Approved for Public Review by the Boston Region Metropolitan Planning Organization on June 11, 2015

DRAFT TRANSPORTATION IMPROVEMENT PROGRAM AND AIR QUALITY CONFORMITY DETERMINATION: FEDERAL FISCAL YEARS 2016–20

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)

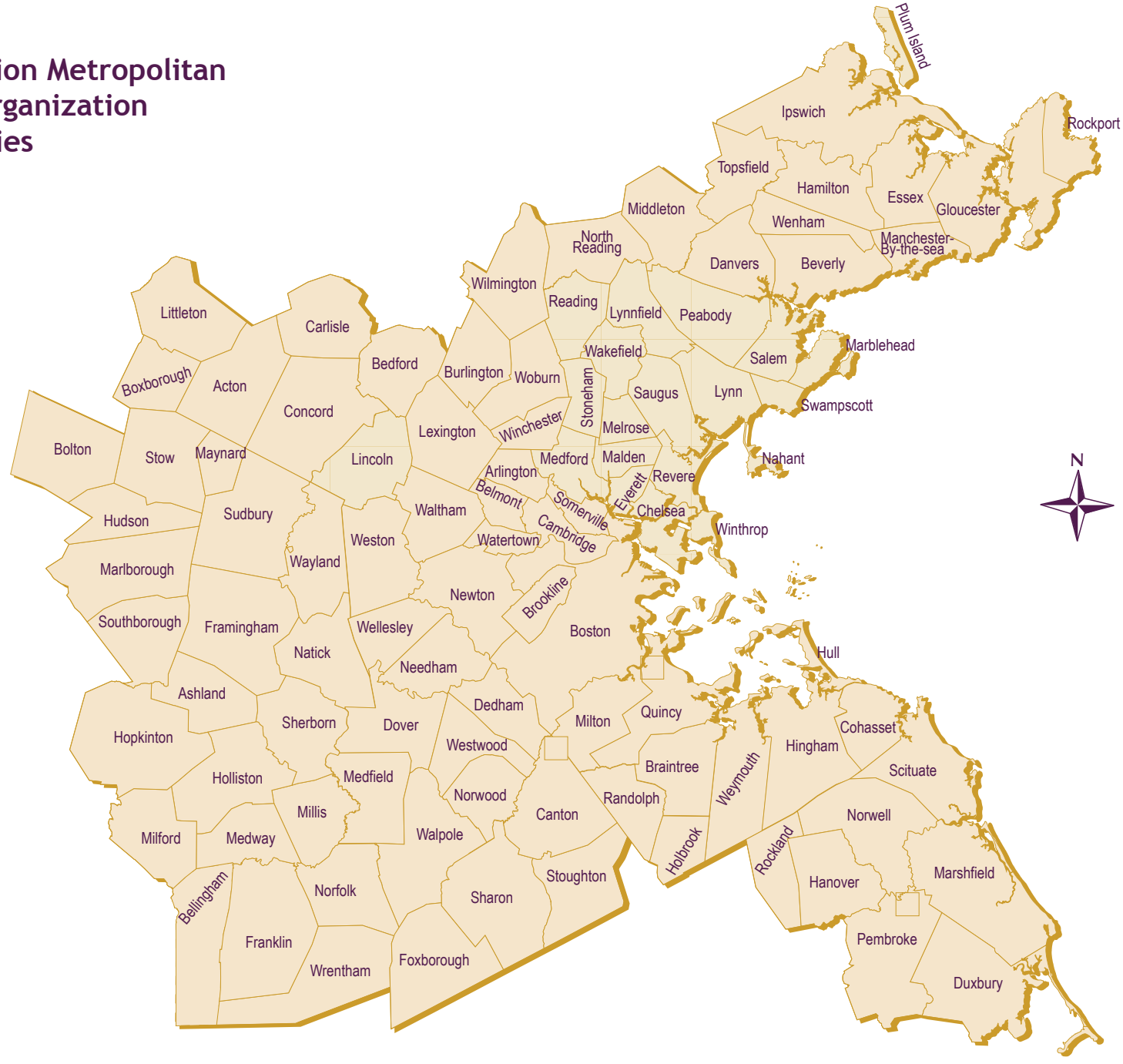
Town of Medway (South West Advisory Planning Committee)

Town of Norwood (Three Rivers Interlocal Council)

Federal Highway Administration (nonvoting)

Federal Transit Administration (nonvoting)

Boston Region Metropolitan Planning Organization Municipalities



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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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ES EXECUTIVE SUMMARY

Federal Fiscal Years 2016–20 Transportation Improvement Program

INTRODUCTION

The Boston Region Metropolitan Planning Organization's (MPO's) five-year, nearly $2 billion transportation capital plan, the Transportation Improvement Program (TIP), is the near-term investment program for the region's transportation system. Guided by the MPO's visions and policies, 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 the evaluation of project requests, propose the programming of current and new projects based on anticipated funding levels, support the MPO in the development of a draft document, and facilitate a public review of the draft document before the MPO endorses the final document.

FEDERAL FISCAL YEARS 2016–20 TIP OVERVIEW

The federal fiscal years (FFYs) 2016–20 TIP consists of approximately $940 million worth of transportation investments in the Highway Program and more than $1 billion in the 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 it in a state of good repair.

This TIP devotes a more significant portion of funding for the targeted expansion of the rapid transit system and new shared-use paths than previous TIPs. 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.

FFYS 2016–20 TIP INVESTMENTS

Transit Program

The Transit Program of the TIP provides funding for projects and programs that address capital needs that have been given priority 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.

Over the next four fiscal years, the MBTA will invest heavily in its bus fleets.

The MBTA will also invest in the MBTA's bridges and tunnels. Funds will also be dedicated to improving accessibility at MBTA subway stations and other light rail, commuter rail, and bus stations throughout the system, as well as the Silver Line. Transit expansion will be funded in the Highway Program as discussed below.

Highway Program

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

Over the next five years, more than $230 million (25 percent) of funds in the Highway Program will be used to resurface interstate and state routes, replace highway lighting and signage, and add travel lanes and shoulders to more than three miles of Route 128. Approximately $260 million (27 percent) will be spent to modernize roadways in order to balance the needs of all users—motorists, bicyclists, and pedestrians. Multimodal projects, such as the improvements to Route 9 in Brookline, will improve safety and enhance access for pedestrians, bicyclists, transit riders, and automobiles. In total, roadway modernization projects will add 24 miles of new on-road bicycle accommodations.

Nearly $260 million (27 percent) of the Highway Program will be used to address functionally obsolete and structurally deficient bridges.

The program also invests in the targeted expansion of transit service and bicycle and pedestrian facilities to grow the transit, bicycle, and pedestrian networks. In the draft TIP, $158 million (17 percent) of the Highway Program funds are allocated to transit to extend the Green Line beyond College Avenue to Route 16/Mystic Valley Parkway in Medford. Lastly, the MPO will invest nearly $35 million (4 percent) to extend rail trails, construct shared-use paths, and improve bicycle and pedestrian facilities around schools. A majority of these facilities will also provide direct access to MBTA stations: the Bruce Freeman Rail Trail will link to the West Concord Station, the Cochituate Rail Trail will connect to the Natick Station, and the New Fenway Multi-use Path will improve access to the Fenway Station and the Yawkey Station.

FINANCING THE FFYS 2016–20 TIP

Transit Program

Funds programmed in the Transit Program of the TIP are allocated by the Federal Transit Administration 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 federal transit funds in the region.

Under the federal transportation legislation, Moving Ahead for Progress in the 21st Century Act (MAP-21), funding is allocated by the following categories:

- **Section 5307 (Urbanized Area Formula Grants):** provides grants to urbanized areas to support public transportation based on the level 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

Highway Program

The Highway Program of the TIP was developed under the assumption that there would be $600 million of federal dollars available annually over the next five years for highway projects statewide. In Massachusetts, federal highway program funding is allocated to several main funding categories.

First, MassDOT allocates federal funding to Grant Anticipation Notes (GANs) payments. Over the four years of this TIP, approximately $245 million of the Highway Program is dedicated to GANs payments for the Accelerated Bridge Program. MassDOT matches the remaining amount of federal funding with an 80 percent (federal) and 20 percent (state) split.

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 federal funding among the state's MPOs for programming. This discretionary funding for MPOs is suballocated by formula to determine "Regional Target" amounts. MassDOT develops these targets in consultation with the Massachusetts Association of Regional Planning Agencies. Each MPO can decide how to prioritize their Regional Target funding.

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. The criteria are based on the MPO's visions and policies, which were adopted for its current LRTP, *Paths to a Sustainable Region*. These criteria closely align with the draft LRTP, *Charting Progress to 2040*, and MPO staff plan to update the evaluation criteria to guide future TIP investments after *Charting Progress to 2040* is finalized.

Outreach and Data Collection

The outreach process begins early in the fiscal year when MPO staff begin to brief local officials and members of the public on the upcoming year's development process. Each November, MPO staff ask the staffs of cities and towns in the region to

identify their priority projects for consideration for federal funding. MPO staff compile the 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. 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, the staff evaluates projects based on how well they address the MPO's policies in the following categories:

- System Preservation, Modernization, and Efficiency
- Livability and Economic Benefit
- Mobility
- Environment and Climate Change
- Environmental Justice
- Safety and Security

This year, the staff completed evaluations for approximately 50 projects. A basic level of design is needed to provide enough information to fully evaluate a potential TIP project. In some cases, not enough information is available to fully evaluate a project across all six policy categories. The evaluation results are posted on the MPO's website, allowing municipal officials and members of the public to view and provide feedback on the evaluation results.

Staff Recommendation and Draft TIP

MPO staff use the project information and evaluation results to prepare a First-Tier List of Projects—projects that have received high scores through the TIP evaluation process and could be made ready for advertisement within the time frame of the upcoming TIP. MPO staff then prepare a recommendation for the TIP considering the First-Tier list and other factors, such as the construction readiness of a 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 staff recommendation proposes the projects to be funded with the MPO's Regional Target funding over the next five years. This year, the MPO voted to add a fifth year to the TIP in order to align with the first time band of the LRTP.

The staff recommendation is always financially constrained. This year, there was approximately $440 million available for MPO Regional Target projects in FFYs 2016–20. In April 2015, the staff recommendation was submitted to the MPO and was discussed.

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 mid-June of 2015, the MPO voted to release the draft FFYs 2016–20 TIP for a 30-day public comment period. The MPO invites members of the public, regional and local officials, and other stakeholders in the Boston region to review the proposed program during this period. In addition, several outreach sessions are held during the public comment period to solicit comments on the draft TIP.

After the comment period ends, the MPO reviews all of the comments it has received and makes appropriate changes to the document. This year, the MPO is scheduled to endorse the FFYs 2016–20 TIP on July 30, 2015. Once the TIP has been endorsed by the MPO, it will be incorporated into the State Transportation Improvement Program (STIP), which is a compilation of TIPs from all of the MPOs in Massachusetts, and sent to the Federal Highway Administration and Federal Transit Administration to enable the document to be approved by the federal agencies by September 30, 2015 before the start of FFY 2016.

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 affected municipalities and other stakeholders are notified through the MPO's email listserv, MPOinfo. 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 may also 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:

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Boston, MA 02116-3968

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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 continuing, cooperative, and comprehensive (3C) transportation-planning process that results in plans and programs consistent with the planning 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 nontransportation objectives and impacts when analyzing project issues.
- Assist implementing agencies 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 Moving Ahead for Progress in the 21st Century (MAP-21); the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU); the Transportation Equity Act for the 21st Century (TEA-21); the Americans with Disabilities Act (ADA); the Clean Air Act; Title VI of the Civil Rights Act of 1964; and Executive Order 12898: Federal Actions to Address Environmental Justice

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

in Minority Populations and Low-Income Populations.

THE BOSTON REGION MPO

The Boston Region MPO is a 22-member board consisting of state agencies, regional organizations, and municipalities; 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 (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's process to be certified as meeting federal requirements; this certification is a prerequisite for receiving federal transportation funds.

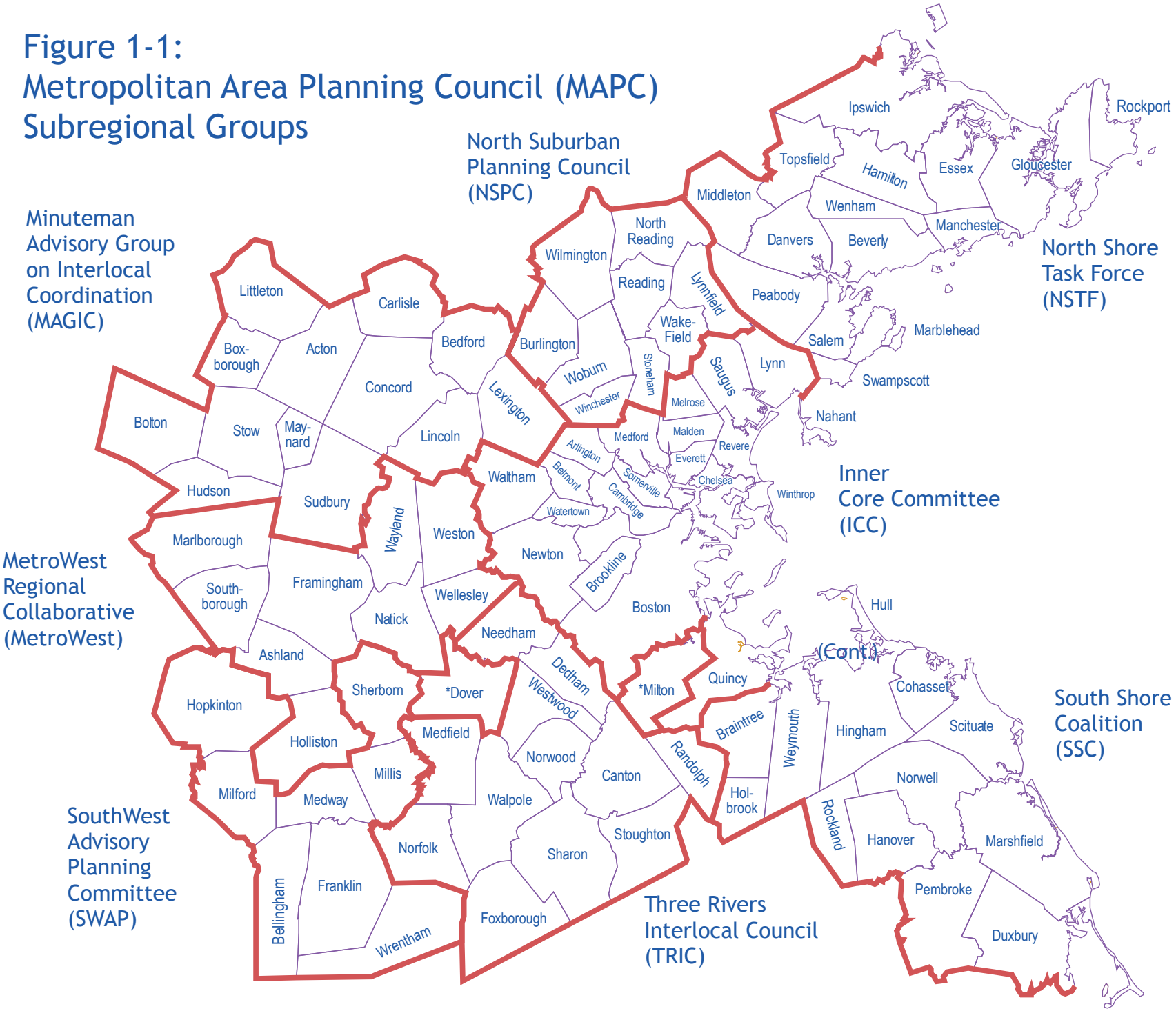
This TIP was developed and approved by the MPO members listed below. The permanent MPO voting members are the Massachusetts Department of Transportation (MassDOT), Metropolitan Area Planning Council (MAPC), Massachusetts Bay Transportation Authority (MBTA), MBTA Advisory Board, Massachusetts Port Authority (Massport), City of Boston, and Regional Transportation Advisory Council. The elected MPO voting members and their respective seats are:

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: SouthWest Advisory Planning Committee
Town of Norwood: Three Rivers Interlocal Council

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

- *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.

Figure 1-1:
Metropolitan Area Planning Council (MAPC) Subregional Groups



*Several communities are represented by more than one subregional group. Dover is in TRIC and SWAP; Milton and Needham are in ICC and TRIC.

- 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* is responsible for all rail and transit initiatives, and it oversees the MBTA and all Regional Transit Authorities of the Commonwealth. The MassDOT Board of Directors also serves as the governing board of the MBTA.

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. A seven-member board of directors was appointed by the governor of Massachusetts to be the governing body of both MassDOT and the MBTA, which is part of MassDOT but retains a separate legal existence.
- The *MBTA Advisory Board* was created by the Legislature in 1964 through the same legislation that created the MBTA. The Advisory Board consists of representatives of the 175 cities and towns that compose the MBTA district. Cities are represented by either the city manager or mayor, and towns are represented by the chairperson of the board of selectmen. Specific responsibilities of the Advisory Board include review of and comment on the Program for Mass Transportation (PMT), proposed fare increases, and the annual MBTA Capital Investment Program; review of the MBTA's documentation of its net operating investment per passenger; and review of the MBTA's operating budget.
- *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 *MAPC* is the regional planning agency for the 101 cities and towns in the MAPC/MPO district. It is composed of the chief executive (or her/his 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 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 decision-making processes of the MPO 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.

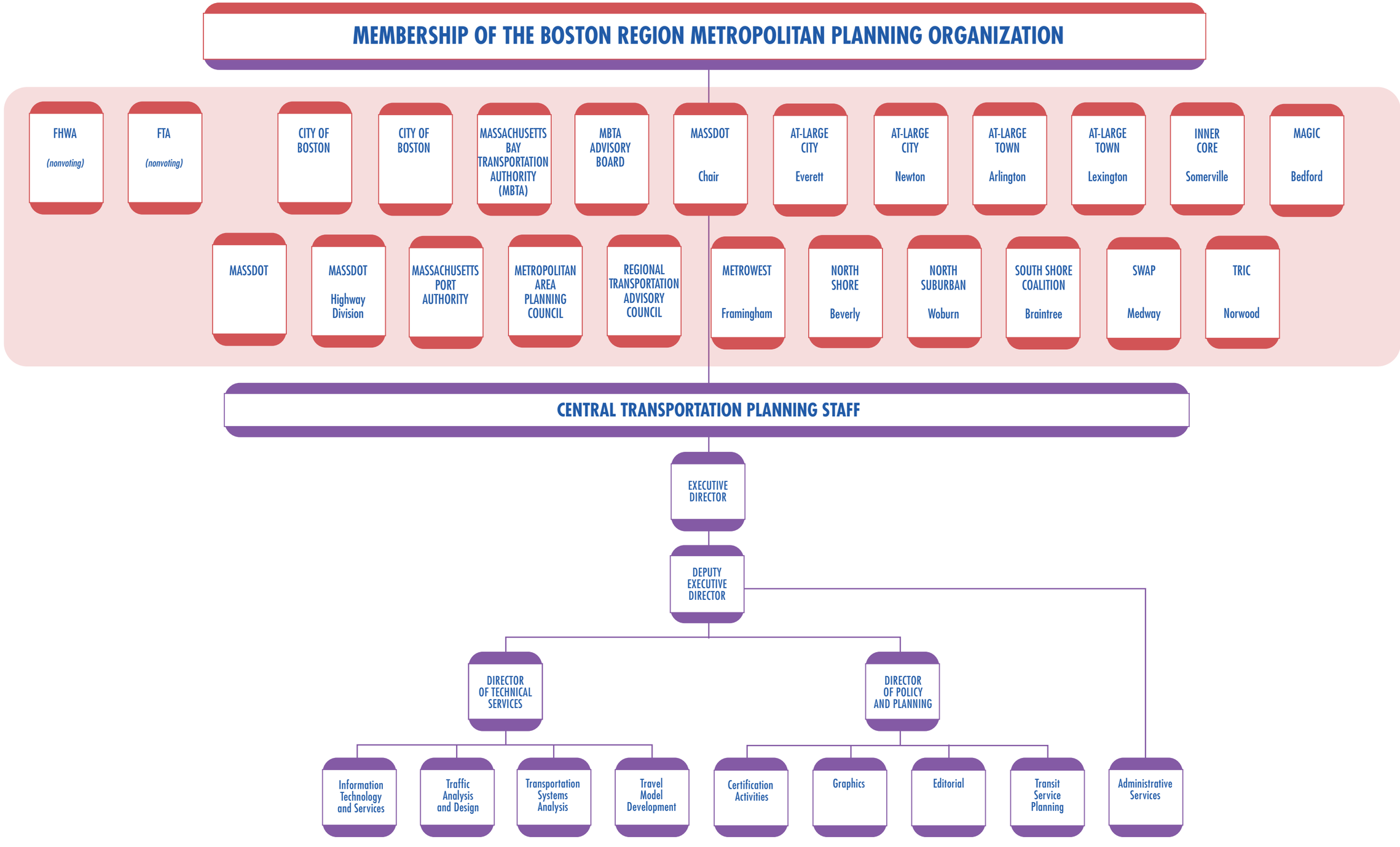
Two members participate in the Boston Region MPO in an advisory (nonvoting) capacity, reviewing the LRTP, the TIP, and the UPWP to ensure compliance with federal planning and programming requirements:

- The *FHWA* and *FTA* oversee the highway and transit programs of the US Department of Transportation under pertinent legislation and the provisions of MAP-21.

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:

- The *CTPS* was created by the MPO to carry out general and 3C transportation-planning activities on behalf of the MPO and to provide agencies with analyses required for their decision-making.

Figure 1-2:
Boston Region MPO Organizational Chart



- 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 regarding 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 developing 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 at least the next 20 years. It defines an overarching vision of the future of transportation in the region, establishes goals and objectives that will lead to the 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. *Paths to a Sustainable Region*, the LRTP endorsed by the MPO in 2011, was in effect during development of this document. The MPO is schedule to endorse its next LRTP, *Charting Progress to 2040*, in 2015.

- 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 four-year period. The types of transportation projects funded include major highway reconstruction and maintenance, arterial and intersection improvements, public transit expansion and maintenance, bicycle paths and facilities, 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, and the Boston Region MPO updates the TIP annually. An MPO-endorsed TIP is incorporated into the State Transportation Improvement Program for its submission to FHWA, FTA, and the Environmental Protection Agency for approval.

- The *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 by MassDOT, the MBTA, and Massport.

CONSISTENCY WITH FEDERAL PLANNING REGULATIONS

MAP-21 Legislation

MAP-21 legislation requires all MPOs to carry out 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.
- Maintain transportation models and data resources to support air-quality conformity determinations as well as long- and short-range planning work.

MAP-21 legislation establishes 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 while eliminating delays in the development and delivery process, lessening regulatory burdens, and improving work practices of the agencies.

MAP-21 also establishes performance-based planning as an integral part of the metropolitan planning process. Under MAP-21, states will develop performance goals, guided by the national goals cited in MAP-21, and MPOs will work with state departments of transportation (DOTs) to develop MPO performance targets. The TIP will integrate the MPO's 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 the air-quality standards in any area.

Transportation control measures identified in the 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 the 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 on the basis of 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 ADA

Title III of the 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 of GHG emissions, and therefore is a major focus of the Clean Energy and Climate Plan for 2020. MassDOT's approach to supporting implementation 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.
- **To support smart-growth development.** MassDOT will achieve this by working with MPOs and other partners to make transportation investments that make denser smart-growth development patterns, which support reduced GHG emissions, possible.

The Commonwealth's 13 MPOs are integrally involved in helping to achieve the GreenDOT objectives and supporting the GHG reductions mandated under the GWSA. The MPOs seek to realize these objectives by prioritizing projects 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 identify anticipated GHG impacts of the planned and programmed projects and also to use GHG impacts as a criterion to prioritize transportation investments.

COORDINATION WITH OTHER PLANNING ACTIVITIES

LRTP

The MPO considered the degree to which a proposed TIP project would advance the goals and objectives that guided the development of its LRTP. The MPO also reviewed TIP projects within the context of the recommended projects included in the LRTP.

UPWP

The MPO aims to implement the recommendations of past studies and reports of the UPWP. This information was considered by the MPO in the development of the draft TIP.

Congestion Management Process

The purpose of the Congestion Management Process (CMP) is to 1) monitor and analyze the performance of facilities and services; 2) develop strategies for the management of congestion based on the results of monitoring; and 3) move these strategies into the implementation stage by providing decision makers in the region with information and recommendations for the improvement of transportation system performance. 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 were considered for inclusion in this TIP.

The MBTA's PMT

In 2009, the MBTA adopted its current PMT, which is the MBTA's long-range capital plan. The PMT was

developed with extensive public involvement and was approved by the MBTA Advisory Board. The next PMT development process will begin in 2015 and identify a set of achievable investments that will help the MBTA and MassDOT advance towards a future transit system that meets our statewide mobility goals and objectives.

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, *Paths to a Sustainable Region*. 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) developed 10 core themes derived from a broad-based public participation process that articulated the expressed concerns, needs, and aspirations of Massachusetts residents related to their transportation network. These themes formed the basis for the YMM Interim Report (2009), and they were 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 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 or designee (co-chair), the Secretary of Health and Human Services or designee (co-chair), the Secretary of Energy and Environmental Affairs or designee, the Administrator of Transportation for Highways or designee, the Administrator of Transportation for Mass Transit or

designee, and the Commissioner of Public Health or designee.

The HTC also promotes improved coordination among the public and private sectors and advocacy groups, as well as 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 Patrick-Murray Accelerated Bridge Program (ABP) represents a monumental investment in Massachusetts' bridges. This program will greatly reduce the number of structurally deficient bridges in the state system while creating thousands of construction jobs.

To complete 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.

Since 2008, the number of former structurally deficient bridges has dropped from 543 to 416, a decline of more than 23 percent. As of October 1, 2014, the ABP Program has completed 160 bridge projects, with another 29 bridge projects currently in construction and an additional 5 bridge projects scheduled to start construction within the next calendar year. Over the course of the eight-year ABP program, more than 250 bridges will be replaced or repaired.

MassDOT Mode Shift Goal

In the fall of 2012, MassDOT announced a statewide mode shift goal: to triple the share of travel in Massachusetts that uses bicycling, transit, and walking. The mode shift goal aims to foster improved quality of life by enhancing 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 would provide all customers with access to safe and comfortable walking, bicycling, and transit options.

CONSISTENCY WITH MPO POLICIES

In choosing projects to include in the TIP, the Boston Region MPO considers the degree to which a project promotes the following MPO policies that were adopted in April 2010 and are the basis for the TIP evaluation process:

System Preservation, Modernization, and Efficiency

Maximizing efficiency, reliability, mobility, and accessibility within our existing infrastructure while taking into account current and ongoing fiscal constraints will require following a program of strategic needs-based investments. To accomplish

this, the MPO will put a priority on programs, services, and projects that will:

- Develop low-cost strategies and pursue alternative funding sources and mechanisms.
- Use intelligent transportation systems (ITS), new technologies, transportation systems management, and management and operations and will turn to technology before expansion.
- Bring the transportation network—particularly the transit, bicycle, and pedestrian systems—into a state of good repair, maintain them at that level, and set funding levels to make this possible.
- Maintain bridges and roads.
- Support the increase of Chapter 90 (the grant program to fund municipalities' highway capital improvements) funding so that local road maintenance can remain funded by that program.

Livability

To make livability a hallmark of communities in the MPO region and to achieve mobility, foster sustainable communities, and expand economic opportunities and prosperity, the MPO will put a priority on programs, services, and projects that:

- Are consistent with MetroFuture land-use planning. This means supporting transportation projects serving 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 agencies; and areas with relatively high-density development.[2]
- Support health-promoting transportation options, such as bicycle and pedestrian modes, and activities that reduce single-occupant-vehicle use and overall vehicle-miles (VMT) traveled.
- Expand and close gaps in the bicycle and pedestrian network and promote a Complete Streets philosophy.
- Support transportation design and reasonably priced enhancements that protect community cohesiveness, identity, and quality of life.

Mobility

To improve mobility for people and freight, the MPO will put a priority on programs, services, and projects that:

- Strengthen existing connections and create new connections within and between modes.
- Improve access to transit for all persons and provide accessibility of transit for people with disabilities.
- Improve the frequency, span, and reliability of transit services.

[2] MetroFuture is MAPC's 30-year plan for our region, which serves as a guide for work in all areas of the agency. The MetroFuture plan supports a vision of smart growth and regional collaboration through the promotion of efficient transportation systems, conservation of land and natural resources, improvement of residents' health and education, and an increase in equitable economic-development opportunities for prosperity.

- Expand transit, bicycle, and pedestrian networks while focusing bicycle investments (lanes and paths) on moving people between activity centers and linking with transit.
- Integrate payment methods for fares and parking across modes.
- Support transportation-demand management, Transportation Management Associations, shuttles, and carpooling.
- Address capacity constraints and bottlenecks in the existing roadway system using low-cost approaches (transportation system management strategies, management and operations strategies, ITS, and new technologies) before expansion.

Environment

To protect the environment and minimize the impacts from transportation systems, the MPO will put a priority on programs, services, and projects that:

- Improve transportation in areas of existing development, which will reduce pressure to develop greenfields and possibly support development that will clean up brownfields for productive use.
- Promote energy conservation, fleet management and modernization, and high-occupancy travel options to reduce fuel consumption and emissions of pollutants.
- Protect community character and cultural resources.
- Protect natural resources by planning early to avoid or mitigate impacts on storm water or groundwater and on other resources.
- Protect public health by reducing air pollutants, including fine particulates, and avoid funding projects that increase exposure of at-risk populations to ultrafine particulates.
- Lower the life-cycle costs from construction to operation.
- Increase the mode share for transit and nonmotorized modes.
- Promote energy conservation and the use of alternative energy sources.
- Promote a context-sensitive design philosophy consistent with the MassDOT Highway Division design guidelines.

Transportation Equity

To provide for the equitable sharing of the benefits and burdens of transportation investments among all residents of the region, the MPO will put a priority on programs, services, and projects that:

- Continue outreach to low-income and minority residents and expand data collection and analysis that include the elderly, youth, and LEP populations in order to identify transportation needs.
- Continue to monitor system performance.
- Address identified transportation equity issues and needs related to service and to removing or

minimizing burdens (air pollution, unsafe conditions, community impacts).

- Track implementing agencies' actions responding to transportation needs identified in MPO outreach and analysis that are related to transportation equity and encourage action to address these needs.
- Strengthen avenues for involving low-income and minority persons in decision-making.
- Reduce trip times for residents of low-income and minority neighborhoods and increase transit service capacity.
- Give priority to heavily used transit services over new, yet-to-be-proven services.

Climate Change

To meet targets for reducing GHG emissions, the MPO will put a priority on programs, services, and projects that:

- Implement action to meet defined targets for reducing VMT and tie transportation funding to VMT reduction.
- Support stronger land-use and smart growth strategies.
- Increase transit, bicycle, and pedestrian options.
- Invest in adaptations that protect critical infrastructure from the effects of climate change.
- Encourage strategies that utilize transportation-demand management.
- Promote fleet management and modernization, idling reduction, and alternative fuel use.
- Contribute to reduced energy use in the region. Energy use will be part of the environmental-impact analysis of all projects.

Safety and Security

To provide for maximum transportation safety and to support security in the region, the MPO will put a priority on programs, services, and projects that:

- Implement actions stemming from all-hazards planning.
- Maintain the transportation system in a state of good repair.
- Use state-of-the-practice safety elements, address roadway safety deficiencies (after safety audits) in order to reduce crashes, and address transit safety (which will include following federal mandates).
- Support incident-management programs and ITS.
- Protect critical transportation infrastructure from natural hazards and human threats, address transit security vulnerabilities, and upgrade key transportation infrastructure to a "hardened" design standard.
- Improve safety for pedestrians and cyclists and ensure that safety provisions are incorporated into shared-use corridors.

- Reduce the severity of crashes, especially via measures that improve safety for all.
- Promote safety through supporting the reduction of base speed limits (in municipalities) to 25 mph and through education about and enforcement of rules of the road for all modes of transportation that use the roadways.
- Improve the transportation infrastructure to better support emergency response and evacuations.

In the development of the LRTP, *Charting Progress to 2040* (scheduled to be endorsed in July 2015), the Boston Region MPO updated its vision, goals, and objectives. These updated goals and objectives, listed on the following pages, will guide future investment decisions through the LRTP, TIP, and UPWP. Following the MPO's endorsement of *Charting Progress to 2040,* MPO staff will update the TIP evaluation criteria to align future investment decisions with the new goals and objectives.

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 transportationoptions—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
ECONOMIC VITALITY	
Ensure our transportation network provides a strong foundation for economic vitality	• Minimize the burden of housing and transportation costs for residents in the region • Prioritize transportation investments that serve targeted development sites • Prioritize transportation investments consistent with the compact-growth strategies of MetroFuture

CENTRAL VISION STATEMENT (CONT.)

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

GOALS	OBJECTIVES
CAPACITY MANAGEMENT/MOBILITY	
Use existing facility capacity more efficiently and increase healthy transportation capacity	• 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 percentage of population and places of employment within one-quarter mile of transit stations and stops • Increase percentage of population and places of employment with access to bicycle facilities • Improve access to and accessibility of transit and active modes • 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 • Enhance intermodal connections • Emphasize capacity management through low-cost investments; give priority to projects that focus on lower-cost O&M-type improvements such as intersection improvements and Complete Streets solutions
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

How to allocate scarce funds while realizing the best possible transportation system is one of the most important decisions an MPO faces in planning for its region's future. 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, MPOs' investments choices must be guided by policies that help identify the most viable solutions.

Thus, each year, the Boston Region MPO conducts a 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 to the Boston Region MPO manages the annual development process for the TIP. MPO staff help evaluate project requests, propose programming of new and current projects based on anticipated 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 a multiyear authorization act that establishes a maximum level of federal transportation funding per federal fiscal year. Establishing this level of funding is referred to as an authorization. The most recent authorization act is Moving Ahead for Progress in the 21st Century (MAP-21), which was signed into law on July 6, 2012.

Once the authorization level has been established, the United States Department of Transportation annually allocates funding among the states, 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 committed to a state because of federally imposed funding limitations on spending in a given fiscal year, referred to as the obligation authority.

Obligation authority may be imposed in a multiyear authorization act, in the annual appropriations act, or in both. Obligation authority is typically less than a state's apportionment. 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 2016–20 TIP was developed with the assumption that the Statewide Federal Highway Program funding would be $600 million annually for the next four 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. During the four years of this TIP, approximately $245 million of the Highway Program is dedicated to GANs payments for the Accelerated Bridge Program.

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

MassDOT matches the remaining amount of federal funding with an 80 percent (federal) and 20 percent (state) split. Next, MassDOT allocates funding based on the following categories:

- **Statewide Infrastructure Items**: interstate highway maintenance, intelligent transportation systems, Safe Routes to Schools programs, 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

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.

After these needs have been satisfied, the remaining federal funding is allocated to the state's MPOs for programming. This discretionary funding for MPOs is suballocated by formula to determine "regional target" amounts, which are developed in consultation with the Massachusetts Association of Regional Planning Agencies. Each MPO decides how its Regional Target funding is prioritized. During the next five years, the Boston Region MPO's total Regional Target Program funding is approximately $440 million, an average of $88 million annually. 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

The Federal Transit Program is allocated within the Boston Urbanized Area (UZA) by formula to the transit service operators. The formula considers passenger-miles, population density, and other factors associated with each transit provider. The three regional transit authorities (RTAs) in the Boston Region MPO area are the MBTA, MWRTA, and 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

Many federal-aid transportation programs support transportation activities in metropolitan areas, each area having different requirements and program characteristics. Non-federal aid (state funds) for the statewide infrastructure items, the bridge program, and the regional targets is derived from various sources, including the Commonwealth's Transportation Bond Bill. Under MAP-21, federal programs that fund projects in the FFYs 2016–20 TIP are listed in the following two tables.

TABLE 2-1
Federal Transit Administration Programs

MAP-21 Program	Eligible Uses	Examples
Urbanized Area Formula Grants (**Section 5307**)	Transit capital and operating assistance in urbanized areas. Under MAP-21, job access and reverse-commute activities (formerly funded under Section 5316) are now eligible for funding under Section 5307.	Preventive Maintenance – FFYs 2016–19
Fixed Guideway/Bus (**Section 5337**)	Replacement, rehabilitation, and other state-of-good-repair capital projects.	MBTA Bridge and Tunnel Program – FFYs 2016–19
Bus and Bus Facilities (**Section 5339**)	Capital projects to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities.	MBTA Systems Upgrades Program – FFYs 2016–19
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. Under MAP-21, New Freedom program (Section 5317) activities are now eligible under Section 5310.	

TABLE 2-2
Federal Highway Administration Programs

MAP-21 Program	Eligible Uses	Examples
Congestion Mitigation and Air Quality Improvement (**CMAQ**)	A wide range of projects in air quality nonattainment and maintenance areas for ozone, carbon monoxide, and small particulate matter, which reduce transportation-related emissions.	Green Line Extension Project (Phase 2), College Avenue to Mystic Valley Parkway/Route 16– FFYs 2016–20
Highway Safety Improvement Program (**HSIP**)	Implementation of infrastructure-related highway safety improvements	Reconstruction of Route 85/ Maple Street (Marlborough) – FFY 2017
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 resurfacing, restoring, and rehabilitating routes on the Interstate Highway System.	Route 128 Improvement Program (Needham and Wellesley) – FFYs 2016–18
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.	Reconstruction and Widening on Route 18 (Weymouth and Abington) – FFYs 2016–19
Transportation Alternatives Program (**TAP**)	Construction of infrastructure-related projects (for example, sidewalk, crossing, and on-road bicycle facility improvements). Under MAP-21, Safe Routes to School Program and Recreational Trails Program are now eligible under TAP.	Veterans Memorial School (Saugus) – FFY 2016
High-Priority Projects (**HPP**) [Carried over from SAFETEA-LU]	Specific, named projects for which funds are carried over from previous authorizations.	Traffic Signal Improvements on Blue Hill Avenue and Warren Street (Boston) – FFY 2018
Discretionary Funding	Specific projects included annual appropriations that are funded through grant programs such as the Transportation, Community, and System Preservation Program; Value Pricing Pilot Program; and Transportation Infrastructure Finance and Innovation Act Program.	

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 visions and policies, which were adopted for its current Long-Range Transportation Plan, *Paths to a Sustainable Region.* These criteria closely align with the draft LRTP, *Charting Progress to 2040*, and MPO staff plan to update the evaluation criteria to guide future TIP investments after *Charting Progress to 2040* is finalized.

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 and municipal support. Background information about the TIP project evaluation process is presented in Appendix B and on the MPO's website, www.bostonmpo.org. The MPO reviews the effectiveness of this evaluation method and alters the process as appropriate.

Outreach and Data Collection (November 2014–February 2015)

The outreach process begins early in the federal fiscal year, when MPO staff begin to brief local officials and members of the public on the year's development process. Each November, MPO staff asks the staffs 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. The staff then compiles the project funding requests and relevant information into a Universe of Projects list for the MPO. The Universe of Projects list consists of all of the identified projects being advanced for possible funding; including projects in various stages of development, from the conceptual stage to the stage when a project is fully designed and ready to be advertised for construction.

New projects must be initiated by the MassDOT Highway Division before they can be considered for programming in the TIP. Details of the project initiation process and relevant documents can be found on MassDOT's Project Review Committee's webpage, www.mhd.state.ma.us. Municipal TIP Contacts and the MPO staff coordinate with each other to update each project´s Project Funding Application Form through the MPO´s Interactive TIP Database, www.bostonmpo.org. The form provides information on a project´s background, conditions and needs of the existing infrastructure, development status, and a project's potential to help the region attain the MPO's visions. More information on the Project Funding Application Forms is presented in Appendix B.

The MPO has begun to monitor the anticipated greenhouse gas (GHG) emission impacts of planned and programmed projects, in order to consider these impacts when prioritizing transportation investments. For more information on the GHG emission monitoring and evaluation, see Appendix C.

Evaluation of Projects (February–March 2015)

The MPO uses TIP project-evaluation criteria to develop a numeric score that indicates how well a project would help the region attain the MPO's visions. This score can be used to guide the MPO in selecting the projects that would be most successful in this regard. The MPO's visions include: maintain a state of good repair, focus investments on existing activity centers, improve mobility for people and freight, reduce the level GHG emissions, minimize environmental burdens from transportation facilities on low-income and minority populations, and provide safe transportation for all modes. Projects with components and outcomes that help attain the MPO's goals receive higher scores.

The project evaluation criteria consist of 35 questions across six policy categories. A figure that illustrates the TIP evaluation criteria (on the following page) provides an overview of the policy categories, their point values, and the criteria measures.

The MPO staff requires a functional design report (FDR) to conduct a complete evaluation (see MassDOT's *Project Development and Design Guide* for information about what is included in an FDR). If not enough information is available, a project cannot be fully evaluated across all categories.

The summary of evaluation results for projects being considered for the federal fiscal years (FFYs) 2016–20 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 2015)

The MPO staff used evaluations and project readiness information to prepare a first-tier list of projects. This is a list of the projects with the highest ratings that could be made ready for advertising within the TIP's time horizon (the next four federal fiscal years). The staff relies on the MassDOT Highway Division to provide information about what year a project would be ready for advertising. In developing its recommendations for the draft TIP, MPO staff strongly considered the first-tier list of projects. The MPO staff also factored in projects that are listed in the LRTP, considered geographic equity to help ensure that the list of projects addresses needs throughout the region, and accounted for costs to comply with the fiscal constraint requirement.

Bridge Program—Project Selection Process

The project selection criteria for the bridge program are based on MassDOT's continuous, ongoing prioritization process. The underlying basis of this prioritization is the condition of the bridges, based largely on information gathered through the Bridge Inspection Management System.

TIP Evaluation Criteria

SUBCATEGORY	CATEGORY	Project Rating
• Improves substandard pavement • Improves substandard signal equipment condition • Improves traffic signal operations • In a Congestion Management Process–identified area • Improves intermodal accommodations/connections to transit • Implements ITS strategies other than traffic signal operations	**System Preservation, Modernization and Efficiency**	36
• Design is consistent with complete streets policies • Provides multimodal access to an activity center • Reduces auto dependency • Serves a targeted development site • Provides for development consistent with the goals of MetroFuture • Improves the quality of life	**Livability and Economic Benefit**	29
• Existing peak-hour level of service (LOS) • Improves an MPO- or state-identified freight movement issue • Improves proponent-identified primary mobility issue • Improves MPO-identified mobility issue • Reduces congestion • Improves transit reliability	**Mobility**	25
• Air quality (improves/degrades) • CO_2 reduction • Is in an EOEEA-certified Green Community • Reduces VMT/VHT • Improves identified environmental impact	**Environment and Climate Change**	25
• Improves transit for an EJ population • Design is consistent with complete streets policies in an EJ area • Improves an MPO-identified EJ transportation issue	**Environmental Justice**	10
• Improves emergency response • Improves ability to respond to extreme conditions • EPDO/Injury Value • Improves proponent-identified primary safety need • Improves MPO-identified primary safety issue • Improves freight-related safety issue • Improves bicycle safety • Improves pedestrian safety • Improves safety or removes an at-grade railroad crossing	**Safety and Security**	29

Statewide Infrastructure Items—Project Selection Process

The project selection process for the statewide infrastructure items involves coordination between the MassDOT divisions to review and prioritize projects that advance important statewide policy goals for improving mobility, protecting the environment, promoting economic growth, and improving public health and quality of life. Other prioritization factors include project readiness and consistency with MassDOT's GreenDOT sustainability policy, the Bay State Greenway Priority 100, and the Safe Routes to School Program.

