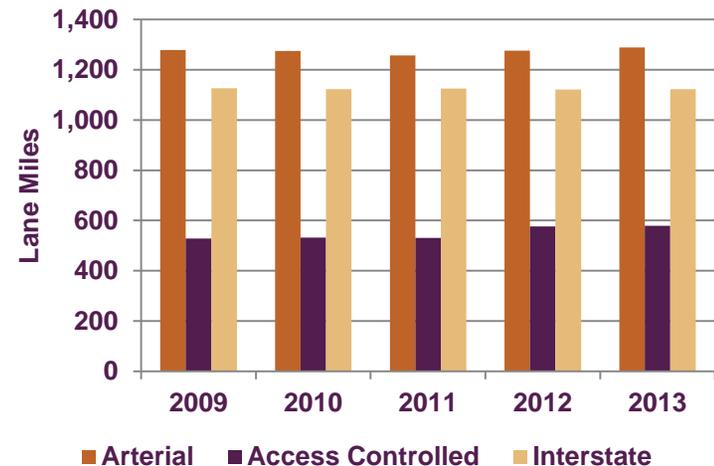
System preservation is a priority for the MPO because the region’s transportation infrastructure is aging. The demands placed on highway and transit facilities have been taxing to the point that routine maintenance is insufficient to keep up with the need. As a result, there is a significant backlog of maintenance and state-of-good repair work to be done on the highway and transit systems, including bridges, roadway pavement, transit rolling stock, and traffic- and transit-control equipment.

MassDOT’s program monitors approximately 4,150 lane miles of interstate, arterial, and access-controlled arterial roadways in the Boston Region MPO area. It has been the policy of the MPO not to fund resurfacing-only projects in the TIP. However, the MPO does make funding decisions for roadway reconstruction projects that include resurfacing,

usually full-depth reconstruction, in addition to other design elements.

Figure 4-6 displays the number of lane miles in good or better condition by roadway classification between 2009 and 2013 in the Boston Region MPO area. The figure indicates that the lane miles of interstates, access-controlled arterials, and arterials in good or better condition on MassDOT-maintained roadways has remained constant between 2009 and 2013.

FIGURE 4-6:
LANE MILES OF PAVEMENT IN GOOD OR BETTER
CONDITION IN THE BOSTON REGION MPO BY ROADWAY
CLASSIFICATION

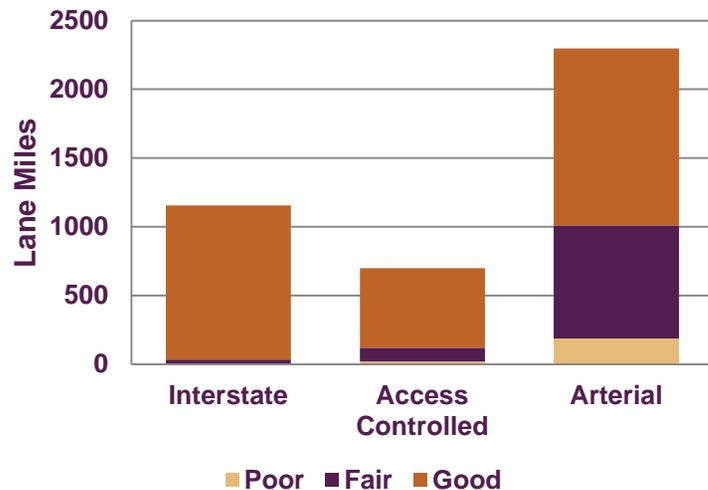


Source: MassDOT Pavement Management Program.

Approximately 70 percent of roadway lane miles are in good condition, 25 percent are in fair condition, and five percent are in poor condition—which meets

MassDOT’s performance measure of at least 65 percent of the pavement in good condition. However, MassDOT-maintained arterial roadways continue to account for a disproportionate share of substandard roadway lane miles. Arterials accounted for 62 percent of the monitored roadways, but nearly 90 percent of the roadways that are in substandard condition (see Figure 4-7).

FIGURE 4-7:
PAVEMENT CONDITION IN THE BOSTON REGION MPO BY ROADWAY CLASSIFICATION

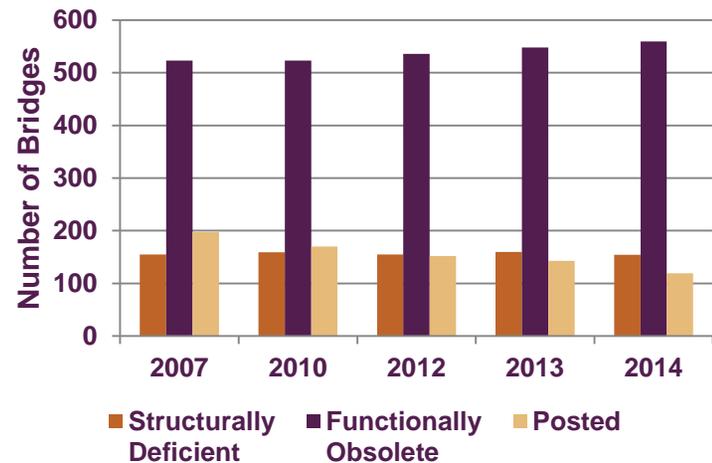


Source: MassDOT Pavement Management Program.

MassDOT also monitors the condition of its bridges across the state. There are 2,866 bridges located within the Boston Region MPO area, of which some are in substandard condition because they have been deemed by MassDOT bridge inspectors as structurally deficient, functionally obsolete, or posted.

Figure 4-8 displays the number of substandard bridges in the Boston Region MPO by condition between 2007 and 2014. As seen in the figure, the percentage of structurally deficient bridges decreased slightly from six to five percent, functionally obsolete bridges remained constant at 19 percent, and posted bridges declined from seven to four percent.

FIGURE 4-8:
NUMBERS OF SUBSTANDARD BRIDGES IN THE BOSTON REGION MPO BY CONDITION



Source: MassDOT Bridge Inventory.

In prioritizing its capital investments, the MPO uses TIP project-evaluation criteria to assess how well each project improves pavement and signal condition to advance the MPO’s goal of maintaining a state of good repair.

System Preservation—Demonstrating Progress Using Performance Measures

Virtually all of the TIP's MPO Target Program investments advance the MPO's system preservation goal to maintain the transportation system by improving pavement condition, traffic signal equipment, or sidewalk infrastructure, or by prioritizing projects that improve emergency response or ability to respond to extreme conditions. In addition, the Target Program investments contribute modestly to bridge preservation by addressing 11 substandard bridges. Yet, the MassDOT Bridge Program remains the primary funding source for replacement or rehabilitation of substandard bridges.

The FFYs 2017–2021 TIP's MPO Target Program investments propose to improve 68 miles of substandard pavement traveled daily by nearly 670,000 vehicles, and 45 miles of substandard sidewalk and replace more than 90 traffic signals, and 11 substandard bridges (10 functionally obsolete and one structurally deficient) traveled daily by approximately 340,000 vehicles. In addition, there are 15 projects that will improve emergency response or ability to respond to extreme conditions, thus aiming to make significant progress toward maintaining the region's transportation system.

Intersection Improvements

The FFYs 2017–2021 TIP's MPO Target Program proposes to improve substandard pavement at three intersections and modernize signal equipment at four intersections. These investments will also improve emergency response by updating intersections along

an evacuation route and in close proximity to emergency support locations.

Complete Streets

The FFYs 2017–2021 TIP Target Program proposes to resurface or reconstruct more than 35 miles of substandard pavement, replace more than 50 traffic signals, repair 25 miles of sidewalk infrastructure, and rehabilitate one substandard bridge on an arterial roadway. In addition, there are eight projects that will improve emergency response or ability to respond to extreme conditions, thus aiming to make significant progress toward maintaining the region's transportation system.

The reconstruction of Ferry Street in Everett will resurface more than three miles of substandard pavement while bringing six traffic signals, substandard sidewalks, street lighting, signs, and pavement markings into a state of good repair.

Reconstruction of Route 1A in Walpole will resurface nearly five miles of substandard pavement, repair five miles of substandard sidewalk, signalize four intersections, and improve one substandard bridge.

Major Infrastructure

The FFYs 2017–2021 TIP's MPO Target Program proposes to resurface or reconstruct 30 miles of substandard pavement, approximately 20 miles of sidewalk infrastructure, and 10 substandard bridges. In addition, there are six projects that will improve emergency response or ability to respond to extreme conditions, thus aiming to make significant progress toward maintaining the region's transportation system.

Reconstruction of Highland Avenue and Needham Street in Newton and Needham will resurface nine miles of substandard pavement, six miles of sidewalk infrastructure, and one substandard bridge, while bringing traffic signals, street lighting, signs, and pavement markings into a state of good repair.

The Route 128 Add-a-Lane project will replace one structurally deficient and three functionally obsolete bridges as part of widening I-95 in Needham and Wellesley.

Capacity Management/Mobility—Tracking Performance Measures

Through its capacity management and mobility goal and objectives, the MPO seeks to maximize the region's existing transportation system so that both people and goods can move reliably and connect to key destinations. The Boston region is mature, which creates challenges to making major infrastructure changes to its transportation system.

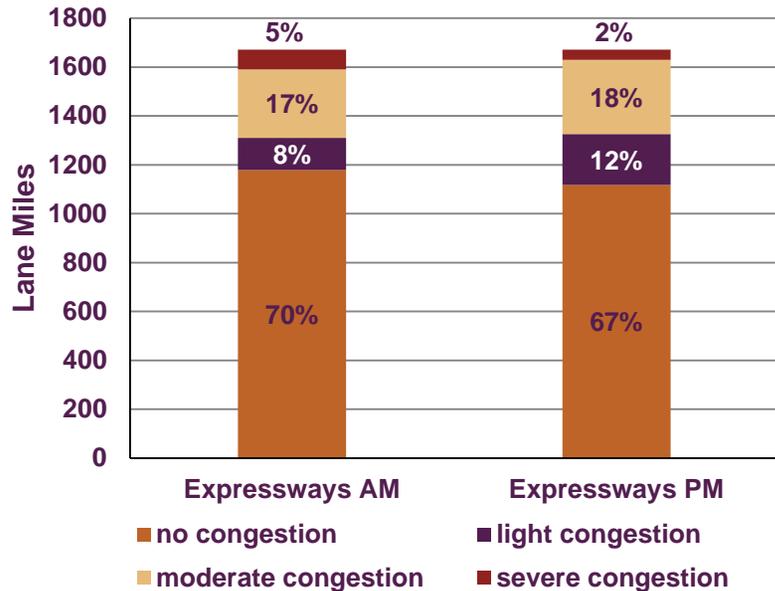
In order to determine how well the region's roadways are performing, the MPO applies performance measures that gauge the duration, extent, intensity, and reliability of congestion. MPO staff analyzed congestion in the region using the CMP Express Highway and Arterial Performance Dashboards to establish a baseline for future comparison. MPO staff established congestion thresholds based on travel time index (TTI) which compares near-worst-case travel time to free-flow travel time to determine the contingency time needed to ensure on-time arrival 95 percent of the time. For example, a value of 2.5 means that to arrive on time 95 percent of the time, a

traveler should budget an additional 45 minutes for a trip that takes 30 minutes during free-flow conditions. MPO staff established the following congestion thresholds based on TTI:

- No congestion (TTI less than 1.15)
- Light congestion (TTI between 1.15 and 1.29)
- Moderate congestion (TTI between 1.3 and 2.0)
- Severe congestion (TTI greater than 2.0)

Figure 4-9 displays the percentage of lane miles of congestion based on TTI on the CMP expressway network. In the Boston Region MPO area, 22 percent of all expressway lane miles in the AM peak period and 20 percent of all expressway lane miles in PM peak period experience moderate-to-severe congestion.

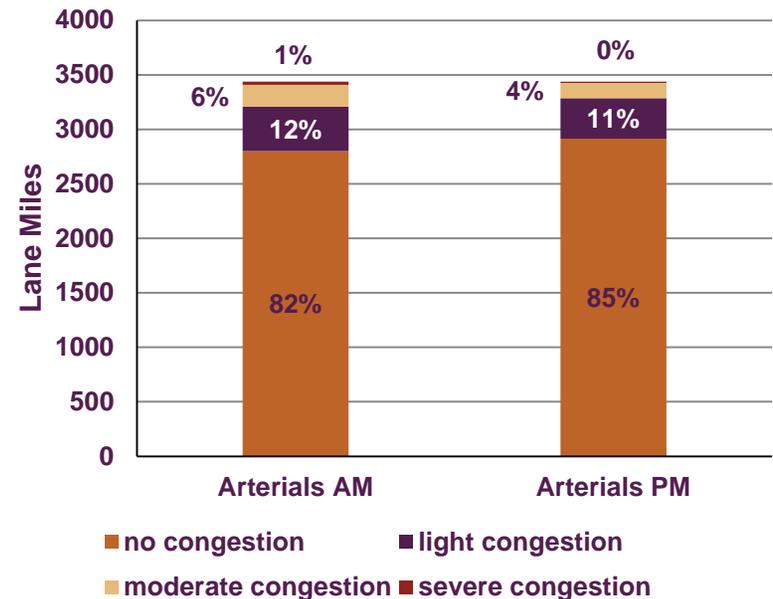
**FIGURE 4-9:
LANE MILES OF CONGESTION IN THE BOSTON REGION MPO:
CMP MONITORED EXPRESSWAYS**



Source: Boston Region MPO Congestion Management Process.

The measure of lane miles of congestion was significantly less for the arterial network. Figure 4-10 displays the percentage of lane miles of congestion based on TTI on the CMP arterial network. For the arterial network, only seven percent of arterials in the AM peak period and four percent of arterials in the PM peak period experience moderate-to-severe congestion.

**FIGURE 4-10:
LANE MILES OF CONGESTION IN THE BOSTON REGION MPO:
CMP-MONITORED ARTERIALS**



Source: Boston Region MPO Congestion Management Process.

Moving forward, the MPO will continue to monitor congestion data of the roadway network to track performance of the system. This annual analysis will depend on routinely updated data sources, which may require the purchase of INRIX data or other comparable data.

In prioritizing its capital investments, the MPO uses TIP project-evaluation criteria to assess how well each project expands transportation options to advance the MPO's goal of managing capacity and improving mobility.

Capacity Management/Mobility— Demonstrating Progress Using Performance Measures

The MPO seeks to manage capacity on its transportation network and improve mobility for its users by extending transit service to support non-single-occupancy-vehicle (SOV) travel options, adding roadway capacity at select MPO-identified bottleneck locations, and implementing traffic and operational improvements along congested corridors.

The FFYs 2017–2021 TIP Target Program investments propose to add 53 miles of bicycle lanes, 13 miles of new sidewalk, and improve access to transit at 21 locations. In addition, these investments would improve more than 90 traffic signals, resulting in nearly 7,900 hours of reduced daily vehicle delay.

Complete Streets

The FFYs 2017–2021 TIP Target Program proposes to add 33 miles of bicycle lanes (including almost a mile of separated bicycle lanes), eight miles of new sidewalk infrastructure; and improve access to transit along 14 corridors. These investments also would improve traffic flow along corridors that serve more than 800 bus trips on a typical weekday, resulting in 15 fewer hours of daily transit vehicle delay.

For example, reconstruction of Route 126 (Pond Street) in Ashland will transform the corridor by adding sidewalks and bicycle lanes where no facilities currently exist. These improvements for bicyclists and pedestrians will provide the necessary facilities to support existing MWRTA bus services in the corridor. In addition, the Gateway East project in Brookline will

provide safe access for bicyclists by implementing bicycle lanes that physically separate the facility from the travel lane to reduce conflicts between motorists and bicyclists.

Major Infrastructure

The FFYs 2017–2021 TIP Target Program proposes to add 16 miles of bicycle lanes, nearly four miles of sidewalk infrastructure, and improve access to transit along five corridors. These investments also would improve corridors that serve nearly 600 bus trips on a typical weekday.

Middlesex Turnpike Improvements (Phase III) in Bedford, Billerica, and Burlington will continue improvements to the corridor by adding three miles of sidewalks and bicycle lanes where no facilities currently exist. These improvements will support LRTA bus service along the Middlesex Turnpike.

Reconstruction of Route 18 (Main Street) in Weymouth will improve one moderate MPO-identified arterial bottleneck location by widening a four-mile section of the corridor from two to four lanes. In addition, the project will expand transportation options by adding eight miles of bicycle lanes.

The Route 128 Add-a-Lane project will improve one severe MPO-identified express highway bottleneck location by widening 3.25 miles of I-95 in Needham and Wellesley.

Transportation Equity—Tracking Performance Measures

Historically, some minority and economically disadvantaged areas have endured the negative

effects of the transportation system disproportionately—for example, via placement of infrastructure from which they do not benefit; poor access to, or maintenance of, necessary services; and by not being included in the transportation-planning process. In addition, youth, the elderly, and people with disabilities of various kinds face special challenges when using the transportation system.

To advance the MPO’s Transportation Equity (TE) goal of providing comparable transportation access and service quality among communities regardless of income level or minority status, the MPO has broadened its equity analysis beyond low-income and minority populations to also include: Limited-English Proficiency individuals (persons who live in households in which no one older than 14 speaks English “very well”), elderly (persons 75 or more years old), zero-vehicle households, and persons with disabilities.

The MPO considers the six factors to designate degrees of potential disadvantage. For example, an area with five or six indicators above the region’s average share would be considered as having high potential for disadvantage, while an area with only one indicator above the threshold percentage would be considered as having low potential for disadvantage.

Table 4-3 provides a breakdown of the indicators considered by the MPO in the region, and their percentage of the region’s population.

TABLE 4-3:
INDICATORS OF POTENTIAL DISADVANTAGE: PERCENT OF
MPO REGION

Indicator of Potential Disadvantage	Population	MPO Total	Threshold
Minority	878,118	3,161,712	27.8%
Low-income Households	395,456	1,243,189	31.8%
Limited English Proficiency*	310,490	2,985,344	10.4%
Age (75+)	211,347	3,161,712	6.7%
Persons with Disabilities**	309,341	3,129,938	9.9%
Zero Vehicle Households	197,689	1,243,189	15.9%

*MPO Total is calculated based on the population five years of age and older in households where no one older than the age of fourteen speaks English “very well”. **MPO Total is calculated based on the noninstitutionalized population.

Source: 2010 U S Census, 2012 American Community Survey.

Transportation Equity—Demonstrating Progress Using Performance Measures

The MPO’s transportation investments advance transportation equity by prioritizing projects that serve Title VI/non-discrimination populations, which include minority, low-income, limited-English proficiency, elderly, and zero-vehicle household populations, as well as persons with disabilities. In other words, the MPO prioritizes investments in areas that have been indicated as having a higher potential for disadvantage.

Table 4-4 provides a summary comparison of the Title VI/non-discrimination population served to total population served by MPO investments. The table indicates that the percentage served is higher than the threshold percentage for each indicator. These results reflect the MPO's priority for investments in areas that have been identified as having a higher potential for disadvantage.

TABLE 4-4:
POPULATIONS SERVED BY MPO INVESTMENTS

Indicator of Potential Disadvantage	Indicator Population Served	Total MPO Population Served	Percent Served
Minority	138,618	323,265	42.9%
Low-income Households	50,815	128,028	39.7%
Limited English Proficiency*	53,531	304,904	17.6%
Age (75+)	44,555	323,265	13.8%
Persons with Disabilities**	32,631	320,135	10.2%
Zero Vehicle Households	35,947	128,028	28.1%

* MPO Total is calculated based on the population five years of age and older in households where no one older than the age of fourteen speaks English "very well". ** MPO Total is calculated based on the noninstitutionalized population.

Source: 2010 U S Census, 2012 American Community Survey.

Clean Air/Clean Communities— Tracking Performance Measures

The Boston Region MPO agrees that greenhouse gas emissions (GHGs) contribute to climate change. If climate trends continue as projected, the conditions in the Boston region will include a rise in sea level coupled with storm-induced flooding, and warmer temperatures that would affect the region's infrastructure, economy, human health, and natural resources. Massachusetts is responding to this challenge by taking action to reduce the GHGs produced by the state, including those generated by the transportation sector. To that end, Massachusetts passed its Global Warming Solutions Act, which requires reductions of GHGs by 2020, and further reductions by 2050, relative to 1990 baseline conditions.

In prioritizing its capital investments, the MPO uses TIP project-evaluation criteria to assess the projected transportation-related emissions impact of each project to advance the MPO's goal of promoting clean air and clean communities.

Clean Air/Clean Communities— Demonstrating Progress Using Performance Measures

The MPO's transportation investments advance clean air/clean communities by prioritizing projects that reduce GHGs and other transportation-related emissions as well as those that address environmental impacts.

The FFYs 2017–2021 TIP Target Program investments are estimated to reduce more than 8,700

annual tons of CO₂ and more than 18,000 annual kilograms of VOC, NO_x, and CO because of traffic flow improvements and increased bicycle and pedestrian travel.

Complete Streets

The FFYs 2017–2021 TIP Target Program proposes to reduce more than 5,600 annual tons of CO₂ and more than 12,500 annual kilograms of VOC, NO_x, and CO because of traffic flow improvements and increased bicycle and pedestrian travel.

Reconstruction of Boylston Street in Boston will provide significant reductions in vehicle delay through improvements at five intersections, and encourage increased bicycle and pedestrian trips through safer pedestrian crossings and new bicycle lanes.

Reconstruction of Derby Street in Hingham will provide significant reductions in vehicle delay through new signalization at the Route 3 ramps. The project will also encourage increased bicycle and pedestrian trips via new sidewalk and bicycle lanes.

Major Infrastructure

The FFYs 2017–2021 TIP Target Program proposes to reduce more than 1,400 annual tons of CO₂ and nearly 2,700 annual kilograms of VOC, NO_x, and CO because of traffic-flow improvements and increased bicycle and pedestrian travel.

Reconstruction of Highland Avenue and Needham Street in Newton and Needham will provide significant reductions in vehicle delay through improvements at five intersections, and encourage increased bicycle

and pedestrian trips via safer pedestrian crossings and new bicycle lanes.

Economic Vitality—Tracking Performance Measures

Through its economic vitality goal, the MPO seeks to ensure that the transportation network provides a strong foundation for an economically vibrant region.

One of MetroFuture’s implementation strategies is to focus on economic growth, and coordinate transportation investments to guide economic growth in the region. Metropolitan Area Planning Council (MAPC) worked with Executive Office of Housing and Economic Development (EOHED) and the Executive Office of Energy and Environmental Affairs (EOEEA) to identify local, regional, and state-level priority development and preservation areas in municipalities within the MPO area. MAPC staff worked with municipalities and state partners to identify locations throughout the region that are principal supporters of additional housing, employment growth, creation and preservation of open space, and the infrastructure improvements required to support these outcomes for each location.

This process identified locations that are best suited to support the type of continued economic vitality and future growth that the market demands, and which communities desire. Identifying these key growth and preservation locations also helps MAPC, the Boston Region MPO, and state agencies to understand both the infrastructure and technical-assistance needs better, in order to help them prioritize the limited regional and state funding.

The MPO has not yet established performance measures to track the coordination of land-use development and transportation investments. However, the MPO uses TIP project-evaluation criteria to assess how well each project advances MetroFuture land-use planning. This means supporting investments in already-developed locations of residential or commercial/industrial activity, locations with adequate sewer and water infrastructure, areas identified for economic development by state, regional, and local planning, and areas with a relatively high density of existing development.

Economic Vitality—Demonstrating Progress Using Performance Measures

The MPO's transportation investments advance economic vitality by prioritizing projects that support access to targeted development areas for multiple modes and serve areas of concentrated development. The FFYs 2017–2021 TIP Target Program proposes 17 investments that provide multimodal access to targeted development areas and 24 investments that serve areas of concentrated development.

Complete Streets

The FFYs 2017–2021 TIP Target Program proposes 10 projects that provide multimodal access to targeted development areas that are well suited to support continued economic vitality and future growth. For example, reconstruction of Route 85 (Maple Street) will provide access to a 43D site located at the former Lucent site in Marlborough and reconstruction of Route 27 (North Main Street) will provide access to a

40R site located at the former Paperboard site at 182 North Main Street in Natick.

Major Infrastructure

The FFYs 2017–2021 TIP Target Program proposes four projects that provide multimodal access to a targeted development areas well suited to support continued economic vitality and future growth.

Reconstruction of Rutherford Avenue in Boston, Route 18 (Main Street) in Weymouth, and Highland Avenue and Needham Street in Newton and Needham will expand transportation options and enhance access to transit to support future growth and facilitate new development.

