DRAFT TRANSPORTATION IMPROVEMENT PROGRAM AND AIR QUALITY CONFORMITY DETERMINATION: FEDERAL FISCAL YEARS 2015–18

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)

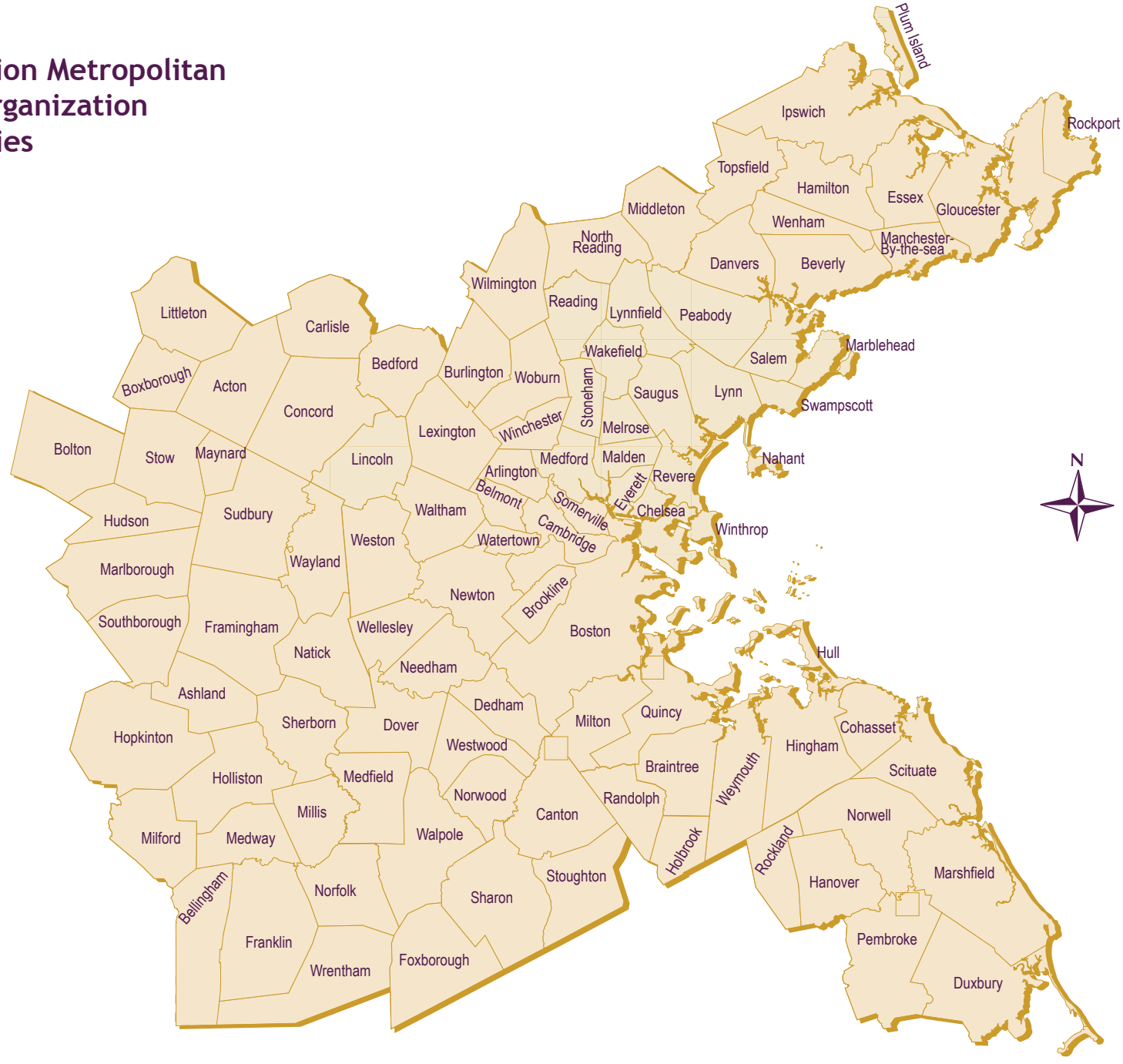
Town of Medway (South West Advisory Planning Committee)

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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ES EXECUTIVE SUMMARY

Draft Federal Fiscal Years 2015-2018 TIP

INTRODUCTION

The Boston Region Metropolitan Planning Organization's (MPO's) four-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, 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.

DRAFT FFYS 2015–18 TIP OVERVIEW

The federal fiscal years (FFYs) 2015–18 TIP consists of approximately $670 million worth of transportation investments in the Highway Program and more than $1.3 billion in the transit program. These investments reflect the MPO's goal of targeting a majority of transportation resources to preserving and modernizing the existing roadway and transit system and maintaining it in a state of good repair.

This draft TIP also devotes a greater 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, *Paths to a Sustainable Region,* or implement recommendations from past studies and reports that were funded through the MPO's Unified Planning Work Program.

Transit Program

The Transit Program of the TIP provides funding for projects and programs that address capital needs that had been given priority by the three transit agencies in the region: the Massachusetts Bay Transportation Authority (MBTA), Cape Ann Transportation Authority (CATA), and the MetroWest Regional Transit Authority (MWRTA). The Transit Program is predominately 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 modernizing subway, commuter rail, and bus fleets, including $400 million for procuring new cars for the Red and Orange subway lines (part of a $750 million project).

The MBTA will also invest in the MBTA's bridges (of which there are 476) and tunnels. Funds will also be dedicated to improving accessibility at MBTA subway stations—including Government Center Station–and other light rail, commuter rail, Silver Line, and bus stations throughout the system. Transit expansion will be funded in the Highway Program, 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 four years, nearly $206 million (31 percent) of funds in the Highway Program will be used to resurface almost 50 miles of interstate highways, replace highway lighting, and add travel lanes and shoulders to more than three miles of Route 128. Approximately $155 million (23 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 Commonwealth Avenue in Boston and Route 9 in Brookline will improve safety and enhance access for pedestrians, bicyclists, transit riders, and automobiles. In total, roadway modernization projects will result in nearly 27 miles of new bicycle accommodations. More than $190 million (29 percent) of the Highway

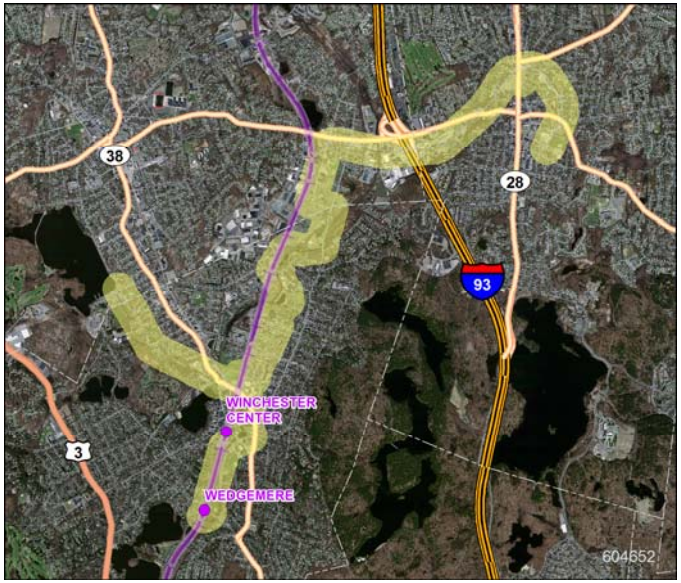
Program will invest in addressing—functionally obsolete and—structurally deficient bridges.

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 this draft TIP, $78 million (12 percent) of the Highway Program funds are flexed to transit to extend the Green Line beyond College Avenue to Route 16/Mystic Valley Parkway in Medford. More than $35 million (5 percent) will be invested in extending rail trails, constructing shared-use paths, and improving bicycle and pedestrian facilities around schools—adding more than 20 miles to the off-road bicycle network. A majority of these facilities will also provide direct access to MBTA commuter rail stations: the Tri-Community Bikeway will connect to Winchester Center and Wedgemere stations; the Assabet River Rail Trail will terminate at South Acton Station, and the Bruce Freeman Rail Trail will link to West Concord Station.

FINANCING THE DRAFT FFYS 2015–18 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 (RTAs) in the Boston Region MPO area that are recipients of these formula funds 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 is allocated by the following funding categories, under the federal transportation legislation, Moving Ahead for Progress in the 21st Century (MAP-21):

- **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 four 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 Note (GANs) payments. Over the four years of this TIP, approximately $308 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
- **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. These targets are developed by MassDOT in consultation with the Massachusetts Association of Regional Planning Agencies. Each MPO can decide how the Regional Target funding they receive is prioritized.

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 Long-Range Transportation Plan, *Paths to a Sustainable Region*.

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. In 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 was able to increase the number of projects that have complete evaluations from 50 to 60 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 that could be made ready for advertisement within the time frame of the upcoming TIP. MPO staff then prepare a staff 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 Long-Range Transportation Plan. The staff recommendation proposes the projects to be funded with the MPO's Regional Target funding over the next four years.

The staff recommendation is always financially constrained. This year it is constrained to the approximately $293 million available for MPO Regional Target projects in FFYs 2015–18. The staff recommendation was submitted to the MPO and was discussed in April 2014.

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, and the capital programs for the MBTA, CATA, and MWRTA, before voting to release a draft TIP for public review.

This year, the MPO voted in mid-May to release the draft FFYs 2015–18 TIP for a 30-day public comment period. In early June, the MPO voted to revise the draft FFYs 2015-18 TIP and extend the 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 that time period. Several

outreach sessions are held during the public comment period, as well, to solicit comments on the draft TIP.

After the comment period ends, the MPO reviews all of the comments it has received and makes changes to the document as appropriate. This year, the MPO is scheduled to take action on the draft FFYs 2015–2018 TIP on July 10, 2014. Once the TIP has been endorsed by the MPO, it is 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, before the start of FFY 2015.

UPDATES TO THE TIP

Even after the TIP has been finalized, administrative modifications and amendments must often 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 there must be an amendment, 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:

Mail: Boston Region MPO
Certification Activities Group
10 Park Plaza, Suite 2150
Boston, MA 02116

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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 Metropolitan Planning Organization (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, and both transportation and non-transportation 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 METROPOLITAN PLANNING ORGANIZATION

The Boston Region MPO is a 22-member board consisting of state agencies, regional organizations, and municipalities; its jurisdiction extends from Boston to Ipswich in the north, Duxbury in the south, and approximately to Interstate 495 in the west. The map that follows the title page of this document shows the 101 cities and towns that make up this area.

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); MBTA Advisory Board; Massachusetts Bay Transportation Authority (MBTA); 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 FHWA and the FTA participate in the MPO as advisory (nonvoting) members. The organization chart on the following page also shows MPO membership and the MPO's staff, Central Transportation Planning Staff (CTPS).

- The *Massachusetts Department of Transportation (MassDOT)* was established on November 1, 2009, under Chapter 25 ("An Act Modernizing the Transportation Systems of the Commonwealth of Massachusetts") of the Acts of 2009, which was signed by Governor Deval Patrick in June 2009. Accordingly, MassDOT is a merger of the former Executive Office of Transportation and Public Works (EOT) and its divisions with the former Massachusetts Turnpike Authority, the Massachusetts Highway Department, the Registry of Motor Vehicles, and the Massachusetts

MEMBERSHIP OF THE BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

- FHWA *(nonvoting)*
- FTA *(nonvoting)*
- CITY OF BOSTON
- CITY OF BOSTON
- MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (MBTA)
- MBTA ADVISORY BOARD
- MASSDOT Chair
- AT-LARGE CITY Everett
- AT-LARGE CITY Newton
- AT-LARGE TOWN Arlington
- AT-LARGE TOWN Lexington
- INNER CORE Somerville
- MAGIC Bedford
- MASSDOT
- MASSDOT Highway Division
- MASSACHUSETTS PORT AUTHORITY
- METROPOLITAN AREA PLANNING COUNCIL
- REGIONAL TRANSPORTATION ADVISORY COUNCIL
- METROWEST Framingham
- NORTH SHORE Beverly
- NORTH SUBURBAN Woburn
- SOUTH SHORE COALITION Braintree
- SWAP Medway
- TRIC Norwood

CENTRAL TRANSPORTATION PLANNING STAFF

- EXECUTIVE DIRECTOR
  - DEPUTY EXECUTIVE DIRECTOR
    - DIRECTOR OF TECHNICAL SERVICES
      - Information Technology and Services
      - Traffic Analysis and Design
      - Transportation Systems Analysis
      - Travel Model Development
    - DIRECTOR OF POLICY AND PLANNING
      - Certification Activities
      - Graphics
      - Editorial
      - Transit Service Planning
    - Administrative Services

Aeronautics Commission. The legislation also established MassDOT oversight of the MBTA and the Commonwealth's regional transit authorities (RTAs). In addition, it authorized ownership of the Tobin Bridge to be transferred from Massport to MassDOT and for MassDOT to assume responsibility for many of the bridges and parkways formerly operated by the Department of Conservation and Recreation (DCR).

- The *MassDOT Highway Division* has jurisdiction over the roadways, bridges, and tunnels of the former Massachusetts Highway Department and the Massachusetts Turnpike Authority, and over the Tobin Bridge. The Division also has jurisdiction over the former DCR bridges and parkways, as mentioned above. The Highway Division is responsible for the design, construction, and maintenance of the Commonwealth's state highways and bridges. The Division is responsible for overseeing traffic safety and engineering activities, including the Highway Operations Control Center, to ensure safe road and travel conditions.
- The *Massachusetts Bay Transportation Authority (MBTA)* has the statutory responsibility within its district, under the provisions of Chapter 161A of the Massachusetts General Laws (MGL), 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. The MassDOT board of directors consists of a chairman and eight other directors, appointed by the governor.
- The *Massachusetts Bay Transportation Authority 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 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 (CIP); review of the MBTA's documentation of its net operating investment per passenger; and review of the MBTA's operating budget.
- The *Massachusetts Port Authority (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 the Boston Seaport, Logan International Airport, and Hanscom Field.
- The *Metropolitan Area Planning Council (MAPC)* is the regional planning agency for the 101 cities and towns in the MAPC/MPO district. It is composed of the chief executive (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 MGL. 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, identifying issues, advocating for ways to address the region's transportation needs, and generating 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 *Federal Highway Administration* and *Federal Transit Administration* 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 *Central Transportation Planning Staff (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.
- The *MAPC subregional groups* bring together representatives (usually appointed or elected officials or their staff) of the communities within a

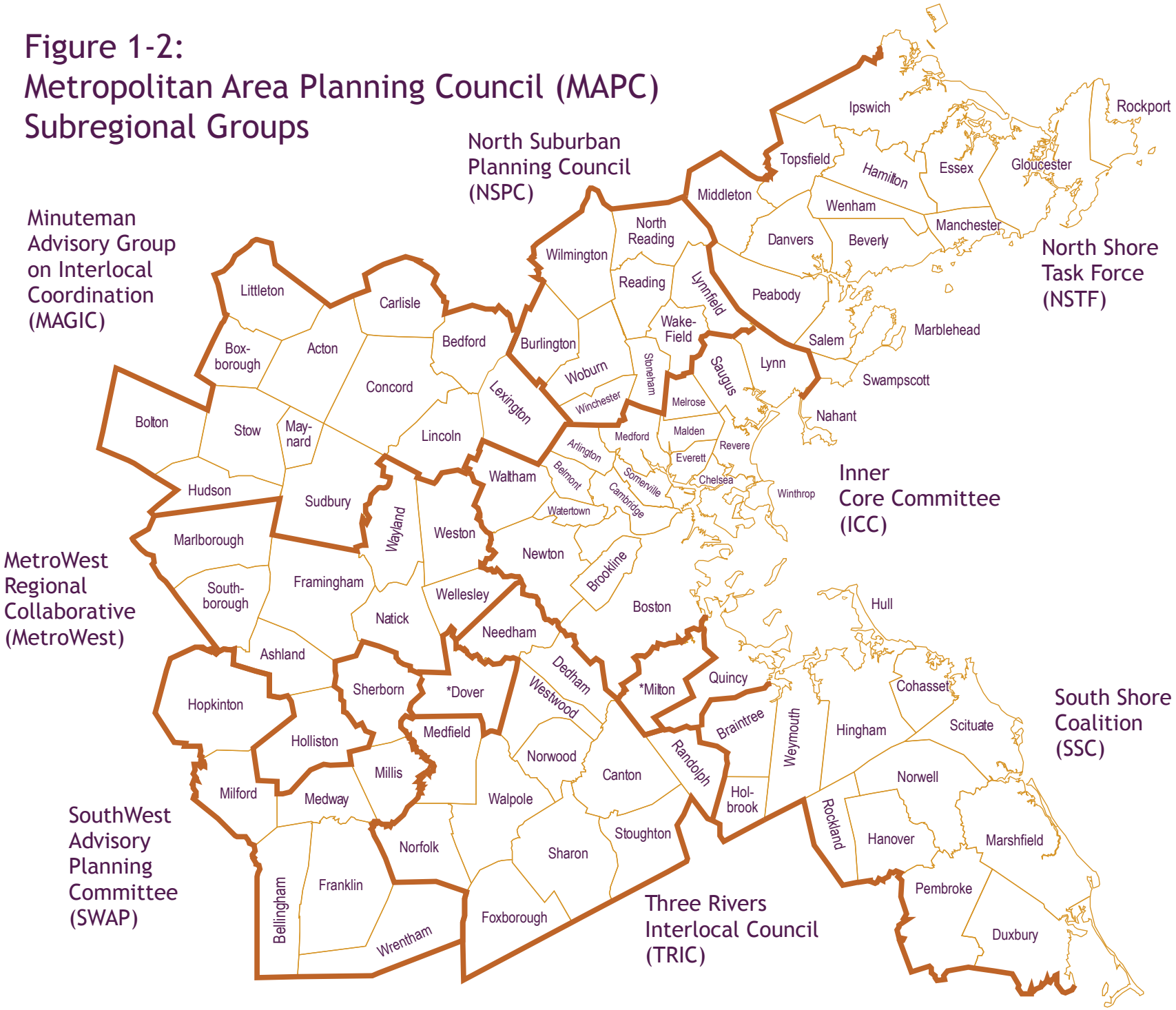
subregion of the MAPC district to address shared concerns regarding transportation and land use issues. MAPC has promoted and supported the formation of subregional groups in order to foster better communication and cooperation among communities. It has played an important role in the MPO's participatory process, including the developing the TIP and UPWP project priorities.

CERTIFICATION DOCUMENTS

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

- The *Long-Range Transportation Plan and Air Quality Conformity Determination (LRTP)* states the MPO's transportation goals and policies, describes the public-participation process for transportation planning, assesses the current state of the region's transportation system, estimates future needs and resources, and lays out a program for preserving and expanding the system for the upcoming 20-year period. In the Boston Region MPO, the LRTP is produced every four years. The current LRTP, *Paths to a Sustainable Region*, commits future transportation investments that advance the MPO's goals for the region to the end of 2035.
- The *Transportation Improvement Program and Air Quality Conformity Determination (TIP)* is a staged, 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. One function of the TIP is to monitor progress towards implementing the LRTP. The Boston Region MPO updates the TIP annually. An MPO-endorsed TIP is incorporated into the State Transportation Improvement Program (STIP) for its submission to FHWA, FTA, and the Environmental Protection Agency (EPA) for approval.
- The *Unified Planning Work Program (UPWP)* describes a fiscal year's transportation-related planning activities and presents budgets for projects using FHWA and FTA planning funds. The UPWP identifies the funding used to effect each component of the transportation-planning process in the region, including producing the LRTP, the TIP, and their Air Quality Conformity Determinations. The UPWP has a one-year scope and is produced annually.

Figure 1-2:
Metropolitan Area Planning Council (MAPC) Subregional Groups



*Communities represented by more than one subregional group: Dover is in TRIC and SWAP; Milton is in ICC and TRIC.

CONSISTENCY WITH FEDERAL PLANNING REGULATIONS

Moving Ahead for Progress in the 21st Century (MAP-21)

This 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

The 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 through eliminating delays in the development and delivery process, including lessening regulatory burdens and improving agencies' work practices

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

Nondiscrimination Mandates

The Boston Region MPO complies with Title VI of the Civil Rights Act of 1964, the Americans with Disabilities Act (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 1964 Civil Rights Act

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, national origin, under any program or activity provided by an agency receiving federal financial assistance.

Executive Order 13166, dated August 11, 2000, extends Title VI protections to persons who, as a result of national origin, have limited English-language proficiency (LEP). Specifically, it calls for improved access to federally conducted and assisted programs and activities and requires MPOs to develop and implement a system by which LEP persons can meaningfully participate in the transportation-planning process.

Environmental Justice Executive Orders

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

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

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

The Americans with Disabilities Act

Title III of the Americans with Disabilities Act 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.

The 1990 Clean Air Act

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 (TCMs) identified in the State Implementation Plan (SIP) 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.

CONSISTENCY WITH STATE REQUIREMENTS

Global Warming Solutions Act

The Global Warming Solutions Act (GWSA), which Governor Deval Patrick signed into law in August 2008, 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 (EOEEA), 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 greenhouse gases, 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 greenhouse gas (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

Long-Range Transportation Plan (LRTP)

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

Unified Planning Work Program (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 (CMP)

The purpose of the CMP is to monitor transit, roadway, park-and-ride facilities, and bicycle and pedestrian facilities in the MPO region and identify "problem" locations. Projects that help address problems identified in the most recent CMP monitoring were considered for inclusion in this TIP.

The MBTA's Program for Mass Transportation (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 PMT includes projects that are currently in design for inclusion in the TIP.

youMove Massachusetts (YMM)

YMM, a statewide initiative designed as a bottom-up approach to transportation planning, 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 were considered in the development of this TIP.

weMove Massachusetts (WMM)

WMM is MassDOT's statewide strategic multimodal plan. The initiative is a product of the transportation reform legislation of 2009 and the YMM civic engagement process. In December, 2013, MassDOT released *WMM: Planning for Performance*, a single, multimodal Long-Range Transportation Plan. The WMM Planning for Performance 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 (HTC)

The 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 the Commonwealth makes 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 (ABP)

The $3 billion Patrick-Murray ABP Program 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 minimum 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 April 1, 2014, the ABP Program has completed 155 bridge projects, with another 29 bridge projects currently in construction and an additional 15 bridge projects

scheduled to start construction within the next calendar year. Over the course of the eight-year ABP program, in excess of 200 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—which 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, and 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:

- Develop low-cost strategies; pursue alternative funding sources and mechanisms
- Use intelligent transportation systems (ITS), new technologies, transportation systems management, and management and operations; turn to technology before expansion
- Bring the transportation network—particularly the transit, bicycle, and pedestrian systems—into a state of good repair and maintain them at that level; 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; 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 the accessibility of transit for persons with disabilities
- Improve frequency, span, and reliability of transit services
- 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

[2] MetroFuture is MAPC's 30-year plan for our region, and 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.

- 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; 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 these residents' 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; encourage action to address 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; 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; address transit safety (this 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; upgrade key transportation infrastructure to a “hardened” design standard
- Improve safety for pedestrians and cyclists; 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 miles per hour and through education about and enforcement of rules of the road, for all modes that use the roadways
- Improve the transportation infrastructure to better support emergency response and evacuations

2 CHAPTER TWO
The TIP Process

INTRODUCTION TO THE TIP PROCESS

Among the most important decisions faced in planning for the future are those involving how to spend scarce funds to achieve the best possible transportation system. Transportation improvements are 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. With not nearly enough transportation funding available to build all of the needed and worthy projects that would address these problems, investments should be guided by policies that help identify the most viable solutions. The TIP prioritizes these transportation investments through its annual development process.

Each year, the MPO conducts a TIP development process to 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. The MPO staff coordinates the evaluation of project requests, proposes programming of current and new projects based on anticipated funding levels, supports the MPO in the development a draft document, and facilitates public review of the draft document before the final MPO endorsement.

FINANCING THE PROGRAM

Federal Framework

The first step in the process of allocating federal transportation funds is a multiyear federal transportation authorization act that establishes a maximum level of federal transportation funding per federal fiscal year. The establishment of this level of funding is referred to as an authorization. The 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 is 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 2015–18 TIP was developed under the assumption that the Statewide Federal Highway Program funding would be $600 million annually over 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. Over the four years of this TIP, approximately $308 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 based on the following funding categories:

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

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. Over the next four years, the Boston Region MPO's total Regional Target Program funding is approximately $293.3 million, an average of $73.3 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.

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

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, the MWRTA, and the 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 2015–18 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.	Government Center (MBTA Stations) – FFY 2015
Fixed Guideway/Bus (**Section 5337**)	Replacement, rehabilitation, and other state-of-good-repair capital projects.	MBTA Bridge & Tunnel Program – FFYs 2015-18
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 2015–18
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.	Intersection and Signal Improvements at Route 9 and Village Square (Brookline) – FFY 2016
Highway Safety Improvement Program (**HSIP**)	Implementation of infrastructure-related highway safety improvements	Reconstruction of Route 85/ Maple Street (Marlborough) – FFY 2016
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 2015–18
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) – FFY 2016–18
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 2015
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.	Improvements to Commonwealth Avenue (Boston) – FFY 2015

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.*

All projects are required to show consistency with the Long-Range Transportation Plan and other statewide and regional plans (for example, the MBTA's Program for Mass Transportation and the Massachusetts Statewide Bicycle Transportation Plan).
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. Additional background information on the TIP project evaluation process is in Appendix B and on the MPO's website, http://bostonmpo.org/Drupal/tip. The MPO reviews the effectiveness of this evaluation method and makes alterations to the process as appropriate.

Outreach and Data Collection (November 2013–February 2014)

The outreach process begins early in the federal fiscal year, when the MPO staff begins to brief local officials and members of the public on the year's development process. Every November, the 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 each project´s background, the conditions and needs of the existing infrastructure, the development status, and the potential of the project to help the region attain the MPO's visions. More information on the Project Funding Application Forms is in Appendix B.

The MPO has begun to monitor the anticipated greenhouse gas (GHG) emission impacts of planned and programmed projects. This tracking will enable the MPO to consider the anticipated impacts when prioritizing transportation investments. For more

information on the GHG emission monitoring and evaluation, see Appendix C.

Evaluation of Projects (February–March 2014)

The MPO uses TIP project evaluation criteria to develop a numeric score that gives an indication of how well a project would help the region attain the visions established by the MPO. This score can then be used to guide the MPO in selecting the projects that will be most successful. The MPO's visions include: to maintain a state of good repair, focus investments on existing activity centers, improve mobility for people and freight, reduce the level of greenhouse gas (GHG) emissions, minimize environmental burdens from transportation facilities on low-income and minority populations, and provide safe transportation in 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 a Functional Design Report). 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) 2015–18 TIP is available in Table A-1, in Appendix A. The table contains the total project rating for each project. For more details on the evaluation criteria used to score projects, see Appendix B.

Staff Recommendation (March–April 2014)

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 the staff recommendation for the draft TIP, the MPO staff strongly considered the First-Tier List of Projects. The MPO staff also factored in projects that are listed in the Long-Range Transportation Plan (LRTP) in order to implement 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 Massachusetts Bay Transportation Authority (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: the 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 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 the development of the draft TIP. In addition to prioritizing the Regional Target funding, the MPO reviews the 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.

This year, the MPO voted in mid-May to release the draft federal fiscal years (FFYs) 2015–18 TIP for a 30-day public review and comment period. In early June, the MPO voted to revise the draft FFYs 2015-18 TIP and extend the 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. Several TIP outreach sessions are held during the public comment period to solicit comments on the draft TIP. Summaries of the comments received on the draft TIP are in Appendix F.

Approval of the Draft TIP

After the comment period ends, the MPO reviews all comments and makes changes to the document as appropriate. This year, the MPO is scheduled to take action on the draft FFYs 2015–2018 TIP on July 10, 2014. 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 in order to obtain federal approval by September 30, the end of the federal fiscal year.

UPDATING THE TIP

The TIP is a dynamic program that is amended and adjusted throughout the year. Administrative modifications and amendments must often be introduced due to 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 below these thresholds may be considered administrative modifications. The MPO acts on administrative modifications, and, although no public review period is 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 listserv, 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 on the draft materials may be submitted directly through the website, as well as at MPO meetings at which the materials are discussed, and via US mail.

3 CHAPTER THREE

Project Information

This chapter begins with tables listing, by year, the projects and programs funded in FFYs 2015–18. 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.