Transit—Project Selection Process

The process of selecting transit projects for the TIP draws primarily from the MBTA Capital Investment Program (CIP). The CIP is a rolling five-year plan that outlines the transit system´s infrastructure needs and planned investments within that short-range time frame. The MBTA updates the CIP annually. Prioritization of projects for inclusion in the CIP is based on their impacts on the following, as defined in the MBTA's enabling legislation: effectiveness of the commonwealth's transportation system; service quality; the environment, health, and safety; the state of good repair of MBTA infrastructure; and the MBTA's operating costs and debt service.

Projects that receive the highest priority are those with the greatest benefit and the least cost, as prioritized by the following criteria:

- Health and the Environment: To qualify for points in this area, proposed projects must correct an existing deficiency for passengers and/or employees in matters of their health and/or the environment.
- State of Good Repair: This criterion measures the degree to which proposed projects improve the condition of the MBTA's existing infrastructure.
- Cost-Benefit: Projects receive scores based on the number of passengers they benefit, their net operating costs, and the debt service necessary to support their capital costs.
- Operational Impact: This measures the extent to which proposed projects are deemed operationally critical, as well as a project's ability to improve the effectiveness of the commonwealth's transportation network in general.
- Legal Commitments: To qualify for points in this area, projects must contribute to fulfilling a legal obligation of the MBTA, such as the MBTA's Key Station Plan.

The transit element of the TIP also includes the federal-aid programs of the other two transit authorities in the region, the Cape Ann Transportation Authority (CATA) and MetroWest Regional Transit Authority (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. They also consider 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.

In early-June 2015, the MPO voted to release the draft FFYs 2016–20 TIP for a 30-day public review and comment period. The MPO invites members of the public, regional and local officials, and other stakeholders in the Boston region to review the proposed program. Several TIP outreach sessions are held during the public comment period to solicit comments on the draft TIP; summaries of these are listed in Appendix F.

Approval of the Draft TIP

After the comment period ends, the MPO reviews all comments it has received and makes appropriate changes to the TIP document. This year, the MPO is scheduled to endorse the FFYs 2016–20 TIP on July 30, 2015. Once the TIP has been endorsed by the MPO, it is incorporated into the State Transportation Improvement Program (STIP) and sent to the Federal Highway Administration and Federal Transit Administration so that the document may be approved by the federal agencies by September 30, 2015 before the start of FFY 2016.

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 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 are notified of pending amendments. Legal notices of amendments are placed in the region's major newspaper, in its most widely read minority newspaper and Spanish-language newspaper, and on the MPO's website, www.bostonmpo.org. In addition, a notice of a pending amendment is distributed to the MPO's email contact list, MPOinfo, and, along with the actual amendment, is posted on the MPO's website. These notices include information on the 30-day public comment period that precedes MPO action on an amendment. The Regional Transportation Advisory Council is notified and briefed during this period and provides comments to the MPO. Municipal

representatives and members of the public may also submit written or oral testimony at the MPO meetings at which amendments are discussed.

Because the print version of the TIP is prepared prior to the start of each federal fiscal year, it may not reflect all of the changes to the program and projects that occur during the course of the year. 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, www.bostonmpo.org. Comments or questions about the draft materials may be submitted directly through the website, voiced at MPO meetings, or via US mail.

3 CHAPTER THREE

Project Information

This chapter begins with tables listing, by year, the projects and programs funded in FFYs 2016–20. Following the tables, information on projects and programs funded in the Highway and Transit Programs is presented. Projects funded under the Highway Program are listed by municipality, while programs funded under the Transit Program are listed by transit agency.

HIGHWAY PROGRAM - PROJECT INFORMATION KEY

ID Number: Projects in MassDOT's project-tracking system are given a number; those projects not in the Project-tracking system have no number. Transit projects are identified by regional transit agency.

Municipality(ies): The municipality (or municipalities) in which a project is located.

Project Name: The location or name of the project.

Project Type: The category of the project (e.g., Major Highway, Arterial and Intersection, or Bicycle and Pedestrian).

Air Quality Status: The air quality status of the project in the MPO's regional travel demand model.

CO_2 Impact: The quantified or assumed annual tons of carbon dioxide reduced by the project.
See Appendix C for more details on greenhouse gas (GHG) emission monitoring and evaluation.

Evaluation Rating: The number of points scored by the project based on the evaluation criteria, if it has been evaluated.

MPO/CTPS Study: Past UPWP-funded studies or reports conducted within the project area.

LRTP Status: The time band that the project is listed in the Long-Range Transportation Plan, if applicable.

Project Length: The length of the project in miles.

Project Description: The description of the project, if available.

Year: The programming year(s) of the project.

Funding Program: The funding program(s) of the project. See Chapter 2 for more details on funding programs.

Total Funding Programmed: The total funding programmed for the project based on the year of expenditure.

Information regarding TIP projects changes periodically. For more information on all projects please visit the Interactive TIP Database at www.bostonmpo.org.

TRANSIT PROGRAM - PROJECT INFORMATION KEY

Transit Agency: Regional transit agency that is the proponent of the project.

Program/Project Name: The description of the program or project.

Air Quality Status: The air quality status of the project in the MPO's regional travel demand model.

CO_2 Impact: The quantified or assumed annual tons of carbon dioxide reduced by the project.

See Appendix C for more details on greenhouse gas (GHG) emission monitoring and evaluation.

Project Description: The description of the program or project, if available.

Year: The programming year(s) of the program or project.

Funding Program: The funding program(s) of the project. See Chapter 2 for more details on funding programs.

Total Funding Programmed: The total funding programmed for the program or project based on the year of expenditure.

2016 Boston Region MPO Transportation Improvement Program

06/22/2015 Draft Released
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Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 1A / Federal Aid Target Projects								
►HSIP - Highway Safety Improvement Program								
	607409	LEXINGTON- RECONSTRUCTION ON MASSACHUSETTS AVENUE, FROM MARRETT ROAD TO PLEASANT STREET	4	HSIP	$ 2,600,000	$ 2,340,000	$ 260,000	TAP+HSIP Total Cost = $5,200,000
	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)	6	HSIP	$ 1,000,000	$ 900,000	$ 100,000	AC Yr 1 of 4; STP+HSIP+TEA-21 Earmark (MA1236) Total Cost = $60,053,518
				HSIP Subtotal ►	$ 3,600,000	$ 3,240,000	$ 360,000	◄ 90% Federal + 10% Non-Federal
►CMAQ - Congestion Mitigation and Air Quality Improvement Program								
	605721	WEYMOUTH- INTERSECTION IMPROVEMENTS @ MIDDLE STREET, LIBBEY INDUSTRIAL PARKWAY AND TARA DRIVE	6	CMAQ	$ 937,326	$ 749,861	$ 187,465	
	606117	BOSTON - TRAFFIC SIGNAL IMPROVEMENTS AT 10 LOCATIONS	6	CMAQ	$ 1,000,000	$ 800,000	$ 200,000	CMAQ+STP Total Cost = $3,036,200
	1569	GREEN LINE EXTENSION PROJECT (PHASE 2), COLLEGE AVENUE TO MYSTIC VALLEY PARKWAY/ROUTE 16	N/A	CMAQ	$ 8,100,000	$ 6,480,000	$ 1,620,000	Yr 1 of 6; CMAQ+STP Total Cost = $190,100,000 ($158,000,000 programmed within FFYs 2016-20 TIP)
				CMAQ Subtotal ►	$ 10,037,326	$ 8,029,861	$ 2,007,465	◄ 80% Federal + 20% Non-Federal
►TAP - Transportation Alternatives Program								
	607409	LEXINGTON- RECONSTRUCTION ON MASSACHUSETTS AVENUE, FROM MARRETT ROAD TO PLEASANT STREET	4	TAP	$ 2,600,000	$ 2,080,000	$ 520,000	TAP+HSIP Total Cost = $5,200,000
				TAP Subtotal ►	$ 2,600,000	$ 2,080,000	$ 520,000	◄ 80% Federal + 20% Non-Federal
►Non-CMAQ/HSIP/TAP (Other)								
	29492	BEDFORD- BILLERICA- BURLINGTON- MIDDLESEX TURNPIKE IMPROVEMENTS, FROM CROSBY DRIVE NORTH TO MANNING ROAD, INCLUDES RECONSTRUCTION OF B-04-006 (PHASE III)	4	STP	$ 21,691,442	$ 17,353,154	$ 4,338,288	AC Yr 1 of 2; STP+Northern Middlesex Council of Governments contribution ($1,000,000) Total Cost = $29,296,348
	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)	6	STP	$ 3,800,000	$ 3,840,000	$ 960,000	AC Yr 1 of 4; STP+HSIP+TEA-21 Earmark (MA1236) Total Cost = $60,053,518
	606117	BOSTON - TRAFFIC SIGNAL IMPROVEMENTS AT 10 LOCATIONS	6	STP	$ 2,036,200	$ 1,628,960	$ 407,240	CMAQ+STP Total Cost = $3,036,200
	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	NHPP	$ 31,240,000	$ 24,992,000	$ 6,248,000	AC Yr 3 of 5; NHPP+BR+Statewide Infrastructure Total Cost = $164,919,140 ($57,768,183 programmed within FFYs 2016-20 TIP)
				Non-CMAQ/HSIP/TAP (Other) Subtotal ►	$ 58,767,642	$ 47,814,114	$ 11,953,528	◄ 80% Federal + 20% Non-Federal

2016 Boston Region MPO Transportation Improvement Program

06/22/2015 Draft Released
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Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 1A / Fiscal Constraint Analysis								
				Total Federal Aid Target Funds Programmed ►	$ 75,004,968	**$ 75,009,821**	**◄Total Target**	**$ 4,853** **Target Funds Available**
				Total Non-CMAQ/HSIP/TAP (Other) Programmed ►	$ 58,767,642	$ 52,188,453	◄ Max. **Non-CMAQ/HSIP/TAP**	**$ (6,579,189)** Non-CMAQ/HSIP/TAP (Other) E
				Total HSIP Programmed ►	$ 3,600,000	$ 4,296,710	◄ Min. **HSIP**	**$ 696,710** HSIP Minimum Not Met
				Total CMAQ Programmed ►	$ 10,037,326	$ 13,427,220	◄ Min. **CMAQ**	**$ 3,389,894** CMAQ Minimum Not Met
				Total TAP Programmed ►	$ 2,600,000	$ 5,097,438	◄ Min. **TAP**	**$ 2,497,438** TAP Minimum Not Met
				Remaining HSIP, CMAQ, and TAP Funds	$ 6,584,042			
►Section 1B / Federal Aid Bridge Projects								
►Statewide Bridge Maintenance Program								
		No Projects Programmed			$ -	$ -	$ -	
				Statewide Bridge Maintenance Program Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►On System								
	603008	WOBURN- BRIDGE REPLACEMENT, W-43-003, SALEM STREET OVER MBTA	4	**NHPP**	$ 7,089,200	$ 5,671,360	$ 1,417,840	
	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**	$ 11,908,000	$ 9,526,400	$ 2,381,600	
	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)	6	**NHPP**	$ 29,000,000	$ 23,200,000	$ 5,800,000	AC Yr 1 of 2: Total Cost =$41,955,600
	600867	BOSTON- BRIDGE REHABILITATION, B-16-237, MASSACHUSETTS AVENUE (ROUTE 2A) OVER COMMONWEALTH AVENUE	6	**NHPP**	$ 9,074,000	$ 7,259,200	$ 1,814,800	AC Yr 1 of 2; Total Cost = $16,183,795
	600703	LEXINGTON- BRIDGE REPLACEMENT, L-10-009, ROUTE 2 (EB & WB) OVER ROUTE I-95 (ROUTE 128)	4	**NHPP**	$ 5,108,000	$ 4,086,400	$ 1,021,600	AC Yr 4 of 4; Total Cost = $36,794.555
				On System Subtotal ►	$ 62,179,200	$ 49,743,360	$ 12,435,840	◄ 80% Federal + 20% Non-Federal
►Off-System								
	607345	COHASSET- SUPERSTRUCTURE REPLACEMENT & SUBSTRUCTURE REHABILITATION, C-17-002, ATLANTIC AVENUE OVER LITTLE HARBOR INLET	5	**STP-BR-OFF**	$ 4,336,600	$ 3,469,280	$ 867,320	
				Off-System Subtotal ►	$ 4,336,600	$ 3,469,280	$ 867,320	◄ 80% Federal + 20% Non-Federal
► Statewide Bridge Inspection Program								
		No Projects Programmed			$ -	$ -	$ -	
				Statewide Bridge Inspection Program Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal

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Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 1C / Federal Aid Non-Target Projects								
►Other Federal Aid								
	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)	6	HPP (1998)	$ 8,600,000	$ 6,880,000	$ 1,720,000	AC Yr 1 of 4; STP+HSIP+TEA-21 Earmark (MA1236) Total Cost = $60,053,518
				Other Federal Aid Subtotal ►	$ 8,600,000	$ 6,880,000	$ 1,720,000	◄ Funding Split Varies by Funding Source
►Section 1D / Federal Aid Major & State Category Projects								
► Statewide Infrastructure Program								
	603917	MEDFORD- STONEHAM- WOBURN- READING- HIGHWAY LIGHTING REHABILITATION ON I-93 (PHASE II)	4	STP	$ 15,000,000	$ 12,000,000	$ 3,000,000	AC Year 1 of 2; Total Cost = $17,500,000
	605733	DISTRICT 6- HIGHWAY LIGHTING SYSTEM REPLACEMENT ON I-93, FROM SOUTHAMPTON STREET TO NEPONSET AVENUE IN BOSTON	6	STP	$ 2,500,000	$ 2,000,000	$ 500,000	AC Year 1 of 3; Total Cost = $8,250,000
				Statewide Infrastructure Program Subtotal ►	$ 17,500,000	$ 14,000,000	$ 3,500,000	◄ 80% Federal + 20% Non-Federal
► Statewide HSIP Program								
	607755	WEYMOUTH- INTERSECTION & SIGNAL IMPROVEMENTS AT 2 LOCATIONS: SR 53 (WASHINGTON STREET) AT MUTTON LANE & PLEASANT 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 Safe Routes to Schools Program								
	607997	SAUGUS - SAFE ROUTES TO SCHOOL (VETERANS MEMORIAL)	4	TAP	$ 662,612	$ 530,090	$ 132,522	80% Federal + 20% Non-Federal
	607998	EVERETT - SAFE ROUTES TO SCHOOL (MADELAINE ENGLISH)	4	TAP	$ 602,608	$ 482,086	$ 120,522	80% Federal + 20% Non-Federal
	607999	REVERE - SAFE ROUTES TO SCHOOL (GARFIELD ELEMENTARY & MIDDLE SCHOOL)	4	TAP	$ 874,113	$ 699,290	$ 174,823	80% Federal + 20% Non-Federal
	608000	BEDFORD - SAFE ROUTES TO SCHOOL (JOHN GLENN MIDDLE)	4	TAP	$ 780,000	$ 624,000	$ 156,000	80% Federal + 20% Non-Federal
				Statewide Safe Routes to Schools Program Subtotal ►	$ 2,256,721	$ 1,805,377	$ 451,344	◄ Funding Split Varies by Funding Source

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Statewide CMAQ								
	601579	WAYLAND- SIGNAL & INTERSECTION IMPROVEMENTS AT ROUTE 27 (MAIN STREET) AND ROUTE 30 (COMMONWEALTH ROAD)	3	CMAQ	$ 2,425,710	$ 1,940,568	$ 485,142	
	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	$ 5,532,584	$ 4,426,067	$ 1,106,517	
	606316	BROOKLINE- PEDESTRIAN BRIDGE REHABILITATION, B-27-016, OVER MBTA OFF CARLTON STREET	6	CMAQ	$ 2,846,700	$ 2,277,360	$ 569,340	
				Statewide CMAQ ►	$ 10,804,994	$ 8,643,995	$ 2,160,999	◄ 80% Federal + 20% Non-Federal
►Statewide Transportation Enhancements								
		No Projects Programmed			$ -	-	-	
				Statewide Transportation Enhancements Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide ITS								
		No Projects Programmed			$ -	-	-	
				Statewide ITS Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide Interstate Maintenance Program								
	606176	FOXBOROUGH-PLAINVILLE-WRENTHAM- INTERSTATE MAINTENANCE AND RELATED WORK ON I-495	5	NHPP	$ 1,604,800	$ 1,444,320	$ 160,480	IM+Stormwater Total Cost = $3,344,800
				Statewide Interstate Maintenance Program Subtotal ►	$ 1,604,800	$ 1,444,320	$ 160,480	◄ 90% Federal + 10% Non-Federal
►Statewide NHS Preservation Program+								
	607340	WELLESLEY- RESURFACING AND RELATED WORK ON ROUTE 9	6	NHPP	$ 7,327,800	$ 5,862,240	$ 1,465,560	
	607488	SOUTHBOROUGH- RESURFACING & RELATED WORK ON ROUTE 9, FROM THE FRAMINGHAM T.L TO WHITE BAGLEY ROAD	3	NHPP	$ 3,791,340	$ 3,033,072	$ 758,268	
				Statewide NHS Preservation Program Subtotal ►	$ 11,119,140	$ 8,895,312	$ 2,223,828	◄ 80% Federal + 20% Non-Federal
►Statewide RR Grade Crossings								
		No Projects Programmed			$ -	-	-	
				Statewide RR Grade Crossings Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide Stormwater Retrofits								
	608059	SALEM - STORMWATER IMPROVEMENTS ALONG ROUTE 107 (SALEM BYPASS ROAD)	4	STP-TE	$ 125,000	$ 100,000	$ 25,000	
	608134	HINGHAM - BROCKTON - STORMWATER IMPROVEMENTS ALONG ROUTE 3A/ROUTE 28	5	STP-TE	$ 479,100	$ 383,280	$ 95,820	
	606176	FOXBOROUGH-PLAINVILLE-WRENTHAM- INTERSTATE MAINTENANCE AND RELATED WORK ON I-495	5	STP-TE	$ 1,740,000	$ 1,392,000	$ 348,000	IM+Stormwater Total Cost = $3,344,800
				Statewide Stormwater Retrofits Subtotal ►	$ 2,344,100	$ 1,875,280	$ 468,820	◄ 80% Federal + 20% Non-Federal
►Statewide ADA Implementation Plan								
		No Projects Programmed			$ -	-	-	
				Statewide ADA Implementation Plan Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal

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Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►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								
	1568	FAIRMOUNT IMPROVEMENTS	N/A	NFA	$ 447,000		$ 447,000	Lists cash flows (based on state fiscal year)
	1572	RED LINE-BLUE LINE CONNECTOR DESIGN	N/A	NFA	$ 29,000,000		$ 29,000,000	MassDOT made a formal request on Aug. 1, 2011, to remove this project from the State Implementation Plan regulation. The MPO is continuing to reference this project in the document until the process is complete.
				Non-Federal Aid Subtotal►	$ 29,447,000		$ 29,447,000	◄100% Non-Federal
►Section 2B / Non-Federal Bridge Projects								
►Section 2B / Non-Federal Bridge Projects								
		No Projects Programmed		NFA	$ -		$ -	
				Section 2B / Non-Federal Bridge Projects Subtotal►	$ -		$ -	◄100% Non-Federal

2016 Boston Region MPO TIP Summary

	TIP Section 1: ▼	TIP Section 2: ▼	Total of All Projects ▼	
Total ►	$ 197,300,523	$ 29,447,000	$ 226,747,523	◄ Total Spending in Region
Federal Funds ►	$ 158,415,899		$ 158,415,899	◄ Total Federal Spending in Region
Non-Federal Funds ►	$ 38,884,625	$ 29,447,000	$ 68,331,625	◄ 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

2016 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources					Local Funds ▼	Total Cost ▼	Additional Information ▼
					RTACAP ▼	MAP ▼	ICB ▼	TDC ▼	SCA ▼			
5307	MBTA	PREVENTIVE MAINTENANCE		$ 12,000,000	$ -	$ -	$ -	$ -	$ -	$ 3,000,000	**$ 15,000,000**	
5307	MBTA	Systems Upgrades		$ 58,685,516	$ -	$ -	$ -	$ -	$ -	$ 14,671,379	**$ 73,356,895**	
5307	CATA	BUY REPLACEMENT 30-FT BUS (1)		$ -	$ 80,000	$ -	$ -	$ -	$ -	$ -	**$ 400,000**	
5307	CATA	PREVENTIVE MAINTENANCE		$ -	$ -	$ -	$ -	$ -	$ -	$ 48,347	**$ 241,738**	
5307	CATA	ACQUIRE - MISC SUPPORT EQUIPMENT		$ -	$ 5,501	$ -	$ -	$ -	$ -	$ -	**$ 27,502**	
5307	MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES		$ 283,056	$ 70,765	$ -	$ -	$ -	$ -	$ -	**$ 353,821**	
5307	MWRTA	NON FIXED ROUTE ADA PARA SERV		$ 1,300,000	$ -	$ -	$ -	$ -	$ 325,000	$ -	**$ 1,625,000**	
5307	MWRTA	TERMINAL, INTERMODAL (TRANSIT)		$ 150,000	$ 37,500	$ -	$ -	$ -	$ -	$ -	**$ 187,500**	
5307	MWRTA	Mobility Management		$ 25,000	$ 6,250	$ -	$ -	$ -	$ -	$ -	**$ 31,250**	
			5307 Subtotal ►	**$ 72,443,572**	**$ 200,016**	**$ -**	**$ -**	**$ -**	**$ 325,000**	**$ 17,719,726**	**$ 90,688,314**	
5337	MBTA	Bridge & Tunnel Program		$ 85,000,000	$ -	$ -	$ -	$ -	$ -	$ 21,250,000	**$106,250,000**	
5337	MBTA	Stations - T-GAPS		$ 16,000,000	$ -	$ -	$ -	$ -	$ -	$ 4,000,000	**$ 20,000,000**	
5337	MBTA	Systems Upgrades		$ 20,190,546	$ -	$ -	$ -	$ -	$ -	$ 5,047,637	**$ 25,238,183**	
			5337 Subtotal ►	**$ 121,190,546**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,297,637**	**$151,488,183**	
5339	MBTA	Systems Upgrades		$ 5,287,027	$ -	$ -	$ -	$ -	$ -	$ 1,321,757	**$ 6,608,784**	
			5339 Subtotal ►	**$ 5,287,027**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,321,757**	**$ 6,608,784**	
5310		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
			5310 Subtotal ►	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	

2016 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources: RTACAP ▼	MAP ▼	ICB ▼	TDC ▼	SCA ▼	Local Funds ▼	Total Cost ▼	Additional Information ▼
5309	MBTA	GREEN LINE EXTENSION PROJECT-EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	$ 150,000,000	$ -	$ -	$ -	$ -	$ -	$ 217,838,000	**$367,838,000**	The Green Line Extension project received a New Starts Full Funding Grant Agreement in FFY 2015. The cash flows for the project begin programming New Starts funding in FFY 2015 and program $150 million in New Starts in FFY 2016. $1,270,262,000 of the $1,992,243,000 project cost is programmed in FFYs 2016-19.
			5309 Subtotal ►	**$ 150,000,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 217,838,000**	**$367,838,000**	
SoGR		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
Livability		No Projects Programmed	N/A	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	**$ -**	
TIGER		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
			Grants Subtotal ►	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Other	CATA	BUY REPLACEMENT 30-FT BUS (4)	N/A	$ -	$ 800,000	$ -	$ -	$ -	$ -	$ -	**$ 800,000**	
Other	CATA	SHOP EQ/SOFTWARE MAINT - Match for FY15	N/A	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	**$ 10,000**	
Other	CATA	FACILITY - Match for FY15	N/A	$ -	$ 15,600	$ -	$ -	$ -	$ -	$ -	**$ 15,600**	
Other	CATA	SUPPORT EQUIP - Match for FY15	N/A	$ -	$ 4,176	$ -	$ -	$ -	$ -	$ -	**$ 4,176**	
Other	MWRTA	REHAB/RENOVATE - BUS TERMINAL	N/A	$ -	$ 970,000	$ -	$ -	$ -	$ -	$ -	**$ 970,000**	
			Other Subtotal ►	**$ -**	**$1,799,776**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,799,776**	
			Total►	**$ 348,921,145**	**$1,999,792**	**$ -**	**$ -**	**$ -**	**$ 325,000**	**$ 267,177,120**	**$618,423,057**	

Fiscal Constraint Analysis

Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼	
FFY 16 / 5307	$ 72,443,572	$ 136,927,264	$ 64,483,692	Available
FFY 16 / 5337	$ 121,190,546	$ 121,190,546	$ -	Available
FFY 16 / 5339	$ 5,287,027	$ 5,287,027	$ -	Available
FFY 16 / 5310	$ -	$ -	$ -	Available
FFY 16 / 5309	$ 150,000,000	$ 150,000,000	$ -	Available

State Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼	
RTACAP	$ 1,999,792	$ 1,999,792	$ -	Available
MAP	$ -	$ -	$ -	Available
ITCCAP	$ -	$ -	$ -	Available
SCA	$ 325,000	$ 3,234,526	$ 2,909,526	Available
TDC	$ -			

2017 Boston Region MPO Transportation Improvement Program

06/22/2015 Draft Released
xx/xx/xxxx Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 1A / Federal Aid Target Projects								
►HSIP - Highway Safety Improvement Program								
	604810	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
	604935	WOBURN- RECONSTRUCTION OF MONTVALE AVENUE, FROM I-93 INTERCHANGE TO CENTRAL STREET (APPROX. 1,850 FT)	4	**HSIP**	$ 3,564,629	$ 3,208,166	$ 356,463	STP+HSIP Total Cost = $4,752
	607309	HINGHAM- RECONSTRUCTION & RELATED WORK ON DERBY STREET, FROM POND PARK ROAD TO CUSHING STREET	5	**HSIP**	$ 798,857	$ 718,972	$ 79,886	HSIP+CMAQ Total Cost = $3,994,287
				HSIP Subtotal ►	$ 7,761,213	$ 6,985,092	$ 776,121	◄ 90% Federal + 10% Non-Federal
►CMAQ - Congestion Mitigation and Air Quality Improvement Program								
	604810	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
	604989	SOUTHBOROUGH- RECONSTRUCTION OF MAIN STREET (ROUTE 30), FROM SEARS ROAD TO PARK STREET	3	CMAQ	$ 1,038,370	$ 830,696	$ 207,674	STP+CMAQ+TAP Total Cost = $6,862,752
	605110	BROOKLINE- INTERSECTION & SIGNAL IMPROVEMENTS @ ROUTE 9 & VILLAGE SQUARE (GATEWAY EAST)	6	CMAQ	$ 471,811	$ 377,449	$ 94,362	STP+TAP+CMAQ+Private Sector Contribution ($1,000,000) Total Cost = $5,818,649
	1569	GREEN LINE EXTENSION PROJECT (PHASE 2), COLLEGE AVENUE TO MYSTIC VALLEY PARKWAY/ROUTE 16	N/A	CMAQ	$ 13,427,220	$ 10,741,776	$ 2,685,444	Yr 2 of 6; CMAQ+STP Total Cost = $190,100,000 ($158,000,000 programmed within FFYs 2016-20 TIP)
				CMAQ Subtotal ►	$ 16,937,401	$ 13,549,921	$ 3,387,480	◄ 80% Federal + 20% Non-Federal
►TAP - Transportation Alternatives Program								
	604989	SOUTHBOROUGH- RECONSTRUCTION OF MAIN STREET (ROUTE 30), FROM SEARS ROAD TO PARK STREET	3	**TAP**	$ 2,824,382	$ 2,259,506	$ 564,876	STP+CMAQ+TAP Total Cost = $6,862,752
	605110	BROOKLINE- INTERSECTION & SIGNAL IMPROVEMENTS @ ROUTE 9 & VILLAGE SQUARE (GATEWAY EAST)	6	**TAP**	$ 2,346,838	$ 1,877,470	$ 469,368	STP+TAP+CMAQ+Private Sector Contribution ($1,000,000) Total Cost = $5,818,649
				TAP Subtotal ►	$ 5,171,220	$ 4,136,976	$ 1,034,244	◄ 80% Federal + 20% Non-Federal

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Non-CMAQ/HSIP/TAP (Other)								
	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	**NHPP**	$ 13,360,000	$ 10,688,000	$ 2,672,000	AC Yr 4 of 5; NHPP+BR+Statewide Infrastructure Total Cost = $164,919,140 ($57,768,183 programmed within FFYs 2016-20 TIP)
	1569	GREEN LINE EXTENSION PROJECT (PHASE 2), COLLEGE AVENUE TO MYSTIC VALLEY PARKWAY/ROUTE 16	N/A	**STP**	$ 16,472,780	$ 13,178,224	$ 3,294,556	Yr 2 of 6; CMAQ+STP Total Cost = $190,100,000 ($158,000,000 programmed within FFYs 2016-20 TIP)
	29492	BEDFORD- BILLERICA- BURLINGTON- MIDDLESEX TURNPIKE IMPROVEMENTS, FROM CROSBY DRIVE NORTH TO MANNING ROAD, INCLUDES RECONSTRUCTION OF B-04-006 (PHASE III)	4	**STP**	$ 6,604,906	$ 5,283,925	$ 1,320,981	AC Yr 2 of 2; STP+Northern Middlesex Council of Governments contribution ($1,000,000) Total Cost = $29,296,348
	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)	6	**STP**	$ 12,850,000	$ 10,280,000	$ 2,570,000	AC Yr 2 of 4; STP+HSIP+TEA-21 Earmark (MA1236) Total Cost = $60,053,518
	607309	HINGHAM- RECONSTRUCTION & RELATED WORK ON DERBY STREET, FROM POND PARK ROAD TO CUSHING STREET	5	**STP**	$ 3,195,430	$ 2,556,344	$ 639,086	HSIP+STP Total Cost = $3,994,287
	605110	BROOKLINE- INTERSECTION & SIGNAL IMPROVEMENTS @ ROUTE 9 & VILLAGE SQUARE (GATEWAY EAST)	6	**STP**	$ 2,000,000	$ 1,600,000	$ 400,000	STP+TAP+CMAQ+Private Sector Contribution ($1,000,000) Total Cost = $5,818,649
	604989	SOUTHBOROUGH- RECONSTRUCTION OF MAIN STREET (ROUTE 30), FROM SEARS ROAD TO PARK STREET	3	**STP**	$ 3,000,000	$ 2,400,000	$ 600,000	STP+CMAQ+TAP Total Cost = $6,862,752
	604810	MARLBOROUGH- RECONSTRUCTION OF ROUTE 85 (MAPLE STREET)	3	**STP**	$ 215,909	$ 172,727	$ 43,182	HSIP+CMAQ+STP Total Cost = $5,613,636
	604935	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
				Non-CMAQ/HSIP/TAP (Other) Subtotal ►	$ 58,887,235	$ 47,109,788	$ 11,777,447	◄ 80% Federal + 20% Non-Federal

►Section 1A / Fiscal Constraint Analysis

Total Federal Aid Target Funds Programmed ►	$ 88,757,069	**$ 88,759,294**	**◄Total Target**	**$ 2,225**	**Target Funds Available**
Total Non-CMAQ/HSIP/TAP (Other) Programmed ►	$ 58,887,235	$ 67,723,275	◄ Max. **Non-CMAQ/HSIP/TAP**	**$ 2,225**	Non-CMAQ/HSIP/TAP (Other) A
Total HSIP Programmed ►	$ 7,761,213	$ 4,296,710	◄ Min. **HSIP**	**$ (3,464,503)**	HSIP Minimum Met
Total CMAQ Programmed ►	$ 16,937,401	$ 13,427,220	◄ Min. **CMAQ**	**$ (3,510,181)**	CMAQ Minimum Met
Total TAP Programmed ►	$ 5,171,220	$ 3,312,089	◄ Min. **TAP**	**$ (1,859,131)**	TAP Requirement Exceeded!

HSIP, CMAQ, TAP Overprogrammed $ (8,833,815)

2017 Boston Region MPO Transportation Improvement Program

06/22/2015 Draft Released
xx/xx/xxxx Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 1B / Federal Aid Bridge Projects								
►Statewide Bridge Maintenance Program								
	607507	WAKEFIELD - BRIDGE DECK REPLACEMENT BRIDGE NO. W-01-021 (2MF), HOPKINS STREET OVER I-95 / ST 128	4	**NHPP**	$ 2,469,936	$ 1,975,949	$ 493,987	
				Statewide Bridge Maintenance Program Subtotal ►	$ 2,469,936	$ 1,975,949	$ 493,987	◄ 80% Federal + 20% Non-Federal
►On System								
	604173	BOSTON- BRIDGE REHABILITATION, B-16-016, NORTH WASHINGTON STREET OVER THE CHARLES RIVER	6	**NHPP**	$ 12,984,000	$ 10,387,200	$ 2,596,800	AC Yr 1 of 4; Total Cost = $117,208,000
	607954	DANVERS - BRIDGE REPLACEMENT, D-03-018, ROUTE 128 OVER WATERS RIVER	4	**NHPP**	$ 10,513,973	$ 8,411,178	$ 2,102,795	
	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)	6	**NHPP**	$ 12,955,600	$ 10,364,480	$ 2,591,120	AC Yr 2 of 2; Total Cost = $41,955,600
	600867	BOSTON- BRIDGE REPLACEMENT, B-16-237, MASSACHUSETTS AVENUE (ROUTE 2A) OVER COMMONWEALTH AVENUE	6	**NHPP**	$ 7,109,795	$ 5,687,836	$ 1,421,959	AC Yr 2 of 2; Total Cost = $16,183,795
	604952	LYNN- SAUGUS- BRIDGE REPLACEMENT, L-18-016=S-05-008, ROUTE 107 OVER THE SAUGUS RIVER (AKA - BELDEN G. BLY BRIDGE)	4	**NHPP**	$ 6,800,000	$ 5,440,000	$ 1,360,000	AC Yr 1 of 4; Total Cost = $45,000,000
				On System Subtotal ►	$ 50,363,368	$ 40,290,694	$ 10,072,674	◄ 80% Federal + 20% Non-Federal
►Off-System								
		No Projects Programmed			$ -	$ -	$ -	
				Off-System Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
► Statewide Bridge Inspection Program								
		No Projects Programmed			$ -	$ -	$ -	
				Statewide Bridge Inspection Program Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Section 1C / Federal Aid Non-Target Projects								
►Other Federal Aid								
	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)	6	HPP (1998)	$ 6,171,760	$ 4,937,408	$ 1,234,352	AC Yr 2 of 4; STP+HSIP+TEA-21 Earmark (MA1236) Total Cost = $60,053,518
				Other Federal Aid Subtotal ►	$ 6,171,760	$ 4,937,408	$ 1,234,352	◄ Funding Split Varies by Funding Source

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 1D / Federal Aid Major & State Category Projects								
► Statewide Infrastructure Program								
	603917	MEDFORD- STONEHAM- WOBURN- READING- HIGHWAY LIGHTING REHABILITATION ON I-93 (PHASE II)	4	STP	$ 2,500,000	$ 2,000,000	$ 500,000	AC Year 2 of 2; Total Cost = $17,500,000
	605733	DISTRICT 6- HIGHWAY LIGHTING SYSTEM REPLACEMENT ON I-93, FROM SOUTHAMPTON STREET TO NEPONSET AVENUE IN BOSTON	6	STP	$ 4,500,000	$ 3,600,000	$ 900,000	AC Year 2 of 3; Total Cost = $8,250,000
				Statewide Infrastructure Program Subtotal ►	$ 7,000,000	$ 5,600,000	$ 1,400,000	◄ 80% Federal + 20% Non-Federal
► Statewide HSIP Program								
	607754	MILTON- INTERSECTION & SIGNAL IMPROVEMENTS AT GRANITE AVENUE & SQUANTUM STREET	6	HSIP	$ 350,000	$ 315,000	$ 35,000	
				Statewide HSIP Program Subtotal ►	$ 350,000	$ 315,000	$ 35,000	◄ 90% Federal + 10% Non-Federal
► Statewide Safe Routes to Schools Program								
	608003	WEYMOUTH - SAFE ROUTES TO SCHOOL (PINGREE ELEMENTARY)	6	TAP	$ 754,000	$ 603,200	$ 150,800	
	608004	WATERTOWN - SAFE ROUTES TO SCHOOL (HOSMER ELEMENTARY)	6	TAP	$ 903,500	$ 722,800	$ 180,700	
				Statewide Safe Routes to Schools Program Subtotal ►	$ 1,657,500	$ 1,326,000	$ 331,500	◄ Funding Split Varies by Funding Source
► Statewide CMAQ								
	602165	STONEHAM- SIGNAL & INTERSECTION IMPROVEMENTS AT ROUTE 28/NORTH STREET	4	CMAQ	$ 1,532,550	$ 1,226,040	$ 306,510	
				Statewide CMAQ ►	$ 1,532,550	$ 1,226,040	$ 306,510	◄ 80% Federal + 20% Non-Federal
►Statewide Transportation Enhancements								
		No Projects Programmed			$ -	-	-	
				Statewide Transportation Enhancements Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide ITS								
		No Projects Programmed			$ -	-	-	
				Statewide ITS Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide Interstate Maintenance Program								
	607481	RANDOLPH- QUINCY- BRAINTREE- RESURFACING & RELATED WORK ON I-93	6	NHPP	$ 12,137,008	$ 10,923,307	$ 1,213,701	
				Statewide Interstate Maintenance Program Subtotal ►	$ 12,137,008	$ 10,923,307	$ 1,213,701	◄ 90% Federal + 10% Non-Federal
►Statewide NHS Preservation Program+								
	607477	LYNNFIELD- PEABODY- RESURFACING & RELATED WORK ON ROUTE 1	4	NHPP	$ 7,721,542	$ 6,177,234	$ 1,544,308	
				Statewide NHS Preservation Program Subtotal ►	$ 7,721,542	$ 6,177,234	$ 1,544,308	◄ 80% Federal + 20% Non-Federal
►Statewide RR Grade Crossings								
		No Projects Programmed			$ -	-	-	
				Statewide RR Grade Crossings Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal

2017 Boston Region MPO Transportation Improvement Program

06/22/2015 Draft Released
xx/xx/xxxx Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Statewide Stormwater Retrofits								
		No Projects Programmed			$ -	-	-	
				Statewide Stormwater Retrofits Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide ADA Implementation Plan								
		No Projects Programmed			$ -	-	-	
				Statewide ADA Implementation Plan 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								
	1568	FAIRMOUNT IMPROVEMENTS	N/A	NFA	$ 11,574,800		$ 11,574,800	Lists cash flows (based on state fiscal year)
	1572	RED LINE-BLUE LINE CONNECTOR DESIGN	N/A	NFA	$ 10,000,000		$ 10,000,000	MassDOT made a formal request on Aug. 1, 2011, to remove this project from the State Implementation Plan regulation. The MPO is continuing to reference this project in the document until the process is complete.
				Non-Federal Aid Subtotal►	$ 21,574,800		$ 21,574,800	◄100% Non-Federal
►Section 2B / Non-Federal Bridge Projects								
►Section 2B / Non-Federal Bridge Projects								
		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 ►	$ 178,160,733	$ 21,574,800	$ 199,735,533	◄ Total Spending in Region
Federal Funds ►	$ 144,553,409		$ 144,553,409	◄ Total Federal Spending in Region
Non-Federal Funds ►	$ 33,607,325	$ 21,574,800	$ 55,182,125	◄ 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

2017 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details▼	Federal Funds ▼	State Match Sources					Local Funds ▼	Total Cost ▼	Additional Information▼
					RTACAP ▼	MAP ▼	ICB ▼	TDC ▼	SCA ▼			
5307	MBTA	PREVENTIVE MAINTENANCE		$ 12,000,000	$ -	$ -	$ -	$ -	$ -	$ 3,000,000	**$ 15,000,000**	
5307	MBTA	Systems Upgrades		$ 58,685,516	$ -	$ -	$ -	$ -	$ -	$ 14,671,379	**$ 73,356,895**	
5307	CATA	PREVENTIVE MAINTENANCE	2016	$ 400,000	$ -	$ -	$ -	$ -	$ -	$ 100,000	**$ 500,000**	
5307	CATA	ACQUIRE - MISC SUPPORT EQUIPMENT	2016	$ 19,390	$ 4,848	$ -	$ -	$ -	$ -	$ -	**$ 24,238**	
5307	CATA	ACQUIRE - SUPPORT VEHICLES	2016	$ 88,000	$ 22,000	$ -	$ -	$ -	$ -	$ -	**$ 110,000**	
5307	CATA	ACQUIRE - SHOP EQ/SOFTWARE MAINTENANCE	2016	$ 28,000	$ 7,000	$ -	$ -	$ -	$ -	$ -	**$ 35,000**	
5307	MWRTA	INTERMODAL (TRANSIT): Facil. Improvements		$ 150,000	$ 37,500	$ -	$ -	$ -	$ -	$ -	**$ 187,500**	
5307	MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES		$ 248,415	$ 62,104	$ -	$ -	$ -	$ -	$ -	**$ 310,519**	
5307	MWRTA	NON FIXED ROUTE ADA PARA SERV		$ 1,300,000	$ -	$ -	$ -	$ -	$ 325,000	$ -	**$ 1,625,000**	
5307	MWRTA	Mobility Management		$ 25,000	$ 6,250	$ -	$ -	$ -	$ -	$ -	**$ 31,250**	
			5307 Subtotal ►	**$ 72,944,321**	**$ 139,702**	**$ -**	**$ -**	**$ -**	**$ 325,000**	**$ 17,771,379**	**$ 91,180,402**	
5337	MBTA	Bridge & Tunnel Program		$ 100,000,000	$ -	$ -	$ -	$ -	$ -	$ 25,000,000	**$ 125,000,000**	
5337	MBTA	Systems Upgrades		$ 21,190,546	$ -	$ -	$ -	$ -	$ -	$ 5,297,637	**$ 26,488,183**	
			5337 Subtotal ►	**$ 121,190,546**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,297,637**	**$ 151,488,183**	
5339	MBTA	Systems Upgrades		$ 5,287,027	$ -	$ -	$ -	$ -	$ -	$ 1,321,757	**$ 6,608,784**	
			5339 Subtotal ►	**$ 5,287,027**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,321,757**	**$ 6,608,784**	
5310		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
			5310 Subtotal ►	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	