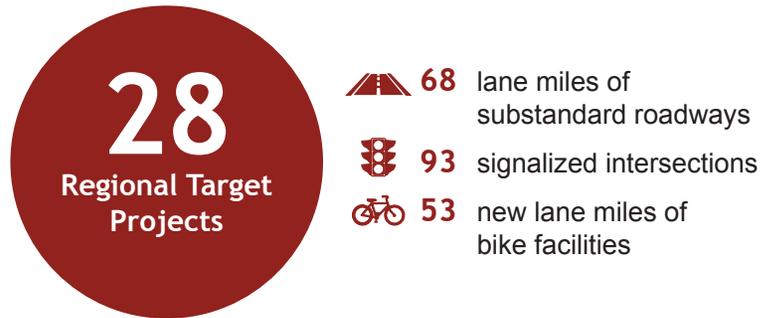
In addition, the reconstruction of Highland Avenue and Needham Street in Newton and Needham will leverage other investments in the form of an EOHEE Massworks award. This award will fund reconstruction of two intersections within the limits of the corridor reconstruction to address safety and congestion and support future development.

Figure 4-11 describes how the FFYs 2017–2021 Regional Target-funded projects address various performance areas.

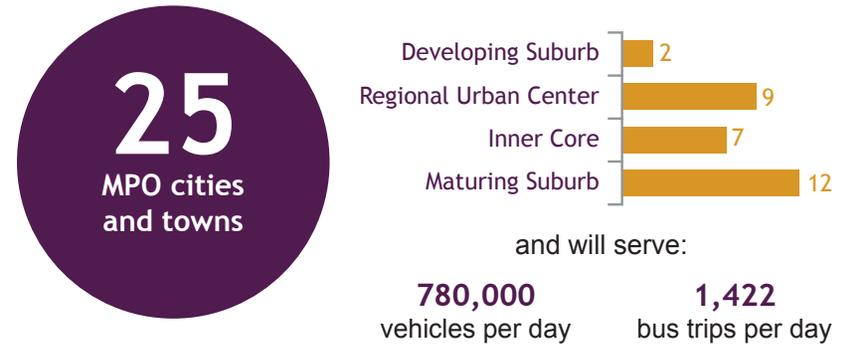
Figure 4-11

FFYs 2017-21 TIP Target Program: By the Numbers

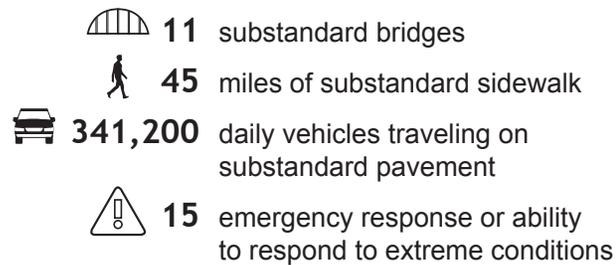
Between FFY 2017 and 2021, the MPO plans to fund:



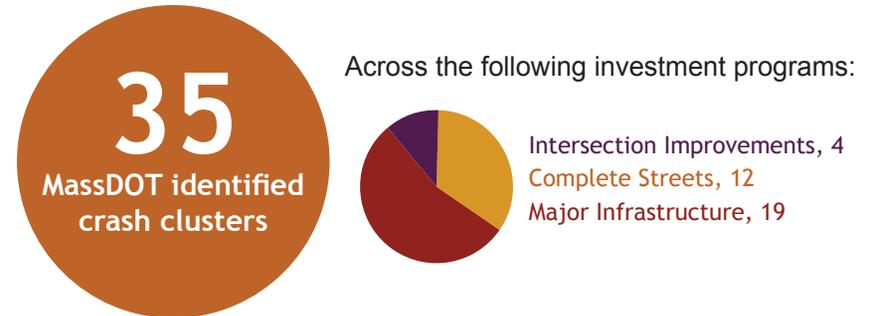
These projects will happen in:



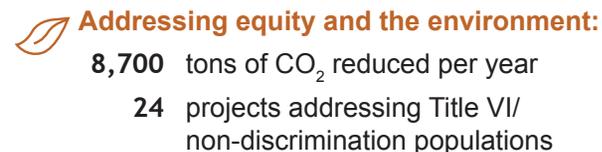
These projects will address safety help preserve the transportation system by improving:



These projects will improve safety by addressing:



These projects will also enhance the system by:



Source: Evaluations for FFYs 2017-21 TIP Target Projects

Next Steps in Advancing Performance Measures

Performance-based planning is an ongoing process that will continue to evolve as the MPO monitors and evaluates its planning and investment programs using performance measures. The MPO will advance performance-based planning through its core planning documents by:

- continuing scenario planning to explore how various transportation investments support goals through the LRTP
- considering performance-based planning needs and issues when deciding what activities to fund through the UPWP
- tracking annual progress toward goals and objectives through the TIP programming

The MPO has begun to participate in the recently formed MassDOT subcommittee on performance measure coordination. The subcommittee met for the first time on July 6, 2016, and will continue to meet to determine how the MPOs will work with MassDOT's highway measures and targets to develop their own.

In FFY 2017, the MPO will continue to monitor system-level trends and propose performance targets to guide investment decisions. If, in its annual monitoring, the MPO sees that it is not making progress toward its targets, then the organization would need to consider modifying investment or policy priorities, and weigh the tradeoffs involved.

For example, allocating a greater share of funding to intersection improvements at high-crash locations

may make significant progress toward reducing traffic fatalities and serious injuries; however, it also may affect the MPO's ability to meet system-preservation targets for pavement or bridge conditions. By continuously monitoring and evaluating its progress, the MPO will be able to make these difficult decisions across competing goals and objectives in a more informed manner, resulting in greater outcomes for all concerned.

5

CHAPTER FIVE

Determination of Air Quality Conformity

BACKGROUND

The Commonwealth of Massachusetts is classified as “unclassifiable/attainment” for the ozone standard with the exception of Dukes County. Therefore, the Boston Region MPO does not have to perform a conformity determination for ozone for its LRTP or TIP.

In addition, on April 1, 1996, the cities of Boston, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, and Somerville were classified as “attainment” for carbon monoxide (CO) emissions. As part of past LRTPs, an air-quality conformity analysis was required for these communities, as they had a carbon monoxide maintenance plan approved as part of the Massachusetts State Implementation Plan (SIP). As of April 1, 2016, the 20-year maintenance period for this CO maintenance area expired and transportation conformity is no longer required for CO in these municipalities. This is documented in a letter from the United States Environmental Protection Agency dated May 12, 2016.

As of April 22, 2002, the community of Waltham was re-designated as being in attainment for CO, with an EPA-approved limited-maintenance plan. In areas that have approved limited-maintenance plans, federal actions requiring conformity determinations

under the transportation conformity rule are considered to satisfy the “budget test” (as budgets are not treated as being constraining in these areas for the length of the initial maintenance period). Any requirements for future “project-level” conformity determinations for projects located within this community will continue to use a “hot-spot” analysis to ensure that any new transportation projects in this CO attainment area do not cause or contribute to CO nonattainment.

Therefore, the MPO is not required to perform modeling analyses for a conformity determination for ozone or CO; it is only required to provide the statement in the paragraph above regarding the Waltham attainment area. However, it still is required to provide a status report on the timely implementation of transportation control measures included as part of the SIP. This status report is provided below.

Timely Implementation of Transportation Control Measures

Transportation control measures (TCMs) were required in SIP in revisions submitted to the EPA in 1979 and 1982, and in those submitted as part of the Central Artery/Tunnel (CA/T) project. The TCMs

included in the 1979 and 1982 submissions were accomplished through construction or implementation of ongoing programs.

The TCMs submitted as part of the CA/T project mitigation have been included in the LRTP as recommended or completed projects, except for the following three projects:

- Completion of a final design of the Red Line-Blue Line Connector from the Blue Line at Government Center to the Red Line at Charles Station
- Fairmount Line Improvements
- Enhanced Green Line extended beyond Lechmere Station to Medford Hillside and Union Square

MassDOT worked with the Massachusetts Department of Environmental Protection (DEP) to address these projects, and continues to keep the Boston Region MPO informed of their status through monthly reports at the MPO's regularly scheduled meetings. The Boston Region MPO will continue to include these projects in the LRTP and TIP until the process has been completed, assuming that any interim projects or programs would provide equal or better emissions benefits. When the process has been completed, the MPO will amend the LRTP and future TIPs and their conformity determinations to include any changes (including any interim projects or programs).

A Status Report of Uncompleted SIP Projects

The status of the SIP projects has been updated using the *SIP Transit Commitments Status Report*, submitted by MassDOT to DEP in May 2016. Highlights of the report are presented below. For a detailed description of these projects' status, please visit the MassDOT website at:

<https://www.massdot.state.ma.us/planning/Main/PlanningProcess/StateImplementationPlan/SIPTransitCommitmentSubmissions.aspx>

Red Line-Blue Line Connector - Final Design - SIP Required Completion by December 2011

Project Status

MassDOT initiated a process to amend the SIP to permanently and completely remove the obligation to perform a final design of the Red Line-Blue Line Connector. To that end, MassDOT officially sought approval from DEP to support a SIP amendment process. MassDOT did not propose to substitute any new projects in place of the Red Line-Blue Line Connector commitment, given the absence of any air-quality benefits associated with that project (final design only). Correspondence from MassDOT to DEP to initiate the amendment process formally was submitted on July 27, 2011, and is posted on the MassDOT website.

On September 13, 2012, DEP held two hearings to take public comment on MassDOT's proposed amendments to 310 CMR 7.36, "Transit System Improvements," including eliminating the requirement to complete the final design of the Red Line-Blue Line Connector. Between the two hearings, there were 16

attendees, 10 of whom gave oral testimony. All who spoke at the hearings were in favor of DEP not removing the commitment. DEP accepted written testimony until September 24, 2012.

On August 23, 2013, EPA sent a letter to the Federal Highway Administration (FHWA) to provide an update on Massachusetts Air Quality Conformity. In that letter, EPA noted that the Red Line-Blue Line Connector Design project had not met its completion date of December 2011, but that MassDOT was not obligated to implement interim emission-reduction projects because no emission reductions are associated with the design project.

On October 8, 2013, the DEP approved a request made by MassDOT in July 2011 to revise 310 CMR 7.36 to remove the requirement that MassDOT complete the design of the Red Line-Blue Line Connector. This revision to the SIP needed to be approved by EPA. The text of the revision is available on the MassDOT website at: <http://www.massdot.state.ma.us/Portals/17/docs/sip/October13UpdatedSIPReg.pdf>.

On December 8, 2015, EPA published a final rule in the Federal Register approving the SIP revision submitted by the Commonwealth of Massachusetts on November 6, 2013. The final rule removes from the SIP the commitment to design the Red Line-Blue Line Connector project.

Funding Source

This commitment has been nullified.

Fairmount Line Improvements Project - SIP Required Completion by December 2011

Project Status

The Four Corners and Newmarket Stations opened for service on July 1, 2013. All change orders have been paid and the project is officially closed out. The Talbot Avenue Station opened in November 2012.

A station at Blue Hill Avenue has been the subject of significant community controversy during the past seven years. Redesign of the station reached 100 percent, with plans submitted in March 2016. While the community still has concerns, the project team is now advancing with the understanding that continued coordination with the community is paramount. Construction is scheduled to begin in winter 2016, and the station to open in summer 2018.

MassDOT and the MBTA prepared a Petition to Delay and an Interim Emission Offset Plan to be implemented for the duration of the delay of the Fairmount Line Improvements project. MassDOT estimated the reduced emissions that are expected to be generated by implementing the new Fairmount Line station and, with input from Fairmount Line stakeholders, proposed offset measures. MassDOT estimated that the potential offset measures would meet emissions-reduction targets. The measures include shuttle bus service from Andrew Square to Boston Medical Center and increased service on bus Route 31, which serves Dorchester and Mattapan. These measures were implemented on January 2, 2012, and currently are in place.

Funding Source

The Commonwealth

Green Line Extension to Somerville and Medford Project – SIP Required Completion by December 2014

Project Status

State-level environmental review (Massachusetts Environmental Policy Act (MEPA)) was completed in July 2010. Federal-level environmental review (National Environmental Policy Act (NEPA)) documents were submitted to the Federal Transit Administration in September 2011, and a public hearing was held on October 20, 2011. A Finding of No Significant Impact (FONSI) was issued by the Federal Transit Administration (FTA) on July 9, 2012.

On January 5, 2015, the US Secretary of Transportation and the MBTA signed the Full Funding Grant Agreement (FFGA) for the Green Line Extension project (GLX), approving \$996,121,000 of FTA New Starts funding to support design and construction of the project. Execution of the FFGA was the result of many years of planning, design and pre-construction efforts by MassDOT and the MBTA, in collaboration with the FTA and its Project Management Oversight Consultant. Federal funding is scheduled to be paid between federal fiscal years (FFYs) 2015 and 2022. As noted in the MassDOT Capital Investment Plan (CIP) for fiscal year 2016, MassDOT and the MBTA will use Commonwealth funds in addition to federal funding to support design and construction activities.

As the project proceeded, it was later found that the project scope as defined in the Full Funding Grant Agreement could not be built for the \$1.992 billion project cost established in January 2015. It was projected that the total project cost could range between \$2.7 billion and \$3.0 billion. The Commonwealth's share of overall project costs would then be between \$1.7 billion and \$2.0 billion, rather than the currently budgeted \$996 million.

With the federal contribution capped at \$996 million and the Commonwealth responsible for all project cost increases, MassDOT and the MBTA had no choice but to re-evaluate the GLX project in order to recommend to the Commonwealth if and how the project should proceed.

MassDOT and the MBTA are now working to identify opportunities to value engineering elements of the project in order to bring costs of the overall project closer to the original anticipated costs.

The MBTA Fiscal and Management Control Board and the MassDOT Board were briefed on August 24, 2015 and September 9, 2015, respectively, about these developments.

Before seeking additional state funding, MassDOT and the MBTA considered:

- All available options to reduce costs
- All available options to identify additional funding from sources other than the Commonwealth

Whether or not to proceed with the Green Line Extension project

MassDOT and the MBTA actively sought stakeholder and public input on, as well as staff analysis of, options including the following:

Option 1 - Reduce the Project Scope and Project Costs

Downsize, delay, or eliminate planned vehicle maintenance and storage facility

Option 2 - Find Additional Sources of Funds, Other than State Bonds

This could include:

- Reallocate \$158 million programmed by the Boston Region MPO for a future Route 16 extension to the core GLX project (the MPO endorsed this action in Amendment Four of the 2016–20 TIP)
- Work with municipal partners (Cambridge and Somerville committed \$75 million towards the project)
- Obtain institutional and private contributions
- Seek any additional federal funding in cooperation with the Congressional delegation

Option 3 - Change Procurement Method

Halt Construction Manager/General Contractor process and rebid project—in smaller contract packages—using a more traditional procurement method

Option 4 - Mothball or Cancel the Project

On May 9, 2016, the MBTA Fiscal and Management Control Board and the MassDOT Board voted to advance a scaled-down version of the project by

submitting the redesign to federal regulators and continuing with plans for financing the project.

MassDOT will provide an update to DEP and the public as soon as it has determined the impact of this delay on the overall project schedule.

Prior to the cost increase, the project had been moving forward, with MassDOT and MBTA implementing a four-phased project-delivery plan.

Phase 1 used the traditional design-bid-build approach to deliver the contract for widening the Harvard Street and Medford Street railroad bridges and demolishing the 21 Water Street building. The MBTA also added some retaining wall construction to the Phase 1 contract that had previously been programmed for Phase 4 in that area. This contract is completed.

Phase 2/2A will extend service from the (new) Lechmere Station to the Washington Street and Union Square Stations and relocate the bus facility and vehicle storage at Lechmere Station.

Phase 3 will construct the vehicle-maintenance facility and storage facility.

Phase 4 will provide service from Washington Street Station (completed as part of Phase 2, above) to College Avenue Station.

New Green Line Vehicles: The MBTA Vehicle Procurement contract to purchase 24 Type 9 Vehicles

was awarded to CAF USA Inc. in an amount not to exceed \$118,159,822 at the MassDOT Board Meeting held on May 14, 2014. The NTP for this contract was issued on September 4, 2014.

CAF is in the process of developing drawing packages for the Preliminary Design; and the MBTA Project Team and CAF continue to hold technical working sessions and project meetings. In addition, weekly project management meetings are held between MBTA and CAF to discuss project status, short-term schedules and priorities; and monthly project status meetings are held to review and discuss all project issues, including schedules, deliverables, and milestones.

The first vehicle is to be delivered no later than 36 months from the notice to proceed. The pilot car delivery is scheduled for September 2017. The pilot car will receive comprehensive testing for six months followed by delivery of the remaining 22 vehicles, with the last car to be delivered by July 2018. All vehicles are expected to be in service in early 2019.

Somerville Community Path: Originally the Green Line Extension project included just the design of the extension of the Somerville Community Path from south of Lowell Street to the Inner Belt area of Somerville. In May 2014, MassDOT and the City of Somerville announced an agreement to add construction of the Community Path, including a connection to the Cambridge/Northpoint area, to the scope of the program. The Path Extension is not part of the SIP commitment and is currently being re-

evaluated by the MBTA Fiscal and Management Control Board and the MassDOT Board.

SIP Requirement Status

By filing an Expanded Environmental Notification Form, procuring multiple design consultants, and publishing Draft and Final Environmental Impact Reports, MassDOT met the first four interim milestones associated with the Green Line Extension project. MassDOT—which has committed substantial resources to the Green Line Extension project, a top transportation priority of the Commonwealth and the largest expansion of the MBTA rapid transit system in decades—has transitioned the project from the planning and environmental review phases to design, engineering, and eventual construction, coupled with the tasks associated with applying for New Starts funding.

In the 2011 SIP Status Report, MassDOT reported that the Green Line Extension project would not meet the legal deadline of December 31, 2014.

Although the goal of the phased project delivery approach is to complete components in an incremental way, the timeline for overall project completion listed above represents a substantial delay beyond the current SIP deadline of December 31, 2014; this triggered the need to provide interim emission reduction offset projects and measures for the period of the delay (beginning January 1, 2015). Working with the Central Transportation Planning Staff, MassDOT and the MBTA calculated the reductions of non-methane hydrocarbon, carbon monoxide, and nitrogen oxide—reductions equal to or

greater than those projected for the Green Line Extension itself, as specified in the SIP regulation—that will be required for the period of the delay.

In June 2012, MassDOT released a list of potential mitigation ideas received from the public that could be used as offset measures. In the summer and fall of 2012, MassDOT solicited public comments on these potential measures. The MBTA created an internal working group to determine a final portfolio of interim mitigation measures to implement by December 31, 2014, the legal deadline for implementation of the Green Line Extension.

This work resulted in a recommendation to implement the following three interim mitigation measures, which collectively would meet the emissions-reduction target for the project:

- Additional off-peak service along existing routes serving the GLX corridor, including the Green Line, and bus routes 80, 88, 91, 94, and 96
- Purchase of 142 new hybrid electric vehicles for THE RIDE
- Additional park-and-ride spaces at the Salem and Beverly intermodal facilities

The Petition to Delay, submitted to DEP on July 22, 2014, which expands further on the analysis and determination of the interim offset measures, is available on MassDOT's website. These measures went into effect at the beginning of 2015.

Funding Source

The Commonwealth

Russia Wharf Ferry Terminal

Project Status

Former MassDOT Secretary Richard Davey approved construction of the permitted ferry facility and a \$460,000 ferry-service startup subsidy in October 2012. The 2005 facility plans and specifications were revised to meet the latest MassDOT Highway Division standards. The bid package was issued in fall 2013. A contractor was selected and the Notice to Proceed was issued in April 2014. Pre-construction activities progressed, but contractual issues associated with the project design led MassDOT to decide to rebid the contract. There is no regularly scheduled passenger water transportation service in this area, nor are there any plans to provide such service.

The City of Boston, however, is undertaking design and engineering work to address the Old Northern Avenue Bridge, which will allow for ferry vessel-clearance. The city received a grant in 2012 to purchase two ferry vessels for Inner Harbor use, which could include this ferry terminal as a destination. The Massachusetts Convention Center Authority has agreed to take over that grant and will purchase the vessels. Procurement could occur in calendar year 2016.

Funding Source

The Commonwealth

6 CHAPTER SIX

Financial Constraint

For financial constraint of the TIP, the highway funding programs must be financially constrained to projections of available federal aid.

As shown in the table below, the federal fiscal years 2017–21 TIP Regional Target Program complies with financial constraint.

TABLE 6-1:
The Federal-Aid Highway Regional Target Program
(Including state matching funds, but excluding earmarked funds)

Regional Target Program	FFY 2017	FFY 2018	FFY 2019	FFY 2020	FFY 2021	FFYs 2017–21
Regional Target Obligation Authority	\$89,188,965	\$92,656,334	\$92,626,333	\$94,819,913	\$94,819,913	\$464,111,458
<i>Regional Target Programmed</i>	\$89,188,965	\$92,656,334	\$92,844,280	\$94,284,367	\$94,621,275	\$463,595,221
STP Target	\$68,562,975	\$74,660,294	\$74,705,507	\$76,522,320	\$76,785,305	\$371,236,401
<i>STP Programmed</i>	\$34,523,084	\$66,051,814	\$64,213,303	\$72,079,797	\$70,741,656	\$307,609,654
NHPP Target	N/A	N/A	N/A	N/A	N/A	\$0
<i>NHPP Programmed*</i>	\$24,539,816	\$1,988,367	\$0	\$0	\$0	\$26,528,183
HSIP Target	\$4,296,710	\$4,296,710	\$4,296,710	\$4,296,710	\$4,296,710	\$21,483,550
<i>HSIP Programmed</i>	\$7,947,909	\$2,931,191	\$5,086,246	\$0	\$4,481,040	\$20,446,386
CMAQ Target	\$13,427,220	\$10,741,776	\$10,741,776	\$10,741,776	\$10,741,776	\$56,394,324
<i>CMAQ Programmed</i>	\$18,622,650	\$17,427,220	\$18,905,547	\$17,427,220	\$15,919,847	\$88,302,484
TAP Target	\$2,902,060	\$2,927,554	\$2,882,340	\$3,259,106	\$2,996,121	\$14,967,181
<i>TAP Programmed</i>	\$3,555,506	\$4,257,742	\$4,639,185	\$4,777,350	\$3,478,732	\$20,708,515

* National Highway Performance Program (NHPP) funds are from Surface Transportation Program (STP) target amounts.

7 CHAPTER SEVEN

Operation and Maintenance

One requirement of the FAST Act is the assessment of the operation and maintenance of the transportation system in the Boston region. State and regional agencies develop estimates of transit and highway operating and maintenance costs through their budgeting process. The information on projects and funding sources presented in Chapter 3 represents operations and maintenance estimates from the implementing agencies: the Cape Ann Transportation Authority (CATA), the MetroWest Regional Transit Authority (MWRTA), the Massachusetts Bay Transportation Authority (MBTA), and the MassDOT Highway Division. The tables on pages 7-2 and 7-3 present the operations and maintenance expenditures for state fiscal years (SFYs) 2017 through 2021 for MassDOT projects.