2015 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 ▼
►Section 1A / Federal Aid Target Projects								
►HSIP - Highway Safety Improvement Program								
	605146	SALEM- RECONSTRUCTION ON CANAL STREET, FROM WASHINGTON STREET & MILL STREET TO LORING AVENUE & JEFFERSON AVENUE	4	**HSIP**	$ 2,000,000	$ 1,800,000	$ 200,000	STP+HSIP+CMAQ Total Cost = $7,867,762
	605657	MEDWAY- RECONSTRUCTION ON ROUTE 109, FROM HOLLISTON STREET TO 100 FT. WEST OF HIGHLAND STREET, INCLUDES REHAB OF M-13-012	3	**HSIP**	$ 3,000,000	$ 2,700,000	$ 300,000	STP+HSIP+CMAQ+TAP Total Cost = $12,062,567; HSIP pending Road Safety Audit
				HSIP Subtotal ►	$ 5,000,000	$ 4,500,000	$ 500,000	◄ 90% Federal + 10% Non-Federal
►CMAQ - Congestion Mitigation and Air Quality Improvement Program								
	605146	SALEM- RECONSTRUCTION ON CANAL STREET, FROM WASHINGTON STREET & MILL STREET TO LORING AVENUE & JEFFERSON AVENUE	4	**CMAQ**	$ 2,000,000	$ 1,600,000	$ 400,000	STP+HSIP+CMAQ Total Cost = $7,867,762
		INTERSECTION IMPROVEMENT PROGRAM	N/A	**CMAQ**	$ 400,000	$ 320,000	$ 80,000	
	604652	STONEHAM- WINCHESTER- WOBURN- TRI-COMMUNITY BIKEWAY	4	**CMAQ**	$ 5,429,110	$ 4,343,288	$ 1,085,822	
	606284	BOSTON- IMPROVEMENTS TO COMMONWEALTH AVENUE, FROM AMORY STREET TO ALCORN STREET	6	**CMAQ**	$ 5,000,000	$ 4,000,000	$ 1,000,000	STP+CMAQ+Earmarks (SAFETEA-LU, Section 125 and 129, STPP, TCSP) Total Cost = $16,866,250
	605657	MEDWAY- RECONSTRUCTION ON ROUTE 109, FROM HOLLISTON STREET TO 100 FT. WEST OF HIGHLAND STREET, INCLUDES REHAB OF M-13-012	3	**CMAQ**	$ 5,000,000	$ 4,000,000	$ 1,000,000	STP+HSIP+CMAQ+TAP Total Cost = $12,062,567
				CMAQ Subtotal ►	$ 17,829,110	$ 14,263,288	$ 3,565,822	◄ 80% Federal + 20% Non-Federal
►TAP - Transportation Alternatives Program								
	605657	MEDWAY- RECONSTRUCTION ON ROUTE 109, FROM HOLLISTON STREET TO 100 FT. WEST OF HIGHLAND STREET, INCLUDES REHAB OF M-13-012	3	**TAP**	$ 2,548,719	$ 2,038,975	$ 509,744	STP+HSIP+CMAQ+TAP Total Cost = $12,062,567
				TAP Subtotal ►	$ 2,548,719	$ 2,038,975	$ 509,744	◄ 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 ▼
►Non-CMAQ/HSIP/TAP (Other)								
	605146	SALEM- RECONSTRUCTION ON CANAL STREET, FROM WASHINGTON STREET & MILL STREET TO LORING AVENUE & JEFFERSON AVENUE	4	**STP**	$ 3,867,762	$ 3,094,210	$ 773,552	STP+HSIP+CMAQ Total Cost = $7,867,762
	606284	BOSTON- IMPROVEMENTS TO COMMONWEALTH AVENUE, FROM AMORY STREET TO ALCORN STREET	6	**STP**	$ 7,446,852	$ 5,957,482	$ 1,489,370	STP+CMAQ+Earmarks (SAFETEA-LU, Section 125 and 129, STPP, TCSP) Total Cost = $16,866,250
	605657	MEDWAY- RECONSTRUCTION ON ROUTE 109, FROM HOLLISTON STREET TO 100 FT. WEST OF HIGHLAND STREET, INCLUDES REHAB OF M-13-012	3	**STP**	$ 1,513,848	$ 1,211,078	$ 302,770	STP+HSIP+CMAQ+TAP Total Cost = $12,062,567
	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	**NHPP**	$ 30,000,000	$ 24,000,000	$ 6,000,000	AC Yr 2 of 5; NHPP+BR+Statewide Infrastructure Total Cost = $164,919,140 ($87,768,183 programmed within FFYs 2015-18 TIP)
				Non-CMAQ/HSIP/TAP (Other) Subtotal ►	$ 42,828,462	$ 34,262,770	$ 8,565,692	◄ 80% Federal + 20% Non-Federal

►Section 1A / Fiscal Constraint Analysis

Total Federal Aid Target Funds Programmed ►	$ 68,206,291	**$ 68,221,673**	**◄Total Target**	**$ 15,382**	**Target Funds Available**
Total Non-CMAQ/HSIP/TAP (Other) Programmed ►	$ 42,828,462	$ 44,786,168	◄ Max. **Non-CMAQ/HSIP/TAP**	**$ 15,383**	Non-CMAQ/HSIP/TAP (Other) Available
Total HSIP Programmed ►	$ 5,000,000	$ 4,774,123	◄ Min. **HSIP**	**$ (225,877)**	HSIP Minimum Met
Total CMAQ Programmed ►	$ 17,829,110	$ 16,112,664	◄ Min. **CMAQ**	**$ (1,716,446)**	CMAQ Minimum Met
Total TAP Programmed ►	$ 2,548,719	$ 2,548,719	◄ Min. **TAP**	**$ -**	TAP Minimum Met

HSIP, CMAQ, TAP Overprogrammed $ (1,942,323)

►Section 1B / Federal Aid Bridge Projects

►Statewide Bridge Maintenance Program

		No Projects Programmed			$ -	$ -	$ -	
				Statewide Bridge Maintenance 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 ▼
►On System								
	600703	LEXINGTON- BRIDGE REPLACEMENT, L-10-009, ROUTE 2 (EB & WB) OVER ROUTE I-95 (ROUTE 128)	4	**NHPP**	$ 14,886,555	$ 11,909,244	$ 2,977,311	AC Yr 3 of 4; Total Cost = $35,108,000
	607338	GLOUCESTER- BRIDGE PRESERVATION, G-05-017, ROUTE 128 OVER ANNISQUAM RIVER (PHASE II)	4	**NHPP**	$ 5,506,585	$ 4,405,268	$ 1,101,317	AC Yr 2 of 2; Total Cost = $13,956,585
	604796	DEDHAM- BRIDGE REPLACEMENT, D-05-033, PROVIDENCE HIGHWAY OVER MOTHER BROOK	6	**NHPP**	$ 1,192,805	$ 954,244	$ 238,561	AC Yr 2 of 2; Total Cost = $7,051,805
	607273	FRANKLIN- BRIDGE DEMOLITION, F-08-005, OLD STATE ROUTE 140 OVER MBTA/CSX & NEW PEDESTRAIN BRIDGE CONSTRUCTION	3	**NHPP**	$ 1,780,272	$ 1,424,218	$ 356,054	
	605883	DEDHAM- BRIDGE REPLACEMENT, D-05-003 (33K), NEEDHAM STREET OVER GREAT DITCH	6	**NHPP**	$ 3,029,032	$ 2,423,226	$ 605,806	
	603008	WOBURN- BRIDGE REPLACEMENT, W-43-003, SALEM STREET OVER MBTA	4	**NHPP**	$ 5,018,477	$ 4,014,782	$ 1,003,695	
	600867	BOSTON- BRIDGE REPLACEMENT, B-16-237, MASSACHUSETTS AVENUE (ROUTE 2A) OVER COMMONWEALTH AVENUE	6	**NHPP**	$ 1,600,000	$ 1,280,000	$ 320,000	AC Yr 1 of 3; Total Cost = $15,100,000
				On System Subtotal ►	$ 33,013,726	$ 26,410,981	$ 6,602,745	◄ 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

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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								
	605789	BOSTON- RECONSTRUCTION OF MELNEA CASS BOULEVARD (HPP 756 & 4284)	6	HPP	$ 2,429,730	$ 1,943,784	$ 485,946	Construction; HPP 756 (MA126); SAFETEA-LU Earmark (HPP 756)+ SAFETEA-LU Earmark (HPP 4284) =Total Cost $7,437,105
	605789	BOSTON- RECONSTRUCTION OF MELNEA CASS BOULEVARD (HPP 756 & 4284)	6	HPP	$ 5,007,375	$ 4,005,900	$ 1,001,475	Construction; HPP 4284 (MA203); SAFETEA-LU Earmark (HPP 756)+ SAFETEA-LU Earmark (HPP 4284) =Total Cost $7,437,105
	606134	BOSTON- TRAFFIC SIGNAL IMPROVEMENTS ON BLUE HILL AVENUE AND WARREN STREET	6	HPP	$ 2,377,900	$ 1,902,320	$ 475,580	Construction; HPP 2129 (MA155)
	606284	BOSTON- IMPROVEMENTS TO COMMONWEALTH AVENUE, FROM AMORY STREET TO ALCORN STREET	6	HPP	$ 1,114,501	$ 891,601	$ 222,900	Construction; HPP 682; STP+CMAQ+Earmarks (SAFETEA-LU, Sections 125 and 129, STPP, TCSP) Total Cost = $16,866,250
	606284	BOSTON- IMPROVEMENTS TO COMMONWEALTH AVENUE, FROM AMORY STREET TO ALCORN STREET	6	Sec 129	$ 980,000	$ 980,000	$ -	Construction; Section 129 (MA246); STP+CMAQ+Earmarks (SAFETEA-LU, Sections 125 and 129, STPP, TCSP) Total Cost = $16,866,250
	606284	BOSTON- IMPROVEMENTS TO COMMONWEALTH AVENUE, FROM AMORY STREET TO ALCORN STREET	6	Sec 125	$ 475,000	$ 475,000	$ -	Construction; Section 125 (MA252); STP+CMAQ+Earmarks (SAFETEA-LU, Sections 125 and 129, STPP, TCSP) Total Cost = $16,866,250
	606284	BOSTON- IMPROVEMENTS TO COMMONWEALTH AVENUE, FROM AMORY STREET TO ALCORN STREET	6	STPP	$ 599,897	$ 599,897	$ -	Construction; STPP (MA267); STP+CMAQ+Earmarks (SAFETEA-LU, Sections 125 and 129, STPP, TCSP) Total Cost = $16,866,250
	606284	BOSTON- IMPROVEMENTS TO COMMONWEALTH AVENUE, FROM AMORY STREET TO ALCORN STREET	6	TCSP	$ 1,250,000	$ 1,000,000	$ 250,000	Construction; TCSP (11MA008); STP+CMAQ+Earmarks (SAFETEA-LU, Sections 125 and 129, STPP, TCSP) Total Cost = $16,866,250
				Other Federal Aid Subtotal ►	$ 14,234,403	$ 11,798,502	$ 2,435,901	◄ Funding Split Varies by Funding Source
►Section 1D / Federal Aid Major & State Category Projects								
► Statewide Infrastructure Program								
	607700	DISTRICT 4- HIGHWAY LIGHTING BRANCH CIRCUIT RE-CABLING FROM SIX (6) LIGHTING LOAD CENTERS ALONG ROUTE I-95 (128) LEXINGTON-WOBURN	4	STP	$ 2,500,000	$ 2,000,000	$ 500,000	
				Statewide Infrastructure Program Subtotal ►	$ 2,500,000	$ 2,000,000	$ 500,000	◄ 80% Federal + 20% Non-Federal
► Statewide HSIP Program								
		No Projects Programmed			$ -	$ -	$ -	
				Statewide HSIP Program Subtotal ►	$ -	$ -	$ -	◄ 90% Federal + 10% 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 ▼
► Statewide Safe Routes to Schools Program								
	607920	MILTON- SAFE ROUTES TO SCHOOL (GLOVER ELEMENTARY SCHOOL)	6	TAP	$ 725,000	$ 580,000	$ 145,000	80% Federal + 20% Non-Federal
	607892	SOMERVILLE- SAFE ROUTES TO SCHOOL (HEALEY SCHOOL)	4	TAP	$ 700,000	$ 560,000	$ 140,000	80% Federal + 20% Non-Federal
				Statewide Safe Routes to Schools Program Subtotal ►	$ 1,425,000	$ 1,140,000	$ 285,000	◄ Funding Split Varies by Funding Source
► Statewide CMAQ								
	604531	ACTON- MAYNARD- ASSABET RIVER RAIL TRAIL	3	CMAQ	$ 4,042,873	$ 3,234,298	$ 808,575	Statewide TE+Statewide CMAQ Total Cost = $4,575,977
				Statewide CMAQ ►	$ 4,042,873	$ 3,234,298	$ 808,575	◄ 80% Federal + 20% Non-Federal
►Statewide Transportation Enhancements								
	604531	ACTON- MAYNARD- ASSABET RIVER RAIL TRAIL	3	STP-TE	$ 533,104	426,483	106,621	Statewide TE+Statewide CMAQ Total Cost = $4,575,977
				Statewide Transportation Enhancements Subtotal ►	$ 533,104	$ 426,483	$ 106,621	◄ 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+								
	607174	CHELSEA- REVERE- RESURFACING & RELATED WORK ON ROUTE 1	4	NHPP	$ 8,663,824	6,931,059	1,732,765	
	PENDING	BEVERLY - RESURFACING & RELATED WORK ON ROUTE 128	4	NHPP	$ 5,805,600	4,644,480	1,161,120	
				Statewide NHS Preservation Program Subtotal ►	$ 14,469,424	$ 11,575,539	$ 2,893,885	◄ 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

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								
		ACCELERATED BRIDGE PROGRAM- GANS DEBT SERVICE	N/A	STP-BR-OFF	$ 3,207,506	2,566,005	641,501	Accelerated Bridge Program (ABP) GANs payments - First Year
		ACCELERATED BRIDGE PROGRAM- GANS DEBT SERVICE	N/A	STP-TE	$ 24,587,494	19,669,995	4,917,499	Accelerated Bridge Program (ABP) GANs payments - First Year
		ACCELERATED BRIDGE PROGRAM- GANS DEBT SERVICE	N/A	NHPP	$ 3,000,000	2,400,000	600,000	Accelerated Bridge Program (ABP) GANs payments - First Year
				Other Statewide Items Subtotal ►	$ 30,795,000	$ 24,636,000	$ 6,159,000	◄ Funding Split Varies by Funding Source
►Section 2A / Non-Federal Projects								
►Non Federal Aid								
	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	5/6	NFA	$ 38,000,000		$ 38,000,000	Non-federal aid
		GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	NFA	$ 244,427,508		$ 244,427,508	The Green Line Extension project is currently in the New Starts pipeline and the Commonwealth anticipates a decision in a Full Funding Grant Agreement in FFY 2015. The cash flows for the project, therefore, provide 100% bond funding for FFYs 2013-14 and begin programming New Starts funding in FFY 2015. The Commonwealth is committed to fully funding this project with bond funds if New Starts is not awarded.
		FAIRMOUNT IMPROVEMENTS	N/A	NFA	$ 4,863,082		$ 4,863,082	Lists cash flows (based on state fiscal year) for Fairmount Improvements
		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►	$ 297,290,590		$ 297,290,590	◄100% Non-Federal

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►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

2015 Boston Region MPO TIP Summary

	TIP Section 1: ▼	TIP Section 2: ▼	Total of All Projects ▼	
Total ►	$ 169,219,821	$ 297,290,590	$ 466,510,411	◄ Total Spending in Region
Federal Funds ►	$ 136,286,836		$ 136,286,836	◄ Total Federal Spending in Region
Non-Federal Funds ►	$ 32,932,985	$ 297,290,590	$ 330,223,575	◄ 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

2015 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources					RTA Funds ▼	Total Cost ▼	Additional Information ▼
					RTACAP ▼	MAP ▼	ITCCAP ▼	TDC ▼	SCA ▼			
5307	MBTA	PREVENTIVE MAINTENANCE		$ 12,000,000	$ -	$ -	$ -	$ -	$ -	$ 3,000,000	**$ 15,000,000**	
5307	MBTA	HEAVY RAIL CARS - Red/Orange Lines		$ 64,000,000	$ -	$ -	$ -	$ -	$ -	$ 16,000,000	**$ 80,000,000**	
5307	MBTA	Government Center (Blue Line Modernization)		$ 32,761,068	$ -	$ -	$ -	$ -	$ -	$ 8,190,267	**$ 40,951,335**	
5307	MBTA	Elevators/Escalators		$ 25,924,448	$ -	$ -	$ -	$ -	$ -	$ 6,481,112	**$ 32,405,560**	
5307	CATA	BUY REPLACEMENT 30-FT BUS		$ 320,000	$ 80,000	$ -	$ -	$ -	$ -	$ -	**$ 400,000**	
5307	CATA	PREVENTIVE MAINTENANCE		$ 193,391	$ -	$ -	$ -	$ -	$ -	$ 48,347	**$ 241,738**	
5307	CATA	ACQUIRE - MISC SUPPORT EQUIPMENT		$ 16,700	$ 4,176	$ -	$ -	$ -	$ -	$ -	**$ 20,876**	
5307	MWRTA	TERMINAL, INTERMODAL (TRANSIT)		$ 20,000	$ 5,000	$ -	$ -	$ -	$ -	$ -	**$ 25,000**	
5307	MWRTA	TERMINAL, INTERMODAL (TRANSIT)		$ 471,356	$ 117,840	$ -	$ -	$ -	$ -	$ -	**$ 589,196**	
5307	MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES		$ 25,000	$ 6,250	$ -	$ -	$ -	$ -	$ -	**$ 31,250**	
5307	MWRTA	PURCHASE SIGNAGE		$ 20,000	$ 5,000	$ -	$ -	$ -	$ -	$ -	**$ 25,000**	
5307	MWRTA	ACQUIRE - MOBILE SURV/SECURITY EQUIP		$ 50,000	$ 12,500	$ -	$ -	$ -	$ -	$ -	**$ 62,500**	
5307	MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES		$ 80,000	$ 20,000	$ -	$ -	$ -	$ -	$ -	**$ 100,000**	
5307	MWRTA	NON FIXED ROUTE ADA PARA SERV		$ 1,000,000	$ -	$ -	$ -	$ -	$ 250,000	$ -	**$ 1,250,000**	
5307	MWRTA	ACQUIRE - SUPPORT VEHICLES		$ 40,000	$ 10,000	$ -	$ -	$ -	$ -	$ -	**$ 50,000**	
		5307 Subtotal ►		**$ 136,921,963**	**$ 260,766**	**$ -**	**$ -**	**$ -**	**$ 250,000**	**$ 33,719,726**	**$ 171,152,455**	
5337	MBTA	Bridge & Tunnel Program		$ 60,000,000	$ -	$ -	$ -	$ -	$ -	$ 15,000,000	**$ 75,000,000**	
5337	MBTA	Stations & Facilities (T-GAPS)		$ 40,000,000	$ -	$ -	$ -	$ -	$ -	$ 10,000,000	**$ 50,000,000**	
5337	MBTA	Systems Upgrades		$ 21,190,546	$ -	$ -	$ -	$ -	$ -	$ 5,297,637	**$ 26,488,183**	
		5337 Subtotal ►		**$ 121,190,546**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,297,637**	**$ 151,488,183**	

2015 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources					RTA Funds ▼	Total Cost ▼	Additional Information ▼
					RTACAP ▼	MAP ▼	ITCCAP ▼	TDC ▼	SCA ▼			
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 ►	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
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►	**$ 263,399,536**	**$ 260,766**	**$ -**	**$ -**	**$ -**	**$ 250,000**	**$ 65,339,120**	**$ 329,249,422**	

Fiscal Constraint Analysis

Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		State Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼	
FFY 15 / 5307	$ 136,921,963	$ 136,134,551	$ (787,412)	Over Programmed	RTACAP	$ 260,766	$ 672,010	$ 411,244	Available
FFY 15 / 5337	$ 121,190,546	$ 121,190,546	$ -	Available	MAP	$ -	$ -	$ -	Available
FFY 15 / 5339	$ 5,287,027	$ 5,287,027	$ -	Available	ITCCAP	$ -	$ -	$ -	Available
FFY 15 / 5310	$ -	$ -	$ -	Available	SCA	$ 250,000	$ 3,234,526	$ 2,984,526	Available
					TDC	$ -			

2016 Boston Region MPO Transportation Improvement Program

06/09/2014 Revised Draft Released

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								
	601630	WEYMOUTH- ABINGTON- RECONSTRUCTION & WIDENING ON ROUTE 18 (MAIN STREET) FROM HIGHLAND PLACE TO ROUTE 139 (4.0 MILES) INCLUDES REHAB OF 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 Total Cost = $60,053,518 ($53,453,518 programmed in FFYs 2015-18 TIP)
	604810	MARLBOROUGH- RECONSTRUCTION OF ROUTE 85 (MAPLE STREET)	3	**HSIP**	$ 3,397,727	$ 3,057,954	$ 339,773	HSIP+CMAQ Total Cost = $5,397,727; HSIP pending Road Safety Audit
				HSIP Subtotal ►	$ 4,397,727	$ 3,957,954	$ 439,773	◄ 90% Federal + 10% Non-Federal
►CMAQ - Congestion Mitigation and Air Quality Improvement Program								
	1559	CLEAN AIR AND MOBILITY	N/A	**CMAQ**	$ 374,850	$ 299,880	$ 74,970	
		GREEN LINE EXTENSION PROJECT (PHASE II), MEDFORD HILLSIDE (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 ($78,000,000 programmed within FFYs 2015-18 TIP)
	604810	MARLBOROUGH- RECONSTRUCTION OF ROUTE 85 (MAPLE STREET)	3	**CMAQ**	$ 2,000,000	$ 1,600,000	$ 400,000	HSIP+CMAQ Total Cost = $5,397,727
	605110	BROOKLINE- INTERSECTION & SIGNAL IMPROVEMENTS @ ROUTE 9 & VILLAGE SQUARE (GATEWAY EAST)	6	**CMAQ**	$ 244,171	$ 195,337	$ 48,834	TAP+CMAQ+Private Sector Contribution ($1,000,000) Total Cost = $5,591,009
				CMAQ Subtotal ►	$ 10,719,021	$ 8,575,217	$ 2,143,804	◄ 80% Federal + 20% Non-Federal
►TAP - Transportation Alternatives Program								
	605110	BROOKLINE- INTERSECTION & SIGNAL IMPROVEMENTS @ ROUTE 9 & VILLAGE SQUARE (GATEWAY EAST)	6	**TAP**	$ 4,346,838	$ 3,477,470	$ 869,368	TAP+CMAQ+Private Sector Contribution ($1,000,000) Total Cost = $5,591,009
				TAP Subtotal ►	$ 4,346,838	$ 3,477,470	$ 869,368	◄ 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
	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	**NHPP**	$ 30,000,000	$ 24,000,000	$ 6,000,000	AC Yr 3 of 5; NHPP+BR+Statewide Infrastructure Total Cost = $164,919,140 ($87,768,183 programmed within FFYs 2015-18 TIP)
	601630	WEYMOUTH- ABINGTON- RECONSTRUCTION & WIDENING ON ROUTE 18 (MAIN STREET) FROM HIGHLAND PLACE TO ROUTE 139 (4.0 MILES) INCLUDES REHAB OF W-32-013, ROUTE 18 OVER THE OLD COLONY RAILROAD (MBTA)	6	**STP**	$ 3,800,000	$ 3,040,000	$ 760,000	AC Yr 1 of 4; STP+HSIP+TEA-21 Earmark Total Cost = $60,053,518 ($53,453,518 programmed in FFYs 2015-18 TIP)
				Non-CMAQ/HSIP/TAP (Other) Subtotal ►	$ 55,491,442	$ 44,393,154	$ 11,098,288	◄ 80% Federal + 20% Non-Federal

2016 Boston Region MPO Transportation Improvement Program

06/09/2014 Revised Draft Released

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 ►	$ 74,955,028	**$ 75,009,821**	**◄Total Target**	**$ 54,793**	**Target Funds Available**
Total Non-CMAQ/HSIP/TAP (Other) Programmed ►	$ 55,491,442	$ 52,939,052	◄ Max. **Non-CMAQ/HSIP/TAP**	**$ (2,552,390)**	Non-CMAQ/HSIP/TAP (Other) E
Total HSIP Programmed ►	$ 4,397,727	$ 4,296,710	◄ Min. **HSIP**	**$ (101,017)**	HSIP Minimum Met
Total CMAQ Programmed ►	$ 10,719,021	$ 13,427,220	◄ Min. **CMAQ**	**$ 2,708,199**	CMAQ Minimum Not Met
Total TAP Programmed ►	$ 4,346,838	$ 4,346,838	◄ Min. **TAP**	**$ -**	TAP Minimum Met

Remaining HSIP, CMAQ, and TAP Funds $ 2,607,182

►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

	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 = $35,108,000
	600867	BOSTON- BRIDGE REPLACEMENT, B-16-237, MASSACHUSETTS AVENUE (ROUTE 2A) OVER COMMONWEALTH AVENUE	6	**NHPP**	$ 7,535,161	$ 6,028,129	$ 1,507,032	AC Yr 2 of 3; Total Cost = $15,100,000
	604173	BOSTON- BRIDGE REHABILITATION, B-16-016, NORTH WASHINGTON STREET OVER THE CHARLES RIVER	6	**NHPP**	$ 5,000,000	$ 4,000,000	$ 1,000,000	AC Yr 1 of 5; Total Cost = $85,000,000 ($53,035,161 programmed within FFYs 2015-18 TIP)
	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**	$ 6,668,480	$ 5,334,784	$ 1,333,696	
	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**	$ 8,554,209	$ 6,843,367	$ 1,710,842	AC Yr 1 of 2; Total Cost = $11,434,190
				On System Subtotal ►	$ 32,865,850	$ 26,292,680	$ 6,573,170	◄ 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**	$ 6,416,550	$ 5,133,240	$ 1,283,310	
				Off-System Subtotal ►	$ 6,416,550	$ 5,133,240	$ 1,283,310	◄ 80% Federal + 20% Non-Federal

► Statewide Bridge Inspection Program

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

2016 Boston Region MPO Transportation Improvement Program

06/09/2014 Revised Draft Released

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 REHAB OF W-32-013, ROUTE 18 OVER THE OLD COLONY RAILROAD (MBTA)	6	HPP	$ 8,600,000	$ 6,880,000	$ 1,720,000	AC Yr 1 of 4; STP+HSIP+TEA-21 Earmark Total Cost = $60,053,518 ($53,453,518 programmed in FFYs 2015-18 TIP)
				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 Yr 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 Yr 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								
		No Projects Programmed			$ -	$ -	$ -	
				Statewide HSIP Program Subtotal ►	$ -	$ -	$ -	◄ 90% Federal + 10% Non-Federal
► Statewide Safe Routes to Schools Program								
	PENDING	SAUGUS- SAFE ROUTES TO SCHOOL (VETERANS MEMORIAL)	4	TAP	$ 676,000	$ 540,800	$ 135,200	80% Federal + 20% Non-Federal
	PENDING	EVERETT- SAFE ROUTES TO SCHOOL (MADELAINE ENGLISH)	4	TAP	$ 624,000	$ 499,200	$ 124,800	80% Federal + 20% Non-Federal
	PENDING	REVERE- SAFE ROUTES TO SCHOOL (GARFIELD ELEMENTARY & MIDDLE SCHOOL)	4	TAP	$ 936,000	$ 748,800	$ 187,200	80% Federal + 20% Non-Federal
	PENDING	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 ►	$ 3,016,000	$ 2,412,800	$ 603,200	◄ Funding Split Varies by Funding Source
► Statewide CMAQ								
	601579	WAYLAND- SIGNAL & INTERSECTION IMPROVEMENTS AT ROUTE 27 (MAIN STREET) AND ROUTE 30 (COMMONWEALTH ROAD)	3	CMAQ	$ 1,931,854	$ 1,545,483	$ 386,371	
	602165	STONEHAM- SIGNAL & INTERSECTION IMPROVEMENTS AT ROUTE 28/NORTH STREET	4	CMAQ	$ 3,268,366	$ 2,614,693	$ 653,673	
	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	$ 5,753,887	$ 4,603,110	$ 1,150,777	
	606316	BROOKLINE- PEDESTRIAN BRIDGE REHABILITATION, B-27-016, OVER MBTA OFF CARLTON STREET	6	CMAQ	$ 1,847,452	$ 1,477,962	$ 369,490	
				Statewide CMAQ ►	$ 12,801,559	$ 10,241,247	$ 2,560,312	◄ 80% Federal + 20% Non-Federal

2016 Boston Region MPO Transportation Improvement Program

06/09/2014 Revised Draft Released

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►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 & RELATED WORK ON I-495 (NB & SB)	5	NHPP	$ 14,692,038	13,222,834	1,469,204	
				Statewide Interstate Maintenance Program Subtotal ►	$ 14,692,038	$ 13,222,834	$ 1,469,204	◄ 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								
		ACCELERATED BRIDGE PROGRAM- GANS DEBT SERVICE	N/A	NHPP	$ 51,753,864	41,403,091	10,350,773	Accelerated Bridge Program (ABP) GANs payments - Second Year
		ACCELERATED BRIDGE PROGRAM- GANS DEBT SERVICE	N/A	STP-TE	$ 14,350,000	11,480,000	2,870,000	Accelerated Bridge Program (ABP) GANs payments - Second Year
				Other Statewide Items Subtotal ►	$ 66,103,864	$ 52,883,091	$ 13,220,773	◄ Funding Split Varies by Funding Source

2016 Boston Region MPO Transportation Improvement Program

06/09/2014 Revised Draft Released

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								
	87790	CANTON- DEDHAM- NORWOOD- WESTWOOD- INTERCHANGE IMPROVEMENTS AT I-95/I-93/ UNIVERSITY AVENUE/I-95 WIDENING	5/6	NFA	$ 190,000,000		$ 190,000,000	Non-federal aid
		GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	NFA	$ 428,900,255		$ 428,900,255	The Green Line Extension project is currently in the New Starts pipeline and the Commonwealth anticipates a decision in a Full Funding Grant Agreement in FFY 2015. The cash flows for the project, therefore, provide 100% bond funding for FFYs 2013-14 and begin programming New Starts funding in FFY 2015. The Commonwealth is committed to fully funding this project with bond funds if New Starts is not awarded.
		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►	$ 647,900,255		$ 647,900,255	◄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 ►	$ 236,950,889	$ 647,900,255	$ 884,851,144	◄ Total Spending in Region
Federal Funds ►	$ 191,469,688		$ 191,469,688	◄ Total Federal Spending in Region
Non-Federal Funds ►	$ 45,481,201	$ 647,900,255	$ 693,381,456	◄ 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					RTA Funds ▼	Total Cost ▼	Additional Information ▼
					RTACAP ▼	MAP ▼	ITCCAP ▼	TDC ▼	SCA ▼			
5307	MBTA	PREVENTIVE MAINTENANCE		$ 12,000,000	$ -	$ -	$ -	$ -	$ -	$ 3,000,000	**$ 15,000,000**	
5307	MBTA	HEAVY RAIL CARS - Red/Orange Lines		$ 64,000,000	$ -	$ -	$ -	$ -	$ -	$ 16,000,000	**$ 80,000,000**	
5307	MBTA	Systems Upgrades		$ 58,685,516	$ -	$ -	$ -	$ -	$ -	$ 14,671,379	**$ 73,356,895**	
5307	CATA	BUY REPLACEMENT 30-FT BUS		$ 320,000	$ 80,000	$ -	$ -	$ -	$ -	$ -	**$ 400,000**	
5307	CATA	PREVENTIVE MAINTENANCE		$ 193,391	$ -	$ -	$ -	$ -	$ -	$ 48,347	**$ 241,738**	
5307	CATA	ACQUIRE - MISC SUPPORT EQUIPMENT		$ 22,001	$ 5,501	$ -	$ -	$ -	$ -	$ -	**$ 27,502**	
5307	MWRTA	TERMINAL, INTERMODAL (TRANSIT)	2015	$ 471,356	$ 117,840	$ -	$ -	$ -	$ -	$ -	**$ 589,196**	
5307	MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES	2015	$ 80,000	$ 20,000	$ -	$ -	$ -	$ -	$ -	**$ 100,000**	
5307	MWRTA	ACQUIRE - MOBILE SURV/SECURITY EQUIP	2015	$ 50,000	$ 12,500	$ -	$ -	$ -	$ -	$ -	**$ 62,500**	
5307	MWRTA	TERMINAL, INTERMODAL (TRANSIT)	2015	$ 20,000	$ 5,000	$ -	$ -	$ -	$ -	$ -	**$ 25,000**	
5307	MWRTA	PURCHASE SIGNAGE	2015	$ 20,000	$ 5,000	$ -	$ -	$ -	$ -	$ -	**$ 25,000**	
5307	MWRTA	NON FIXED ROUTE ADA PARA SERV	2015	$ 1,000,000	$ -	$ -	$ -	$ -	$ 250,000	$ -	**$ 1,250,000**	
5307	MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES	2015	$ 65,000	$ 16,250	$ -	$ -	$ -	$ -	$ -	**$ 81,250**	
		5307 Subtotal ►		**$136,927,264**	**$ 262,091**	**$ -**	**$ -**	**$ -**	**$ 250,000**	**$ 33,719,726**	**$171,159,081**	
5337	MBTA	Bridge & Tunnel Program		$ 85,000,000	$ -	$ -	$ -	$ -	$ -	$ 21,250,000	**$106,250,000**	
5337	MBTA	Stations & Facilities (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**	

2016 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources					RTA Funds ▼	Total Cost ▼	Additional Information ▼
					RTACAP ▼	MAP ▼	ITCCAP ▼	TDC ▼	SCA ▼			
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 ►	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
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►	**$ 263,404,837**	**$ 262,091**	**$ -**	**$ -**	**$ -**	**$ 250,000**	**$ 65,339,120**	**$ 329,256,048**	

Fiscal Constraint Analysis

Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		State Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼	
FFY 16 / 5307	$ 136,927,264	$ 136,014,394	$ (912,870)	Over Programmed	RTACAP	$ 262,091	$ 950,970	$ 688,879	Available
FFY 16 / 5337	$ 121,190,546	$ 121,190,546	$ -	Available	MAP	$ -	$ -	$ -	Available
FFY 16 / 5339	$ 5,287,027	$ 5,287,027	$ -	Available	ITCCAP	$ -	$ -	$ -	Available
FFY 16 / 5310	$ -	$ -	$ -	Available	SCA	$ 250,000	$ 3,234,526	$ 2,984,526	Available
					TDC	$ -			

2017 Boston Region MPO Transportation Improvement Program

06/09/2014 Revised Draft Released

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								
	604935	WOBURN- RECONSTRUCTION OF MONTVALE AVENUE, FROM I-93 INTERCHANGE TO CENTRAL STREET (APPROX. 1,850 FT)	4	**HSIP**	$ 4,752,838	$ 4,277,554	$ 475,284	HSIP pending Road Safety Audit
				HSIP Subtotal ►	$ 4,752,838	$ 4,277,554	$ 475,284	◄ 90% Federal + 10% Non-Federal
►CMAQ - Congestion Mitigation and Air Quality Improvement Program								
	604989	SOUTHBOROUGH- RECONSTRUCTION OF MAIN STREET (RTE 30), FROM SEARS ROAD TO PARK STREET	3	**CMAQ**	$ 4,038,370	$ 3,230,696	$ 807,674	CMAQ+TAP Total Cost = $6,862,752
		GREEN LINE EXTENSION PROJECT (PHASE II), MEDFORD HILLSIDE (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 ($78,000,000 programmed within FFYs 2015-18 TIP)
				CMAQ Subtotal ►	$ 17,465,590	$ 13,972,472	$ 3,493,118	◄ 80% Federal + 20% Non-Federal
►TAP - Transportation Alternatives Program								
	604989	SOUTHBOROUGH- RECONSTRUCTION OF MAIN STREET (RTE 30), FROM SEARS ROAD TO PARK STREET	3	**TAP**	$ 2,824,382	$ 2,259,506	$ 564,876	CMAQ+TAP Total Cost = $6,862,752
				TAP Subtotal ►	$ 2,824,382	$ 2,259,506	$ 564,876	◄ 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**	$ 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
		GREEN LINE EXTENSION PROJECT (PHASE II), MEDFORD HILLSIDE (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 ($78,000,000 programmed within FFYs 2015-18 TIP)
	601630	WEYMOUTH- ABINGTON- RECONSTRUCTION & WIDENING ON ROUTE 18 (MAIN STREET) FROM HIGHLAND PLACE TO ROUTE 139 (4.0 MILES) INCLUDES REHAB OF 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 Total Cost = $60,053,518 ($53,453,518 programmed in FFYs 2015-18 TIP)
	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	**NHPP**	$ 14,000,000	$ 11,200,000	$ 2,800,000	AC Yr 4 of 5; NHPP+BR+Statewide Infrastructure Total Cost = $164,919,140 ($87,768,183 programmed within FFYs 2015-18 TIP)
				Non-CMAQ/HSIP/TAP (Other) Subtotal ►	$ 49,927,686	$ 39,942,149	$ 9,985,537	◄ 80% Federal + 20% Non-Federal