2017 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources: RTACAP ▼	State Match Sources: MAP ▼	State Match Sources: ICB ▼	State Match Sources: TDC ▼	State Match Sources: SCA ▼	Local Funds ▼	Total Cost ▼	Additional Information ▼
5309	MBTA	GREEN LINE EXTENSION PROJECT-EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	$ 150,000,000	$ -	$ -	$ -	$ -	$ -	$ 230,670,000	$ 380,670,000	The Green Line Extension project received a New Starts Full Funding Grant Agreement in FFY 2015. The cash flows for the project begin programming New Starts funding in FFY 2015 and program $150 million in New Starts in FFY 2017. $1,270,262,000 of the $1,992,243,000 project cost is programmed in FFYs 2016-19.
		5309 Subtotal ►		**$ 150,000,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 230,670,000**	**$ 380,670,000**	
SoGR		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
Livability		No Projects Programmed	N/A	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	**$ -**	
TIGER		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
		Grants Subtotal ►		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Other	CATA	BUY REPLACEMENT 30-FT BUS (3)		$ -	$ 1,275,000	$ -	$ -	$ -	$ -	$ -	**$ 1,275,000**	
		Other Subtotal ►		**$ -**	**$ 1,275,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,275,000**	
		Total►		**$ 349,421,894**	**$ 1,414,702**	**$ -**	**$ -**	**$ -**	**$ 325,000**	**$ 280,060,773**	**$ 631,222,369**	

Fiscal Constraint Analysis

Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		State Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼	
FFY 17 / 5307	$ 72,944,321	$ 136,932,618	$63,988,297	Available	RTACAP	$ 1,414,702	$ 1,414,702	$ -	Available
FFY 17 / 5337	$ 121,190,546	$ 121,190,546	$ -	Available	MAP	$ -	$ -	$ -	Available
FFY 17 / 5339	$ 5,287,027	$ 5,287,027	$ -	Available	ITCCAP	$ -	$ -	$ -	Available
FFY 17 / 5310	$ -	$ -	$ -	Available	SCA	$ 325,000	$ 3,234,526	$ 2,909,526	Available
FFY 17 / 5309	$ 150,000,000	$ 150,000,000	$ -	Available	TDC	$ -			

2018 Boston Region MPO Transportation Improvement Program

06/22/2015 Draft Released
xx/xx/xxxx Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 1A / Federal Aid Target Projects								
►HSIP - Highway Safety Improvement Program								
	600518	HINGHAM- INTERSECTION IMPROVEMENTS AT DERBY STREET, WHITING STREET (ROUTE 53) AND GARDNER STREET	5	**HSIP**	$ 611,547	$ 550,392	$ 61,155	STP+HSIP Total Cost = $3,057,735
	606635	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
				HSIP Subtotal ►	$ 2,931,191	$ 2,638,072	$ 293,119	◄ 90% Federal + 10% Non-Federal
►CMAQ - Congestion Mitigation and Air Quality Improvement Program								
	1569	GREEN LINE EXTENSION PROJECT (PHASE 2), COLLEGE AVENUE TO MYSTIC VALLEY PARKWAY/ROUTE 16	N/A	**CMAQ**	$ 13,427,220	$ 10,741,776	$ 2,685,444	Yr 3 of 6; CMAQ+STP Total Cost = $190,100,000 ($158,000,000 programmed within FFYs 2016-20 TIP)
	606635	NEEDHAM- NEWTON- RECONSTRUCTION OF HIGHLAND AVENUE, NEEDHAM STREET & CHARLES RIVER BRIDGE, N-04-002, FROM WEBSTER STREET (NEEDHAM) TO ROUTE 9 (NEWTON)	6	**CMAQ**	$ 3,687,911	$ 2,950,329	$ 737,582	CMAQ+HSIP+TAP+STP Total Cost = 15,464,292
				CMAQ Subtotal ►	$ 17,115,131	$ 13,692,105	$ 3,423,026	◄ 80% Federal + 20% Non-Federal
►TAP - Transportation Alternatives Program								
	606635	NEEDHAM- NEWTON- RECONSTRUCTION OF HIGHLAND AVENUE, NEEDHAM STREET & CHARLES RIVER BRIDGE, N-04-002, FROM WEBSTER STREET (NEEDHAM) TO ROUTE 9 (NEWTON)	6	**TAP**	$ 3,312,089	$ 2,649,671	$ 662,418	CMAQ+HSIP+TAP+STP Total Cost = 15,464,292
				TAP Subtotal ►	$ 3,312,089	$ 2,649,671	$ 662,418	◄ 80% Federal + 20% Non-Federal

2018 Boston Region MPO Transportation Improvement Program

06/22/2015 Draft Released
xx/xx/xxxx Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Non-CMAQ/HSIP/TAP (Other)								
	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	**NHPP**	$ 13,168,183	$ 10,534,546	$ 2,633,637	AC Yr 5 of 5; NHPP+BR+Statewide Infrastructure Total Cost = $164,919,140 ($57,768,183 programmed within FFYs 2016-20 TIP)
	1569	GREEN LINE EXTENSION PROJECT (PHASE 2), COLLEGE AVENUE TO MYSTIC VALLEY PARKWAY/ROUTE 16	N/A	**STP**	$ 26,572,780	$ 21,258,224	$ 5,314,556	Yr 3 of 6; CMAQ+STP Total Cost = $190,100,000 ($158,000,000 programmed within FFYs 2016-20 TIP)
	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)	6	**STP**	$ 21,031,758	$ 16,825,406	$ 4,206,352	AC Yr 3 of 4; STP+HSIP+TEA-21 Earmark Total Cost = $60,053,518
	606635	NEEDHAM- NEWTON- RECONSTRUCTION OF HIGHLAND AVENUE, NEEDHAM STREET & CHARLES RIVER BRIDGE, N-04-002, FROM WEBSTER STREET (NEEDHAM) TO ROUTE 9 (NEWTON)	6	**STP**	$ 6,144,648	$ 4,915,718	$ 1,228,930	CMAQ+HSIP+TAP+STP Total Cost = 15,464,292
	600518	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
				Non-CMAQ/HSIP/TAP (Other) Subtotal ►	$ 69,363,557	$ 55,490,846	$ 13,872,711	◄ 80% Federal + 20% Non-Federal

►Section 1A / Fiscal Constraint Analysis

Total Federal Aid Target Funds Programmed ►	$ 92,721,968	**$ 92,626,333**	**◄Total Target**	**$ (95,635)**	**Funds Over Programmed**
Total Non-CMAQ/HSIP/TAP (Other) Programmed ►	$ 69,363,557	$ 71,590,314	◄ Max. **Non-CMAQ/HSIP/TAP**	**$ (95,635)**	Non-CMAQ/HSIP/TAP (Other) E
Total HSIP Programmed ►	$ 2,931,191	$ 4,296,710	◄ Min. **HSIP**	**$ 1,365,519**	HSIP Minimum Not Met
Total CMAQ Programmed ►	$ 17,115,131	$ 13,427,220	◄ Min. **CMAQ**	**$ (3,687,911)**	CMAQ Minimum Met
Total TAP Programmed ►	$ 3,312,089	$ 3,312,089	◄ Min. **TAP**	**$ -**	TAP Minimum Met

HSIP, CMAQ, TAP Overprogrammed $ (2,322,392)

►Section 1B / Federal Aid Bridge Projects

►Statewide Bridge Maintenance Program

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

►On System

	604173	BOSTON- BRIDGE REHABILITATION, B-16-016, NORTH WASHINGTON STREET OVER THE CHARLES RIVER	6	**NHPP**	$ 36,000,000	$ 28,800,000	$ 7,200,000	AC Yr 2 of 4; Total Cost = $112,700,000
	604952	LYNN- SAUGUS- BRIDGE REPLACEMENT, L-18-016=S-05-008, ROUTE 107 OVER THE SAUGUS RIVER (AKA - BELDEN G. BLY BRIDGE)	4	**NHPP**	$ 18,800,000	$ 15,040,000	$ 3,760,000	AC Yr 2 of 4; Total Cost = $45,000,000
				On System Subtotal ►	$ 54,800,000	$ 43,840,000	$ 10,960,000	◄ 80% Federal + 20% Non-Federal

2018 Boston Region MPO Transportation Improvement Program

06/22/2015 Draft Released
xx/xx/xxxx Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Off-System								
	606632	HOPKINTON- WESTBOROUGH- BRIDGE REPLACEMENT, H-23-006=W-24-016, FRUIT STREET OVER CSX & SUDBURY RIVER	3	**STP-BR-OFF**	$ 11,727,339	$ 9,381,871	$ 2,345,468	
	607133	QUINCY- BRIDGE REPLACEMENT, ROBERTSON STREET OVER I-93/US 1/SR 3	6	**STP-BR-OFF**	$ 6,435,763	$ 5,148,610	$ 1,287,153	
	604655	MARSHFIELD- BRIDGE REPLACEMENT, M-07-007, BEACH STREET OVER THE CUT RIVER	5	**STP-BR-OFF**	$ 4,822,854	$ 3,858,283	$ 964,571	
	607533	WALTHAM- WOERD AVENUE OVER THE CHARLES RIVER	4	**STP-BR-OFF**	$ 3,873,360	$ 3,098,688	$ 774,672	
				Off-System Subtotal ►	$ 26,859,316	$ 21,487,453	$ 5,371,863	◄ 80% Federal + 20% Non-Federal
► Statewide Bridge Inspection Program								
	607915	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**	$ 1,724,400	$ 1,379,520	$ 344,880	
				Statewide Bridge Inspection Program Subtotal ►	$ 1,724,400	$ 1,379,520	$ 344,880	◄ 80% Federal + 20% Non-Federal
►Section 1C / Federal Aid Non-Target Projects								
►Other Federal Aid								
	606134	BOSTON- TRAFFIC SIGNAL IMPROVEMENTS ON BLUE HILL AVENUE AND WARREN STREET	6	HPP (2005)	$ 2,377,900	$ 1,902,320	$ 475,580	Construction; HPP 2129 (MA155)
	605789	BOSTON- RECONSTRUCTION OF MELNEA CASS BOULEVARD	6	HPP (2005)	$ 2,429,730	$ 1,943,784	$ 485,946	Construction; HPP 4284 (MA203); SAFETEA-LU Earmark (HPP 756)+ SAFETEA-LU Earmark
	605789	BOSTON- RECONSTRUCTION OF MELNEA CASS BOULEVARD	6	HPP (2005)	$ 5,007,375	$ 4,005,900	$ 1,001,475	Construction; HPP 4284 (MA203); SAFETEA-LU Earmark (HPP 756)+ SAFETEA-LU Earmark
				Other Federal Aid Subtotal ►	$ 9,815,005	$ 7,852,004	$ 1,963,001	◄ Funding Split Varies by Funding Source
►Section 1D / Federal Aid Major & State Category Projects								
► Statewide Infrastructure Program								
	605733	DISTRICT 6- HIGHWAY LIGHTING SYSTEM REPLACEMENT ON I-93, FROM SOUTHAMPTON STREET TO NEPONSET AVENUE IN BOSTON	6	STP	$ 1,250,000	$ 1,000,000	$ 250,000	AC Year 3 of 3; Total Cost = $8,250,000
	606381	ARLINGTON- BELMONT- HIGHWAY LIGHTING REPAIR & MAINTENANCE ON ROUTE 2	4	STP	$ 5,750,000	$ 4,600,000	$ 1,150,000	AC Year 1 of 2; Total Cost = $9,450,000
				Statewide Infrastructure Program Subtotal ►	$ 7,000,000	$ 5,600,000	$ 1,400,000	◄ 80% Federal + 20% Non-Federal
► Statewide HSIP Program								
	607748	ACTON- INTERSECTION & SIGNAL IMPROVEMENTS ON SR 2 & SR 111 (MASSACHUSETTS AVENUE) AT PIPER ROAD & TAYLOR ROAD	3	HSIP	$ 1,500,000	$ 1,350,000	$ 150,000	
	607761	SWAMPSCOTT- INTERSECTION & SIGNAL IMPROVEMENTS AT SR 1A (PARADISE ROAD) AT SWAMPSCOTT MALL	4	HSIP	$ 550,000	$ 495,000	$ 55,000	
				Statewide HSIP Program Subtotal ►	$ 2,050,000	$ 1,845,000	$ 205,000	◄ 90% Federal + 10% Non-Federal

2018 Boston Region MPO Transportation Improvement Program

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Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Statewide Safe Routes to Schools Program								
		No Projects Programmed			$ -	$ -	$ -	Funding Split Varies by Funding Source
				Statewide Safe Routes to Schools Program Subtotal ►	$ -	$ -	$ -	◄ Funding Split Varies by Funding Source
► Statewide CMAQ								
	607329	WAKEFIELD- LYNNFIELD- RAIL TRAIL EXTENSION, FROM THE GALVIN MIDDLE SCHOOL TO LYNNFIELD/PEABODY T.L.	4	CMAQ	$ 7,662,854	$ 6,130,283	$ 1,532,571	
	606223	ACTON- CONCORD- BRUCE FREEMAN RAIL TRAIL CONSTRUCTION (PHASE II-B)	3	CMAQ	$ 6,230,016	$ 4,984,013	$ 1,246,003	
	607732	FRAMINGHAM- NATICK- COCHITUATE RAIL TRAIL CONSTRUCTION INCLUDING PEDESTRIAN BRIDGE, N-03-014, OVER ROUTE 9 & BRIDGE OVER ROUTE 30	3	CMAQ	$ 5,859,926	$ 4,687,941	$ 1,171,985	
				Statewide CMAQ ►	$ 19,752,796	$ 15,802,237	$ 3,950,559	◄ 80% Federal + 20% Non-Federal
►Statewide Transportation Enhancements								
		No Projects Programmed			$ -	-	-	
				Statewide Transportation Enhancements Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide ITS								
		No Projects Programmed			$ -	-	-	
				Statewide ITS Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide Interstate Maintenance Program								
	608219	READING-WAKEFIELD- INTERSTATE MAINTENANCE RESURFACING AND RELATED WORK ON I-95	4	NHPP	$ 4,638,816	$ 4,174,934	$ 463,882	
				Statewide Interstate Maintenance Program Subtotal ►	$ 4,638,816	$ 4,174,934	$ 463,882	◄ 90% Federal + 10% Non-Federal
►Statewide NHS Preservation Program+								
	608069	MARSHFIELD PEMBROKE NORWELL HANOVER ROCKLAND HINGHAM RESURFACING ON RT 3	5	NHPP	$ 17,586,720	$ 14,069,376	$ 3,517,344	
	605608	DEDHAM - RESURFACING AND RELATED WORK ON ROUTE 109	6	NHPP	$ 2,523,312	$ 2,018,650	$ 504,662	NHSPP+Stormwater Total Cost = $2,739,312
	608008	SAUGUS-RESURFACING AND RELATED WORK ON ROUTE 1	4	NHPP	$ 10,597,910	$ 8,478,328	$ 2,119,582	
	608220	CONCORD - RESURFACING AND RELATED WORK ON ROUTE 2	4	NHPP	$ 1,784,160	$ 1,427,328	$ 356,832	
				Statewide NHS Preservation Program Subtotal ►	$ 32,492,102	$ 25,993,682	$ 6,498,420	◄ 80% Federal + 20% Non-Federal
►Statewide RR Grade Crossings								
		No Projects Programmed			$ -	-	-	
				Statewide RR Grade Crossings Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide Stormwater Retrofits								
	605608	DEDHAM - RESURFACING AND RELATED WORK ON ROUTE 109	6	STP-TE	$ 216,000	$ 172,800	$ 43,200	NHSPP+Stormwater Total Cost = $2,739,312
				Statewide Stormwater Retrofits Subtotal ►	$ 216,000	$ 172,800	$ 43,200	◄ 80% Federal + 20% Non-Federal

2018 Boston Region MPO Transportation Improvement Program

06/22/2015 Draft Released
xx/xx/xxxx Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Statewide ADA Implementation Plan								
		No Projects Programmed			$ -	-	-	
				Statewide ADA Implementation Plan 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								
	1568	FAIRMOUNT IMPROVEMENTS	N/A	NFA	$ 9,000,000		$ 9,000,000	Lists cash flows (based on state fiscal year)
				Non-Federal Aid Subtotal ►	$ 9,000,000		$ 9,000,000	◄100% Non-Federal
►Section 2B / Non-Federal Bridge Projects								
►Section 2B / Non-Federal Bridge Projects								
		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 ►	$ 252,070,403	$ 9,000,000	$ 261,070,403	◄ Total Spending in Region
Federal Funds ►	$ 202,618,323		$ 202,618,323	◄ Total Federal Spending in Region
Non-Federal Funds ►	$ 49,452,080	$ 9,000,000	$ 58,452,080	◄ 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

2018 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources					Local Funds ▼	Total Cost ▼	Additional Information ▼
					RTACAP ▼	MAP ▼	ICB ▼	TDC ▼	SCA ▼			
5307	MBTA	PREVENTIVE MAINTENANCE		$ 12,000,000	$ -	$ -	$ -	$ -	$ -	$ 3,000,000	**$ 15,000,000**	
5307	MBTA	Systems Upgrades		$ 58,685,516	$ -	$ -	$ -	$ -	$ -	$ 14,671,379	**$ 73,356,895**	
5307	CATA	PREVENTIVE MAINTENANCE	2017	$ 400,000	$ -	$ -	$ -	$ -	$ -	$ 100,000	**$ 500,000**	
5307	CATA	ACQUIRE - SHOP EQ/SOFTWARE MAINT	2017	$ 28,000	$ 7,000	$ -	$ -	$ -	$ -	$ -	**$ 35,000**	
5307	CATA	ACQUIRE - MISC SUPPORT EQUIPMENT	2017	$ 60,744	$ 15,186	$ -	$ -	$ -	$ -	$ -	**$ 75,930**	
5307	CATA	ACQUIRE - SHOP EQUIPMENT	2017	$ 52,000	$ 13,000	$ -	$ -	$ -	$ -	$ -	**$ 65,000**	
5307	MWRTA	TERMINAL, INTERMODAL (TRANSIT)		$ 150,000	$ 37,500	$ -	$ -	$ -	$ -	$ -	**$ 187,500**	
5307	MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES		$ 248,519	$ 62,104	$ -	$ -	$ -	$ -	$ -	**$ 310,623**	
5307	MWRTA	NON FIXED ROUTE ADA PARA SERV		$ 1,300,000	$ -	$ -	$ -	$ -	$ 325,000	$ -	**$ 1,625,000**	
5307	MWRTA	Mobility Management		$ 25,000	$ 6,250	$ -	$ -	$ -	$ -	$ -	**$ 31,250**	
			5307 Subtotal ►	**$ 72,949,779**	**$ 141,040**	**$ -**	**$ -**	**$ -**	**$ 325,000**	**$ 17,771,379**	**$ 91,187,198**	
5337	MBTA	Bridge & Tunnel Program		$ 60,000,000	$ -	$ -	$ -	$ -	$ -	$ 15,000,000	**$ 75,000,000**	
5337	MBTA	Systems Upgrades		$ 61,190,546	$ -	$ -	$ -	$ -	$ -	$ 15,297,637	**$ 76,488,183**	
			5337 Subtotal ►	**$ 121,190,546**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,297,637**	**$ 151,488,183**	
5339	MBTA	Systems Upgrades		$ 5,287,027	$ -	$ -	$ -	$ -	$ -	$ 1,321,757	**$ 6,608,784**	
			5339 Subtotal ►	**$ 5,287,027**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,321,757**	**$ 6,608,784**	

2018 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources: RTACAP ▼	MAP ▼	ICB ▼	TDC ▼	SCA ▼	Local Funds ▼	Total Cost ▼	Additional Information ▼
5310		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
			5310 Subtotal ►	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
5309	MBTA	GREEN LINE EXTENSION PROJECT-EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	$ 150,000,000	$ -	$ -	$ -	$ -	$ -	$195,558,000	**$ 345,558,000**	The Green Line Extension project received a New Starts Full Funding Grant Agreement in FFY 2015. The cash flows for the project begin programming New Starts funding in FFY 2015 and program $150 million in New Starts in FFY 2018. $1,270,262,000 of the $1,992,243,000 project cost is programmed in FFYs 2016-19.
			5309 Subtotal ►	**$ 150,000,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$195,558,000**	**$ 345,558,000**	
SoGR		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
Livability		No Projects Programmed	N/A	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	**$ -**	
TIGER		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
			Grants Subtotal ►	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Other	CATA	BUY REPLACEMENT TROLLEY BUS (2)		$ -	$ 900,000	$ -	$ -	$ -	$ -	$ -	**$ 900,000**	
			Other Subtotal ►	**$ -**	**$ 900,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 900,000**	
			Total►	**$ 349,427,352**	**$ 1,041,040**	**$ -**	**$ -**	**$ -**	**$ 325,000**	**$244,948,773**	**$ 595,742,165**	

Fiscal Constraint Analysis

Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		State Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼	
FFY 17 / 5307	$ 72,949,779	$ 136,938,027	$ 63,988,248	Available	RTACAP	$ 1,041,040	$ 1,041,040	$ -	Available
FFY 17 / 5337	$ 121,190,546	$ 121,190,546	$ -	Available	MAP	$ -	$ -	$ -	Available
FFY 17 / 5339	$ 5,287,027	$ 5,287,027	$ -	Available	ITCCAP	$ -	$ -	$ -	Available
FFY 17 / 5310	$ -	$ -	$ -	Available	SCA	$ 325,000	$ 3,234,526	$ 2,909,526	Available
FFY 17 / 5309	$ 150,000,000	150,000,000	$ -	Available	TDC	$ -			

2019 Boston Region MPO Transportation Improvement Program

06/22/2015 Draft Released
xx/xx/xxxx Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 1A / Federal Aid Target Projects								
►HSIP - Highway Safety Improvement Program								
	606043	HOPKINTON- SIGNAL & INTERSECTION IMPROVEMENTS ON ROUTE 135	3	**HSIP**	$ 1,220,822	$ 1,098,740	$ 122,082	CMAQ+HSIP+STP Total Cost = $8,138,816
	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	3	**HSIP**	$ 2,362,214	$ 2,125,993	$ 236,221	CMAQ+HSIP Total Cost = $3,149,619
	607652	EVERETT- RECONSTRUCTION OF FERRY STREET, SOUTH FERRY STREET AND A PORTION OF ELM STREET	4	**HSIP**	$ 2,000,000	$ 1,800,000	$ 200,000	STP+HSIP Total Cost = $7,244,124
				HSIP Subtotal ►	$ 5,583,037	$ 5,024,733	$ 558,304	◄ 90% Federal + 10% Non-Federal
►CMAQ - Congestion Mitigation and Air Quality Improvement Program								
	1569	GREEN LINE EXTENSION PROJECT (PHASE 2), COLLEGE AVENUE TO MYSTIC VALLEY PARKWAY/ROUTE 16	N/A	**CMAQ**	$ 13,427,220	$ 10,741,776	$ 2,685,444	Yr 4 of 6; CMAQ+STP Total Cost = $190,100,000 ($158,000,000 programmed within FFYs 2016-20 TIP)
	605034	NATICK- RECONSTRUCTION OF ROUTE 27 (NORTH MAIN STREET), FROM NORTH AVENUE TO THE WAYLAND T.L.	3	**CMAQ**	$ 1,000,000	$ 800,000	$ 400,000	CMAQ+STP Total Cost = $14,725,286
	606043	HOPKINTON- SIGNAL & INTERSECTION IMPROVEMENTS ON ROUTE 135	3	**CMAQ**	$ 1,000,000	$ 800,000	$ 200,000	CMAQ+HSIP+STP Total Cost = $8,138,816
	606453	BOSTON- IMPROVEMENTS ON BOYLSTON STREET, FROM INTERSECTION OF BROOKLINE AVENUE & PARK DRIVE TO IPSWICH STREET	6	**CMAQ**	$ 1,824,765	$ 1,459,812	$ 364,953	STP+CMAQ+TAP Total Cost = $7,373,484
	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	3	**CMAQ**	$ 787,405	$ 629,924	$ 157,481	CMAQ+HSIP Total Cost = $3,149,619
				CMAQ Subtotal ►	$ 18,039,390	$ 14,431,512	$ 3,807,878	◄ 80% Federal + 20% Non-Federal
►TAP - Transportation Alternatives Program								
	606453	BOSTON- IMPROVEMENTS ON BOYLSTON STREET, FROM INTERSECTION OF BROOKLINE AVENUE & PARK DRIVE TO IPSWICH STREET	6	**TAP**	$ 2,548,719	$ 2,038,975	$ 509,744	STP+CMAQ+TAP Total Cost = $7,373,484
				TAP Subtotal ►	$ 2,548,719	$ 2,038,975	$ 509,744	◄ 80% Federal + 20% Non-Federal

2019 Boston Region MPO Transportation Improvement Program

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Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Non-CMAQ/HSIP/TAP (Other)								
	1569	GREEN LINE EXTENSION PROJECT (PHASE 2), COLLEGE AVENUE TO MYSTIC VALLEY PARKWAY/ROUTE 16	N/A	**STP**	$ 26,572,780	$ 21,258,224	$ 5,314,556	Yr 4 of 6; CMAQ+STP Total Cost = $190,100,000 ($158,000,000 programmed within FFYs 2016-20 TIP)
	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)	6	**STP**	$ 6,600,000	$ 5,280,000	$ 1,320,000	AC Yr 4 of 4; STP+HSIP+TEA-21 Earmark Total Cost = $60,053,518
	602077	LYNN- RECONSTRUCTION ON ROUTE 129 (LYNNFIELD STREET), FROM GREAT WOODS ROAD TO WYOMA SQUARE	4	**STP**	$ 3,889,305	$ 3,111,444	$ 777,861	
	605034	NATICK- RECONSTRUCTION OF ROUTE 27 (NORTH MAIN STREET), FROM NORTH AVENUE TO THE WAYLAND T.L.	3	**STP**	$ 13,725,286	$ 10,980,229	$ 2,745,057	CMAQ+STP Total Cost = $14,725,286
	606453	BOSTON- IMPROVEMENTS ON BOYLSTON STREET, FROM INTERSECTION OF BROOKLINE AVENUE & PARK DRIVE TO IPSWICH STREET	6	**STP**	$ 3,000,000	$ 2,400,000	$ 600,000	STP+CMAQ+TAP Total Cost = $7,373,484
	606043	HOPKINTON- SIGNAL & INTERSECTION IMPROVEMENTS ON ROUTE 135	3	**STP**	$ 5,917,993	$ 4,734,395	$ 1,183,599	CMAQ+HSIP+STP Total Cost = $8,138,816
	607652	EVERETT- RECONSTRUCTION OF FERRY STREET, SOUTH FERRY STREET AND A PORTION OF ELM STREET	4	**STP**	$ 5,244,124	$ 4,195,299	$ 1,048,825	STP+HSIP Total Cost = $7,244,124
				Non-CMAQ/HSIP/TAP (Other) Subtotal ►	$ 64,949,489	$ 51,959,591	$ 12,989,898	◄ 80% Federal + 20% Non-Federal

►Section 1A / Fiscal Constraint Analysis

Total Federal Aid Target Funds Programmed ►	$ 91,120,634	**$ 92,626,333**	**◄Total Target**	**$ 1,505,699**	**Target Funds Available**
Total Non-CMAQ/HSIP/TAP (Other) Programmed ►	$ 64,949,489	$ 72,353,684	◄ Max. **Non-CMAQ/HSIP/TAP**	**$ 1,505,699**	Non-CMAQ/HSIP/TAP (Other) A
Total HSIP Programmed ►	$ 5,583,037	$ 4,296,710	◄ Min. **HSIP**	**$ (1,286,327)**	HSIP Minimum Met
Total CMAQ Programmed ►	$ 18,039,390	$ 13,427,220	◄ Min. **CMAQ**	**$ (4,612,170)**	CMAQ Minimum Met
Total TAP Programmed ►	$ 2,548,719	$ 2,548,719	◄ Min. **TAP**	**$ -**	TAP Minimum Met

HSIP, CMAQ, TAP Overprogrammed $ (5,898,497)

►Section 1B / Federal Aid Bridge Projects

►Statewide Bridge Maintenance Program

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

►On System

	604173	BOSTON- BRIDGE REHABILITATION, B-16-016, NORTH WASHINGTON STREET OVER THE CHARLES RIVER	6	**NHPP**	$ 34,504,000	$ 27,603,200	$ 6,900,800	AC Yr 3 of 4; Total Cost = $112,700,000
	604952	LYNN- SAUGUS- BRIDGE REPLACEMENT, L-18-016=S-05-008, ROUTE 107 OVER THE SAUGUS RIVER (AKA - BELDEN G. BLY BRIDGE)	4	**NHPP**	$ 12,800,000	$ 10,240,000	$ 2,560,000	AC Yr 3 of 4; Total Cost = $45,000,000
				On System Subtotal ►	$ 47,304,000	$ 37,843,200	$ 9,460,800	◄ 80% Federal + 20% Non-Federal

2019 Boston Region MPO Transportation Improvement Program

06/22/2015 Draft Released
xx/xx/xxxx Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Off-System								
	608079	SHARON- BRIDGE REPLACEMENT, S-09-003 (40N), MASKWONICUT STREET OVER AMTRAK/MBTA	5	**STP-BR-OFF**	$ 4,755,240	$ 3,804,192	$ 951,048	
	BR1901	STOW, BRIDGE REPLACEMENT, S-29-11, BOX MILL ROAD OVER ELIZABETH BROOK	3	**STP-BR-OFF**	$ 3,612,224	$ 2,889,779	$ 722,445	
				Off-System Subtotal ►	$ 8,367,464	$ 6,693,971	$ 1,673,493	◄ 80% Federal + 20% Non-Federal
► Statewide Bridge Inspection Program								
		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			$ -	$ -	$ -	
				Other Federal Aid Subtotal ►	$ -	$ -	$ -	◄ Funding Split Varies by Funding Source
►Section 1D / Federal Aid Major & State Category Projects								
► Statewide Infrastructure Program								
	606381	ARLINGTON- BELMONT- HIGHWAY LIGHTING REPAIR & MAINTENANCE ON ROUTE 2	4	STP	$ 3,700,000	$ 2,960,000	$ 740,000	AC Year 2 of 2; Total Cost = $9,450,000
				Statewide Infrastructure Program Subtotal ►	$ 3,700,000	$ 2,960,000	$ 740,000	◄ 80% Federal + 20% Non-Federal
► Statewide HSIP Program								
	608205	READING TO LYNNFIELD - GUIDE AND TRAFFIC SIGN REPLACEMENT ON A SECTION OF INTERSTATE 95 (STATE ROUTE 128)	4	HSIP	$ 3,500,000	$ 3,150,000	$ 350,000	
	608206	CHELSEA TO DANVERS - GUIDE AND TRAFFIC SIGN REPLACEMENT ON A SECTION OF US ROUTE 1	4	HSIP	$ 5,900,000	$ 5,310,000	$ 590,000	
	607759	BOSTON- INTERSECTION & SIGNAL IMPROVEMENTS AT THE VFW PARKWAY & SPRING STREET	6	HSIP	$ 550,000	$ 495,000	$ 55,000	
	608052	NORWOOD- INTERSECTION & SIGNAL IMPROVEMENTS AT US 1 (PROVIDENCE HIGHWAY) & MORSE STREET	5	HSIP	$ 550,000	$ 495,000	$ 55,000	
	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	6	HSIP	$ 1,100,000	$ 990,000	$ 110,000	
				Statewide HSIP Program Subtotal ►	$ 11,600,000	$ 10,440,000	$ 1,160,000	◄ 90% Federal + 10% Non-Federal
► Statewide Safe Routes to Schools Program								
		No Projects Programmed			$ -	$ -	$ -	Funding Split Varies by Funding Source
				Statewide Safe Routes to Schools Program Subtotal ►	$ -	$ -	$ -	◄ Funding Split Varies by Funding Source

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Statewide CMAQ								
	607888	BOSTON- BROOKLINE- MULTI-USE PATH CONSTRUCTION ON NEW FENWAY	6	CMAQ	$ 1,915,213	$ 1,532,170	$ 383,043	
				Statewide CMAQ ►	$ 1,915,213	$ 1,532,170	$ 383,043	◄ 80% Federal + 20% Non-Federal
►Statewide Transportation Enhancements								
		No Projects Programmed			$ -	-	-	
				Statewide Transportation Enhancements Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide ITS								
		No Projects Programmed			$ -	-	-	
				Statewide ITS Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide Interstate Maintenance Program								
	608208	QUINCY - MILTON - BOSTON - INTERSTATE MAINTENANCE AND RELATED WORK ON I-93	6	NHPP	$ 22,287,462	$ 20,058,716	$ 2,228,746	
	608210	FOXBOROUGH-PLAINVILLE-WRENTHAM-FRANKLIN-INTERSTAE MAINTENANCE AND RELATED WORK ON I-495	5	NHPP	$ 29,392,384	$ 26,453,146	$ 2,939,238	
				Statewide Interstate Maintenance Program Subtotal ►	$ 51,679,846	$ 46,511,862	$ 5,167,985	◄ 90% Federal + 10% Non-Federal
►Statewide NHS Preservation Program+								
	608221	MARLBORO RESURFACING AND RELATED WORK ON ROUTE 20	3	NHPP	$ 6,126,938	$ 4,901,550	$ 1,225,388	
				Statewide NHS Preservation Program Subtotal ►	$ 6,126,938	$ 4,901,550	$ 1,225,388	◄ 80% Federal + 20% Non-Federal
►Statewide RR Grade Crossings								
		No Projects Programmed			$ -	-	-	
				Statewide RR Grade Crossings Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide Stormwater Retrofits								
	608213	MILTON - STORMWATER IMPROVEMENTS ALONG I-93	6	STP-TE	$ 560,000	$ 448,000	$ 112,000	
	608214	WINCHESTER - UPPER MYSTIC RIVER ROUTE 3	4	STP-TE	$ 224,000	$ 179,200	$ 44,800	
				Statewide Stormwater Retrofits Subtotal ►	$ 784,000	$ 627,200	$ 156,800	◄ 80% Federal + 20% Non-Federal
►Statewide ADA Implementation Plan								
		No Projects Programmed			$ -	-	-	
				Statewide ADA Implementation Plan 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

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xx/xx/xxxx Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 2A / Non-Federal Projects								
►Non Federal Aid								
	1568	FAIRMOUNT IMPROVEMENTS	N/A	NFA	$ 5,328,200		$ 5,328,200	Lists cash flows (based on state fiscal year)
				Non-Federal Aid Subtotal►	$ 5,328,200		$ 5,328,200	◄100% Non-Federal
►Section 2B / Non-Federal Bridge Projects								
►Section 2B / Non-Federal Bridge Projects								
		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 ►	$ 222,798,095	$ 5,328,200	$ 228,126,295	◄ Total Spending in Region
Federal Funds ►	$ 184,964,765		$ 184,964,765	◄ Total Federal Spending in Region
Non-Federal Funds ►	$ 37,833,331	$ 5,328,200	$ 43,161,531	◄ 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

2019 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources					Local Funds ▼	Total Cost ▼	Additional Information ▼
					RTACAP ▼	MAP ▼	ICB ▼	TDC ▼	SCA ▼			
5307	MBTA	PREVENTIVE MAINTENANCE		$ 12,000,000	$ -	$ -	$ -	$ -	$ -	$ 3,000,000	**$ 15,000,000**	
5307	MBTA	Systems Upgrades		$ 58,685,516	$ -	$ -	$ -	$ -	$ -	$ 14,671,379	**$ 73,356,895**	
5307	CATA	PREVENTIVE MAINTENANCE	2018	$ 400,000	$ -	$ -	$ -	$ -	$ -	$ 100,000	**$ 500,000**	
5307	CATA	ACQUIRE - SHOP EQ/COMPUTER/SFTWR	2018	$ 44,000	$ 11,000	$ -	$ -	$ -	$ -	$ -	**$ 55,000**	
5307	CATA	ACQUIRE - MISC SUPPORT EQUIPMENT	2018	$ 102,152	$ 25,538	$ -	$ -	$ -	$ -	$ -	**$ 127,690**	
5307	MWRTA	INTERMODAL (TRANSIT): Facil. Improvements		$ 150,000	$ 37,500	$ -	$ -	$ -	$ -	$ -	**$ 187,500**	
5307	MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES		$ 248,415	$ 62,104	$ -	$ -	$ -	$ -	$ -	**$ 310,519**	
5307	MWRTA	NON FIXED ROUTE ADA PARA SERV		$ 130,000	$ -	$ -	$ -	$ -	$ 325,000	$ -	**$ 455,000**	
5307	MWRTA	Mobility Management		$ 25,000	$ 6,250	$ -	$ -	$ -	$ -	$ -	**$ 31,250**	
			5307 Subtotal ►	**$ 71,785,083**	**$ 142,392**	**$ -**	**$ -**	**$ -**	**$ 325,000**	**$ 17,771,379**	**$ 90,023,854**	
5337	MBTA	Bridge & Tunnel Program		$ 60,000,000	$ -	$ -	$ -	$ -	$ -	$ 15,000,000	**$ 75,000,000**	
5337	MBTA	Systems Upgrades		$ 61,190,546	$ -	$ -	$ -	$ -	$ -	$ 15,297,637	**$ 76,488,183**	
			5337 Subtotal ►	**$ 121,190,546**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,297,637**	**$ 151,488,183**	
5339	MBTA	Systems Upgrades		$ 5,287,027	$ -	$ -	$ -	$ -	$ -	$ 1,321,757	**$ 6,608,784**	
			5339 Subtotal ►	**$ 5,287,027**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,321,757**	**$ 6,608,784**	

2019 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources: RTACAP ▼	MAP ▼	ICB ▼	TDC ▼	SCA ▼	Local Funds ▼	Total Cost ▼	Additional Information ▼
5310		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
			5310 Subtotal ►	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
5309	MBTA	GREEN LINE EXTENSION PROJECT-EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	$ 150,000,000	$ -	$ -	$ -	$ -	$ -	$ 26,196,000	**$ 176,196,000**	The Green Line Extension project received a New Starts Full Funding Grant Agreement in FFY 2015. The cash flows for the project begin programming New Starts funding in FFY 2015 and program $150 million in New Starts in FFY 2019. $1,270,262,000 of the $1,992,243,000 project cost is programmed in FFYs 2016-19.
			5309 Subtotal ►	**$ 150,000,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 26,196,000**	**$ 176,196,000**	
SoGR		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
Livability		No Projects Programmed	N/A	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	**$ -**	
TIGER		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
			Grants Subtotal ►	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Other		No Projects Programmed	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**	
			Other Subtotal ►	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
			Total►	**$ 348,262,656**	**$ 142,392**	**$ -**	**$ -**	**$ -**	**$ 325,000**	**$ 75,586,773**	**$ 424,316,821**	

Fiscal Constraint Analysis

Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		State Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼	
FFY 17 / 5307	$ 71,785,083	$ 136,938,027	$ 65,152,944	Available	RTACAP	$ 142,392	$ 142,392	$ -	Available
FFY 17 / 5337	$ 121,190,546	$ 121,190,546	$ -	Available	MAP	$ -	$ -	$ -	Available
FFY 17 / 5339	$ 5,287,027	$ 5,287,027	$ -	Available	ITCCAP	$ -	$ -	$ -	Available
FFY 17 / 5310	$ -	$ -	$ -	Available	SCA	$ 325,000	$ 3,234,526	$ 2,909,526	Available
FFY 17 / 5309	$ 150,000,000	150,000,000	$ -	Available	TDC	$ -			

2020 Boston Region MPO Transportation Improvement Program

06/22/2015 Draft Released
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Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 1A / Federal Aid Target Projects								
►HSIP - Highway Safety Improvement Program								
		No Projects Programmed			$ -	$ -	$ -	
				HSIP Subtotal ►	$ -	$ -	$ -	◄ 90% Federal + 10% Non-Federal
►CMAQ - Congestion Mitigation and Air Quality Improvement Program								
	1569	GREEN LINE EXTENSION PROJECT (PHASE 2), COLLEGE AVENUE TO MYSTIC VALLEY PARKWAY/ROUTE 16	N/A	**CMAQ**	$ 13,427,220	$ 10,741,776	$ 2,685,444	Yr 5 of 6; CMAQ+STP Total Cost = $190,100,000 ($158,000,000 programmed within FFYs 2016-20 TIP)
	602261	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**	$ 2,000,000	$ 1,600,000	$ 400,000	STP+CMAQ Total Cost = $18,584,373
	604123	ASHLAND- RECONSTRUCTION ON ROUTE 126 (POND STREET), FROM THE FRAMINGHAM T.L. TO THE HOLLISTON T.L.	3	**CMAQ**	$ 2,000,000	$ 1,600,000	$ 400,000	STP+CMAQ+TAP Total Cost = $15,532,405
				CMAQ Subtotal ►	$ 17,427,220	$ 13,941,776	$ 3,485,444	◄ 80% Federal + 20% Non-Federal
►TAP - Transportation Alternatives Program								
	604123	ASHLAND- RECONSTRUCTION ON ROUTE 126 (POND STREET), FROM THE FRAMINGHAM T.L. TO THE HOLLISTON T.L.	3	**TAP**	$ 2,548,719	$ 2,038,975	$ 509,744	STP+CMAQ+TAP Total Cost = $15,532,405
				TAP Subtotal ►	$ 2,548,719	$ 2,038,975	$ 509,744	◄ 80% Federal + 20% Non-Federal
►Non-CMAQ/HSIP/TAP (Other)								
	1569	GREEN LINE EXTENSION PROJECT (PHASE 2), COLLEGE AVENUE TO MYSTIC VALLEY PARKWAY/ROUTE 16	N/A	**STP**	$ 26,572,780	$ 21,258,224	$ 5,314,556	Yr 5 of 6; CMAQ+STP Total Cost = $190,100,000 ($158,000,000 programmed within FFYs 2016-20 TIP)
	604996	WOBURN- BRIDGE REPLACEMENT, W-43-017, NEW BOSTON STREET OVER MBTA	4	**STP**	$ 11,355,289	$ 9,084,231	$ 2,271,058	
	606226	BOSTON- RECONSTRUCTION OF RUTHERFORD AVENUE, FROM CITY SQUARE TO SULLIVAN SQUARE	6	**STP**	$ 7,000,000	$ 5,600,000	$ 1,400,000	
	604123	ASHLAND- RECONSTRUCTION ON ROUTE 126 (POND STREET), FROM THE FRAMINGHAM T.L. TO THE HOLLISTON T.L.	3	**STP**	$ 10,983,686	$ 8,786,949	$ 2,196,737	STP+CMAQ+TAP Total Cost = $15,532,405
	602261	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**	$ 16,584,373	$ 13,267,498	$ 3,316,875	STP+CMAQ Total Cost = $18,584,373
				Non-CMAQ/HSIP/TAP (Other) Subtotal ►	$ 72,496,128	$ 57,996,902	$ 14,499,226	◄ 80% Federal + 20% Non-Federal

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Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼

►Section 1A / Fiscal Constraint Analysis

Total Federal Aid Target Funds Programmed ►	$ 92,472,067	**$ 92,626,333**	**◄Total Target**	**$ 154,266**	**Target Funds Available**
Total Non-CMAQ/HSIP/TAP (Other) Programmed ►	$ 72,496,128	$ 72,353,684	◄ Max. **Non-CMAQ/HSIP/TAP**	**$ (142,444)**	Non-CMAQ/HSIP/TAP (Other) E
Total HSIP Programmed ►	$ -	$ 4,296,710	◄ Min. **HSIP**	**$ 4,296,710**	HSIP Minimum Not Met
Total CMAQ Programmed ►	$ 17,427,220	$ 13,427,220	◄ Min. **CMAQ**	**$ (4,000,000)**	CMAQ Minimum Met
Total TAP Programmed ►	$ 2,548,719	$ 2,548,719	◄ Min. **TAP**	**$ -**	TAP Minimum Met