Massachusetts Department of Transportation - Highway Division
 Summary of Operating and Maintenance Expenditures
 Boston Region - Part 1: Non-Federal Aid
 as of May 20, 2016

Non Federal Aid Maintenance Projects - State Bondfunds

Program Group/Sub Group	Estimated SFY 2017 Expenditures	Estimated SFY 2018 Expenditures	Estimated SFY 2019 Expenditures	Estimated SFY 2020 Expenditures	Estimated SFY 2021 Expenditures
01 - Bridge Repair & Replacement					
New Bridge (Excluded)	n/a	n/a	n/a	n/a	n/a
Bridge Replacement (Excluded)	n/a	n/a	n/a	n/a	n/a
Bridge Reconstruction/Rehab	\$12,432,548	\$11,074,901	\$11,538,383	\$11,681,944	\$11,431,743
Drawbridge Maintenance	\$336,286	\$267,455	\$201,247	\$268,330	\$245,677
Structures Maintenance	\$1,110,269	\$1,313,728	\$1,612,800	\$1,345,599	\$1,424,043
02 - Bridge Painting					
Painting - Structural	\$469,901	\$626,247	\$834,996	\$643,714	\$701,652
03 - Roadway Reconstruction					
Hwy Relocation (Excluded)	n/a	n/a	n/a	n/a	n/a
Hwy Recon. - Added Capacity (Excluded)	n/a	n/a	n/a	n/a	n/a
New Construction (Excluded)	n/a	n/a	n/a	n/a	n/a
Hwy Reconstr - Restr and Rehab	\$28,436	\$22,750	\$17,062	\$22,749	\$20,854
Hwy Reconstr - No Added Capacity	\$23,464	\$8,460	\$10,641	\$14,189	\$11,097
Hwy Reconstr - Minor Widening	\$1,069,824	\$1,420,329	\$1,716,498	\$1,402,217	\$1,513,015
Hwy Reconstr - Major Widening	\$0	\$0	\$0	\$0	\$0
04 - Roadway Resurfacing					
Resurfacing	\$277,689	\$335,538	\$215,763	\$276,330	\$275,877
05 - Intersection & Safety					
Impact Attenuators	\$0	\$0	\$0	\$0	\$0
Safety Improvements	\$0	\$0	\$0	\$0	\$0
Traffic Signals	\$0	\$0	\$0	\$0	\$0
06 - Signs & Lighting					
Electrical	\$0	\$0	\$0	\$0	\$0
Sign Installation / Upgrading	\$0	\$0	\$0	\$0	\$0
Structural Signing	\$0	\$0	\$0	\$0	\$0
07 - Guardrail					
Guard Rail and Fencing	\$916	\$1,221	\$712	\$949	\$961
08 - Maintenance					
Catch Basin Cleaning	\$0	\$0	\$0	\$0	\$0
Crack Sealing	\$0	\$0	\$0	\$0	\$0
Landscaping	\$0	\$0	\$0	\$0	\$0
Mowing and Spraying	\$0	\$0	\$0	\$0	\$0
Pavement Marking	\$0	\$0	\$0	\$0	\$0
Sewer and Water	\$0	\$0	\$0	\$0	\$0
Process/Recycle/Tmsprt Soils	\$0	\$0	\$0	\$0	\$0
Contract Hwy Maint.	\$1,960	\$2,613	\$1,524	\$2,033	\$2,057
09 - Facilities					
Chemical Storage Sheds	\$0	\$0	\$0	\$0	\$0
Vertical Construction	\$1,733,971	\$1,217,275	\$1,338,553	\$1,429,933	\$1,328,587
10 - Bikeways (Excluded)	n/a	n/a	n/a	n/a	n/a
11 - Other					
Demolition	\$0	\$0	\$0	\$0	\$0
Drilling & Boring	\$0	\$0	\$0	\$0	\$0
Highway Sweeping	\$0	\$0	\$0	\$0	\$0
Intelligent Transportation System	\$1,698	\$566	\$755	\$1,006	\$775
Marine Construction	\$0	\$0	\$0	\$0	\$0
Miscellaneous / No prequal	\$117,528	\$40,351	\$52,626	\$70,169	\$54,382
Reclamation	\$0	\$0	\$0	\$0	\$0
Underground Tank Removal Replace	\$0	\$0	\$0	\$0	\$0
Unknown	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0	\$0
Grand Total NFA:	\$17,604,489	\$16,331,435	\$17,541,561	\$17,159,162	\$17,010,719

Massachusetts Department of Transportation - Highway Division
 Summary of Operating and Maintenance Expenditures
 Boston Region - Part 2: Federal Aid
 as of May 20, 2016

Federal Aid Maintenance Projects

Program Group/Sub Group	Estimated SFY 2017 Expenditures	Estimated SFY 2018 Expenditures	Estimated SFY 2019 Expenditures	Estimated SFY 2020 Expenditures	Estimated SFY 2021 Expenditures
01 - Bridge Repair & Replacement					
New Bridge (Excluded)	n/a	n/a	n/a	n/a	n/a
Bridge Replacement (Excluded)	n/a	n/a	n/a	n/a	n/a
Bridge Reconstruction/Rehab	\$74,269,737	\$68,858,160	\$66,549,689	\$69,892,529	\$68,433,459
Drawbridge Maintenance	\$0	\$0	\$0	\$0	\$0
Structures Maintenance	\$7,092,779	\$8,633,367	\$8,012,868	\$7,913,004	\$8,186,413
02 - Bridge Painting					
Painting - Structural	\$0	\$0	\$0	\$0	\$0
03 - Roadway Reconstruction					
Hwy Relocation (Excluded)	n/a	n/a	n/a	n/a	n/a
Hwy Recon. - Added Capacity (Excluded)	n/a	n/a	n/a	n/a	n/a
New Construction (Excluded)	n/a	n/a	n/a	n/a	n/a
Hwy Reconstr - Restr and Rehab	\$23,245,311	\$25,895,586	\$24,496,612	\$24,545,836	\$24,979,345
Hwy Reconstr - No Added Capacity	\$15,069,270	\$14,380,744	\$13,265,384	\$14,238,466	\$13,961,531
Hwy Reconstr - Minor Widening	\$5,739,961	\$7,138,908	\$7,516,920	\$6,798,596	\$7,151,475
Hwy Reconstr - Major Widening	\$0	\$0	\$0	\$0	\$0
04 - Roadway Resurfacing					
Resurfacing	\$48,062,956	\$48,621,761	\$45,596,235	\$47,426,984	\$47,214,993
05 - Intersection & Safety					
Impact Attenuators	\$0	\$0	\$0	\$0	\$0
Safety Improvements	\$1,800	\$600	\$800	\$1,066	\$822
Traffic Signals	\$890,131	\$1,022,934	\$825,069	\$912,712	\$920,238
06 - Signs & Lighting					
Electrical	\$264,997	\$242,443	\$213,029	\$240,156	\$231,876
Sign Installation / Upgrading	\$2,315,171	\$2,160,450	\$1,648,817	\$2,041,480	\$1,950,249
Structural Signing	\$1,662,213	\$1,117,783	\$1,013,084	\$1,264,360	\$1,131,743
07 - Guardrail					
Guard Rail and Fencing	\$1,030,339	\$758,564	\$614,360	\$801,088	\$724,671
08 - Maintenance					
Catch Basin Cleaning	\$0	\$0	\$0	\$0	\$0
Contract Highway Maintenance	\$0	\$0	\$0	\$0	\$0
Crack Sealing	\$0	\$0	\$0	\$0	\$0
Landscaping	\$3,115	\$1,726	\$1,614	\$2,152	\$1,831
Mowing and Spraying	\$0	\$0	\$0	\$0	\$0
Pavement Marking	\$0	\$0	\$0	\$0	\$0
Process/Recycle/Transport Soils	\$0	\$0	\$0	\$0	\$0
Sewer and Water	\$82,673	\$110,230	\$146,974	\$113,292	\$123,499
09 - Facilities					
Chemical Storage Sheds	\$0	\$0	\$0	\$0	\$0
Vertical Construction	\$4,766,996	\$6,352,264	\$8,469,686	\$6,529,649	\$7,117,200
10 - Bikeways (Excluded)	n/a	n/a	n/a	n/a	n/a
11 - Other					
Demolition	\$0	\$0	\$0	\$0	\$0
Drilling & Boring	\$0	\$0	\$0	\$0	\$0
Highway Sweeping	\$0	\$0	\$0	\$0	\$0
Intelligent Transportation System	\$1,718,023	\$2,037,875	\$2,418,061	\$2,057,986	\$2,171,307
Marine Construction	\$885,249	\$295,083	\$393,444	\$524,592	\$404,373
Miscellaneous / No prequal	\$24,423	\$11,389	\$15,186	\$16,999	\$14,525
Reclamation	\$0	\$0	\$0	\$0	\$0
Underground Tank Removal Replace	\$0	\$0	\$0	\$0	\$0
Unknown	\$0	\$0	\$0	\$0	\$0
Grand Total Federal Aid:	\$187,125,145	\$187,639,867	\$181,197,831	\$185,320,948	\$184,719,549

A APPENDIX

Universe of Projects for Highway Discretionary (“Regional Target”) Funding & Evaluation Results

This appendix lists information about transportation projects that cities and towns in the region identified as their priority projects to be considered for funding through the Boston Region MPO’s Highway Discretionary (“Regional Target”) Program. It also contains the evaluation results of those projects scored by MPO staff based on the evaluation criteria.

Through an outreach process that seeks input from local officials and interested parties, the MPO staff compiles project requests and relevant information into a Universe of Projects list for the MPO. The Universe of Projects list includes projects in varied stages of development, from projects in the conceptual stage to those that are fully designed and ready to be advertised for construction. The MPO staff also collects data on each project to support the evaluation of projects. (Typically, at a minimum, a functional design report is required.)

The MPO’s project selection process uses evaluation criteria to make the process of selecting projects for programming in the TIP both more logical and more transparent. The criteria are based on the MPO’s goals and objectives, which were adopted for its current Long-Range Transportation Plan (LRTP), *Charting Progress to 2040*.

The MPO staff uses the project information and evaluations to prepare a First-Tier List of Projects that have high ratings in the evaluation process and could be made ready for advertising in the time frame of the TIP. The MPO staff then prepares a staff recommendation for the TIP taking into consideration the First-Tier list and factors such as the construction readiness of the project, the estimated project cost, community priority, geographic equity (to ensure that needs are addressed throughout the region), and consistency with the MPO’s LRTP.

The MPO discusses the First-Tier List of Projects, the staff recommendation, and other information before voting on a draft TIP to release for a 30-day public review and comment period.

Table A-1 contains a summary of the evaluated projects in this year’s TIP development process. Projects that are programmed with MPO Target Funding in the FFYs 2017-21 TIP are in bold type.

A full list of the Universe of Projects (including those project that were evaluated and those projects that were not evaluated) is contained in Table A-2. Projects in bold type are programmed with Target Funding in the FFYs 2017–21 TIP.

TABLE A-1: FFYs 2017-21 TIP - Summary of Evaluated Highway Projects

TIP ID	Proponent(s)	Project Name	TIP/ LRTP Status	Total Rating (134 Points Possible):	Safety Rating (30 Points Possible):	System Preservation Rating (29 Points Possible):	Capacity Management / Mobility Rating (29 Points Possible):	Clean Air / Clean Communities Rating (16 Points Possible):	Transporta- tion Equity Rating (12 Points Possible):	Economic Vitality Rating (18 Points Possible):
606635	Newton and Needham	Reconstruction of Highland Ave., Needham St. and Charles River bridge	2018	77	18	16	14	13	3	13
607652	Everett	Reconstruction of Ferry St.	2019	75	14	15	15	10	12	9
607777	Watertown	Rehabilitation of Mount Auburn St. (Route 16)	N/A	71	18	10	16	12	6	9
605110	Brookline	Intersection and signal improvements at Route 9 and Village Square (Gateway East)	2018	70	9	14	16	7	10	14
607981	Somerville	McGrath Boulevard project	LRTP 2026-30	70	13	14	11	8	12	12
608449	Boston	Commonwealth Avenue, phases 3 and 4	N/A	69	17	12	11	8	10	11
606043	Hopkinton	Signal and intersection improvements on Route 135	2019	65	16	14	12	13	1	9
608347	Beverly	Traffic and safety improvements at three locations	2021	63	15	12	13	11	3	9
605034	Natick	Reconstruction of Route 27 (North Main St.)	2019	61	13	13	15	7	2	11
605789	Boston	Reconstruction of Melnea Cass Boulevard	2019	61	10	12	10	3 <i>(not fully evaluated)</i>	12	14
608348	Beverly	Rehabilitation of Bridge St.	N/A	60	12	13	13	9	5	8
606453	Boston	Improvements on Boylston St.	2020	60	7	6	15	12	8	12
608228	Framingham	Reconstruction of Union Ave.	2021	60	19	12	6	0	10	13
604810	Marlborough	Reconstruction of Route 85 (Maple St.)	2017	59	15	11	10	12	3	8
604123	Ashland	Reconstruction on Route 126 (Pond St.)	2020	57	12	10	15	8	3	9
29492	Bedford, Billerica and Burlington	Middlesex Turnpike improvements, phase III	2016-17	55	7	14	16	10	2	6
1671	Everett	Rehabilitation of Beacham St.	N/A	55	16	14	8	5	7	5
607409	Lexington	Reconstruction on Massachusetts Ave.	2016	55	14	14	13	8	2	4
607428	Milford	Resurfacing and intersection improvements on Route 16 (Main St.)	2019	55	14	15	9	5	5	7
605857	Norwood	Intersection improvements at Route 1 and University Ave./ Everett St.	2021	55	11	12	15	11	2	4
604996	Woburn	Bridge replacement, New Boston St. over MBTA	2021	55	9	1	21	12	0	12

TABLE A-1: FFYs 2017-21 TIP - Summary of Evaluated Highway Projects

TIP ID	Proponent(s)	Project Name	TIP/ LRTP Status	Total Rating (134 Points Possible):	Safety Rating (30 Points Possible):	System Preservation Rating (29 Points Possible):	Capacity Management / Mobility Rating (29 Points Possible):	Clean Air / Clean Communities Rating (16 Points Possible):	Transporta- tion Equity Rating (12 Points Possible):	Economic Vitality Rating (18 Points Possible):
607309	Hingham	Reconstruction and related work on Derby St.	2017	54	19	10	14	6	1	4
605313	Natick (MassDOT)	Bridge replacement, Route 27 (North Main St.) over Route 9 (Worcester St.)	LRTP 2021-25	54	18	16	10	2	2	6
602261	Walpole (MassDOT)	Reconstruction on Route 1A (Main St.)	2020	52	13	11	10	6	3	9
605721	Weymouth	Intersection improvements at Middle St., Libbey Industrial Parkway and Tara Dr.	2016	52	17	11	11	4	4	5
602310	Danvers	Reconstruction on Collins St.	N/A	51	9	12	12	8	3	7
604935	Woburn	Reconstruction of Montvale Ave.	2017	51	17	12	10	6	2	4
606117	Boston	Traffic signal improvements at 10 locations	2016	50	7	11	6	4	12	10
604377	Gloucester	Washington St. and Railroad Ave.	N/A	49	10	10	5	5	6	13
606130	Norwood	Intersection improvements at Route 1A and Upland Rd./Washington St. and Prospect St./Fulton St.	N/A	47	13	7	14	3	3	7
606501	Holbrook	Reconstruction of Union St. (Route 139)	2021	46	10	6	13	3	5	9
601704	Newton	Reconstruction and signal improvements on Walnut St.	N/A	45	10	12	7	4	3	9
604652	Winchester, Stoneham and Woburn	Tri-Community Bikeway	2016	45	6	0	15	13	4	7
607888	Boston	Multi-use path construction on New Fenway	2019	44	6	0	14	7	8	9
604811	Marlborough	Reconstruction of Route 20 (East Main St.)	N/A	44	11	7	7	5	5	9
607901	Dedham	Pedestrian improvements along Elm St. and Rustcraft Rd. corridors	2021	44	10	0	14	6	2	12
601513	Saugus (MassDOT)	Interchange reconstruction at Walnut St. and Route 1 (phase II)	N/A	43	9	13	9	6	2	4
604989	Southborough	Reconstruction of Main St. (Route 30)	2018	43	8	13	10	6	1	5
606316	Brookline	Pedestrian bridge rehabilitation over MBTA off Carlton St.	2016	41	7	0	13	6	8	7
602077	Lynn	Reconstruction on Route 129 (Lynnfield St.)	2020	41	12	9	8	4	4	4
604231	Marlborough	Intersection and signal improvements on Route 20 (East Main St./Boston Post Rd.) at Concord Rd.	N/A	40	6	12	6	7	4	5
608352	Salem	Canal St. Bikeway	2019	40	6	0	11	6	10	7
605743	Ipswich	Resurfacing and related work on Central and South Main Sts.	N/A	38	10	9	5	4	2	8

TABLE A-1: FFYs 2017-21 TIP - Summary of Evaluated Highway Projects

TIP ID	Proponent(s)	Project Name	TIP/ LRTP Status	Total Rating (134 Points Possible):	Safety Rating (30 Points Possible):	System Preservation Rating (29 Points Possible):	Capacity Management / Mobility Rating (29 Points Possible):	Clean Air / Clean Communities Rating (16 Points Possible):	Transporta- tion Equity Rating (12 Points Possible):	Economic Vitality Rating (18 Points Possible):
608146	Marblehead	Intersection improvements to Pleasant St. at Village/Vine/Cross Sts.	N/A	38	8	10	5	3	3	9
607732	Natick	Cochituate Rail Trail, phase two	2020	38	8	0	15	7	2	6
607249	Sudbury	Intersection improvements at Route 20 and Landham Rd.	N/A	37	16	7	4	5	0	5
605189	Concord	Bruce Freeman Rail Trail, phase 2C	2016	36	6	0	15	8	2	5
601607	Hull	Reconstruction of Atlantic Ave. and related work	N/A	36	9	9	5	6	3	4
603739	Wrentham	Construction of I-495/Route 1A ramps	N/A	35	9	8	8	10	0	0
604638	Danvers and Peabody (MassDOT)	Mainline improvements on Route 128 (phase II)	N/A	34	10	10	5	3	3	3
606002	Duxbury	Signal installation at Route 3 (NB and SB) ramps and Route 3A (Tremont St.)	N/A	33	6	11	10	4	0	2
601359	Franklin	Reconstruction of Pleasant St.	N/A	32	9	8	5	2	2	6
604735	Medfield	Reconstruction of North St.	N/A	30	7	8	2	4	2	7
604745	Wrentham	Reconstruction of Taunton St. (Route 152)	N/A	29	8	7	5	4	1	4
600518	Hingham (MassDOT)	Intersection improvements at Derby St., Whiting St. (Route 53) and Gardner St.	2018	28	11	10	5	-1	0	3
607899	Dedham	Pedestrian improvements along Bussey St.	N/A	25	7	3	1	4	7	3

TABLE A-2: FFYs 2017-21 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Acton	1656	Intersection Improvements at Massachusetts Avenue (Route 111) and Main Street (Route 27) (Kelly's Corner)	
Ashland	604123	Reconstruction on Route 126 (Pond Street), from the Framingham T.L. to the Holliston T.L.	2020
Bedford	607738	Minuteman Bikeway Extension, from Loomis Street to the Concord T.L.	
Bedford, Billerica & Burlington	029492	Middlesex Turnpike Improvements, from Crosby Drive North to Manning Road (Phase III)	2016-17
Bellingham	940	South Main Street (Route 126), from Mechanic Street (Route 140) to Douglas Drive	
Bellingham	1718	South Main Street (Route 126), from Old Elm Street to Meadow Road	
Beverly	608348	Rehabilitation of Bridge Street	
Beverly	608347	Traffic and Safety Improvements at Three Locations	2021
Beverly	604369	Reconstruction & Improvements on Route 128 (Interchange 19) at Brimbal Avenue, Sohler Road, Dunham Road, Otis Road	
Beverly	607727	Interchange Reconstruction at Route 128/Exit 19 at Brimbal Avenue (Phase II)	
Boston	606117	Traffic Signal Improvements at 10 Locations	2016
Boston	606453	Improvements on Boylston Street, from Intersection of Brookline Avenue & Park Drive to Ipswich Street	2020
Boston	607888	Multi-use Path Construction on New Fenway	2019
Boston	606134	Traffic Signal Improvements on Blue Hill Avenue and Warren Street	2018
Boston	605789	Reconstruction of Melnea Cass Boulevard	2019
Boston	606226	Reconstruction of Rutherford Avenue, from City Square to Sullivan Square	2020-21 (LRTP 2021-25)
Boston	604761	Multi-Use Trail Construction (South Bay Harbor) From Ruggles Station to Fort Point Channel	2017
Boston	608449	Reconstruction of Commonwealth Avenue, Phases 3 and 4	
Boston	601274	Reconstruction of Tremont Street, from Court Street to Boylston Street	
Braintree	1675	Braintree Split	
Brookline	606316	Pedestrian Bridge Rehabilitation over MBTA off Carlton Street	2018
Brookline	605110	Intersection & Signal Improvements at Route 9 & Village Square (Gateway East)	2018
Burlington	949	Route 62 (Wilmington Road)	
Burlington	950	South Bedford Street	
Cambridge	1716	Alewife Bicycle/Pedestrian Bridge	

TABLE A-2: FFYs 2017-21 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Cambridge	604993	Innovation Boulevard Streetscape & Pedestrian Improvements, Between Main Street & Binney Street (Phase I)	
Canton	603883	Reconstruction on Route 138, from I-93 to Dan Road	
Canton	900	East-West Connector, between Pleasant St. & Route 138	
Canton, Dedham, and Norwood (MassDOT)	087790	Interchange Improvements at I-95/I-93/University Avenue/I-95 Widening	
Chelsea	608078	Reconstruction of Broadway, from City Hall Ave to the Revere City Line	
Chelsea	1660	Chelsea Gateway Center Infrastructure Improvement Plan, Phase 3 (Everett Ave. Reconstruction)	
Chelsea	953	Reconstruction and Widening of Spruce Street, between Everett Avenue and Sixth Street	
Chelsea	1063	Reconstruction of Beacham and Williams Streets, from Spruce Street to Everett City Line	
Chelsea	1615	Spruce Street/Second Street/Carter Street Improvements	
Cohasset	608007	Corridor Improvements and Related Work on Justice Cushing Highway (Route 3A), from Beechwood Street to the Scituate Town Line	
Concord	605189	Bruce Freeman Rail Trail, Phase 2C	2016
Concord	602091	Improvements & Upgrades to Concord Rotary (Routes 2/2A/119)	
Concord	1441	Route 62 (Main St) Phase 3	
Concord	1450	Route 117 (Fitchburg Turnpike)	
Concord, Acton	606223	Bruce Freeman Rail Trail Construction (Phase II-B)	2018
Danvers	602310	Reconstruction on Collins Street, from Sylvan Street to Centre & Holten Streets	
Dedham	607899	Pedestrian Improvements along Bussey Street	
Dedham	607901	Pedestrian Improvements along Elm Street & Rustcraft Road Corridors	2021
Duxbury	606002	Signal Installation at Route 3 (NB & SB) Ramps & Route 3A (Tremont St)	
Duxbury	600650	Route 3A (Tremont Street) Bridge	
Duxbury	942	Intersection Improvements at Route 3A & Route 139	
Everett	607652	Reconstruction of Ferry Street, South Ferry Street and a Portion of Elm Street	2019
Everett	1671	Rehabilitation of Beacham Street, from Route 99 to Chelsea City Line	
Everett & Malden	649	TeleCom Boulevard, Phase 2	
Framingham	608228	Reconstruction of Union Avenue, from Proctor Street to Main Street	2021
Framingham	955	Reconstruction of Route 126, from Route 9 to Lincoln Street	

TABLE A-2: FFYs 2017-21 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Framingham	356	Reconstruct Route 126 (Hollis Street), from Irving Street to the Ashland town line	
Framingham	602038	Edgell Road Corridor Project	
Framingham	606109	Intersection Improvements at Route 126/135/MBTA & CSX Railroad	LRTP 2026-30
Framingham	608006	Pedestrian Hybrid Beacon Installation at Route 9 and Maynard Road	
Franklin	601359	Reconstruction of Pleasant Street, from Main Street to Chestnut Street	
Franklin	607774	Resurfacing & Intersection Improvements on Route 140, from Beaver Street to I-495 Ramps	
Gloucester	604377	Washington Street And Railroad Avenue	
Hingham	607309	Reconstruction and Related Work on Derby Street from Pond Park Road to Cushing Street	2017
Hingham (MassDOT)	600518	Intersection Improvements at Derby Street, Whiting Street (Route 53) and Gardner Street	2018
Holbrook	606501	Reconstruction of Union Street (Route 139), from Linfield Street to Centre Street/Water Street	2021
Holbrook	602260	Intersection Improvements at Abington Avenue and Plymouth Street	
Holliston	602462	Signal Installation at Route 16/126 and Oak Street	
Hopkinton	606043	Signal & Intersection Improvements on Route 135	2019
Hudson	1047	South Street	
Hudson	1488	Lincoln St. at Cox St. and Packard St.	
Hudson	1617	Route 85/ Route 62 Rotary Improvements	
Hudson (MassDOT)	601906	Bridge Replacement, Cox Street over the Assabet River	
Hudson and Marlborough (MassDOT)	603345	Reconstruction on Routes I-290 & 495 and Bridge Replacement	
Hull	601607	Reconstruction of Atlantic Avenue and Related Work, from Nantasket Avenue to Cohasset Town Line	
Ipswich	605743	Resurfacing & Related Work on Central & South Main Streets	
Lexington	607409	Reconstruction on Massachusetts Avenue, from Marrett Road to Pleasant Street	2016
Lexington	604619	Route 4/225 (Bedford Street) and Hartwell Avenue	LRTP 2021-25