2017 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 ▼
►Section 1A / Fiscal Constraint Analysis								
				Total Federal Aid Target Funds Programmed ►	$ 74,970,496	**$ 75,009,821**	**◄Total Target**	**$ 39,325** **Target Funds Available**
				Total Non-CMAQ/HSIP/TAP (Other) Programmed ►	$ 49,927,686	$ 54,461,509	◄ Max. **Non-CMAQ/HSIP/TAP**	**$ 39,325** Non-CMAQ/HSIP/TAP (Other) A
				Total HSIP Programmed ►	$ 4,752,838	$ 4,296,710	◄ Min. **HSIP**	**$ (456,128)** HSIP Minimum Met
				Total CMAQ Programmed ►	$ 17,465,590	$ 13,427,220	◄ Min. **CMAQ**	**$ (4,038,370)** CMAQ Minimum Met
				Total TAP Programmed ►	$ 2,824,382	$ 2,824,382	◄ Min. **TAP**	**$ -** TAP Minimum Met
				HSIP, CMAQ, TAP Overprogrammed	$ (4,494,498)			
►Section 1B / Federal Aid Bridge Projects								
►Statewide Bridge Maintenance Program								
	607507	WAKEFIELD- BRIDGE DECK REPLACEMENT, 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								
	600867	BOSTON- BRIDGE REPLACEMENT, B-16-237, MASSACHUSETTS AVENUE (ROUTE 2A) OVER COMMONWEALTH AVENUE	4	**NHPP**	$ 5,964,839	$ 4,771,871	$ 1,192,968	AC Yr 3 of 3; Total Cost = $15,100,000
	604173	BOSTON- BRIDGE REHABILITATION, B-16-016, NORTH WASHINGTON STREET OVER THE CHARLES RIVER	6	**NHPP**	$ 18,035,161	$ 14,428,129	$ 3,607,032	AC Yr 2 of 5; Total Cost = $85,000,000 ($53,035,161 programmed within FFYs 2015-18 TIP)
	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**	$ 2,879,981	$ 2,303,985	$ 575,996	AC Yr 2 of 2; Total Cost = $11,434,190
	604952	LYNN- SAUGUS- BRIDGE REPLACEMENT, L-18-016=S-05-008, ROUTE 107 OVER THE SAUGUS RIVER (AKA - BELDEN G. BLY BRIDGE)	4	**NHPP**	$ 4,150,000	$ 3,320,000	$ 830,000	AC Yr 1 of 4; Total Cost = $45,000,000 ($20,400,000 programmed within the FFYs 2015-18 TIP)
	PENDING	DANVERS - BRIDGE REPLACEMENT, D-03-018, ROUTE 128 OVER WATERS RIVER	4	**NHPP**	$ 8,949,150	$ 7,159,320	$ 1,789,830	
				On System Subtotal ►	$ 39,979,131	$ 31,983,305	$ 7,995,826	◄ 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

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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 REHAB OF W-32-013, ROUTE 18 OVER THE OLD COLONY RAILROAD (MBTA)	6	HPP	$ 6,171,760	$ 4,937,408	$ 1,234,352	AC Yr 2 of 4; STP+HSIP+TEA-21 Earmark Total Cost = $60,053,518 ($53,453,518 programmed in FFYs 2015-18 TIP)
				Other Federal Aid Subtotal ►	$ 6,171,760	$ 4,937,408	$ 1,234,352	◄ 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	$ 2,500,000	$ 2,000,000	$ 500,000	AC Yr 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 Yr 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								
		No Projects Programmed			$ -	$ -	$ -	
				Statewide HSIP Program Subtotal ►	$ -	$ -	$ -	◄ 90% Federal + 10% Non-Federal
► Statewide Safe Routes to Schools Program								
	PENDING	WEYMOUTH- SAFE ROUTES TO SCHOOL (PINGREE ELEMENTARY)	6	TAP	$ 648,000	$ 518,400	$ 129,600	80% Federal + 20% Non-Federal
	PENDING	WATERTOWN- SAFE ROUTES TO SCHOOL (HOSMER ELEMENTARY)	6	TAP	$ 664,200	$ 531,360	$ 132,840	80% Federal + 20% Non-Federal
				Statewide Safe Routes to Schools Program Subtotal ►	$ 664,200	$ 531,360	$ 132,840	◄ Funding Split Varies by Funding Source
► Statewide CMAQ								
	606223	ACTON- CONCORD- BRUCE FREEMAN RAIL TRAIL CONSTRUCTION (PHASE II-B)	3	CMAQ	$ 6,220,800	$ 4,976,640	$ 1,244,160	
				Statewide CMAQ ►	$ 6,220,800	$ 4,976,640	$ 1,244,160	◄ 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

Amendment/ Adjustment Type ▼	MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Statewide Interstate Maintenance Program								
	607481	RANDOLPH- QUINCY- BRAINTREE - RESURFACING AND RELATED WORK ON I-93	6	NHPP	$ 12,055,824	10,850,242	1,205,582	
				Statewide Interstate Maintenance Program Subtotal ►	$ 12,055,824	$ 10,850,242	$ 1,205,582	◄ 90% Federal + 10% Non-Federal
►Statewide NHS Preservation Program+								
	607477	LYNNFIELD- PEABODY - RESURFACING AND RELATED WORK ON ROUTE 1	4	NHPP	$ 6,490,417	5,192,334	1,298,083	
				Statewide NHS Preservation Program Subtotal ►	$ 6,490,417	$ 5,192,334	$ 1,298,083	◄ 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								
		ACCELERATED BRIDGE PROGRAM- GANS DEBT SERVICE	N/A	NHPP	$ 90,571,614	72,457,291	18,114,323	Accelerated Bridge Program (ABP) GANs payments - Third Year
		ACCELERATED BRIDGE PROGRAM- GANS DEBT SERVICE	N/A	STP-TE	$ 14,350,000	11,480,000	2,870,000	Accelerated Bridge Program (ABP) GANs payments - Third Year
				Other Statewide Items Subtotal ►	$ 104,921,614	$ 83,937,291	$ 20,984,323	◄ Funding Split Varies by Funding Source
►Section 2A / Non-Federal Projects								
►Non Federal Aid								
		GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR		NFA	$ 338,011,653		$ 338,011,653	The Green Line Extension project is currently in the New Starts pipeline and the Commonwealth anticipates a decision in a Full Funding Grant Agreement in FFY 2015. The cash flows for the project, therefore, provide 100% bond funding for FFYs 2013-14 and begin programming New Starts funding in FFY 2015. The Commonwealth is committed to fully funding this project with bond funds if New Starts is not awarded.
		RED LINE-BLUE LINE CONNECTOR DESIGN		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►	$ 348,011,653		$ 348,011,653	◄100% Non-Federal

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►Section 2B / Non-Federal Bridge Projects								
►Section 2B / Non-Federal Bridge Projects								
		No Projects Programmed	N/A	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 ►	$ 260,944,178	$ 348,011,653	$ 608,955,831	◄ Total Spending in Region
Federal Funds ►	$ 210,436,209		$ 210,436,209	◄ Total Federal Spending in Region
Non-Federal Funds ►	$ 50,507,969	$ 348,011,653	$ 398,519,622	◄ 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					RTA Funds ▼	Total Cost ▼	Additional Information▼
					RTACAP ▼	MAP ▼	ITCCAP ▼	TDC ▼	SCA ▼			
5307	MBTA	PREVENTIVE MAINTENANCE		$ 12,000,000	$ -	$ -	$ -	$ -	$ -	$ 3,000,000	**$ 15,000,000**	
5307	MBTA	HEAVY RAIL CARS - Red/Orange Lines		$ 96,000,000	$ -	$ -	$ -	$ -	$ -	$ 24,000,000	**$120,000,000**	
5307	MBTA	Systems Upgrades		$ 26,685,516	$ -	$ -	$ -	$ -	$ -	$ 6,671,379	**$ 33,356,895**	
5307	CATA	PREVENTIVE MAINTENANCE		$ 193,391	$ -	$ -	$ -	$ -	$ -	$ 48,347	**$ 241,738**	
5307	CATA	BUY REPLACEMENT 30-FT BUS		$ 320,000	$ 80,000	$ -	$ -	$ -	$ -	$ -	**$ 400,000**	
5307	CATA	ACQUIRE - MISC SUPPORT EQUIPMENT		$ 27,355	$ 6,840	$ -	$ -	$ -	$ -	$ -	**$ 34,195**	
5307	MWRTA	INTERMODAL (TRANSIT): Facil. Improvements	2016	$ 471,356	$ 117,840	$ -	$ -	$ -	$ -	$ -	**$ 589,196**	
5307	MWRTA	PURCHASE SIGNAGE	2016	$ 20,000	$ 5,000	$ -	$ -	$ -	$ -	$ -	**$ 25,000**	
5307	MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES	2016	$ 80,000	$ 20,000	$ -	$ -	$ -	$ -	$ -	**$ 100,000**	
5307	MWRTA	ACQUIRE - MOBILE SURV/SECURITY EQUIP	2016	$ 50,000	$ 12,500	$ -	$ -	$ -	$ -	$ -	**$ 62,500**	
5307	MWRTA	NON FIXED ROUTE ADA PARA SERV	2016	$ 1,000,000	$ -	$ -	$ -	$ -	$ 250,000	$ -	**$ 1,250,000**	
5307	MWRTA	INTERMODAL (TRANSIT): Facil. Improvements	2016	$ 20,000	$ 5,000	$ -	$ -	$ -	$ -	$ -	**$ 25,000**	
5307	MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES	2016	$ 65,000	$ 16,250	$ -	$ -	$ -	$ -	$ -	**$ 81,250**	
		5307 Subtotal ►		**$ 136,932,618**	**$ 263,430**	**$ -**	**$ -**	**$ -**	**$ 250,000**	**$ 33,719,726**	**$171,165,774**	
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**	

2017 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources					RTA Funds ▼	Total Cost ▼	Additional Information ▼
					RTACAP ▼	MAP ▼	ITCCAP ▼	TDC ▼	SCA ▼			
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 ►	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
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►	**$ 263,410,191**	**$ 263,430**	**$ -**	**$ -**	**$ -**	**$ 250,000**	**$ 65,339,120**	**$329,262,741**	

Fiscal Constraint Analysis

Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		State Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼	
FFY 17 / 5307	$ 136,932,618	$ 135,863,615	$ (1,069,003)	Over Programmed	RTACAP	$ 263,430	$ 233,275	$ (30,155)	Over Programmed
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	$ 250,000	$ 3,234,526	$ 2,984,526	Available
					TDC	$ -			

2018 Boston Region MPO Transportation Improvement Program

06/09/2014 Revised Draft Released

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								
		GREEN LINE EXTENSION PROJECT (PHASE II), MEDFORD HILLSIDE (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 ($78,000,000 programmed within FFYs 2015-18 TIP)
				CMAQ Subtotal ►	$ 13,427,220	$ 10,741,776	$ 2,685,444	◄ 80% Federal + 20% Non-Federal
►TAP - Transportation Alternatives Program								
		No Projects Programmed			$ -	$ -	$ -	
				TAP Subtotal ►	$ -	$ -	$ -	◄ 80% Federal + 20% Non-Federal
►Non-CMAQ/HSIP/TAP (Other)								
		GREEN LINE EXTENSION PROJECT (PHASE II), MEDFORD HILLSIDE (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 ($78,000,000 programmed within FFYs 2015-18 TIP)
	601630	WEYMOUTH- ABINGTON- RECONSTRUCTION & WIDENING ON ROUTE 18 (MAIN STREET) FROM HIGHLAND PLACE TO ROUTE 139 (4.0 MILES) INCLUDES REHAB OF 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 ($53,453,518 programmed in FFYs 2015-18 TIP)
	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	**NHPP**	$ 13,768,183	$ 11,014,546	$ 2,753,637	AC Yr 5 of 5; NHPP+BR+Statewide Infrastructure Total Cost = $164,919,140 ($87,768,183 programmed within FFYs 2015-18 TIP)
				Non-CMAQ/HSIP/TAP (Other) Subtotal ►	$ 61,372,721	$ 49,098,177	$ 12,274,544	◄ 80% Federal + 20% Non-Federal

►Section 1A / Fiscal Constraint Analysis

Total Federal Aid Target Funds Programmed ►	$ 74,799,941	**$ 75,009,821**	**◄Total Target**	**$ 209,880**	**Target Funds Available**
Total Non-CMAQ/HSIP/TAP (Other) Programmed ►	$ 61,372,721	$ 54,461,509	◄ Max. **Non-CMAQ/HSIP/TAP**	**$ (6,911,212)**	Non-CMAQ/HSIP/TAP (Other) E
Total HSIP Programmed ►	$ -	$ 4,296,710	◄ Min. **HSIP**	**$ 4,296,710**	HSIP Minimum Not Met
Total CMAQ Programmed ►	$ 13,427,220	$ 13,427,220	◄ Min. **CMAQ**	**$ -**	CMAQ Minimum Met
Total TAP Programmed ►	$ -	$ 2,824,382	◄ Min. **TAP**	**$ 2,824,382**	TAP Minimum Not Met

Remaining HSIP, CMAQ, and TAP Funds $ 7,121,092

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 ▼
►Section 1B / Federal Aid Bridge Projects								
►Statewide Bridge Maintenance 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 Maintenance Program Subtotal ►	$ 1,724,400	$ 1,379,520	$ 344,880	◄ 80% Federal + 20% Non-Federal
►On System								
	604173	BOSTON- BRIDGE REHABILITATION, B-16-016, NORTH WASHINGTON STREET OVER THE CHARLES RIVER	6	**NHPP**	$ 30,000,000	$ 24,000,000	$ 6,000,000	AC Yr 3 of 5; Total Cost = $85,000,000 ($53,035,161 programmed within FFYs 2015-18 TIP)
	604952	LYNN- SAUGUS- BRIDGE REPLACEMENT, L-18-016=S-05-008, ROUTE 107 OVER THE SAUGUS RIVER (AKA - BELDEN G. BLY BRIDGE)	4	**NHPP**	$ 16,250,000	$ 13,000,000	$ 3,250,000	AC Yr 2 of 4; Total Cost = $45,000,000 ($20,400,000 programmed within the FFYs 2015-18 TIP)
				On System Subtotal ►	$ 46,250,000	$ 37,000,000	$ 9,250,000	◄ 80% Federal + 20% Non-Federal
►Off-System								
	606632	HOPKINTON- WESTBOROUGH- BRIDGE REPLACEMENT, H-23-006=W-24-016, FRUIT STREET OVER CSX & SUDBURY RIVER	3	**STP-BR-OFF**	$ 12,727,339	$ 10,181,871	$ 2,545,468	
	607133	QUINCY- BRIDGE REPLACEMENT, Q-01-039, 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 ►	$ 27,859,316	$ 22,287,453	$ 5,571,863	◄ 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

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								
	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 Yr 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	
				Statewide Infrastructure Program Subtotal ►	$ 7,000,000	$ 5,600,000	$ 1,400,000	◄ 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
► Statewide CMAQ								
	607329	WAKEFIELD- LYNNFIELD- RAIL TRAIL EXTENSION, FROM THE GALVIN MIDDLE SCHOOL TO LYNNFIELD/PEABODY T.L.	4	CMAQ	$ 7,084,000	$ 5,667,200	$ 1,416,800	
				Statewide CMAQ ►	$ 7,084,000	$ 5,667,200	$ 1,416,800	◄ 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								
	606546	FRANKLIN- INTERSTATE MAINTENANCE & RELATED WORK ON I-495	3	NHPP	$ 6,280,243	5,652,219	628,024	
				Statewide Interstate Maintenance Program Subtotal ►	$ 6,280,243	$ 5,652,219	$ 628,024	◄ 90% Federal + 10% Non-Federal
►Statewide NHS Preservation Program+								
	608008	SAUGUS - RESURFACING AND RELATED WORK ON ROUTE 1	4	NHPP	$ 10,620,378	8,496,302	2,124,076	
	PENDING	MARSHFIELD - PLYMOUTH - RESURFACING & RELATED WORK ON ROUTE 3	5	NHPP	$ 16,229,512	12,983,610	3,245,902	
	PENDING	MARSHFIELD - RESURFACING & RELATED WORK ON ROUTE 3	5	NHPP	$ 4,398,285	3,518,628	879,657	
				Statewide NHS Preservation Program Subtotal ►	$ 31,248,175	$ 24,998,540	$ 6,249,635	◄ 80% Federal + 20% Non-Federal
►Statewide RR Grade Crossings								
		No Projects Programmed			$ -	-	-	
				Statewide RR Grade Crossings 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 ▼
►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								
		ACCELERATED BRIDGE PROGRAM- GANS DEBT SERVICE	N/A	NHPP	$ 106,236,614	84,989,291	21,247,323	Accelerated Bridge Program (ABP) GANs payments - Fourth Year
				Other Statewide Items Subtotal ►	$ 106,236,614	$ 84,989,291	$ 21,247,323	◄ Funding Split Varies by Funding Source
►Section 2A / Non-Federal Projects								
►Non Federal Aid								
		GREEN LINE EXTENSION PROJECT- EXTENSION TO COLLEGE AVENUE WITH THE UNION SQUARE SPUR	N/A	NFA	$ 214,270,798		$ 214,270,798	The Green Line Extension project is currently in the New Starts pipeline and the Commonwealth anticipates a decision in a Full Funding Grant Agreement in FFY 2015. The cash flows for the project, therefore, provide 100% bond funding for FFYs 2013-14 and begin programming New Starts funding in FFY 2015. The Commonwealth is committed to fully funding this project with bond funds if New Starts is not awarded.
				Non-Federal Aid Subtotal►	$ 214,270,798		$ 214,270,798	◄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 ►	$ 308,482,689	$ 214,270,798	$ 522,753,487	◄ Total Spending in Region
Federal Funds ►	$ 247,414,176		$ 247,414,176	◄ Total Federal Spending in Region
Non-Federal Funds ►	$ 61,068,514	$ 214,270,798	$ 275,339,312	◄ 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					RTA Funds ▼	Total Cost ▼	Additional Information ▼
					RTACAP ▼	MAP ▼	ITCCAP ▼	TDC ▼	SCA ▼			
5307	MBTA	PREVENTIVE MAINTENANCE		$ 12,000,000	$ -	$ -	$ -	$ -	$ -	$ 3,000,000	**$ 15,000,000**	
5307	MBTA	HEAVY RAIL CARS - Red/Orange Lines		$ 96,000,000	$ -	$ -	$ -	$ -	$ -	$ 24,000,000	**$120,000,000**	
5307	MBTA	Systems Upgrades		$ 26,685,516	$ -	$ -	$ -	$ -	$ -	$ 6,671,379	**$ 33,356,895**	
5307	CATA	PREVENTIVE MAINTENANCE		$ 193,391	$ -	$ -	$ -	$ -	$ -	$ 48,347	**$ 241,738**	
5307	CATA	ACQUIRE - MISC SUPPORT EQUIPMENT		$ 32,763	$ 8,192	$ -	$ -	$ -	$ -	$ -	**$ 40,955**	
5307	CATA	BUY REPLACEMENT 30-FT BUS		$ 320,000	$ 80,000	$ -	$ -	$ -	$ -	$ -	**$ 400,000**	
5307	MWRTA	TERMINAL, INTERMODAL (TRANSIT)	2017	$ 351,357	$ 87,840	$ -	$ -	$ -	$ -	$ -	**$ 439,197**	
5307	MWRTA	PURCHASE BUS SHELTERS	2017	$ 20,000	$ 5,000	$ -	$ -	$ -	$ -	$ -	**$ 25,000**	
5307	MWRTA	ACQUIRE - MOBILE SURV/SECURITY EQUIP	2017	$ 50,000	$ 12,500	$ -	$ -	$ -	$ -	$ -	**$ 62,500**	
5307	MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES	2017	$ 200,000	$ 50,000	$ -	$ -	$ -	$ -	$ -	**$ 250,000**	
5307	MWRTA	INTERMODAL (TRANSIT): Facil. Improvements	2017	$ 20,000	$ 5,000	$ -	$ -	$ -	$ -	$ -	**$ 25,000**	
5307	MWRTA	ACQUISITION OF BUS SUPPORT EQUIP/FACILITIES	2017	$ 65,000	$ 16,250	$ -	$ -	$ -	$ -	$ -	**$ 81,250**	
5307	MWRTA	NON FIXED ROUTE ADA PARA SERV	2017	$ 1,000,000	$ -	$ -	$ -	$ -	$ 250,000	$ -	**$ 1,250,000**	
			5307 Subtotal ►	**$ 136,938,027**	**$ 264,782**	**$ -**	**$ -**	**$ -**	**$ 250,000**	**$ 33,719,726**	**$171,172,535**	
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**	

2018 Boston Region MPO Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources					RTA Funds ▼	Total Cost ▼	Additional Information ▼
					RTACAP ▼	MAP ▼	ITCCAP ▼	TDC ▼	SCA ▼			
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 ►	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
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►	**$ 263,415,600**	**$ 264,782**	**$ -**	**$ -**	**$ -**	**$ 250,000**	**$ 65,339,120**	**$ 329,269,502**	

Fiscal Constraint Analysis

Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		State Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼	
FFY 17 / 5307	$ 136,938,027	$ 135,863,615	$ (1,074,412)	Over Programmed	RTACAP	$ 264,782	$ 233,275	$ (31,507)	Over Programmed
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	$ 250,000	$ 3,234,526	$ 2,984,526	Available
					TDC	$ -			

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

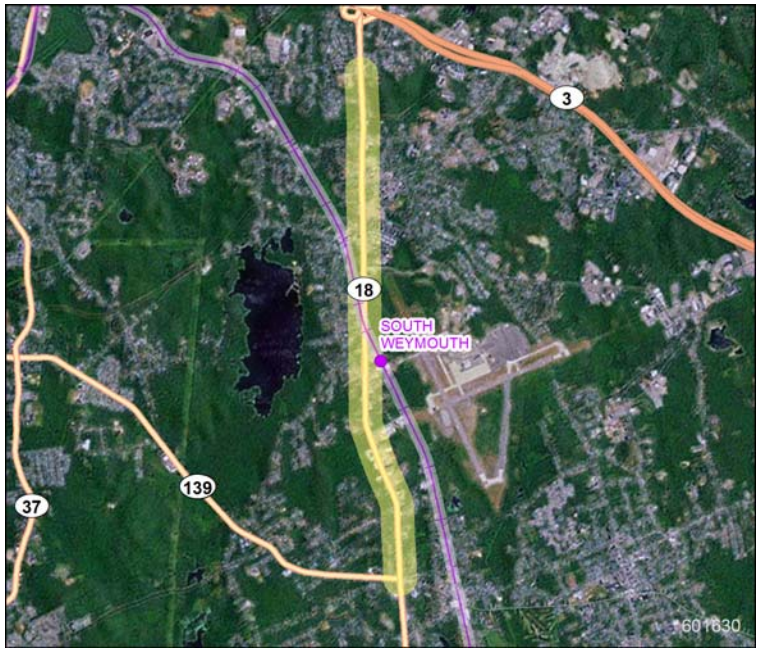
CO2 Impact: -179

Evaluation Rating:

MPO / CTPS Study:

LRTP Status: 2012-20

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	Earmark High Priority Project (1998)	$6,880,000	$1,720,000	$8,600,000
2016	Highway Safety Improvement Program	$900,000	$100,000	$1,000,000
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
Total Funding Programmed		**$42,862,814**	**$10,590,704**	**$53,453,518**

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

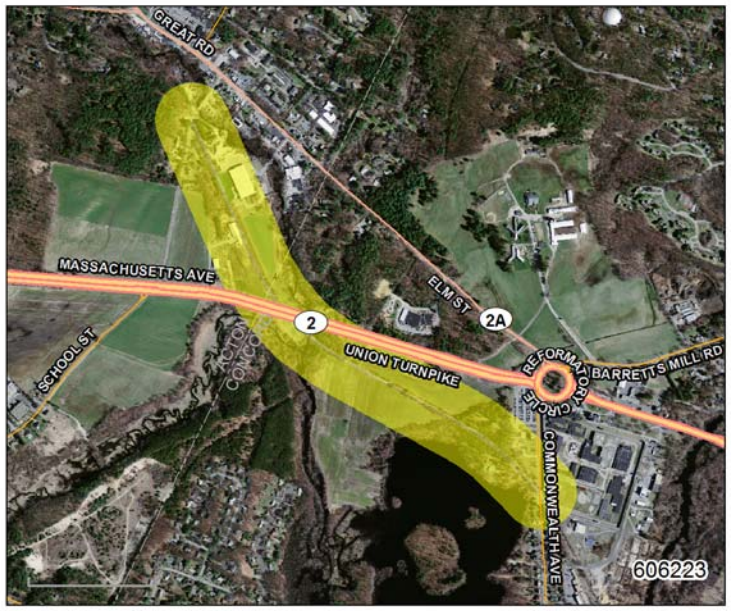
CO2 Impact: To Be Determined

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
2017	Congestion Mitigation and Air Quality Program	$4,976,640	$1,244,160	$6,220,800
Total Funding Programmed		**$4,976,640**	**$1,244,160**	**$6,220,800**

ID Number : 604531

Municipality(ies): Acton, Maynard

Project Name: Assabet River Rail Trail

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

CO2 Impact: 183

Evaluation Rating: 68

MPO / CTPS Study: Assabet River Rail Trail Feasibility Study (1997)

LRTP Status: 2016-20

Project Length: 3.61

Project Description:

Project Need: This Rail Trail project links the Assabet River National Wildlife refuge with the downtown Maynard business district and the South Acton Commuter Rail Station, providing an alternative transportation option. Project Description: The scope of work includes the construction of the Assabet River Rail Trail from the Stow/Maynard town line to the MBTA station in Acton, a distance of 3.4 miles. The work will also include replacement of the existing bridges at Tobin Park in Maynard, Mill Pond in Acton, and an approximately 200 ft; new boardwalk in Acton.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Congestion Mitigation and Air Quality Program	$3,234,298	$808,575	$4,042,873
2015	Transportation Enhancements	$426,483	$106,621	$533,104
Total Funding Programmed		**$3,660,781**	**$915,196**	**$4,575,977**

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	Surface Transportation Program	$4,600,000	$1,150,000	$5,750,000
Total Funding Programmed		**$4,600,000**	**$1,150,000**	**$5,750,000**

ID Number : 1630

Municipality(ies): Bedford

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

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

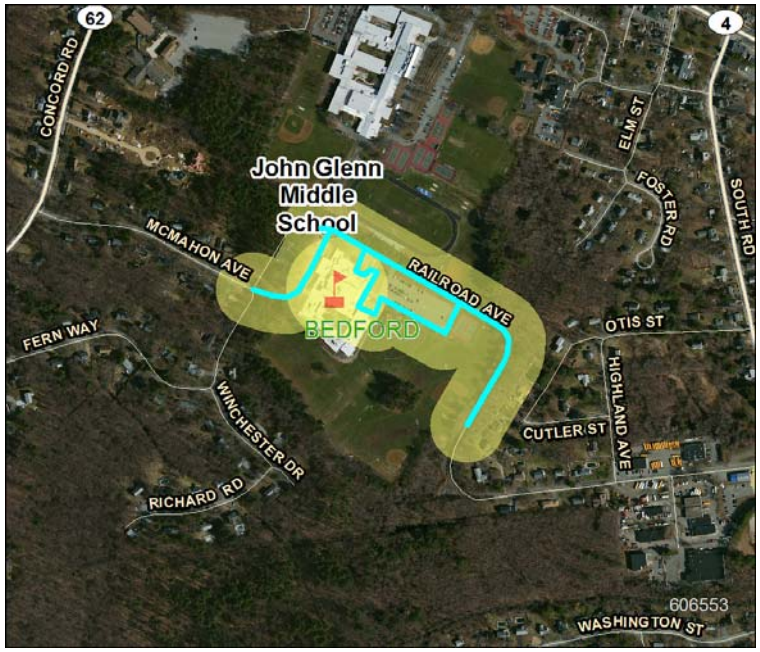
CO2 Impact:

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	Transportation Alternatives	$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

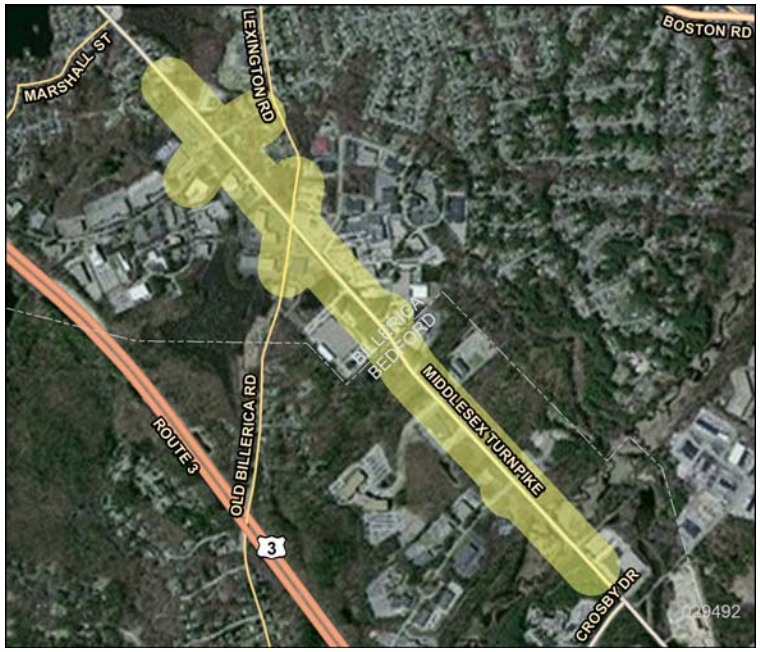
CO2 Impact: Model

Evaluation Rating: 83

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	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
2017	Other	$800,000	$200,000	$1,000,000
Total Funding Programmed		**$23,437,078**	**$5,859,270**	**$29,296,348**

ID Number : 1621

Municipality(ies): Beverly

Project Name: Resurfacing & Related Work on Route 128

Project Type: Major Highway

Air Quality Status: Exempt

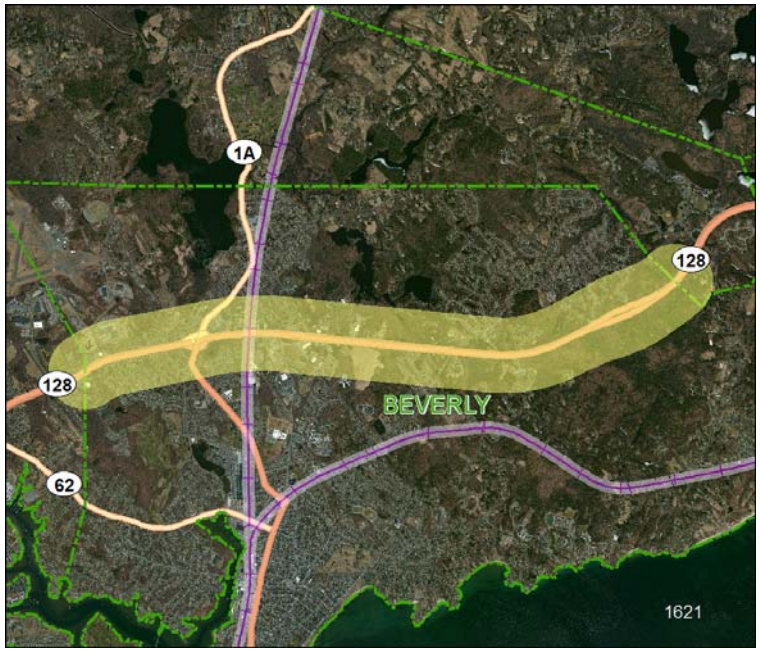
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project consists of resurfacing and related work along Route 128 in Beverly.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	National Highway Performance Program	$4,644,480	$1,161,120	$5,805,600
Total Funding Programmed		**$4,644,480**	**$1,161,120**	**$5,805,600**