Remaining HSIP, CMAQ, and TAP Funds $ 296,710

►Section 1B / Federal Aid Bridge Projects

►Statewide Bridge Maintenance Program

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

►On System

		No Projects Programmed						
				On System Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal

►Off-System

		No Projects Programmed						
				Off-System Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal

► Statewide Bridge Inspection Program

		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			$ -	$ -	$ -	
				Other Federal Aid Subtotal ►	$ -	$ -	$ -	◄ Funding Split Varies by Funding Source

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

► Statewide Infrastructure Program

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

► Statewide HSIP Program

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

► Statewide Safe Routes to Schools Program

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

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Statewide CMAQ								
		No Projects Programmed						
				Statewide CMAQ ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide Transportation Enhancements								
		No Projects Programmed			$ -	-	-	
				Statewide Transportation Enhancements Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide ITS								
		No Projects Programmed			$ -	-	-	
				Statewide ITS Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide Interstate Maintenance Program								
		No Projects Programmed						
				Statewide Interstate Maintenance Program Subtotal ►	$ -	$ -	$ -	◄ 90% Federal + 10% Non-Federal
►Statewide NHS Preservation Program+								
		No Projects Programmed						
				Statewide NHS Preservation Program Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide RR Grade Crossings								
		No Projects Programmed			$ -	-	-	
				Statewide RR Grade Crossings Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide Stormwater Retrofits								
		No Projects Programmed						
				Statewide Stormwater Retrofits Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Statewide ADA Implementation Plan								
		No Projects Programmed			$ -	-	-	
				Statewide ADA Implementation Plan 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

2020 Boston Region MPO Transportation Improvement Program

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xx/xx/xxxx Endorsed

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 2A / Non-Federal Projects								
►Non Federal Aid								
		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	$ -		$ -	
				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 ►	$ 92,472,067	$ -	$ 92,472,067	◄ Total Spending in Region
Federal Funds ►	$ 73,977,654		$ 73,977,654	◄ Total Federal Spending in Region
Non-Federal Funds ►	$ 18,494,413	$ -	$ 18,494,413	◄ 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

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:

LRTP Status: 2016-20

Project Length: 4.18

Project Description:

This project will add a lane in each direction.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Highway Safety Improvement Program	$900,000	$100,000	$1,000,000
2016	Earmark High Priority Project (1998)	$6,880,000	$1,720,000	$8,600,000
2016	Surface Transportation Program	$3,040,000	$760,000	$3,800,000
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	$16,825,406	$4,206,352	$21,031,758
2019	Surface Transportation Program	$5,280,000	$1,320,000	$6,600,000
Total Funding Programmed		**$48,142,814**	**$11,910,704**	**$60,053,518**

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:

LRTP 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 Acton.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Statewide Highway Safety Improvement Program	$1,350,000	$150,000	$1,500,000
Total Funding Programmed		**$1,350,000**	**$150,000**	**$1,500,000**

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

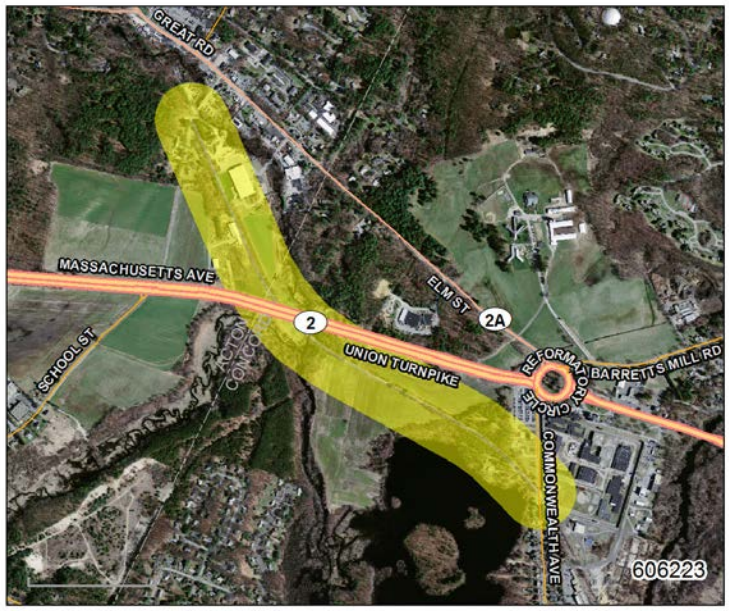
CO2 Impact: To Be Determined

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	$4,984,013	$1,246,003	$6,230,016
Total Funding Programmed		**$4,984,013**	**$1,246,003**	**$6,230,016**

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:

LRTP 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	$4,600,000	$1,150,000	$5,750,000
2019	Statewide Infrastructure Program	$2,960,000	$740,000	$3,700,000
Total Funding Programmed		**$7,560,000**	**$1,890,000**	**$9,450,000**

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

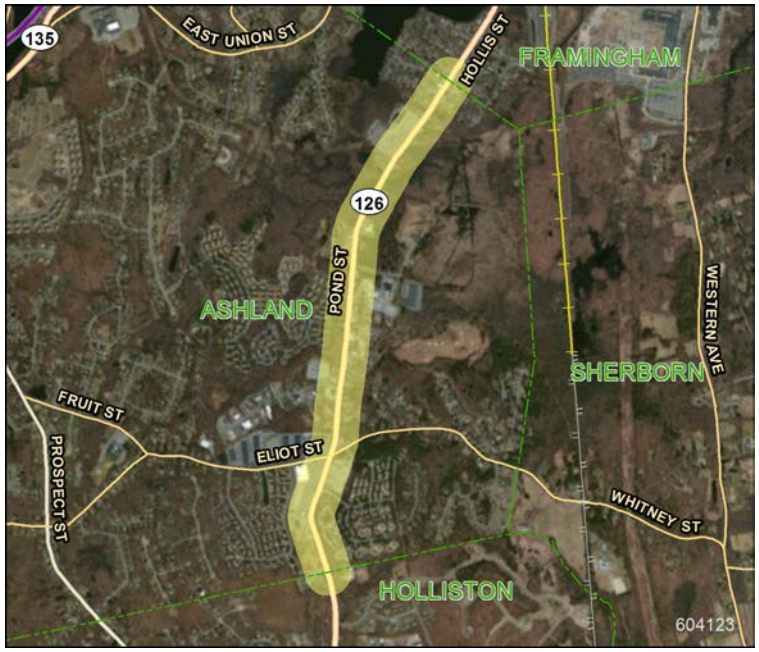
CO2 Impact: 61

Evaluation Rating: 77

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

LRTP 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 miling 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	Transportation Alternatives	$2,038,975	$509,744	$2,548,719
2020	Surface Transportation Program	$8,786,949	$2,196,737	$10,983,686
2020	Congestion Mitigation and Air Quality Program	$1,600,000	$400,000	$2,000,000
Total Funding Programmed		**$12,425,924**	**$3,106,481**	**$15,532,405**

ID Number : 608000

Municipality(ies): Bedford

Project Name: Safe Routes to School (John Glenn Middle)

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

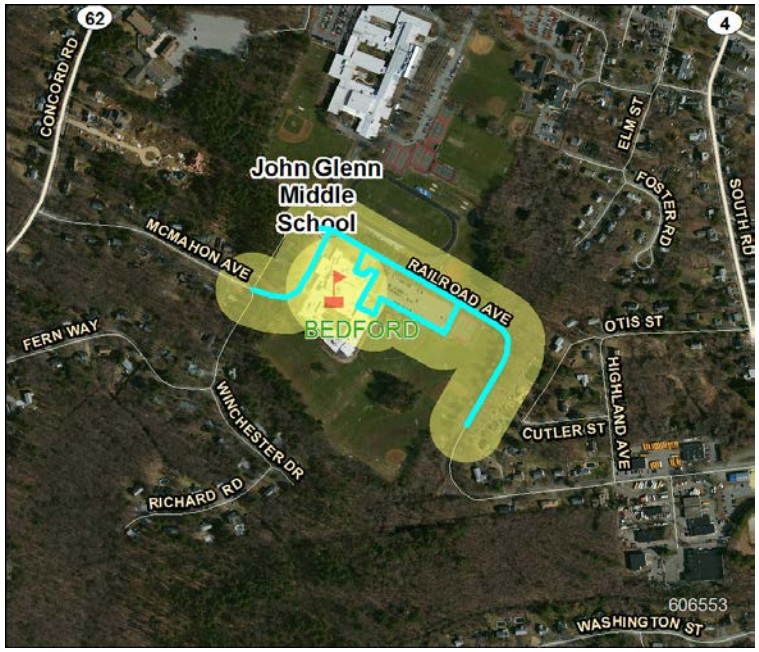
CO2 Impact: Assumed Nominal Reduction

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project will provide bicycle and pedestrian improvements around John Glenn Middle in Bedford.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Safe Routes to School	$624,000	$156,000	$780,000
Total Funding Programmed		**$624,000**	**$156,000**	**$780,000**

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

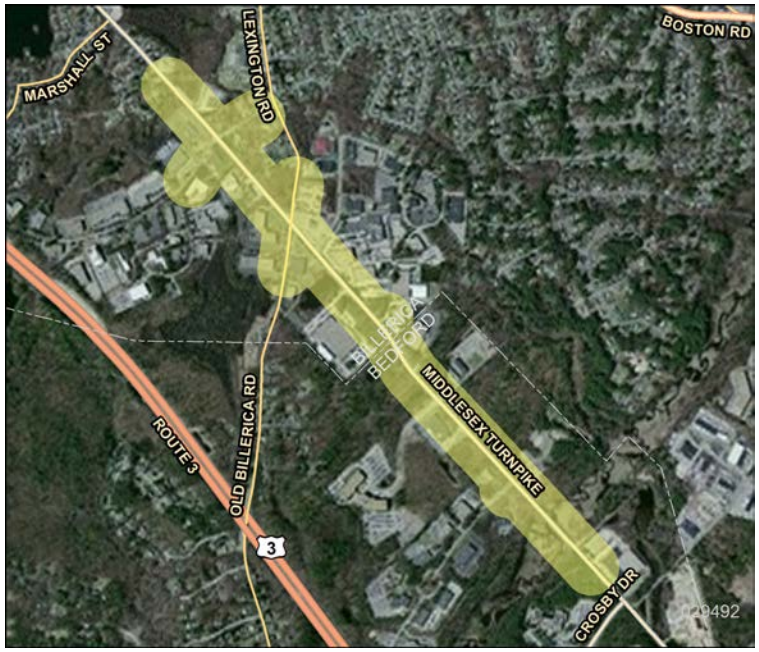
CO2 Impact: Model

Evaluation Rating: 86

MPO / CTPS Study:

LRTP 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
2016	Other	$800,000	$200,000	$1,000,000
2016	Surface Transportation Program	$17,353,154	$4,338,288	$21,691,442
2017	Surface Transportation Program	$5,283,925	$1,320,981	$6,604,906
Total Funding Programmed		**$23,437,079**	**$5,859,270**	**$29,296,348**

ID Number : 605789

Municipality(ies): Boston

Project Name: Reconstruction of Melnea Cass Boulevard

Project Type: Arterial and Intersection

Air Quality Status: Exempt

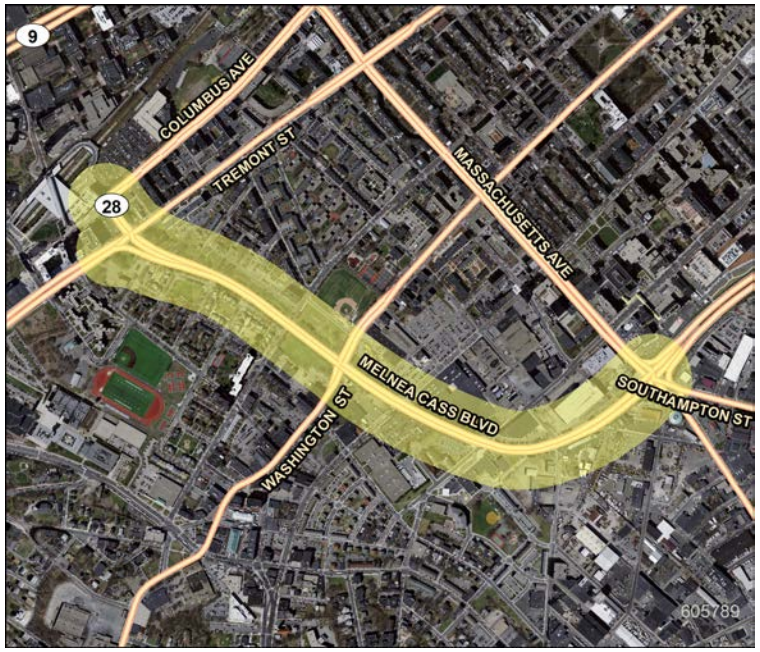
CO2 Impact: To Be Determined

Evaluation Rating:

MPO / CTPS Study:

LRTP 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
2018	Earmark High Priority Project (2005)	$1,943,784	$485,946	$2,429,730
2018	Earmark High Priority Project (2005)	$4,005,900	$1,001,475	$5,007,375
Total Funding Programmed		**$5,949,684**	**$1,487,421**	**$7,437,105**

ID Number : 607759

Municipality(ies): Boston

Project Name: Intersection and Signal Improvements at the VFW Parkway and Spring Street

Project Type: Arterial and Intersection

Air Quality Status: Exempt

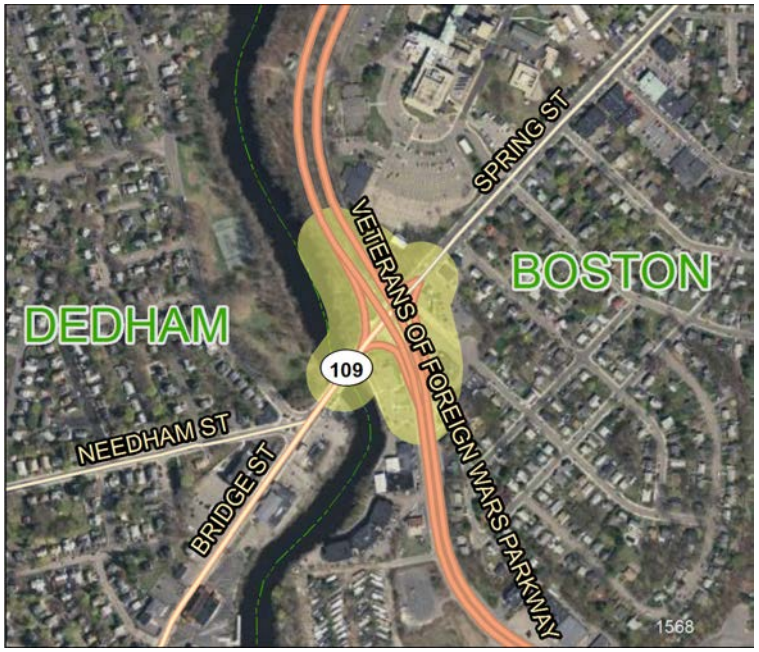
CO2 Impact: To Be Determined

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



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	$495,000	$55,000	$550,000
Total Funding Programmed		**$495,000**	**$55,000**	**$550,000**

ID Number : 1572

Municipality(ies): Boston

Project Name: Red Line-Blue Line Connector Design

Project Type: Transit

Air Quality Status: Exempt

CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 0.43

Project Description:

The proposed Red Line/Blue Line Connector consists of an extension of the MBTA Blue Line under Cambridge Street to the Red Line station at Charles/MGH. As currently envisioned, the project consists of two major components: (1) a new tunnel extending the Blue Line under Cambridge Street from Government Center to Charles Circle and (2) a new underground Blue Line station connected to the existing Charles/MGH Station. The project will also consider whether and how to relocate Bowdoin Station.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Other State Implementation Plan	$0	$29,000,000	$29,000,000
2017	Other State Implementation Plan	$0	$10,000,000	$10,000,000
Total Funding Programmed		**$0**	**$39,000,000**	**$39,000,000**

ID Number : 605733

Municipality(ies): Boston

Project Name: Highway Lighting System Replacement on I-93, from Southhampton Street to Neponset Avenue

Project Type: Major Highway

Air Quality Status: Exempt

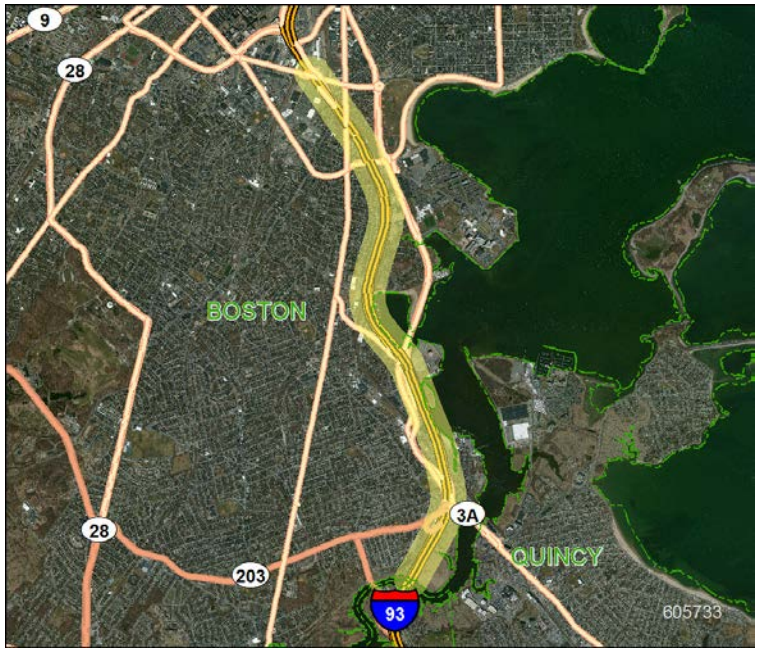
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 3.92



Project Description:

This project will replace existing non-functional lighting system. Project will include new lighting poles, luminaires and foundations as well as new conduit runs and load centers

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Statewide Infrastructure Program	$2,000,000	$500,000	$2,500,000
2017	Statewide Infrastructure Program	$3,600,000	$900,000	$4,500,000
2018	Statewide Infrastructure Program	$1,000,000	$250,000	$1,250,000
Total Funding Programmed		**$6,600,000**	**$1,650,000**	**$8,250,000**

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

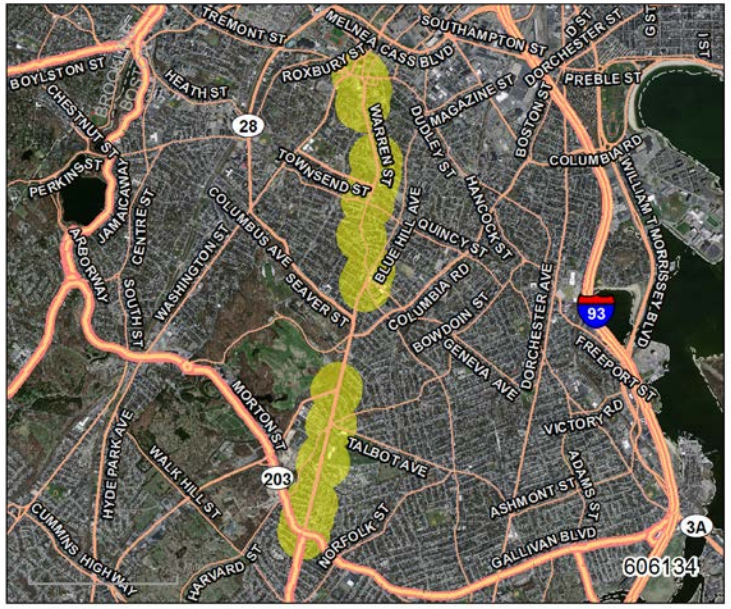
CO2 Impact: To Be Determined

Evaluation Rating:

MPO / CTPS Study:

LRTP 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)	$1,902,320	$475,580	$2,377,900
Total Funding Programmed		**$1,902,320**	**$475,580**	**$2,377,900**

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: 806

Evaluation Rating: 83

MPO / CTPS Study:

LRTP 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 vehicluar congestion.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Surface Transportation Program	$2,400,000	$600,000	$3,000,000
2019	Transportation Alternatives	$2,038,975	$509,744	$2,548,719
2019	Congestion Mitigation and Air Quality Program	$1,459,812	$364,953	$1,824,765
Total Funding Programmed		**$5,898,787**	**$1,474,697**	**$7,373,484**

ID Number : 604173

Municipality(ies): Boston

Project Name: Bridge Rehabilitation, North Washington Street over the Charles River

Project Type: Bridge

Air Quality Status: Exempt

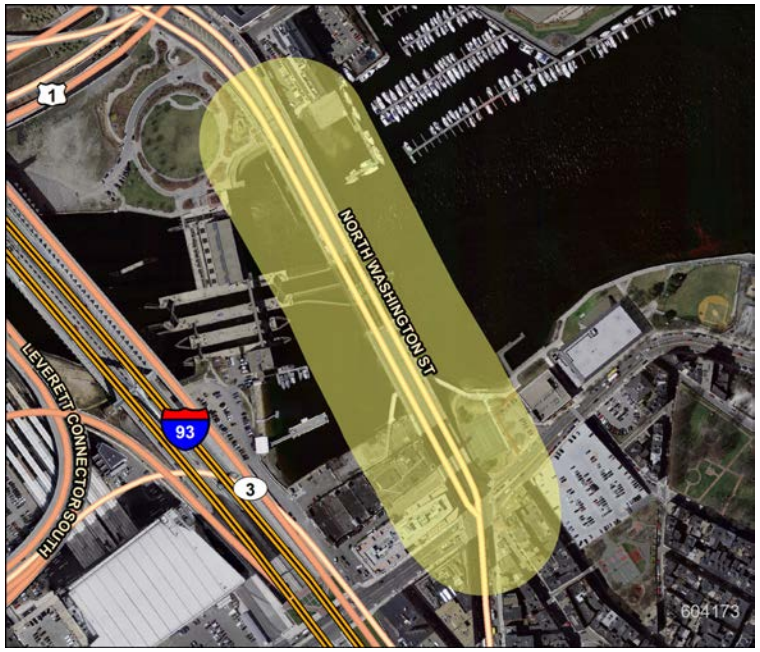
CO2 Impact: Assumed Nominal Reduction

Evaluation Rating:

MPO / CTPS Study:

LRTP 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	$10,387,200	$2,596,800	$12,984,000
2018	Bridge	$28,800,000	$7,200,000	$36,000,000
2019	Bridge	$27,603,200	$6,900,800	$34,504,000
Total Funding Programmed		**$66,790,400**	**$16,697,600**	**$83,488,000**

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

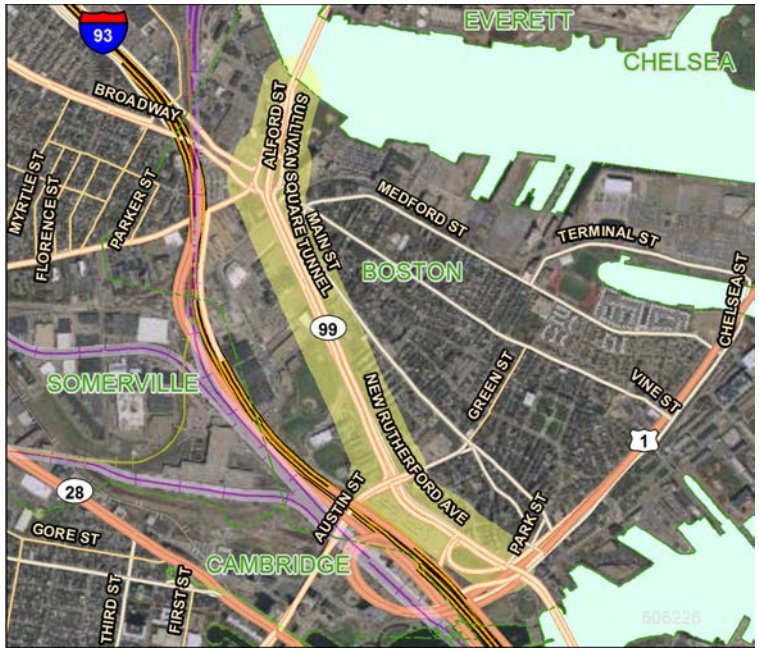
CO2 Impact: Model

Evaluation Rating:

MPO / CTPS Study:

LRTP 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
Total Funding Programmed		**$5,600,000**	**$1,400,000**	**$7,000,000**

ID Number : 600867

Municipality(ies): Boston

Project Name: Bridge Replacement, Massachusetts Avenue (Route 2A) over Commonwealth Avenue

Project Type: Bridge

Air Quality Status: Exempt

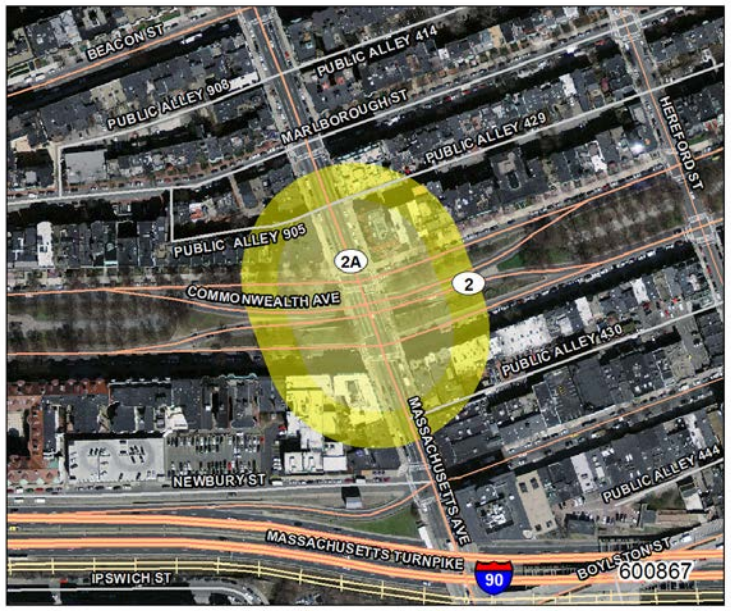
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 0.02



Project Description:

This project will replace the Massachusetts Avenue Bridge that spans Commonwealth Avenue with a new bridge.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Bridge	$7,259,200	$1,814,800	$9,074,000
2017	Bridge	$5,687,836	$1,421,959	$7,109,795
Total Funding Programmed		**$12,947,036**	**$3,236,759**	**$16,183,795**

ID Number : 606117

Municipality(ies): Boston

Project Name: Traffic Signal Improvements at 10 Locations

Project Type: Arterial and Intersection

Air Quality Status: Exempt

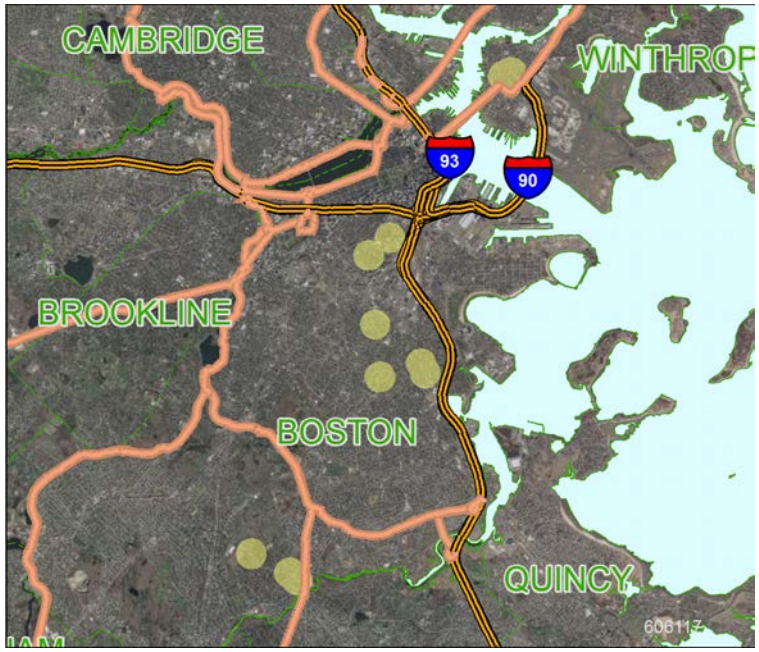
CO2 Impact: 13

Evaluation Rating: 71

MPO / CTPS Study:

LRTP Status:

Project Length: 0.77



Project Description:

The purpose of this projects is to upgrade five (5) traffic control signals and install four (4) new signals (a total of 9 locations). Existing devices are outdated and require additional functionality to meet MUTCD standards. Some traffic signals will include communication cable and field equipment (local controllers, detectors, etc). Certain locations will be connected to the Boston Transportation Department central traffic computer system, which will allow remote monitoring and real time adjustments to timing. Sidewalk ramps will be reconstructed as needed in order to meet current AAB standards. All signals will be retimed based on current traffic volumes. Certain locations require minor geometric changes to improve safety and operations. The locations are Arlington Street at Beacon and Embankment Road; Arlington at Marlborough; Cambridge at Harvard and Franklin; Cambridge at Windom; Pleasant at Savin Hill; Waltham at Washington; Dudley at Shirley; Cummins Highway at Rockdale; and Washington at West Concord.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Surface Transportation Program	$1,628,960	$407,240	$2,036,200
2016	Congestion Mitigation and Air Quality Program	$800,000	$200,000	$1,000,000
Total Funding Programmed		**$2,428,960**	**$607,240**	**$3,036,200**

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

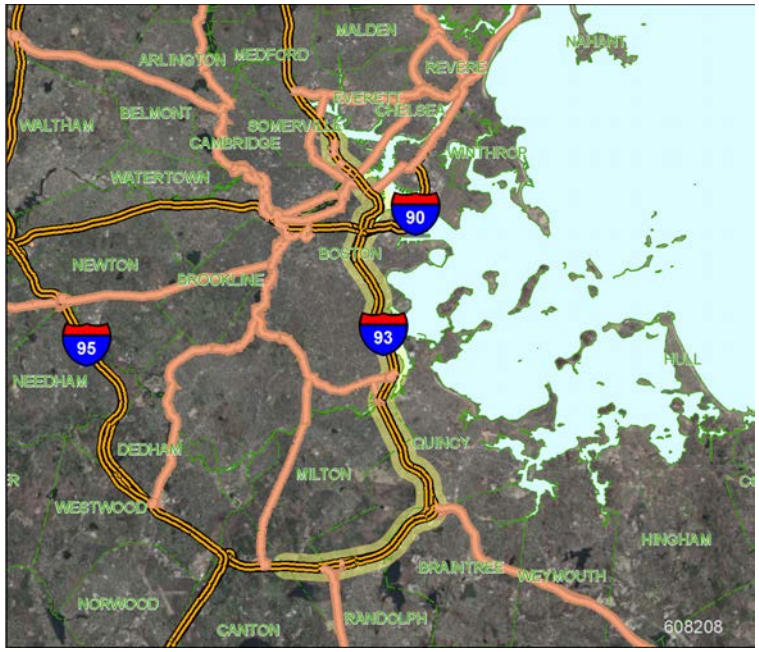
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project consists of interstate maintenance resurfacing and related work on I-93.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Interstate Maintenance	$20,058,716	$2,228,746	$22,287,462
Total Funding Programmed		**$20,058,716**	**$2,228,746**	**$22,287,462**

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

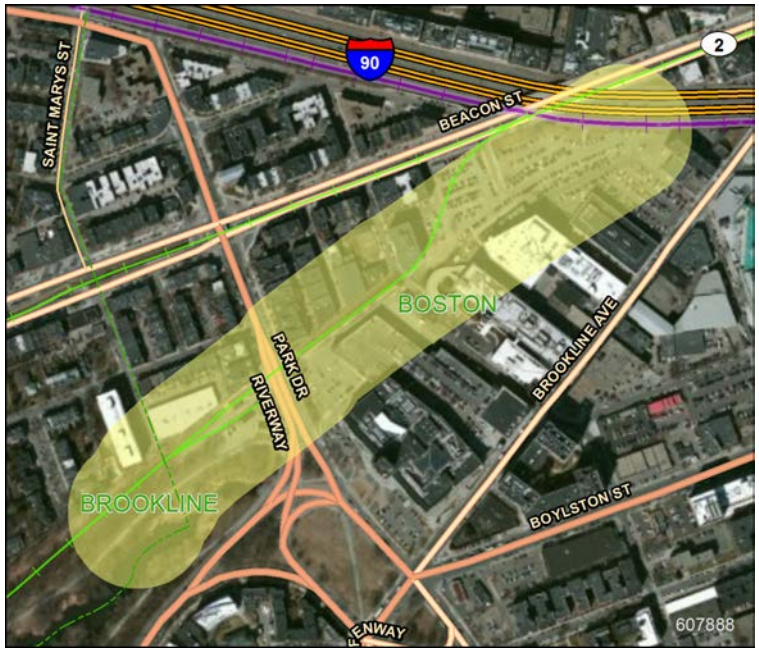
CO2 Impact: 106

Evaluation Rating: 65

MPO / CTPS Study:

LRTP 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	$1,532,170	$383,043	$1,915,213
Total Funding Programmed		**$1,532,170**	**$383,043**	**$1,915,213**

ID Number : 608213

Municipality(ies): Boston, Milton

Project Name: Stormwater Improvements along I-93

Project Type: Major Highway

Air Quality Status: Exempt

CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:

Project Description:

This project consists of stormwater improvements along I-93 in Milton.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Transportation Enhancement	$448,000	$112,000	$560,000
Total Funding Programmed		**$448,000**	**$112,000**	**$560,000**

ID Number : 607685

Municipality(ies): Braintree

Project Name: Bridge Rehabilitation, B-21-060 and B-21-061, St 3 (SB) And St 3 (NB) over Ramp C (Quincy Adams)

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 rehabbing B-21-060.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Bridge	$9,526,400	$2,381,600	$11,908,000
Total Funding Programmed		**$9,526,400**	**$2,381,600**	**$11,908,000**

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

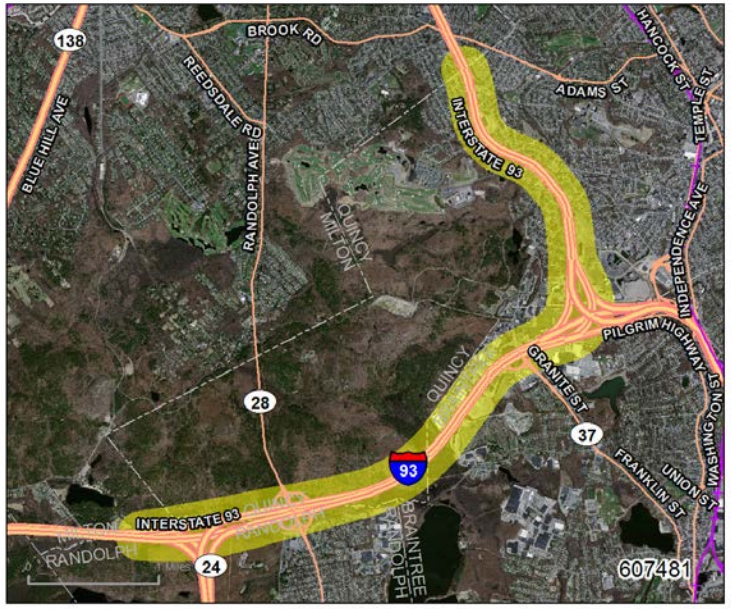
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 4.3



Project Description:

The project will resurface I-93 in Randolph, Quincy 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	$10,923,307	$1,213,701	$12,137,008
Total Funding Programmed		**$10,923,307**	**$1,213,701**	**$12,137,008**

ID Number : 608134

Municipality(ies): Brockton, Hingham

Project Name: Stormwater Improvements along Route 3A/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:

Project Description:

Stormwater improvements to address the Weir River (Hingham) and the Salisbury Plain River (Brockton)

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Statewide Transportation Enhancement	$383,280	$95,820	$479,100
Total Funding Programmed		**$383,280**	**$95,820**	**$479,100**

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

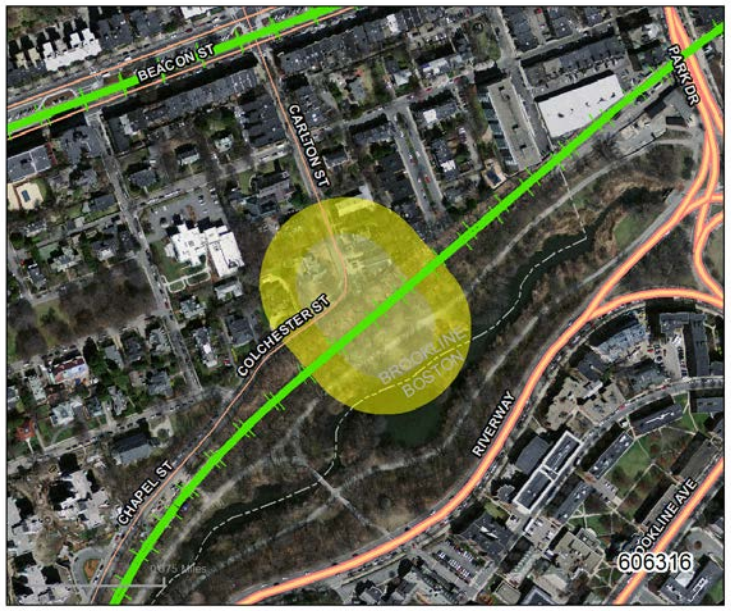
CO2 Impact: Assumed Nominal Reduction

Evaluation Rating: 59

MPO / CTPS Study:

LRTP 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
2016	Statewide Congestion Mitigation and Air Quality Program	$2,277,360	$569,340	$2,846,700
Total Funding Programmed		**$2,277,360**	**$569,340**	**$2,846,700**

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: 22

Evaluation Rating: 85

MPO / CTPS Study:

LRTP Status:

Project Length: 0.39

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
2017	Other	$800,000	$200,000	$1,000,000
2017	Transportation Alternatives	$1,877,470	$469,368	$2,346,838
2017	Congestion Mitigation and Air Quality Program	$377,449	$94,362	$471,811
2017	Surface Transportation Program	$1,600,000	$400,000	$2,000,000
Total Funding Programmed		**$4,654,919**	**$1,163,730**	**$5,818,649**

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:

LRTP 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
2016	Section 5309 - Transit Capital	$150,000,000	$217,838,000	$367,838,000
2017	Section 5309 - Transit Capital	$150,000,000	$230,670,000	$380,670,000
2018	Section 5309 - Transit Capital	$150,000,000	$195,558,000	$345,558,000
2019	Section 5309 - Transit Capital	$150,000,000	$26,196,000	$176,196,000
Total Funding Programmed		**$600,000,000**	**$670,262,000**	**$1,270,262,000**

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

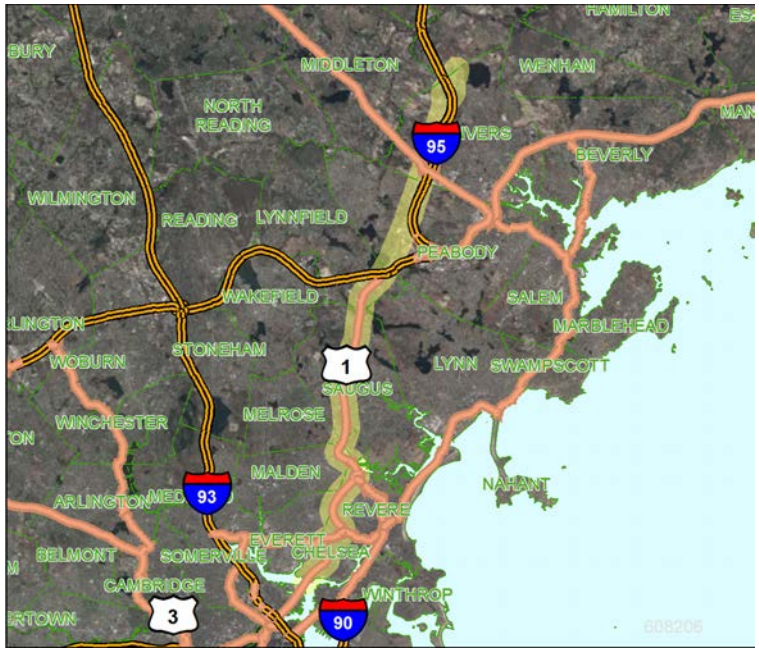
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project consists of guide and traffic sign replacement on a section of Route 1 between Chelsea and Danvers.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Highway Safety Improvement Program	$5,310,000	$590,000	$5,900,000
Total Funding Programmed		**$5,310,000**	**$590,000**	**$5,900,000**

ID Number : 607345

Municipality(ies): Cohasset

Project Name: Superstructure Replacement & Substructure Rehabilitation, Atlantic Avenue over Little Harbor Inlet

Project Type: Bridge

Air Quality Status: Exempt

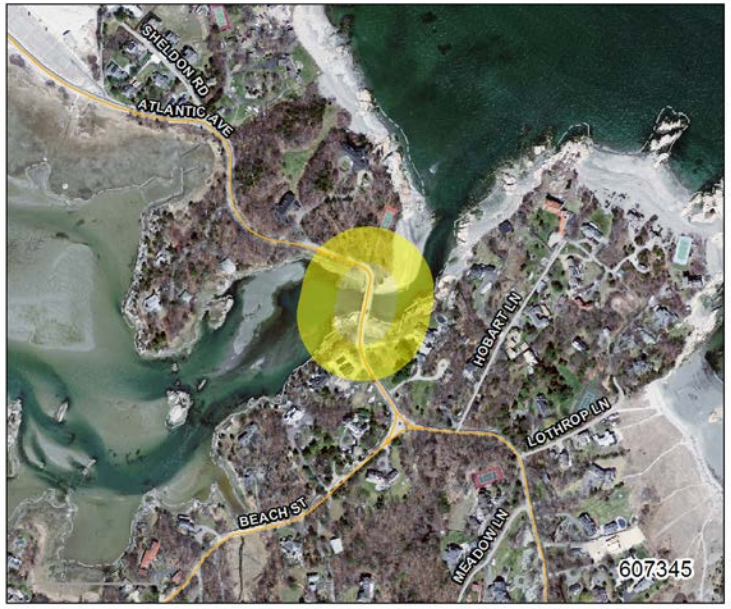
CO2 Impact: Assumed Nominal Reduction

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 0.01



Project Description:

This project is intended to rehabilitate and replace a structurally deficient bridge in Cohasset located on Atlantic Avenue over Little Harbor Inlet.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Bridge	$3,469,280	$867,320	$4,336,600
Total Funding Programmed		**$3,469,280**	**$867,320**	**$4,336,600**