TABLE A-2: FFYs 2017-21 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Lexington	1141	West Lexington Greenway	
Littleton	1460	Harvard Street	
Lynn	602077	Reconstruction on Route 129 (Lynnfield Street), from Great Woods Road to Wyoma Square	2020
Lynn	601138	Traffic Signals at 4 Locations (Contract E)	
Lynn	602081	Route 107 (Western Avenue)/Eastern Avenue	
Lynn	602093	Route 107 (Western Avenue)	
Lynn	943	Broad Street/Lewis Street /Route 129	
Lynn	944	Boston Street -Hamilton Street	
Lynn	1319	Route 129 (Boston St./Washington St.)	
Lynn	1320	Route 1 (Copeland Circle, Fox Hill Bridge)	
Lynn	1321	Route 1A Lynnway at Blossom Street	
Lynn	1322	Route 1A Lynnway intersection at Market St.	
Lynn	1323	Route 1A Lynn (GE Bridge Nahant Rotary)	
Lynn	1324	Blue Line Extension (Wonderland connection)	
Lynn	1454	Route 1 South (Jug handle lights at Goodwin Circle)	
Lynn	607306	Blossom Street Ferry Boat Discretionary Program (Phase III)	
Lynn	1672	Blossom Street Ferry Terminal	
Lynn (MBTA)	374	Lynn Garage	
Lynn, Malden, Revere & Saugus	351	Bike to the Sea, Phase 2	
Lynnfield, Wakefield	607329	Rail Trail Extension, from the Galvin Middle School to Lynnfield/Peabody Town Line	2020
Malden, Revere, and Saugus (MassDOT)	605012	Reconstruction & Widening on Route 1, from Route 60 to Route 99	
Marblehead	608146	Intersection Improvements to Pleasant Street at Village/Vine/Cross Streets	
Marlborough	604810	Reconstruction of Route 85 (Maple Street)	2017
Marlborough	604231	Intersection & Signal Improvements on Route 20 (East Main Street/Boston Post Road) at Concord Road	
Marlborough	604811	Reconstruction of Route 20 (East Main Street), from Main Street Easterly to Lincoln Street	
Marshfield (MassDOT)	604655	Bridge Replacement, Beach Street over the Cut River	2018
Marshfield (MassDOT)	605664	Resurfacing & Related Work on Route 3A	
Medfield	604735	Reconstruction of North Street, from Frairy Street to Pine Street	

TABLE A-2: FFYs 2017-21 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Medford	1146	Medford Square Parking	
Medford	1455	Medford Square Phase 2 Improvements	
Medford	1456	Medford Square Water Taxi Landing and Related Park Improvements	
Medford	1457	Medford Square Transit Center	
Medford	1458	Mystic River Linear Park	
Medway	602134	Resurfacing & Related Work on a Section of Village Street	
Medway	1167	Route 109 (Milford Street)	
Melrose	601551	Intersection & Signal Improvements at Main Street & Essex Street	
Milford	607428	Resurfacing & Intersection Improvements on Route 16 (Main Street), from Water Street to the Hopedale T.L.	2019
Milford	967	Veteran's Memorial Drive/Alternate Route	
Milford	608045	Rehabilitation on Route 16, from Route 109 to Beaver Street	
Millis	602364	Reconstruction of Village Street, from Main Street (Route 109) to the Medway Town Line	
Milton	608406	Reconstruction on Granite Avenue, from Neponset River to Squantum Street	
Natick	607732	Cochituate Rail Trail, Phase Two	2020
Natick	605034	Reconstruction of Route 27 (North Main Street), from North Avenue to the Wayland Town Line	2019
Natick	605313	Bridge Replacement, Route 27 (North Main Street) over Route 9 (Worcester Street) and Interchange Improvements	LRTP 2021-25
Needham and Wellesley (MassDOT)	603711	Rehab/Replacement of 6 Bridges on I-95/Route 128 (Add-a-Lane Contract 5)	2016-18
Newton	601704	Reconstruction & Signal Improvements on Walnut Street, from Homer Street to Route 9	
Newton	1067	Washington Street (Phase 2), from Commonwealth Avenue to Perkins Street	
Newton	600932	Reconstruction on Route 30 (Commonwealth Avenue), from Weston Town Line to Auburn Street	
Newton & Needham	606635	Reconstruction of Highland Avenue, Needham Street & Charles River Bridge, from Webster Street to Route 9	2018
North Reading	1673	Reconstruction of Route 28 (Main Street), from Larch Road to Route 62 (Lowell Road)	
North Reading	1674	Reconstruction of Route 62, from Route 28 (Main Street) to I-93	
Norwood	605857	Intersection Improvements at Route 1 & University Avenue/Everett Street	2021

TABLE A-2: FFYs 2017-21 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Norwood	606130	Intersection Improvements at Route 1A & Upland Road/Washington Street & Prospect Street/Fulton Street	
Peabody (MassDOT)	604638	Mainline Improvements on Route 128 (Phase II)	
Peabody, Salem	1655	Riverwalk/Greenway from Peabody Square to Salem Train Depot	
Quincy	1451	Quincy Center Multimodal MBTA Station	
Salem	608352	Canal St. Rail Trail construction (phase 2)	2019
Salem	005399	Reconstruction of Bridge Street, from Flint Street to Washington Street	
Salem	600986	Boston Street	
Saugus	601513	Interchange Reconstruction at Walnut Street & Route 1 (Phase II)	
Somerville (MassDOT)	607981	McGrath Boulevard Project	L RTP 2026-30
Somerville (MassDOT)	600831	I-93 Mystic Avenue Interchange (Design and Study)	
Somerville and Medford (MBTA)	1569	Green Line Extension Project (Phase II), College Avenue to Mystic Valley Parkway/Route 16	
Southborough	604989	Reconstruction of Main Street (Route 30), from Sears Road to Park Street	2018
Southborough	1064	Cordaville Road/Route 85 Rehabilitation	
Southborough and Westborough (MassDOT)	607701	Improvements at I-495 & Route 9	
Stow, Hudson	1139	Assabet River Rail Trail	
Sudbury	608164	Bruce Freeman Rail Trail, Phase 2D	
Sudbury	1037	Route 20/Horsepond Road	
Sudbury	1069	Route 20/Wayside Inn Road	
Sudbury	1305	Bruce Freeman Rail Trail, Phase 2E	
Sudbury (MassDOT)	607249	Intersection Improvements at Route 20 & Landham Road	
Walpole	602261	Reconstruction on Route 1A (Main Street), from the Norwood Town Line to Route 27	2020
Walpole	600671	Reconstruction of Route 1A, from Common Street to the Norfolk Town Line	
Walpole	1151	Walpole Central Business District	
Walpole	1152	Elm St Improvements	
Walpole (MassDOT)	997	Coney Street Interchange with Route 95	
Watertown	607777	Rehabilitation of Mount Auburn Street (Route 16)	

TABLE A-2: FFYs 2017-21 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Wayland	601579	Signal & Intersection Improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)	2016
Westwood	608158	Reconstruction of Canton Street and Everett Street	
Weymouth	605721	Intersection Improvements at Middle Street, Libbey Industrial Parkway and Tara Drive	2016
Weymouth, Abington	601630	Reconstruction & Widening on Route 18 (Main Street), from Highland Place to Route 139	2016-19
Weymouth	608231	Reconstruction of Route 3A	
Wilmington	608051	Reconstruction on Route 38 (Main Street), from Route 62 to the Woburn C.L.	
Wilmington	1720	Lowell Street (Route 129) at Woburn Street	
Winchester, Stoneham, and Woburn	604652	Tri-Community Bikeway	2016
Winthrop	607244	Reconstruction & Related Work along Winthrop Street & Revere Street Corridor	
Woburn	604935	Reconstruction of Montvale Avenue, from I-93 Interchange to Central Street	2017
Woburn	604996	Bridge Replacement, New Boston Street over MBTA	2021
Woburn	1153	Woburn Loop Bikeway Project	
Woburn	1449	Route 38 (Main St.) Traffic Lights	
Woburn	608067	Intersection Reconstruction at Route 3 (Cambridge Road) & Bedford Road and South Bedford Street	
Woburn	608097	Bridge Replacement & Related Work, W-43-028, Washington Street over I-95	
Woburn (MassDOT)	605605	Interchange Improvements to I-93/I-95	
Wrentham	604745	Reconstruction of Taunton Street (Route 152)	
Wrentham (MassDOT)	603739	Construction of I-495/Route 1A Ramps	

B APPENDIX

Roadway Project Funding Application Forms & Evaluations

This appendix provides an explanation of the project funding application form for roadway projects that is used to understand requests for funding and to evaluate projects for possible programming. MPO staff and project proponents update these project funding application forms when new information becomes available. The forms are used to evaluate projects using criteria that reflect MPO visions and policies. Some information is provided specifically by the project proponent and other information is provided by MPO staff or by various state agencies.

Project funding application forms are available on the MPO website, <http://www.ctps.org/>. Proponents enter the project information on-line. Other information is input by MPO staff or automatically updated through links to other databases.

ROADWAY PROJECT FUNDING APPLICATION FORMS

Overview Tab

Project Background Information

1 *ID Number*

The MassDOT Project Information System (PROJIS) number assigned to the project. If the project does not have a PROJIS number, an

identification number will be assigned to the project by the MPO for internal tracking purposes.

2 *Municipality(ies)*

The municipality (or municipalities) in which the project is located.

3 *Project Name*

The name of the project. (Source: MassDOT)

4 *Project Category*

(determined by MPO staff):

- Arterial and Intersection – Arterial roadway and intersection projects
- Major Highway – Limited access roadway projects
- Bridge – Bridge projects
- Bicycle and Pedestrian – Projects dedicated solely to bicycle and pedestrian facilities such as walkways, paths, and trails
- Transit – Transit projects consisting of improvements to trains, buses, and ferries
- Enhancement – Streetscape improvements and enhancements to transportation facilities
- Regional Mobility – Transportation demand management (TDM) and Transportation Systems Management (TSM) programs or projects

5 *MassDOT Highway District*

The MassDOT Highway District in which the project is located.

6 *MAPC Subregion*

The MAPC subregion in which the project is located.

7 *MAPC Community Type*

The MAPC community type in which the project is located as defined by land use and housing patterns, recent growth trends, and projected development patterns.

8 *Estimated Cost*

The estimated total cost of the project. (Source: MassDOT)

9 *Evaluation Rating*

The number of points scored by the project, if it has been evaluated.

10 *Description*

A description of the project, including its primary purpose, major elements and geographic limits. (Source: MassDOT).

11 *Project Length (Miles)*

Total length of project in miles.

12 *Project Lane Miles*

Total lane miles of project.

Project Background Information

P1 Community Priority

The priority rank of the project as determined by the community. (Source: Proponent)

Additional Status

13 MPO/CTPS Study

Past UPWP-funded studies or reports conducted within the project area.

14 Air Quality Status

The air quality status of the project in the MPO's travel demand model. Projects with "exempt" status do not add capacity to the transportation system. Projects with "model" status add capacity to the transportation system and are included in the travel demand model.

Readiness Tab

"Readiness" is a determination of the appropriate year of programming for a project. In order to make this determination, the MPO tracks project development milestones and coordinates with the MassDOT Highway Division to estimate when a project will be ready for advertising.

All **non-transit** projects programmed in the first year of the Transportation Improvement Program (TIP) must be advertised before the end of the federal fiscal year (September 30). That funding authorization is not transferred to the next federal fiscal year, therefore any "leftover" funds are effectively "lost" to the region. If a project in the first year of the TIP is determined as "not ready to be advertised before September 30," it

will be removed from the TIP and replaced with another project by amendment.

For projects in the first year of the TIP, it is important to communicate any perceived problems that may affect the schedule to the Boston Region MPO as soon as possible.

Project Background Information

15 Transportation Improvement Program (TIP) Status

Advertised, Programmed, Pre-TIP, or Conceptual (Source: MPO database):

- **Advertised** – projects have been advertised by the implementation agency for bids.
- **Programmed** – projects have been identified for funds in the current TIP.
- **Pre-TIP** – projects have received Project Review Committee (PRC) approval from MassDOT Highway Division and have an “active” PROJIS number, but do not have funds identified in the TIP.
- **Conceptual** – projects are project concepts or ideas that are not yet under design.

16 Functional Design Report (FDR) Status

The year that a functional design report was completed, if one has been conducted for the project.

17 Design Status

Current design status of the project in the MassDOT Highway Division Design Process.

Dates are provided where available. (Source: MassDOT Project Info)

- Project Review Committee (PRC) Approved
- 25% Submitted
- 25% Approved
- 75% Submitted
- 75% Approved
- 100% Submitted
- 100% Approved
- PS&E Submitted

18 Right-of-Way (ROW) Requirement

(Source: MassDOT Project Info):

Required – ROW action is required for completion of the project

Not Required – No ROW action required for completion of the project

19 Right-of-Way (ROW) Responsibility

(Source: MassDOT Project Info):

MassDOT Responsibility – Providing the required right-of-way is the responsibility of MassDOT.

Municipal Responsibility – Providing the required right-of-way is the responsibility of the municipality.

Municipal Approval – Municipal approval has been given to the right-of-way plan (with date of approval):

20 *Right-of-Way (ROW) Certification*

(Source: MassDOT Project Info):

Expected – Expected date of ROW plan and order of taking

Recorded – Date the ROW plan and order of taking were recorded at the Registry of Deeds

Expires – Expiration date of the rights of entry, easements, or order of taking

21 *Required Permits*

Permits required by the Massachusetts Environmental Policy Act (MEPA). (Source: MassDOT Project Info.)

Possible required permits include:

- Environmental Impact Statement
- Construction Engineering Checklist
- Clean Water Act Section 404 Permit
- Rivers and Harbors Act of 1899 Section 10 Permit
- MEPA Environmental Notification Form
- MEPA Environmental Impact Report
- Massachusetts Historical Commission Approval
- M.G.L. Ch. 131 Wetlands Order of Conditions
- Conservation Commission Order of Conditions

Safety Tab

The evaluation criteria below serve as a way to guide investments that implement the following MPO safety objectives:

- Reduce the number and severity of crashes, all modes
- Reduce serious injuries and fatalities from transportation
- Protect transportation customers and employees from safety and security threats

Project Background Information

22 *Top 200 Rank*

Ranks of highest crash intersection clusters in the project area listed within MassDOT's top 200 high crash intersection locations. The crash rankings are weighted by crash severity as indicated by Equivalent Property Damage Only (EPDO) values. (Source: MassDOT Highway Division 2011-2013 Top Crash Locations Report)

23 *EPDO/Injury Value*

An estimated value of property damage. Fatal crashes are weighted by 10, injury crashes are weighted by 5 and property damage only or nonreported is weighted by 1. (Source: MassDOT Highway Division, 2011-2013)

24 *Crash Rate/Crashes per Mile*

Intersection projects list the crash rate as total crashes per million vehicle entering the intersection. Arterial projects list the crash rate as total crashes per mile. (Source: MassDOT Highway Division, 2011-2013)

25 *Bicycle-Involved Crashes (Total EPDO)*

Total EPDO value of bicycle-involved crashes in the project area. (Source: MassDOT Highway Division, 2011-2013)

26 *Pedestrian-Involved Crashes (Total EPDO)*

Total EPDO value of pedestrian-involved crashes in the project area. (Source: MassDOT Highway Division, 2011-2013)

27 *Truck-Involved Crashes (Total EPDO)*

Total EPDO value of truck-involved crashes in the project area. (Source: MassDOT Highway Division, 2011-2013)

Proponent Provided Information

P2 What is the primary safety need associated with this project and how does it address that need?

Describe the need for the project from a local and a regional perspective. What are the existing safety needs/improvements the project is designed to address? How will this design accomplish those needed improvements? Please be as specific as possible. When applicable, this information should be consistent with project need information provided in the MassDOT Highway Division Project Need Form. (Source: Proponent)

Evaluation

Safety Evaluation Scoring (30 total points possible):

Crash Severity Value: Equivalent Property Damage Only (EPDO) index (up to 5 points)

- +5 EPDO value of 300 or more
- +4 EPDO value between 200-299

- +3 EPDO value between 100-199
- +2 EPDO value between 50-99
- +1 EPDO value less than 50
- +0 No EPDO value

Crash Severity Rate: Equivalent Property Damage Only (EPDO) index per VMT (up to 5 points)

- +5 Average annual EPDO per 1,000,000 VMT of 20 or more
- +4 Average annual EPDO per 1,000,000 VMT between 15-20
- +3 Average annual EPDO per 1,000,000 VMT between 10-15
- +2 Average annual EPDO per 1,000,000 VMT between 5-10
- +1 Average annual EPDO per 1,000,000 VMT less than 5
- +0 No EPDO rate

Improves truck-related safety issue (up to 5 points)

- +3 High total effectiveness of truck safety countermeasures
- +2 Medium total effectiveness of truck safety countermeasures
- +1 Low total effectiveness of truck safety countermeasures
- +0 Does not implement truck safety countermeasures

If project scores points above, then it is eligible for additional points below:

- +2 Improves truck safety at HSIP Cluster

Improves bicycle safety (up to 5 points)

- +3 High total effectiveness of bicycle safety countermeasures
- +2 Medium total effectiveness of bicycle safety countermeasures
- +1 Low total effectiveness of bicycle safety countermeasures
- 0 Does not implement bicycle safety countermeasures

If project scores points above, then it is eligible for additional points below:

- +2 Improves bicycle safety at HSIP Bicycle Cluster
- +1 Improves bicycle safety at HSIP Cluster

Improves pedestrian safety (up to 5 points)

- +3 High total effectiveness of pedestrian safety countermeasures
- +2 Medium total effectiveness of pedestrian safety countermeasures
- +1 Low total effectiveness of pedestrian safety countermeasures
- 0 Does not implement pedestrian safety countermeasures

If project scores points above, then it is eligible for additional points below:

- +2 Improves pedestrian safety at HSIP Pedestrian Cluster
- +1 Improves pedestrian safety at HSIP Cluster

Improves safety or removes an at-grade railroad crossing (up to 5 points)

- +5 Removes an at-grade railroad crossing
- +3 Significantly improves safety at an at-grade railroad crossing
- +1 Improves safety at an at-grade railroad crossing
- 0 Does not include a railroad crossing

System Preservation Tab

The evaluation criteria below serve as a way to guide investments that implement the following MPO system preservation objectives:

- Improve the condition of on- and off-system bridges
- Improve pavement condition on the MassDOT-monitored roadway system
- Maintain and modernize capital assets throughout the system
- Maintain and modernize capital assets throughout the system (surface condition of sidewalks)
- Prioritize projects that support planned response capability to existing or future extreme conditions (sea level rise, flooding, and other natural and security-related man-made hazards)
- Protect freight network elements, such as port facilities, that are vulnerable to climate-change impacts

Project Background Information

28 Existing Pavement Condition

(Source: MassDOT Roadway Inventory File)

Pavement Roughness (IRI) – International Roughness Index (IRI) rating reflects the calibrated value in inches of roughness per mile. IRI ratings are classified as follows:

- Good – Ranges of 0 - 190
- Fair – Ranges of 191- 320
- Poor – Above 320

29 Equipment Condition

Existing signal equipment condition. (Source: CMP, Massachusetts permitted signal information, municipal signal information, submitted design).

30 Natural Hazard Zones**

- Project lies within a flood zone
- Project lies within a hurricane surge zone
- Project lies within ¼ mile of an emergency support location
- Project lies within an area of liquefiable soils

**Please refer to the All-hazards Planning Application (hyperlink to http://www.ctps.org/map/www/apps/eehmApp/pub_eehm_index.html) for more information on natural hazard zones.

Proponent Provided Information

P3 What are the infrastructure condition needs or issues of the project area?

Please include additional pavement information from municipal pavement management programs.

In addition, qualitative descriptions of existing problems or anticipated needs can be provided. When applicable, this information should be consistent with project need information provided in the MassDOT Project Need Form. (Source: Proponent)

P4 How does this project address the infrastructure condition needs or issues in the project area?

Please include detail regarding the pavement management system employed by the community or agency, and of how this system will maximize the useful life of any pavement repaired or replaced by the project. (Source: Proponent)

P5 What is the primary security need associated with this project and how does it address that need?

Describe the need for the project from a local and a regional perspective. What are the existing security needs/improvements the project is designed to address? How will this design accomplish those needed improvements? Please be as specific as possible. When applicable, this information should be consistent with project need information provided in the MassDOT Highway Division Project Need Form. (Source: Proponent)

Evaluation

System Preservation Evaluation Scoring (29 total points possible):

Improves substandard roadway bridge(s) (up to 3 points)

+3 Condition is structurally deficient and improvements are included in the project

- +1 Condition is functionally obsolete and improvements are included in the project
- +0 Does not improve substandard bridge or does not include a bridge

Improves substandard pavement (up to 6 points)

- +6 IRI rating greater than 320: Poor and pavement improvements are included in the project
- +4 IRI rating between 320 and 191: Fair and pavement improvements are included in the project
- 0 IRI rating less than 190: Good or better

Improves substandard signal equipment condition (up to 6 points)

- +6 Poor condition, improvements are included in the project
- +4 Fair condition, improvements are included in the project
- 0 Does not meet or address criteria

Improves transit asset(s) (up to 3 points)

- +2 Brings transit asset into State of Good Repair
- +1 Meets an identified-need in an Asset Management Plan
- +0 Does not meet or address criteria

Improves substandard sidewalk(s) (up to 3 points)

- +3 Poor condition and sidewalk improvements are included in the project
- +2 Fair condition and sidewalk improvements are included in the project
- +0 Sidewalk condition is good or better

Improves emergency response (up to 2 points)

- +1 Project improves an evacuation route, diversion route, or alternate diversion route
- +1 Project improves an access route to or in proximity to an emergency support location

Improves ability to respond to extreme conditions (up to 6 points)

- +2 Addresses flooding problem and/or sea level rise and enables facility to function in such a condition
- +1 Brings facility up to current seismic design standards
- +1 Addresses critical transportation infrastructure
- +1 Protects freight network elements
- +1 Implements hazard mitigation or climate adaptation plans

Capacity Management/Mobility Tab

The evaluation criteria below serve as a way to guide investments that implement the following MPO capacity management/mobility objectives:

- Improve reliability of transit
- Implement roadway management and operations strategies, constructing improvements to the bicycle and pedestrian network, and supporting community-based transportation
- Create connected network of bicycle and accessible sidewalk facilities (at both regional and neighborhood scale) by expanding existing facilities and closing gaps

- Increase automobile and bicycle parking capacity and usage at transit stations
- Increase the percentage of population and places of employment within one-quarter mile of transit stations and stops
- Increase the percentage of population and employment with access to bicycle facilities
- Improve access to and accessibility of transit and active modes
- Enhance intermodal connections
- Support community-based and private-initiative services and programs to meet last mile, reverse commute and other non-traditional transit/ transportation needs, including those of the elderly and persons with disabilities
- Eliminate bottlenecks on the freight network

Project Background Information

31 *Bicycle and Pedestrian Facilities*

(Source: MassDOT Bicycle Facility Inventory and Roadway Inventory File and MPO bicycle GIS coverage)

Pedestrian Facilities:

- Sidewalks – Indicates if sidewalks are present on one side or on both sides of the roadway.
- Shared Use Path – Facilities with a stabilized firm surface and separated from motor vehicle traffic by an open space or barrier.
- Minimally Improved Path – Facilities with a rough surface and separated from motor vehicle traffic by an open space or barrier.

Bicycle Facilities:

- Cycle Track – Bikeways separated from parallel motor vehicle roadway by a line of parked cars, landscaping, or another form of physical barrier that motor vehicles cannot cross.
- Striped Bicycle Lane – A portion of a roadway (greater than or equal to 4 feet) which has been designated by striping, and pavement markings for preferential or exclusive use by bicyclists.
- Marked Shared Lane – Travel lanes with specific bicycle markings, often referred to as *sharrows*.
- Signed Route – Roadway is designated and signed as a bicycle route.
- Shared Use Path – Facilities with a stabilized firm surface and separated from motor vehicle traffic by an open space or barrier.
- Minimally Improved Path – Facilities with a rough surface and separated from motor vehicle traffic by an open space or barrier.

32 *Transit Vehicles Use of Roadway*

Identifies the fixed route transit vehicles using the roadway

33 *Usage*

- Average Daily Traffic Volumes
- Average Daily Truck Volumes
- Average Weekday Transit Rider Volumes
- AM Peak Hour Pedestrian Volumes
- AM Peak Hour Bicyclist Volumes
- PM Peak Hour Pedestrian Volumes
- PM Peak Hour Bicyclist Volumes

34 *A.M./P.M. Travel Time Index****

Travel Time Index directly compares peak-period travel time conditions with free-flow travel time conditions. Travel time Index indicates how much contingency time should be considered to ensure an on-time arrival during the peak period versus optimum travel times.

Travel time index = average peak-period travel time / free-flow travel time

Information provided is determined by the Boston Region MPO's CMP Arterial Performance Dashboard. If a Project Funding Application Form does not have any CMP data listed, this does not necessarily mean that the roadway or intersection does not experience congestion problems; this simply means that data from the CMP are not available.

35 *A.M./P.M. Speed Index****

Speed index is equal to the average speed divided by the posted speed limit of a Traffic Message Channel (TMC). Speed index indicates congestion more accurately than travel speeds alone because low travel speeds may be a result of low speed limits on certain facilities.