ID Number : 604173

Municipality(ies): Boston

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

Project Type: Bridge

Air Quality Status: Exempt

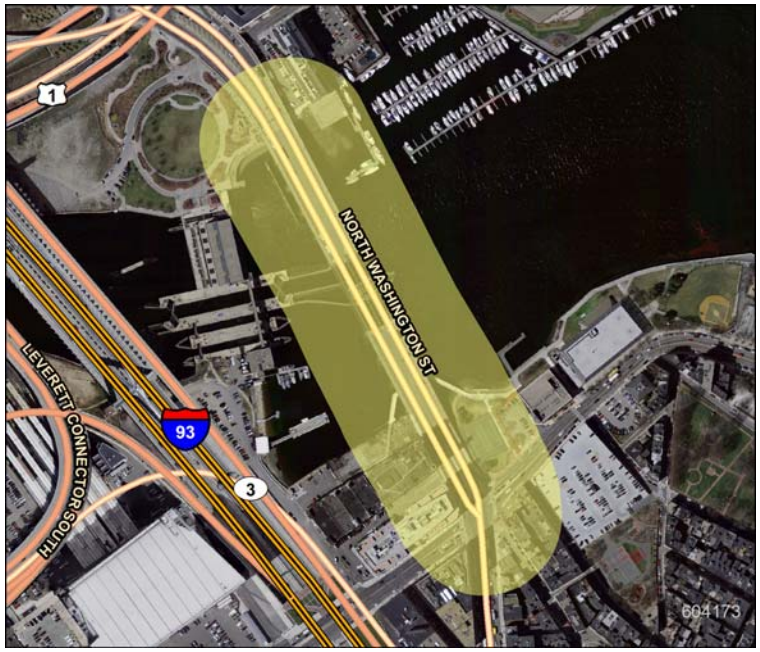
CO2 Impact: Assumed Nominal Reduction

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 rehabilitate the bridge. On the approach spans this rehabilitation will include replacement of the existing concrete deck slabs and sidewalks with lightweight reinforced concrete and replacement of all deteriorated structural steel, which will amount to approximately 37% of all floor beams and 50% of all stringers. At the swing spans, the rehabilitation will include replacement of all floor beams and stringers and replacement of the open metal grating with an exodemic deck with lightweight concrete. Also proposed is the complete deleading and repainting of the entire structure.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	National Highway Performance Program	$4,000,000	$1,000,000	$5,000,000
2017	National Highway Performance Program	$14,428,129	$3,607,032	$18,035,161
2018	National Highway Performance Program	$24,000,000	$6,000,000	$30,000,000
Total Funding Programmed		**$42,428,129**	**$10,607,032**	**$53,035,161**

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	Surface Transportation Program	$2,000,000	$500,000	$2,500,000
2017	Surface Transportation Program	$3,600,000	$900,000	$4,500,000
2018	Surface Transportation Program	$1,000,000	$250,000	$1,250,000
Total Funding Programmed		**$6,600,000**	**$1,650,000**	**$8,250,000**

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
2015	Other	$0	$10,000,000	$10,000,000
2016	Other	$0	$29,000,000	$29,000,000
2017	Other	$0	$10,000,000	$10,000,000
Total Funding Programmed		**$0**	**$49,000,000**	**$49,000,000**

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

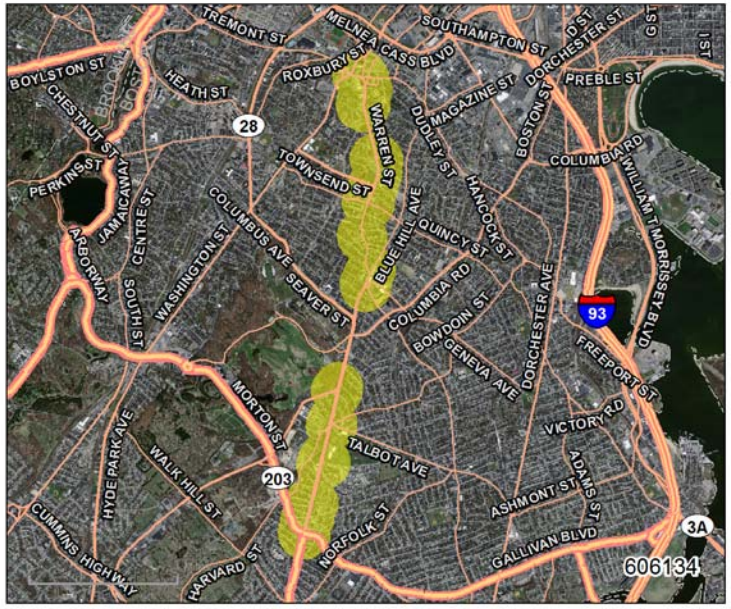
CO2 Impact: To Be Determined

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 1.29



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
2015	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 : 606284

Municipality(ies): Boston

Project Name: Improvements to Commonwealth Avenue, from Amory Street to Alcorn Street

Project Type: Arterial and Intersection

Air Quality Status: Exempt

CO2 Impact: 57

Evaluation Rating: 96

MPO / CTPS Study:

LRTP Status: 2012-15

Project Length: 0.49

Project Description:

This project will improve a principal arterial roadway by upgrading pavement and drainage conditions, improving facilities for bikes and pedestrians, and widening the MBTA reservation. The upgrades will be consistent with Boston's Commonwealth Avenue Phase 1 project.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Congestion Mitigation and Air Quality Program	$4,000,000	$1,000,000	$5,000,000
2015	Discretionary Programs Surface Transportation Policy Project (2010)	$599,897	$0	$599,897
2015	Discretionary Programs Transportation, Community and System Preservation	$1,000,000	$250,000	$1,250,000
2015	Earmark High Priority Project (2005)	$891,601	$222,900	$1,114,501
2015	Earmark Section 125 (2009)	$475,000	$0	$475,000
2015	Earmark Section 129 (2008)	$980,000	$0	$980,000
2015	Surface Transportation Program	$5,957,482	$1,489,370	$7,446,852
Total Funding Programmed		**$13,903,980**	**$2,962,271**	**$16,866,250**

ID Number : 605789

Municipality(ies): Boston

Project Name: Reconstruction of Melnea Cass Boulevard

Project Type: Arterial and Intersection

Air Quality Status: Exempt

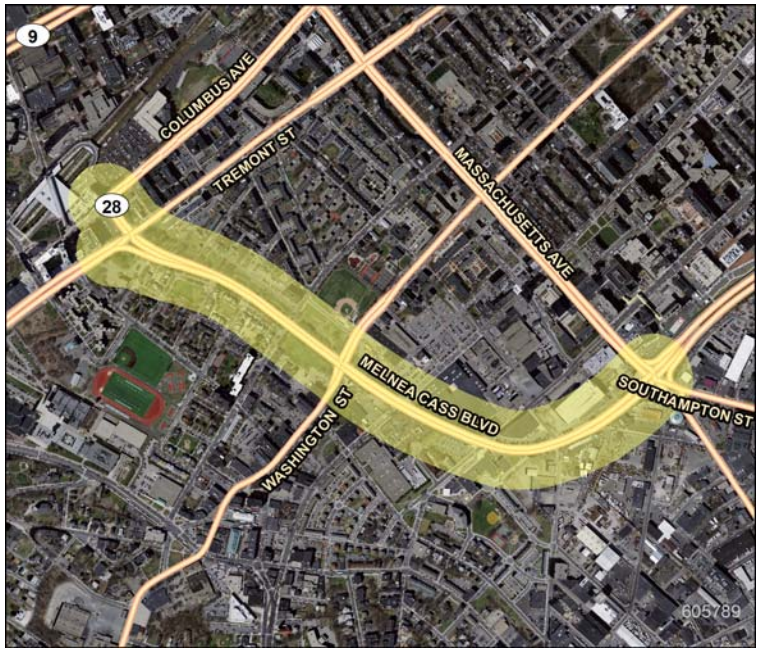
CO2 Impact: To Be Determined

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
2015	Earmark High Priority Project (2005)	$1,943,784	$485,946	$2,429,730
2015	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 : 600867

Municipality(ies): Boston

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

Project Type: Bridge

Air Quality Status: Exempt

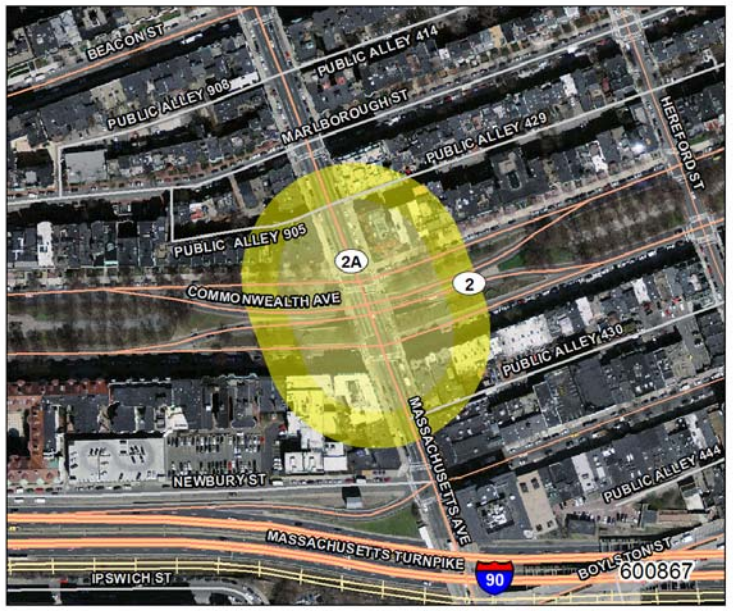
CO2 Impact: No CO2 Impact

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
2015	National Highway Performance Program	$1,280,000	$320,000	$1,600,000
2016	National Highway Performance Program	$6,028,129	$1,507,032	$7,535,161
2017	National Highway Performance Program	$4,771,871	$1,192,968	$5,964,839
Total Funding Programmed		**$12,080,000**	**$3,020,000**	**$15,100,000**

ID Number : 1568

Municipality(ies): Boston

Project Name: Fairmount Improvements

Project Type: Transit

Air Quality Status: Model

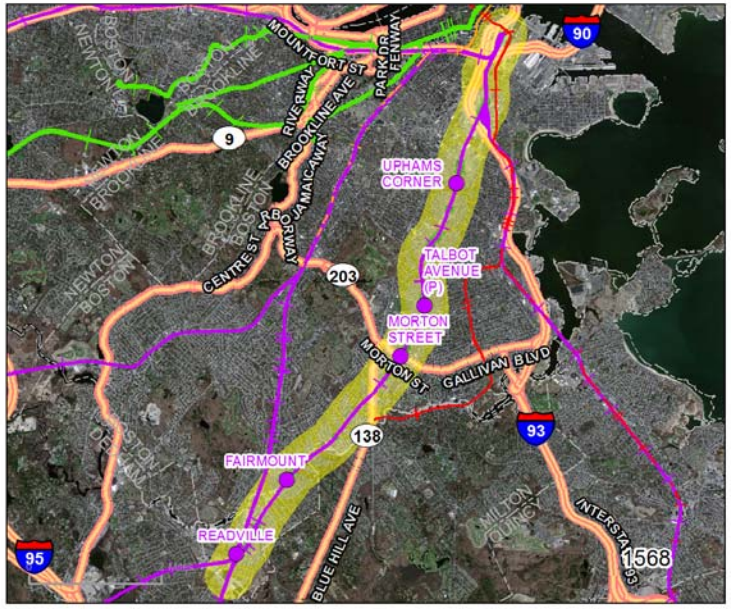
CO2 Impact: Model

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 9.31



Project Description:

This project includes the rehabilitation of the existing Uphams Corner and Morton Street Stations, construction of four new stations - Newmarket, Four Corners, Talbot Avenue, and Blue Hill Avenue - reconstruction of six existing railroad bridges (located over Columbia Road, Quincy Street, Massachusetts Avenue, Talbot Avenue, Woodrow Avenue, and the Neponset River), and construction of a new interlocking and upgraded signal system (required to advance the bridge reconstruction work). These upgrades will enhance future service, allowing for increased frequency on the line.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Other	$0	$4,863,082	$4,863,082
Total Funding Programmed		**$0**	**$4,863,082**	**$4,863,082**

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:

Project Description:

This project is intended to rehabilitate Route 3 (SB) and Route 3 (NB) over Ramp C (Quincy Avenue), B-21-060 and B-21-061.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	National Highway Performance Program	$5,334,784	$1,333,696	$6,668,480
Total Funding Programmed		**$5,334,784**	**$1,333,696**	**$6,668,480**

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

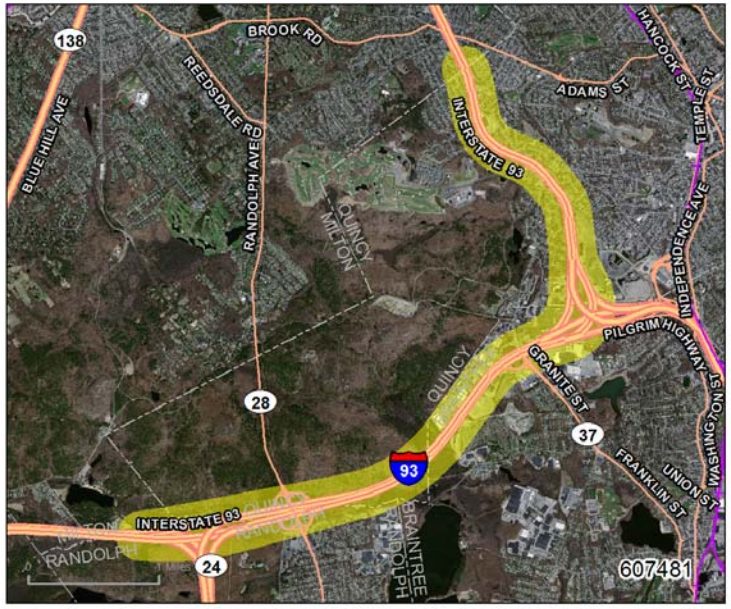
CO2 Impact: No CO2 Impact

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	National Highway Performance Program	$10,850,242	$1,205,582	$12,055,824
Total Funding Programmed		**$10,850,242**	**$1,205,582**	**$12,055,824**

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: 84

MPO / CTPS Study:

LRTP Status:

Project Length: 0.36

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
2016	Congestion Mitigation and Air Quality Program	$195,337	$48,834	$244,171
2016	Transportation Alternatives	$3,477,470	$869,368	$4,346,838
2016	Other	$800,000	$200,000	$1,000,000
Total Funding Programmed		**$4,472,807**	**$1,118,202**	**$5,591,009**

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: 53

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	Congestion Mitigation and Air Quality Program	$1,477,961	$369,490	$1,847,451
Total Funding Programmed		**$1,477,961**	**$369,490**	**$1,847,451**

ID Number : 607700

Municipality(ies): Burlington, Lexington, Woburn

Project Name: Highway Lighting Branch Circuit Re-Cabling From Six (6) Lighting Load Centers along Route I-95 (128) Lexington-Woburn

Project Type: Major Highway

Air Quality Status: Exempt

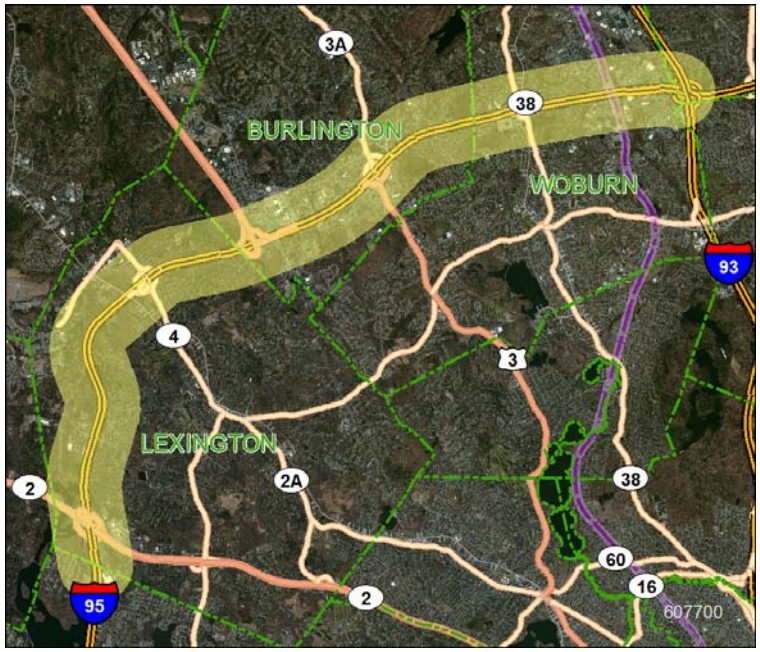
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project consists of highway lighting branch circuit re-cabling from six lighting load centers along I-95/Route 128 between Lexington and Woburn.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Surface Transportation Program	$2,000,000	$500,000	$2,500,000
Total Funding Programmed		**$2,000,000**	**$500,000**	**$2,500,000**

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

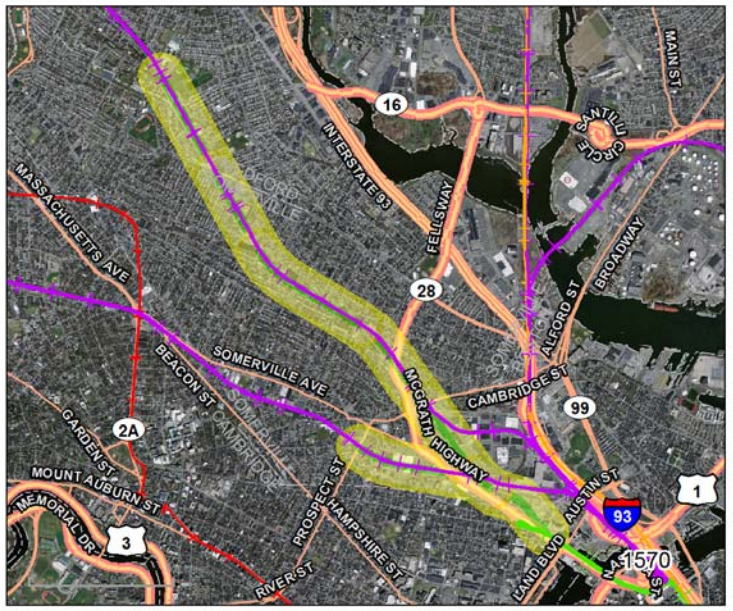
CO2 Impact: Model

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 4.06



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
2015	Other	$100,000,000	$144,427,508	$244,427,508
2016	Other	$100,000,000	$328,900,255	$428,900,255
2017	Other	$100,000,000	$238,011,653	$338,011,653
2018	Other	$100,000,000	$114,270,798	$214,270,798
Total Funding Programmed		**$400,000,000**	**$825,610,214**	**$1,225,610,214**

ID Number : 087790

Municipality(ies): Canton, Dedham, Westwood

Project Name: Interchange Improvements at I-95/I-93/University Avenue/I-95 Widening

Project Type: Major Highway

Air Quality Status: Model

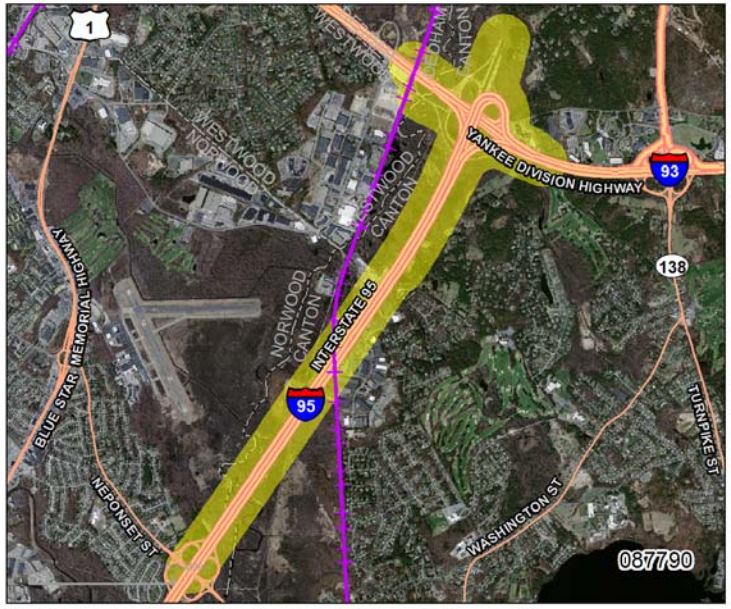
CO2 Impact: Model

Evaluation Rating:

MPO / CTPS Study: University Ave./I-95/I-93 Regional Traffic Study (1999)

LRTP Status:

Project Length: 4.46



Project Description:

The I-95/I-93/University Avenue Interchange Improvement Project is divided into two distinct sections. The I-95/I-93/University Avenue Interchange section extends along I-93 southbound from just west of the I-93/Route 138 Interchange out to the University Ave entrance ramp on I-95 northbound. Work in this area includes: Replacement of the I-95 northbound clover leaf ramp with a high speed, two lane, direct connect ramp. A realigned and improved high speed two-lane, direct connect between I-93 southbound and I-95 southbound. A new entrance ramp from University Avenue to I-93 northbound along the Green Lodge Street ROW. This includes discontinuance of Green Lodge Street west of Elm Street. A new exit ramp from I-93 southbound to University Ave. The other section of the project is south of the I-95/I-93 Interchange and includes. The construction of a fourth lane, for two miles in the median, of I-95 southbound from the I-95/I-93 Interchange to Neponset St. The construction of a fourth lane, for one mile in the median of I-95 northbound, from Dedham St to the I-93 on ramp.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Other	$0	$190,000,000	$190,000,000
Total Funding Programmed		**$0**	**$190,000,000**	**$190,000,000**

ID Number : 606146

Municipality(ies): Canton, Norwood, Westwood

Project Name: Ramp Construction on I-95 (NB) & Improvements on Dedham Street, Includes Replacement of 4 Signalized Intersections

Project Type: Major Highway

Air Quality Status: Model

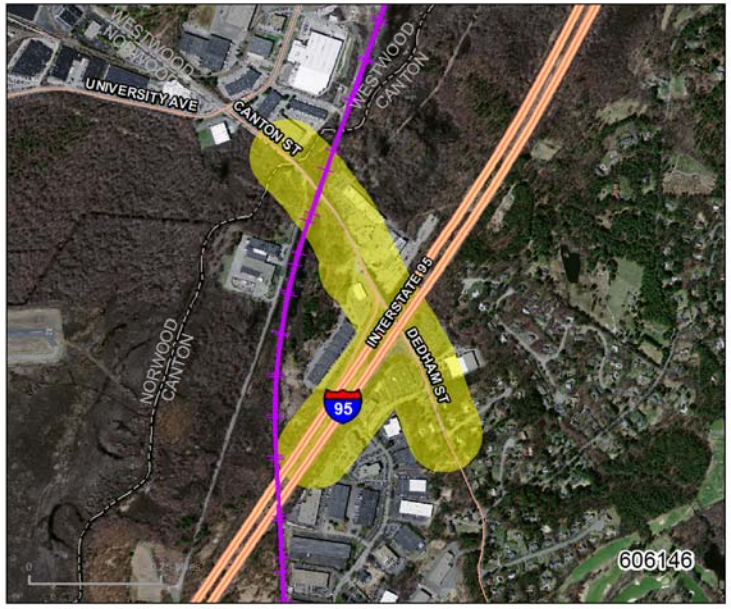
CO2 Impact: Model

Evaluation Rating:

MPO / CTPS Study: University Ave./I-95/I-93 Regional Traffic Study (1999)

LRTP Status:

Project Length: 0.89



Project Description:

The Canton Street/Dedham Street project will consist of the construction of an off-ramp from I-95 northbound to Dedham Street and improvements to the Dedham Street/Canton Street corridor. Within the approximately 4,500 linear feet between Kirby Drive and a point 300 feet west of University Avenue, the existing two lane Canton Street/Dedham Street will be widened to provide four 12-foot travel lanes (two in each direction), four-foot shoulders in each direction, and a six-foot sidewalk will be constructed on the northern side of Dedham Street, from Kirby Drive to the Canton St/University Ave intersection. This roadway reconstruction will require the bridges over AMTRAK and the Neponset River to be widened and the bridge over I-95 to be replaced. Traffic signal control will be installed at the following four locations: Dedham Street at (former) Cumberland Farms Driveway/Canton Corporate Park Driveway; Dedham Street at existing I-95 southbound on-ramp; Dedham Street at proposed I-95 northbound off-ramp; and Dedham Street at Shawmut Road. The intersection of Canton Street and University Avenue will be reconstructed and the signals upgraded. These five intersections will operate as a coordinated signal system and will provide safe pedestrian crossing locations for the major potential sources of pedestrian trips.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Other	$0	$38,000,000	$38,000,000
Total Funding Programmed		**$0**	**$38,000,000**	**$38,000,000**

ID Number : 607174

Municipality(ies): Chelsea, Revere

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: 4.87

Project Description:

Project involves the resurfacing of Route 1. The limit of work begins at approximately mm 49.95 in Chelsea and extends northerly into the Saugus and ends at approximately mm 55.0. The total project length is approximately 5.0 miles.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	National Highway Performance Program	$6,931,059	$1,732,765	$8,663,824
Total Funding Programmed		**$6,931,059**	**$1,732,765**	**$8,663,824**

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

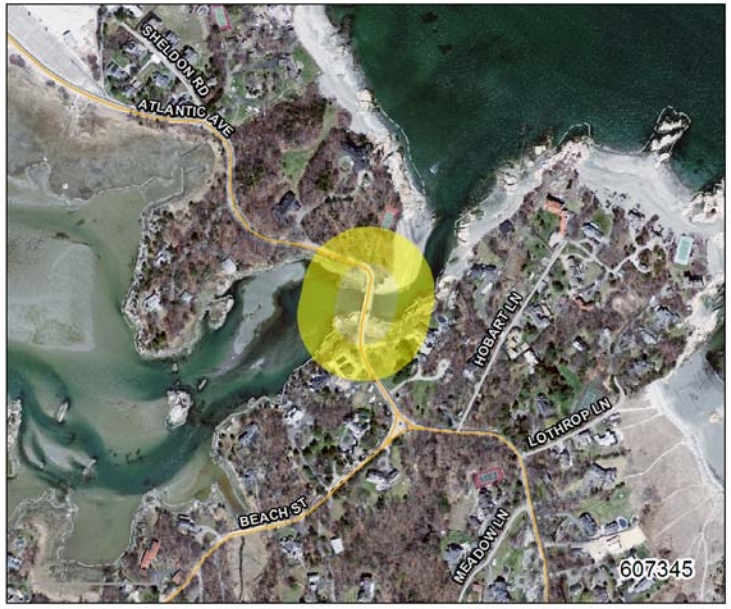
CO2 Impact: Assumed Nominal Reduction

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	Surface Transportation Program	$5,133,240	$1,283,310	$6,416,550
Total Funding Programmed		**$5,133,240**	**$1,283,310**	**$6,416,550**

ID Number : 605189

Municipality(ies): Concord

Project Name: Bruce Freeman Rail Trail, Phase 2C

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

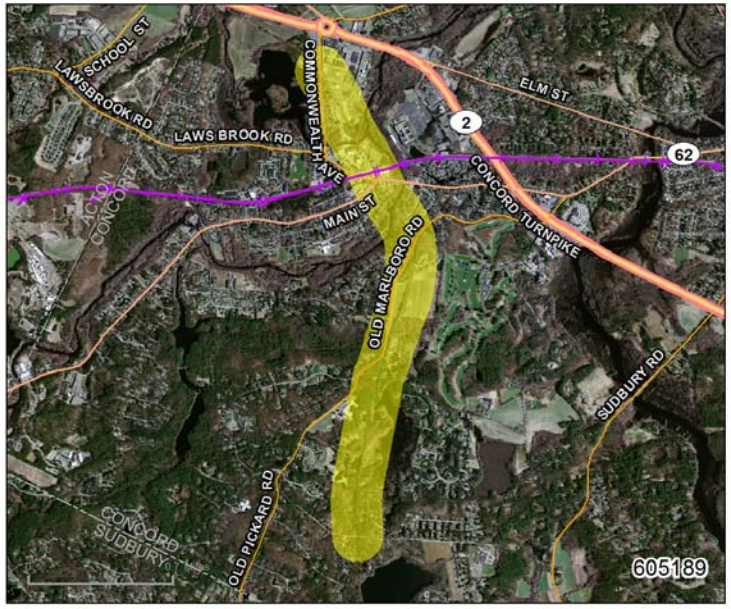
CO2 Impact: 79

Evaluation Rating: 73

MPO / CTPS Study:

LRTP Status: 2021-25

Project Length: 2.4



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	Congestion Mitigation and Air Quality Program	$4,603,110	$1,150,777	$5,753,887
Total Funding Programmed		**$4,603,110**	**$1,150,777**	**$5,753,887**

ID Number : 1626

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:

Project Description:

This project is intended to replace Route 128 over the Waters River (D-03-018).