ID Number : 605189

Municipality(ies): Concord

Project Name: Bruce Freeman Rail Trail, Phase 2C

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

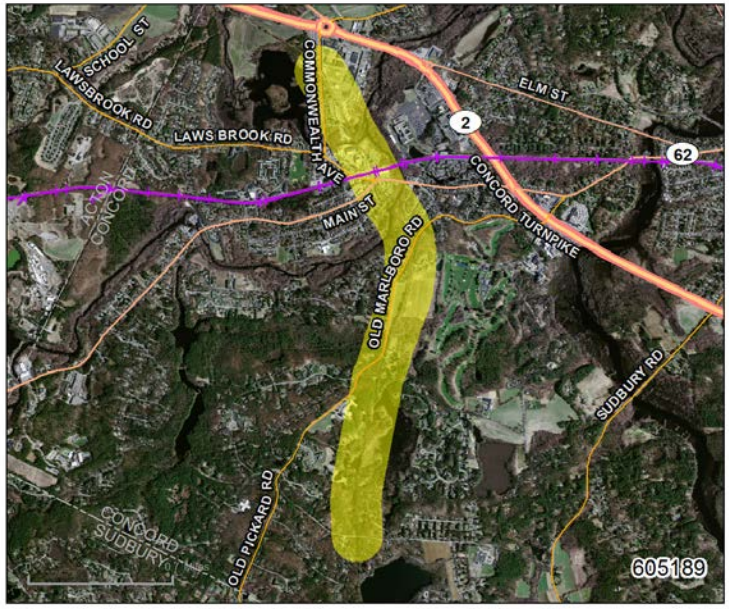
CO2 Impact: 79

Evaluation Rating: 73

MPO / CTPS Study:

LRTP Status:

Project Length: 2.5



Project Description:

The Bruce Freeman Rail Trail (BFRT) corridor extends approximately 25 miles along the Framingham and Lowell railroad corridor and is named in memory of former State Representative Bruce Freeman. The Town of Concord is proposing the construction of a 2.5 mile context-sensitive trail section of the BFRT from Commonwealth Avenue south to Powder Mill Road. The section of the BFRT from Commonwealth Avenue to the Acton town line will be addressed as part of the Concord Rotary project. The section from Powder Mill Road to the Sudbury town line will be addressed in cooperation with the Town of Sudbury as they develop plans for the trail in their town.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Statewide Congestion Mitigation and Air Quality Program	$4,426,067	$1,106,517	$5,532,584
Total Funding Programmed		**$4,426,067**	**$1,106,517**	**$5,532,584**

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:

LRTP Status:

Project Length:

Project Description:

This project consists of resurfacing and related work on Route 2.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	National Highway Performance Program	$1,427,328	$356,832	$1,784,160
Total Funding Programmed		**$1,427,328**	**$356,832**	**$1,784,160**

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:

LRTP 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	$8,411,178	$2,102,795	$10,513,973
Total Funding Programmed		**$8,411,178**	**$2,102,795**	**$10,513,973**

ID Number : 605608

Municipality(ies): Dedham

Project Name: Resurfacing & Related Work on Route 109

Project Type: Arterial and Intersection

Air Quality Status: Exempt

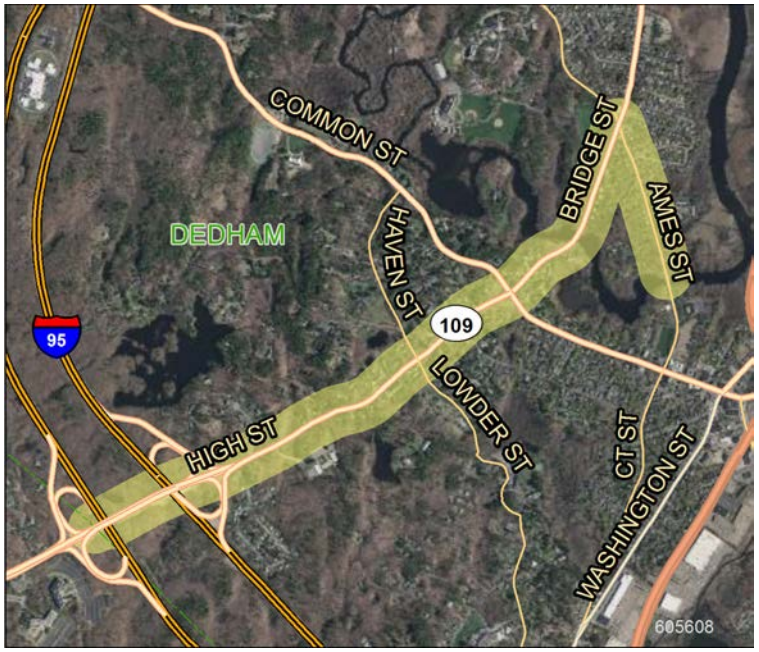
CO2 Impact: No CO2 Impact

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	$2,018,650	$504,662	$2,523,312
2018	Statewide Transportation Enhancement	$172,800	$43,200	$216,000
Total Funding Programmed		**$2,191,450**	**$547,862**	**$2,739,312**

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

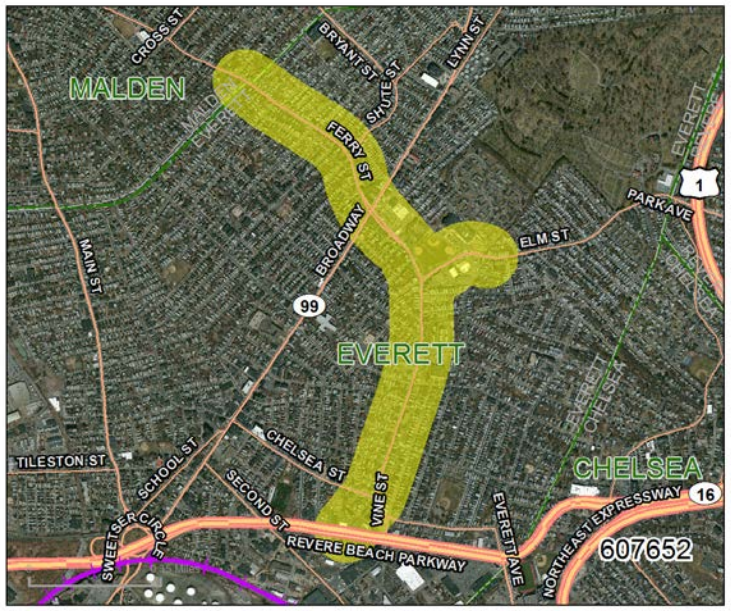
CO2 Impact: 159

Evaluation Rating: 90

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

LRTP 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	Surface Transportation Program	$4,195,299	$1,048,825	$5,244,124
2019	Highway Safety Improvement Program	$1,800,000	$200,000	$2,000,000
Total Funding Programmed		**$5,995,299**	**$1,248,825**	**$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:

LRTP 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
2016	Safe Routes to School	$482,086	$120,522	$602,608
Total Funding Programmed		**$482,086**	**$120,522**	**$602,608**

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:

LRTP Status:

Project Length:

Project Description:

This project consists of interstate maintenance resurfacing and related work on I-495.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Interstate Maintenance	$26,453,146	$2,939,238	$29,392,384
Total Funding Programmed		**$26,453,146**	**$2,939,238**	**$29,392,384**

ID Number : 606176

Municipality(ies): Foxborough, Plainville, Wrentham

Project Name: Interstate Maintenance & Related Work on I-495 (NB & SB)

Project Type: Major Highway

Air Quality Status: Exempt

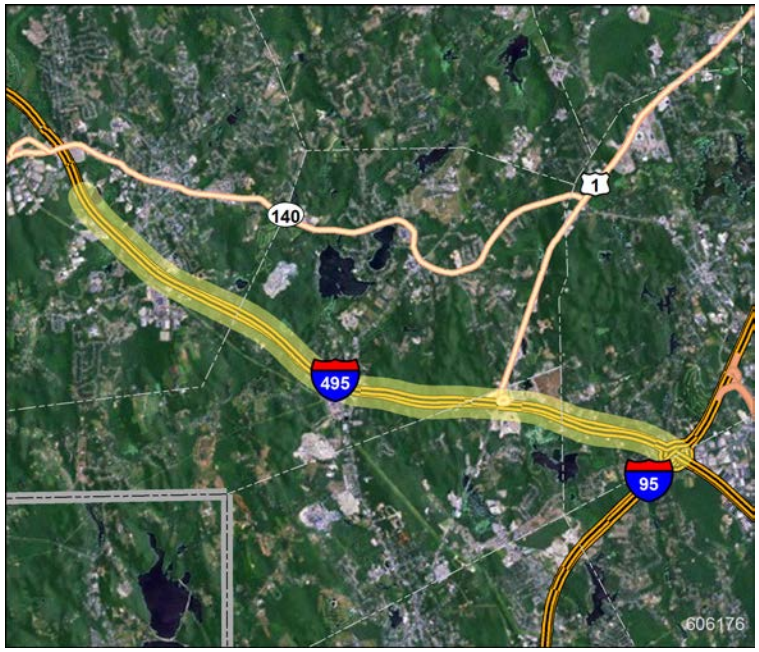
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 7.3



Project Description:

Interstate maintenance pavement preservation resurfacing, safety improvements and related work from MM 32.6 to MM 39.7 for a total project length of 7.3 miles.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Interstate Maintenance	$1,444,320	$160,480	$1,604,800
2016	Statewide Transportation Enhancement	$1,392,000	$348,000	$1,740,000
Total Funding Programmed		**$2,836,320**	**$508,480**	**$3,344,800**

ID Number : 607732

Municipality(ies): Framingham, Natick

Project Name: Cochituate Rail Trail, Phase Two

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

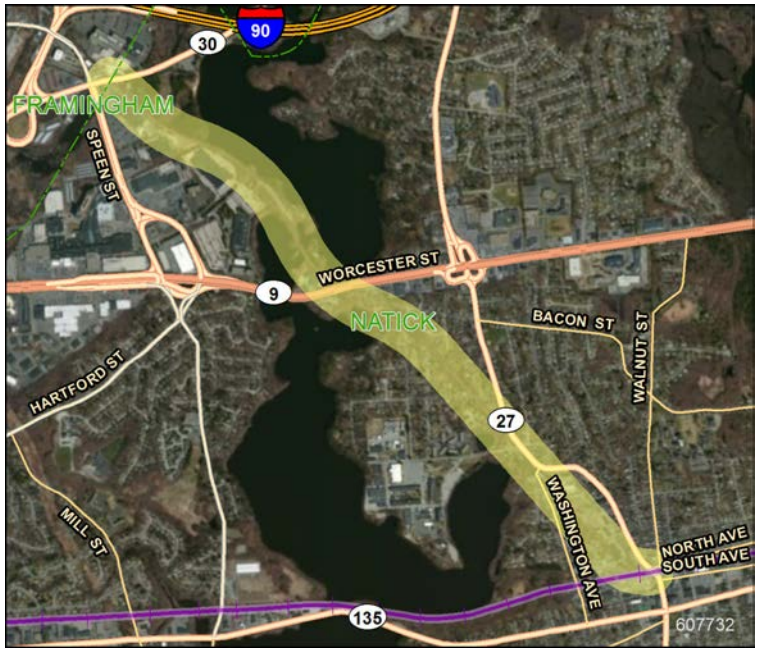
CO2 Impact: 126

Evaluation Rating: 60

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

LRTP 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. The Trail will be, for the most part, off road with 5 roadway and 2 driveway crossings. At the northerly end, a grade separated crossing of Route 30 will constructed to provide the connection to the Framingham section of the CRT. At its southerly end, options to be studied include the location of the proposed connection to the MBTA station and the use of local roads to make the final trail connection to the Town Center.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Statewide Congestion Mitigation and Air Quality Program	$4,687,941	$1,171,985	$5,859,926
Total Funding Programmed		**$4,687,941**	**$1,171,985**	**$5,859,926**

ID Number : 608069

Municipality(ies): Hanover, Hingham, Marshfield, Norwel, 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:

LRTP 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	$14,069,376	$3,517,344	$17,586,720
Total Funding Programmed		**$14,069,376**	**$3,517,344**	**$17,586,720**

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: Assumed Nominal Reduction

Evaluation Rating:

MPO / CTPS Study:

LRTP 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
2016	Bridge	$23,200,000	$5,800,000	$29,000,000
2017	Bridge	$10,364,480	$2,591,120	$12,955,600
Total Funding Programmed		**$33,564,480**	**$8,391,120**	**$41,955,600**

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: -60

Evaluation Rating: 59

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

LRTP 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. 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 : 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: 166

Evaluation Rating: 71

MPO / CTPS Study:

LRTP 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	Highway Safety Improvement Program	$718,972	$79,886	$798,857
2017	Congestion Mitigation and Air Quality Program	$2,556,344	$639,086	$3,195,430
Total Funding Programmed		**$3,275,316**	**$718,972**	**$3,994,287**

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: 84

Evaluation Rating: 73

MPO / CTPS Study:

LRTP 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	Highway Safety Improvement Program	$2,125,993	$236,221	$2,362,214
2019	Congestion Mitigation and Air Quality Program	$629,924	$157,481	$787,405
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: 566

Evaluation Rating: 85

MPO / CTPS Study:

LRTP 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	$1,098,740	$122,082	$1,220,822
2019	Surface Transportation Program	$4,734,395	$1,183,599	$5,917,993
Total Funding Programmed		**$6,633,135**	**$1,505,681**	**$8,138,816**

ID Number : 606632

Municipality(ies): Hopkinton, Westborough

Project Name: Bridge Replacement, Fruit Street Over CSX & Sudbury River

Project Type: Bridge

Air Quality Status: Exempt

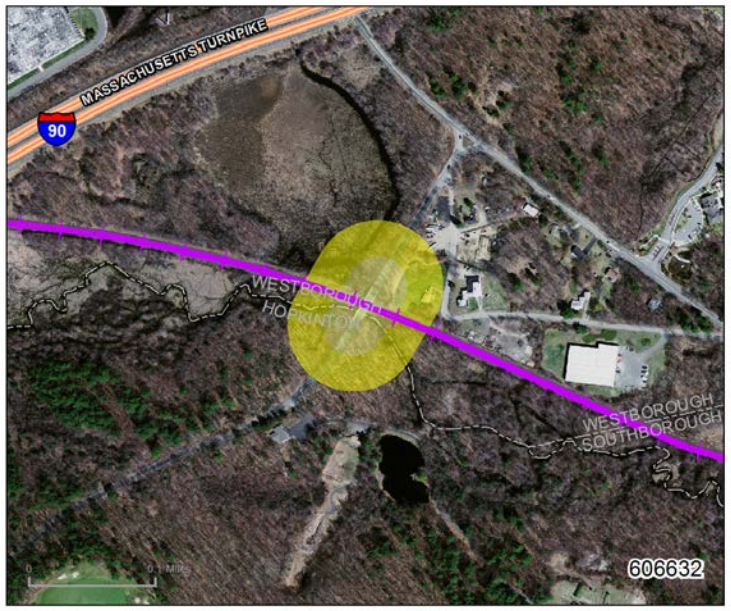
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP 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	$9,381,871	$2,345,468	$11,727,339
Total Funding Programmed		**$9,381,871**	**$2,345,468**	**$11,727,339**

ID Number : 607409

Municipality(ies): Lexington

Project Name: Reconstruction on Massachusetts Avenue, from Marrett Road to Pleasant Street

Project Type: Arterial and Intersection

Air Quality Status: Exempt

CO2 Impact: 80

Evaluation Rating: 87

MPO / CTPS Study: Safety and Operational Improvements at Selected Intersections (2008)

LRTP Status:

Project Length: 0.73

Project Description:

The proposed project will address safety and capacity deficiencies at three intersections along Massachusetts Avenue; Marrett Road (Route 2A), Maple Street (Route 2A) and Pleasant Street (Routes 4/225). The improvements will be designed to be consistent with the principles of “complete streets” and will improve safety for pedestrians, bicyclists, and drivers. The project will also consolidate some uncontrolled mid-block crosswalks, improve transit (bus) operations and bus stops and provide bicycle accommodation along the roadway.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Highway Safety Improvement Program	$2,340,000	$260,000	$2,600,000
2016	Transportation Alternatives	$2,080,000	$520,000	$2,600,000
Total Funding Programmed		**$4,420,000**	**$780,000**	**$5,200,000**

ID Number : 600703

Municipality(ies): Lexington

Project Name: Bridge Replacement, Route 2 (EB & WB) over Route I-95 (Route 128)

Project Type: Bridge

Air Quality Status: Exempt

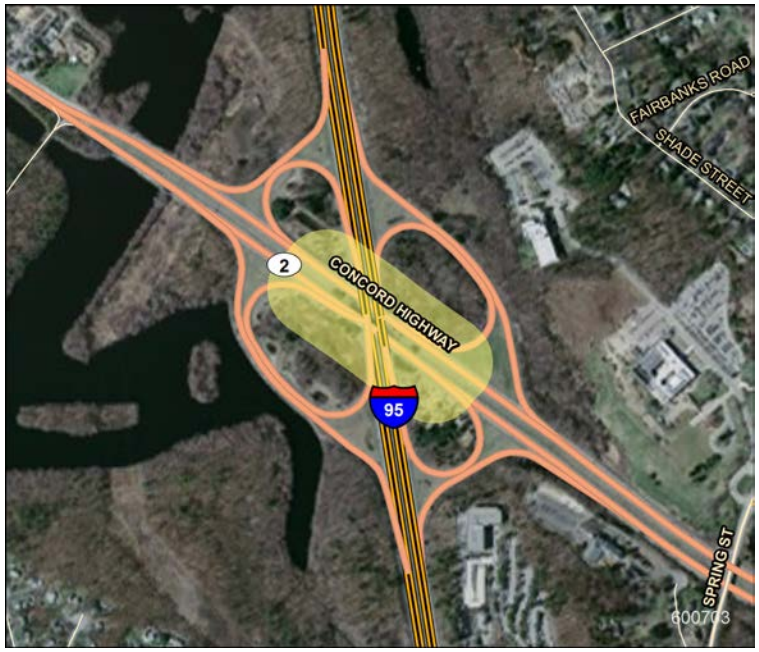
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 0.16



Project Description:

The purpose of this project is to replace the Route 2 Bridges over I-95/Route 128 in both directions. Each bridge deck will accommodate three 12 foot travel lanes, one 12 foot auxiliary lane and offsets to the bridge curbing. Multi-staged construction will be required to maintain existing traffic on Route 2 and I-95/Route 128.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Bridge	$4,086,400	$1,021,600	$5,108,000
Total Funding Programmed		**$4,086,400**	**$1,021,600**	**$5,108,000**

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: To Be Determined

Evaluation Rating: 73

MPO / CTPS Study:

LRTP 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
2019	Surface Transportation Program	$3,111,444	$777,861	$3,889,305
Total Funding Programmed		**$3,111,444**	**$777,861**	**$3,889,305**

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:

LRTP 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
2017	Bridge	$5,440,000	$1,360,000	$6,800,000
2018	Bridge	$15,040,000	$3,760,000	$18,800,000
2019	Bridge	$10,240,000	$2,560,000	$12,800,000
Total Funding Programmed		**$30,720,000**	**$7,680,000**	**$38,400,000**

ID Number : 607477

Municipality(ies): Lynnfield, Peabody

Project Name: Resurfacing and Related Work on Route 1

Project Type: Major Highway

Air Quality Status: Exempt

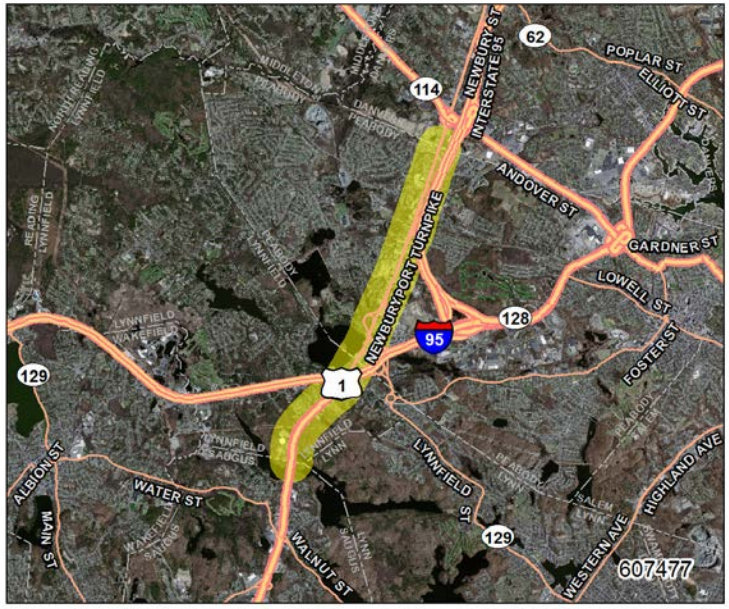
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 2.7



Project Description:

The project will resurface Route 1 in Lynnfield 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	$6,177,234	$1,544,308	$7,721,542
Total Funding Programmed		**$6,177,234**	**$1,544,308**	**$7,721,542**

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

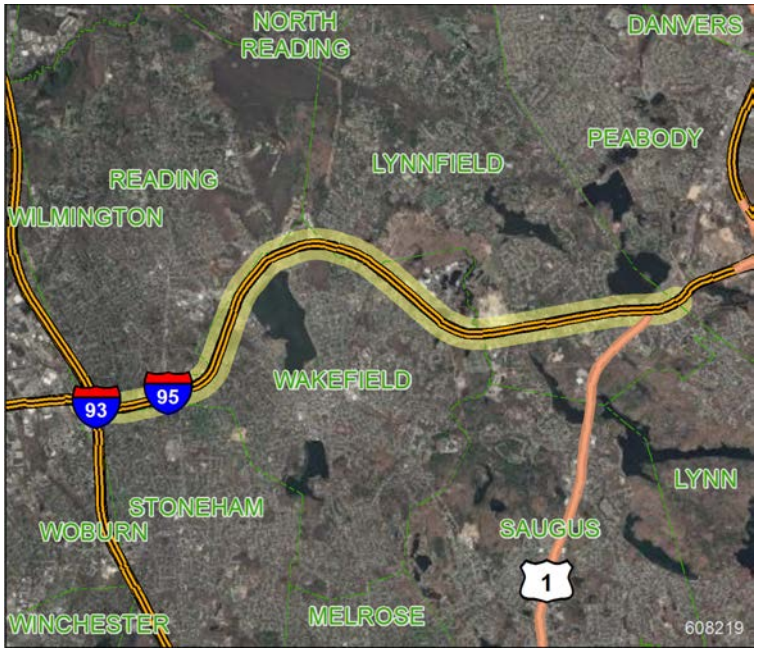
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project consists of interstate maintenance resurfacing and related work on I-95.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Interstate Maintenance	$4,174,934	$463,882	$4,638,816
Total Funding Programmed		**$4,174,934**	**$463,882**	**$4,638,816**

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

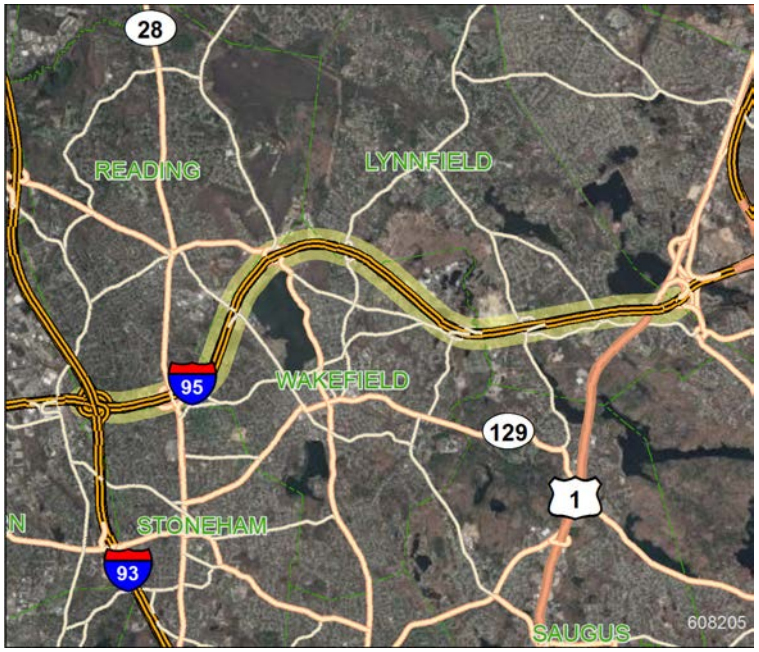
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project consists of guide and traffic sign replacement on a section of Interstate 95 between Reading and Lynnfield.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Highway Safety Improvement Program	$3,150,000	$350,000	$3,500,000
Total Funding Programmed		**$3,150,000**	**$350,000**	**$3,500,000**

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

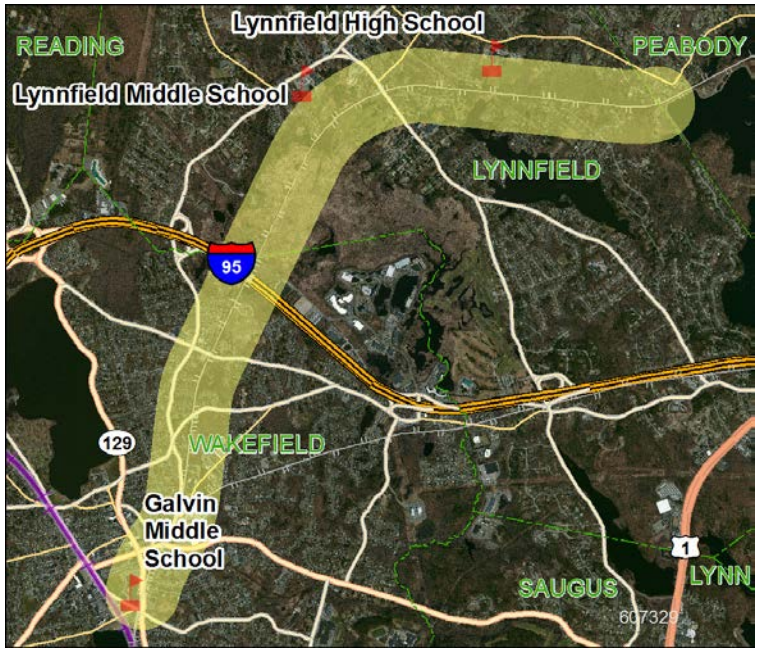
CO2 Impact: To Be Determined

Evaluation Rating:

MPO / CTPS Study:

LRTP 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
2018	Statewide Congestion Mitigation and Air Quality Program	$6,130,283	$1,532,571	$7,662,854
Total Funding Programmed		**$6,130,283**	**$1,532,571**	**$7,662,854**

ID Number : 604810

Municipality(ies): Marlborough

Project Name: Reconstruction of Route 85 (Maple Street)

Project Type: Arterial and Intersection

Air Quality Status: Exempt

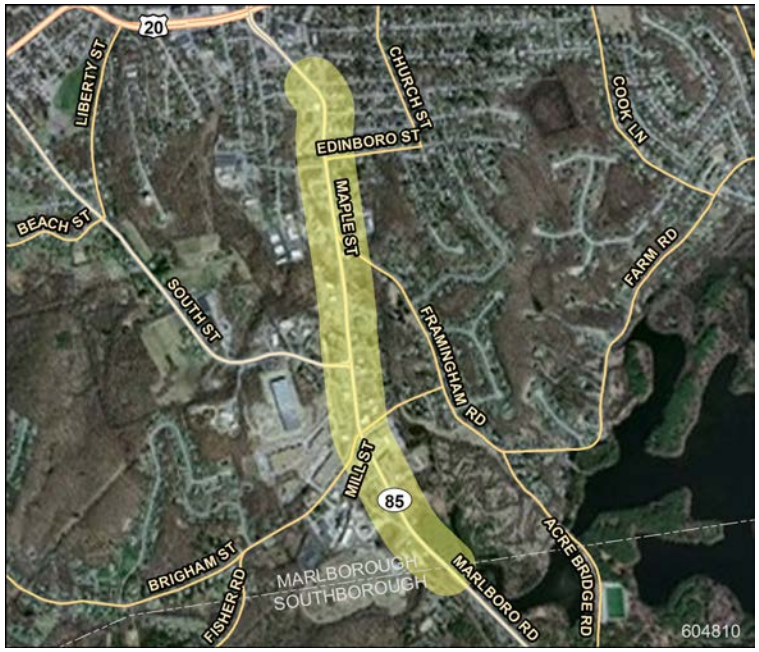
CO2 Impact: 325

Evaluation Rating: 84

MPO / CTPS Study:

LRTP 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 : 608221

Municipality(ies): Marlborough

Project Name: Resurfacing and Related Work on Route 20

Project Type: Arterial and Intersection

Air Quality Status: Exempt

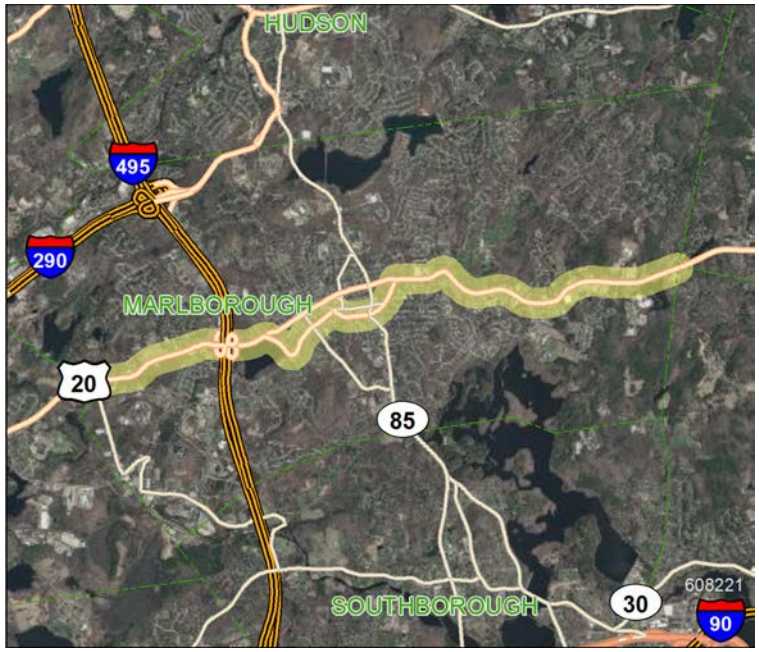
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project consists of resurfacing and related work on Route 20.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	National Highway Performance Program	$4,901,550	$1,225,388	$6,126,938
Total Funding Programmed		**$4,901,550**	**$1,225,388**	**$6,126,938**

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:

LRTP 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	$3,858,283	$964,571	$4,822,854
Total Funding Programmed		**$3,858,283**	**$964,571**	**$4,822,854**

ID Number : 603917

Municipality(ies): Medford, Reading, Stoneham, Winchester, W oburn

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:

LRTP Status:

Project Length: 9.62

Project Description:

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

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Statewide Infrastructure Program	$12,000,000	$3,000,000	$15,000,000
2017	Statewide Infrastructure Program	$2,000,000	$500,000	$2,500,000
Total Funding Programmed		**$14,000,000**	**$3,500,000**	**$17,500,000**

ID Number : 1569

Municipality(ies): Medford, Somerville

Project Name: Green Line Extension Project (Phase II), College Avenue to Mystic Valley Parkway/Route 16

Project Type: Transit

Air Quality Status: Model

CO2 Impact: Model

Evaluation Rating:

MPO / CTPS Study:

LRTP Status: 2016-20

Project Length: 0.91

Project Description:

This project will extend the MBTA Green Line with the purpose of improving corridor mobility, boosting transit ridership, improving regional air quality, ensuring equitable distribution of transit services, and supporting opportunities for sustainable development.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Congestion Mitigation and Air Quality Program	$6,480,000	$1,620,000	$8,100,000
2017	Congestion Mitigation and Air Quality Program	$10,741,776	$2,685,444	$13,427,220
2017	Surface Transportation Program	$13,178,224	$3,294,556	$16,472,780
2018	Surface Transportation Program	$21,258,224	$5,314,556	$26,572,780
2018	Congestion Mitigation and Air Quality Program	$10,741,776	$2,685,444	$13,427,220
2019	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
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
Total Funding Programmed		**$126,400,000**	**$31,600,000**	**$158,000,000**

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

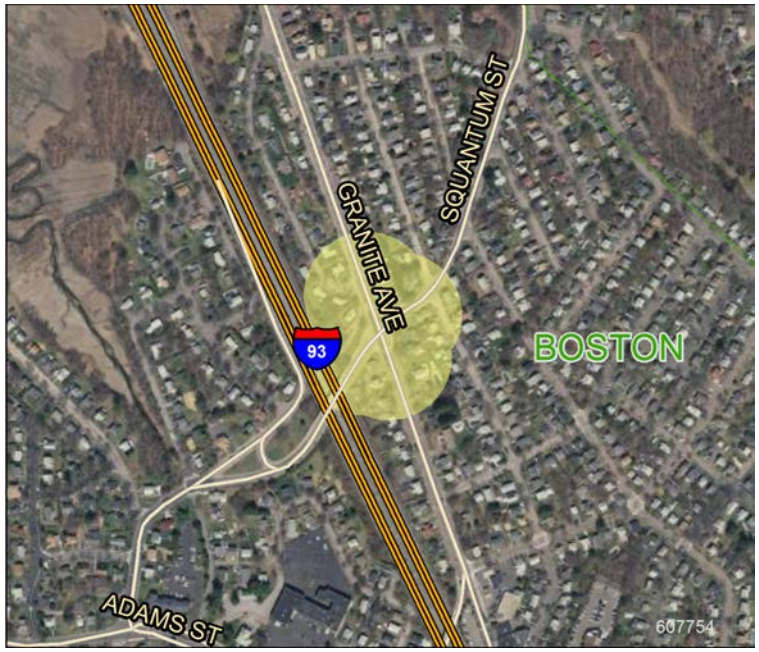
CO2 Impact: To Be Determined

Evaluation Rating:

MPO / CTPS Study:

LRTP 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	$315,000	$35,000	$350,000
Total Funding Programmed		**$315,000**	**$35,000**	**$350,000**

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

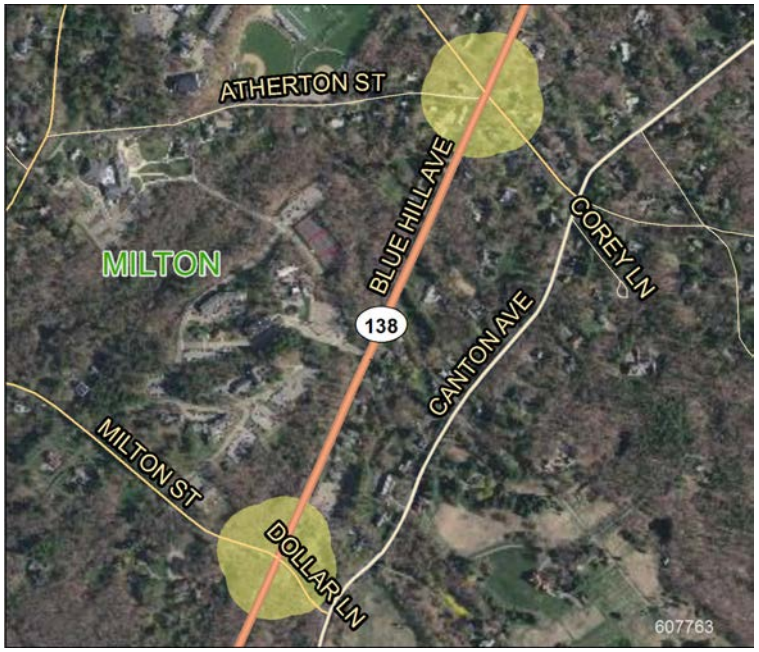
CO2 Impact: To Be Determined

Evaluation Rating:

MPO / CTPS Study:

LRTP 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	$990,000	$110,000	$1,100,000
Total Funding Programmed		**$990,000**	**$110,000**	**$1,100,000**

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: 74

Evaluation Rating: 88

MPO / CTPS Study:

LRTP 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	$800,000	$200,000	$1,000,000
2019	Surface Transportation Program	$10,980,229	$2,745,057	$13,725,286
Total Funding Programmed		**$11,780,229**	**$2,945,057**	**$14,725,286**

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

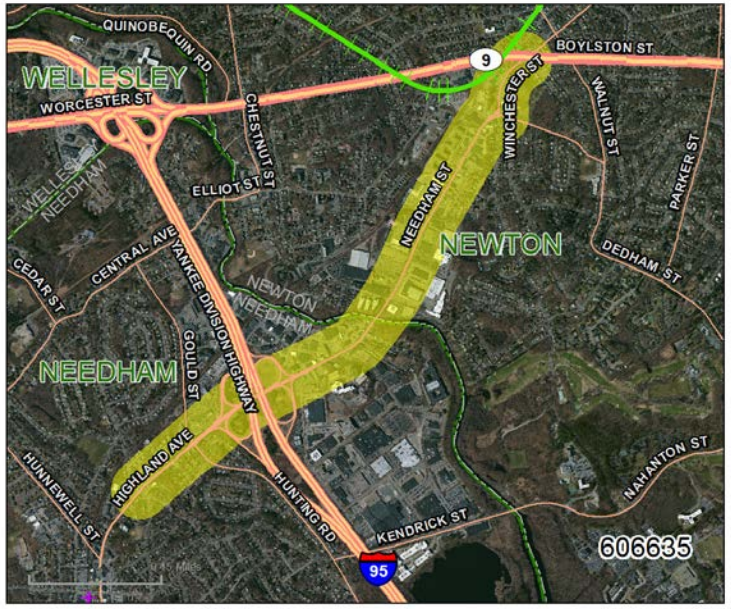
CO2 Impact: 312

Evaluation Rating: 104

MPO / CTPS Study:

LRTP Status: 2016-20

Project Length: 3.05



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	Surface Transportation Program	$4,915,718	$1,228,930	$6,144,648
2018	Highway Safety Improvement Program	$2,087,679	$231,964	$2,319,644
2018	Congestion Mitigation and Air Quality Program	$2,950,329	$737,582	$3,687,911
2018	Transportation Alternatives	$2,649,671	$662,418	$3,312,089
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

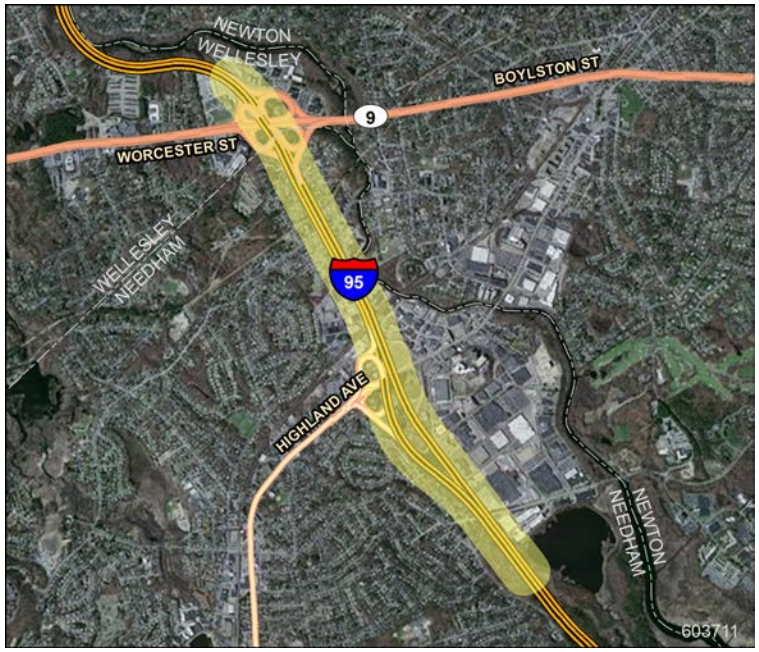
CO2 Impact: Model

Evaluation Rating:

MPO / CTPS Study:

LRTP 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; 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
2016	National Highway Performance Program	$24,992,000	$6,248,000	$31,240,000
2017	National Highway Performance Program	$10,688,000	$2,672,000	$13,360,000
2018	National Highway Performance Program	$10,534,546	$2,633,637	$13,168,183
Total Funding Programmed		**$46,214,546**	**$11,553,637**	**$57,768,183**

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

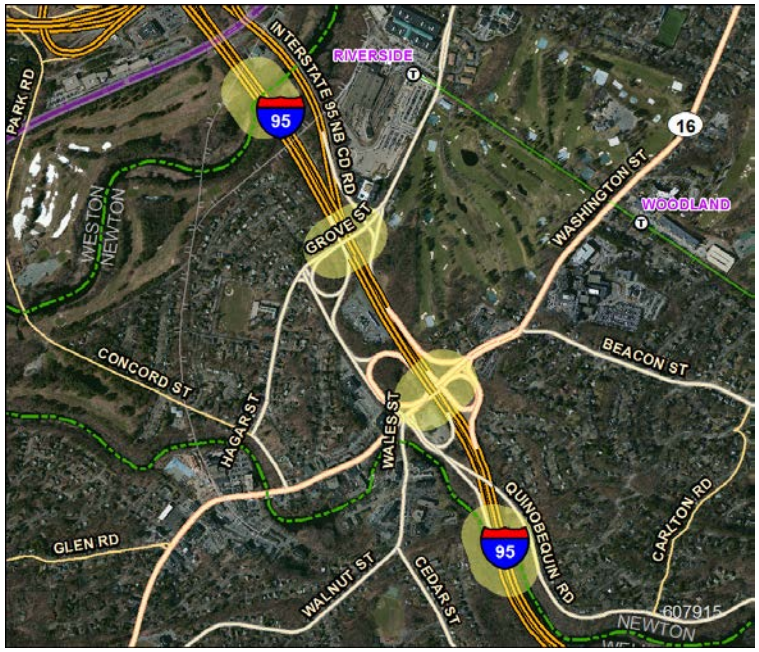
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP 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	$1,379,520	$344,880	$1,724,400
Total Funding Programmed		**$1,379,520**	**$344,880**	**$1,724,400**

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:

LRTP Status:

Project Length: 0.13

Project Description:

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

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Highway Safety Improvement Program	$495,000	$55,000	$550,000
Total Funding Programmed		**$495,000**	**$55,000**	**$550,000**

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

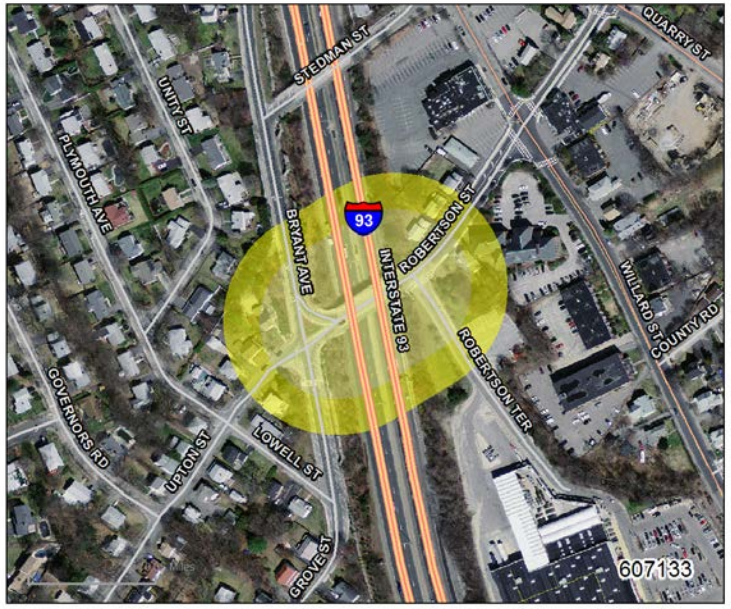
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP 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	$5,148,610	$1,287,153	$6,435,763
Total Funding Programmed		**$5,148,610**	**$1,287,153**	**$6,435,763**