Speed Index = average speed / posted speed limit

Information provided is determined by the Boston Region MPO's CMP Arterial Performance Dashboard. If a Project Funding Application Form does not have any CMP data listed, this does not necessarily mean that the roadway or intersection does not experience congestion problems; this

simply means that data from the CMP are not available.

***Please refer to the CMP Arterial Performance Dashboard (hyperlink to <http://www.ctps.org/map/www/apps/arterialHighwayPerformanceDashboard/index.html>) for data on roadway congestion in the MPO region.

Proponent Provided Information

P6 What is the primary mobility need for this project and how does it address that need?

Describe the need for the project from a local and a regional perspective. What are the existing or anticipated mobility needs the project is designed to address? Please include information on how the project improves level of service and reduces congestion, provides multimodal elements (for example, access to transit stations or parking, access to bicycle or pedestrian connections), enhances freight mobility, and closes gaps in the existing transportation system. For roadway projects, it is MPO and MassDOT policy that auto congestion reductions not occur at the expense of pedestrians, bicyclists, or transit users. Please explain the mobility benefits of the project for all modes. When applicable, this information should be consistent with project need information provided in the MassDOT Project Need Form. (Source: Proponent)

P7 What intelligent transportation systems (ITS) elements does this project include?

Examples of ITS elements include new signal systems or emergency vehicle override applications. (Source: Proponent)

P8 How does the project improve access for pedestrians, bicyclists, and public transportation? How does the project support MassDOT's mode shift goal of tripling the share of walking, biking, and transit travel?

Describe what improvements are in the project for pedestrians, bicyclists, and public transportation, and what level of improvement will be achieved over existing conditions. (Source: Proponent)

Evaluation

Capacity Management/Mobility Evaluation Scoring (29 total points possible):

Reduces transit vehicle delay (up to 4 points)

- +3 5 hours or more of daily transit vehicle delay reduced
- +2 1-5 hours of daily transit vehicle delay reduced
- +1 Less than one hour of daily transit vehicle delay reduced
- +0 Does not reduce transit delay

If project scores points above, then it is eligible for additional points below:

- +1 Improves one or more key bus route(s)

Improves pedestrian network and ADA accessibility (up to 5 points)

- +2 Adds new sidewalk(s) (including shared-use paths)
- +2 Improves ADA accessibility
- +1 Closes a gap in the pedestrian network
- 0 Does not improve pedestrian network

Improves bicycle network (up to 4 points)

- +3 Adds new physically separated bicycle facility (including shared-use paths)
- +2 Adds new buffered bicycle facility
- +1 Adds new standard bicycle facility
- +1 Closes a gap in the bicycle network
- +0 Does not improve bicycle network

Improves intermodal accommodations/connections to transit (up to 6 points)

- +6 Meets or addresses criteria to a high degree
- +4 Meets or addresses criteria to a medium degree
- +2 Meets or addresses criteria to a low degree
- +0 Does not meet or address criteria

Improves truck movement (up to 4 points)

- +3 Meets or addresses criteria to a high degree
- +2 Meets or addresses criteria to a medium degree
- +1 Meets or addresses criteria to a low degree
- +0 Does not meet or address criteria

If project scores points above, then it is eligible for additional points below:

- +1 Addresses MPO-identified bottleneck location

Project reduces congestion (up to 6 points)

- +6 400 hours or more of daily vehicle delay reduced
- +4 100-400 hours of daily vehicle delay reduced
- +2 Less than 100 hours of daily vehicle delay reduced
- 0 Does not meet or address criteria

Clean Air/Clean Communities Tab

The evaluation criteria below serve as a way to guide investments that implement the following MPO clean air/clean communities objectives:

- Reduce GHGs generated in the Boston Region by all transportation modes as outlined in the Global Warming Solutions Act
- Reduce other transportation-related pollutants
- Minimize negative environmental impacts of the transportation system, when possible
- Support land use policies consistent with smart and healthy growth

Project Background Information

36 CO₂ Impact

The quantified or assumed annual tons of carbon dioxide estimated to be reduced by the project. (Source: MPO Database)

37 Located in a Green Community

Project is in an Executive Office of Energy and Environmental Affairs (EOEEA) certified Green Community. (Source: EOEEA)

38 Located in an Area of Critical Environmental Concern

Areas designated as Areas of Critical Environmental Concern by the Massachusetts Secretary of Environmental Affairs. (Source: MassGIS)

39 Located adjacent to (within 200 feet of) a waterway

Hydrographic (water related) features, including surface water (lakes, ponds, reservoirs), flats, rivers, streams, and others from MassGIS. Two hundred feet from the hydrographic feature is the distance protected by the Massachusetts Rivers Protection Act. (Source: MassGIS)

Proponent Provided Information

P9 How does the project relate to community character?

Is the project located in an existing community or neighborhood center or other pedestrian-oriented area? Explain the community context (cultural, historical, other) in which the project will occur and indicate the positive or negative effect this project will have on community character. (Source: Proponent)

P10 What are the environmental impacts of the project?

How will this project improve air quality, improve water quality, or reduce noise levels in the project area and in the region? Air quality improvements can come from reductions in the number or length of vehicle trips or from reductions in vehicle cold

starts. Water quality improvements can result from reductions in runoff from impervious surfaces, water supply protection, and habitat protection. Noise barriers can reduce noise impacts. (Source: Proponent)

Evaluation

Clean Air/Clean Communities Evaluation Scoring (16 total points possible):

Reduces CO₂ (up to 5 points)

- +5 1,000 or more annual tons of CO₂ reduced
- +4 500-999 annual tons of CO₂ reduced
- +3 250-499 annual tons of CO₂ reduced
- +2 100-249 annual tons of CO₂ reduced
- +1 Less than 100 annual tons of CO₂ reduced
- 0 No impact
- 1 Less than 100 annual tons of CO₂ increased
- 2 100-249 annual tons of CO₂ increased
- 3 250-499 annual tons of CO₂ increased
- 4 500-999 annual tons of CO₂ increased
- 5 1,000 or more annual tons of CO₂ increased

Reduces other transportation-related emissions (VOC, NO_x, CO) (up to 5 points)

- +5 2,000 or more total kilograms of VOC, NO_x, CO reduced
- +4 1,000-1999 total kilograms of VOC, NO_x, CO reduced
- +3 500-999 total kilograms of VOC, NO_x, CO reduced
- +2 250-499 total kilograms of VOC, NO_x, CO reduced
- +1 Less than 250 total kilograms of VOC, NO_x, CO reduced

- 0 No impact
- 1 Less than 250 total kilograms of VOC, NO_x, CO increased
- 2 250-499 total kilograms of VOC, NO_x, CO increased
- 3 500-999 total kilograms of VOC, NO_x, CO increased
- 4 1,000-1999 total kilograms of VOC, NO_x, CO increased
- 5 2,000 or more total kilograms of VOC, NO_x, CO increased

Addresses environmental impacts (up to 4 points)

- +1 Addresses water quality
- +1 Addresses cultural resources/open space
- +1 Addresses wetlands/resource areas
- +1 Addresses wildlife preservation/protected habitats
- 0 Does not meet or address criteria

Project is in an Executive Office of Energy and Environmental Affairs (EOEEA)-certified “Green Community” (up to 2 points)

- +2 Project is located in a “Green Community”
- 0 Project is not located in a “Green Community”

Transportation Equity Tab

The evaluation criteria below serve as a way to guide investments that implement the following MPO transportation equity objectives:

- Target investments to areas that benefit a high percentage of low income and minority populations

- Minimize any burdens associated with MPO-funded projects in low income and minority areas
- Break down barriers to participation in MPO-decision making

Proponent Provided Information

P11 Are any other transportation equity issues addressed by this project?

This answer should only be addressed by those projects that serve Title VI/non-discrimination populations. Please be specific. (Source: Proponent)

Evaluation

Transportation Equity Evaluation Scoring (12 total points possible):

Serves Title VI/non-discrimination populations (up to 12 points)

- +2 Serves minority (high concentration) population
- +1 Serves minority (low concentration) population
- +2 Serves low-income (high concentration) population
- +1 Serves low-income (low concentration) population
- +2 Serves limited-English proficiency (high concentration) population
- +1 Serves limited-English proficiency (low concentration) population
- +2 Serves elderly (high concentration) population
- +1 Serves elderly (low concentration) population
- +2 Serves zero vehicle households (high concentration) population

- +1 Serves zero vehicle households (low concentration) population
- +2 Serves persons with disabilities (high concentration) population
- +1 Serves persons with disabilities (low concentration) population
- +0 Does not serve Title VI or non-discrimination populations
- 10 Creates a burden for Title VI/non -discrimination populations

Economic Vitality Tab

The evaluation criteria below serve as a way to guide investments that implement the following MPO economic vitality objectives:

- Prioritize transportation investments that serve targeted development sites
- Prioritize transportation investments that support development consistent with the compact growth strategies of MetroFuture
- Minimize the burden of housing and transportation costs for residents in the region

Proponent Provided Information

P12 How is the project consistent with local land use policies? How does the project advance local efforts to improve design and access?

Explain how this project will support existing or proposed local land use policies. (Source: Proponent)

P13 How does the zoning of the area within ½ mile of this project support transit-oriented development and preserve any new roadway capacity?

Will the project have an impact on adjacent land uses? Please review the land use information if the project is expected to have an impact on land use. Is there a local project currently under development that would provide a better balance between housing and jobs in this corridor? If so, please provide details on the project status. (Source: Proponent)

P14 How is the project consistent with state, regional, and local economic development priorities?

Explain how this project will support economic development in the community or in the project area (Source: Proponent)

Evaluation

Economic Vitality Evaluation Scoring (18 total points possible):

Serves targeted development site (up to 6 points)

- +2 Provides new transit access to or within site
- +1 Improves transit access to or within site
- +1 Provides for bicycle access to or within site
- +1 Provides for pedestrian access to or within site
- +1 Provides for improved road access to or within site
- +0 Does not provide any of the above measures

Provides for development consistent with the compact growth strategies of MetroFuture (up to 5 points)

- +2 Mostly serves an existing area of concentrated development
- +1 Partly serves an existing area of concentrated development
- +1 Supports local zoning or other regulations that are supportive of smart growth development
- +2 Complements other local financial or regulatory support that fosters economic revitalization in a manner consistent with smart growth development principles
- 0 Does not provide for any of the above measures

Provides multimodal access to an activity center (up to 4 points)

- +1 Provides transit access (within a quarter mile) to an activity center
- +1 Provides truck access to an activity center
- +1 Provides bicycle access to an activity center
- +1 Provides pedestrian access to an activity center
- 0 Does not provide multimodal access

Leverages other investments (non-TIP funding) (up to 3 points)

- +3 Meets or addresses criteria to a high degree (>30% of the project cost)
- +2 Meets or addresses criteria to a medium degree (10-30% of the project cost)
- +1 Meets or addresses criteria to a low degree (<10% of the project cost)
- 0 Does not meet or address criteria

Other Tab

Cost per Unit

These two measures of cost per unit are derived by dividing project cost by quantified data in the MPO database. These measures can be used to compare similar types of projects.

40 \$ per User

Cost divided by ADT (ADT for roadway projects or other user estimate)

41 \$ per Lane Mile

Cost divided by proposed total lane miles

Additional Project Background Information

Targeted Development Areas

A targeted development area is located within ½ mile of the project area. Eligible targeted development areas include 43D, 43E, and 40R sites, Regionally Significant Priority Development Areas, Growth District Initiatives, and MBTA transit station areas.

- **43D Priority Development Site:** The Chapter 43D Program offers communities expedited permitting to promote targeted economic and housing development. Sites approved under the program are guaranteed local permitting decisions on priority development sites within 180 days. (Source:

Executive Office of Housing and Economic Development)

- **43E Priority Development Site:** The Chapter 43E Program promotes the expedited permitting of commercial, industrial, residential and mixed-use projects on sites with dual designation as a Priority Development Site and Growth District. Sites approved under the program are guaranteed state permitting decisions on priority development sites within 180 days. (Source: Executive Office of Housing and Economic Development)
- **40R Smart Growth Zoning Overlay District:** The program encourages communities to zone for compact residential and mixed-use development in “smart growth” locations by offering financial incentives and control over design. (Source: Department of Housing and Community Development)
- **Regionally Significant Priority Development Area:** A site or district that has been identified by the local municipality as an eligible and desirable site for housing and/or economic development, and which has been identified as a “regionally significant” site by MAPC through a subregional screening process that considers development potential, accessibility, environmental impacts, equity, and other factors.
- **Growth District Initiative:** The EOHEd initiative focuses on expediting commercial and residential development at appropriate locations for significant new growth. (Source:

Executive Office of Housing and Economic Development)

- **Eligible MBTA Transit Station Area:** Areas within ½ mile of existing or proposed subway, trolley, commuter rail, or ferry service, with the exception of “Undeveloped” station areas as defined by MAPC (www.mapc.org/TOD); or areas within ¼ mile of an MBTA “Key Bus Route.”

Municipality Provides Financial or Regulatory Support for Targeted Development

The proposed project will improve access to or within a commercial district served by a Main Street organization, local business association, Business Improvement District, or comparable, geographically targeted organization (i.e., not a city/town-wide chamber of commerce).

Local Efforts to improve Design and Access:

- Form-based codes
- Official design guidelines for new development/redevelopment
- Official local plan for pedestrian/bike/handicap access, the recommendations of which are reflected in the proposal



APPENDIX

Greenhouse Gas Monitoring and Evaluation

BACKGROUND

The Global Warming Solutions Act of 2008 (GWSA) requires statewide reductions in greenhouse gas (GHG) emissions of 25 percent below 1990 levels by the year 2020, and 80 percent below 1990 levels by 2050. As part of the GWSA, the Executive Office of Energy and Environmental Affairs developed the Massachusetts Clean Energy and Climate Plan (CECP), which outlines programs to attain the 25 percent reduction by 2020—including a 7.6 percent reduction to be attributed to the transportation sector.

The Commonwealth's 13 metropolitan planning organizations (MPOs) are integrally involved in helping to achieve greenhouse gas reductions mandated under the GWSA. The MPOs work closely with the Massachusetts Department of Transportation (MassDOT) and other involved agencies to develop common transportation goals, policies, and projects that would help to reduce GHG emission levels statewide, and meet the specific requirements of the GWSA regulation – *Global Warming Solutions Act Requirements for the Transportation Sector and the Massachusetts Department of Transportation (310 CMR 60.05)*. The purpose of this regulation is to assist the Commonwealth in achieving its adopted GHG emission-reduction goals by requiring:

- MassDOT to demonstrate that its GHG reduction commitments and targets are being achieved
- Each MPO to evaluate and track the GHG emissions and impacts of both its LRTP and TIP
- Each MPO, in consultation with MassDOT, to develop and utilize procedures to prioritize and select projects in its LRTP and TIP based on factors that include GHG emissions and impacts

The Commonwealth's MPOs are meeting the requirements of this regulation through the transportation goals and policies contained in their 2016 LRTPs, the major projects planned in the LRTPs, and the mix of new transportation projects that are programmed and implemented through the TIP.

The GHG tracking and evaluation processes enable the MPOs and MassDOT to identify the anticipated GHG impacts of the planned and programmed projects, and to use GHG impacts as criteria to prioritize transportation projects. This approach is consistent with the greenhouse-gas reduction policies of promoting healthy transportation modes through prioritizing and programming an appropriate balance

of roadway, transit, bicycle and pedestrian investments; as well as supporting smart-growth development patterns by creating a balanced multi-modal transportation system. All of the Commonwealth's MPOs and MassDOT are working toward reducing greenhouse gases with "sustainable" transportation plans, actions, and strategies that include, but are not limited to:

- Reducing emissions from construction and operations
- Using more fuel-efficient fleets
- Implementing and expanding travel demand management programs
- Encouraging eco-driving
- Providing mitigation for development projects
- Improving pedestrian, bicycle, and public transit infrastructure and operations (healthy transportation)
- Investing in higher-density, mixed-use, and transit-oriented developments (smart growth)

REGIONAL TRACKING AND EVALUATION IN LONG-RANGE TRANSPORTATION PLANS

MassDOT coordinated with the Boston Region MPO and regional planning agencies to implement GHG tracking and evaluation in developing each MPO's 2012 LRTPs, which were adopted in September 2011. This collaboration continued for the MPOs' 2016 RTPs, 2016–19 TIPs, and 2017–21 TIPs. This information is now being updated and included in the

Boston Region MPO's Amendment One to the 2016 LRTP, *Charting Progress to 2040*. Working together, MassDOT and the MPOs have attained the following milestones:

- As a supplement to the 2016 LRTPs and the Boston Region MPO Amendment One to *Charting Progress to 2040*, the MPOs have completed modeling and long-range statewide projections for GHG emissions resulting from the transportation sector. Using the Boston Region MPO's travel demand model and the statewide travel demand model for the remainder of the state, the MPOs have projected GHG emissions for 2020 no-build (base) and build (action) conditions, and for 2040 no-build (base) and build (action) conditions.
- All of the MPOs have addressed GHG emissions-reduction projections in their LRTPs, discussed climate change, and included a statement of MPO support to reduce GHG emissions as a regional goal.

TRACKING AND EVALUATING IN THE TRANSPORTATION IMPROVEMENT PROGRAM

In addition to monitoring the GHG impacts of capacity-adding projects in the LRTP, it also is important to monitor and evaluate the GHG impacts of all transportation projects that are programmed in the TIP. The TIP includes both the larger, capacity-adding projects from the LRTP and smaller projects, which

are not included in the LRTP that may affect GHG emissions. The principal objective of this tracking is to enable the MPOs to evaluate the expected GHG impacts of different projects and to use this information as criteria to prioritize and program projects in future TIPs.

In order to monitor and evaluate the GHG impacts of TIP projects, MassDOT and the MPOs have developed approaches for identifying anticipated GHG emission impacts of different project types. Since carbon dioxide (CO₂) is the largest component of GHG emissions overall, CO₂ has been used to measure the GHG impacts of transportation projects in the TIP and LRTP. All TIP projects have been sorted into two main categories for analysis: 1) projects with quantified impacts, and 2) projects with assumed impacts. Projects with quantified impacts consist of capacity-adding projects from the LRTP and projects from the TIP that underwent a Congestion Mitigation and Air Quality Improvement (CMAQ) Program spreadsheet analysis. Projects with assumed impacts include ones that would be expected to produce a minor decrease or increase in emissions, and those that would be assumed to have no CO₂ impact.

PROJECTS WITH QUANTIFIED IMPACTS

Travel Demand Model Set

This includes capacity-adding projects in the LRTP that were analyzed using the travel demand model set. No independent TIP calculations were done for these projects.

Reduction or Increase in the Number of Tons of CO₂ Associated with the Project

The Office of Transportation Planning at MassDOT provided spreadsheets that are used to determine CMAQ Improvement Program eligibility. Typically, the data and analysis required by MPO staff to conduct these calculations is derived from functional design reports submitted for projects at the 25-percent design phase. Estimated projections of CO₂ for each project in this category are shown in Tables C-1 and C-2. A note of “To be determined” is shown for those projects for which a functional design report was not yet available. Analyses are done for the following types of projects:

Traffic Operational Improvement

An intersection reconstruction or signalization project that typically reduces delays and therefore idling

- Step 1: Calculate the AM-peak-hour total intersection delay (secs)
- Step 2: Calculate the PM-peak-hour total intersection delay (secs)
- Step 3: Select the peak hour with the longer intersection delay
- Step 4: Calculate the selected peak-hour total intersection delay with improvements
- Step 5: Calculate the vehicle delay in hours per day (assumes peak-hour delay is 10 percent of daily delay)
- Step 6: Input the MOBILE 6/MOVES emission factors for arterial idling speed

- Step 7: Calculate the net emissions change in kilograms per day
- Step 8: Calculate the net emissions change in kilograms per year (seasonally adjusted)
- Step 9: Calculate the cost-effectiveness (first year cost per kilogram of emissions reduced)

Pedestrian and Bicycle Infrastructure

A shared-use path that would enable increased walking and biking and reduces automobile trips

- Step 1: Calculate the estimated number of one-way trips based on the percentage of workers residing in the communities of the facilities service area and the communities' bicycle and pedestrian commuter mode share
- Step 2: Calculate the reduction in vehicle-miles traveled per day and per year (assumes each trip is the length of the facility; assumes the facility operates 200 days per year)
- Step 3: Input the MOBILE 6/MOVES emission factors for the average commuter travel speed (assumes 35 mph)
- Step 4: Calculate the net emissions change in kilograms per year (seasonally adjusted)
- Step 5: Calculate the cost-effectiveness (first year cost per kilogram of emissions reduced)

Calculations may be performed on the following project types; however, there are no projects of these types in the TIP.

New and Additional Transit Service

A new bus or shuttle service that reduces automobile trips

Park-and-Ride Lot

A facility that reduces automobile trips by encouraging high-occupancy vehicle (HOV) travel through carpooling or transit

Bus Replacement

A new bus that replaces an old bus with newer, cleaner technology

PROJECTS WITH ASSUMED IMPACTS

Assumed Nominal Decrease or Increase in CO₂ Emissions

Projects that could produce a minor decrease or increase in emissions (but which cannot be calculated with any precision)

Examples include roadway repaving or reconstruction projects that add a new sidewalk or new bike lanes. Such projects would enable increased travel by walking or bicycling, but there may not be sufficient data or analysis to support any projections of GHG impacts. These projects are categorized as an assumed nominal increase or decrease from pedestrian and/or bicycle infrastructure, intelligent transportation systems (ITS) and/or traffic operational

improvements, transit infrastructure, and freight infrastructure.

No CO₂ Impact

Projects that do not change the capacity or use of a facility—for example, a resurfacing project that restores a roadway to its previous condition, and a bridge rehabilitation/replacement that restores the bridge to its previous condition—and which would be assumed to have no CO₂ impact.

More details on these projects, including a description of each project’s anticipated CO₂ impacts, are discussed in Chapter 3. The following tables display the GHG impact analyses of projects funded in the Highway Program (Table C-1) and Transit Program (Table C-2). Table C-3 summarizes the GHG impact analysis of highway projects completed from FFY 2015 and FFY 2016.