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	National Highway Performance Program	$7,159,320	$1,789,830	$8,949,150
Total Funding Programmed		**$7,159,320**	**$1,789,830**	**$8,949,150**

ID Number : 605883

Municipality(ies): Dedham

Project Name: Bridge Replacement, Needham Street over Great Ditch

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:

It is anticipated that the structure will be replaced with a single span superstructure of approximately 84 feet. The additional required superstructure depth shall be accommodated by raising the profile as little as possible. The proposed bottom chord elevation should not be reduced. The abutments are to be located behind the existing abutments. They will be integral with the superstructure and supported on piles. The existing abutments shall be left in place to be part of the scour protection system and, if necessary, the construction dewatering system. They shall be cut down to facilitate inspection access to the new abutments and beam ends. These parameters shall be verified with the Geotechnical Report, the Hydraulic Report, the Survey, and the consultant's own investigations. The bridge profile is expected to remain approximately the same. The minimum under clearance of the bridge cannot be reduced. This profile shall be verified with the proposed superstructure depth and the Hydraulic Report. The curb-to-curb width of the bridge shall be 32 feet. There shall be a new 5.5 foot sidewalk. The bridge rail shall be type S3-TL4. Highway guardrail transitions shall be located on independent bases. Adequate lighting shall be provided on the approach roadway curve (restore any existing lighting and add additional as necessary.) The scour protection of the abutments is required and shall be included on the consultant's drawings and special provisions. Work in the water shall be eliminated or reduced to the extent possible.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	National Highway Performance Program	$2,423,226	$605,806	$3,029,032
Total Funding Programmed		**$2,423,226**	**$605,806**	**$3,029,032**

ID Number : 604796

Municipality(ies): Dedham

Project Name: Bridge Replacement, Providence Highway over Mother Brook

Project Type: Bridge

Air Quality Status: Exempt

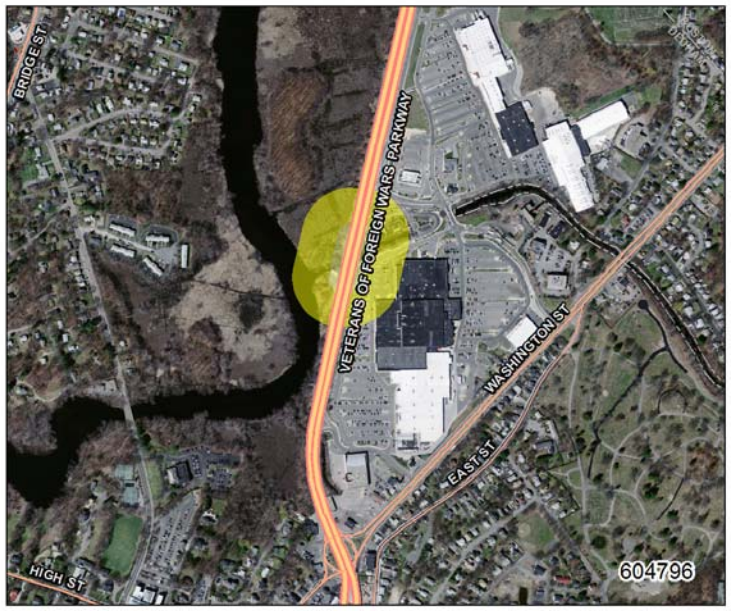
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 0.04



Project Description:

This bridge project involves the complete replacement of the Providence Highway Bridge over Mother Brook (Bridge No. D-05-033) in Dedham, MA. The existing 4-span steel beam structure, built in 1934, will be replaced with a single span bridge. The proposed cross section will consist of two 12-foot travel lanes, a 12-foot paved shoulder, and a 6.5-foot sidewalk in both directions. An 18-foot wide raised median will separate each travel direction. Traffic will be maintained during construction, as the bridge will be replaced in stages.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	National Highway Performance Program	$954,244	$238,561	$1,192,805
Total Funding Programmed		**$954,244**	**$238,561**	**$1,192,805**

ID Number : 1623

Municipality(ies): Duxbury, Marshfield, Plymouth

Project Name: Resurfacing & 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:

Project Description:

This project consists of resurfacing and related work along Route 3 between Marshfield and Plymouth.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	National Highway Performance Program	$12,983,610	$3,245,902	$16,229,512
Total Funding Programmed		**$12,983,610**	**$3,245,902**	**$16,229,512**

ID Number : 1595

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 will provide bicycle and pedestrian improvements around Madelaine English in Everett.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Transportation Alternatives	$499,200	$124,800	$624,000
Total Funding Programmed		**$499,200**	**$124,800**	**$624,000**

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

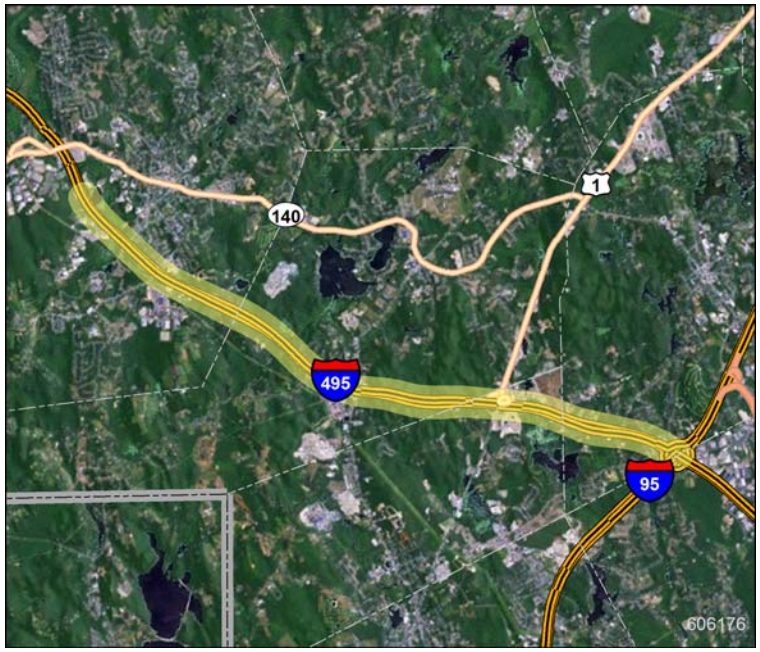
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 9.8



Project Description:

Interstate maintenance pavement preservation resurfacing, safety improvements and related work from MM 32.6 to MM 42.4 for a total project length of 9.8 miles.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	National Highway Performance Program	$13,222,834	$1,469,204	$14,692,038
Total Funding Programmed		**$13,222,834**	**$1,469,204**	**$14,692,038**

ID Number : 606546

Municipality(ies): Franklin

Project Name: Interstate Maintenance & 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: 4.14

Project Description:

Work consists of resurfacing and related work on Interstate 495 in Franklin. The project begins at the Franklin/Wrentham town line (mm 38.3) and ends at a pavement joint on the south side of the bridge over Beaver Street (mm 42.4). The total length of this project is 4.1 miles.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	National Highway Performance Program	$5,652,219	$628,024	$6,280,243
Total Funding Programmed		**$5,652,219**	**$628,024**	**$6,280,243**

ID Number : 607273

Municipality(ies): Franklin

Project Name: Bridge Demolition, F-08-005, Old State Route 140 over MBTA/CSX & New Pedestrian Bridge Construction

Project Type: Bridge

Air Quality Status: Exempt

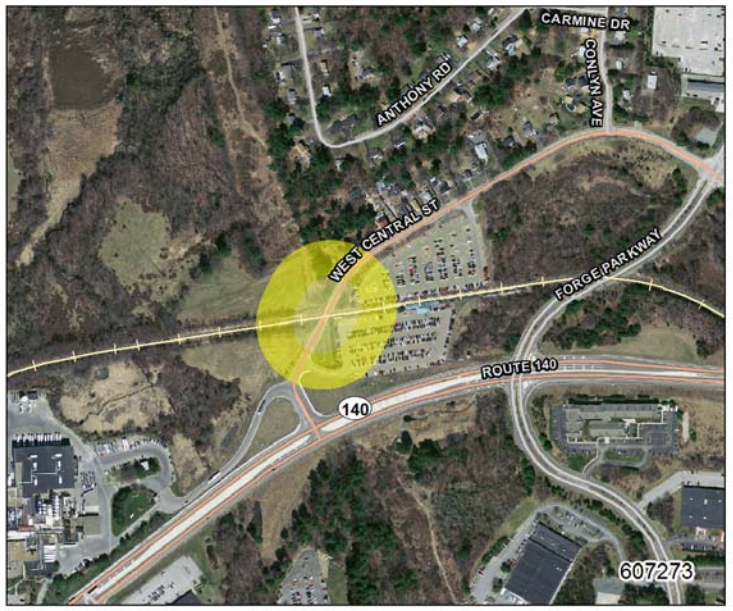
CO2 Impact: Assumed Nominal Reduction

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 0.01



Project Description:

Bridge F-08-005 is closed because Route 140 has been re-aligned. A new bridge has taken its place. This bridge is structurally deficient with an AASHTO = 15.5. It is proposed to demolish the old roadway bridge and replace it with a pedestrian bridge.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	National Highway Performance Program	$1,424,218	$356,054	$1,780,272
Total Funding Programmed		**$1,424,218**	**$356,054**	**$1,780,272**

ID Number : 607338

Municipality(ies): Gloucester

Project Name: Bridge Preservation, Route 128 over Annisquam River (Phase II)

Project Type: Bridge

Air Quality Status: Exempt

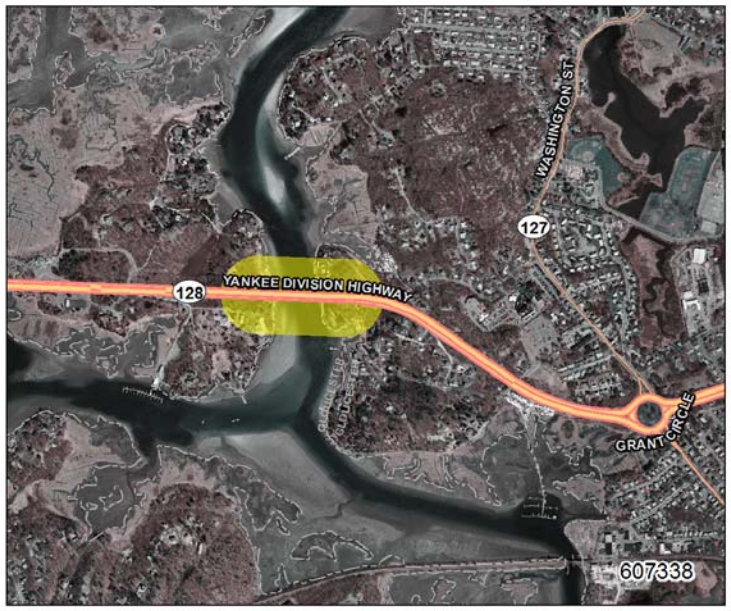
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 0.16



Project Description:

Remove and replace the existing arch level bracing with a more efficient structural tube system, perform arch structural repairs, clean and paint structural steel on arch level including braces, arches and columns.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	National Highway Performance Program	$4,405,268	$1,101,317	$5,506,585
Total Funding Programmed		**$4,405,268**	**$1,101,317**	**$5,506,585**

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:

Project Description:

This bridge project involves the superstructure replacement of Route 3 over Route 123 (Webster Street), H-06-010, and Route 3 over Route 123 (High Street), N-24-003.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	National Highway Performance Program	$6,843,367	$1,710,842	$8,554,209
2017	National Highway Performance Program	$2,303,985	$575,996	$2,879,981
Total Funding Programmed		**$9,147,352**	**$2,286,838**	**$11,434,190**

ID Number : 606632

Municipality(ies): Hopkinton, Westborough

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

Project Type: Bridge

Air Quality Status: Exempt

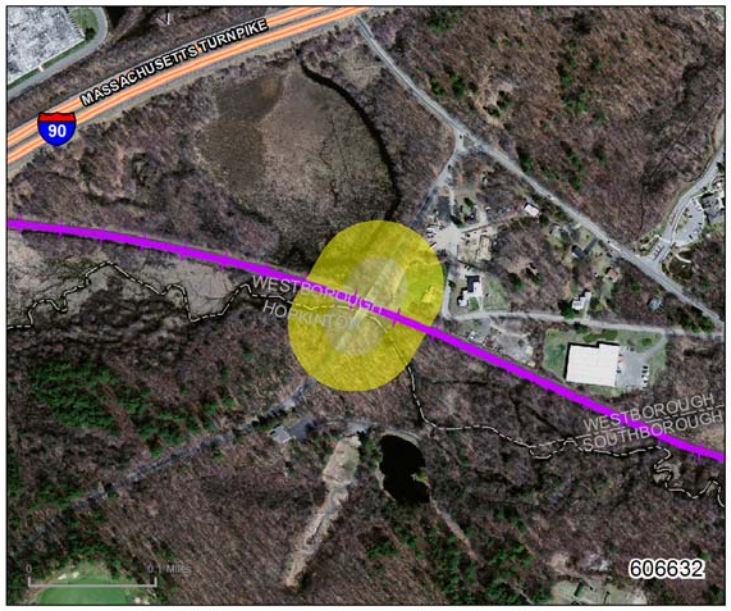
CO2 Impact: No CO2 Impact

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	Surface Transportation Program	$10,181,871	$2,545,468	$12,727,339
Total Funding Programmed		**$10,181,871**	**$2,545,468**	**$12,727,339**

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

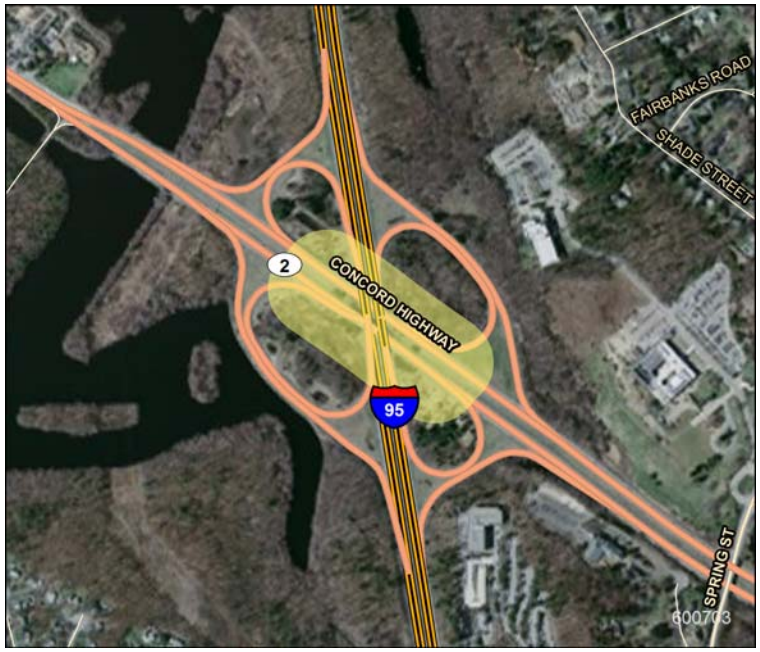
CO2 Impact: No CO2 Impact

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
2015	National Highway Performance Program	$11,909,244	$2,977,311	$14,886,555
2016	National Highway Performance Program	$4,086,400	$1,021,600	$5,108,000
Total Funding Programmed		**$15,995,644**	**$3,998,911**	**$19,994,555**

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	National Highway Performance Program	$3,320,000	$830,000	$4,150,000
2018	National Highway Performance Program	$13,000,000	$3,250,000	$16,250,000
Total Funding Programmed		**$16,320,000**	**$4,080,000**	**$20,400,000**

ID Number : 607477

Municipality(ies): Lynnfield, Peabody

Project Name: Resurfacing and Related Work on Route 1

Project Type: Major Highway

Air Quality Status: Exempt

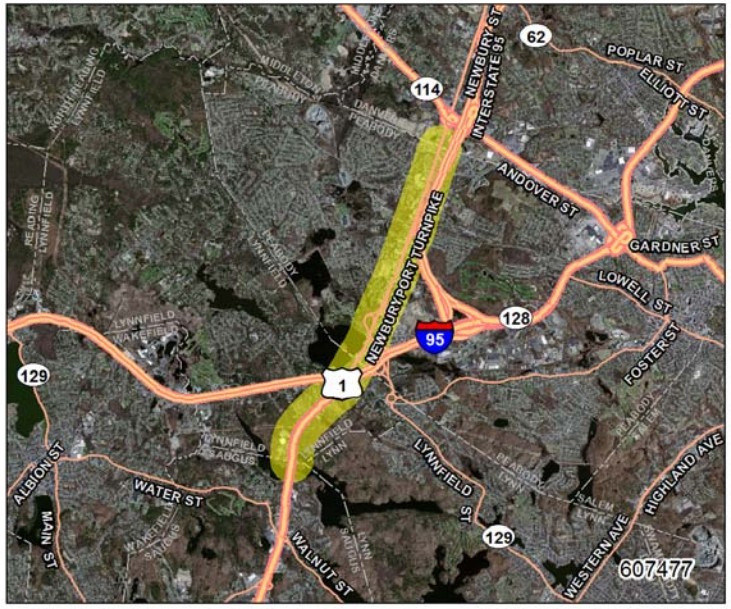
CO2 Impact: No CO2 Impact

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	$5,192,334	$1,298,083	$6,490,417
Total Funding Programmed		**$5,192,334**	**$1,298,083**	**$6,490,417**

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

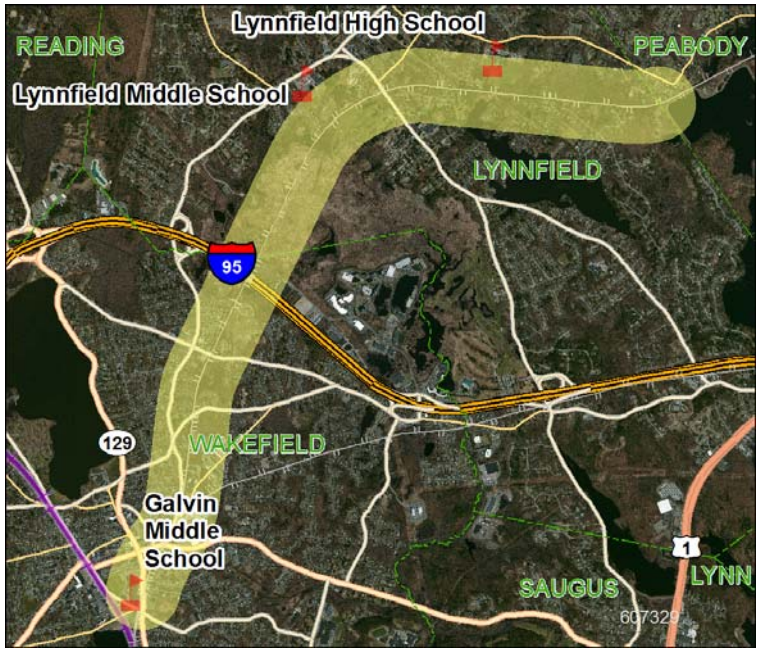
CO2 Impact: To Be Determined

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	Congestion Mitigation and Air Quality Program	$5,667,200	$1,416,800	$7,084,000
Total Funding Programmed		**$5,667,200**	**$1,416,800**	**$7,084,000**

ID Number : 604810

Municipality(ies): Marlborough

Project Name: Reconstruction of Route 85 (Maple Street)

Project Type: Arterial and Intersection

Air Quality Status: Exempt

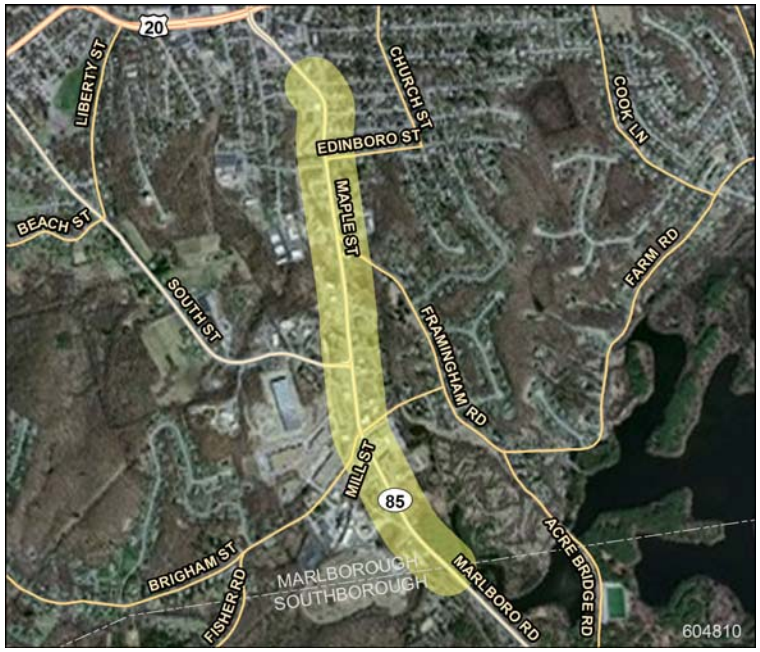
CO2 Impact: 325

Evaluation Rating: 82

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
2016	Congestion Mitigation and Air Quality Program	$1,600,000	$400,000	$2,000,000
2016	Highway Safety Improvement Program	$3,057,954	$339,773	$3,397,727
Total Funding Programmed		**$4,657,954**	**$739,773**	**$5,397,727**

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	Surface Transportation Program	$3,858,283	$964,571	$4,822,854
Total Funding Programmed		**$3,858,283**	**$964,571**	**$4,822,854**

ID Number : 1624

Municipality(ies): Marshfield

Project Name: Resurfacing & 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:

Project Description:

This project consists of resurfacing and related work along Route 3 in Marshfield.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	National Highway Performance Program	$3,518,628	$879,657	$4,398,285
Total Funding Programmed		**$3,518,628**	**$879,657**	**$4,398,285**

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: 6.02

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	Surface Transportation Program	$12,000,000	$3,000,000	$15,000,000
2017	Surface Transportation 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), Medford Hillside (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	Congestion Mitigation and Air Quality Program	$10,741,776	$2,685,444	$13,427,220
2018	Surface Transportation Program	$21,258,224	$5,314,556	$26,572,780
Total Funding Programmed		**$62,400,000**	**$15,600,000**	**$78,000,000**

ID Number : 605657

Municipality(ies): Medway

Project Name: Reconstruction on Route 109, from Holliston Street to 100 Feet West of Highland Street

Project Type: Arterial and Intersection

Air Quality Status: Exempt

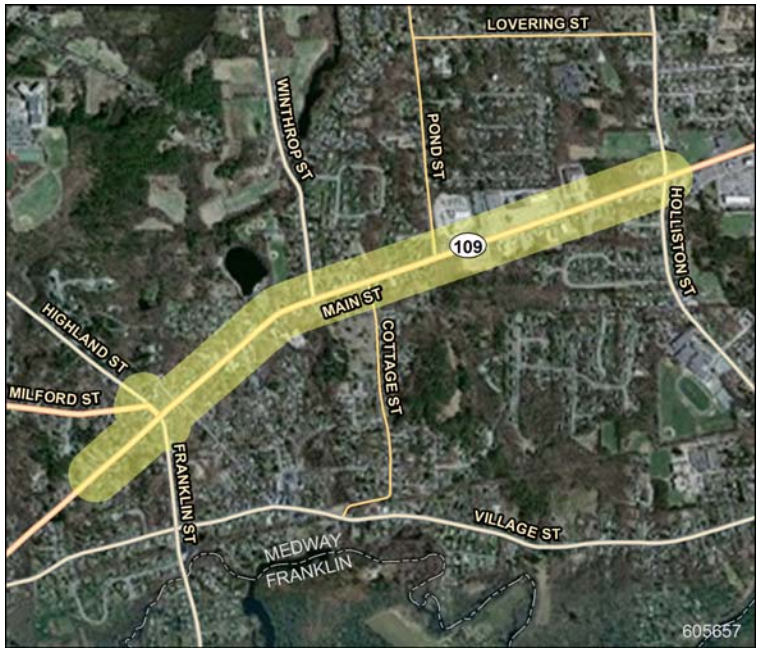
CO2 Impact: 352

Evaluation Rating: 82

MPO / CTPS Study: Route 109 Corridor Planning Study (2003)

LRTP Status: 2016-20

Project Length: 3.05



Project Description:

The Route 109 reconstruction project in Medway will focus on roadway improvements in Medway’s business district including resurfacing and reconstruction, consolidating curb cuts, sidewalks, signage, street lighting, and aesthetic improvements. Signal upgrade and capacity improvements will be implemented at the intersection of Main, Franklin, Milford, and Highland Streets, including widening for turn lanes in the SB and WB approaches. Work also includes adjusting the grade on Main Street west of Winthrop Street for approximately 700 feet.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Congestion Mitigation and Air Quality Program	$4,000,000	$1,000,000	$5,000,000
2015	Highway Safety Improvement Program	$2,700,000	$300,000	$3,000,000
2015	Surface Transportation Program	$1,211,078	$302,770	$1,513,848
2015	Transportation Alternatives	$2,038,975	$509,744	$2,548,719
Total Funding Programmed		**$9,950,054**	**$2,112,513**	**$12,062,567**

ID Number : 607920

Municipality(ies): Milton

Project Name: Safe Routes to School (Glover Elementary School)

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

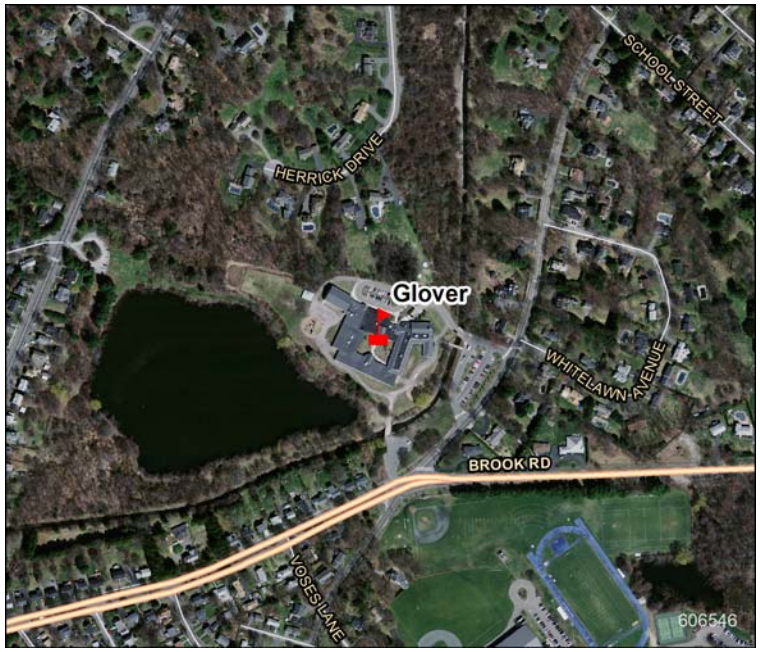
CO2 Impact: Assumed Nominal Reduction

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project will provide bicycle and pedestrian improvements around Glover Elementary School in Milton.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Transportation Alternatives	$580,000	$145,000	$725,000
Total Funding Programmed		**$580,000**	**$145,000**	**$725,000**

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

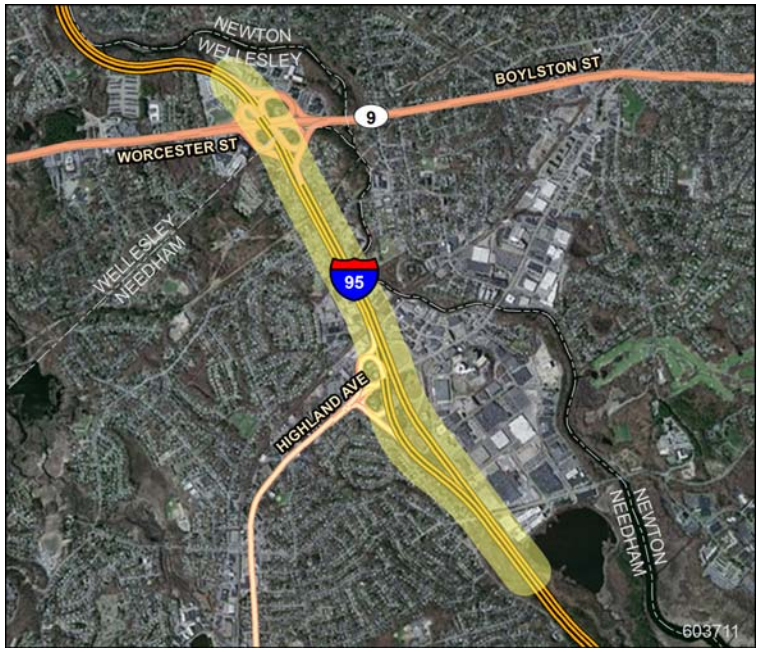
CO2 Impact: Model

Evaluation Rating:

MPO / CTPS Study:

LRTP Status: 2012-20

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 five 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; and, I-95 (Route 128) over Route 9 in Wellesley.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	National Highway Performance Program	$24,000,000	$6,000,000	$30,000,000
2016	National Highway Performance Program	$24,000,000	$6,000,000	$30,000,000
2017	National Highway Performance Program	$11,200,000	$2,800,000	$14,000,000
2018	National Highway Performance Program	$11,014,546	$2,753,637	$13,768,183
Total Funding Programmed		**$70,214,546**	**$17,553,637**	**$87,768,183**

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

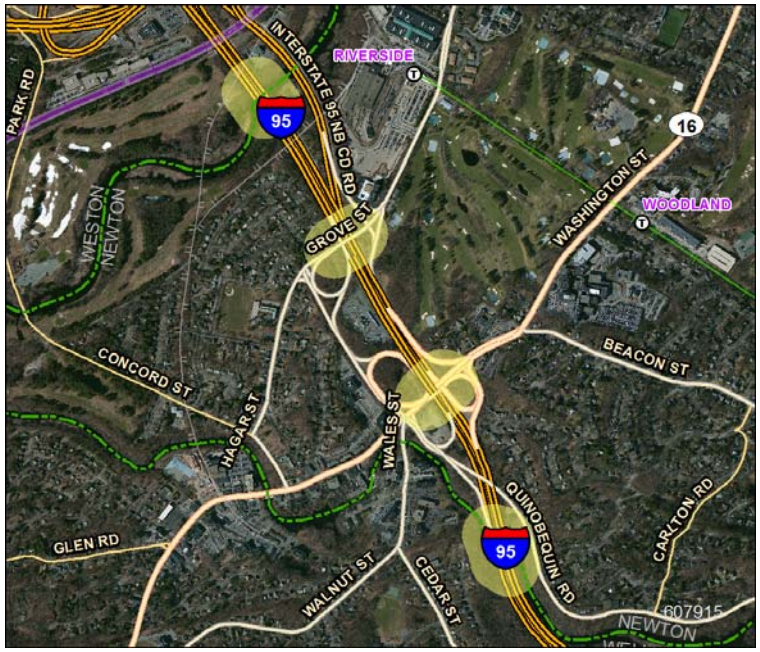
CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project consists of maintenance on four bridges on I-95/Route 128 (N-12-063, N-12-054, N-12-055 and N-12-056).