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:

LRTP Status:

Project Length:

Project Description:

This project will provide bicycle and pedestrian improvements around Garfield Elementary & Middle School in Revere.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Safe Routes to School	$699,290	$174,823	$874,113
Total Funding Programmed		**$699,290**	**$174,823**	**$874,113**

ID Number : 608059

Municipality(ies): Salem

Project Name: Stormwater Improvements along Route 107 (Salem Bypass Road)

Project Type: Arterial and Intersection

Air Quality Status: Exempt

CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:

Project Description:

Work consists of improving stormwater along Route 107 in Salem.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Statewide Transportation Enhancement	$100,000	$25,000	$125,000
Total Funding Programmed		**$100,000**	**$25,000**	**$125,000**

ID Number : 607997

Municipality(ies): Saugus

Project Name: Safe Routes to School (Veterans Memorial)

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 Veterans Memorial in Saugus.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Safe Routes to School	$530,090	$132,522	$662,612
Total Funding Programmed		**$530,090**	**$132,522**	**$662,612**

ID Number : 608008

Municipality(ies): Saugus

Project Name: Resurfacing & Related Work on Route 1

Project Type: Major Highway

Air Quality Status: Exempt

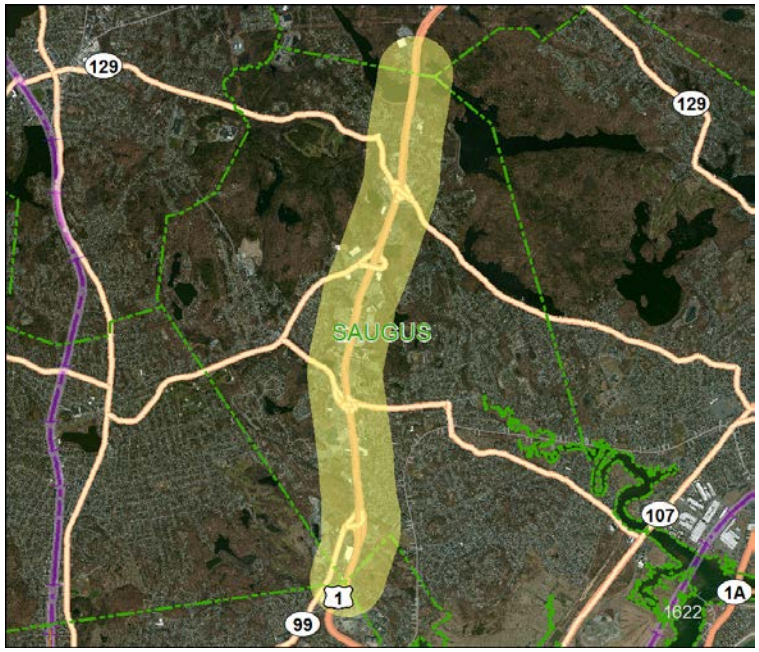
CO2 Impact: No CO2 Impact

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	$8,478,328	$2,119,582	$10,597,910
Total Funding Programmed		**$8,478,328**	**$2,119,582**	**$10,597,910**

ID Number : 608079

Municipality(ies): Sharon

Project Name: Bridge Replacement, Maskwonicut Street over Amtrak/MBTA

Project Type: Bridge

Air Quality Status: Exempt

CO2 Impact: Assumed Nominal Reduction

Evaluation Rating:

MPO / CTPS Study:

LRTP 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	$3,804,192	$951,048	$4,755,240
Total Funding Programmed		**$3,804,192**	**$951,048**	**$4,755,240**

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

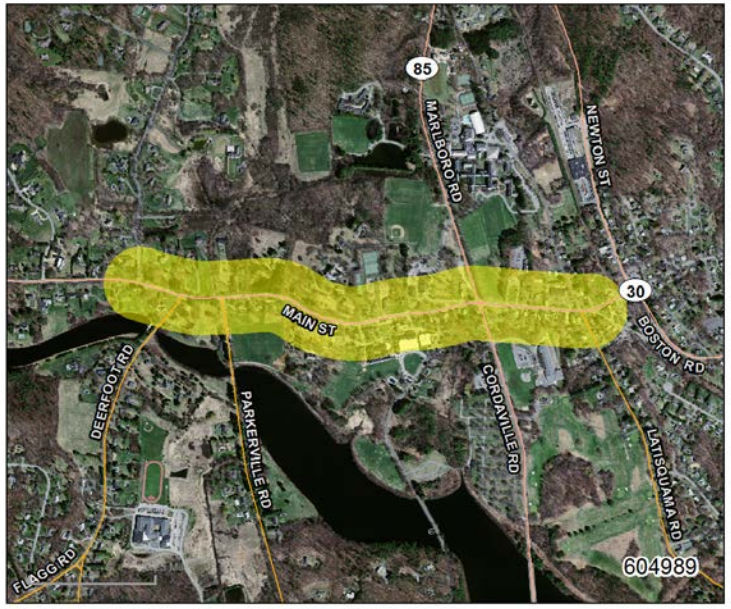
CO2 Impact: 101

Evaluation Rating: 73

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
2017	Surface Transportation Program	$2,400,000	$600,000	$3,000,000
2017	Transportation Alternatives	$2,259,506	$564,876	$2,824,382
2017	Congestion Mitigation and Air Quality Program	$830,696	$207,674	$1,038,370
Total Funding Programmed		**$5,490,202**	**$1,372,550**	**$6,862,752**

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

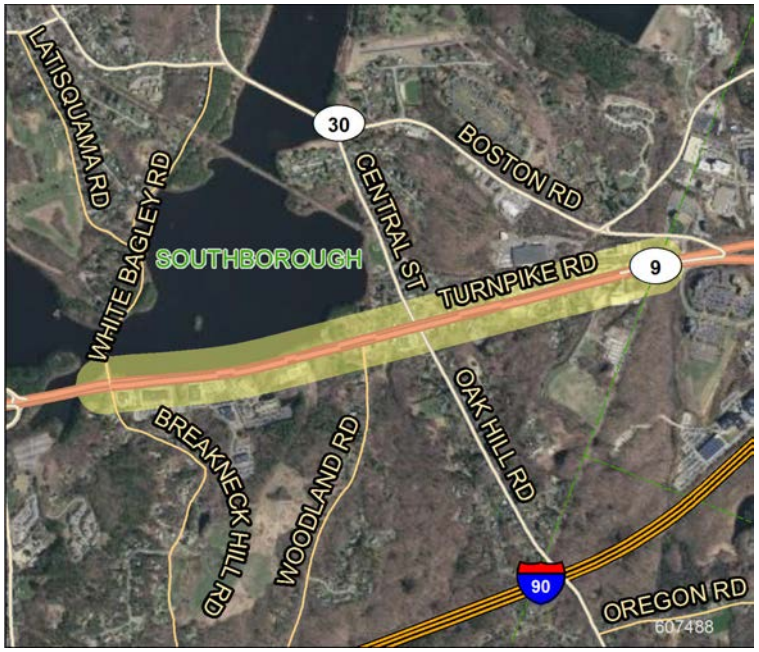
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 1.6



Project Description:

The proposed project involves resurfacing and related work on Route 9 in Southbrough. The project begins just west of White Bagley/Breakneck Hill Road (mm 111.4A?) and ends at the Framingham/Southbrough town line (mm113.0A?) 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
2016	National Highway Performance Program	$3,033,072	$758,268	$3,791,340
Total Funding Programmed		**$3,033,072**	**$758,268**	**$3,791,340**

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

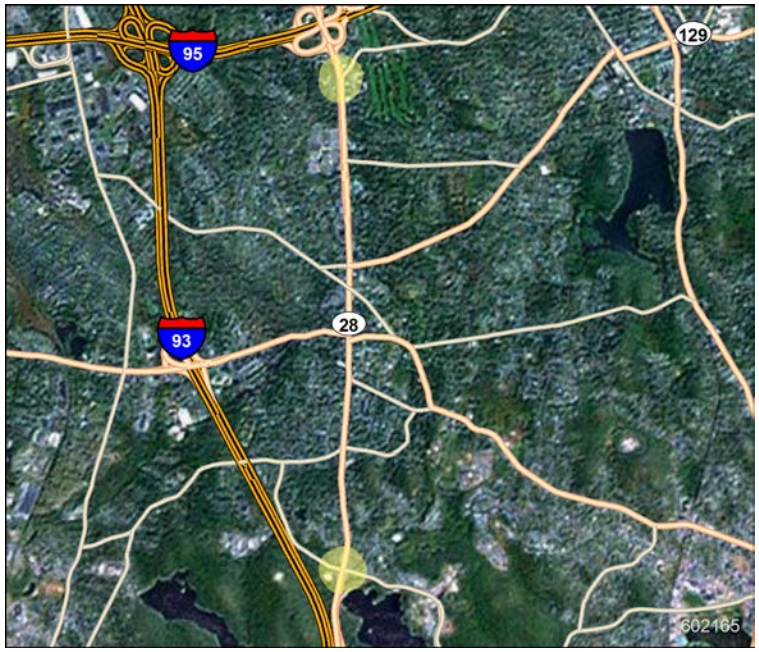
CO2 Impact: 154

Evaluation Rating:

MPO / CTPS Study:

LRTP 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	$1,226,040	$306,510	$1,532,550
Total Funding Programmed		**$1,226,040**	**$306,510**	**$1,532,550**

ID Number : 1703

Municipality(ies): Stow

Project Name: Bridge Replacement, S-29-11, Box Mill Road over Elizabeth Brook

Project Type: Bridge

Air Quality Status: Exempt

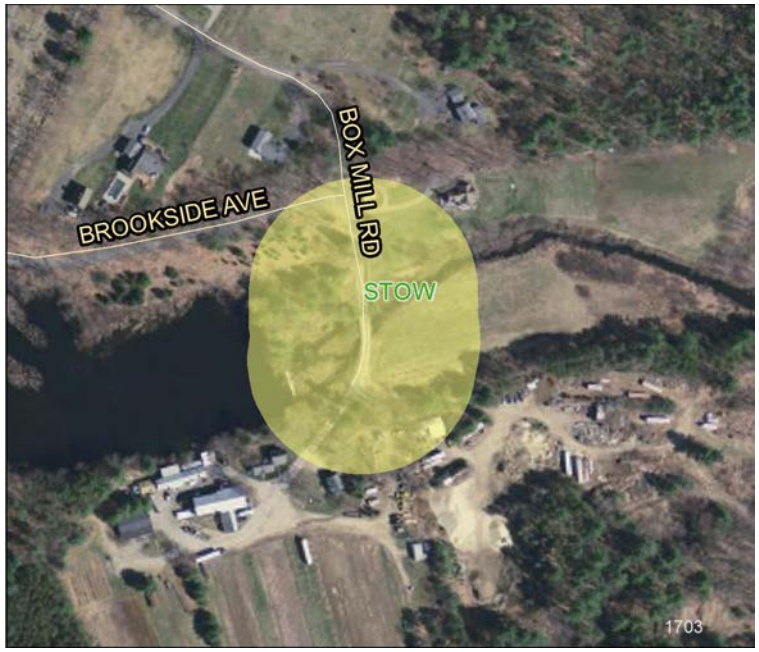
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project will replace the Box Mill Road bridge over Elizabeth Brook in Stow.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Bridge	$2,889,779	$462,365	$3,352,144
Total Funding Programmed		**$2,889,779**	**$462,365**	**$3,352,144**

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:

LRTP 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	$495,000	$55,000	$550,000
Total Funding Programmed		**$495,000**	**$55,000**	**$550,000**

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

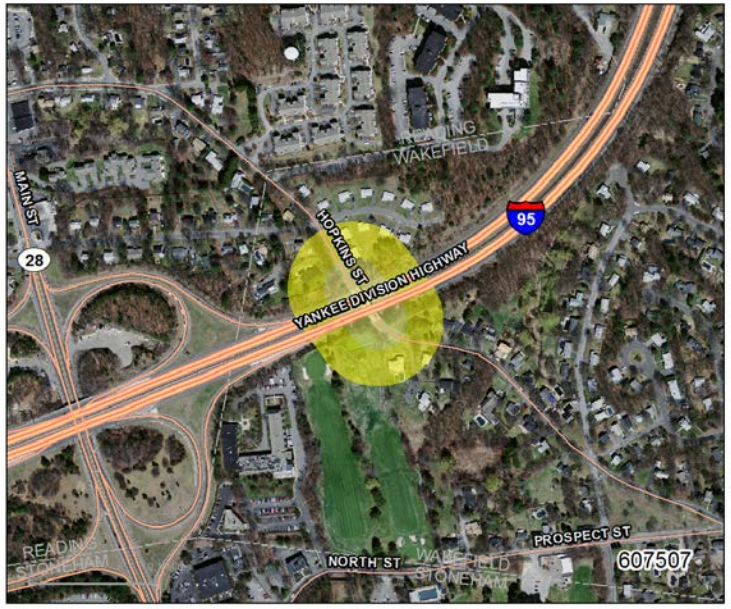
CO2 Impact: Assumed Nominal Reduction

Evaluation Rating:

MPO / CTPS Study:

LRTP 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 rrepairs to bring it out of the structurally deficient list.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Bridge	$1,975,949	$493,987	$2,469,936
Total Funding Programmed		**$1,975,949**	**$493,987**	**$2,469,936**

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

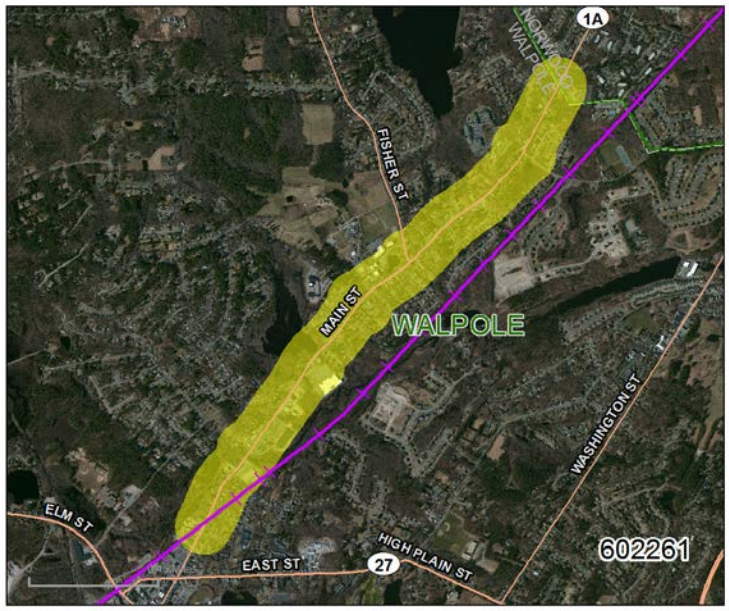
CO2 Impact: 94

Evaluation Rating: 76

MPO / CTPS Study:

LRTP 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	$1,600,000	$400,000	$2,000,000
2020	Surface Transportation Program	$13,267,498	$3,316,875	$16,584,373
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:

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	$3,098,688	$774,672	$3,873,360
Total Funding Programmed		**$3,098,688**	**$774,672**	**$3,873,360**

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	$722,800	$180,700	$903,500
Total Funding Programmed		**$722,800**	**$180,700**	**$903,500**

ID Number : 601579

Municipality(ies): Wayland

Project Name: Signal & Intersection Improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)

Project Type: Arterial and Intersection

Air Quality Status: Exempt

CO2 Impact: 115

Evaluation Rating: 70

MPO / CTPS Study: Safety and Operational Improvements at Selected Intersections (2008)

LRTP Status:

Project Length: 0.07

Project Description:

The project will reconstruct, widen and resignalize the intersection of Routes 27 and 30 in Wayland. Sidewalks will be reconstructed and wheelchair ramps installed. Drainage, pavement markings, signs and other incidental work will be included.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Statewide Congestion Mitigation and Air Quality Program	$1,940,568	$485,142	$2,425,710
Total Funding Programmed		**$1,940,568**	**$485,142**	**$2,425,710**

ID Number : 607340

Municipality(ies): Wellesley

Project Name: Resurfacing on Route 9, from (approx.) Dearborn Street to the Natick T.L.

Project Type: Arterial and Intersection

Air Quality Status: Exempt

CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 4.8

Project Description:

Project involves the resurfacing of Route 9 from the approximately Dearborn Street to the Natick town line (mm 126.4) Approximate length of project is 4.8 center miles. Includes a number of bridges and interchanges. The work is to include milling and resurfacing (with saw-cut and seal of the underlying concrete joints) wheelchair ramp upgrades, sidewalk repairs and improvements, signal improvements, new reflectorized lines and recessed raodway deflectors. Bridge work is limited to resurfacing.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	National Highway Performance Program	$5,862,240	$1,465,560	$7,327,800
Total Funding Programmed		**$5,862,240**	**$1,465,560**	**$7,327,800**

ID Number : 607755

Municipality(ies): Weymouth

Project Name: Intersection & Signal Improvements at 2 Locations: SR 53 (Washington Street) at Mutton Lane & Pleasant Street

Project Type: Arterial and Intersection

Air Quality Status: Exempt

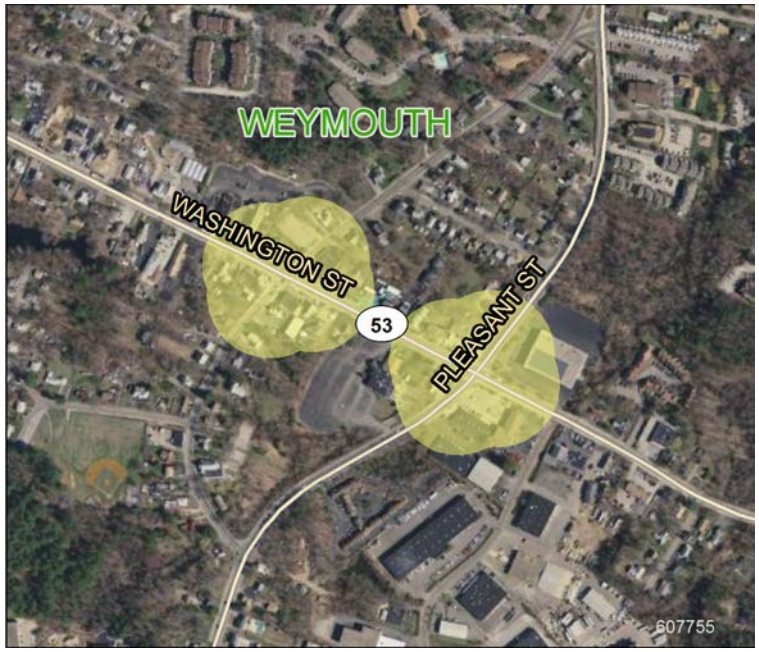
CO2 Impact: To Be Determined

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 0.14



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
2016	Statewide Highway Safety Improvement Program	$495,000	$55,000	$550,000
Total Funding Programmed		**$495,000**	**$55,000**	**$550,000**

ID Number : 605721

Municipality(ies): Weymouth

Project Name: Intersection Improvements at Middle Street, Libbey Industrial Parkway and Tara Drive

Project Type: Arterial and Intersection

Air Quality Status: Exempt

CO2 Impact: 6

Evaluation Rating: 68

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

LRTP Status:

Project Length: 0.07

Project Description:

The project will install traffic signals at the intersection of Middle Street, Libbey Industrial Parkway and Tara Drive. The project will include pavement rehabilitation, lane reconfiguration, sidewalk and wheelchair ramp installation/repair/reconstruction, installation and/or resetting of granite curbing and installation of signs and pavement markings. Since the side streets of this 4-way intersection are off-set, each side street will operate on a separate phase.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Congestion Mitigation and Air Quality Program	$749,861	$187,465	$937,326
Total Funding Programmed		**$749,861**	**$187,465**	**$937,326**

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 will provide bicycle and pedestrian improvements around Pingree Elementary in Weymouth.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Safe Routes to School	$603,200	$150,800	$754,000
Total Funding Programmed		**$603,200**	**$150,800**	**$754,000**

ID Number : 608214

Municipality(ies): Winchester

Project Name: Stormwater Improvements along Route 3

Project Type: Arterial and Intersection

Air Quality Status: Exempt

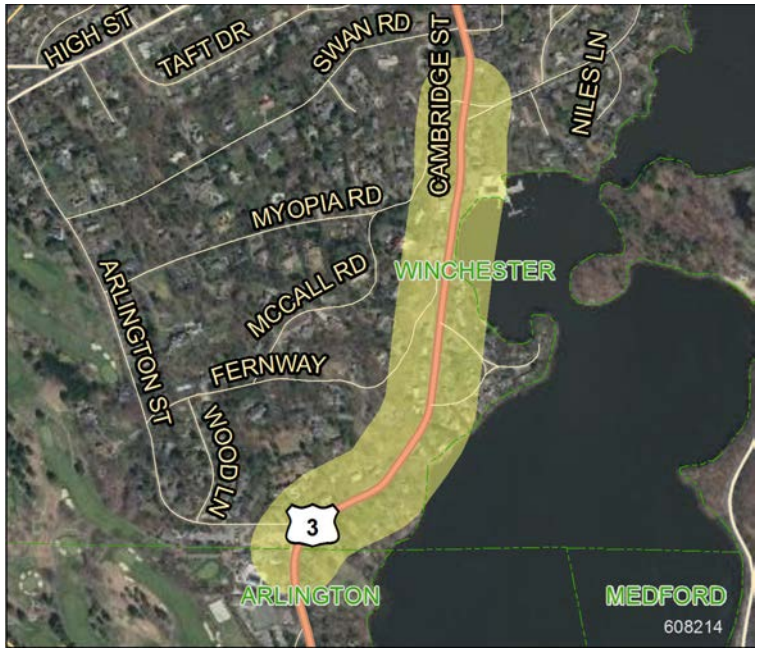
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project consists of stormwater improvements along Route 3 in Winchester.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2019	Statewide Transportation Enhancement	$179,200	$44,800	$224,000
Total Funding Programmed		**$179,200**	**$44,800**	**$224,000**

ID Number : 603008

Municipality(ies): Woburn

Project Name: Bridge Replacement, Salem Street over MBTA

Project Type: Bridge

Air Quality Status: Exempt

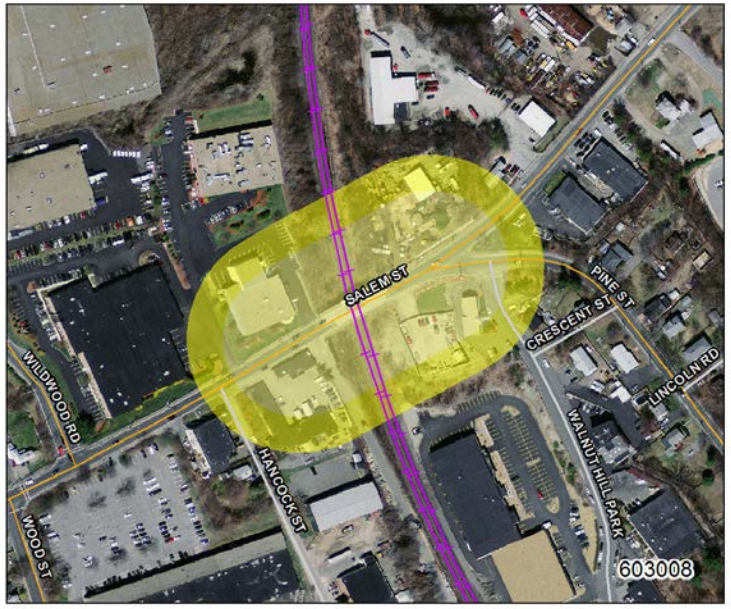
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 0.05



Project Description:

The purpose of this project is to replace the existing bridge carrying Salem Street over the MBTA railroad tracks on a new alignment to allow for staged construction. One lane of the existing bridge will remain open during construction due to high traffic volumes.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Bridge	$5,671,360	$1,417,840	$7,089,200
Total Funding Programmed		**$5,671,360**	**$1,417,840**	**$7,089,200**

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: 62

MPO / CTPS Study:

LRTP 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
2020	Surface Transportation Program	$9,084,231	$2,271,058	$11,355,289
Total Funding Programmed		**$9,084,231**	**$2,271,058**	**$11,355,289**

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: 46

Evaluation Rating: 75

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

Transit Agency: MBTA

Program/Project Name: Stations

Air Quality Status: Exempt

CO2 Impact: Assumed Nominal Reduction

Project Description: Funds accessibility improvements at all MBTA heavy rail, light rail, commuter rail, Silver Line, and bus stations. The program also includes major bus transfer stations, bus stops, and shelters. The majority of this program is devoted to renovation of subway stations and systemwide replacement of escalators and elevators.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Section 5337	$16,000,000	$4,000,000	$20,000,000
	Total Funding Programmed	**$16,000,000**	**$4,000,000**	**$20,000,000**

Transit Agency: MBTA

Program/Project Name: Bridge & Tunnel Program

Air Quality Status: Exempt

CO2 Impact: No CO2 Impact

Project Description: Upgrades and maintains the 476 systemwide bridges owned by the MBTA.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Section 5337	$85,000,000	$21,250,000	$106,250,000
2017	Section 5337	$100,000,000	$25,000,000	$125,000,000
2018	Section 5337	$60,000,000	$15,000,000	$75,000,000
2019	Section 5337	$60,000,000	$15,000,000	$75,000,000
	Total Funding Programmed	**$305,000,000**	**$76,250,000**	**$381,250,000**

Transit Agency: MBTA

Program/Project Name: Systems Upgrades

Air Quality Status: Exempt

CO2 Impact: To Be Determined

Project Description: Funds upgrades on rapid transit and commuter rail systems. The program include funding for the Light Rail Accessibility Program (LRAP) for the Green Line to modernize stations, install elevators, raise platforms, and construct new headhouses.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Section 5307	$58,685,516	$14,671,379	$73,356,895
2016	Section 5337	$20,190,546	$5,047,637	$25,238,183
2016	Section 5339	$5,287,027	$1,321,757	$6,608,784
2017	Section 5307	$58,685,516	$14,671,379	$73,356,895
2017	Section 5337	$21,190,546	$5,297,637	$26,488,183
2017	Section 5339	$5,287,027	$1,321,757	$6,608,784
2018	Section 5307	$58,685,516	$14,671,379	$73,356,895
2018	Section 5337	$61,190,546	$15,297,637	$76,488,183
2018	Section 5339	$5,287,027	$1,321,757	$6,608,784
2019	Section 5307	$58,685,516	$14,671,379	$73,356,895
2019	Section 5337	$61,190,546	$15,297,637	$76,488,183
2019	Section 5339	$5,287,027	$1,321,757	$6,608,784
	Total Funding Programmed	**$419,652,356**	**$104,913,092**	**$524,565,448**

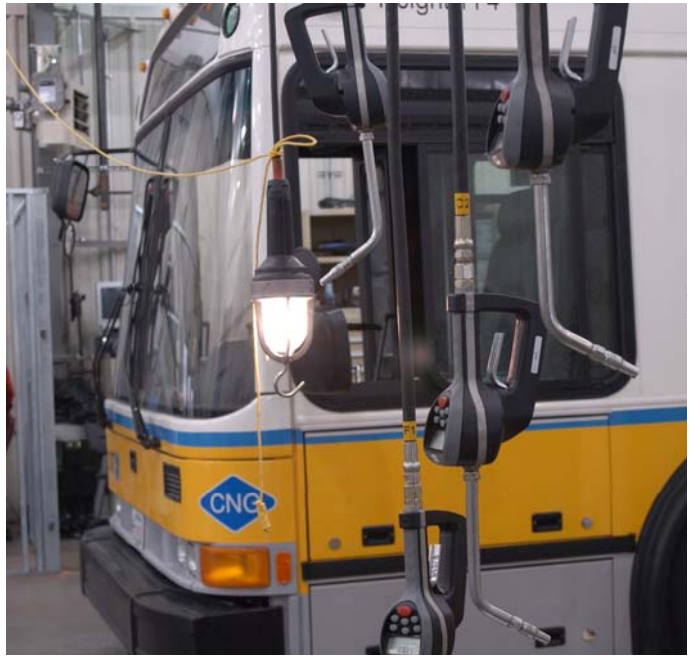
Transit Agency: MBTA

Program/Project Name: Preventative Maintenance

Air Quality Status: Exempt

CO2 Impact: To Be Determined

Project Description: Funds preventative maintenance on buses, vehicles, stations, and other MBTA facilities.



Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Section 5307	$12,000,000	$3,000,000	$15,000,000
2017	Section 5307	$12,000,000	$3,000,000	$15,000,000
2018	Section 5307	$12,000,000	$3,000,000	$15,000,000
2019	Section 5307	$12,000,000	$3,000,000	$15,000,000
	Total Funding Programmed	**$48,000,000**	**$12,000,000**	**$60,000,000**

Transit Agency: CATA

Program/Project Name: Preventative Maintenance

Air Quality Status: Exempt

CO2 Impact: To Be Determined

Project Description: Funds preventative maintenance on buses, vehicles, and other CATA facilities.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Section 5307	$400,000	$100,000	$500,000
2018	Section 5307	$400,000	$100,000	$500,000
2019	Section 5307	$400,000	$100,000	$500,000
	Total Funding Programmed	**$1,200,000**	**$300,000**	**$1,500,000**

Transit Agency: CATA

Program/Project Name: Equipment and Facilities

Air Quality Status: Exempt

CO2 Impact: To Be Determined

Project Description: Funds bus replacement and acquisition of support equipment.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Section 5307	$0	$29,776	$29,776
2017	Section 5307	$135,390	$33,848	$169,238
2018	Section 5307	$140,744	$35,186	$175,930
2019	Section 5307	$146,152	$36,538	$182,690
	Total Funding Programmed	**$422,286**	**$135,348**	**$557,634**

Transit Agency: MWRTA

Program/Project Name: ADA Paratransit

Air Quality Status: Exempt

CO2 Impact: To Be Determined

Project Description: Funds the operation of MWRTA's non-fixed route ADA paratransit service.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Section 5307	$1,300,000	$325,000	$1,625,000
2017	Section 5307	$1,300,000	$325,000	$1,625,000
2018	Section 5307	$1,300,000	$325,000	$1,625,000
2019	Section 5307	$130,000	$325,000	$455,000
	Total Funding Programmed	**$4,030,000**	**$1,300,000**	**$5,330,000**

Transit Agency: MWRTA

Program/Project Name: Equipment and Facilities

Air Quality Status: Exempt

CO2 Impact: To Be Determined

Project Description: Funds intermodal transit terminal improvements, signage, support vehicles, security equipment, and bus support equipiment.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Section 5307	$458,056	$114,515	$572,571
2017	Section 5307	$423,415	$105,854	$529,269
2018	Section 5307	$423,415	$105,854	$529,269
2019	Section 5307	$423,415	$105,854	$529,269
	Total Funding Programmed	**$1,728,301**	**$432,077**	**$2,160,378**

4 CHAPTER FOUR

Tracking and Demonstrating Progress Using Performance Measures

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 support decisions that would help achieve desired outcomes. 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 processes to achieve desired performance outcomes for the multimodal transportation system. For MPOs, this includes a range of activities and products undertaken by a transportation agency 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. States will invest resources in projects to achieve individual state targets that collectively will make progress toward national goals.

MAP-21 establishes national performance goals for federal highway programs:

- **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 National Highway System (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 US Secretary of Transportation, in consultation with states, MPOs, and other stakeholders, have established performance measures for fatalities and serious injuries to fulfill the Highway Safety Improvement Program; proposed performance measures for pavement conditions for the Interstate and National Highway System (NHS), bridge conditions, and general performance of the Interstate and NHS; and drafted 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.

STATUS OF PERFORMANCE-BASED PLANNING

The Boston Region MPO's transition to performance-based planning is underway in anticipation of MAP-21 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

TABLE 4-1 NATIONAL AND MPO PERFORMANCE GOALS

National Goal	Proposed 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

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

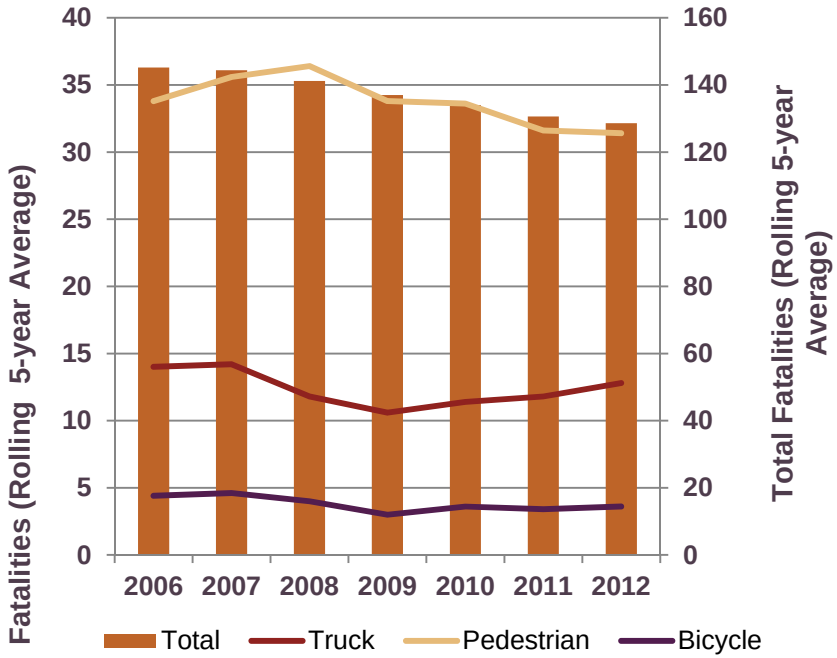
Safety—Tracking Performance Measures

Safety for all transportation modes continues to be a top priority for the MPO. The MPO goals commit to investing in projects and programs that reduce the severity of crashes and improve safety 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 help gauge the effectiveness of MPO transportation investments on reducing fatalities and serious injuries.

Overall, safety is improving in the region. Between 2006 and 2012, traffic fatalities (based on a rolling five-year average) decreased from 145 fatalities in 2006 to 129 in 2012. Figure 4-1 shows the change in traffic fatalities by mode during this time period and indicates that the 11 percent decline in fatalities included fewer automobile, truck, pedestrian, and bicycle fatalities. Similarly, total traffic crashes and injuries declined by 21 percent and 27 percent, respectively between 2006 and 2012.

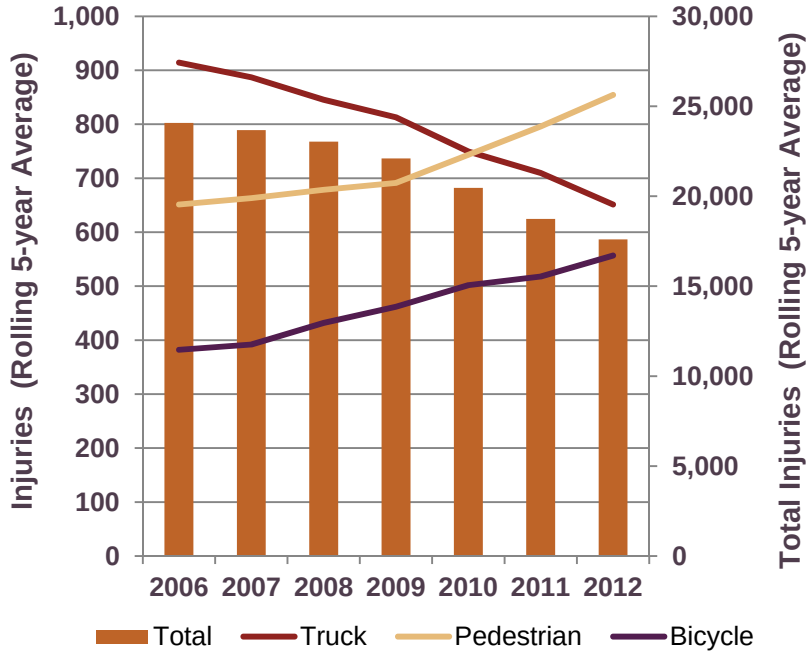
FIGURE 4-1
Traffic Fatalities in the Boston Region by Mode, 2006–12



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 4-2. Between 2006 and 2012, roughly two-thirds of pedestrian and bicycle crashes resulted in an injury. For pedestrians, the number of crashes increased by 18 percent and injuries grew by 31 percent. For bicycles, the number of crashes increased by 36 percent and injuries jumped by 46 percent. In addition, there are still a number of high-crash locations throughout the Boston MPO region, including nearly 80 of the Top-200 Crash Locations statewide.

FIGURE 4-2
Traffic Injuries in the Boston Region by Mode, 2006–12



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 improving safety for all modes. These criteria identify projects with great safety needs and assess whether proposed improvements address those needs. Projects with higher scores in the safety-evaluation criteria tend to address high-crash locations and be most effective at providing safety for all modes.

Safety—Demonstrating Progress Using Performance Measures

The projects programmed in the draft FFYs 2016–20 TIP Target Program propose safety improvements at 35 high-crash locations, and multiple truck, bicycle, and pedestrian high-crash locations to reduce fatalities and serious injuries in the region.

Intersection Improvements

The FFYs 2016–20 TIP Target Program proposes three projects at 12 intersection locations. These intersection investments will provide safety improvements for automobiles, trucks, bicyclists, and pedestrians by implementing safety countermeasures at two high crash locations: Derby Street, Whiting Street (Route 53) and Gardner Street in Hingham and Middle Street, Libbey Industrial Parkway and Tara Drive in Weymouth.

Major Infrastructure

The TIP Target Program proposes eight major infrastructure projects that would implement safety improvements at 19 high-crash locations, including seven truck high-crash locations.

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 will address serious safety issues. The addition of a fourth full-time travel lane will eliminate the usage of the breakdown lane during the peak periods and adding collector roads between Highland Avenue and Kendrick Streets will provide safer weaving movements between the interchanges.

Complete Streets

The FFYs 2016–20 TIP Target Program proposes nine Complete Streets projects along corridors across the region. These corridor investments will provide safety improvements for automobiles, trucks, bicyclists, and pedestrians. Nine of the 13 Complete Streets projects would improve safety at one or more high-crash locations. In addition, improvements at these 13 corridors would provide safe and continuous accommodations for non-motorized users by adding 24 miles of new bicycle facilities and more than six miles of new sidewalk. For example, reconstructing Massachusetts Avenue in Lexington will add new bicycle lanes throughout this 0.7-mile section of the corridor, enhancing safe access to the Minuteman Commuter Bikeway. The Gateway East project along Route 9 in Brookline will provide added safety for bicyclists by implementing cycle tracks that physically separate the bicycle lane from the travel lane to reduce conflicts between motorists and bicyclists.

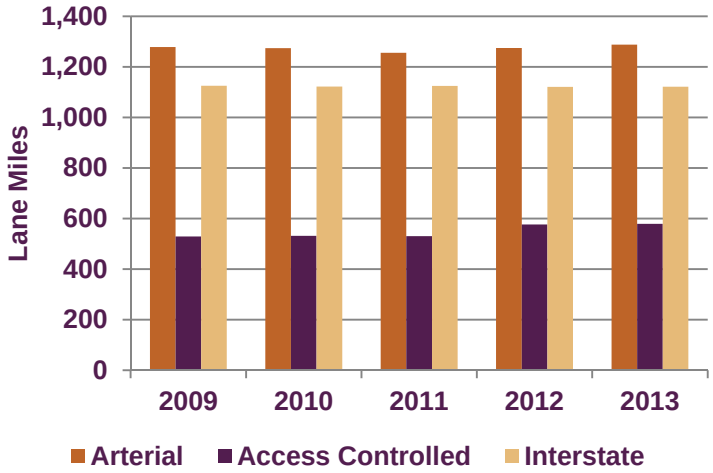
System Preservation—Tracking Performance Measures

System preservation is a priority for the MPO because the transportation infrastructure in the region 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 system, 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 deep reconstruction, in addition to other design elements.

An analysis of the pavement on MassDOT-maintained roadways in the Boston Region MPO area indicates that pavement condition has remained fairly constant between 2009 and 2013. Figure 4-3 displays the number of lane miles in good or better condition in the Boston Region MPO by roadway classification between 2009 and 2013. Figure 4-3 indicates that the lane miles of interstates, access-controlled arterials, and arterials in good or better condition has remained constant since 2009.

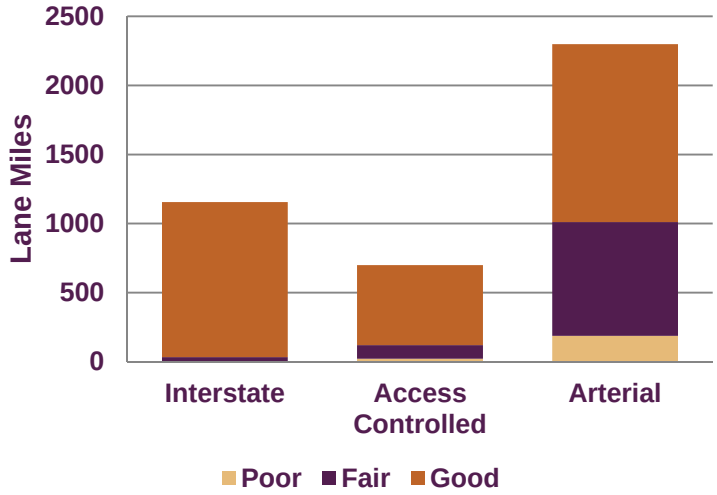
FIGURE 4-3
Lane Miles of Pavement in Good or Better Condition in the Boston Region MPO by Roadway Classification



Source: MassDOT Pavement Management Program.

Approximately 70 percent of roadway lane miles are in good condition, 25 percent in fair condition, and five percent 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 4-4).

FIGURE 4-4
Pavement Condition in the Boston Region MPO by Roadway Classification

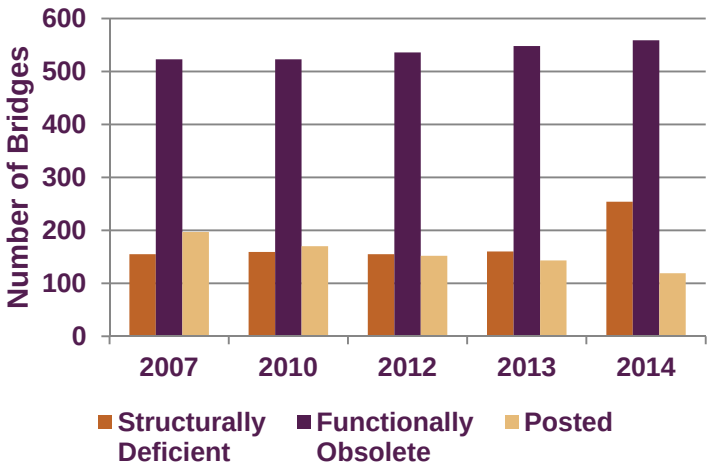


Source: MassDOT Pavement Management Program.

MassDOT also monitors the condition of its bridges across the state. There are 2,877 bridges located within the Boston Region MPO area. Of those bridges, some are in substandard condition because they have been deemed by MassDOT bridge inspectors as structurally deficient, functionally obsolete, or posted.