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
606223	ACTON- CONCORD- BRUCE FREEMAN RAIL TRAIL CONSTRUCTION (PHASE II-B)	Quantified		TBD
607748	ACTON- INTERSECTION & SIGNAL IMPROVEMENTS ON SR 2 & SR 111 (MASSACHUSETTS AVENUE) AT PIPER ROAD & TAYLOR ROAD	Quantified		TBD
606381	ARLINGTON- BELMONT- HIGHWAY LIGHTING REPAIR & MAINTENANCE ON ROUTE 2	Qualitative		No assumed impact/negligible impact on emissions
604123	ASHLAND- RECONSTRUCTION ON ROUTE 126 (POND STREET), FROM THE FRAMINGHAM T.L. TO THE HOLLISTON T.L	Quantified	140,616	Quantified Decrease in Emissions from Complete Streets Project
29492	BEDFORD- BILLERICA- MIDDLESEX TURNPIKE IMPROVEMENTS, FROM CROSBY DRIVE NORTH TO MANNING ROAD, INCLUDES RECONSTRUCTION OF B-04-006 (PHASE III)	Quantified		RTP project included in the statewide model
608347	BEVERLY- INTERSECTION IMPROVEMENTS @ 3 LOCATIONS: CABOT STREET (ROUTE 1A/97) @ DODGE STREET (ROUTE 1A), COUNTY WAY, LONGMEADOW ROAD & SCOTT STREET, MCKAY STREET @ BALCH STREET & VETERANS MEMORIAL BRIDGE (ROUTE 1A) AT RANTOUL, CABOT, WATER & FRONT STREETS	Quantified	582,422	Quantified Decrease in Emissions from Traffic Operational Improvement
608614	BOSTON - SUPERSTRUCTURE REPLACEMENT, B-16-179, AUSTIN STREET OVER I-93 RAMPS, MBTA COMMUTER RAIL AND ORANGE LINE	Qualitative		No assumed impact/negligible impact on emissions
604173	BOSTON- BRIDGE REHABILITATION, B-16-016, NORTH WASHINGTON STREET OVER THE BOSTON INNER HARBOR	Qualitative		Qualitative Decrease in Emissions
607888	BOSTON- BROOKLINE- MULTI-USE PATH CONSTRUCTION ON NEW FENWAY	Quantified	96,163	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
605733	BOSTON- HIGHWAY LIGHTING SYSTEM REPLACEMENT ON I-93, FROM SOUTHAMPTON STREET TO NEPONSET AVENUE	Qualitative		No assumed impact/negligible impact on emissions
605733	BOSTON- HIGHWAY LIGHTING SYSTEM REPLACEMENT ON I-93, FROM SOUTHAMPTON STREET TO NEPONSET AVENUE	Qualitative		No assumed impact/negligible impact on emissions
606453	BOSTON- IMPROVEMENTS ON BOYLSTON STREET, FROM INTERSECTION OF BROOKLINE AVENUE & PARK DRIVE TO IPSWICH STREET	Quantified	1,780,834	Quantified Decrease in Emissions from Complete Streets Project
607759	BOSTON- INTERSECTION & SIGNAL IMPROVEMENTS AT THE VFW PARKWAY & SPRING STREET	Quantified		TBD
604761	BOSTON- MULTI-USE TRAIL CONSTRUCTION (SOUTH BAY HARBOR), FROM RUGGLES STATION TO FORT POINT CHANNEL	Quantified	767,491	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
608234	BOSTON- RANDOLPH- BRIDGE PRESERVATION OF 3 BRIDGES: B-16-165, R-01-005 & R-01-007	Qualitative		No assumed impact/negligible impact on emissions
605789	BOSTON- RECONSTRUCTION OF MELNEA CASS BOULEVARD	Quantified		TBD
606226	BOSTON- RECONSTRUCTION OF RUTHERFORD AVENUE, FROM CITY SQUARE TO SULLIVAN SQUARE	Quantified		RTP project included in the statewide model
606134	BOSTON- TRAFFIC SIGNAL IMPROVEMENTS ON BLUE HILL AVENUE AND WARREN STREET	Quantified		TBD

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
608009	BOXBOROUGH- BRIDGE REPLACEMENT, B-18-002, ROUTE 111 OVER I-495	Qualitative		No assumed impact/negligible impact on emissions
608608	BRAINTREE - HIGHWAY LIGHTING IMPROVEMENTS AT I-93/ ROUTE 3 INTERCHANGE	Qualitative		No assumed impact/negligible impact on emissions
605110	BROOKLINE- INTERSECTION & SIGNAL IMPROVEMENTS @ ROUTE 9 & VILLAGE SQUARE (GATEWAY EAST)	Quantified	66,226	Quantified Decrease in Emissions from Complete Streets Project
606316	BROOKLINE- PEDESTRIAN BRIDGE REHABILITATION, B-27-016, OVER MBTA OFF CARLTON STREET	Qualitative		Qualitative Decrease in Emissions
608149	BURLINGTON- BRIDGE REPLACEMENT, B-29-010, I-95/ST 128 (NB) & I-95/ST128 (SB) OVER ROUTE 3A (CAMBRIDGE STREET)	Qualitative		No assumed impact/negligible impact on emissions
608482	CAMBRIDGE- SOMERVILLE- RESURFACING AND RELATED WORK ON ROUTE 28	Qualitative		No assumed impact/negligible impact on emissions
608484	CANTON- MILTON- RESURFACING AND RELATED WORK ON ROUTE 138	Qualitative		No assumed impact/negligible impact on emissions
608599	CANTON-FOXBOROUGH-NORWOOD-WALPOLE- STORMWATER IMPROVEMENTS ALONG ROUTE 1, ROUTE 1A, AND INTERSTATE 95	Qualitative		No assumed impact/negligible impact on emissions
608611	CANTON-MILTON-RANDOLPH, REPLACEMENT AND REHABILITATION OF THE HIGHWAY LIGHTING SYSTEM AT THE ROUTE 24/ROUTE1/I-93 INTERCHANGE.	Qualitative		No assumed impact/negligible impact on emissions
608206	CHELSEA TO DANVERS- GUIDE AND TRAFFIC SIGN REPLACEMENT ON A SECTION OF US ROUTE 1	Qualitative		No assumed impact/negligible impact on emissions
BN1800	Community Transportation Program	Quantified		
608220	CONCORD- RESURFACING & RELATED WORK ON ROUTE 2	Qualitative		No assumed impact/negligible impact on emissions
608478	CONCORD- RESURFACING AND RELATED WORK ON ROUTE 2	Qualitative		No assumed impact/negligible impact on emissions
607954	DANVERS- BRIDGE REPLACEMENT, D-03-018, ST 128 OVER WATERS RIVER	Qualitative		No assumed impact/negligible impact on emissions
607901	DEDHAM- PEDESTRIAN IMPROVEMENTS ALONG ELM STREET & RUSTCRAFT ROAD CORRIDORS	Quantified	13,608	Quantified Decrease in Emissions from Complete Streets Project
605608	DEDHAM- RESURFACING & RELATED WORK ON ROUTE 109	Qualitative		No assumed impact/negligible impact on emissions
608596	ESSEX- BRIDGE PRESERVATION, E-11-001, ROUTE 133\MAIN STREET OVER ESSEX RIVER	Qualitative		No assumed impact/negligible impact on emissions
607998	EVERETT- IMPROVEMENTS AT MADELAINE ENGLISH (SRTS)	Qualitative		Qualitative Decrease in Emissions
607652	EVERETT- RECONSTRUCTION OF FERRY STREET, SOUTH FERRY STREET AND A PORTION OF ELM STREET	Quantified	415,498	Quantified Decrease in Emissions from Complete Streets Project
608210	FOXBOROUGH- PLAINVILLE- WRENTHAM- FRANKLIN- INTERSTATE MAINTENANCE & RELATED WORK ON I-495	Qualitative		No assumed impact/negligible impact on emissions

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
608480	FOXBOROUGH- WALPOLE- RESURFACING AND RELATED WORK ON ROUTE 1	Qualitative		No assumed impact/negligible impact on emissions
607732	FRAMINGHAM- NATICK- COCHITUATE RAIL TRAIL CONSTRUCTION INCLUDING PEDESTRIAN BRIDGE, N-03-014, OVER ROUTE 9 & F-07-033=N-03-029 OVER ROUTE 30	Quantified	78,019	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
608228	FRAMINGHAM- RECONSTRUCTION OF UNION AVENUE, FROM PROCTOR STREET TO MAIN STREET	Quantified	-196,862	Quantified Increase in Emissions
BN1570	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	Quantified		RTP project included in the statewide model
606553	HANOVER- NORWELL- SUPERSTRUCTURE REPLACEMENT, H-06-010, ST 3 OVER ST 123 (WEBSTER STREET) & N-24-003, ST 3 OVER ST 123 (HIGH STREET)	Qualitative		Qualitative Decrease in Emissions
600518	HINGHAM- INTERSECTION IMPROVEMENTS AT DERBY STREET, WHITING STREET (ROUTE 53) AND GARDNER STREET	Quantified	-113,400	Quantified Increase in Emissions
607309	HINGHAM- RECONSTRUCTION & RELATED WORK ON DERBY STREET, FROM POND PARK ROAD TO CUSHING STREET	Quantified	351,994	Quantified Decrease in Emissions from Complete Streets Project
606501	HOLBROOK- RECONSTRUCTION OF UNION STREET (ROUTE 139), FROM LINFIELD STREET TO CENTRE STREET/WATER STREET	Quantified	4,536	Quantified Decrease in Emissions from Complete Streets Project
607428	HOPEDALE- MILFORD- RESURFACING & INTERSECTION IMPROVEMENTS ON ROUTE 16 (MAIN STREET), FROM WATER STREET WEST TO APPROXIMATELY 120 FEET WEST OF THE MILFORD/HOPEDALE T.L AND THE INTERSECTION OF ROUTE 140.	Quantified	186,883	Quantified Decrease in Emissions from Complete Streets Project
606043	HOPKINTON- SIGNAL & INTERSECTION IMPROVEMENTS ON ROUTE 135	Quantified	1,194,782	Quantified Decrease in Emissions from Complete Streets Project
606632	HOPKINTON- WESTBOROUGH- BRIDGE REPLACEMENT, H-23-006=W-24-016, FRUIT STREET OVER CSX & SUDBURY RIVER	Qualitative		No assumed impact/negligible impact on emissions
607977	HOPKINTON- WESTBOROUGH- RECONSTRUCTION OF I-90/I-495 INTERCHANGE	Quantified		RTP project included in the statewide model
608379	LEXINGTON- BELMONT- ARLINGTON- CAMBRIDGE- PAVEMENT PRESERVATION ON ROUTE 2	Qualitative		No assumed impact/negligible impact on emissions
602077	LYNN- RECONSTRUCTION ON ROUTE 129 (LYNNFIELD STREET), FROM GREAT WOODS ROAD TO WYOMA SQUARE	Quantified	15,422	Quantified Decrease in Emissions from Complete Streets Project
604952	LYNN- SAUGUS- BRIDGE REPLACEMENT, L-18-016=S-05-008, ROUTE 107 OVER THE SAUGUS RIVER (AKA - BELDEN G. BLY BRIDGE)	Qualitative		Qualitative Decrease in Emissions
607477	LYNNFIELD- PEABODY- RESURFACING & RELATED WORK ON ROUTE 1	Qualitative		No assumed impact/negligible impact on emissions
604810	MARLBOROUGH- RECONSTRUCTION OF ROUTE 85 (MAPLE STREET)	Quantified	589,680	Quantified Decrease in Emissions from Complete Streets Project
608467	MARLBOROUGH- SUDBURY- RESURFACING AND RELATED WORK ON ROUTE 20	Qualitative		No assumed impact/negligible impact on emissions

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
608217	MARLBOROUGH- SUDBURY- STORMWATER IMPROVEMENTS ALONG ROUTE 20	Qualitative		No assumed impact/negligible impact on emissions
604655	MARSHFIELD- BRIDGE REPLACEMENT, M-07-007, BEACH STREET OVER THE CUT RIVER	Qualitative		Qualitative Decrease in Emissions
608069	MARSHFIELD- PEMBROKE- NORWELL- HANOVER- ROCKLAND- HINGHAM- RESURFACING & RELATED WORK ON ROUTE 3	Qualitative		No assumed impact/negligible impact on emissions
608637	MAYNARD - BRIDGE REPLACEMENT, M-10-006, FLORIDA ROAD OVER ASSABET RIVER	Qualitative		No assumed impact/negligible impact on emissions
603917	MEDFORD- STONEHAM- WOBURN- READING- HIGHWAY LIGHTING REHABILITATION ON I-93 (PHASE II)	Qualitative		No assumed impact/negligible impact on emissions
608522	MIDDLETON- BRIDGE REPLACEMENT- M-20-003, RT 62/MAPLE STREET OVER Ipswich RIVER	Qualitative		No assumed impact/negligible impact on emissions
607763	MILTON- INTERSECTION & SIGNAL IMPROVEMENTS AT 2 LOCATIONS: SR 138 (BLUE HILL AVENUE) AT ATHERTON STREET & BRADLEE ROAD AND SR 138 (BLUE HILL AVENUE) AT MILTON STREET & DOLLAR LANE	Quantified		TBD
607754	MILTON- INTERSECTION & SIGNAL IMPROVEMENTS AT GRANITE AVENUE & SQUANTUM STREET	Quantified		TBD
605034	NATICK- RECONSTRUCTION OF ROUTE 27 (NORTH MAIN STREET), FROM NORTH AVENUE TO THE WAYLAND T.L.	Quantified	177,811	Quantified Decrease in Emissions from Complete Streets Project
606635	NEEDHAM- NEWTON- RECONSTRUCTION OF HIGHLAND AVENUE, NEEDHAM STREET & CHARLES RIVER BRIDGE, N-04-002, FROM WEBSTER STREET (NEEDHAM) TO ROUTE 9 (NEWTON)	Quantified	729,389	Quantified Decrease in Emissions from Complete Streets Project
603711	NEEDHAM- WELLESLEY- REHAB/REPLACEMENT OF 6 BRIDGES ON I-95/ROUTE 128: N-04-020, N-04-021, N-04-022, N-04-026, N-04-027, N-04-037 & W-13-023 (ADD-A-LANE - CONTRACT V)	Quantified		RTP project included in the statewide model
608609	NEWTON - WESTWOOD, BRIDGE NO. N-12-0056 AND W-31-006: CLEA AND PAIT STRUCTURAL STEEL	Qualitative		No assumed impact/negligible impact on emissions
607915	NEWTON- WELLESLEY- WESTON- BRIDGE MAINTENANCE OF N-12-063, N-12-054, N-12-055 & N-12-056 ON I-95/ROUTE 128	Qualitative		No assumed impact/negligible impact on emissions
608610	NEWTON, BRIDGE NUMBER N-12-055: CLEAN AND PAINT STRUCTURAL STEEL	Qualitative		No assumed impact/negligible impact on emissions
608052	NORWOOD- INTERSECTION & SIGNAL IMPROVEMENTS AT US 1 (PROVIDENCE HIGHWAY) & MORSE STREET	Quantified		TBD
605857	NORWOOD- INTERSECTION IMPROVEMENTS @ ROUTE 1 & UNIVERSITY AVENUE/EVERETT STREE	Quantified	1,003,363	Quantified Decrease in Emissions from Traffic Operational Improvement
608468	PEABODY- DANVERS- RESURFACING AND RELATED WORK ON ROUTE 1	Qualitative		No assumed impact/negligible impact on emissions
608208	QUINCY- MILTON- BOSTON- INTERSTATE MAINTENANCE & RELATED WORK ON I-93	Qualitative		No assumed impact/negligible impact on emissions

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
608208	QUINCY- MILTON- BOSTON- INTERSTATE MAINTENANCE & RELATED WORK ON I-93	Qualitative		No assumed impact/negligible impact on emissions
607133	QUINCY- SUPERSTRUCTURE REPLACEMENT, Q-01-039, ROBERTSON STREET OVER I-93/US 1/SR 3	Qualitative		No assumed impact/negligible impact on emissions
607481	RANDOLPH- QUINCY- BRAINTREE- INTERSTATE MAINTENANCE & RELATED WORK ON I-93 (SB)	Qualitative		No assumed impact/negligible impact on emissions
608205	READING TO LYNNFIELD- GUIDE AND TRAFFIC SIGN REPLACEMENT ON A SECTION OF I-95 (SR 128)	Qualitative		No assumed impact/negligible impact on emissions
608219	READING- WAKEFIELD- INTERSTATE MAINTENANCE AND RELATED WORK ON I-95	Qualitative		No assumed impact/negligible impact on emissions
607999	REVERE- IMPROVEMENTS AT GARFIELD ELEMENTARY & MIDDLE SCHOOL (SRTS)	Qualitative		Qualitative Decrease in Emissions
608521	SALEM - STRUCTURAL STEEL REPAIRS, BRIDGE NO. S-01-018	Qualitative		No assumed impact/negligible impact on emissions
608352	SALEM- CANAL STREET RAIL TRAIL CONSTRUCTION (PHASE 2)	Quantified	9,979	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
608008	SAUGUS - RESURFACING AND RELATED WORK ON ROUTE 1	Qualitative		No assumed impact/negligible impact on emissions
608079	SHARON- BRIDGE REPLACEMENT, S-09-003 (40N), MASKWONICUT STREET OVER AMTRAK/MBTA	Qualitative		Qualitative Decrease in Emissions
604989	SOUTHBOROUGH- RECONSTRUCTION OF MAIN STREET (ROUTE 30), FROM SEARS ROAD TO PARK STREET	Quantified	213,192	Quantified Decrease in Emissions from Complete Streets Project
607488	SOUTHBOROUGH- RESURFACING & RELATED WORK ON ROUTE 9, FROM THE FRAMINGHAM T.L TO WHITE BAGLEY ROAD	Qualitative		No assumed impact/negligible impact on emissions
608476	SOUTHBOROUGH- RESURFACING AND RELATED WORK ON ROUTE 30	Qualitative		No assumed impact/negligible impact on emissions
608613	STONEHAM - BRIDGE REPLACEMENT, S-27-008, MARBLE STREET OVER I-93	Qualitative		No assumed impact/negligible impact on emissions
602165	STONEHAM- SIGNAL & INTERSECTION IMPROVEMENTS AT ROUTE 28/NORTH STREET	Quantified	139,709	Quantified Decrease in Emissions from Traffic Operational Improvement
605342	STOW- BRIDGE REPLACEMENT, S-29-001, (ST 62) GLEASONDALE ROAD OVER THE ASSABET RIVER	Qualitative		No assumed impact/negligible impact on emissions
608255	STOW- BRIDGE REPLACEMENT, S-29-011, BOX MILL ROAD OVER ELIZABETH BROOK	Qualitative		No assumed impact/negligible impact on emissions
607761	Swampscott- INTERSECTION & SIGNAL IMPROVEMENTS AT SR 1A (PARADISE ROAD) AT Swampscott MALL	Quantified		TBD
607507	WAKEFIELD- BRIDGE DECK REPLACEMENT, W-01-021 (2MF), HOPKINS STREET OVER I-95/ST 128	Qualitative		Qualitative Decrease in Emissions

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
607329	WAKEFIELD- LYNNFIELD- RAIL TRAIL EXTENSION, FROM THE GALVIN MIDDLE SCHOOL TO LYNNFIELD/PEABODY T.L.	Quantified		TBD

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
602261	WALPOLE- RECONSTRUCTION ON ROUTE 1A (MAIN STREET), FROM THE NORWOOD T.L. TO ROUTE 27, INCLUDES W-03-024 OVER THE NEPONSET RIVER	Quantified	215,006	Quantified Decrease in Emissions from Complete Streets Project
607533	WALTHAM- BRIDGE REPLACEMENT, W-04-006, WOERD AVENUE OVER CHARLES RIVER	Qualitative		No assumed impact/negligible impact on emissions
608004	WATERTOWN- IMPROVEMENTS AT HOSMER ELEMENTARY SCHOOL (SRTS)	Qualitative		Qualitative Decrease in Emissions
601630	WEYMOUTH- ABINGTON- RECONSTRUCTION & WIDENING ON ROUTE 18 (MAIN STREET) FROM HIGHLAND PLACE TO ROUTE 139 (4.0 MILES) INCLUDES REPLACING W-32-013, ROUTE 18 OVER THE OLD COLONY RAILROAD (MBTA)	Quantified		RTP project included in the statewide model
608003	WEYMOUTH- IMPROVEMENTS AT PINGREE ELEMENTARY SCHOOL (SRTS)	Qualitative		Qualitative Decrease in Emissions
608483	WEYMOUTH- RESURFACING AND RELATED WORK ON ROUTE 3A	Qualitative		No assumed impact/negligible impact on emissions
608214	WINCHESTER- STORMWATER IMPROVEMENTS ALONG ROUTE 3	Qualitative		No assumed impact/negligible impact on emissions
608097	WOBURN- BRIDGE REPLACEMENT & RELATED WORK, W-43-028, WASHINGTON STREET OVER I-95	Qualitative		No assumed impact/negligible impact on emissions
604996	WOBURN- BRIDGE REPLACEMENT, W-43-017, NEW BOSTON STREET OVER MBTA	Quantified		RTP project included in the statewide model
604935	WOBURN- RECONSTRUCTION OF MONTVALE AVENUE, FROM I-93 INTERCHANGE TO CENTRAL STREET (APPROX. 1,850 FT)	Quantified	98,885	Quantified Decrease in Emissions from Complete Streets Project

TABLE C-2: Greenhouse Gas Regional Transit Project Tracking

Regional Transit Authority	Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
CATA	ACQUIRE - MISC SUPPORT EQUIPMENT	Qualitative		No assumed impact/negligible impact on emissions
CATA	ACQUIRE - SHOP EQ/SOFTWARE MAINT	Qualitative		No assumed impact/negligible impact on emissions
CATA	BUY REPLACEMENT 30-FT BUS (3)	Quantified		TBD
CATA	BUY REPLACEMENT TROLLEY BUS (2)	Quantified		TBD
CATA	CONSTRUCT - BUS SHELTER-CATA HUB/COA	Qualitative		No assumed impact/negligible impact on emissions
CATA	PREVENTIVE MAINTENANCE	Qualitative		No assumed impact/negligible impact on emissions
CATA	REHAB- SHELTERS Railroad, P&R, Emerson Ave	Qualitative		Quantified Decrease in Emissions from Park and Ride Lot
CATA	REHAB/RENOVATE - BUS PASSENGER SHELTERS	Qualitative		No assumed impact/negligible impact on emissions
MBTA	Bridge & Tunnel Program	Qualitative		No assumed impact/negligible impact on emissions
MBTA	GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	Quantified		Quantified Decrease in Emissions from New/Additional Transit Service
MBTA	PREVENTIVE MAINTENANCE	Qualitative		No assumed impact/negligible impact on emissions
MBTA	Revenue Vehicles Program	Quantified		TBD
MBTA	Systems Upgrades	Quantified		TBD
MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES	Qualitative		No assumed impact/negligible impact on emissions
MWRTA	CONSTRUCT MISC ELEC/POWER EQUIP	Qualitative		No assumed impact/negligible impact on emissions
MWRTA	CONSTRUCTION OF BUS STATIONS/TERMINALS	Quantified		TBD
MWRTA	Mobility Management	Qualitative		No assumed impact/negligible impact on emissions
MWRTA	NON FIXED ROUTE ADA PARA SERV	Quantified		TBD
MWRTA	TERMINAL, INTERMODAL (TRANSIT)	Quantified		TBD

TABLE C-3: Greenhouse Gas Regional Highway "Completed" Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description	FFY of Contract Award
606284	Boston- Improvements to Commonwealth Avenue, from Amory Street to Alcorn Street	Quantified	162,389	Quantified Decrease in Emissions from Complete Streets Project	2015
605657	Medway- Reconstruction on Route 109, from Holliston Street to 100 Feet West of Highland Street	Quantified	707,616	Quantified Decrease in Emissions from Complete Streets Project	2015
605146	Salem- Reconstruction on Canal Street, from Washington Street & Mill Street to Loring Avenue & Jefferson Avenue	Quantified	66,226	Quantified Decrease in Emissions from Complete Streets Project	2015
604531	Acton- Assabet River Rail Trail	Quantified	61,690	from Bicycle and Pedestrian Infrastructure	2015
602000	Weston- Intersection & Signal Improvements at Route 30 (South Ave) & Wellesley Street	Quantified	214,099	Quantified Decrease in Emissions from Traffic Operational Improvement	2015
607209	Somerville- Cambridge- Reconstruction of Beacon Street, from Oxford Street to Cambridge C.L.	Quantified	684,057	Quantified Decrease in Emissions from Complete Streets Project	2015
601579	Wayland- Signal & Intersection Improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)	Quantified	205,105	Quantified Decrease in Emissions from Traffic Operational Improvement	2016

D APPENDIX

FFY 2016 Highway Projects Status

This appendix lists information about the status of roadway projects in the federal fiscal year 2016 element of the FFYs 2016–20 TIP.