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	National Highway Performance Program	$1,379,520	$344,880	$1,724,400
Total Funding Programmed		**$1,379,520**	**$344,880**	**$1,724,400**

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

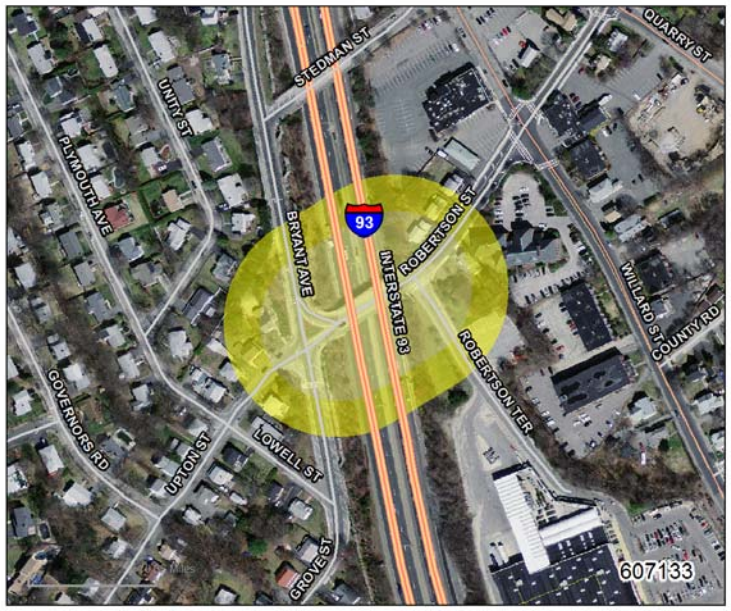
CO2 Impact: No CO2 Impact

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	Surface Transportation Program	$5,148,610	$1,287,153	$6,435,763
Total Funding Programmed		**$5,148,610**	**$1,287,153**	**$6,435,763**

ID Number : 1565

Municipality(ies): Regional

Project Name: Accelerated Bridge Program - Bridge

Project Type: Bridge

Air Quality Status: Exempt

CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:

Project Description:

Funds various contracts associated with the Accelerated Bridge Program, a multi-year effort to repair and rehabilitate structurally deficient bridge across the state.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Grant Anticipation Notes Accelerated Bridge Program	$2,566,005	$641,501	$3,207,506
2015	Grant Anticipation Notes Accelerated Bridge Program	$19,669,995	$4,917,499	$24,587,494
2015	Grant Anticipation Notes Accelerated Bridge Program	$2,400,000	$600,000	$3,000,000
2016	Grant Anticipation Notes Accelerated Bridge Program	$41,403,091	$10,350,773	$51,753,864
2016	Grant Anticipation Notes Accelerated Bridge Program	$11,480,000	$2,870,000	$14,350,000
2017	Grant Anticipation Notes Accelerated Bridge Program	$72,457,291	$18,114,323	$90,571,614
2017	Grant Anticipation Notes Accelerated Bridge Program	$11,480,000	$2,870,000	$14,350,000
2018	Grant Anticipation Notes Accelerated Bridge Program	$84,989,291	$21,247,323	$106,236,614
Total Funding Programmed		**$246,445,674**	**$61,611,418**	**$308,057,092**

ID Number : 1571

Municipality(ies): Regional

Project Name: Intersection Improvement Program

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:

The purpose of this program is to identify and implement short-term improvements at signalized intersections to improve traffic operations. The program takes into account that signal timing has a greater impact on transportation system efficiency than any other operational measure in the traffic engineering toolkit.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Congestion Mitigation and Air Quality Program	$320,000	$80,000	$400,000
Total Funding Programmed		**$320,000**	**$80,000**	**$400,000**

ID Number : 456661

Municipality(ies): Regional

Project Name: Clean Air and Mobility

Project Type: Clean Air and Mobility

Air Quality Status: Exempt

CO2 Impact: To Be Determined

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:

Project Description:

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2016	Congestion Mitigation and Air Quality Program	$299,880	$74,970	$374,850
Total Funding Programmed		**$299,880**	**$74,970**	**$374,850**

ID Number : 1596

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	Transportation Alternatives	$748,800	$187,200	$936,000
Total Funding Programmed		**$748,800**	**$187,200**	**$936,000**

ID Number : 605146

Municipality(ies): Salem

Project Name: Reconstruction on Canal Street, from Washington Street & Mill Street to Loring Avenue & Jefferson Avenue

Project Type: Arterial and Intersection

Air Quality Status: Exempt

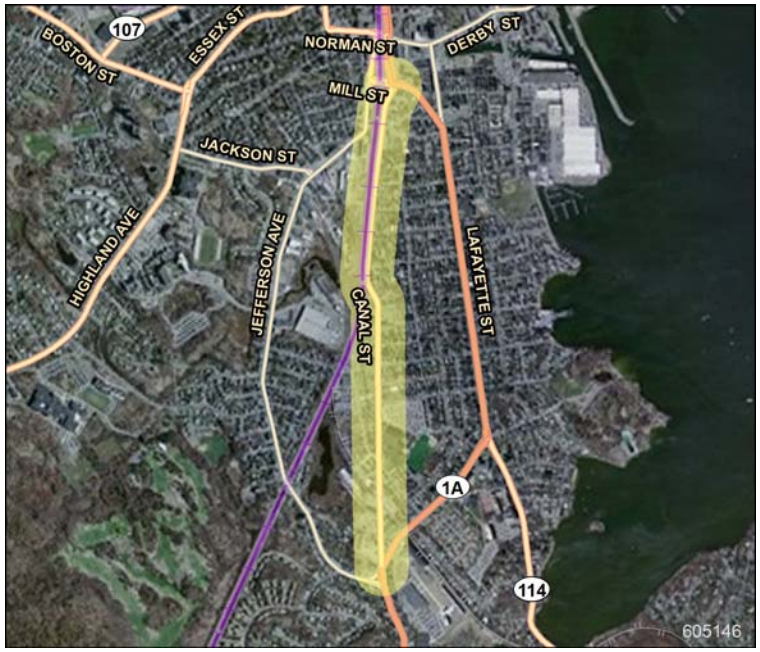
CO2 Impact: 18

Evaluation Rating: 85

MPO / CTPS Study: Transportation Improvement Study for Routes 1A, 114, and 107, and Other Major Roadways in Downtown Salem (2005)

LRTP Status:

Project Length: 1.22



Project Description:

The improvements include reconstruction of the roadway pavement, curbing, and sidewalks. Wheelchair ramps and appropriate pedestrian crossings will be added to improve pedestrian safety. Additional improvements such as trees and ornamental lighting, and curb extensions will be incorporated. Pavement markings will be provided to define the parking areas to remain and provide defined shoulder areas for use by bicycles. Drainage improvements will be made, the roadway crown will be adjusted to provide a consistent cross slope, and repair of settled locations will be done. Access issues with area business will be more clearly defined to improve safety for vehicles entering and exiting local businesses. Traffic signals at Mill and Washington and at Loring and Jefferson will be updated.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Congestion Mitigation and Air Quality Program	$1,600,000	$400,000	$2,000,000
2015	Highway Safety Improvement Program	$1,800,000	$200,000	$2,000,000
2015	Surface Transportation Program	$3,094,210	$773,552	$3,867,762
Total Funding Programmed		**$6,494,210**	**$1,373,552**	**$7,867,762**

ID Number : 1622

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:

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	$8,496,302	$2,124,076	$10,620,378
Total Funding Programmed		**$8,496,302**	**$2,124,076**	**$10,620,378**

ID Number : 1529

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	Transportation Alternatives	$540,800	$135,200	$676,000
Total Funding Programmed		**$540,800**	**$135,200**	**$676,000**

ID Number : 607892

Municipality(ies): Somerville

Project Name: Safe Routes to School (Healey School)

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

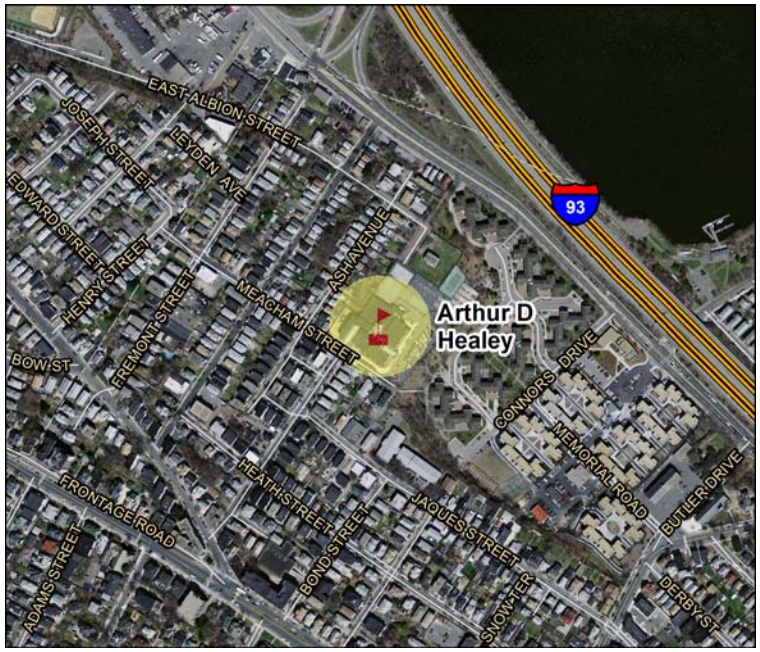
CO2 Impact: Assumed Nominal Reduction

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length:



Project Description:

This project will provide bicycle and pedestrian improvements around Healey School in Somerville.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Transportation Alternatives	$560,000	$140,000	$700,000
Total Funding Programmed		**$560,000**	**$140,000**	**$700,000**

ID Number : 604989

Municipality(ies): Southborough

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

Project Type: Arterial and Intersection

Air Quality Status: Exempt

CO2 Impact: 101

Evaluation Rating: 69

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 within the existing right-of-way. 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	Congestion Mitigation and Air Quality Program	$3,230,696	$807,674	$4,038,370
2017	Transportation Alternatives	$2,259,506	$564,876	$2,824,382
Total Funding Programmed		**$5,490,202**	**$1,372,550**	**$6,862,752**

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

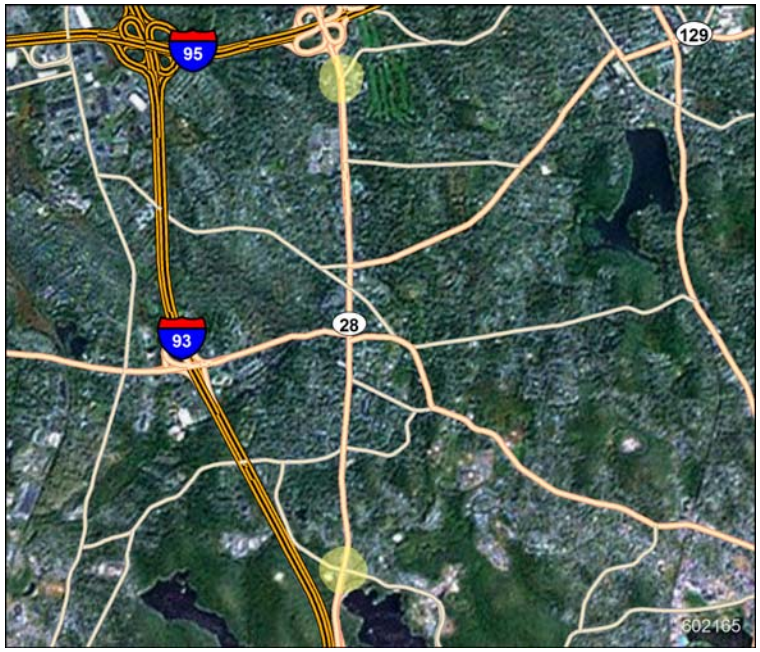
CO2 Impact: 154

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
2016	Congestion Mitigation and Air Quality Program	$2,614,693	$653,673	$3,268,366
Total Funding Programmed		**$2,614,693**	**$653,673**	**$3,268,366**

ID Number : 604652

Municipality(ies): Stoneham, Winchester, Woburn

Project Name: Tri-Community Bikeway

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

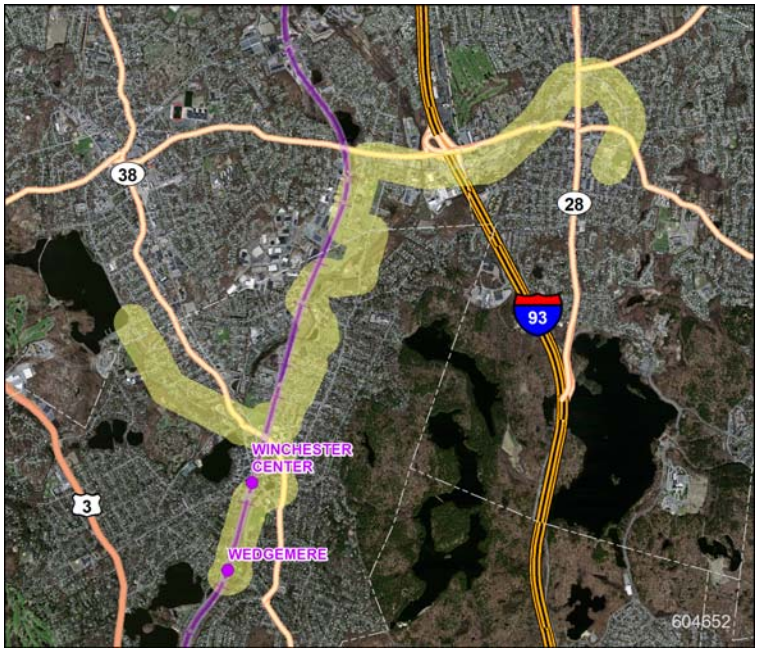
CO2 Impact: 435

Evaluation Rating: 75

MPO / CTPS Study: Stoneham Bikeway Preliminary Study (1999)

LRTP Status:

Project Length: 6.63



Project Description:

The proposed project involves the construction of a bikeway from the Wedgemere MBTA Station in Winchester northerly to Horn Pond in Woburn and Recreation Park in Stoneham, a total distance of approximately 7 miles. The objective of this project is to provide non-motorized access to commuter rail property, schools, recreation and commercial areas along the length of the bikeway and, subsequently, reduce congestion and improve air quality by converting some motorized traffic to non-motorized.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Congestion Mitigation and Air Quality Program	$4,343,288	$1,085,822	$5,429,110
Total Funding Programmed		**$4,343,288**	**$1,085,822**	**$5,429,110**

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

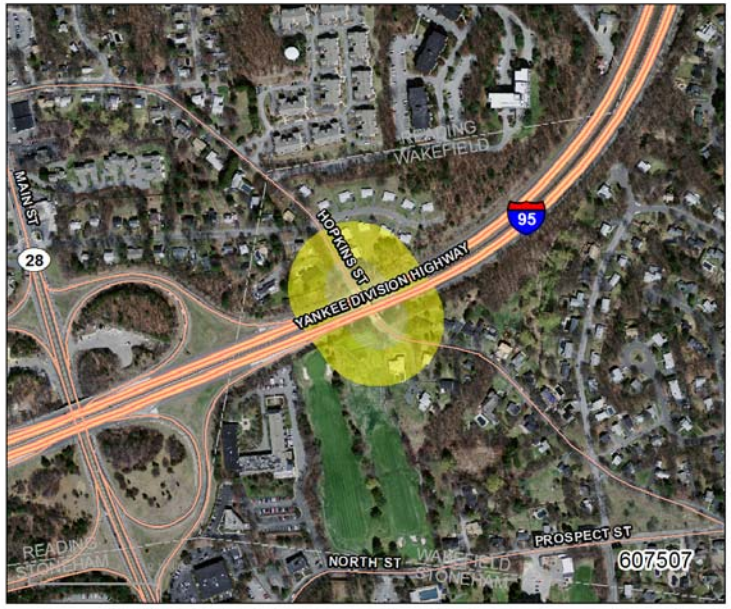
CO2 Impact: Assumed Nominal Reduction

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	National Highway Performance Program	$1,975,949	$493,987	$2,469,936
Total Funding Programmed		**$1,975,949**	**$493,987**	**$2,469,936**

ID Number : 607533

Municipality(ies): Waltham

Project Name: Woerd Avenue over the Charles River

Project Type: Bridge

Air Quality Status: Exempt

CO2 Impact: No CO2 Impact

Evaluation Rating:

MPO / CTPS Study:

LRTP Status:

Project Length: 0.02

Project Description:

This project is intended to replace a structurally deficient bridge on Woerd Avenue over the Charles River in Waltham.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2018	Surface Transportation Program	$3,098,688	$774,672	$3,873,360
Total Funding Programmed		**$3,098,688**	**$774,672**	**$3,873,360**

ID Number : 1594

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	Transportation Alternatives	$531,360	$132,840	$664,200
Total Funding Programmed		**$531,360**	**$132,840**	**$664,200**

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	Congestion Mitigation and Air Quality Program	$1,545,483	$386,371	$1,931,854
Total Funding Programmed		**$1,545,483**	**$386,371**	**$1,931,854**

ID Number : 1631

Municipality(ies): Weymouth

Project Name: Safe Routes to School (Pingree Elementary)

Project Type: Bicycle and Pedestrian

Air Quality Status: Exempt

CO2 Impact:

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	Transportation Alternatives	$518,400	$129,600	$648,000
Total Funding Programmed		**$518,400**	**$129,600**	**$648,000**

ID Number : 603008

Municipality(ies): Woburn

Project Name: Bridge Replacement, Salem Street over MBTA

Project Type: Bridge

Air Quality Status: Exempt

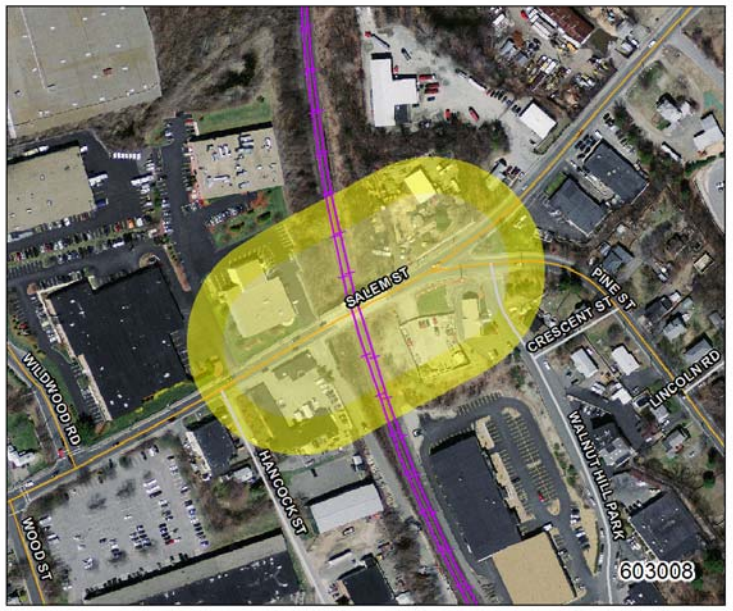
CO2 Impact: No CO2 Impact

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
2015	National Highway Performance Program	$4,014,782	$1,003,695	$5,018,477
Total Funding Programmed		**$4,014,782**	**$1,003,695**	**$5,018,477**

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: 71

MPO / CTPS Study:

LRTP Status: 2016-20

Project Length: 0.37

Project Description:

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

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2017	Highway Safety Improvement Program	$4,277,554	$475,284	$4,752,838
Total Funding Programmed		**$4,277,554**	**$475,284**	**$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
2015	Section 5337	$40,000,000	$10,000,000	$50,000,000
2015	Section 5307	$32,761,068	$8,190,267	$40,951,335
2015	Section 5307	$25,924,448	$6,481,112	$32,405,560
2016	Section 5337	$16,000,000	$4,000,000	$20,000,000
	Total Funding Programmed	**$114,685,516**	**$28,671,379**	**$143,356,895**

Transit Agency: MBTA

Program/Project Name: Revenue Vehicles

Air Quality Status: Exempt

CO2 Impact: To Be Determined

Project Description: Consists primarily of fleet procurement and overhaul programs in subway, commuter rail and bus fleets, including the procurement of new vehicles for the red and orange lines of the subway system.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Section 5307	$64,000,000	$16,000,000	$80,000,000
2016	Section 5307	$64,000,000	$16,000,000	$80,000,000
2017	Section 5307	$96,000,000	$24,000,000	$120,000,000
2018	Section 5307	$96,000,000	$24,000,000	$120,000,000
	Total Funding Programmed	**$320,000,000**	**$80,000,000**	**$400,000,000**

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. Active bridge projects include the Merrimack River, Shawsheen River, Dean Road, and Neponset River bridges.

Year	Funding Program	Federal Funds	Non-Federal Funds	Total Funds
2015	Section 5337	$60,000,000	$15,000,000	$75,000,000
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
	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
2015	Section 5337	$21,190,546	$5,297,637	$26,488,183
2015	Section 5339	$5,287,027	$1,321,757	$6,608,784
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	$26,685,516	$6,671,379	$33,356,895
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	$26,685,516	$6,671,379	$33,356,895
2018	Section 5337	$61,190,546	$15,297,637	$76,488,183
2018	Section 5339	$5,287,027	$1,321,757	$6,608,784
	Total Funding Programmed	**$256,966,840**	**$64,241,713**	**$321,208,553**

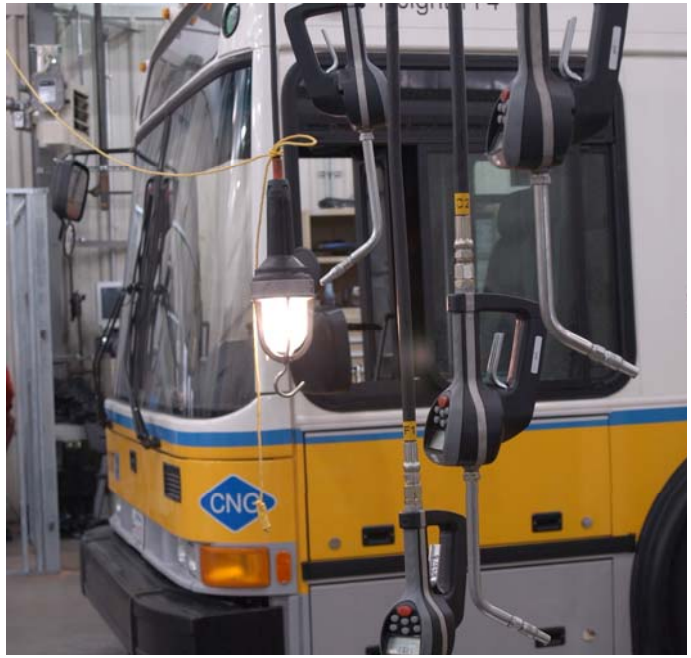
Transit Agency: MBTA

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
2015	Section 5307	$12,000,000	$3,000,000	$15,000,000
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
	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
2015	Section 5307	$193,391	$48,347	$241,738
2016	Section 5307	$193,391	$48,347	$241,738
2017	Section 5307	$193,391	$48,347	$241,738
2018	Section 5307	$193,391	$48,347	$241,738
	Total Funding Programmed	**$773,564**	**$193,388**	**$966,952**

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
2015	Section 5307	$336,701	$84,175	$420,876
2016	Section 5307	$342,002	$85,500	$427,502
2017	Section 5307	$347,356	$86,839	$434,195
2018	Section 5307	$352,764	$88,191	$440,955
	Total Funding Programmed	**$1,378,823**	**$344,705**	**$1,723,528**

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
2015	Section 5307	$1,000,000	$250,000	$1,250,000
2016	Section 5307	$1,000,000	$250,000	$1,250,000
2017	Section 5307	$1,000,000	$250,000	$1,250,000
2018	Section 5307	$1,000,000	$250,000	$1,250,000
	Total Funding Programmed	**$4,000,000**	**$1,000,000**	**$5,000,000**

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
2015	Section 5307	$706,357	$176,589	$882,946
2016	Section 5307	$706,357	$176,589	$882,946
2017	Section 5307	$706,357	$176,589	$882,946
2018	Section 5307	$706,357	$176,589	$882,946
	Total Funding Programmed	**$2,825,427**	**$706,357**	**$3,531,784**

4 CHAPTER FOUR

Tracking and Demonstrating Progress Using Performance Measures

INTRODUCTION TO PERFORMANCE MEASURES

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); and programming documents, including State and metropolitan Transportation Improvement Programs (STIPs and TIPs). PBPP tries 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

The US Secretary of Transportation, in consultation with states, MPOs, and other stakeholders, will establish performance measures for pavement conditions and for the Interstate and NHS; bridges; injuries and fatalities; traffic congestion; on-road mobile source emissions; and freight movement on the interstate system. 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.

WORK UNDERWAY AT MASSDOT

MassDOT has begun to respond to the new MAP-21 performance-measure requirements by incorporating PBPP into weMove Massachusetts (WMM), MassDOT's statewide strategic multimodal plan. In December 2013, MassDOT released *WMM: Planning for Performance*, a single, multimodal LRTP. The WMM Planning for Performance incorporates PBPP into investment decision making to calculate the differences in pavement and bridge conditions, mobility, and safety resulting from the different funding levels available to MassDOT. In the future, MassDOT will use the scenario tool developed for this process to update and refine investment priorities.

WORK UNDERWAY AT THE BOSTON REGION MPO

The Boston Region MPO also has begun to prepare for new MAP-21 performance-measure requirements by: setting MPO goals; ensuring that MPO goals align with national goals; identifying performance measures and associated performance targets that support objectives and can be used to track results over time; and demonstrating, through analysis, how MPO investment decisions are making progress toward achieving the MPO goals using performance measures.

Table 4–1 cites the proposed MPO goals and how they align with established national goals. Thus far, the MPO has made progress in its performance-based planning in its goal of safety (as seen in "Safety—Tracking Performance Measures" below). As the MPO advances in its performance-based

planning, staff will create sections for the remaining goals.

TABLE 4–1 NATIONAL AND MPO PERFORMANCE GOALS

National Goal	Proposed MPO Goal
Infrastructure, System Reliability	System Preservation
Congestion Reduction	Congestion Reduction
Safety	Safety
Safety	Security
Environmental Sustainability	Transportation Options/ Mode Share
Environmental Sustainability	Greenhouse Gas Reduction
Freight Movement/ Economic Vitality	Economic Impact

Safety—Tracking Performance Measures

Safety for all transportation modes continues to be a top priority for the MPO. The existing MPO policies are committed to investing in projects and programs that would reduce the severity of crashes and improve safety for pedestrians and cyclists.

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

Safety also continues to be a primary goal of the US Department of Transportation (USDOT). To achieve the national safety goal—of a significant reduction in traffic fatalities and serious injuries on all public roads—USDOT proposed rulemaking would require state DOTs and MPOs to establish and report specific annual targets for fatalities and serious injuries.

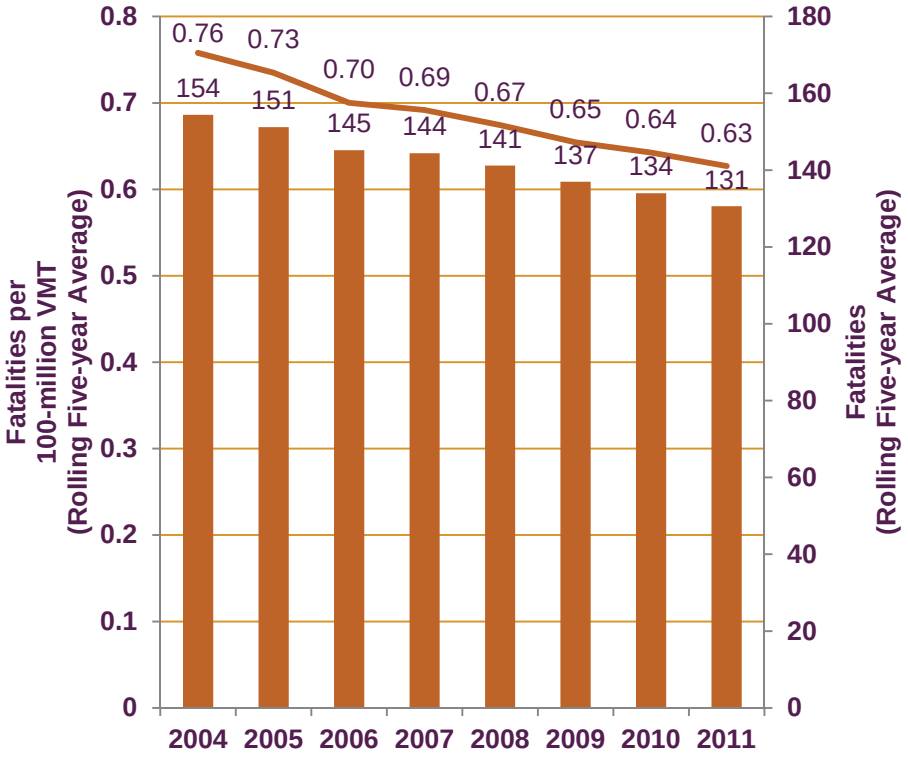
Going forward, the MPO will track traffic fatalities and serious injuries in the Boston region to determine past trends, identify regional safety issues, and set targets for preferred performance. Tracking these measures also would help determine whether the MPO's transportation investment decisions support reduced fatalities and serious injuries. Based on available data, MPO staff already has begun to track overall traffic fatalities and the fatality rate per 100 million vehicle-miles traveled (VMT). Figure 4-1 demonstrates how the MPO will track these safety measures in the future. The figure shows the number of traffic fatalities (based on a rolling five-year average) and the fatality rate (per 100 million VMT) between 2004 and 2011. During those eight years, there was a steady decline in overall traffic fatalities from 154 fatalities in 2004 to 131 fatalities in 2011, representing more than three lives saved per year.

There also was a decline in the fatality rate from 0.76 fatalities per 100 million VMT in 2004 to 0.63 fatalities per 100 million VMT in 2011. These results provide baseline data for traffic fatalities and indicate that safety is improving in the region. However, the results

also indicate that safety is not improving for all modes.

FIGURE 4–1

Traffic Fatalities and Fatality per 100-Million Vehicle-Miles Traveled in the Boston Region MPO, 2004–2011

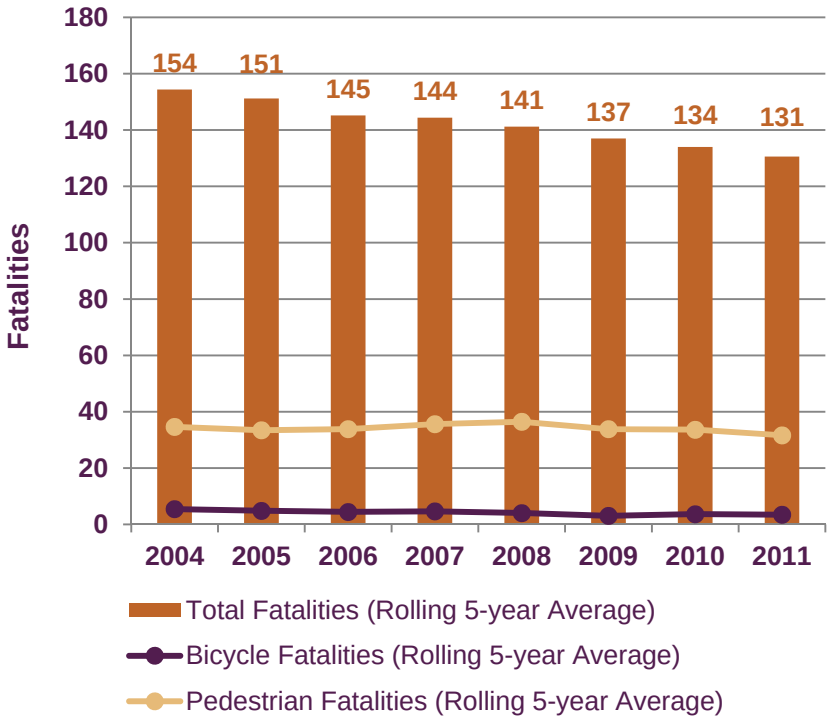


Examining traffic fatalities by mode reveals that pedestrians did not experience comparable safety improvements between 2004 and 2011. Figure 4–2 displays pedestrian and bicycle fatalities relative to total traffic fatalities from 2004 to 2011. The figure indicates that pedestrian fatalities did not decline at the same rate as total fatalities, and that they actually increased in three of the years.

Thus, pedestrian fatalities continue to make up a disproportionate share of traffic fatalities. While pedestrians typically account for approximately 16 percent of all trips in the region, they accounted for 22 to 26 percent of all traffic fatalities between 2004 and 2011.

FIGURE 4–2

Traffic Fatalities in the Boston Region MPO by Mode, 2004–2011



Safety —Demonstrating Progress Using Performance Measures

There are numerous MassDOT and MPO investment and policy priorities that would help the agencies progress toward reducing traffic fatalities and serious injuries. MassDOT's *Strategic Highway Safety Plan* identifies nine strategic, proactive, and emerging emphasis areas that represent a significant share of traffic fatalities and serious injuries, as well as strategies to help to reduce them.

Pedestrians are one of the state's nine strategic emphasis areas. Massachusetts agencies are involved in several initiatives to promote and improve pedestrian safety, including: applying Complete Streets in project development; the Safe Routes to School (SRTS) program; and Road Safety Audits. Other strategies include incorporating the Healthy Transportation Policy Directive to provide all customers with access to safe and comfortable walking, bicycling, and transit options; and piloting the Bicycle and Pedestrian Safety Awareness and Enforcement Program in 12 communities with high pedestrian and bicycle crash rates.

The Boston Region MPO is most actively involved in reducing traffic fatalities and serious injuries through its investments in projects and planning activities. The MPO evaluates projects based on crashes and the Equivalent Property Damage Only (EPDO) index to assess locations with safety needs, and considers proposed improvements to determine whether they would address those needs. This evaluation process helps to identify the projects that would have the greatest impact on reducing crash severity.

The projects programmed in the draft federal fiscal years (FFYs) 2015–18 TIP Target Program propose safety improvements at numerous high-crash locations, thus aiming to make significant progress toward reducing fatalities and serious injuries in the region.

Arterials

Arterial roadway investment will provide safety improvements for automobiles, trucks, bicyclists, and pedestrians at numerous high-crash locations in the region. Of the nine arterials programmed in the MPO's Target Program, five projects address high-crash clusters in the region, including two of the top-200 crash locations statewide. All of the arterials will provide bicycle and pedestrian accommodations, adding 13 miles of new sidewalk and 20 miles of new bicycle lanes, as well as addressing inadequate existing facilities.

Intersections

Continued investment in the Intersection Improvement Program can help reduce intersection crashes through signal retiming at prioritized locations throughout the region.

Shared-use Paths

Construction of the Tri-Community Bikeway in Winchester, Stoneham, and Woburn will provide safety improvements for bicyclists and pedestrians by providing safe access to downtown, recreational areas, and two commuter rail stations.

Highway Expansion

Widening 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. Adding a fourth full-time travel lane will allow the state to end breakdown lane usage during the peak periods and adding collector roads between Highland Avenue and Kendrick Streets will provide safer weaving movements between the interchanges.

Transit Expansion

The extension of the MBTA Green Line, Phase 2 from College Avenue to Route 16, likely would provide indirect safety benefits by reducing VMT. The project is expected to shift more than 600 daily drivers to transit, which would result in an annual reduction of two million VMT on nearby roadways, and increased traffic safety.

Safety—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 and their associated targets. In the future, the MPO will set targets for the safety performance measure as well as targets for performance measures under the remaining goals. If, in its annual monitoring, the MPO sees it is not making progress toward its safety goal, 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 safety outcomes for all concerned.