Figure 4-5 displays the number of substandard bridges in the Boston Region MPO by condition between 2007 and 2014. Figure 4-5 indicates that between 2007 and 2014, the percentage of structurally deficient bridges increased from six to nine percent, functionally obsolete bridges remained constant at 19 percent, and posted bridges declined from seven to four percent.

FIGURE 4-5
Number 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 TIP Target Program investments advance the MPO's system preservation goal to maintain the transportation system by improving pavement condition, 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 2016–20 TIP Target Program investments propose to improve 67 miles of substandard pavement, 43 miles of sidewalk infrastructure, and 11 substandard bridges (10 functionally obsolete and one structurally deficient). In addition, there are 14 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 2016-20 TIP Target Program proposes to improve substandard pavement at multiple intersections and modernizes signal equipment at 12 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 2016–20 TIP Target Program proposes to resurface or reconstruct more than 30 miles of substandard pavement, more than 20 miles of sidewalk infrastructure, and one substandard bridge on arterial roadways. 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 traffic signals, street lighting, signs and pavement markings into a state of good repair.

Major Infrastructure

The FFYs 2016–20 TIP Target Program proposes to resurface or reconstruct 30 miles of substandard pavement, more than 20 miles of sidewalk infrastructure, and 10 substandard bridges. In addition, there are four 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.

In addition, the 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 the widening of I-95 in Needham and Wellesley.

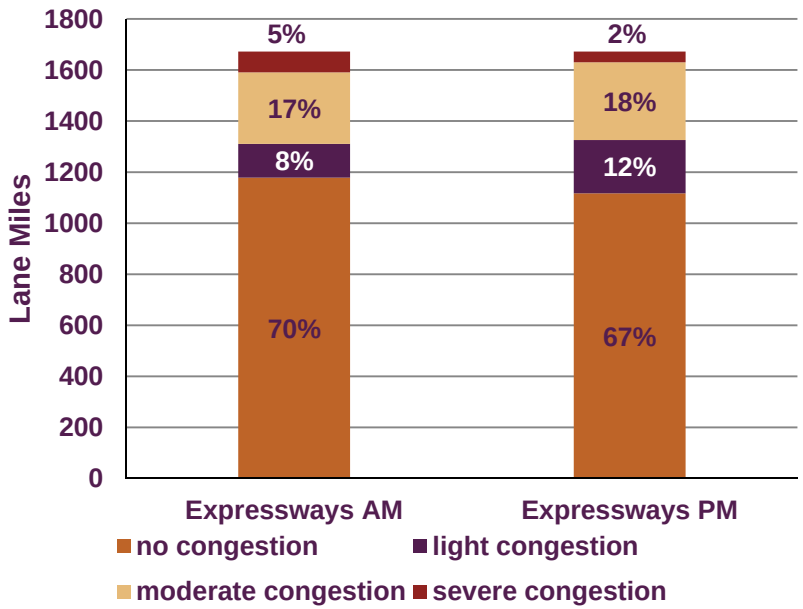
Capacity Management/Mobility—Tracking Performance Measures

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. Figure 4-6 displays the percentage of lane miles of congestion as measured by travel time index 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.

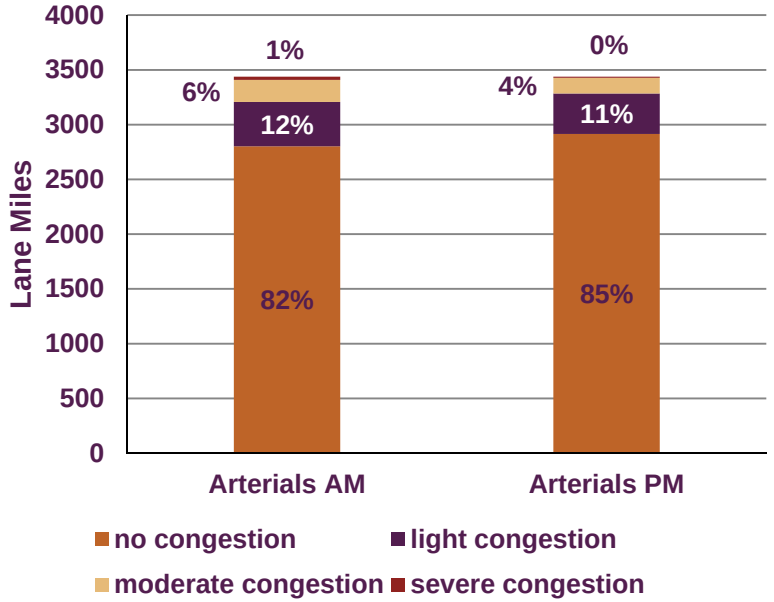
The measure of lane miles of congestion was significantly less for the arterial network. Figure 4-7 displays the percentage of lane miles of congestion as measured by travel time index on the CMP arterial network. For the arterial network, only seven percent of arterials in the AM peak period and four percent of arterials in the PM peak period experience moderate to severe congestion.

FIGURE 4-6
Lane Miles of Congestion in the Boston Region MPO:
CMP Monitored Expressways



Source: Boston Region MPO Congestion Management Process.

FIGURE 4-7
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 the transportation and improve mobility for its users by extending transit service to support non-SOV travel options, adding roadway capacity at select MPO-identified bottleneck locations, and implementing traffic and operational improvements along congested corridors.

Complete Streets

The FFYs 2016–20 TIP Target Program proposes to add 24 miles of bicycle lanes (including almost a mile of cycle tracks), more than six miles of new sidewalk infrastructure, and improve access to transit along 10 corridors. These investments also would improve corridors that serve 18 bus routes, operating nearly 1,000 bus trips on a typical weekday. For example, the 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.

Major Infrastructure

The FFYs 2016-20 TIP Target Program proposes to add 24 miles of bicycle lanes, more than three miles of sidewalk infrastructure, and improve access to transit along five corridors. These investments also would improve corridors that serve multiple bus routes, operating more than 300 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 new 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.

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. MAPC worked with EOHED and the EOEEA to develop a process 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 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.

Complete Streets

The FFYs 2016–20 TIP Target Program proposes nine 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 2016-20 TIP Target Program proposes five projects that provide multimodal access to a targeted development areas well suited to support continued economic vitality and future growth.

The 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.

Next Steps in Advancing Performance Measures

Performance-based planning is an ongoing process and will continue to evolve as the MPO monitors and evaluates its progress 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

In FFY 2016, 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 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 impact 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 Long-Range Transportation Plan or Transportation Improvement Program.

The Boston area carbon monoxide (CO) maintenance area[1], however, must maintain reduced emission levels of CO. With this maintenance classification, the 1990 Clean Air Act Amendments (CAAA) require the Boston Region MPO to conduct an air quality conformity analysis for the nine communities, as they have a carbon monoxide maintenance plan approved and included in the State Implementation Plan (SIP).

In April 2002, Waltham was redesignated as in attainment for carbon monoxide with a United States Environmental Protection Agency (EPA)-approved limited maintenance plan (see the Boston Region MPO's *Charting Progress to 2040* LRTP for more details).

The Boston Region MPO certifies that no activity outlined in its LRTP and TIP will:

- Cause or contribute to any new violation of any standard in any area
- Increase the frequency or severity of any existing violation of any standard in any area
- Delay the timely attainment of any standard or any required interim emission reductions or other milestones in any area

Key elements of this FFYs 2016–2020 TIP related to air quality conformity are as follows:

- This TIP is financially constrained, and all projects in the TIP come from the conforming LRTP of the Boston Region MPO, *Charting Progress to 2040*.
- All regionally significant projects included in the TIP have been included in the air quality analysis for the conforming LRTP. These projects are of the same design and concept as presented in the LRTP.
- Because projects in the TIP come from the conforming LRTP, *and* all regionally significant LRTP projects for 2016 through 2020, (both Federal and Non-Federal Aid) are programmed

[1] The Boston area carbon monoxide maintenance area includes Boston, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, and Somerville.

in the TIP, the same air quality analysis used for the LRTP can be used for the TIP.

- Therefore, this TIP demonstrates air quality conformity.

Timely Implementation of Transportation Control Measures

Transportation control measures (TCMs) were required in the 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 conformity of the LRTP as recommended or completed projects with the exception of 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 Extension (GLX) 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 will 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 the Uncompleted SIP Projects

The status of these projects has been updated using the SIP Transit Commitments Status Report, which was submitted by MassDOT to DEP in May 2015. Highlights of the report are presented below. For a detailed description of the status of these projects, please visit MassDOT's website at the following link: 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 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 is not proposing 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 the current Red Line-

Blue Line commitment (final design only). Correspondence from MassDOT to the DEP formally initiating the amendment process was submitted on July 27, 2011, and is posted on the MassDOT website.

On September 13, 2012, the DEP held two hearings (at 1:00 PM and 5:00 PM) to take public comment on MassDOT's proposed amendments to 310 CMR 7.36, Transit System Improvements, including eliminating the requirement to complete final design of the Red Line-Blue Line Connector. Between the two hearings, there were 16 attendees, 10 of whom gave oral testimony. All those who spoke at the hearings were in favor of the DEP not removing the commitment. The DEP accepted written testimony until September 24, 2012.

On August 23, 2013, the EPA sent a letter to FHWA providing an update on Massachusetts Air Quality Conformity. In that letter, the EPA noted that the Red Line-Blue Line Connector Design project had not met the completion date on 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 for MassDOT to complete the design of the Red Line-Blue Line Connector. This revision to the State Implementation Plan must now also 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 1, 2014, the EPA published a proposed rule to approve a SIP revision submitted by the Commonwealth of Massachusetts in the Federal Register on November 6, 2013. This proposal, if finalized, would remove the design of the Red Line-Blue Line Connector as a requirement in the SIP.

Funding Source

MassDOT is proposing to nullify this commitment

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. One remaining claim must be processed for the Four Corners station and then the contract will be closed out. Final closeout is expected in July 2015. 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-five years. The redesign of the station is now moving forward, and is 60 percent complete. The 90 percent design plans are expected in July 2015 and 100 percent plans in September 2015. Construction is scheduled to begin in spring 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, approving $996,121,000 of FTA New Starts funding to support design and construction of the project. The 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. The federal funding is scheduled to be paid between FFY 2015 and FFY 2022. As noted in the current MassDOT Capital Investment Plan (released January 2014), MassDOT and the MBTA will use Commonwealth funds in addition to federal funding to support the design and construction activities.

To tailor the project-delivery method to best mitigate the larger project risks, MassDOT and MBTA are implementing a four-phased project-delivery plan:

Phase 1 is using 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 contract award occurred in December 2012, and the Notice to Proceed was issued on January 31, 2013.

The MBTA has also added some retaining wall construction to the Phase 1 contract that had previously been programmed for Phase 4 in that area. By constructing this work under the Phase 1 contract, this retaining/noise wall should be completed in time to better support and facilitate track relocation as part of the construction of Phase 4. The addition of this work has extended the end date of the Phase 1 contract by six months to October 2015, and as of this writing, the contractor is on track to complete it by then.

In Medford at Harvard Street, the new T2 track installation is almost complete and the track throw to

the new T2 bridge alignment was competed on May 10, 2015. Road closure and demolition of the old T2 bridge structure was scheduled for the weekend of May 16 and 17. Once this demolition is complete, abutment modifications will commence for installation of the new Green Line outbound and inbound bridges. Noise barrier column and panel installation above the new cast-in-place retaining wall south of Winchester Court is also anticipated to begin in summer 2015.

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. The projected completion date for Phase 2/2A initial Green Line service is likely mid-2018.

Phase 3 will construct the vehicle-maintenance facility and storage facility. As the full yard and maintenance facility are not needed to support the initial passenger service to Washington Street and Union Square, this phase has been scheduled for completion approximately six months ahead of the date for revenue service to College Avenue.

Phase 4 will provide service from Washington Street Station (completed as part of Phase 2, above) to College Avenue Station, which was targeted to be completed in June 2020, roughly a year ahead of the FFGA completion date. Although enabling construction is already underway in this segment, the design of this package is being revised to incorporate value engineering scope changes. This reworking will extend the period to complete the 100% final design for pricing and may extend the bidding and award into early 2016, as opposed to the planned November 2015 Notice to Proceed (NTP) date.

New Green Line Vehicles: The MBTA Vehicle Procurement contract to purchase 24 Type 9 Vehicles was awarded to CAF USA Inc. in the 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 the Contractor 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 as well as monthly project status meetings where all project issues, schedules, deliverables and milestones are reviewed and discussed.

The first vehicle is to be delivered no later than 36 months from NTP. 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.

Potential Challenges

MassDOT has met the first four interim milestones associated with the Green Line Extension project: 1) filing an Expanded Environmental Notification Form, 2) procuring multiple design consultants, 3) publishing Draft Environmental Impact Report, and 4) publishing Final Environmental Impact Report. The project has transitioned from planning and environmental review phases to design, engineering, and construction.

In the 2011 SIP Status Report, MassDOT reported that the Green Line Extension project would not meet the legal deadline of December 31, 2014. At that time, MassDOT projected a period for introducing passenger service on the Green Line Extension. The points within the period are associated with different probabilities, as shown below:

- 10% Probability of Not Exceeding – Autumn 2018
- 90% Probability of Not Exceeding – Summer 2020

FTA's projected completion date is June 2021, which includes one year of schedule contingency beyond the MBTA's target date. Presently, the Green Line Extension team anticipates that the completion date of Phase 4 will be extended from June 2020 to late summer/early fall 2020.

MassDOT and the MBTA continue to seek measures to accelerate the project timeline wherever possible. The receipt of the FFGA was a key milestone, as it allowed completion of the bidding process and the start of construction for the bulk of the Phase 2/2A and Phase 4 work.

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. Consequently, this schedule triggers 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 volatile organic compounds, CO, and nitrogen oxides—reductions equal to or greater than the reductions 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 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 the 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 in the beginning of 2015.

Funding Source
The Commonwealth

Russia Wharf Ferry Terminal

Project Status
Former MassDOT Secretary of Transportation, 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 have led MassDOT to decide to rebid the contract and complete the facility in 2015. There is no regularly scheduled passenger water transportation service in this area, nor are there any plans to provide such a service. The City of Boston, however, is undertaking design and engineering work to address the Old Northern Avenue Bridge's vessel-clearance constraint, and is purchasing two ferry vessels for Inner Harbor use, which could include this ferry terminal as a destination.

Funding Source
The Commonwealth

AIR QUALITY CONFORMITY ANALYSIS

The primary conformity test is to show consistency with emissions budgets set forth in the SIP. Specific information regarding analysis methods, latest planning assumptions, and consultation procedures are detailed in the LRTP, *Charting Progress to 2040*.

A list of all of the regionally significant projects from the Boston Region MPO included in the air quality conformity determination for this TIP is shown in Tables 5-1 and 5-2.

TABLE 5-1
Regionally Significant Projects Included in the Regional Transportation Models for the Boston Region MPO
Projects under Construction

Analysis Year	Community	Project Descriptions
2020	Needham and Wellesley	Route 128 Additional Lanes

TABLE 5-2
Regionally Significant Projects Included in the Regional Transportation Models for the Boston Region MPO
Recommended LRTP and TIP Projects

Analysis Year	Community	Project Descriptions
2020	Bedford and Billerica	Middlesex Turnpike Improvements, Phase 3 – from Crosby Drive north to Manning Road
2020	Newton and Needham	Reconstruction of Highland Avenue, Needham Street and Charles River Bridge, from Webster Street to Route 9
2020	Somerville and Medford	Green Line Extension Project (Phase 2) from College Avenue to Mystic Valley Parkway/Route 16
2020	Weymouth and Abington	Reconstruction and Widening of Route 18 (Main Street) From Highland Place to Route 139
2020	Woburn	Reconstruction of Montvale Avenue from I-93 to Central Street
2020	Woburn	Bridge Replacement, New Boston Street Bridge over MBTA Tracks
2020	Boston	Reconstruction of Rutherford Avenue, from City Square to Sullivan Square
2030	Framingham	Intersection Improvements at Route 126 and Route 135/MBTA and CSX Railroad
2030	Lexington	Route 4/225 (Bedford Street) and Hartwell Avenue
2030	Natick	Bridge Replacement, Route 27 (North Main Street) over Route 9 (Worcester Street) and Interchange Improvements
2030	Somerville	McGrath Boulevard Project

The primary test for showing conformity with the SIP is to demonstrate that the air-quality conformity of this TIP is consistent with the emission budget set forth in the SIP. The CO mobile-source attainment inventory for 1993, for the nine cities in the Boston maintenance area, reclassified being in attainment as 305.43 tons per winter day. The projection of mobile sources for the Boston maintenance area is 228.33 tons per winter day for 2010. Estimates of CO emissions for the Boston maintenance area for various years are shown in Table 5-3. The CO emissions are less than the CO emission budget.

TABLE 5-3
Winter CO Emissions Estimates for the CO Maintenance Area for the Nine Cities in the Boston Area (all emissions are in tons per winter day)

Year	Boston Region Action Emission	Emission Budget	Difference (Action Minus Budget)
2020	34.56	228.33	-193.77
2030	23.32	228.33	-205.01
2040	18.90	228.33	-209.43

In summary, this TIP is derived from a conforming LRTP, and the conformity determination has been prepared in accordance with EPA's final conformity regulations. The Boston Region MPO has found that the emission levels from this FFYs 2016–20 TIP demonstrate conformity with the SIP. Therefore, the implementation of the FFYs 2016–20 TIP is consistent with the air quality goals in the Massachusetts SIP.

6 CHAPTER SIX

Financial Constraint

For financial constraint of the TIP, the transit and highway programs must be financially constrained to projections of available federal aid.

As shown in the tables below, the federal fiscal years 2016–20 TIP complies with financial constraint.

TABLE 6-1

The Federal-Aid Transit Program

Transit Program	FFY 2016	FFY 2017	FFY 2018	FFY 2019	FFYs 2016–19
MBTA Section 5307 Authorization	$142,258,223	$144,392,097	$146,557,978	$148,756,348	$581,964,646
MBTA Section 5307 Program	*$70,685,516*	*$70,685,516*	*$70,685,516*	*$70,685,516*	*$282,742,064*
CATA Section 5307 Authorization	$538,041	$546,111	$554,303	$562,618	$2,201,073
CATA Section 5307 Program	*$0*	*$535,390*	*$540,744*	*$546,152*	*$1,622,286*
MWRTA Section 5307 Authorization	$1,766,759	$1,793,260	$1,820,159	$1,847,462	$7,227,640
MWRTA Section 5307 Program	*$1,758,056*	*$1,723,415*	*$1,723,415*	*$1,723,415*	*$5,758,301*
MBTA Section 5337 Authorization	$122,065,594	$123,896,578	$125,755,026	$127,641,352	$499,358,550
MBTA Section 5337 Program	*$121,190,546*	*$121,190,546*	*$121,190,546*	*$121,190,546*	*$484,762,184*
MBTA Section 5339 Authorization	$5,818,872	$5,906,155	$5,994,748	$6,084,669	$23,804,444
MBTA Section 5339 Program	*$5,287,027*	*$5,287,027*	*$5,287,027*	*$5,287,027*	*$21,148,108*

TABLE 6-2

The Federal-Aid Highway Regional Target Program
(Including state matching funds, but excluding earmarked funds)

Regional Target	FFY 2016	FFY 2017	FFY 2018	FFY 2019	FFYs 2016–19
Regional Target Obligation Authority	$75,009,821	$88,759,294	$92,626,333	$92,626,333	$349,021,781
Regional Target Programmed	*$75,004,968*	*$88,757,069*	*$92,721,968*	*$91,120,634*	*$347,604,639*
STP Target	$52,188,452	$67,723,275	$71,590,315	$72,353,684	$263,855,726
STP Programmed	*$58,767,642*	*$45,527,235*	*$56,195,374*	*$64,949,489*	*$225,439,740*
NHPP Target	N/A	N/A	N/A	N/A	N/A
*NHPP Programmed**	*$31,240,000*	*$13,360,000*	*$13,168,183*	*$0*	*$57,768,183*
HSIP Target	$4,296,710	$4,296,710	$4,296,710	$4,296,710	$17,186,840
HSIP Programmed	*$3,600,000*	*$7,761,213*	*$2,931,191*	*$5,583,037*	*$19,875,440*
CMAQ Target	$13,427,220	$13,427,220	$13,427,220	$13,427,220	$53,708,880
CMAQ Programmed	*$10,037,326*	*$16,937,401*	*$17,115,131*	*$18,039,390*	*$62,129,248*
TAP Target	$5,097,438	$3,312,089	$3,312,089	$2,548,719	$14,270,335
TAP Programmed	*$2,600,000*	*$5,171,220*	*$3,312,089*	*$2,548,719*	*$15,632,028*

* National Highway Performance Program (NHPP) funds are from Surface Transportation Program (STP) target amounts.

TABLE 6-3

The Federal-Aid Bridge Program

Bridge Program	FFY 2016	FFY 2017	FFY 2018	FFY 2019	FFYs 2016–19
Federal-Aid Bridges*	$66,515,800	$52,833,304	$83,383,716	$55,383,716	$258,404,284

7 CHAPTER SEVEN

Operation and Maintenance

One requirement of Moving Ahead for Progress in the 21st Century (MAP-21) 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) 2013 through 2015 for MassDOT projects. The tables on pages 7-4 through 7-6 present operations and maintenance expenditures for SFYs 2014 through 2017 for the MBTA, CATA, and the MWRTA.

Massachusetts Department of Transportation - Highway Division
Summary of Operating and Maintenance Expenditures
Boston Region - Part 1: Non-Federal Aid
as of 3/30/2015

Section I - Non Federal Aid Maintenance Projects - State Bondfunds

Program Group/Sub Group	Estimated SFY 2013 Expenditures	Estimated SFY 2014 Expenditures	Current SFY 2015 Expenditures to Date
01 - Bridge Repair & Replacement			
New Bridge (Excluded)	n/a	n/a	*n/a*
Bridge Replacement (Excluded)	n/a	n/a	*n/a*
Bridge Reconstruction/Rehab	$16,199,248	$16,505,491	$5,560,902
Drawbridge Maintenance	$7,156,539	$542,778	$111,887
Structures Maintenance	$4,110,669	$499,891	$5,332
02 - Bridge Painting			
Painting - Structural	$1,988,410	$863	$0
03 - Roadway Reconstruction			
Hwy Relocation (Excluded)	*n/a*	*n/a*	*n/a*
Hwy Recon. - Added Capacity (Excluded)	*n/a*	*n/a*	*n/a*
New Construction (Excluded)	*n/a*	*n/a*	*n/a*
Hwy Reconstr - Restr and Rehab	$0	$41,976	$32,824
Hwy Reconstr - No Added Capacity	$0	$68,476	$1,917
Hwy Reconstr - Minor Widening	$0	$18,307	$0
Hwy Reconstr - Major Widening	$32,799	$0	$0
04 - Roadway Resurfacing			
Resurfacing	$7,059	$104,139	$641,820
05 - Intersection & Safety			
Impact Attenuators	$0	$0	$0
Safety Improvements	$0	$0	$0
Traffic Signals	$0	$0	$0
06 - Signs & Lighting			
Electrical	$0	$36,331	$0
Sign Installation / Upgrading	$22,859	$0	$0
Structural Signing	$0	$0	$0
07 - Guardrail			
Guard Rail and Fencing	$352,282	$0	$0
08 - Maintenance			
Catch Basin Cleaning	$0	$0	$0
Crack Sealing	$16,819	$0	$0
Landscaping	$0	$0	$0
Mowing and Spraying	$686	$0	$0
Pavement Marking	$0	$0	$0
Sewer and Water	$0	$0	$0
Process/Recycle/Trnsprt Soils	$0	$0	$0
Contract Hwy Maint.	$0	$0	$0
09 - Facilities			
Chemical Storage Sheds	$0	$0	$0
Vertical Construction	$0	$3,284,059	$0
10 - Bikeways (Excluded)	*n/a*	*n/a*	*n/a*
11 - Other			
Demolition	$0	$0	$0
Drilling & Boring	$0	$0	$0
Highway Sweeping	$0	$0	$0
Intelligent Transportation System	$20,238	$5,093	$0
Marine Construction	$0	$0	$0
Miscellaneous / No prequal	$0	$349,058	$0
Reclamation	$0	$0	$0
Underground Tank Removal Replace	$0	$0	$0
Unknown	$0	$0	$0
Section I Total:	**$29,907,608**	**$21,456,461**	**$6,354,682**

Section II - Non Federal Aid Highway Operations - State Operating Budget Funding

12 - Snow and Ice Operations & Materials	*n/a*	*n/a*	*n/a*
13 - District Maintenance Payroll (Mowing, Litter Management, Sight Distance Clearing, Etc.)	*n/a*	*n/a*	*n/a*
Section II Total:	**$0**	**$0**	**$0**
Grand Total NFA:	$29,907,608	$21,456,461	$6,354,682

Massachusetts Department of Transportation - Highway Division
Summary of Operating and Maintenance Expenditures
Boston Region - Part 2: Federal Aid
as of 3/30/2015

Section I - Federal Aid Maintenance Projects

Program Group/Sub Group	Estimated SFY 2013 Expenditures	Estimated SFY 2014 Expenditures	Current SFY 2015 Expenditures to Date
01 - Bridge Repair & Replacement			
New Bridge (Excluded)	*n/a*	*n/a*	*n/a*
Bridge Replacement (Excluded)	*n/a*	*n/a*	*n/a*
Bridge Reconstruction/Rehab	$38,149,859	$90,504,470	$41,767,035
Drawbridge Maintenance	$0	$0	$0
Structures Maintenance	$2,876,813	$2,471,015	$3,020,905
02 - Bridge Painting			
Painting - Structural	$0	$0	$0
03 - Roadway Reconstruction			
Hwy Relocation (Excluded)	*n/a*	*n/a*	*n/a*
Hwy Recon. - Added Capacity (Excluded)	*n/a*	*n/a*	*n/a*
New Construction (Excluded)	*n/a*	*n/a*	*n/a*
Hwy Reconstr - Restr and Rehab	$21,306,863	$15,294,488	$17,499,272
Hwy Reconstr - No Added Capacity	$19,679,881	$17,134,846	$10,103,681
Hwy Reconstr - Minor Widening	$3,130,409	$1,543,122	$2,949,553
Hwy Reconstr - Major Widening	$26,413	$53,924	$0
04 - Roadway Resurfacing			
Resurfacing	$35,092,455	$46,386,538	$38,324,507
05 - Intersection & Safety			
Impact Attenuators	$0	$0	$0
Safety Improvements	$17,238	$5,399	$0
Traffic Signals	$2,572,475	$491,724	$1,580,823
06 - Signs & Lighting			
Electrical	$444,997	$332,658	$0
Sign Installation / Upgrading	$892,283	$2,779,336	$1,801,749
Structural Signing	$2,071,432	$3,295,503	$897,513
07 - Guardrail			
Guard Rail and Fencing	$31,665	$1,845,666	$0
08 - Maintenance			
Catch Basin Cleaning	$0	$0	$0
Contract Highway Maintenance	$0	$0	$0
Crack Sealing	$0	$0	$0
Landscaping	$0	$7,284	$0
Mowing and Spraying	$0	$0	$0
Pavement Marking	$0	$0	$0
Process/Recycle/Trnsport Soils	$0	$0	$0
Sewer and Water	$0	$0	$0
09 - Facilities			
Chemical Storage Sheds	$0	$0	$0
Vertical Construction	$281,655	$11,191	$0
10 - Bikeways (Excluded)	*n/a*	*n/a*	*n/a*
11 - Other			
Demolition	$0	$0	$0
Drilling & Boring	$0	$0	$0
Highway Sweeping	$0	$0	$0
Intelligent Transportation System	$301,775	$758,469	$0
Marine Construction	$2,545,467	$2,655,746	$0
Miscellaneous / No prequal	$702,180	$63,525	$0
Reclamation	$0	$0	$0
Underground Tank Removal Replace	$0	$0	$0
Unknown	$0	$0	$0
Section I Total:	**$130,123,860**	**$185,634,903**	**$117,945,038**

Section II - Federal Aid Highway Operations

ITS Operations - I-93 HOV Lane Operation and Towing	$550,000	$550,000	
ITS Operations - Traffic Operations Center (South Boston)	$600,000	$600,000	
Section II Total	$1,150,000	$1,150,000	$0

Grand Total Federal Aid: **$131,273,860** **$186,784,903** **$117,945,038**

APPENDIX A

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 in the universe to support the evaluation of projects.

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 visions and policies that were adopted for its Long-Range Transportation Plan (LRTP), Paths to a Sustainable Region.

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 in the draft FFYs 2016-20 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 in the draft FFYs 2016–20 TIP.

TABLE A-1: FFYs 2016-20 TIP - Summary of Evaluated Highway Projects

TIP ID	Proponent(s)	Project Name	TIP/ LRTP Status	Total Rating (154 Points Possible):	System Preservation, Modernization, and Efficiency Rating (36 Points Possible):	Livability and Economic Benefit Rating (29 Points Possible):	Mobility Rating (25 Points Possible):	Environment and Climate Change Rating (25 Points Possible):	Environmental Justice Rating (10 Points Possible):	Safety and Security Rating (29 Points Possible):
606635	Newton and Needham (MassDOT)	Reconstruction of Highland Avenue, Needham Street & Charles River Bridge, from Webster Street to Route 9	2018	104	30	17	13	18	6	20
606284	Boston	Improvements to Commonwealth Avenue, from Amory Street to Alcorn Street	2015	96	28	16	15	9	8	20
607981	Somerville (MassDOT)	McGrath Boulevard Project	LRTP 2026-30	96	30	18	13	12	9	14
607652	Everett	Reconstruction of Ferry Street	2019	90	30	12	14	11	5	18
605034	Natick	Reconstruction of Route 27 (North Main Street), from North Avenue to the Wayland town line	2019	88	32	16	14	9	0	17
607409	Lexington	Reconstruction on Massachusetts Avenue, from Marrett Road to Pleasant Street	2016	87	30	10	15	8	6	18
29492	Bedford, Billerica, and Burlington	Middlesex Turnpike Improvements, from Crosby Drive North to Manning Road (Phase III)	2016-17	86	28	11	18	13	3	13
605146	Salem	Reconstruction on Canal Street, from Washington Street and Mill Street to Loring Avenue and Jefferson Avenue	2015	85	22	16	12	10	6	19
605110	Brookline	Intersection and signal improvements at Route 9 and Village Square (Gateway East)	2017	85	30	19	14	10	0	12
606043	Hopkinton	Signal and intersection improvements on Route 135	2019	85	24	14	14	16	0	17
604810	Marlborough	Reconstruction of Route 85 (Maple Street)	2017	84	16	15	10	18	6	19
605313	Natick (MassDOT)	Bridge replacement, Route 27 (North Main St.) over Route 9 (Worcester St.) and interchange improvements	LRTP 2021-25	84	34	12	15	8	0	15
606453	Boston	Improvements on Boylston Street, from intersection of Brookline Avenue and Park Drive to Ipswich Street	2019	83	16	18	14	16	5	14
605657	Medway	Reconstruction on Route 109, from Holliston Street to 100 feet west of Highland Street	2015	82	28	13	10	16	0	15
604123	Ashland	Reconstruction on Route 126 (Pond Street), from the Framingham town line to the Holliston town line	2020	77	20	16	9	11	6	15
602261	Walpole (MassDOT)	Reconstruction on Route 1A (Main Street), from the Norwood town line to Route 27	2020	76	28	14	10	6	6	12
604652	Winchester, Stoneham, and	Tri-Community Bikeway	2015	75	20	15	9	17	0	14
604935	Woburn	Reconstruction of Montvale Avenue, from I-93 Interchange to Central Street	2017	75	30	10	9	8	0	18
605189	Concord	Bruce Freeman Rail Trail, Phase 2C	2016	73	24	14	10	10	2	13
604989	Southborough	Reconstruction of Main Street (Route 30), from Sears Road to Park Street	2017	73	22	13	12	11	0	15
602077	Lynn	Reconstruction on Route 129 (Lynnfield Street), from Great Woods Road to Wyoma Square	2019	73	20	8	14	9	5	17
607428	Milford	Resurfacing and intersection improvements on Route 16 (Main Street), from Water Street to the Hopedale town line	2019	73	22	12	13	4	6	16
607309	Hingham	Reconstruction and related work on Derby Street from Pond Park Road to Cushing Street	2017	71	22	9	15	8	0	17

TABLE A-1: FFYs 2016-20 TIP - Summary of Evaluated Highway Projects

TIP ID	Proponent(s)	Project Name	TIP/ LRTP Status	Total Rating (154 Points Possible):	System Preservation, Modernization, and Efficiency Rating (36 Points Possible):	Livability and Economic Benefit Rating (29 Points Possible):	Mobility Rating (25 Points Possible):	Environment and Climate Change Rating (25 Points Possible):	Environmental Justice Rating (10 Points Possible):	Safety and Security Rating (29 Points Possible):
606117	**Boston**	**Traffic signal improvements at 11 locations**	**2016**	**71**	**20**	**13**	**12**	**7**	**5**	**14**
601579	**Wayland**	**Signal and intersection improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)**	**2016**	**70**	**24**	**10**	**10**	**12**	**0**	**14**
601704	Newton	Reconstruction and signal improvements on Walnut Street, from Homer Street to Route 9	N/A	70	24	16	8	7	0	15
601513	Saugus (MassDOT)	Interchange reconstruction at Walnut Street and Route 1 (Phase II)	N/A	69	22	12	15	7	0	13
1671	Everett	Rehabilitation of Beacham Street	N/A	69	20	10	8	9	4	18
604531	**Acton and Maynard**	**Assabet River Rail Trail**	**2015**	**68**	**16**	**14**	**10**	**13**	**2**	**13**
602310	Danvers	Reconstruction on Collins Street, from Sylvan Street to Centre and Holten Streets	N/A	68	20	13	14	6	2	13
605721	**Weymouth**	**Intersection improvements at Middle Street, Libbey Industrial Parkway and Tara Drive**	**2016**	**68**	**20**	**12**	**16**	**5**	**0**	**15**
604231	Marlborough	Intersection and signal improvements on Route 20 (East Main Street/Boston Post Road) at Concord Road	N/A	67	24	7	16	7	3	10
607255	Holbrook	Intersection improvements and related work at Weymouth Street/Pine Street/Sycamore Street	N/A	66	24	6	13	7	0	16
604377	Gloucester	Washington Street and Railroad Avenue	N/A	65	12	15	9	8	4	17
607888	**Boston**	**Multi-use path construction on New Fenway**	**2019**	**65**	**6**	**17**	**11**	**13**	**5**	**13**
604996	**Woburn**	**Bridge replacement, New Boston Street over MBTA**	**2020**	**62**	**12**	**19**	**11**	**13**	**0**	**7**
606002	Duxbury	Signal installation at Route 3 (NB and SB) ramps and Route 3A (Tremont Street)	N/A	61	24	4	17	3	0	13
607732	**Natick**	**Cochituate Rail Trail, Phase Two**	**2018**	**60**	**6**	**14**	**10**	**12**	**3**	**15**
600518	**Hingham (MassDOT)**	**Intersection improvements at Derby Street, Whiting Street (Route 53) and Gardner Street**	**2018**	**59**	**22**	**10**	**13**	**2**	**0**	**12**
606316	**Brookline**	**Pedestrian bridge rehabilitation over MBTA off Carlton Street**	**2016**	**59**	**10**	**13**	**8**	**11**	**5**	**12**
605857	Norwood	Intersection improvements at Route 1 and University Avenue/Everett Street	N/A	58	24	8	14	3	0	9
603739	Wrentham	Construction of I-495/Route 1A ramps	N/A	55	18	1	15	10	0	11
606130	Norwood	Intersection improvements at Route 1A and Upland Road/Washington Street and Prospect Street/Fulton Street	N/A	55	20	7	10	5	0	13
605743	Ipswich	Resurfacing and related work on Central and South Main Streets	N/A	51	10	13	8	6	0	14
604811	Marlborough	Reconstruction of Route 20 (East Main Street), from Main Street easterly to Lincoln Street	N/A	51	10	9	11	7	3	11
604638	Danvers and Peabody (MassDOT)	Mainline improvements on Route 128 (Phase II)	N/A	49	12	3	18	3	0	13

TABLE A-1: FFYs 2016-20 TIP - Summary of Evaluated Highway Projects

TIP ID	Proponent(s)	Project Name	TIP/ LRTP Status	Total Rating (154 Points Possible):	System Preservation, Modernization, and Efficiency Rating (36 Points Possible):	Livability and Economic Benefit Rating (29 Points Possible):	Mobility Rating (25 Points Possible):	Environment and Climate Change Rating (25 Points Possible):	Environmental Justice Rating (10 Points Possible):	Safety and Security Rating (29 Points Possible):
606501	Holbrook	Reconstruction of Union Street (Route 139), from Linfield Street to Centre Street/Water Street	N/A	48	10	13	7	5	0	13
601359	Franklin	Reconstruction of Pleasant Street, from Main Street to Chestnut Street	N/A	45	12	11	6	4	0	12
601607	Hull	Reconstruction of Atlantic Avenue and related work, from Nantasket Avenue to Cohasset town line	N/A	43	6	11	2	8	0	16
604745	Wrentham	Reconstruction of Taunton Street (Route 152)	N/A	36	6	10	2	4	0	14

TABLE A-2: FFYs 2016-20 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Acton	**604531**	**Assabet River Rail Trail**	**2015**
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, and Burlington	**029492**	**Middlesex Turnpike Improvements, from Crosby Drive North to Manning Road (Phase III)**	**2016-17**
Beverly	604369	Reconstruction & Improvements on Route 128 (Interchange 19) at Brimbal Avenue, Sohier Road, Dunham Road, Otis Road	
Beverly	607727	Interchange Reconstruction at Route 128/Exit 19 at Brimbal Avenue (Phase II)	
Boston	**606284**	**Improvements to Commonwealth Avenue, from Amory Street to Alcorn Street**	**2015**
Boston	604761	Multi-Use Trail Construction (South Bay Harbor) From Ruggles Station to Fort Point Channel	
Boston	606117	Traffic Signal Improvements at 11 Locations	2016
Boston	606226	Reconstruction of Rutherford Avenue, from City Square to Sullivan Square	2020
Boston	606453	Improvements on Boylston Street, from Intersection of Brookline Avenue & Park Drive to Ipswich Street	
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**	**2018**
Boston	601274	Reconstruction of Tremont Street, from Court Street to Boylston Street	
Brookline	**605110**	**Intersection & Signal Improvements at Route 9 & Village Square (Gateway East)**	**2017**
Brookline	**606316**	**Pedestrian Bridge Rehabilitation over MBTA off Carlton Street**	**2016**
Brookline	1659	Emerald Necklace Bicycle and Pedestrian Crossings	
Burlington	949	Route 62 (Wilmington Road)	
Burlington	950	South Bedford Street	
Cambridge	604993	Innovation Boulevard Streetscape & Pedestrian Improvements, Between Main Street & Binney Street (Phase I)	
Canton	900	East-West Connector, between Pleasant St. & Route 138	

TABLE A-2: FFYs 2016-20 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Canton	603883	Reconstruction on Route 138, from I-93 to Dan Road	
Canton, Dedham, and Norwood (MassDOT)	087790	Interchange Improvements at I-95/I-93/University Avenue/I-95 Widening	
Canton, Dedham, and Westwood (MassDOT)	606146	Ramp Construction on I-95 (NB) & Improvements on Dedham Street, Includes Replacement of 4 Signalized Intersections	
Chelsea	1443	Reconstruction of Broadway, from City Hall Ave to the Revere City Line	
Chelsea	1063	Reconstruction of Beacham and Williams Streets, from Spruce Street to Everett City Line	
Chelsea	953	Reconstruction and Widening of Spruce Street, between Everett Avenue and Sixth Street	
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	
Cohasset, Marshfield, and Scituate (MassDOT)	605664	Resurfacing & Related Work on Route 3A	
Concord	**605189**	**Bruce Freeman Rail Trail, Phase 2C**	**2016**
Concord and Acton	**606223**	**Bruce Freeman Rail Trail Construction (Phase II-B)**	**2018**
Concord	1441	Route 62 (Main St) Phase 3	
Concord	1450	Route 117 (Fitchburg Turnpike)	
Concord	602091	Improvements & Upgrades to Concord Rotary (Routes 2/2A/119)	
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	
Duxbury	942	Intersection Improvements at Route 3A & Route 139	
Duxbury	600650	Route 3A (Tremont Street) Bridge	
Duxbury	606002	Signal Installation at Route 3 (NB & SB) Ramps & Route 3A (Tremont St)	

TABLE A-2: FFYs 2016-20 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
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 the Chelsea City Line	
Everett and Malden	649	TeleCom Boulevard, Phase 2	
Framingham	356	Reconstruct Route 126 (Hollis Street), from Irving Street to the Ashland town line	
Framingham	955	Reconstruction of Route 126, from Route 9 to Lincoln Street	
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	
Holbrook	607255	Intersection Improvements and Related Work at Weymouth Street/Pine Street/Sycamore Street	
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	

TABLE A-2: FFYs 2016-20 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
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
Lexington	1141	West Lexington Greenway	
Littleton	1460	Harvard Street	
Lynn	**602077**	**Reconstruction on Route 129 (Lynnfield Street), from Great Woods Road to Wyoma Square**	**2019**
Lynn	601138	Traffic Signals at 4 Locations (Contract E)	
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	602081	Route 107 (Western Avenue)/Eastern Avenue	
Lynn	602093	Route 107 (Western Avenue)	
Lynn	1672	Blossom Street Ferry Terminal	
Lynn (MBTA)	374	Lynn Garage	
Lynn, Malden, Revere, and Saugus	351	Bike to the Sea, Phase 2	
Lynnfield and Wakefield	**607329**	**Rail Trail Extension, from the Galvin Middle School to Lynnfield/Peabody Town Line**	**2018**

TABLE A-2: FFYs 2016-20 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Malden, Revere, and Saugus (MassDOT)	605012	Reconstruction & Widening on Route 1, from Route 60 to Route 99	
Marblehead	1657	Intersection Improvements to Pleasant Street at Village/Vine/Cross Streets	
Marlborough	**604810**	**Reconstruction of Route 85 (Maple Street)**	**2017**
Marlborough	604811	Reconstruction of Route 20 (East Main Street), from Main Street Easterly to Lincoln Street	
Marlborough	604231	Intersection & Signal Improvements on Route 20 (East Main Street/Boston Post Road) at Concord Road	
Marshfield (MassDOT)	**604655**	**Bridge Replacement, Beach Street over the Cut River**	**2018**
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	**605657**	**Reconstruction on Route 109, from Holliston Street to 100 Feet West of Highland Street**	**2015**
Medway	1167	Route 109 (Milford Street)	
Medway	602134	Resurfacing & Related Work on a Section of Village 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	
Natick	**605034**	**Reconstruction of Route 27 (North Main Street), from North Avenue to the Wayland Town Line**	**2019**
Natick	**607732**	**Cochituate Rail Trail, Phase Two**	**2018**
Natick	605313	Bridge Replacement, Route 27 (North Main Street) over Route 9 (Worcester Street) and Interchange Improvements	

TABLE A-2: FFYs 2016-20 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Needham and Wellesley (MassDOT)	**603711**	**Rehab/Replacement of 6 Bridges on I-95/Route 128 (Add-a-Lane Contract 5)**	**2015-18**
Newton and Needham	**606635**	**Reconstruction of Highland Avenue, Needham Street & Charles River Bridge, from Webster Street to Route 9**	**2018**
Newton	601704	Reconstruction & Signal Improvements on Walnut Street, from Homer Street to Route 9	
Newton	1067	Washington Street, Phase 2	
Newton	600932	Reconstruction on Route 30 (Commonwealth Avenue), from Weston Town Line to Auburn Street	
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	
Norwood	606130	Intersection Improvements at Route 1A & Upland Road/Washington Street & Prospect Street/Fulton Street	
Norwood	608052	Intersection and Traffic Signal Improvements at Providence Highway (Route 1) and Morse Street	2019
Peabody (MassDOT)	604638	Mainline Improvements on Route 128 (Phase II)	
Peabody and Salem	1655	Riverwalk/Greenway from Peabody Square to Salem Train Depot	
Quincy	1451	Quincy Center Multimodal MBTA Station	
Salem	**605146**	**Reconstruction on Canal Street, from Washington Street & Mill Street to Loring Avenue & Jefferson Avenue**	**2015**
Salem	1311	Canal Street Bikeway	
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	McCarthy Boulevard Construction	LRTP 2026-30
Somerville (MassDOT)	600831	I-93 Mystic Avenue Interchange (Design and Study)	

TABLE A-2: FFYs 2016-20 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Somerville and Medford (MBTA)	**1569**	**Green Line Extension Project (Phase II), College Avenue to Mystic Valley Parkway/Route 16**	**2016-20**
Southborough	**604989**	**Reconstruction of Main Street (Route 30), from Sears Road to Park Street**	**2017**
Southborough	1064	Cordaville Road/Route 85 Rehabilitation	
Southborough and Westborough (MassDOT)	607701	Improvements at I-495 & Route 9	
Stow and Hudson	1139	Assabet River Rail Trail	
Sudbury (MassDOT)	607249	Intersection Improvements at Route 20 & Landham Road	
Sudbury	1037	Route 20/Horsepond Road	
Sudbury	1069	Route 20/Wayside Inn Road	
Sudbury	1164	Bruce Freeman Rail Trail, Phase 2D	
Sudbury	1305	Bruce Freeman Rail Trail, Phase 2E	
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)	
Wayland	**601579**	**Signal & Intersection Improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)**	**2016**
Weymouth	**601630**	**Reconstruction & Widening on Route 18 (Main Street), from Highland Place to Route 139**	**2016-19**
Weymouth	**605721**	**Intersection Improvements at Middle Street, Libbey Industrial Parkway and Tara Drive**	**2016**
Weymouth	**607755**	**Intersection & Signal Improvements at 2 Locations: SR 53 (Washington Street) at Mutton Lane & Pleasant Street**	**2016**

TABLE A-2: FFYs 2016-20 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Wilmington	608051	Reconstruction on Route 38 (Main Street), from Route 62 to the Woburn C.L.	
Winchester, Stoneham, and Woburn	**604652**	**Tri-Community Bikeway**	**2015**
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**	**2020**
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 (MassDOT)	603739	Construction of I-495/Route 1A Ramps	
Wrentham	604745	Reconstruction of Taunton Street (Route 152)	

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 munipalities) 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 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)

- 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

System Preservation, Modernization, and Efficiency Tab

System Preservation, Modernization, and Efficiency of our roadway is important to the vitality of our region. The evaluation criteria below serve as a way to measure the MPO's efforts to emphasize the preservation, modernization and efficiency of the existing transportation system. The MPO has expressed these measures in the following policies:

- Adapt to fiscal constraints by developing needs-based, low-cost strategies for addressing mobility, access, and accessibility and by pursuing alternative funding sources and mechanisms
- Put a priority on programs, services, and projects that maximize efficiency through ITS, technology, TSM, and M&O; turn to technology before expansion
- Bring and keep the network (particularly bike and pedestrian facilities) into a state of good repair (SGR); set funding objectives for this
- For roadway investments, give priority to maintaining the regional network of bridges and roads

Project Background Information

22 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

23 Equipment Condition

Existing signal equipment condition. (Source: CMP, Massachusetts permitted signal information, municipal signal information, submitted design).