TABLE D-1
Advanced construction projects

Project Number	Project Description	District	Funding Source(s)
603711	Needham- Wellesley – Rehab/Replacement of 6 Bridges on I-95/Route 128: N-04-020, N-04-021, N-04-022, N-04-026, N-04-027, N-04-037 & W-13-023 (Add-A-Lane – Contract V)	6	BR-AC

TABLE D-2
Projects advertised in FFY 2016

Project Number	Project Description	District	Funding Source(s)
603917	Medford- Stoneham- Woburn- Reading – Highway Lighting Rehabilitation on I-93 (Phase III)	4	STP
601579	Wayland – Signal & Intersection Improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)	3	CMAQ
606176	Franklin- Wrentham- Plainville- Foxborough- Mansfield – Interstate Maintenance & Related Work on I-495 (NB & SB)	5	NHPP

TABLE D-3
Projects expected to be advertised in FFY 2016

Project Number	Project Description	District	Funding Source(s)
29492	Bedford- Billerica- Middlesex Turnpike Improvements, from Crosby Drive North to Manning Road, Includes Reconstruction	4	STP
608000	Bedford – Improvements at John Glenn Middle (SRTS)	4	TAP
600867	Boston – Bridge Rehabilitation, B-16-237, Massachusetts Avenue (Route 2A) over Commonwealth Avenue	6	NHPP
605733	Boston – Highway Lighting System Replacement on I-93, from Southampton Street to Neponset Avenue	6	STP
606117	Boston – Traffic Signal Improvements at 9 Locations (Previously 18 Intersections)	6	CMAQ, STP
607685	Braintree – Bridge Rehabilitation, B-21-060 and B-21-061, ST 3 (SB) and ST 3 (NB) Over Ramp C (Quincy Adams)	6	NHPP
607345	Cohasset – Superstructure Replacement & Substructure Rehabilitation, C-17-002, Atlantic Avenue over Little Harbor	5	STP-BR-OFF
605189	Concord – Bruce Freeman Rail Trail Construction, from Commonwealth Avenue to Powder Mill Road, Includes 2 Railroad Bridges & 1 Culvert (Phase II-C)	4	CMAQ
606553	Hanover- Norwell – Superstructure Replacement, H-06-010, ST 3 over ST 123 (Webster Street) & N-24-003, ST 3 over ST 123 (High Street)	5	NHPP
607409	Lexington – Reconstruction on Massachusetts Avenue, from Marrett Road to Pleasant Street	4	HSIP
608059	Salem – Stormwater Improvements Along Route 107 (Salem Bypass Road)	4	STP-TE
607997	Saugus – Improvements at Veterans Memorial School (SRTS)	4	TAP

TABLE D-3 (CONTINUED)
Projects expected to be advertised in FFY 2016

Project Number	Project Description	District	Funding Source(s)
601630	Weymouth- Abington – Reconstruction & Widening on Route 18 (Main Street) from Highland Place to Route 139 (4.0 miles)	6	HSIP, STP, HPP (1998)
607755	Weymouth – Intersection & Signal Improvements at 2 Locations: SR 53 (Washington Street) at Mutton Lane & Pleasant Street	6	HSIP
605721	Weymouth – Intersection Improvements at @ Middle Street, Libbey Industrial Parkway and Tara Drive	6	CMAQ
603008	Woburn – Bridge Replacement, W-43-003, Salem Street over MBTA	4	NHPP

TABLE D-4
Projects that will be advertised in a future TIP element

Project Number	Project Description	District	Funding Source(s)
606316	Brookline – Pedestrian Bridge Rehabilitation, B-27-016, over MBTA off Carlton Street	6	CMAQ
607998	Everett – Improvements at Madelaine English (SRTS)	4	TAP
607999	Revere – Improvements at Garfield Elementary & Middle School (SRTS)	4	TAP
607488	Southborough – Resurfacing & Related Work on Route 9, from the Framingham T.L. to White Bagley Road	3	NHPP

TABLE D-5
Projects that were removed from the TIP

Project Number	Project Description	District	Funding Source(s)
607340	Wellesley – Resurfacing on Route 9, from Dearborn Street to Natick T.L.	6	NHPP
600703	Lexington – Bridge Replacement, L-10-009, Route 2 (EB & WB) over Route I-95 (Route 128)	4	NHPP
608134	Hingham- Brockton – Stormwater Improvements along Route 3A/Route 28	5	STP-TE

TABLE D-6
Projects that were added to the TIP

Project Number	Project Description	District	Funding Source(s)
604652	Stoneham- Winchester- Woburn – Tri-Community Bikeway Including New Bridge, W-43-029, over the Aberjona River	4	CMAQ
607498	Quincy – Bridge Maintenance of Q-01-051 on Route 3	6	NHPP
608180	Wellesley- Resurfacing on Route 9, from Limit of Add-A-Lane to east of Overbrook Intersection	6	NHPP

E APPENDIX

Transit Projects Status

This appendix is under development. It will list information about the status of transit projects programmed on previous elements of the TIP.



APPENDIX

Public Comments on the Draft FFYs 2017-21 TIP

This appendix contains a table of summarized public comments on the draft FFYs 2017–21 TIP received during the public comment period. (For the complete text contained in the comment letters, please refer to the compiled digitized version in PDF format at our TIP webpage: <http://www.ctps.org/tip>.)

APPENDIX F: Summary of Public Comments on the Draft FFYs 2017-2021 TIP

PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Atlantic Avenue over Little Harbor Inlet (Cohasset)	Request	Joan Meschino, Candidate for State House of Representatives, Third Plymouth District	Requests that the MPO encourage MassDOT Highway Division to make it a priority to advertise the Atlantic Avenue over Little Harbor Inlet bridge project.	Comment submitted to MassDOT.
Bridge Replacement, Gleasondale Road over the Assabet River (Stow)	Support	<p>Legislative: Representative Kate Hogan, Senator James B. Eldridge</p> <p>Municipal: William Wrigley, Town Administrator; James H. Salvie, Chair of the Board of Selectmen</p>	<p>Support inclusion of the Replacement of the Gleasondale Road Bridge in the FFYs 2017-21 TIP.</p> <p>MassDOT observed signs of structural decay in December 2015. To ensure the safety of drivers, traffic across the bridge was restricted to one lane with an alternating one-way signal. MassDOT has developed a timeline to fully repair the bridge, which is dependent upon the project's inclusion in the FFYs 2017-21 TIP. Design funding for the project has already been made available and is shovel-ready.</p> <p>2.1 million drivers and cyclists use the bridge annually as the most direct route across the Assabet River in Stow, Hudson, and Maynard. The project will ensure its safety and convenience for area residents.</p>	Included in the statewide project list in FFY 2020.
Bruce Freeman Rail Trail (BFRT)	Support	<p>Organization: Friends of the Bruce Freeman Rail Trail</p> <p>Acton residents: Anne Anderson, Martin Burke, Robert Sekuler, Richard Fallon, Susan M. Johnson</p> <p>Arlington resident: Russ Cohen</p> <p>Chelmsford resident: Ram Narayan</p> <p>Concord residents: William Herring, David Clarke, Robert P. Comer, Nina Huber, Ron Bernard, Electa Tritsch, Roy Westerberg, Sue Felshin, Dave Lebling, Janet Rothrock, Nancy Kerr, Kimber Lynn Drake, Barbara Pike</p> <p>Framingham resident: Susan Haney</p> <p>Maynard resident: Kevin Feehily</p> <p>Sudbury residents: Helen Claire Sievers, LeRoy Sievers, Thomas Hollocher</p> <p>Westford residents: Michael Wolfberg, Wendy Wolfberg</p> <p>Weston resident: David Hutcheson</p> <p>Other: Robert Call</p>	<p>Support inclusion of the Bruce Freeman Rail Trail Phase 2C in FFY 2016 and Phase 2B in FFY 2018 of the TIP.</p> <p>The project will provide safe, off-road access for cyclists and pedestrians to local merchants and the West Concord Commuter Rail station, reducing vehicle trips and improving air quality. Other benefits noted by commenters include easier and safer travel across Route 2; increased tourism; recreational benefits; economic benefits to businesses in the area of the rail trail; recreational opportunities; the promotion of healthy activity; and benefits to the community.</p> <p>Several commenters request future inclusion of Phase 2D in the TIP.</p>	Included in the statewide project list in FFY 2018.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Bruce Freeman Rail Trail	Request	Sudbury resident: Pat Brown	<p>Requests information regarding what body considers the effect of the BFRT in Concord on the proposed Concord Rotary Redesign.</p> <p>Requests that information regarding the responsible agency for identifying any constraints or adverse impacts on potential designs for the Concord Rotary resulting from the design of the Route 2 crossing for BFRT Phase 2B be added to the TIP Interactive Database.</p> <p><i>[For further details, please refer to pages 33-34 of the compilation of comments.]</i></p>	No action at this time. Comment submitted to MassDOT.
Bruce Freeman Rail Trail (Phase 2D) (Sudbury)	Oppose	Sudbury resident: Daniel DePompei	<p>Opposes future inclusion of the Bruce Freeman Rail Trail (Phase 2D) in the TIP.</p> <p>Expresses concern that the project does not comply with local environmental bylaws and storm water regulations. Raises questions whether the project triggers Massachusetts Environmental Policy Act (MEPA) thresholds and whether MassDOT design requirements supersede local environmental bylaws and storm water regulations. Notes that the project right-of-way is located in a wetland, and proposes that MassDOT consider alternative alignments or alternate design standards for the trail.</p>	No action at this time. Project is in the LRTP. Comment submitted to MassDOT.
CMAQ Funding	Request	Organization: CrossTown Connect TMA	Requests using a moderate of CMAQ funding to help TMAs reach their goals of reducing congestion and air pollution and increasing economic growth.	CMAQ funding set aside for the Community Transportation / Parking / Clear Air & Mobility investment program in FFY 2021.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Cochituate Rail Trail (Framingham & Natick)	Request	<p>Legislative: Representative David P. Linsky Municipal: Town of Natick, Board of Selectmen Framingham resident: Andrea Carr-Evans Natick resident: Sue Hur</p>	<p>Request that the Cochituate Rail Trail remain programmed in FFY 2018 of the TIP.</p> <p>The Town's efforts to build public and private support for the project, including acquisition, could be tremendously harmed by a delay. Natick has committed over \$800,000 to the project and is working collaboratively with MassDOT on design and acquisition, as well as with a non-profit for private fundraising and are eager to advance opportunities for public-private partnerships. The project would reduce the demand for parking at the Natick Commuter Rail station and provide safe recreation.</p>	Project remains included in the statewide project list in FFY 2018.
Community Path Extension	Support / Request	<p>Organization: Friends of the Community Path</p>	<p>Support inclusion of a full, off-road Community Path Extension (CPX) in the FFYs 2017-21 TIP.</p> <p>States that the CPX is the top-ranked priority in the MPO's 2014 evaluation of regional bicycle network gaps, with an MAPC prediction of up to 3 million bike and pedestrian trips per year.</p> <p>Request that all Green Line Design/Build bidders include Alternative Technical Concepts for a fully off-road CPX from the existing terminus in Somerville to the NorthPoint path terminus in Cambridge, and that MassDOT staff meet with the Friends of the Community Path to review their cost-saving alternative design. State that the FCP design keeps the CPX fully off-road and connecting to the NorthPoint Path, maintains all CPX street access points, and keeps the CPX on the south side of the corridor for safer and easier crossing. Note that this design's cost is similar to the reduced plan proposed by the Interim GLX team.</p>	Included in the MPO target list in FFYs 2017-21. Comment submitted to MassDOT.
Corridor Improvements and Related Work on Justice Cushing Highway (Cohasset & Scituate)	Request	<p>Joan Meschino, Candidate for State House of Representatives, Third Plymouth District</p>	<p>Requests that the MPO continue to review the Corridor Improvements and Related Work on Justice Cushing Highway and work with Hull and Cohasset to advance them for inclusion in a future TIP.</p>	Comment submitted to MassDOT.
Cost Overruns	Request	<p>Organization: Regional Transportation Advisory Council</p>	<p>Requests a better understand of cost overruns on several large projects, and asks the MPO to ensure the benefits of these projects still exceed the costs. Requests that RTAC be engaged in conversations with MassDOT and the MPO about how to minimize these overruns.</p>	No action on the TIP. Subject will be discussed at a future MPO meeting.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Cost-Effectiveness of Multi-Use Path Projects	Request	Sudbury resident: Pat Brown	Requests the MPO study the cost-effectiveness and actual benefits of off-road multi-use path CMAQ projects both in addressing statewide transportation issues. <i>[For further details, please refer to pages 33-34 of the compilation of comments.]</i>	No action on the TIP. The MPO will be discussing changes to the project selection process.
Delay to the Construction of Projects	Other	Organization: 495/MetroWest Partnership	Requests that the MPO recognize the economic impact of delaying projects in the 495/MetroWest Corridor. Projects such as Improvements at I-495 & Route 9 must be addressed sooner rather than later to successfully confront congestion, safety, air quality, and sustainable development issues in the region.	Comment considered by the MPO.
I-95 / I-93 Canton Interchange Project	Request	Municipal: Michael Jaillet, Westwood Town Administrator Organization: Neponset Valley TMA	Request inclusion of the Canton Interchange Project in the FFYs 2017-21 TIP. Towns in the TRIC region view the project as a top priority for the enhancement of economic development in the region and the Commonwealth. The project would eliminate progressively worsening traffic congestion problems which impair the region's potential economic growth. The project will bolster the efforts of the University Station project, the redevelopment of the 120 acres of University Office Park into a transit-oriented, mixed-use development.	Project not included in the FFYs 2017-21 TIP.
Intersection Improvements at Derby Street, Gardner Street, and Whiting Street (Hingham)	Support	Joan Meschino, Candidate for State House of Representatives, Third Plymouth District	Supports inclusion of the Intersection Improvements at Derby Street, Gardner Street, and Whiting Street in FFY 2018 of the TIP. States the project will address traffic flow and safety issues through signal and roadway configuration upgrades and accommodations for cyclists and pedestrians.	Included in the MPO target list in FFYs 2017-18.
Pavement Preservation on Route 2 (Lexington, Belmont, Arlington, & Cambridge)	Support	Organization: Alewife TMA	Supports inclusion of the Pavement Preservation on Route 2 in the FFYs 2017-21 TIP.	Included in the statewide project list in FFY 2018.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Pedestrian Bridge Rehabilitation (Carlton Street Footbridge) (Brookline)		Municipal: Melvin A. Kleckner, Brookline Town Administrator	Requests that the Pedestrian Bridge Rehabilitation be programmed in FFY 2017 of the TIP, rather than FFY 2018. States that the two-year delay will inflate estimated construction costs as well as design engineering fees. Notes that the Town Meeting has overwhelmingly voted to support a series of warrant articles pursuant to Right-of-Way easements and design engineering appropriations for the footbridge, and has voted for authorization to secure all necessary easements. Local funding is fully programmed to meet all MassDOT final design development requirements and submittal dates. 75% design plans have been submitted, and MassDOT comments are expected in August. The Town and Kleinfelder Engineering will move forward with environmental review and permitting, as required. States that the footbridge project restores an historic pedestrian link to the Emerald Necklace and provides universal access to the Green Line.	Project remains included in the statewide project list in FFY 2018.
Project Evaluation	Request	Organization: Regional Transportation Advisory Council	Requests that off-street paths and transit projects be moved to separate scoring sheets from road projects so they can more easily be compared against each other, as currently off-street paths and transit projects do not score well on the criteria. Cross-modal tradeoffs should also be considered in transportation project and program development.	No action on the TIP. The MPO will be discussing changes to the project selection process.
Project Evaluation	Request	Joan Meschino, Candidate for State House of Representatives, Third Plymouth District	Requests that the MPO give high value to a project's ability to deliver reductions in greenhouse gases during project evaluation.	No action on the TIP. The MPO will be discussing changes to the project selection process.
Project Evaluation Criteria	Other	Organization: Regional Transportation Advisory Council	Express appreciation for applying new criteria consistent with the MPO's goals and objects for project evaluation.	N/A
Project Evaluation Criteria	Other	Sudbury resident: Pat Brown	Express appreciation for applying new criteria consistent with the MPO's goals and objects for project evaluation.	N/A

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Project Selection	Request	Organization: Regional Transportation Advisory Council	Requests that the MPO program available funds in FFY 2021 of the TIP (and earlier, to the extent available, including staff recommended projects in FFY 2019) to smaller projects including Complete Streets, intersection improvements, community transit, and bicycle/pedestrian paths per the MPO's indicated priorities from 2015's scenario planning process, and considering the project evaluation score along with cost, readiness, and geographic quality. If major funded projects are delayed, ready-to-go projects should be identified that can be moved ahead in the TIP cycle.	Comment considered by the MPO.
Project Selection in the 495 / MetroWest Corridor	Support / Request	Organization: 495/MetroWest Partnership	Supports 23 projects within the 495/MetroWest Corridor in the FFYs 2017-21 TIP. Note the inclusion of the Reconstruction of I-90/I-495 Interchange, Resurfacing & Intersection Improvements on Route 16 (Milford), and MWRTA funding. Request consideration of 38 projects within the 495/MetroWest Corridor for TIP funding, four of which have been designated as "transportation nightmares" by the 495/MetroWest Partnership. <i>[For further details, please refer to pages 49-53 of the compilation of comments.]</i>	Programmed projects included in the FFYs 2017-21 TIP. Requested projects considered.
Projects in Acton, Boxborough, Littleton, and Maynard	Support / Request	Organization: CrossTown Connect TMA	Supports seven projects located in Acton, Boxborough, Littleton, and Maynard in the FFYs 2017-21 TIP. Requests that twelve projects in Acton, Boxborough, Littleton, and Maynard be advanced to the TIP as soon as possible. <i>[For further details, please refer to pages 38-40 of the compilation of comments.]</i>	Programmed projects included in the FFYs 2017-21 TIP. Requested projects considered.
Reconstruction and Related Work on Derby Street (Hingham)	Support / Request	Joan Meschino, Candidate for State House of Representatives, Third Plymouth District	Supports inclusion of the Reconstruction and Related Work on Derby Street in FFY 2017 of the TIP. States the project will address capacity, congestion, and safety problems at the Route 3 ramps and along Derby Street. Requests that the design includes bicycle and pedestrian facilities.	Included in the MPO target list in FFY 2017.
Reconstruction of Atlantic Avenue (Hull)	Request	Joan Meschino, Candidate for State House of Representatives, Third Plymouth District	Requests that the MPO continue to review the Reconstruction of Atlantic Avenue and work with Hull and Cohasset to advance them for inclusion in a future TIP.	Comment considered by the MPO.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Reconstruction of Highland Avenue, Needham Street and the Charles River Bridge (Newton and Needham)	Support	<p>Legislative: Senator Michael F. Rush, Senator Ricahrd J. Ross, Representative Denise C. Garlick</p> <p>Municipal: Kate Fitzpatrick, Needham Town Manager</p>	<p>Support inclusion of the Highland Avenue/Needham Street Corridor Project in FFY 2018 of the TIP.</p> <p>The project lies at the heart of the N2 Corridor, which has seen recent development including the new TripAdvisor World Headquarters and a Marriott Residence Inn. A twenty seven acre parcel of land is being redeveloped. including office space, a hotel, and 390 units of market and affordable housing. MassWorks funding will support the reconstruction of two intersections, and inclusion of the balance of the project on the TIP will complete the project. Traffic studies confirm that the success of the N2 Corridor depends on the completion of the I-95/Route 128 Add-a-Lane and the planned improvements along Highland Avenue and Needham Street. Newton and Needham have lined up infrastructure investments to improve access and safety concurrently with this development and continue to look for additional transportation advancements. The project will help maximize economic development and mitigate traffic in the corridor, as well as provide safer vehicular and pedestrian mobility.</p>	Included in the MPO target list in FFY 2018.
Reconstruction of Main Street (Route 30) (Southborough)	Support	<p>Municipal: Karen Galligan, DPW Superintendent; Mark Purple, Town Administrator; Southborough Recreation Committee; Fire Chief Joseph C. Mauro; Police Chief Kenneth M. Paulhus</p> <p>Southborough residents: Kath Palm Reed, Doreen Ferguson, Valarie Lefavour, Joseph Palmer, Melissa Shields, Cynthia Foster, Walter Foster, William Harrington, Kathleen Barry, Brendan Barry, John W. Boland, Julie Fialkow</p>	<p>Support inclusion of the Reconstruction of Main Street in the FFYs 2017-21 TIP.</p> <p>The project will add sidewalks and reconstruction poor sidewalks, improving cyclists/pedestrian safety and access to government buildings and nearby schools. The roadway connects to Southborough's downtown commercial center, a preserved farm, and a passive recreation area. The project will also improve the poor condition of Main Street and improve the intersection with Route 85, which cannot currently accommodate its traffic levels. Intersection improvements will also allow for better maneuverability for school buses and large fire vehicles responding to emergencies.</p> <p>Several commenters expressed confidence that the project would pass at the Town's upcoming Special Town Meeting.</p>	Included in the MPO target list in FFY 2018.
Reconstruction of Main Street (Route 30) (Southborough)	Request	<p>Southborough resident: William Harrington</p>	<p>Requests that the "bump-out" in front of the library be reconsidered. The "bump-out" will negate the improvements at the intersection of Main Street and Route 30 by necessitating vehicles to reduce their speed while negotiating the proposed right-angle turn onto Common Street. It will also eliminate several needed parking spaces.</p>	Comment submitted to MassDOT.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Reconstruction of Melnea Cass Boulevard (Boston)	Oppose	Jamaica Plain residents: Jeffrey Ferris, Anne McKinnon	Oppose inclusion of the Reconstruction of Melnea Cass in FFY 2019 of the TIP. The process by which the City of Boston has furthered the project is not consistent with MPO and MassDOT planning principles and guidelines. The project was originally connected to the Urban Ring, which is currently suspended. States that there have not been sufficient meetings or media releases to the general public regarding the project's current status or design, and there has not been an objective study of alternatives for various aspects of the project. The South Harbor Trail is intermixed with this project, but the implications in terms of cost and design are unclear. Notes that a two-way bicycle path exists in the corridor, questioning the need for an additional facility. The project cost has more than doubled since 2013, and the project is not at 25% design.	Included in the MPO target list in FFY 2019.
Reconstruction of Route 126 (Pond Street) (Ashland)	Support	Ashland residents: Janet McGann, KJ Leggett, Karthik Krishnaswamy, Megan Momtahreni, Erin Cote, R. Lightcap, Victoria Sadova, Susan Glueck, Karen McLoughlin, Nancy Puia, Brandi Kinsman, Rosemary Flaherty, Stephen Underwood, Adam Shuster, Brian Fabiano, Cliff Wilson, Elizabeth Glass, Karen Panike, Chufa He, Mary Schlipp, Cheryl Scott, Susan V. Ericson, Patricia Molyneux, Jane Scott, Nina Ashurst, Holly O'Brien, Julie Nardone, Evis Havari, Roland Houle, Beth Reynolds, Michele Hudak, Cheryl Cohen, Al Porter, Candice Wilson, Michael Kane, Vladimir Epifanov, Colin Hoogeboom, Glenn M. Travis, Matthew Richards, Delba Moraes, James Cashin, Joseph Coda, Ianna Ayala, Anne Primiano, Sarah Coleman, Praveen Dubey, Preston Crow, Todd Curlett, Mark Dassoni, Tonya Yaskovich, Jack Shear, Bertha Shear, Salonee [no surname given], Prasad Ramamoorthy, Pankil Patel, Tricia Kendall, Corey Fuellhart, Siva Anduri, Elizabeth Emberley, Lauren Keville, Kathryn Goettel, Dmitriy Sadov, Yolanda Greaves, Gagandeep K. Somal, Athanasios Bamis, Hans Hilpertschauser, Melissa Kenny, Anne Manning, Margaret Manning, Mark Galante, Andrea Green, Charles Green, Aleksandr Verbuk, Praveen Sharma, Shweta Saraswat	Support inclusion of the Reconstruction of Route 126 in the FFYs 2017-21 TIP. The project will address cyclist and pedestrian safety issues by adding sidewalks and bike lanes. Currently, both cyclists and pedestrians must travel on the road, which is heavily traveled by vehicles of both Ashland residents and residents of nearby communities. These facilities will allow residents - including the many residents living in surrounding condo complexes - to travel to nearby shops and the Framingham Commuter Rail station, reducing vehicle trips and promoting healthy activity. The project will also promote economic development in the corridor. Several commenters request that the project receive funding in the earliest possible TIP element.	Included in the MPO target list in FFY 2020.

APPENDIX F: Summary of Public Comments on the Draft FFYs 2017-2021 TIP

PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Reconstruction of Route 126 (Pond Street) (Ashland)	Support	<p>Ashland residents (continued): Margie Matteson, Florence Newcum, Richard R. Klein, Marcia McMahon, Marie Gertje, Paul McCarrick, John Ho, Chris Graeff, Rose Marie Donaldson, Sanjay Yengul, Helen Brown, Jonathan Cain, Carol Chase Hardy, Vijay Pawarkar, David West Jr., Pamela Smith, Detlef Rethage, Karin Oleski, Vishwanath Iyer, Siddharth Bhojnagarwala, Vito A. Cappello, PJ Del Prete, Sara Hines, Ed Bates, Kimberly DeMeo, Melissa Forestal, Rod Holdaway, Andrea Novakowski, Anthony Minucci, Scott Davis, John C. Dudley, Inna Svirskiy, Scott Chalmers, Dave Sunderland, Lisa Wright, Lisa Edwards, Andre Rebelo, Steve Karra, Rosemary Forster, Deborah Rodgers, Mitchell Brown, Rebecca Graessle, David Roscoe, James A. Dublikar, Karen Seniuk, Claudio Silva, Visi Tilak, Tatyana Berestesky, Jon Justrom, Rajah Vedamurthy, Tracy Terry, Shanmugasundari Rajarathinam, Jacques Wagner, Bernice Lindbergh, James [no surname given], Kim McGreal, Gene Svirskiy, Sophia Tel, Alla Druker, Lauren Sexeny, Katana Queiroli, Hishan Fernando, Dennis Orтели, Edward Zdenek, Puja Patel, Rina E. Zarba, Deborah A. Begreen, Leenie Glickman, Susan Palefsky, P. Embree, Tracey Giglia, Lorraine Dorsey, John Yee</p>	<p>Support inclusion of the Reconstruction of Route 126 in the FFYs 2017-21 TIP.</p> <p>The project will address cyclist and pedestrian safety issues by adding sidewalks and bike lanes. Currently, both cyclists and pedestrians must travel on the road, which is heavily traveled by vehicles of both Ashland residents and residents of nearby communities. These facilities will allow residents - including the many residents living in surrounding condo complexes - to travel to nearby shops and the Framingham Commuter Rail station, reducing vehicle trips and promoting healthy activity. The project will also promote economic development in the corridor.</p> <p>Several commenters request that the project receive funding in the earliest possible TIP element.</p>	Included in the MPO target list in FFY 2020.
Reconstruction of Route 126 (Pond Street) (Ashland)	Support	<p>Ashland residents (continued): Vinicius Bremmenkamp, Sergey Maternovskiy</p> <p>Organizations: Ashland Business Association, Pond Street Working Group</p> <p>Framingham resident: Rob Palenchar</p> <p>Maynard resident: Renee Peters</p> <p>Westborough resident: Veronica M. Silva</p>	<p>Support inclusion of the Reconstruction of Route 126 in the FFYs 2017-21 TIP.</p> <p>The project will address cyclist and pedestrian safety issues by adding sidewalks and bike lanes. Currently, both cyclists and pedestrians must travel on the road, which is heavily traveled by vehicles of both Ashland residents and residents of nearby communities. These facilities will allow residents - including the many residents living in surrounding condo complexes - to travel to nearby shops and the Framingham Commuter Rail station, reducing vehicle trips and promoting healthy activity. The project will also promote economic development in the corridor.</p> <p>Several commenters request that the project receive funding in the earliest possible TIP element.</p>	Included in the MPO target list in FFY 2020.