5 CHAPTER FIVE
Determination of Air Quality Conformity

INTRODUCTION

The 1990 Clean Air Act Amendments (CAAA) require metropolitan planning organizations within nonattainment and maintenance areas to perform air-quality conformity determinations prior to the approval of Long-Range Transportation Plans (LRTPs) and Transportation Improvement Programs (TIPs), and at such other times as required by regulation. A nonattainment area is one that the United States Environmental Protection Agency (EPA) has designated as not meeting certain air-quality standards. A maintenance area is a nonattainment area that now meets the standards and has been redesignated as maintaining the standard. A conformity determination is a demonstration that a region's plans, programs, and projects are consistent with the State Implementation Plan (SIP) for attaining the air-quality standards. The CAAA requirement to perform a conformity determination ensures that federal approval and funding go to transportation activities that are consistent with air-quality goals. This chapter presents information and analyses for the air-quality conformity determination for the projects in the federal fiscal years (FFYs) 2015–18 TIP, as required by federal regulations (40 CFR Part 93) and the Massachusetts Conformity Regulations (310 CMR 60.03). It also includes the regulatory framework, conformity requirements, planning assumptions, mobile-source emission budgets, and conformity consultation procedures related to the determination.

LEGISLATIVE BACKGROUND

The 1970 Clean Air Act defined a one-hour national ambient air-quality standard (NAAQS) for ground-level ozone. The 1990 CAAA further classified degrees of nonattainment of the one-hour standard based on the severity of the monitored levels of the pollutant. The entire commonwealth of Massachusetts was classified as being in serious nonattainment for the one-hour ozone standard, with a required attainment date of 1999. The attainment date was later extended, first to 2003 and then to 2007.

In 1997, the EPA proposed a new, eight-hour ozone standard that replaced the one-hour standard; the new standards became effective June 15, 2005. Scientific research had shown that ozone could affect human health at lower levels than previously thought, and over longer exposure times than one hour. The new standard was challenged in court, and after a lengthy legal battle, the courts upheld it. It was finalized in June 2004. The eight-hour standard is 0.08 parts per million, averaged over eight hours and not to be exceeded more than once per year.

Nonattainment areas were again further classified based on the severity of the eight-hour values. Massachusetts as a whole was classified as being in moderate nonattainment for the eight-hour standard, but it was separated into two nonattainment areas – Eastern Massachusetts and Western Massachusetts. The Eastern Massachusetts Ozone Nonattainment Area includes all of Barnstable, Bristol, Dukes, Essex, Middlesex, Nantucket, Norfolk, Suffolk, and Worcester counties. Because of this nonattainment classification, the CAAA required the Commonwealth to reduce its emissions of volatile organic compounds (VOCs) and nitrogen oxides (NOx), the two major precursors of ozone formation, to achieve attainment of the eight-hour ozone standard by 2009.

In addition, on April 1, 1996, the cities of Boston, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, and Somerville were classified as being in attainment for carbon monoxide (CO) emissions. As part of the TIP, an air-quality conformity analysis must still be completed for these communities, as they have a carbon monoxide maintenance plan approved as part of the SIP. The 2010 CO motor vehicle emission budget established for the Boston CO attainment area with a maintenance plan is 228.33 tons of CO per winter day.

As of April 22, 2002, the community of Waltham was redesignated as being in attainment for CO, with an EPA-approved limited-maintenance plan. In areas that have approved limited-maintenance plans, federal actions requiring conformity determinations under the transportation conformity rule are considered to satisfy the “budget test” (since budgets are not treated as being constraining in these areas for the length of the initial maintenance period). Any requirements for future “project-level” conformity determinations for projects located within this community will continue to use a “hot-spot” analysis to ensure that any new transportation projects in this CO attainment area do not cause or contribute to CO nonattainment.

In March 2008, EPA published revisions to the eight-hour ozone NAAQS that established a level of 0.075 ppm (March 27, 2008; 73 FR 16483). In 2009, the EPA announced it would reconsider this standard because it fell outside of the range recommended by the Clean Air Scientific Advisory Committee. However, the EPA never took final action on the reconsideration so the standard would remain at 0.075 ppm.

After reviewing data from Massachusetts monitoring stations, the EPA sent a letter on December 16, 2011, proposing that only Dukes County would be designated as being in nonattainment for the new, proposed 0.075 ozone standard. Massachusetts concurred with these findings.

On Monday, May 21, 2012, the final rule (77 FR 30088) was published in the Federal Register, defining the 2008 NAAQS at 0.075 ppm, the standard that was promulgated in March 2008. A second rule (77 FR 30160), published on May 21, 2012, revoked the 1997 ozone NAAQS, which was to become effective one year after the 2008 NAAQS became effective (July 20, 2012).

Also on Monday, May 21, 2012, the air-quality designations areas for the 2008 NAAQS were

published in the Federal Register. In this Federal Register, the only area in Massachusetts that was designated as being in nonattainment was Dukes County. All other counties were classified as unclassifiable/attainment. Therefore, the Boston Region MPO does not have to perform a conformity determination for ozone for this TIP.

However, the Boston Region MPO is required to continue to perform conformity determinations for the Boston CO Maintenance Area until at least 2020 to comply with regulations requiring continued conformity for an additional 10 years after 2010. In addition, the MPO is required to implement the SIP's Transportation Control Measures (for example, the Central Artery/Tunnel (CA/T) project mitigation commitments). The Boston Region MPO will also be required to continue to perform conformity determinations for the Waltham CO Limited-Maintenance Area.

CONFORMITY REGULATIONS

Designated MPOs are required to perform conformity determinations by nonattainment or maintenance area for their LRTPs and TIPs. Section 176 of the CAAA defines conformity to a State Implementation Plan (SIP) to mean conformity to the plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of the standards. The Boston Region MPO must certify with regard to the activities outlined in the LRTP and TIP that:

- None will cause or contribute to any new violation of any standard in any area.
- None will increase the frequency or severity of any existing violation of any standard in any area.
- None will delay the timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The EPA issued final conformity regulations in the November 24, 1993, Federal Register, and the Massachusetts Department of Environmental Protection (DEP) issued conformity regulations that became effective December 30, 1994. They set forth requirements for determining conformity of LRTPs, TIPs, and individual projects. The federal conformity regulations were amended several times through August 2010. The components of the required conformity analysis are listed below and are explained in detail subsequently.

Conformity Criteria

- Horizon years
- Latest planning assumptions
- Latest emission model used
- Timely implementation of transportation control measures (TCMs)
- Conformity in accordance with consultation procedures and SIP revisions
- Public participation procedures
- Financially constrained document

Procedures for Determining Regional Transportation Emissions

The Conformity Test

The conformity test must be consistent with emission budgets set forth in the SIP. This conformity determination will show the consistency of the FFYs 2015–18 TIP with the CO emission budget for the Boston, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, and Somerville maintenance area.

CONFORMITY DETERMINATION CRITERIA

This conformity determination has been prepared in accordance with 40 CFR Part 93, Transportation Conformity Rule Amendments: Flexibility and Streamlining: Final Rule. It shows that the TIP has been prepared following all the guidelines and requirements of the Rule.

Horizon Year Requirements

The horizon years for regional model analysis were established to comply with 40 CFR 93.106(a) of the Federal Conformity Regulations. The years for which emissions are calculated are shown below.

- 2016 – Milestone Year and Analysis Year: This year is used to show conformity with the CO budget in the Boston nonattainment area.
- 2025 – Analysis Year
- 2035 – Horizon Year: Last forecast year of the LRTP

Latest Planning Assumptions

Section 93.110 of the Federal Conformity Regulations outlines the requirements for the most recent planning assumptions that must be in place at the time of the conformity determination. Assumptions must be derived from current estimates and future projections of population, household, employment, travel, and congestion data developed by the MPO staff. Analysis for the TIP is based on US census data and information obtained from the Metropolitan Area Planning Council (MAPC), the Massachusetts Department of Transportation (MassDOT), and other sources. The sources of data used for model calibration in this analysis are listed below:

- Population, households, and household size: Year 2009 data at a community level received from the US Census Bureau. Community to TAZ-level (transportation analysis zone) distribution is based on Census 2000 allocation.
- Employment: The Central Transportation Planning Staff's Eastern Massachusetts Site- Level Employment Database for 2009, finalized in 2010.
- Household income, resident workers, and vehicle ownership: The data from Summary File 3 data for Massachusetts from the 2000 US Census of Population and Housing were interpolated to produce year 2009 data.
- Household workers: The year 2009 data were arrived at by interpolating Census Transportation Planning Package Part 1 for Massachusetts from the 2000 US Census of Population and Housing

- Traffic volumes: MassDOT 2008–09 Traffic Volumes for the Commonwealth of Massachusetts. Traffic counts taken for external stations and screen lines were used.
- Population, household, and employment forecasts: The forecasts of population, households, and employment for the 101 cities and towns within the Boston Region MPO area were developed by MAPC using what is called the "MetroFuture" scenario. This scenario was developed by altering a number of assumptions from their previous Extended Growth scenario. The MetroFuture scenario seeks to channel regional growth and development by targeting the majority of growth to denser areas that already have available water, sewer, and transit infrastructure. In this scenario, it is assumed that a greater percentage of residents will be living within walking distance of transit and of major activity centers. The forecasts of population, households, and employment for the 63 cities and towns outside of the Boston Region MPO area that are in the MPO's modeled area were developed by MassDOT and the neighboring regional planning agencies (RPAs).
- Project-level data: Obtained from the responsible implementing agency.

Transit Service Policy Assumptions

The transit service assumptions used in ridership modeling for the TIP were based on MBTA service in the spring of 2009. The model calibration was performed using the following data:

- Ridership and Service Statistics, 8th edition, MBTA Blue Book, 2009
- MBTA Systemwide Passenger Survey (2008–09)

Emission Inventory Assumptions

For the FFYs 2015–18 TIP, conformity is determined in relation to the SIP mobile-source CO emission projections that have been set for the nine cities in the Boston area that are classified as being in attainment for CO. An emission attainment inventory for CO of 501.53 tons per winter day was established for all sources of CO emissions (mobile, industrial, and all other sources) for the redesignation year 1993. Of the 501.53 tons, 305.43 tons per winter day was allocated for mobile sources. In addition to the attainment year inventory, the EPA required that emission projections for every five years through 2010 be developed for all sources to ensure that the combination of all CO emissions would not exceed the 501.53 tons per winter day maximum allowance in the future. The mobile-source emission projection of 228.33 tons per winter day was set for 2010. Emissions from those nine towns in the Boston area may not exceed the amount in the last year of the maintenance plan (2010).

The Boston Region MPO estimated the results for the nine towns collectively using the Boston Region MPO's regional travel demand model set, using the latest planning assumptions for the conformity analysis.

Latest Emission Model

Emission factors used for calculating emission changes were determined using the EPA's latest

emissions model – Motor Vehicle Emissions Simulator (MOVES) 2010b. Emission factors for motor vehicles are specific to each model year, pollutant type, temperature, and travel speed. MOVES requires a wide range of input parameters, including inspection and maintenance program information and other data, such as fuel formulation and supply, speed distribution, vehicle fleet mix, and fleet age distribution.

The inputs used for the years 2016 through 2035 were received from the DEP, and include information on programs that were submitted to the EPA as the strategy for the Commonwealth to attain ambient air-quality standards. EPA regulations require that emission factors using the MOVES model be used for all conformity determinations performed after March 2, 2013.

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 through implementation of ongoing programs. The only exceptions are the bus immersion-heater program, the Newton Rider bus service, the private bus insurance discount concept, and the pedestrian malls in Lynn, Cambridge, and Needham. Other services have been substituted for these TCMs. These projects were all included in past Boston Region MPO LRTPs and TIPs.

TCMs were also submitted as SIP commitments as part of the Central Artery/Tunnel project mitigation. The status of these projects has been updated using the Administrative Consent Order (ACO) signed by the Executive Office of Transportation and the Executive Office of Environmental Affairs (EOEA), in September 2000 and January 2005, and the SIP – Transit Commitments Status Report, which was submitted by MassDOT to DEP in May 2014. All of the projects are included in the conformity of the FFYs 2015–18 TIP as recommended or completed projects. They include:

- Southeast Expressway High-Occupancy-Vehicle (HOV) Lane
- HOV Lane on I-93 to Mystic Avenue
- 20,000 New Park-and-Ride Spaces
- Ipswich Commuter Rail Extension to Newburyport
- Old Colony Commuter Rail Extension
- Framingham Commuter Rail Extension to Worcester
- South Boston Piers Transitway

Reevaluation Process of SIP TCMs

MassDOT and DEP went through an extensive process of reevaluating TCMs that had been included in the original Central Artery SIP that had not been completed on schedule – the Green Line Arborway Restoration, the Red Line–Blue Line Connector, and the Green Line Extension to Ball Square/Tufts University. This process began in 2004 and was

completed in 2008. The outcome included DEP's agreeing to the following alternative commitments:

- 1,000 New Parking Spaces in the Boston region
- Completion of a final design of the Red Line–Blue Line Connector from the Blue Line at Government Center to the Red Line at Charles Station
- Fairmount Line Improvements
- Enhanced Green Line extended beyond Lechmere Station to Medford Hillside and Union Square

MassDOT announced through its State Implementation Plan – Transit Commitments 2011 Status Report, submitted to DEP on July 27, 2011, that they are proposing delays in or changes to these projects. In that submission, MassDOT included a Petition to Delay for the Fairmount Line Improvements project and the 1,000 New Parking Spaces. They also made a formal request to remove the Red Line–Blue Line project and informed DEP that the Green Line Extension to College Avenue would be delayed. MassDOT worked with the DEP to set up a process for addressing these changes and continues to keep the Boston Region MPO informed of this process through its 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). The status of each of these projects, as reported in the status report, is provided below.

A Status Report of the Uncompleted SIP Projects

A more detailed description of the status of these projects can be found on MassDOT's website at www.massdot.state.ma.us.

1,000 New Parking Spaces — SIP Required Completion by December 2011

Project Status

MassDOT, along with the MBTA, identified a set of parking projects to fulfill the necessary SIP commitments and requirements. These projects include:

- Wonderland/Blue Line (Revere) – 612 spaces
- Beverly Depot/Commuter Rail – 102 spaces
- Savin Hill/Red Line (Dorchester) – 20 spaces
- Woodland/Green Line (Newton) – 100 spaces
- Quincy Shipyard/Ferry – 168 spaces

All of the projects slated to fulfill the SIP commitment were complete with the opening of Wonderland garage on June 30, 2012. In addition, MassDOT and the MBTA provided interim offset measures for the six-month delay in fulfilling the 1,000-parking-space commitment. The offset increased Saturday bus service on MBTA Route 111, the highest-ridership route serving the communities to the northeast of Boston.

Funding Source: the Commonwealth

Red Line–Blue Line Connector — Final Design — SIP Required Completion by December 2011

Project Status

MassDOT and the MBTA proposed to nullify the commitment to perform final design of the Red Line–Blue Line Connector because the construction of the project would be unaffordable. MassDOT officially sought approval from DEP to support a SIP amendment process. MassDOT did not propose to substitute any new projects in place of the Red Line–Blue Line Connector commitment, given the absence of any air-quality benefits associated with the current Red Line–Blue Line commitment (final design only). MassDOT submitted correspondence to DEP on July 27, 2011, which formally initiated the amendment process.

On September 13, 2012, 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 elimination of 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 DEP not removing the commitment. DEP accepted written testimony until September 24, 2012.

On August 23, 2013, EPA sent a letter to FHWA providing an update on Massachusetts Air Quality Conformity. In that letter, 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, DEP approved the 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 SIP must now be approved by EPA. The timing of the final approval is currently unknown.

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. The punch-list construction items for the Four Corners station will be complete in 2014. The Talbot Avenue Station opened in November 2012. A station at Blue Hill Avenue, which had provoked controversy among abutters, is now moving forward, and design is 60 percent complete. An independent peer review of the location, design, and environmental impacts was recently completed and the draft results were received and are being reviewed internally at MassDOT. The MBTA will develop a schedule for completion after reviewing the results. Given the unexpected delays, the station likely would not be completed before 2015, at the earliest.

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 were expected to be generated by implementing the new Fairmount Line station and proposed offset measures that were identified with the input and assistance of Fairmount Line stakeholders. MassDOT estimated that the potential offset measures would meet the emissions-reduction targets. The measures include shuttle bus service from Andrew Square to Boston Medical Center and increased bus 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 Project — SIP Requires Completion by December 2014

Project Status

State-level environmental review (Massachusetts Environmental Policy Act, or MEPA) was completed in July 2010. Federal-level environmental review (National Environmental Policy Act, or 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.

MassDOT and the MBTA continue to work with the FTA to seek funding for the Green Line Extension project under the FTA New Starts capital funding program. In June 2012, the FTA selected the Green Line Extension project for approval to move into Preliminary Engineering. Upon Congressional approval of Moving Ahead for Progress in the 21st Century (MAP-21), the Project's status was revised by FTA from Preliminary Engineering to Engineering, allowing planning to begin for submission of the Full Funding Grant Agreement (FFGA) application.

As part of the State Legislative Transportation Funding Plan completed last year, the budget needed to complete the project was determined to be $1.33 billion—including all phases of the Green Line Extension project, all capital costs, new vehicles, design costs, and real estate acquisitions.

During September and October of 2013, the MBTA Green Line Extension team developed and submitted a Fiscal Year 2015 (FY15) New Starts Update package to FTA, which included an updated Green Line Extension Project Finance Plan. In late January 2014, the MBTA General Manager sent a letter to the FTA reiterating the project's goals and the importance of the timing of the Advance Work approval and FFGA execution.

In order to introduce passenger service, it is critical that the following steps in the New Starts process be completed: 1) submission of the New Starts Update and a viable Finance Plan update to FTA [completed]; 2) favorable rating by the FTA and inclusion in the FY2015 budget [completed]; 3) approval from FTA to start construction on essential items in August 2014 [submitted March 31, 2014]; 4) completion of the package for initiation of negotiations for a FFGA [ongoing]; and 5) receipt of an FFGA within a six-to-nine month time frame, depending upon how long the FTA needs to complete the review of the Green Line Extension application and finalize the grant. The receipt of the FFGA is a key milestone, as it restricts the start of construction for the bulk of the Phase 2/2A and Phase 4 work.

To tailor the project-delivery method to best mitigate the larger project risks, MassDOT and MBTA are implementing a phased project-delivery plan. This plan has divided the project into four phases, which will be further divided into design and interim construction work packages.

Phase 1 will rely on the traditional design-bid-build approach to deliver the contract for widening the Harvard Street and Medford Street railroad bridges and demolishing 21 Water Street. The contract award occurred in December 2012, and the Notice to Proceed was issued on January 31, 2013.

At the Harvard Street site in Medford, the new (relocated) outbound Commuter Rail track bridge was erected on April 26, 2014. This is the first of three separate steel erection activities that will be completed for the Harvard Street Bridge. As of this report, work on retaining walls located north and south of the Harvard Street Bridge continues. The installation of temporary support of excavation (SOE) for the southeast retaining wall extension continues in advance of the retaining wall construction (currently anticipated to begin in late May 2014). The installation of the new storm drainage system and associated sewer lateral relocation work in Winchester Street and Harvard Street also is ongoing.

At the Medford Street site in Somerville, temporary SOE installation associated with the concrete abutment modification work began on April 29, 2014. These work elements are in advance of steel erection activities to widen the bridge structure (anticipated to begin mid-to-late summer 2014).

The Green Line Extension team continues to store soil at the 21 Water Street site in Cambridge; this soil will be reused in the Harvard Street bridge walls. The Green Line Extension team also has responded to the latest round of EPA SIP comments. After EPA SIP approval is received, the building will be scheduled to be demolished and PCBs to be remediated.

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. MBTA's construction-phasing plans are developed so as to complete construction in time to permit this portion of the Green Line Extension to begin by mid-summer 2017. This schedule assumes that advance work activities are approved by FTA to begin in the summer of 2014 ahead of the FFGA approval.

Phase 3 will construct the vehicle-maintenance facility and storage yard. 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. A risk-evaluation process indicates that this phase, representing the completion of the Green Line Extension project, has a 50 percent probability of being completed on or before July 2019. This date assumes that the project was successful in advancing certain items into construction ahead of the Full Funding Grant Agreement. The updated risk-

evaluation workshop held in January 2014 will be used to confirm or adjust the schedule for this work.

New Green Line Vehicles: The procurement of the 24 new Green Line vehicles that are needed to support the operation of the Green Line Extension is underway. The MBTA advertised for the new vehicles in January 2011 and held a pre-bid meeting for prospective bidders in February 2011. On June 13, 2011, two potential builders submitted proposals to the MBTA, which were reviewed by the MBTA Technical Selection Committee. A contract for the new vehicles was awarded on May 14, 2014. The MBTA also is proceeding with the plan to rehabilitate eight currently out-of-service cars to support the Phase 2/2A opening of the extension to Washington Street and Union Square.

Somerville Community Path: The Green Line Extension project also includes the design of the extension of the Somerville Community Path from south of Lowell Street to the Inner Belt area of Somerville. Additional designs are being developed for south of the Inner Belt area. In April, Governor Patrick, Secretary Davey, Somerville Mayor Curtatone and the Green Line Extension team announced that an agreement had been reached to construct the Community Path from Lowell Street station to Lechmere Station as part of the GLX project.

Potential Challenges

The schedule for the overall project completion dates remains in effect. Any revisions to the schedule will be included in the New Starts application expected to be filed in September 2014.

MassDOT and the MBTA continue to seek measures to accelerate the project time line wherever possible. The phasing approach discussed above should provide for accelerated delivery of some portions of the project. In addition, MassDOT and the MBTA have received authorization from the state legislature, the state Office of the Inspector General, and MassDOT board of directors to use the Construction Manager / General Contractor delivery method described above. This should help to complete the project by the dates above and overcome some of the delays related to FONSI and the approval to enter into preliminary engineering.

Although the goal of the phased project-delivery approach is to complete components in an incremental way, the timeline for overall project completion represents a substantial delay beyond the current SIP deadline of December 31, 2014—triggering 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 (CTPS), MassDOT and the MBTA have begun calculating the emission reductions equal to or greater than the reductions projected for the Green Line Extension itself, as specified in the SIP regulation, which will be required for the period of the delay. MassDOT and the MBTA also have worked with the public to develop a portfolio of interim projects and/or measures that may meet the requirements, and have sought input on the portfolio from the public.

In June 2012, MassDOT released a list of potential mitigation ideas received from the public that could be used as offset measures. MassDOT solicited public comments on these potential measures. Since that

time, the MBTA has created an internal working group to determine a final portfolio of interim mitigation measures that would be in service by December 31, 2014, the legal deadline for implementation of the Green Line Extension. This work is ongoing and an announcement is expected soon.

Funding Source: the Commonwealth

Russia Wharf Ferry Terminal

Project Status

The Central Artery/Tunnel (CA/T) project was responsible for constructing the Russia Wharf Ferry Terminal. Actual ferry service to the wharf is not included in the SIP requirement, and the CA/T project was not responsible for providing that service. In May 2006, the CA/T Project requested—from the Massachusetts DEP and the Boston Conservation Commission (BCC)—to defer construction of the facility pending the availability of ferry service and resolution of the status of the Old Northern Avenue Bridge which is not adequate to provide the necessary clearance to vessels of a size or configuration suited to regularly scheduled passenger service. The Massachusetts Turnpike Authority completed a marketing demand study in October 2009 to determine the potential demand for service in this area, the type of service that could be provided, and the inherent physical, operational, and financial constraints of providing this service. In February 2010, this information was forwarded to MassDOT as part of the ongoing evaluation of this facility. This study was completed and sent to the DEP Waterways Program in February 2012.

MassDOT Secretary Richard Davey approved construction of the permitted ferry facility and a $460,000 ferry-service startup subsidy in October 2012. The 2005 facility plans and specifications were revised to meet the latest MassDOT Highway Division standards. The bid package was issued in the fall of 2013. A contractor was selected and the Notice to Proceed was issued in April 2014. The construction schedule will be submitted in June 2014. As included in the contact, work must be completed by May 25, 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 issue, and is purchasing two ferry vessels for Inner Harbor use, which could include this ferry terminal as a destination.

Consultation Procedures

The conformity regulations require the MPO to make a conformity determination according to consultation procedures set out in state and federal regulations and to follow public involvement procedures established by the MPO under federal metropolitan transportation-planning regulations.

Both state and federal regulations require that the Boston Region MPO, MassDOT, DEP, EPA, and the Federal Highway Administration (FHWA) consult on the following issues:

- Selection of regional emissions analysis models, including model development and assessment of project design factors for modeling

- Selection of inputs to the most recent EPA-approved emissions factor model
- Selection of CO hot-spot modeling procedures, as necessary
- Identification of regionally significant projects to be included in the regional emissions analysis
- Identification of projects that have changed in design and scope
- Identification of exempt projects
- Identification of exempt projects that should be treated as nonexempt because of adverse air-quality impacts
- Identification of the latest planning assumptions and determination of consistency with SIP assumptions

These issues have all been addressed through consultation among the agencies listed above.

Public Participation Procedures

Title 23 CFR Sections 450.324 and 40 CFR 90.105(e) require that the development of the LRTP, TIP, and related certification documents provide an adequate opportunity for public review and comment.

Section 450.316(b) establishes the outline for MPO public participation programs. The Boston Region MPO's public participation program was adopted in June 2007, revised in April 2010, and updated in May 2012. The development and adoption of this program conform to these requirements. The program guarantees public access to the LRTP and TIP and all supporting documentation, provides for public notification of the availability of the LRTP and TIP and the public's right to review the draft documents and comment on them, and provides a public review and comment period prior to the adoption of the LRTP and TIP and related certification documents by the MPO.

On May 21, 2014, a public notice was sent to the MPO's email contact list inviting the recipients to comment on this draft document. On May 15, the Boston Region MPO voted to approve the draft FFYs 2015–18 TIP and its Air Quality Conformity Determination. This allowed ample opportunity for public comment and MPO review of the draft document. These procedures comply with the associated federal requirements.

Financial Consistency

Title 23 CFR Section 450.324 and 40 CFR 93.108 require the LRTP and TIP to "be financially constrained by year and include a financial plan that demonstrates which projects can be implemented using current revenue sources and which projects are to be implemented using proposed revenue sources." This Boston Region MPO's FFYs 2015–18 TIP is financially constrained to projections of federal and state resources that are reasonably expected to be available during the appropriate time frame. Projections of federal resources are based on the estimated apportionment of the federal authorizations contained in Moving Ahead for Progress in the 21st Century (MAP-21), the two-year transportation reauthorization bill, as allocated to the region by the state or as allocated among the various Massachusetts MPOs according to federal formulas

or MPO agreement. Projections of state resources are based on the allocations contained in the current state Transportation Bond Bill and on historic trends. Therefore, this TIP complies with federal requirements relating to financial planning.

PROCEDURES FOR DETERMINING REGIONAL TRANSPORTATION EMISSIONS

The federal conformity regulations set forth specific requirements for determining transportation emissions. The requirements and the procedures used for the TIP are summarized below.

Demographics, Employment, and Transportation Demand

Specific sources of population, household, employment, and traffic information used in the FFYs 2015–18 TIP are listed above in the Latest Planning Assumptions section. Table 5-1, below, outlines recommendations for specific projects for the time period ending in 2035 (as included in the FFYs 2015-18 TIP and the Boston Region MPO's current LRTP, the amended *Paths to a Sustainable Region: Long-Range Transportation Plan of the Boston Region Metropolitan Planning Organization*).

Only regionally significant projects are required to be included in the travel-demand modeling efforts. The federal conformity regulations define regionally significant as follows:

> A transportation project (other than an exempt project) that is on a facility that serves regional transportation needs (such as access to and from the area outside of the MPO region; major activity centers in the region; major planned developments, such as new retail malls and sport complexes; and transportation terminals (as well as most terminals themselves) and would be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed-guideway transit facilities that offer an alternative to regional highway travel.

In addition, specific projects are exempt from regional modeling emissions analysis.

The categories of exempt projects include:

- Intersection channelization projects
- Intersection signalization projects at individual intersections
- Interchange reconfiguration projects
- Changes in vertical and horizontal alignment
- Truck size and weight inspection stations
- Bus terminals and transfer points

The Recommended Networks in this conformity determination are composed of projects proposed in the approved TIPs and LRTP, and projects in the MBTA capital budget. A list of the projects that meet these criteria and are included in the recommended transportation networks and this conformity determination is provided in Table 5-1(projects under construction or recently completed) and Table 5-2 (recommended LRTP and TIP projects). The list

includes all regionally significant projects in the Boston Region MPO area.

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

Analysis Year	Community	Description of Projects
2016	Bedford, Burlington	Middlesex Turnpike Improvements, Phases 1 and 2
2016	Bellingham	Pulaski Boulevard
2016	Boston	Fairmount Line Improvements
2016	Boston	East Boston Haul Road/Chelsea Truck Route (new grade-separated roadway)
2016	Concord, Lincoln	Route 2/Crosby's Corner (Grade Separation)
2016	Danvers	Route 128/Route 35 and Route 62
2016	Hudson	Route 85 Capacity Improvements from Marlborough Town Line to Route 62
2016	Marshfield	Route 139 Widening (to four lanes between School St. and Furnace St.
2016	Quincy	Quincy Center Concourse, Phase II (new roadway from Parking Way to Hancock St.)
2016	Somerville	Assembly Square Orange Line Station
2016	Somerville	Assembly Square Roadways (new and reconfigured)
2016	Weymouth, Hingham, Rockland	South Weymouth Naval Air Station Improvements
2016	Regionwide	1,000 New Parking Spaces
2020	Randolph to 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	Description of Projects
2016	Beverly	Beverly Station Commuter Rail Parking Garage
2016	Boston	Conley Haul Road
2016	Hanover	Route 53, Final Phase (widening to four lanes between Route 3 and Route 123)
2016	Salem	Salem Station Commuter Rail Parking Garage Expansion
2016	Somerville, Cambridge, Medford	Green Line Extension to Medford Hillside (College Avenue)/Union Square
2020	Bedford, Burlington, Billerica	Middlesex Turnpike Improvements, Phase 3 – widening Plank St. to Manning Rd.
2020	Boston	Sullivan Square/Rutherford Avenue Improvements
2020	Salem	Bridge Street widening to four lanes between Flint St. and Washington St.
2020	Somerville, Medford	Green Line Extension from Medford Hillside (College Ave.) to Mystic Valley Parkway (Rte. 16)
2020	Weymouth	Route 18 Capacity Improvements
2020	Woburn	Montvale Ave. widening from Central St. to east of Washington St.
2020	Woburn	New Boston Street Bridge (reestablish connection over MBTA Lowell Line)
2020	Canton	I-95 (NB)/Dedham St. Ramp/Dedham St. Corridor (new ramp with widening on Dedham St. from I-95 to University Ave.)
2025	Canton	Interstate 95/Interstate 93 Interchange (new direct connect ramps)
2025	Newton, Needham	Needham St./Highland Ave. (includes widening of the Charles River Bridge)
2035	Braintree	Braintree Split – I-93/Route 3 Interchange
2035	Framingham	Route 126/135 Grade Separation
2035	Reading, Woburn, Stoneham	I-93/I-95 Interchange (new direct connect ramps)
2035	Revere, Malden. Saugus	Route 1 (widening from four to six lanes between Copeland Circle and Route 99)
2035	Wilmington	Tri-Town Interchange (new “Lowell Junction” interchange on I-93 between Route 125 and Dascomb Rd.)

Changes in Project Design and Construction Schedule since the Last Conformity Determination Analysis

The Commonwealth requires that any changes in the mix of projects, project design, and construction schedule from the previous conformity determination for the region be identified. The last conformity determination was performed for the Boston Region FFYs 2014–17 TIP in July 2013. The mix of projects included in the conformity determination for this TIP is the same as the mix for the conformity determination for the FFYs 2015–18 TIP. The only change is the update to the status of uncompleted SIP projects.

This conformity determination shows that the FFYs 2015–18 TIP is in conformity with the carbon monoxide budget set for the maintenance area for Boston and eight surrounding municipalities. It also shows that the transportation control measures included in the Massachusetts State Implementation Plan are moving forward in a timely manner.

Model-Specific Information

40 CFR Part 93.111 outlines the requirements pertaining to the network-based transportation demand models. These requirements include the modeling methods and functional relationships that are to be used in accordance with accepted professional practice and are to be reasonable for purposes of estimating emissions. The Boston Region MPO used the methods described in the conformity regulations for the analysis in this TIP.