24 CMP Congested Area

Identifies a project that is located within a Boston Region MPO Congestion Management Process (CMP) area.

Proponent Provided Information

P2 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)

P3 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)

Evaluation

System Preservation, Modernization and Efficiency Evaluation Scoring (36 total points possible):

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 and all equipment will be replaced
+4 Mediocre condition, replacement of majority of equipment will occur
+2 Fair condition, partial replacement will occur
0 All other values

Improves traffic signal operations (signal equipment upgrades, including for adaptive signal controls and coordination with adjacent signals (ITS) (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 address criteria to a low degree
0 Does not meet or address criteria

In a Congestion Management Process Identified Area (up to 6 points)

+6 CMP data indicates project area is in one of the most highly congested project areas monitored
+4 CMP data indicates project area is in one of the most congested project areas monitored
+2 CMP data indicates project area is in a congested project areas monitored
0 CMP data indicates project area is in the top 80 to 51 % of the most congested project areas monitored

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 address criteria to a low degree
0 Does not meet or address criteria

Implements ITS strategies other than traffic signal operations (improve traffic flow as identified by an ITS strategy for the municipality or state (e.g. variable message signs) (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 address criteria to a low degree
0 Does not meet or address criteria

Livability and Economic Benefit Tab

The livability and economic benefit of our roadway is important to the vitality of our region. The evaluation criteria below serve as a way to measure the MPO's efforts to emphasize and implement their livability policies. The MPO has expressed these measures in the following policies:

- Invest in projects and programs that are consistent with MetroFuture land use planning (serving already-developed areas; locations with adequate sewer and water, areas identified for economic development by state, regional, and local planning agencies; and density)
- Support health-promoting transportation options; expand and close gaps in the bicycle and pedestrian networks; promote a complete-streets philosophy
- Support urban and context-sensitive design to protect cultural, historic, and scenic resources, community cohesiveness, quality of life; fund enhancements at a reasonable cost
- Support state-of-the-practice parking policies
- Use economic impacts (local and regional) as a criteria for evaluating projects and programs; recognize that economic vitality plays a role in community livability

Project Background Information

Using the current available zoning coverage, the following calculations will be made by MAPC:

25 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.

26 TDM Program Required for All New Developments

For all new development, a Transportation demand management (TDM) program is required that implements at least four of the following components:

- Ridesharing program
- Parking restrictions or pricing policies
- Alternative work hours
- Telecommuting options
- Subsidized transit use and other financial incentives
- Areawide strategies such as membership in Transportation Management Associations
- Subsidies for local transit service
- Multi-occupant vehicle access

In addition, this criteria can be met if the community is taking steps to significantly reduce single-occupant travel as part of the project or in the project area.

27 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."

28 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).

29 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

Proponent Provided Information

P4 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)

P5 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)

P6 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)

P7 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

Livability and Economic Benefit Evaluation Scoring (29 total points possible):

Design is consistent with complete streets policies (up to 4 points)

+1 Project is a "complete street"
+1 Project provides for transit service
+1 Project provides for bicycle facilities
+1 Project provides for pedestrian facilities
0 Does not provide any complete streets components

Provides multimodal access to an activity center (up to 3 points)

+1 Project provides transit access (within a quarter mile) to an activity center
+1 Project provides bicycle access to an activity center
+1 Project provides pedestrian access to an activity center
0 Does not provide multimodal access

Reduces auto dependency (up to 8 points)

+3 Project provides for a new transit service
+1 Project is identified in MassDOT's Bay State Greenway Priority 100
+1 Project completes a known gap in the bicycle or pedestrian network
+1 Project provides for a new bicycle facility
+1 Project provides for a new pedestrian facility
+1 Project implements a transportation demand management strategy
0 Does not provide for any of the above measures

Project serves a targeted development site (40R, 43D, 43E, Regionally Significant Priority Development Area, Growth District Initiative, or eligible MBTA transit station areas) (up to 6 points)

+2 Project provides new transit access to or within a site
+1 Project improves transit access to or within a site
+1 Project provides for bicycle access to or within a site
+1 Project provides for pedestrian access to or within a site
+1 Project provides for improved road access to or within a site

Provides for development consistent with the compact growth strategies of MetroFuture (up to 5 points)

+2 Project mostly serves an existing area of concentrated development+1 Project partly serves an existing area of concentrated development
+1 Project complements other local efforts to improve design and access
+2 Project complements other local financial or regulatory support to foster economic revitalization
0 Does not provide for any of the above measures

Project improves Quality of Life (up to 3 points)

+1 Reduces cut through within the project area
+1 Implements traffic calming measures
+1 Improves the character of the project area

Mobility Tab

Increased travel choices and improved access for and across all modes—pedestrian, bicycle, public transportation, and vehicular—is a key mobility issue. Mobility is not merely about moving motor vehicles more quickly through an intersection or along a roadway segment, but includes increasing access and promoting use of all modes. The evaluation criteria below serve as a way to measure the MPO's efforts to emphasize and implement their mobility policies. The MPO has expressed these measures in the following policies:

- Strengthen conditions between modes; close gaps in the existing network
- Improve access and accessibility to transit
- Expand transit bicycle, and pedestrian networks; focus bicycle investment (lanes and paths) on moving people between activity centers (and access to transit)
- Integrate payment methods for fares and parking across modes
- Support TDM, TMAs, shuttles, and carpooling
- Address low cost capacity constraints and bottlenecks in the existing system before expansion

Project Background Information

29 Transit Vehicles Use of Roadway

Identifies the fixed route transit vehicles using the roadway

30 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

*31 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.

*32 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.

33 Supports Regional Freight Infrastructure

- Supports infrastructure improvements on a designated or known truck route
- Supports infrastructure improvement to an existing or proposed industrial center or distribution center
- Supports infrastructure improvement to a major port or airport or intermodal transfer facility

**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

P8 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)

P9 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)

Evaluation

Mobility Evaluation Scoring (25 total points possible):

Existing peak hour level of service (LOS) (up to 3 points)

+3 Source data indicates project area has an LOS value of F at peak travel times
+2 Source data indicates project area has an LOS value of E at peak travel times
+1 Source data indicates project area has an LOS value of D at peak travel times
0 All other values

Improves or completes an MPO or State identified freight movement issue (Identified in MPO or State published freight plan) (up to 3 points)

+3 Project implements a solution to an MPO or State identified freight movement issue
+2 Project supports significant improvements or removes barriers to an existing MPO or State identified freight movement issue
+1 Project supports improvements to an existing MPO or State identified freight movement issue
0 All other results

Address proponent identified primary mobility need (Project design will address the primary mobility need identified by the proponent in the question P7 and evaluated by staff) (up to 3 points)

+3 Meets or addresses criteria to a high degree
+2 Meets or addresses criteria to a medium degree
+1 Meets or address criteria to a low degree
0 Does not meet or address criteria

Address MPO-identified primary mobility need (Project design will address the primary mobility need identified by MPO staff) (up to 3 points)

+3 Meets or addresses criteria to a high degree
+2 Meets or addresses criteria to a medium degree
+1 Meets or address criteria to a low degree
0 Does not meet or address criteria

Project reduces congestion (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 address criteria to a low degree
0 Does not meet or address criteria

Improves transit reliability (up to 7 points)

+2 Implements queue jumping ability for transit
+2 Project prioritizes signals for transit vehicles (ITS)
+2 Project provides for a dedicated busway
+1 Project provides for a bus bump out

Environment and Climate Change Tab

The evaluation criteria below serve as a way to measure the MPO's efforts to emphasize and implement their environmental policies. The MPO has expressed these measures in the following:

- Avoid investments that increase pressure on developing greenfields; support investments that facilitate clean-up of brownfields

- Promote fleet management and modernization
- Support high-occupancy-vehicle travel options
- Protect natural and cultural resources and public health; plan early to avoid and mitigate impacts, such as stormwater and groundwater impacts; and air quality impacts, including introduction of additional fine particulates
- Promote energy conservation and use of alternative energy sources
- Avoid funding projects that increase exposure of at-risk populations to ultra-fine particulates
- Promote investments and give priority to projects and programs with lower life-cycle costs and emissions
- Invest so as to increase mode share of transit and non-motorized modes
- Work with environmental and cultural resource agencies to reach environmental objectives

Project Background Information

34 *CO_2 Impact*

The quantified or assumed annual tons of carbon dioxide estimated to be reduced by the project. (Source: MPO Database)

35 *Located in a Green Community*

Project is in an Executive Office of Energy and Environmental Affairs (EOEEA) certified Green Community. (Source: EOEEA)

36 *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)

37 *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

P10 *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)

P11 *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

Environment and Climate Change Evaluation Scoring (25 total points possible):

Air Quality (improves or degrades) (up to 5 points)

+5 Project significant improves air quality
+3 Project includes major elements improving air quality
+1 Project includes minor elements improving air quality
0 Project has no significant air quality impacts

CO_2 reduction (up to 5 points)

+5 Project will provide for significant movement towards the goals of the Global Warming Solutions act
+3 Project will provide for movement towards the goals of the Global Warming Solutions Act
+1 Project will provide a minor air quality benefit
0 Project will no additional benefit to air quality

Project is in an Executive Office of Energy and Environmental Affairs (EOEEA) certified "Green Community" (up to 4 points)

+4 Project is in a "Green Community"
0 Project is not in a "Green Community"

Project reduces VMT/VHT (up to 7 points)

+3 Project provides for a new transit service
+1 Project provides for improved transit access
+1 Project provides for a new bicycle facility
+1 Project provides for a new pedestrian facility
+1 Project implements a transportation demand management strategy
0 Does not provide for any of the above measures

Addresses identified environmental impacts (Project design will address the environmental impacts identified by the proponent in the question P9 and/or identified by MPO staff) (up to 4 points)

+4 Meets or addresses criteria to a high degree
+2 Meets or addresses criteria to a medium degree
+1 Meets or address criteria to a low degree
0 Does not meet or address criteria

Environmental Justice Tab

The MPO developed its Transportation Equity Program to provide a systematic method of considering environmental justice in all of its transportation planning work. There are twenty-eight environmental justice (EJ) areas identified by the MPO based on percentage of minority residents and percentages of households with low incomes.

The evaluation criteria below serve as a way to measure the MPO's efforts to emphasize and implement their environmental justice policies. The MPO has expressed these measures in the following policies:

- Continue outreach and analysis to identify equity needs; continue to monitor system performance
- Address identified equity needs related to service and removing or minimizing burdens (air pollution, unsafe conditions, community impacts)

- Track implementing agencies' actions responding to transportation need identified in MPO outreach and analysis; encourage action to address needs
- Strengthen avenues for involvement of low-income and minority persons in decision making
- Reduce trip times for low-income and minority persons in decision making
- Give priority to heavily used transit services over new, yet-to-be proven services

Project Background Information

38 *Located within ½ mile of an Environmental Justice Area*

Twenty-eight areas were identified by the MPO based on percentage of minority residents and percentages of households with low incomes. The following thresholds were determined by the MPO for low-income and minority environmental justice areas (Source: 2010 U.S. Census):

- Low Income – The MPO median household income in 2010 was $70,829. A low-income TAZ was defined as having a median household income at or below 60% of this level ($42,497).
- Minority – A minority TAZ was defined as having a percentage of minority population greater than 50% and a minimum minority population of 200 people.

39 *Located within ½ mile of an Environmental Justice Population Zone****

The MPO's thresholds for low-income and minority population zones are less restrictive, and therefore include many more TAZs:

- Low Income – The MPO median household income in 2010 was $70,829. A low-income TAZ was defined as having a median household income at or below 60% of this level ($42,497). (Source: 2010 U.S. Census)
- Minority – A minority TAZ was defined as having a percentage of minority population greater than 27.8%. Title VI guidelines suggest that a minority community be defined as one with a minority population which is greater than the regional percentage of minority residents. (Source: 2010 U.S. Census)

40 *If this project is located in an MPO-defined environmental justice area or environmental justice population zone, how would it improve access to an existing transit facility?*

Explain how this project would provide needed or additional access to a transit facility. (Source: Proponent)

41 *If this project is located in an MPO-defined environmental justice area or environmental justice population zone, how would it improve safety for users of the transportation facility?*

Explain how this project would provide needed or additional safety improvements to the facility identified. (Source: Proponent)

42 *If this project is located in an MPO-defined environmental justice area or environmental justice population zone, how would it improve air quality?*

Explain how this project would provide needed or additional air quality improvements to the area. (Source: Proponent)

43 If this project is located in an MPO-defined environmental justice area or environmental justice population zone, does it address an MPO-identified EJ community need?

The MPO conducts outreach to the EJ communities and compiles a list of identified needs. Is this project addressing one of these needs? (Source: Proponent)

***Please refer to a map of the Environmental Justice (E J) population zones (hyperlink to http://www.ctps.org/Drupal/data/pdf/programs/equity/EJ_Figure_1_Low_Income_Minority.pdf) in the

Boston Region M P O for more information on E J population zones.

Proponent Provided Information

P12 Are any other Environmental Justice issues addressed by this project?

This answer should only be addressed by those projects in an Environmental Justice area or population zone that address an environmental justice need. Please be specific. (Source: Proponent)

Evaluation

Environmental Justice Evaluation Scoring (10 total points possible):

Improves transit for an EJ population (up to 3 points)

+3 Project is located within half-mile buffer or affects an MPO environmental justice area or population zone and will provide new transit access

+1 Project is located within half-mile buffer or affects an MPO environmental justice area or population zone and will provide improved access

0 Project provides no improvement in transit access or is not in an MPO environmental justice area or population zone

Design is consistent with complete streets policies in an EJ area (up to 4 points)

+1 Project is located within half-mile buffer or affects an MPO environmental justice area or population zone and is a “complete street”

+1 Project is located within half-mile buffer or affects an MPO environmental justice area or population zone and provides for transit service

+1 Project is located within half-mile buffer or affects an MPO environmental justice area or population zone and provides for bicycle facilities

+1 Project is located within half-mile buffer or affects an MPO environmental justice area or population zone and provides for pedestrian facilities

0 Does not provide any complete streets components

Addresses an MPO-identified EJ transportation issue (up to 3 points)

+3 Project located within half-mile buffer or affects an MPO environmental justice area or population zone and the project will provide for substantial improvement to an MPO identified EJ transportation issue

+2 Project located within half-mile buffer or affects an MPO environmental justice area or population

zone and the project will provide for improvement to an MPO-identified EJ transportation issue

Project provides no additional benefit and/or is not in an MPO environmental justice area or population zone

–10 Creates a burden in an EJ area

Safety and Security Tab

The evaluation criteria below serve as a way to measure the MPO's efforts to emphasize and implement their safety and security policies. The MPO has expressed these measures in the following policies:

- Implement actions stemming from all-hazards planning
- Maintain the transportation system in an SGR
- Use state-of-the-practice safety elements; address roadway safety deficiencies (after safety audits) and transit safety (including federal mandates)
- Support incident management programs and ITS
- Protect critical infrastructure; address transit security vulnerabilities; upgrade key transportation infrastructure to a "hardened" design standard
- Improve safety for pedestrians and cyclist; ensure that safety provisions are incorporated into shared-use corridors
- Give priority to safety projects that reduce the severity of crashes, especially those that improve safety for all
- Promote safety through supporting the reduction of base speed limit (municipalities) to 25 miles per hour and education and enforcement on rules of the road, all modes

Project Background Information

44 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 2010-2012 Top Crash Locations Report)

45 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, 2010-2012)

46 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, 2010-2012)

47 Bicycle-Involved Crashes (Total EPDO)

Total EPDO value of bicycle-involved crashes in the project area. (Source: MassDOT Highway Division, 2010-2012)

48 Pedestrian-Involved Crashes (Total EPDO)

Total EPDO value of pedestrian-involved crashes in the project area. (Source: MassDOT Highway Division, 2010-2012)

49 Truck-Involved Crashes (Total EPDO)

Total EPDO value of truck-involved crashes in the project area. (Source: MassDOT Highway Division, 2010-2012)

*50 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

P13 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)

P14 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

Safety and Security Evaluation Scoring (29 total points possible):

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

Design affects ability to respond to extreme conditions (up to 6 points)

+2 Project addresses flooding problem and/or sea level rise and enables facility to function in such a condition
+1 Project addresses facility that serves as a route out of a hurricane zone
+1 Project brings facility up to current seismic design standards
+1 Project improves access to an emergency support location

+1 Project addresses critical transportation infrastructure

EPDO/Injury Value Using the Commonwealth's listing for Estimated Property Damage Only (EPCO) or Injury Value information (up to 3 points)

+3 If the value is in the top 20% of most assessed value
+2 If the value is in the top 49 to 21% of most assessed value
+1 If the value is in the top 50 to 1% of the most assessed value
0 If there is no loss

Design addresses proponent identified primary safety need (Project design will address the primary safety need identified by the proponent in the question P4) (up to 3 points)

+3 Meets or addresses criteria to a high degree
+2 Meets or addresses criteria to a medium degree
+1 Meets or address criteria to a low degree
1 Does not meet or address criteria

Design addresses MPO-identified primary safety need (Project design will address the primary MPO-identified safety need) (up to 3 points)

+3 Meets or addresses criteria to a high degree
+2 Meets or addresses criteria to a medium degree
+1 Meets or address criteria to a low degree
0 Does not meet or address criteria

Improves freight related safety issue (Project design will be effective at improving freight related safety issues including truck crashes) (up to 3 points)

+3 Meets or addresses criteria to a high degree
+2 Meets or addresses criteria to a medium degree
+1 Meets or address criteria to a low degree
0 Does not meet or address criteria

Improves bicycle safety (Project design will be effective at improving bicycle related safety issues including crashes) (up to 3 points)

+3 Meets or addresses criteria to a high degree
+2 Meets or addresses criteria to a medium degree
+1 Meets or address criteria to a low degree
0 Does not meet or address criteria

Improves pedestrian safety (Project design will be effective at improving pedestrian related safety issues including crashes) (up to 3 points)

+3 Meets or addresses criteria to a high degree
+2 Meets or addresses criteria to a medium degree
+1 Meets or address criteria to a low degree
0 Does not meet or address criteria

Improves safety or removes an at grade railroad crossing (up to 3 points)

+3 Project removes an at grade railroad crossing
+2 Project significantly improves safety at an at grade railroad crossing
+1 Project improves safety at an at grade railroad crossing
0 Project does not include a railroad crossing

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.

56 $ per User

Cost divided by ADT (ADT for roadway projects or other user estimate)

57 $ per Lane Mile

Cost divided by proposed total lane miles

APPENDIX C

Greenhouse Gas Monitoring & Evaluation

MassDOT coordinated with MPOs and regional planning agencies (RPAs) on the implementation of greenhouse gas (GHG) tracking and evaluation in the development of the MPOs' 2035 long-range transportation plans (LRTPs), which were adopted in September 2011. The list of GHGs is made up of multiple pollutants, including carbon dioxide (CO_2), methane, nitrous oxide, and fluorinated gases. CO_2 and methane are the most predominant GHGs. CO_2 comprises approximately 84 percent of all GHG emissions and enters the atmosphere primarily through the burning of fossil fuels. Methane comprises approximately 10 percent of GHGs and is emitted during the production and transport of coal, natural gas, and oil. GHG emissions from the transportation sector are primarily through the burning of fossil fuels; therefore, reductions of GHG were measured by calculating reductions in emissions of CO_2 associated with projects listed in the LRTP.

Working together, MassDOT and the MPOs have attained the following milestones:

- Modeling and long-range statewide projections for GHG emissions resulting from the transportation sector. Using the Boston MPO's regional model and the statewide travel demand model for the remainder of the state, GHG emissions were projected for 2020 no-build and build conditions, and for 2035 no-build and build conditions.
- All of the MPOs included these GHG emission projections in their LRTPs, along with a discussion of climate change and a statement of MPO support for reducing GHG emissions as a regional goal.

In addition to monitoring the GHG impacts of capacity-adding projects in the LRTP, it is also 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 have impacts on 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 a criterion for prioritizing and programming 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 the anticipated GHG emission impacts of different project types. All TIP projects have been sorted into two main categories for analysis: projects with quantified impacts and projects with assumed impacts. Projects with quantified impacts consist of capacity-adding

projects from the LRTP and projects from the TIP that underwent a CMAQ spreadsheet analysis. Projects with assumed impacts include projects that would be expected to produce a minor decrease or increase in emissions and projects that would be assumed to have no CO_2 impact.

PROJECTS WITH QUANTIFIED IMPACTS

Travel Demand Model Set

Capacity-adding projects included in the long-range transportation plan and 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 CO_2 Associated with the Project

The Office of Transportation Planning at MassDOT provided spreadsheets that are used for determining Congestion Management and Air Quality (CMAQ) Improvement Program eligibility. The data and analysis required by MPO staff to conduct these calculations is typically derived from functional design reports submitted for projects at the 25 percent design phase. Estimated projections of CO_2 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 reduce 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 can 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 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 CO_2 Emissions

Projects that would be expected to produce a minor decrease or increase in emissions that cannot be calculated with any precision. Examples of such projects include roadway repaving or reconstruction projects that add a new sidewalk or new bike lanes. Such a project would enable increased travel by walking or bicycling, but for which 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 CO_2 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) would be assumed to have no CO_2 impact.

More details on each project, including a description of each project's anticipated CO_2 impacts, are 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-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	Municipality(ies)	MassDOT Project Description	Analysis of GHG Impact
607748	Acton	Intersection & Signal Improvements on SR 2 & SR 111 (Massachusetts Avenue) at Piper Road & Taylor Road	To be determined
604123	Ashland	Reconstruction on Route 126 (Pond Street), from the Framingham T.L. to the Holliston T.L.	61 tons of CO_2 reduced
29492	Bedford, Billerica, and Burlington	Middlesex Turnpike Improvements, from Crosby Drive North to Manning Road (Phase III)	Model
606117	Boston	Traffic Signal Improvements at 10 Locations	13 tons of CO_2 reduced
606453	Boston	Improvements on Boylston Street, from Intersection of Brookline Avenue & Park Drive to Ipswich Street	806 tons of CO_2 reduced
605789	Boston	Reconstruction of Melnea Cass Boulevard	To be determined
606226	Boston	Reconstruction of Rutherford Avenue, from City Square to Sullivan Square	Model
606134	Boston	Traffic Signal Improvements on Blue Hill Avenue and Warren Street	To be determined
605110	Brookline	Intersection & Signal Improvements at Route 9 & Village Square (Gateway East)	22 tons of CO_2 reduced
607652	Everett	Reconstruction of Ferry Street, South Ferry Street and a Portion of Elm Street	159 tons of CO_2 reduced
607309	Hingham	Reconstruction and Related Work on Derby Street from Pond Park Road to Cushing Street	166 tons of CO_2 reduced
606043	Hopkinton	Signal & Intersection Improvements on Route 135	566 tons of CO_2 reduced
607409	Lexington	Reconstruction on Massachusetts Avenue, from Marrett Road to Pleasant Street	80 tons of CO_2 reduced
602077	Lynn	Reconstruction on Route 129 (Lynnfield Street), from Great Woods Road to Wyoma Square	To be determined
604810	Marlborough	Reconstruction of Route 85 (Maple Street)	325 tons of CO_2 reduced
605608	Dedham	Resurfacing & Related Work on Route 109	No CO_2 impact
600518	Hingham	Intersection Improvements at Derby Street, Whiting Street (Route 53) and Gardner Street	Increase of 60 tons of CO_2
607488	Southborough	Resurfacing & Related Work on Route 9, from the Framingham Townline to White Bagley Road	No CO_2 impact

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	Municipality(ies)	MassDOT Project Description	Analysis of GHG Impact
607340	Wellesley	Resurfacing on Route 9, from (approx.) Dearborn Street to the Natick T.L.	No CO_2 impact
608059	Salem	Stormwater Improvements along Route 107 (Salem Bypass Road)	No CO_2 impact
608134	Hingham	Stormwater Improvements along Route 3A/Route 28	No CO_2 impact
608221	Marlborough	Resurfacing and Related Work on Route 20	No CO_2 impact
607759	Boston	Intersection and Signal Improvements at the VFW Parkway and Spring Street	To be determined
608214	Winchester	Stormwater Improvements along Route 3	No CO_2 impact
607428	Milford	Resurfacing & Intersection Improvements on Route 16 (Main Street), from Water Street to the Hopedale T.L.	84 tons of CO_2 reduced
607754	Milton	Intersection & Signal Improvements at Granite Avenue & Squantum Street	To be determined
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	To be determined
605034	Natick	Reconstruction of Route 27 (North Main Street), from North Avenue to the Wayland Town Line	74 tons of CO_2 reduced
606635	Newton & Needham	Reconstruction of Highland Avenue, Needham Street & Charles River Bridge, from Webster Street to Route 9	312 tons of CO_2 reduced
608052	Norwood	Intersection and Traffic Signal Improvements at Providence Highway (Route 1) and Morse Street	To be determined
604989	Southborough	Reconstruction of Main Street (Route 30), from Sears Road to Park Street	101 tons of CO_2 reduced
602165	Stoneham	Signal & Intersection Improvements at Route 28/North Street	154 tons of CO_2 reduced
607761	Swampscott	Intersection & Signal Improvements at SR 1A (Paradise Road) at Swampscott Mall	To be determined
602261	Walpole	Reconstruction on Route 1A (Main Street), from the Norwood Town Line to Route 27	94 tons of CO_2 reduced

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	Municipality(ies)	MassDOT Project Description	Analysis of GHG Impact
601579	Wayland	Signal & Intersection Improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)	115 tons of CO_2 reduced
605721	Weymouth	Intersection Improvements at Middle Street, Libbey Industrial Parkway and Tara Drive	6 tons of CO_2 reduced
601630	Weymouth	Reconstruction & Widening on Route 18 (Main Street), from Highland Place to Route 139	Model
607755	Weymouth	Intersection & Signal Improvements at 2 Locations: SR 53 (Washington Street) at Mutton Lane & Pleasant Street	To be determined
604935	Woburn	Reconstruction of Montvale Avenue, from I-93 Interchange to Central Street	46 tons of CO_2 reduced
608000	Bedford	Safe Routes to School (John Glenn Middle)	Assumed nominal reduction from pedestrian infrastructure
607888	Boston	Multi-use Path Construction on New Fenway	106 tons of CO_2 reduced
606316	Brookline	Pedestrian Bridge Rehabilitation over MBTA off Carlton Street	Assumed nominal reduction from pedestrian infrastructure
605189	Concord	Bruce Freeman Rail Trail, Phase 2C	79 tons of CO_2 reduced
606223	Concord, Acton	Bruce Freeman Rail Trail Construction (Phase II-B)	To be determined
607998	Everett	Safe Routes to School (Madelaine English)	Assumed nominal reduction from pedestrian infrastructure
607329	Lynnfield, Wakefield	Rail Trail Extension, from the Galvin Middle School to Lynnfield/Peabody Town Line	To be determined
607732	Natick	Cochituate Rail Trail, Phase Two	126 tons of CO_2 reduced
607999	Revere	Safe Routes to School (Garfield Elementary & Middle School)	Assumed nominal reduction from pedestrian infrastructure
607997	Saugus	Safe Routes to School (Veterans Memorial)	Assumed nominal reduction from pedestrian infrastructure
608004	Watertown	Safe Routes to School (Hosmer Elementary)	Assumed nominal reduction from pedestrian infrastructure
608003	Weymouth	Safe Routes to School (Pingree Elementary)	Assumed nominal reduction from pedestrian infrastructure
600867	Boston	Bridge Replacement, Massachusetts Avenue (Route 2A) over Commonwealth Avenue	No CO_2 impact

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	Municipality(ies)	MassDOT Project Description	Analysis of GHG Impact
604173	Boston	Bridge Rehabilitation, North Washington Street over the Charles River	Assumed nominal reduction from bicycle infrastructure
607685	Braintree	Bridge Rehabilitation, B-21-060 and B-21-061, St 3 (SB) And St 3 (NB) over Ramp C (Quincy Adams)	No CO_2 impact
607345	Cohasset	Superstructure Replacement & Substructure Rehabilitation, Atlantic Avenue over Little Harbor Inlet	Assumed nominal reduction from pedestrian infrastructure
607954	Danvers	Bridge Replacement, D-03-018, Route 128 over Waters River	No CO_2 impact
606553	Hanover and Norwell	Superstructure Replacement, H-06-010, St 3 Over St 123 (Webster Street) & N-24-003, St 3 Over St 123 (High Street)	Assumed nominal reduction from pedestrian infrastructure
606632	Hopkinton	Bridge Replacement, Fruit Street Over CSX & Sudbury River	No CO_2 impact
600703	Lexington	Bridge Replacement, Route 2 (EB & WB) over Route I-95 (Route 128)	No CO_2 impact
604952	Lynn and Saugus	Bridge Replacement, Route 107 over the Saugus River (AKA Belden G. Bly Bridge)	Assumed nominal reduction from pedestrian infrastructure
604655	Marshfield	Bridge Replacement, Beach Street over the Cut River	Assumed nominal reduction from pedestrian infrastructure
607915	Newton, Wellesley, and Weston	Bridge Maintenance of N-12-063, N-12-054, N-12-055 & N-12-056 on I-95/Route 128	No CO_2 impact
607133	Quincy	Bridge Replacement, Robertson Street over I-93/US 1/SR 3	No CO_2 impact
608079	Sharon	Bridge Replacement, Maskwonicut Street over Amtrak/MBTA	Assumed nominal reduction from pedestrian infrastructure
BR1901	Stow	Bridge Replacement, S-29-11, Box Mill Road over Elizabeth Brook	No CO_2 impact
607507	Wakefield	Bridge Deck Replacement, W-01-021 (2MF) Hopkins Street over I-95 / ST 128	Assumed nominal reduction from pedestrian infrastructure
607533	Waltham	Woerd Avenue over the Charles River	No CO_2 impact
603008	Woburn	Bridge Replacement, Salem Street over MBTA	No CO_2 impact
604996	Woburn	Bridge Replacement, New Boston Street over MBTA	Model (1501 tons of CO_2 reduced)
606381	Arlington and Belmont	Highway Lighting Repair & Maintenance on Route 2	No CO_2 impact
605733	Boston	Highway Lighting System Replacement on I-93, from Southhampton Street to Neponset Avenue	No CO_2 impact
608206	Chelsea to Danvers	Guide and Traffic Sign Replacement on a Section of Route 1	No CO_2 impact

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	Municipality(ies)	MassDOT Project Description	Analysis of GHG Impact
608220	Concord	Resurfacing and Related Work on Route 2	No CO_2 impact
606176	Foxborough to Wrentham	Interstate Maintenance & Related Work on I-495 (NB & SB)	No CO_2 impact
608210	Foxborough to Wrentham	Interstate Maintenance Resurfacing and Related Work on I-495	No CO_2 impact
607477	Lynnfield and Peabody	Resurfacing and Related Work on Route 1	No CO_2 impact
608069	Marshfield to Hingham	Resurfacing and Related Work on Route 3	No CO_2 impact
603917	Medford to Reading	Highway Lighting Rehabilitation on I-93 (Phase II)	No CO_2 impact
608213	Milton	Stormwater Improvements along I-93	No CO_2 impact
603711	Needham and Wellesley	Rehab/Replacement of 6 Bridges on I-95/Route 128 (Add-a-Lane Contract 5)	Model
608208	Quincy, Milton, and Boston	Interstate Maintenance Resurfacing and Related Work on I-93	No CO_2 Impact
607481	Randolph, Quincy, and Braintree	Resurfacing and Related Work on I-93	No CO_2 impact
608219	Reading and Wakefield	Interstate Maintenance Resurfacing and Related Work on I-95	No CO_2 Impact
608205	Reading to Lynnfield	Guide and Traffic Sign Replacement on a Section of Interstate 95	No CO_2 impact
608008	Saugus	Resurfacing & Related Work on Route 1	No CO_2 Impact
1572	MBTA	Red Line-Blue Line Connector Design	No CO_2 impact
1570	Somerville and Cambridge	Green Line Extension Project - Extension to College Avenue with the Union Square Spur	Model
1569	Somerville and Medford	Green Line Extension Project (Phase II), College Avenue to Mystic Valley Parkway/Route 16	Model

TABLE C-2: Greenhouse Gas Regional Transit Project Tracking

Regional Transit Authority	Project Description	Analysis of GHG Impact
MBTA	STATIONS & FACILITIES	Assumed nominal reduction in CO_2 from transit infrastructure
MBTA	BRIDGES & TUNNELS	No CO_2 impact
MBTA	PREVENTATIVE MAINTENANCE	No CO_2 impact
MBTA	SYSTEM UPGRADES	To be determined
CATA	PREVENTATIVE MAINTENANCE	To be determined
CATA	EQUIPMENT AND FACILITIES	No CO_2 impact
MWRTA	ADA PARATRANSIT	To be determined
MWRTA	EQUIPMENT AND FACILITIES	No CO_2 impact

APPENDIX D

FFY 2015 Highway Projects Status

This appendix lists information about the status of roadway projects in the federal fiscal year 2015 element of the FFYs 2015–18 TIP.

TABLE D-1
Advanced Construction Projects

Project Number	Project Description	District	Funding Source(s)
607338	Gloucester- Bridge Preservation, G-05-017, Route 128 over Annisquam River (Phase II)	4	BR-AC
600703	Lexington- Bridge Replacement, L-10-009, Route 2 (EB & WB) over Route I-95 (Route 128)	4	BR-AC
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 & W-13-023 (Add-A-Lane - Contract V)	6	BR-AC

TABLE D-2
Projects Advertised in FFY 2015

Project Number	Project Description	District	Funding Source(s)
607174	Chelsea- Revere – Resurfacing &Related Work on Route 1	6	NHPP
607700	Lexington- Woburn – District 4 Highway Lighting Branch Circuit Re-Cabling from Six Lighting Load Centers Along Route I-95 (128)	4	STP
607891	Beverly – Resurfacing & Related Work on Route 128	4	NHPP

TABLE D-2 (CONTINUED)
Projects Advertised in FFY 2015

Project Number	Project Description	District	Funding Source(s)
605883	Dedham – Bridge Replacement, D-05-003 (33K), Needham Street over Great Ditch	6	NHPP
604796	Dedham- Bridge Replacement, D-05-033, Providence Highway over Mother Brook	6	NHPP

TABLE D-3
Projects Expected to be Advertised in FFY 2015

Project Number	Project Description	District	Funding Source(s)
606997	Braintree-Mansfield-Milton-Weymouth- Stormwater Retrofits on I-93, I-495, I-195, Route 3/18	6	STP-TE
608019	Boston- Advanced Utility Relocations for Bridge B-16-237, Massachusetts Avenue (Route 2A) over Commonwealth Avenue	6	NHPP
604531	Acton & Maynard- Assabet River Rail Trail	3	CMAQ, TAP
605657	Medway- Reconstruction on Route 109, from Holliston Street to 100 Feet West of Highland Street	3	CMAQ, HSIP, TAP
607273	Franklin- Bridge Demolition, F-08-005, Old State Route 140 over MBTA/CSX & New Pedestrian Bridge Construction	3	NHPP
604652	Winchester, Stoneham- Tri-Community Bikeway	4	CMAQ, TAP
605146	Salem- Reconstruction on Canal Street, from Washington Street & Mill Street to Loring Avenue & Jefferson Avenue	4	CMAQ, HSIP
607892	Somerville- Safe Routes to School (Healey School)	4	TAP

TABLE D-3 (CONTINUED)
Projects Expected to be Advertised in FFY 2015

Project Number	Project Description	District	Funding Source(s)
606146	Canton- Norwood- Westwood- Ramp Construction On I-95 (NB) & Improvements on Canton Street/Dedham Street, includes Replacement of C-02-034, Rehab of C-02-024, C-02-002=N-25-016=W-31-002 & 5 Signalized Intersections	5	NFA
606284	Boston- Improvements to Commonwealth Avenue, from Amory Street to Alcorn Street	6	CMAQ, TAP
607920	Milton- Safe Routes to School (Grover Elementary School)	6	TAP
606889	Boston- Improvements Along Gainsborough and St. Botolph Streets	6	TI
607839	Medford- Medford Clippership Drive Park Construction	4	Sec 125
607209	Somerville- Reconstruction of Beacon Street, from Oxford Street to Cambridge C.L.	4	HPP
600867	Boston- Bridge Replacement, B-16-237, Massachusetts Avenue (Route 2A) over Commonwealth Avenue	6	NHPP

TABLE D-4
Projects That Will Be Advertised in a Future TIP Element

Project Number	Project Description	District	Funding Source(s)
603008	Woburn- Bridge Replacement, W-43-003, Salem Street over MBTA	4	NHPP
606134	Boston- Traffic Signal Improvements on Blue Hill Avenue and Warren Street	6	HPP

TABLE D-5
Projects That Were Removed From the TIP

Project Number	Project Description	District	Funding Source(s)
604428	Chelsea- Bridge Replacement, C-09-001, Washington Avenue over the MBTA and B&M Railroad	6	BR

APPENDIX E

Transit Projects Status

This appendix lists information about the status of transit projects programmed on previous elements of the TIP.

Funds Programmed: Total funds programmed in the TIP

Pending: Application being prepared to be submitted to FTA

Completed: Application submitted to FTA

Approved: Funds executed

TABLE E-1

FFY 2014 Transit Projects – Section 5307

Mode	Type	Detail	Funds Programmed	Pending	Completed	Approved
Green Line	Green Line Signal Upgrades	Upgrade signals on Green Line	$24,000,000		$24,000,000	
Commuter Rail	Revenue Vehicles	Procurement of Option Locomotives	$39,838,048			$39,838,048
Red Line	Red Line Signal Upgrade	Upgrade signals on Red Line	$15,200,000		$15,200,000	
Systemwide	Power Program	Improvements to power infrastructure	$28,513,462		$28,513,462	
Bus	Systems Upgrades	Bus Procurement Program	$19,216,693			
Systemwide	Preventive Maintenance	Preventive Maintenance	$12,000,000			$12,000,000
	Section 5307 MBTA Total		**$138,768,203**	**$0**	**$67,713,462**	**$51,838,048**

TABLE E-2
FFY 2014 Transit Projects - Section 5337

Mode	Type	Detail	Funds Programmed	Pending	Completed	Approved
Red Line	Red Line Floating Slab	Improvements to slab between Harvard - Alewife	$17,439,172	$17,439,172		
Systemwide	Stations & Facilities	Improvements to multiple station and facilities	$40,000,000	$40,000,000		
Systemwide	Bridge Program	Improvements to bridge infrastructure	$60,000,000	$60,000,000		
Systemwide	Systems Upgrades	TBD	$1,589,989			
	Section 5337 MBTA Total		**$119,029,161**	**$117,439,172**	**$0**	**$0**

TABLE E-3
FFY 2014 Transit Projects - Section 5339

Mode	Type	Detail	Funds Programmed	Pending	Completed	Approved
Bus	Systems Upgrades	Bus Procurement Program	$5,776,637			
	Section 5339 MBTA Total		**$5,776,637**	**$0**	**$0**	**$0**

APPENDIX

Public Comments on the Draft FFYs 2016 – 20 TIP

This appendix will contain a table of summarized public comments on the draft FFYs 2016-20 TIP received during the public comment period.