APPENDIX F: Summary of Public Comments on the Draft FFYs 2017-2021 TIP

PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Reconstruction of Route 126 (Pond Street) (Ashland)	Oppose	Ashland resident: Leslie Saporetti	Opposes inclusion of the Reconstruction of Route 126 in the FFYs 2017-21 TIP. States that the addition of sidewalks and bicycle lanes will create safety issues for families/home owners on Route 126, as well as have a negative impact on property values.	Included in the MPO target list in FFY 2020.
Reconstruction of Route 126 (Pond Street) (Ashland)	Other	Framingham resident: Mike Connor	Opposes inclusion of the Reconstruction of Route 126 in the FFYs 2017-21 TIP if the plans do not include mitigation of speeding traffic along the route.	Included in the MPO target list in FFY 2020.
Reconstruction of Rutherford Avenue (Boston)	Support	Organizations: Design Review Committee, Friends of City Park Square Charlestown residents: Marc Older, Shelby Chapman-Hale, Liz Levin, Lynn Levesque, Ivey St. John Cambridge resident: Rebecca Nolan	Support inclusion of the Reconstruction of Rutherford Avenue in the FFYs 2017-21 TIP. Several commenters request programming the project in an earlier TIP element. The project area has seen increased volumes of vehicular, pedestrian, and cyclist activity due to recent developments, and the Wynn Casino will affect the area further. The proposed improvements will address dangerous travel conditions in the area, allowing for simpler and safer pedestrian/cyclist transportation within Charlestown and to neighboring communities.	Included in the MPO target list in FFYs 2020-21.
Reconstruction of Union Street (Route 139) (Holbrook)	Support / Request	Legislative: Senator John F. Keenan	Supports inclusion of the Reconstruction of Union Street in the FFYs 2017-21 TIP. Requests earlier programming of the project, stating it is ready and appropriate for action sooner than 2021. The project will improve the connection between Holbrook Town Center and the Holbrook/Randolph Commuter Rail station, setting the stage for future economic development based on the principles of transit oriented development. By improving walkability, adding bicycle lanes, and providing more handicap-accessible, the project also embraces the Complete Streets concept. Adds that the Town's collaboration with MassDOT and undertaking of several critical zoning reforms and public meetings demonstrates commitment to the project.	Project remains included in the MPO target list in FFY 2021.

APPENDIX F: Summary of Public Comments on the Draft FFYs 2017-2021 TIP

PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Reconstruction on Route 1A (Walpole)	Support	Organizations: Neponset Valley TMA	Supports inclusion of the Reconstruction of Route 1A in the FFYs 2017-21 TIP. States that the reconstruction will help to alleviate congestion on the route and create improved multimodal infrastructure. Improved intersections and pedestrian facilities will increase the safety of walking and cycling, which is important due to a number of MBTA bus stops along the road.	Included in the MPO target list in FFY 2021.
Safe Routes to School	Support / Request	Joan Meschino, Candidate for State House of Representatives, Third Plymouth District	Supports the Safe Routes to Schools program and requests that the MPO consider future projects that emerge from working with the municipalities of Cohasset, Hingham, Hull, and Scituate.	Included in the statewide project list in FFY 2017. Request considered by the MPO.
State of Transportation Funding	Other	Organization: 495/MetroWest Partnership	States that the lack of sound financial footing for transportation infrastructure continues to jeopardize the state's and region's economic recovery and future success. Due to these financial conditions, major projects that would have significant regional impact remain in the TIP's Universe of Projects. States that the draft FFYs 2017-21 TIP is a clear indication of the condition of transportation financing in the Greater Boston region.	Comment considered by the MPO.
TIP Document	Request	Sudbury resident: Pat Brown	Requests clarification in various sections of the TIP document, including: -- Executive Summary regarding Highway Program funding; -- Chapter 6 regarding funding sources. -- Appendix C regarding Greenhouse Gas Monitoring and Evaluation. <i>[For further details, please refer to pages 33 and 253 of the compilation of comments.]</i>	Additional edits were made to the document for clarification.
TIP Document	Request	David Mohler, Executive Director, Office of Transportation Planning, Massachusetts Department of Transportation (MassDOT)	Comment letter details specific comments and offers general guidance; includes requests for additional language, corrections, and clarification in various sections of the TIP document. <i>[For further details, please refer to pages 254-258 of the compilation of comments.]</i>	Incorporated into TIP document.
TIP Interactive Database	Request	Sudbury resident: Pat Brown	Requests that project ranking be restored to the TIP Interactive Database. <i>[For further details, please refer to page 253 of the compilation of comments.]</i>	Comment considered by MPO staff.

APPENDIX F: Summary of Public Comments on the Draft FFYs 2017-2021 TIP

PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTER(S)	COMMENT (Summarized)	ACTION
Transit Modernization	Request	Organizations: CrossTown Connect TMA, Alewife TMA Other: Joan Meschino	Request support for various transit modernization initiatives. Improvements to the Red Line include New Busways to Alewife Station; Alewife Garage Repairs Phase II; Improvements to Alewife, Braintree, and Quincy Adams; system support; general station improvements; new signals; and vehicle procurement. Commuter Ferry projects include vessel procurement; improvements at the Hingham Boat Terminal; and the Hingham Marine Intermodal Center.	Comment submitted to MassDOT.

The following comments were received too late to be considered by the MPO.

Projects in the 2nd Essex District	Support	Legislative: Senator Joan B. Lovely	Supports inclusion of the Canal Street Rail Trail Construction, Phase 2 (Salem), in the FFYs 2017-21 TIP. States the project will close the gap between the existing Marblehead Rail Trail and the shared-use path constructed alongside Canal Street to Mill Street. Supports inclusion of the Intersection Improvements at Three Locations (Beverly) in the FFYs 2017-21 TIP. States the project will either modernize or install signal equipment, improve bicycle accommodations, improve pavement, and install ADA-compliant wheelchair ramps at each intersection Expresses support for six additional projects in the 2nd District in the FFYs 2017-21 TIP.	The Salem and Beverly projects are included in the MPO target list in FFY 2019 and FFY 2021, respectively.
Reconstruction of Route 126 (Pond Street) (Ashland)	Support	Ashland resident: Kristen Giessler, Karen Gerard	Support inclusion of the Reconstruction of Route 126 in the FFYs 2017-21 TIP. The project will address cyclist and pedestrian safety issues by adding sidewalks and bike lanes. Currently, both cyclists and pedestrians must travel on the road, which is heavily traveled by vehicles of both Ashland residents and residents of nearby communities. These facilities will allow residents to travel to nearby shops and Downtown Framingham. The project will also promote economic development in the corridor.	Included in the MPO target list in FFY 2020.
Reconstruction of Route 126 (Pond Street) (Ashland)	Request	Ashland resident: Cynthia Dabrowski	Requests reconsideration of the construction of a rotary at Spyglass Hill Drive. States that a pedestrian crosswalk and signal would be sufficient to allow residents to cross Route 126. Notes that Framingham and Natick are removing rotaries in their communities.	
Reconstruction of Rutherford Avenue (Boston)	Support	Charlestown resident: Kate Kennen	Supports inclusion of the Reconstruction of Rutherford Avenue in the FFYs 2017-21 TIP. States that safety issues should be addressed, noting that the roadway is an evacuation route. Requests programming the project in the earliest possible TIP element.	Included in the MPO target list in FFYs 2020-21.

Compiled from 239 comments received during the June 24-July 24, 2016, public comment period, and those received through August 1, 2016. Full text of these comments are compiled into a PDF file and available through the TIP webpage at <http://www.ctps.org/tip>.



APPENDIX

MPO Glossary of Acronyms

Acronym	Definition
3C	continuous, comprehensive, cooperative [planning process]
A&F	Administration and Finance Committee [MassDOT]
AACT	Access Advisory Committee to the MBTA
ABP	Accelerated Bridge Program [MassDOT]
ADA	Americans with Disabilities Act of 1990
ADT	average daily traffic
AFC	automated fare collection [system]
AMPO	Association of Metropolitan Planning Organizations
APC	automatic passenger counter
APTA	American Public Transportation Association
ARAN	automatic road analyzer
ARRA	The American Recovery and Reinvestment Act of 2009
ASL	American sign language
ATR	automatic traffic recorder
AVL	automatic vehicle location
AWDT	average weekday daily traffic
BCIL	Boston Center for Independent Living
BRA	Boston Redevelopment Authority [Massport]
BRT	bus rapid transit
BTD	Boston Transportation Department
CA/T	Central Artery/Tunnel [project]
CAA	Clean Air Act of 1970
CAAA	Clean Air Act Amendments of 1990

Acronym	Definition
CATA	Cape Ann Transportation Authority
CBD	central business district
CFR	Code of Federal Regulation
CHSTP	Coordinated Public Transit Human Services Transportation Plan
CIC	Community Innovation Challenge
CIP	Capital Investment Program
CMAQ	Congestion Mitigation and Air Quality
CMP	Congestion Management Process
CNG	compressed natural gas
CO	carbon monoxide
CO ₂	carbon dioxide
CTPS	Central Transportation Planning Staff [to the Boston Region MPO]
CTTAP	Community Transportation Technical Assistance Program
DBMS	Database Management System
DCAMM	Division of Capital Asset Management and Maintenance [MA]
DCR	Department of Conservation and Recreation
DEIR	draft environmental impact report
DEP	Department of Environmental Protection
DMU	diesel multiple unit
DTA	dynamic traffic assignment
EERPAT	Energy and Emissions Reduction Policy Analysis Tool
EIR	environmental impact report
EIS	environmental impact statement
EJ	environmental justice
EOEEA	Massachusetts Executive Office of Energy and Environmental Affairs
EOHED	Massachusetts Executive Office of Housing and Economic Development
EOHHS	Massachusetts Executive Office of Health and Human Services
EPA	Environmental Protection Agency [federal]
EPDO	equivalent property damage only [index]

Acronym	Definition
ETC	electronic toll collection
FAST Act	Fixing America's Surface Transportation Act
FDR	functional design report
FEIR	final environmental impact report
FFGA	full funding grant agreement
FFY, FFYs	federal fiscal year, federal fiscal years
FHEA	Fair Housing Equity Assessment
FHWA	Federal Highway Administration
FONSI	finding of no significant impact
FTA	Federal Transit Administration
GANS	grant anticipation notes [municipal bond financing]
GHG	greenhouse gas [as in greenhouse gas emissions]
GIS	geographic information system
GLX	Green Line Extension [Green Line Extension project]
GPS	global positioning system
GWI	global warming index
GWSA	Global Warming Solutions Act of 2008
HOV	high-occupancy vehicle
HPP	high-priority projects
HSIP	Highway Safety Improvement Program
HTC	Healthy Transportation Compact
ICC	Inner Core Committee for the Inner Core subregion [of MAPC]
IMS	intermodal management system
INVEST	Infrastructure Voluntary Evaluation Sustainability Tool [FHWA]
IPCC	Intergovernmental Panel on Climate Change
IT&S	Information Technology and Systems [CTPS group]
ITDP	Institute for Transportation and Development Policy
ITE	Institute of Transportation Engineers
ITS	intelligent transportation systems

Acronym	Definition
JARC	Job Access and Reverse Commute [program]
LAP	language access plan
LCW	Livable Community Workshop
LEP	limited English proficiency
LNG	liquefied natural gas
LOS	level of service
LRTA	Lowell Regional Transit Authority
L RTP	Long-Range Transportation Plan
MAGIC	Minuteman Advisory Group on Interlocal Coordination
MAP-21	Moving Ahead for Progress in the 21st Century Act
MAPC	Metropolitan Area Planning Council
MARPA	Massachusetts Association of Regional Planning Agencies
MassDOT	Massachusetts Department of Transportation
MassGIS	[Commonwealth's] Office of Geographic Information
Massport	Massachusetts Port Authority
MassRIDES	MassDOT's statewide travel options program
MBCR	Massachusetts Bay Commuter Railroad
MBTA	Massachusetts Bay Transportation Authority
MCAD	Massachusetts Commission Against Discrimination
MEMA	Massachusetts Emergency Management Agency
MEPA	Massachusetts Environmental Policy Act
MGL	Massachusetts general laws
MHS	metropolitan highway system
MOU	memorandum of understanding
MOVES	Motor Vehicle Emissions Simulator [EPA]
MPO	metropolitan planning organization [Boston Region MPO]
MPOinfo	Boston Region MPO's email contact list
MWGMC	MetroWest Growth Management Committee
MWRC	MetroWest Regional Collaborative

Acronym	Definition
MWRTA	MetroWest Regional Transit Authority
NAAQS	National Ambient Air Quality Standards
NBPD	National Bicycle and Pedestrian Documentation Project
NEPA	National Environmental Policy Act
NHPP	National Highway Performance Program
NMHC	non-methane hydrocarbons
NOx	nitrogen oxides
NTD	National Transit Database
NTP	notice to proceed
O&M	operations and management
ODCR	Office of Diversity and Civil Rights [MassDOT]
OE	operating expenses
OTA	Office for Transportation Access [MBTA]
OTP	Office of Transportation Planning [MassDOT]
P3	Public Participation Plan
PBPP	performance-based planning and programming
PDM	Pre-Disaster Mitigation Program [federal]
PEV	pedestrian environmental variable
PL	public law [PL] funds, or metropolitan planning funds [FHWA]
PM	particulate matter [category of air pollution]
PMT	Program for Mass Transportation [MBTA]
ppm	parts per million
PSA	Project Selection Advisory Council
RCCs	Regional Coordinating Councils
RIF	roadway inventory file
RMV	Registry of Motor Vehicles [MassDOT division]
ROC	Rider Oversight Committee [MBTA]
ROW	right-of-way
RPA	regional planning agency

Acronym	Definition
RSA	Roadway Safety Audit [FHWA]
RSS	rich site summary [Web, feed]
RTA	regional transit authority
RTAC	Regional Transportation Advisory Council
RTC	Regional Transportation Center
SAFE	service and fare equity [Title VI]
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act—A Legacy for Users
SCCCT	Statewide Coordinating Council on Community Transportation
SCI	sustainable communities initiative
SDO	supplier diversity office
SFY	state fiscal year
SGR	state-of-good repair
SHRP	Strategic Highway Research Program
SHSP	Strategic Highway Safety Plan
SIP	State Implementation Plan
SNAC	special needs advisory committee
SNLA	Small Necessities Leave Act
SORE	statement of revenue and expenses
SOV	single-occupancy vehicle
SPR	Statewide Planning and Research
SRTS	Safe Routes to School [federal program]
STB	State Transportation Building [Boston]
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TAM	transit asset management
TAP	Transportation Alternatives Program
TAZ	transportation analysis zone
TCMs	transportation control measures
TCRP	Transit Cooperative Research Program
TDM	travel-demand management, or transportation-demand management

Acronym	Definition
TE	transportation equity
TEAMS	Travel Efficiency Assessment Method
TIGER	Transportation Investment Generating Economic Recovery [TIGER Discretionary Grant program, federal]
TIP	Transportation Improvement Program
Title VI	Title VI of the Civil Rights Act of 1964
TMA [1]	transportation management area [FTA, FHWA]
TMA [2]	Transportation Management Association
TMC	turning movement counts
TOD	transit-oriented development
TRB	Transportation Research Board
TREDIS	Transportation Economic Development Impact System [software]
TSIMS	Transportation Safety Information Management System
TSM	transportation systems management [FHWA]
UFP	ultrafine particles
UPWP	Unified Planning Work Program
US	The United States of America
USDOT	United States Department of Transportation
USGS	US Geological Survey
UZA	urbanized area
V/C	volume-to-capacity ratio
VHT	vehicle-hours traveled
VMS	variable message signs
VMT	vehicle-miles traveled
VOCs	volatile organic compounds [pollutants]
VRH	vehicle revenue-hours
VRM	vehicle revenue-miles
WalkBoston	pedestrian advocacy group [Boston area]
WAT	walk-access transit

Acronym	Definition
WMM	weMove Massachusetts[MassDOT]
WTS	Women in Transportation Seminar
YMM	youMove Massachusetts [planning initiative]



APPENDIX

FFYs 2008–2021 TIP Funding by Municipality

PURPOSE and METHODOLOGY

Purpose

Appendix H summarizes the geographic distribution of Target Program funding within the MPO region between federal fiscal years (FFYs) 2008 and 2021. This data was first compiled for FFYs 2008 through 2013 as part of a response to the MPO's 2014 Certification Review by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). For this FFYs' 2017–2021 TIP, the data was updated to reflect the distribution of Target Program funding, as currently planned, through FFY 2021.

The purpose of this data collection and analysis is to understand the geographic spread of the TIP Target Program funding throughout the region. In other words, this exercise serves to illuminate which communities and areas of our metropolitan region have received Target Program funding for transportation construction projects.

Methodology

MPO staff took the following steps to develop the dataset:

- Recorded information about TIP projects and the amount of funding programmed in each federal fiscal year.
- For projects that spanned multiple municipalities, divided programmed funds equally by the number of municipalities located within the project area.
- For each federal fiscal year, calculated the amount of programmed funds associated with each municipality. Funding from FFYs 2008 to 2016 is displayed in a single column, while funding information is displayed for each FFY in the current TIP cycle.
- Recorded the total amount of programmed funds for each municipality for each fiscal year in the dataset.

To focus this compilation of data on transportation projects programmed for individual municipalities or groups of municipalities more directly, this dataset excluded several projects that have a regionwide scope. Examples of regionwide projects include traffic-management center operations and systemwide transit capital upgrades.

NEXT STEPS

The data summarized in this appendix (and future TIP funding data that is added to it) could be used in various ways to help guide spending decisions made in future TIPs. Some analyses that the MPO could perform in the future include:

- Add to this analysis TIP projects that are funded through statewide funding programs.
- Examine in more detail the geographic distribution of TIP funding per subregion, or MAPC community type.
- Examine TIP funding by community and compare that data to the number of road miles, the Chapter 90 apportionment, and the distribution of needs—as identified in the Long-Range Transportation Plan (LRTP), *Charting Progress to 2040*, Needs Assessment—for each community.

Maintaining a database to track the geographic distribution of TIP funding can serve as one important input into the funding decisions made each FFY. When considered in combination with other data, as described above, this data on geographic distribution of Target Program funding can help guide the MPO's public outreach and decision making to help ensure that, over time, we are meeting the transportation needs of the region.

TABLE H-1: TIP Target Programming by Municipality, FFYs 2008-2021

Municipality	FFYs 2008-16 TIP	FFY 2017 TIP	FFY 2018 TIP	FFY 2019 TIP	FFY 2020 TIP	FFY 2021 TIP	FFYs 2017-21 TIP	FFYs 2008-21 TIP	Additional Information
Hopkinton				\$ 8,501,376			\$ 8,501,376	\$ 8,501,376	
Hudson	\$ 11,114,480							\$ 11,114,480	\$300,000 split with Route 128 Business
Hull	\$ 1,885,976							\$ 1,885,976	
Ipswich	\$ 3,250,305							\$ 3,250,305	
Lexington	\$ 7,438,080							\$ 7,438,080	
Lincoln	\$ 22,492,311							\$ 22,492,311	\$39,584,874 split with Concord (602984)
Littleton	\$ 4,200,000							\$ 4,200,000	
Lynn	\$ 5,531,280				\$ 4,953,270		\$ 4,953,270	\$ 10,484,550	
Lynnfield									
Malden									
Manchester									
Marblehead									
Marlborough		\$ 5,613,636					\$ 5,613,636	\$ 5,613,636	
Marshfield	\$ 5,929,736							\$ 5,929,736	GATRA funding split with Duxbury
Maynard									
Medfield									
Medford									
Medway	\$ 12,062,567							\$ 12,062,567	
Melrose	\$ 4,405,030							\$ 4,405,030	
Middleton									
Milford	\$ 7,600,000			\$ 3,149,619			\$ 3,149,619	\$ 10,749,619	
Millis									
Milton									
Nahant									
Natick	\$ 4,450,987			\$15,459,553			\$ 15,459,553	\$ 19,910,540	
Needham	\$ 74,110,472	\$12,269,908	\$ 8,726,330				\$ 20,996,238	\$ 95,106,710	\$46,956,250 split with Dedham (603206); \$28,613,160 split with Wellesley (603711); \$15,464,292 split with Newton (606635)
Newton	\$ 10,988,203		\$ 7,732,146				\$ 7,732,146	\$ 18,720,349	\$7,197,384 split with Watertown (601686); \$15,464,292 split with Needham (606635)
Norfolk	\$ 2,711,153							\$ 2,711,153	\$8,133,460 split with Foxborough and Wrentham (602496)
North Reading									
Norwell									
Norwood						\$ 6,317,236	\$ 6,317,236	\$ 6,317,236	
Peabody									
Pembroke									Submit TIP funding requests through OCPC
Quincy	\$ 3,575,278							\$ 3,575,278	
Randolph	\$ 10,529,796							\$ 10,529,796	\$26,959,389 split with Canton, Dedham, and Westwood (87800)
Reading	\$ 8,072,234							\$ 8,072,234	
Revere									
Rockland	\$ 7,500,000							\$ 7,500,000	\$15,000,000 split with Weymouth (604510)

TABLE H-1: TIP Target Programming by Municipality, FFYs 2008-2021

Municipality	FFYs 2008-16 TIP	FFY 2017 TIP	FFY 2018 TIP	FFY 2019 TIP	FFY 2020 TIP	FFY 2021 TIP	FFYs 2017-21 TIP	FFYs 2008-21 TIP	Additional Information
Rockport									
Salem	\$ 10,126,263			\$ 2,595,840			\$ 2,595,840	\$ 12,722,103	
Saugus									
Scituate									
Sharon									
Sherborn									
Somerville	\$ 23,420,945	\$29,900,000	\$40,000,000	\$40,000,000	\$40,000,000	\$32,000,000	\$ 181,900,000	\$ 205,320,945	\$5,200,000 split with Belmont and Cambridge (600811)
Southborough	\$ 71,521		\$ 7,281,248				\$ 7,281,248	\$ 7,352,769	
Stoneham	\$ 1,809,703							\$ 1,809,703	\$5,429,110 split with Winchester and Woburn (604652)
Stoughton									Submit TIP funding requests through OCPC
Stow									
Sudbury									
Swampscott									
Topsfield	\$ 3,936,780							\$ 3,936,780	
Wakefield	\$ 2,254,636							\$ 2,254,636	
Walpole				\$18,584,373			\$ 18,584,373	\$ 18,584,373	
Waltham									
Watertown	\$ 5,387,812							\$ 5,387,812	\$7,197,384 split with Newton (601686)
Wayland									
Wellesley	\$ 60,001,722	\$12,269,908	\$ 994,184				\$ 13,264,092	\$ 73,265,814	\$28,613,160 split with Needham (603711)
Wenham									
Weston									
Westwood	\$ 24,638,546							\$ 24,638,546	\$26,959,389 split with Canton, Dedham, and Randolph (87800)
Weymouth	\$ 14,883,300	\$12,850,000	\$19,591,490	\$ 8,040,268			\$ 40,481,758	\$ 55,365,058	\$15,000,000 split with Rockland (604510)
Wilmington									
Winchester	\$ 1,809,703							\$ 1,809,703	\$5,429,110 split with Stoneham and Woburn (604652)
Winthrop									
Woburn	\$ 1,809,703	\$ 4,752,838				\$17,784,392	\$ 22,537,230	\$ 24,346,933	\$5,429,110 split with Stoneham and Winchester (604652)
Wrentham	\$ 2,711,153							\$ 2,711,153	\$8,133,460 split with Foxborough and Norfolk (602496)

GATRA = Greater Attleboro-Taunton Regional Transit Authority. MWRTA = MetroWest Regional Transit Authority. OCPC = Old Colony Planning Council.
TIP = Transportation Improvement Program.