Highway Performance Monitoring System Adjustments

As stated in EPA guidance, all areas of carbon monoxide nonattainment must use the FHWA's Highway Performance Monitoring System (HPMS) to track daily vehicle-miles of travel (VMT) prior to attainment to ensure that the state is in line with commitments made in reaching attainment of the ambient air-quality standards by the required attainment dates. MassDOT provided HPMS information to DEP. DEP used this information in setting the mobile-source budget for CO in all SIP revisions prior to 1997.

An HPMS adjustment factor was developed by comparing the 1990 CO emissions of the nine cities and towns (Boston and eight surrounding communities in the Boston maintenance area) resulting from the 1990 base-year model run to the 1990 HPMS-generated CO emissions data submitted as part of the SIP. The HPMS data were divided by the model data to determine the CO adjustment factor to be applied to all modeled CO emissions for future years. The CO HPMS adjustment factor is 0.71.

THE CONFORMITY TEST

Consistency with the Emission Budgets Set Forth in the SIP

The Boston Region MPO conducted an air-quality analysis for the Boston Region MPO's FFYs 2014–17 TIP. Project information used in the conformity determination for the FFYs 2014–17 TIP has not changed for this TIP, so the results of the emissions

analysis remains the same. The purpose of the analysis was to evaluate the air-quality impacts on the SIP of the projects included in the TIP. The analysis evaluated the change in CO emissions due to implementation of the TIP. The modeling procedures and assumptions used in this air-quality analysis follow the EPA's conformity regulations. They are also consistent with the procedures used by the DEP to develop Massachusetts's "1990 Base-Year Emission Inventory," "1996 Reasonable Further Progress Plan," "Post-1996 Reasonable Further Progress Plan," and "1996 Rate of Progress Report." All consultation procedures were followed to ensure that a complete analysis of the TIP was performed and was consistent with the SIP.

The primary test for showing conformity with the SIP is demonstrating 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 area reclassified as being in attainment is 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 nine cities in 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)
2016	82.30	228.33	-146.03
2025	76.09	228.33	-152.24
2035	77.30	228.33	-151.03

CONCLUSION

The Clean Air Act Amendments of 1990 established air-quality conformity requirements for transportation plans, programs, and projects. The EPA published a final rule in the November 24, 1993, Federal Register, with several amendments through January 2008, providing procedures to be followed by the US Department of Transportation in determining conformity of transportation plans, programs, and projects with the SIP for meeting air-quality standards. Boston, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, and Somerville are designated a "maintenance area" for the CO standard. Federal conformity regulations require that the impact of transportation plans, programs, and projects on maintenance areas be evaluated.

The Boston Region MPO conducted an air-quality analysis for projects in this TIP. The purpose of the analysis was to evaluate the air-quality impacts of the TIP projects on the SIP. The analysis evaluates the

change in CO emissions due to the implementation of the FFYs 2015–18 TIP. The modeling procedures and assumptions used in this air-quality analysis follow the EPA's and the Commonwealth's guidelines and are consistent with all present and past procedures used by the Massachusetts DEP to develop and amend the SIP.

Boston Region MPO has found the emission levels from the Boston area CO Maintenance Area, including emissions resulting from implementation of the TIP, to be in conformance with the SIP according to state and federal conformity criteria. Specifically, the CO emissions for the build scenarios of the MPO's regional travel demand model set are less than the projections for analysis years 2016 through 2035 for the nine cities in the Boston CO Maintenance area.

In accordance with Section 176(c)(4) of the Clean Air Act as Amended in 1990, the Boston Region MPO has completed this review and hereby certifies that the FFYs 2015–18 TIP, and its latest conformity determination, conditionally conforms with 40 CFR Part 93 and 310 CMR 60.03 and is consistent with the air-quality goals in the Massachusetts State Implementation Plan.

6 CHAPTER SIX

Financial Constraint

The financial constraint of the TIP must satisfy two requirements:

- The transit and highway programs must be financially constrained to projections of available federal aid.
- The Accelerated Bridge Program Grant Anticipation Notes (GANs) payments must be constrained to 50 percent of the federal aid available statewide.

As shown in the tables below, the federal fiscal years 2015–18 TIP complies with both of these requirements.

TABLE 6-1

The Federal-Aid Transit Program

Transit Program	FFY 2015	FFY 2016	FFY 2017	FFY 2018	FFYs 2015–18
Section 5307 Authorization	$134,685,516	$134,685,516	$134,685,516	$134,685,516	$538,742,064
Section 5307 Program	$134,685,516	$134,685,516	$134,685,516	$134,685,516	$538,742,064
Section 5337 Authorization	$121,190,546	$121,190,546	$121,190,546	$121,190,546	$484,762,184
Section 5337 Program	$121,190,546	$121,190,546	$121,190,546	$121,190,546	$484,762,184
Section 5339 Authorization	$5,287,027	$5,287,027	$5,287,027	$5,287,027	$21,148,108
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 2015	FFY 2016	FFY 2017	FFY 2018	FFYs 2015–18
Regional Target Obligation Authority	$68,221,673	$75,009,821	$75,009,821	$75,009,821	$293,251,136
Regional Target Program	$68,206,291	$74,955,028	$74,970,496	$74,799,941	$292,931,756
STP	*$12,828,462*	*$25,491,442*	*$35,927,686*	*$47,604,538*	$121,852,128
*NHPP**	*$30,000,000*	*$30,000,000*	*$14,000,000*	*$13,768,183*	*$87,768,183*
HSIP	*$5,000,000*	*$4,397,727*	*$4,752,838*	*$0*	*$14,150,565*
CMAQ	*$17,829,110*	*$10,719,021*	*$17,465,590*	*$13,427,220*	*$59,440,941*
TAP	*$2,548,719*	*$4,346,838*	*$2,824,382*	*$0*	*$9,719,939*

* 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 2015	FFY 2016	FFY 2017	FFY 2018	FFYs 2015–18
Federal-Aid Bridges*	$33,013,726	$39,282,400	$42,449,067	$75,833,716	$190,578,909
Accelerated Bridge Program	*$0*	*$0*	*$0*	*$0*	*$0*

* This amount includes Boston Region Accelerated Bridge Program projects that leverage federal aid.

TABLE 6-4

The Non-Federal Aid-Highway Program

Bridge Program	FFY 2015	FFY 2016	FFY 2017	FFY 2018	FFYs 2015–18
Bridge Target	N/A	N/A	N/A	N/A	N/A
Bridge Program	$0	$0	$0	$0	$0

TABLE 6-5

Accelerated Bridge Program GANs Payments

(Federal funds only)

Bridge Program	FFY 2015	FFY 2016	FFY 2017	FFY 2018	FFYs 2015-18
Obligation Authority	$600,000,000	$600,000,000	$600,000,000	$600,000,000	$2,400,000,000
Central Artery/ Tunnel Project Share	$0	$0	$0	$0	$0
Accelerated Bridge Program	$30,795,000	$66,103,864	$104,921,614	$106,236,614	$308,057,092

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 estimates for state fiscal years (SFYs) 2015 through 2018 for MassDOT projects. The tables on pages 7-4 through 7-6 present operations and maintenance estimates 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
June 3, 2014

Section I - Non Federal Aid Maintenance Projects - State Bondfunds

Program Group/Sub Group	Estimated SFY 2012 Expenditures	Estimated SFY 2013 Expenditures	Current SFY 2014 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	$11,741,641	$16,199,248	$14,155,565
Drawbridge Maintenance	$2,135,389	$7,156,539	$1,682
Structures Maintenance	$6,628,451	$4,110,669	$433,462
02 - Bridge Painting			
Painting - Structural	$272,777	$1,988,410	$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	$5,005	$0	$0
Hwy Reconstr - No Added Capacity	$0	$0	$63,876
Hwy Reconstr - Minor Widening	$0	$0	$18,307
Hwy Reconstr - Major Widening	$0	$32,799	$0
04 - Roadway Resurfacing			
Resurfacing	$163,158	$7,059	$104,139
05 - Intersection & Safety			
Impact Attenuators	$0	$0	$0
Safety Improvements	$0	$0	$0
Traffic Signals	$0	$0	$0
06 - Signs & Lighting			
Lighting and Electrical	$0	$0	$36,331
Sign Installation / Upgrading	$54,933	$22,859	$0
Structural Signing	$0	$0	$0
07 - Guardrail			
Guard Rail and Fencing	$0	$352,282	$0
08 - Maintenance			
Catch Basin Cleaning	$0	$0	$0
Crack Sealing	$0	$16,819	$0
Landscape and Roadside Develop	$0	$0	$0
Mowing and Spraying	$1,345,919	$686	$0
Pavement Marking	$0	$0	$0
Sewer and Water	$0	$0	$0
Process/Recycle/Trnsprt Soils	$0	$0	$0
Contract Hwy Maint.	$13,276	$0	$0
09 - Facilities			
Chemical Storage Sheds	$0	$0	$0
Vertical Construction	$0	$0	$2,897,066
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	$0	$20,238	$5,093
Marine Construction	$0	$0	$0
Miscellaneous / No prequal	$0	$0	$349,058
Reclamation	$0	$0	$0
Underground Tank Removal Replace	$0	$0	$0
Unknown	$0	$0	$0
Section I Total:	**$22,360,549**	**$29,907,608**	**$18,064,579**

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:	$22,360,549	$29,907,608	$18,064,579

Massachusetts Department of Transportation - Highway Division
Summary of Operating and Maintenance Expenditures
Boston Region - Part 2: Federal Aid
June 3, 2014

Section I - Federal Aid Maintenance Projects

Program Group/Sub Group	Estimated SFY 2012 Expenditures	Estimated SFY 2013 Expenditures	Current SFY 2014 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	$95,718,005	$38,149,859	$69,624,238
Drawbridge Maintenance	$0	$0	$0
Structures Maintenance	$6,491,442	$2,876,813	$1,930,480
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	$17,603,622	$21,306,863	$10,775,526
Hwy Reconstr - No Added Capacity	$37,988,026	$19,679,881	$13,603,372
Hwy Reconstr - Minor Widening	$6,041,559	$3,130,409	$879,322
Hwy Reconstr - Major Widening	$30,771	$26,413	$50,184
04 - Roadway Resurfacing			
Resurfacing	$27,338,812	$35,092,455	$32,444,898
05 - Intersection & Safety			
Impact Attenuators	$0	$0	$0
Safety Improvements	$181,201	$17,238	$5,399
Traffic Signals	$2,607,044	$2,572,475	$444,229
06 - Signs & Lighting			
Lighting and Electrical	$365,825	$444,997	$0
Sign Installation / Upgrading	$396,318	$892,283	$1,564,770
Structural Signing	$5,178,896	$2,071,432	$2,770,198
07 - Guardrail			
Guard Rail and Fencing	$305,402	$31,665	$1,455,419
08 - Maintenance			
Catch Basin Cleaning	$0	$0	$0
Contract Highway Maintenance	$0	$0	$0
Crack Sealing	$0	$0	$0
Landscape and Roadside Develop	$0	$0	$3,331
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	$38,680	$281,655	$11,191
10 - Bikeways (Excluded)	*n/a*	*n/a*	*n/a*
11 - Other			
Demolition	$948,492	$0	$0
Drilling & Boring	$0	$0	$0
Highway Sweeping	$0	$0	$0
Intelligent Transportation System	$762,700	$301,775	$636,910
Marine Construction	$477,131	$2,545,467	$2,476,795
Miscellaneous / No prequal	$654,227	$702,180	$63,525
Reclamation	$0	$0	$0
Underground Tank Removal Replace	$0	$0	$0
Unknown	$0	$0	$0
Section I Total:	**$203,128,153**	**$130,123,860**	**$138,739,786**

Section II - Federal Aid Highway Operations

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

Grand Total Federal Aid: **$204,278,153** **$131,273,860** **$139,889,786**

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 2015-18 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 2015–18 TIP.

TABLE A-1: FFYs 2015-18 TIP - Summary of Evaluated 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 & Needham	Reconstruction of Highland Avenue, Needham Street & Charles River Bridge, from Webster Street to Route 9	LRTP 2021-25	104	30	17	13	18	6	20
600220	**Beverly**	**Reconstruction & Signal Improvements on Rantoul Street (Route 1A), from Cabot Street (South) to Cabot Street (North)**	**2014**	**98**	**28**	**18**	**15**	**18**	**0**	**19**
606284	**Boston**	**Improvements to Commonwealth Avenue, from Amory Street to Alcorn Street**	**2015**	**96**	**28**	**16**	**15**	**9**	**8**	**20**
1616	Somerville	Grounding of the McCarthy Overpass		96	30	18	13	12	9	14
606320	Boston	Reconstruction of Causeway Street (Pedestrian & Bicycle Improvements)		92	32	20	12	6	7	15
607409	Lexington	Reconstruction on Massachusetts Avenue, from Marrett Road to Pleasant Street		87	30	10	15	8	6	18
605034	Natick	Reconstruction of Route 27 (North Main Street), from North Avenue to the Wayland Town Line		86	32	16	14	9	0	15
605146	**Salem**	**Reconstruction on Canal Street, from Washington Street & Mill Street to Loring Avenue & Jefferson Avenue**	**2014**	**85**	**22**	**16**	**12**	**10**	**6**	**19**
606043	Hopkinton	Signal & Intersection Improvements on Route 135		85	24	14	14	16	0	17
605110	**Brookline**	**Intersection & Signal Improvements at Route 9 & Village Square (Gateway East)**	**2015**	**84**	**30**	**19**	**14**	**10**	**0**	**11**
605313	Natick	Bridge Replacement, Route 27 (North Main St.) over Route 9 (Worcester St.) and Interchange Improvements		84	34	12	15	8	0	15
029492	**Bedford, Billerica, & Burlington**	**Middlesex Turnpike Improvements, from Crosby Drive North to Manning Road (Phase III)**	**2016**	**83**	**28**	**9**	**18**	**13**	**3**	**12**
607652	Everett	Reconstruction of Ferry Street, South Ferry Street and a Portion of Elm Street		83	30	9	14	7	5	18
606453	Boston	Improvements on Boylston Street, from Intersection of Brookline Avenue & Park Drive to Ipswich Street		83	16	18	14	16	5	14
604810	**Marlborough**	**Reconstruction of Route 85 (Maple Street)**	**2015**	**82**	**16**	**14**	**10**	**18**	**6**	**18**
605657	**Medway**	**Reconstruction on Route 109, from Holliston Street to 100 Feet West of Highland Street**	**2016**	**82**	**28**	**13**	**10**	**16**	**0**	**15**
606460	**Boston**	**Improvements at Audubon Circle**	**2017**	**78**	**24**	**14**	**11**	**9**	**7**	**13**
602261	Walpole (MassDOT)	Reconstruction on Route 1A (Main Street), from the Norwood Town Line to Route 27		76	28	14	10	6	6	12
604532	**Acton, Carlisle, & Westford**	**Bruce Freeman Rail Trail, Phase 2A**	**2014**	**75**	**24**	**14**	**8**	**14**	**2**	**13**
604652	**Winchester, Stoneham, & Woburn**	**Tri-Community Bikeway**	**2015**	**75**	**20**	**15**	**9**	**17**	**0**	**14**
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**
604935	**Woburn**	**Reconstruction of Montvale Avenue, from I-93 Interchange to Central Street**	**2017**	**71**	**26**	**10**	**9**	**8**	**0**	**18**

TABLE A-1: FFYs 2015-18 TIP - Summary of Evaluated 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):
607309	Hingham	Reconstruction and Related Work on Derby Street from Pond Park Road to Cushing Street		71	22	9	15	8	0	17
601579	**Wayland**	**Signal & Intersection Improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)**	**2016**	**70**	**24**	**10**	**10**	**12**	**0**	**14**
601704	Newton	Reconstruction & Signal Improvements on Walnut Street, from Homer Street to Route 9		70	24	16	8	7	0	15
606885	**Arlington**	**Bikeway Connection at Intersection Route 3 & Route 60, Massachusetts Avenue, Pleasant Street & Mystic Street**	**2014**	**69**	**18**	**17**	**10**	**8**	**2**	**14**
601513	Saugus (MassDOT)	Interchange Reconstruction at Walnut Street & Route 1 (Phase II)		69	22	12	15	7	0	13
602077	Lynn	Reconstruction on Route 129 (Lynnfield Street), from Great Woods Road to Wyoma Square		69	20	8	11	9	5	16
604531	**Acton & Maynard**	**Assabet River Rail Trail**	**2015**	**68**	**16**	**14**	**10**	**13**	**2**	**13**
602310	Danvers	Reconstruction on Collins Street, from Sylvan Street to Centre & Holten Streets		68	20	13	14	6	2	13
605721	Weymouth	Intersection Improvements at Middle Street, Libbey Industrial Parkway and Tara Drive		68	20	12	16	5	0	15
606117	Boston	Traffic Signal Improvements at 11 Locations		67	16	13	12	7	5	14
601705	**Reading**	**Reconstruction of West Street, from Woburn City Line to Summer Ave/Willow Street**	**2014**	**66**	**24**	**13**	**11**	**6**	**0**	**12**
607255	Holbrook	Intersection Improvements and Related Work at Weymouth Street/Pine Street/Sycamore Street		66	24	6	13	7	0	16
604377	Gloucester	Washington Street and Railroad Avenue		65	12	15	9	8	4	17
607888	Boston	Multi-use Path Construction on New Fenway		65	6	17	11	13	5	13
604231	Marlborough	Intersection & Signal Improvements on Route 20 (East Main Street/Boston Post Road) at Concord Road		64	24	4	16	7	3	10
601019	**Winchester**	**Signal & Improvements at 4 Locations on Church Street & Route 3 (Cambridge Street)**	**2014**	**62**	**18**	**9**	**11**	**17**	**0**	**7**
604996	Woburn	Bridge Replacement, New Boston Street over MBTA	LRTP 2016-20	62	12	19	11	13	0	7
600518	Hingham (MassDOT)	Intersection Improvements at Derby Street, Whiting Street (Route 53) and Gardner Street		59	22	10	13	2	0	12
602000	Weston	Intersection & Signal Improvements at Route 30 (South Ave) & Wellesley Street		58	18	5	12	12	0	11
606002	Duxbury	Signal Installation at Route 3 (NB & SB) Ramps & Route 3A (Tremont St)		57	20	4	17	3	0	13
602602	**Hanover (MassDOT)**	**Reconstruction of Washington Street (Route 53) and Related Work From the Route 3 Northbound Ramp to Webster Street (Route 123)**	**2014**	**56**	**20**	**9**	**11**	**7**	**0**	**9**
603739	Wrentham	Construction of I-495/Route 1A Ramps		55	18	1	15	10	0	11
604697	Marlborough	Reconstruction of Farm Road, from Cook Lane to Route 20 (Boston Post Road)		55	20	7	6	8	3	11
605857	Norwood	Intersection Improvements at Route 1 & University Avenue/Everett Street		54	22	8	12	3	0	9

TABLE A-1: FFYs 2015-18 TIP - Summary of Evaluated 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):
606316	**Brookline**	**Pedestrian Bridge Rehabilitation over MBTA off Carlton Street**	**2016**	**53**	**10**	**7**	**8**	**11**	**5**	**12**
606130	Norwood	Intersection Improvements at Route 1A & Upland Road/Washington Street & Prospect Street/Fulton Street		53	20	5	10	5	0	13
606501	Holbrook	Reconstruction of Union Street (Route 139), from Linfield Street to Centre Street/Water Street		48	10	13	7	5	0	13
604638	Danvers & Peabody (MassDOT)	Mainline Improvements on Route 128 (Phase II)		47	12	1	18	3	0	13
605743	Ipswich	Resurfacing & Related Work on Central & South Main Streets		47	6	13	8	6	0	14
601359	Franklin	Reconstruction of Pleasant Street, from Main Street to Chestnut Street		45	12	11	6	4	0	12
601607	Hull	Reconstruction of Atlantic Avenue and Related Work, from Nantasket Avenue to Cohasset Town Line		43	6	11	2	8	0	16
604811	Marlborough	Reconstruction of Route 20 (East Main Street), from Main Street Easterly to Lincoln Street		42	6	4	11	7	3	11
604745	Wrentham	Reconstruction of Taunton Street (Route 152)		36	6	10	2	4	0	14

TABLE A-2: FFYs 2015-18 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Acton & Maynard	**604531**	**Assabet River Rail Trail**	**2015**
Acton, Carlisle, & Westford	**604532**	**Bruce Freeman Rail Trail, Phase 2A**	**2014**
Ashland	604123	Reconstruction on Route 126 (Pond Street), from the Framingham T.L. to the Holliston T.L.	
Bedford, Billerica & Burlington	**029492**	**Middlesex Turnpike Improvements, from Crosby Drive North to Manning Road (Phase III)**	**2016**
Beverly	604369	Reconstruction & Improvements on Route 128 (Interchange 19) at Brimbal Avenue, Sohier Road, Dunham Road, Otis Road	
Beverly	**600220**	**Reconstruction & Signal Improvements on Rantoul and Cabot Streets (Route 1A), from Cabot Street (South, at Veterans Memorial Bridge) to Cabot Street (North, at Memorial Building at 502 Cabot Street)**	**2014**
Boston	601274	Reconstruction of Tremont Street, from Court Street to Boylston Street	
Boston	606320	Reconstruction of Causeway Street (Pedestrian & Bicycle Improvements)	
Boston	053001	Northern Avenue Connector Roads (Phase 1)	
Boston	**605789**	**Reconstruction of Melnea Cass Boulevard**	**2015**
Boston	606453	Improvements on Boylston Street, from Intersection of Brookline Avenue & Park Drive to Ipswich Street	
Boston	606460	Improvements at Audubon Circle	
Boston	606117	Traffic Signal Improvements at 11 Locations	
Boston	**606134**	**Traffic Signal Improvements on Blue Hill Avenue and Warren Street**	**2015**
Boston	607888	Multi-use Path Construction on New Fenway	
Boston	**604761**	**Multi-Use Trail Construction (South Bay Harbor) From Ruggles Station to Fort Point Channel**	**2014**
Boston	606226	Reconstruction of Rutherford Avenue, from City Square to Sullivan Square	LRTP 2016-20
Boston	**606284**	**Improvements to Commonwealth Avenue, from Amory Street to Alcorn Street**	**2015**
Brookline	**606316**	**Pedestrian Bridge Rehabilitation over MBTA off Carlton Street**	**2016**
Brookline	**605110**	**Intersection & Signal Improvements at Route 9 & Village Square (Gateway East)**	**2016**
Burlington	950	South Bedford Street	

TABLE A-2: FFYs 2015-18 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Cambridge	604993	Innovation Boulevard Streetscape & Pedestrian Improvements, Between Main Street & Binney Street (Phase I)	
Cambridge (MassDOT)	605637	Improvements at Route 2 and Route 16	
Canton	900	East-West Connector, between Pleasant St. & Route 138	
Canton	603883	Reconstruction on Route 138, from I-93 to Dan Road	
Canton, Dedham, & Norwood (MassDOT)	**87790**	**Interchange Improvements at I-95/I-93/University Avenue/I-95 Widening**	**2016**
Canton, Norwood, & Westwood (MassDOT)	**606146**	**Ramp Construction on I-95 (NB) & Improvements on Dedham Street, Includes Replacement of 4 Signalized Intersections**	**2015**
Chelsea	1063	Beacham and Williams Street	
Chelsea	953	Spruce Street	
Chelsea	1443	Broadway Reconstruction	
Chelsea	1615	Spruce Street/Second Street/Carter Street Improvements	
Cohasset, Marshfield, & Scituate (MassDOT)	605664	Resurfacing & Related Work on Route 3A	
Concord	602091	Improvements & Upgrades to Concord Rotary (Routes 2/2A/119)	
Concord	**605189**	**Bruce Freeman Rail Trail, Phase 2C**	**2016**
Concord	1441	Concord – Route 62 (Main St) Phase 3	
Concord	1450	Route 117 (Fitchburg Turnpike)	
Concord & Lincoln	**602984**	**Limited Access Highway Improvements at Route 2 & 2A, Between Crosby's Corner & Bedford Road**	**Advertised**
Concord, Acton	**606223**	**Bruce Freeman Rail Trail Construction (Phase II-B)**	**2017**
Danvers	602310	Reconstruction on Collins Street, from Sylvan Street to Centre & Holten Streets	
Dedham	1618	Bussey Street and Rustcraft Road/Elm Street	
Duxbury	942	Intersection Improvements at Route 3A & Route 139	

TABLE A-2: FFYs 2015-18 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Duxbury	600650	Route 3A (Tremont Street) Bridge	
Duxbury	606002	Signal Installation at Route 3 (NB & SB) Ramps & Route 3A (Tremont St)	
Duxbury (MassDOT)	**603462**	**Intersection Improvements at Kingstown Way (Route 53) & Winter Street**	**Advertised**
Everett	607652	Reconstruction of Ferry Street, South Ferry Street and a Portion of Elm Street	
Everett & Malden	649	TeleCom Boulevard, Phase 2	
Framingham	356	Route 126 (Hollis Street)	
Framingham	602038	Edgell Road Corridor Project	
Framingham	606109	Intersection Improvements at Route 126/135/MBTA & CSX Railroad	LRTP 2026-30
Framingham	955	Route 126 (Route 9 to Lincoln Street)	
Franklin	601359	Reconstruction of Pleasant Street, from Main Street to Chestnut Street	
Gloucester	604377	Washington Street And Railroad Avenue	
Hanover	**602602**	**Reconstruction of Washington Street (Route 53) and Related Work From the Route 3 Northbound Ramp to Webster Street (Route 123)**	**2014**
Hingham	607309	Reconstruction and Related Work on Derby Street from Pond Park Road to Cushing Street	
Hingham (MassDOT)	600518	Intersection Improvements at Derby Street, Whiting Street (Route 53) and Gardner Street	
Holbrook	602260	Abington Avenue-Plymouth Street	
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	
Holliston	**602462**	**Signal Installation at Route 16/126 and Oak Street**	**2016**
Holliston	**602929**	**Multi-Use Trail Construction on a Section of the Upper Charles Trail (2 Miles of Proposed 27 Miles)**	**2017**
Hopkinton	1006	School Street/W. Main Street Intersections	
Hopkinton	606043	Signal & Intersection Improvements on Route 135	
Hudson	1047	South Street	
Hudson	1488	Lincoln St. at Cox St. and Packard St.	
Hudson	1617	Route 85/ Route 62 Rotary Improvements	

TABLE A-2: FFYs 2015-18 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Hudson & Marlborough (MassDOT)	603345	Reconstruction on Routes I-290 & 495 and Bridge Replacement	
Hudson (MassDOT)	601906	Bridge Replacement, Cox Street over the Assabet River	
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	604619	Route 4/225 (Bedford Street) and Hartwell Avenue	
Lexington	1141	West Lexington Greenway	
Lexington	607409	Reconstruction on Massachusetts Avenue, from Marrett Road to Pleasant Street	
Littleton	1460	Harvard Street	
Lynn	602077	Reconstruction on Route 129 (Lynnfield Street), from Great Woods Road to Wyoma Square	
Lynn	602081	Route 107 (Western Avenue)/Eastern Avenue	
Lynn	602093	Route 107 (Western Avenue)	
Lynn	943	Broad Street/Lewis Street /Route 129	
Lynn	944	Boston Street -Hamilton Street	
Lynn	601138	Traffic Signals at 4 Locations (Contract E)	
Lynn	1454	Route 1 South (Jug handle lights at Goodwin Circle)	
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	374	Lynn Garage	
Lynn, Malden, Revere & Saugus	351	Bike to the Sea, Phase 2	

TABLE A-2: FFYs 2015-18 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Lynnfield, Wakefield	607329	Rail Trail Extension, from the Galvin Middle School to Lynnfield/Peabody Town Line	
Malden, Revere, & Saugus (MassDOT)	605012	Reconstruction & Widening on Route 1, from Route 60 to Route 99	LRTP 2031-35
Marlborough	**604810**	**Reconstruction of Route 85 (Maple Street)**	**2016**
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	
Marlborough	604697	Reconstruction of Farm Road, from Cook Lane to Route 20 (Boston Post Road)	
Marshfield (MassDOT)	**604655**	**Bridge Replacement, Beach Street over the Cut River**	**2018**
MassDOT	600831	I-93 Mystic Avenue Interchange (Design and Study)	
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	
Medford	1146	Medford Square Parking	
Medway	602134	Resurfacing & Related Work on a Section of Village Street	
Medway	1167	Route 109 (Milford Street)	
Medway	**605657**	**Reconstruction on Route 109, from Holliston Street to 100 Feet West of Highland Street**	**2015**
Melrose	601551	Intersection & Signal Improvements at Main Street & Essex Street	
Melrose	**601553**	**Intersection & Signal Improvement to Lebanon Street, from Lynde Street to Main Street**	**Advertised**
Milford	967	Veteran's Memorial Drive/Alternate Route	
Milford	607428	Resurfacing & Intersection Improvements on Route 16 (Main Street), from Water Street to the Hopedale T.L.	

TABLE A-2: FFYs 2015-18 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
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	
Natick	1066	Cochituate Rail Trail, Phase Two	
Natick	607312	Superstructure Replacement, Marion Street over MBTA	
Natick	605313	Bridge Replacement, Route 27 (North Main Street) over Route 9 (Worcester Street) and Interchange Improvements	
Needham & Wellesley (MassDOT)	**603711**	**Rehab/Replacement of 6 Bridges on I-95/Route 128 (Add-a-Lane Contract 5)**	**Advertised**
Newton	601704	Reconstruction & Signal Improvements on Walnut Street, from Homer Street to Route 9	
Newton	1067	Washington St., Phase 2	
Newton	600932	Reconstruction on Route 30 (Commonwealth Avenue), from Weston Town Line to Auburn Street	
Newton & Needham	606635	Reconstruction of Highland Avenue, Needham Street & Charles River Bridge, from Webster Street to Route 9	
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	
Peabody (MassDOT)	604638	Mainline Improvements on Route 128 (Phase II)	
Quincy	1451	Quincy Center Multimodal MBTA Station	
Quincy	**605729**	**Intersection & Signal Improvements at Hancock Street & East/West Squantum Streets**	**Advertised**
Reading	**601705**	**Reconstruction of West Street, from Woburn City Line to Summer Ave/Willow Street**	**2014**

TABLE A-2: FFYs 2015-18 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Reading, Stoneham, Wakefield, & Woburn	605605	Interchange Improvements to I-93/I-95	
Salem	600986	Boston Street	
Salem	005399	Reconstruction of Bridge Street, from Flint Street to Washington Street	
Salem	1311	Canal Street Bikeway	
Salem	**605146**	**Reconstruction on Canal Street, from Washington Street & Mill Street to Loring Avenue & Jefferson Avenue**	**2015**
Saugus	601513	Interchange Reconstruction at Walnut Street & Route 1 (Phase II)	
Somerville	**607209**	**Reconstruction of Beacon Street, from Oxford Street to Cambridge City Line**	**2014**
Somerville	1461	Community Path (Phase 3) – Lowell to Lechmere	
Somerville	1616	Grounding of the McCarthy Overpass	
Somerville & Medford	**1569**	**Green Line Extension Project (Phase II), Medford Hillside (College Avenue) to Mystic Valley Parkway/Route 16**	**2016-2018**
Southborough	**604989**	**Reconstruction of Main Street (Route 30), from Sears Road to Park Street**	**2017**
Southborough	1064	Cordaville Road/Route 85 Rehabilitation	
Southborough & Westborough (MassDOT)	607701	Improvements at I-495 & Route 9	
Stow, Hudson	1139	Assabet River Rail Trail	
Sudbury	1037	Route 20/Horsepond Road	
Sudbury	1069	Route 20/Wayside Inn Road	
Sudbury	971	Old Sudbury Road (Route 27)	
Sudbury	1164	Bruce Freeman Rail Trail, Phase 2D	
Sudbury	1305	Bruce Freeman Rail Trail, Phase 2E	
Sudbury (MassDOT)	607249	Intersection Improvements at Route 20 & Landham Road	
Swampscott	604923	Reconstruction of Humphrey Street and Salem Street	

TABLE A-2: FFYs 2015-18 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Walpole	602261	Reconstruction on Route 1A (Main Street), from the Norwood Town Line to Route 27	
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	
Wayland	**601579**	**Signal & Intersection Improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)**	**2016**
Weston	602000	Intersection & Signal Improvements at Route 30 (South Ave) & Wellesley Street	
Weymouth	**601630**	**Reconstruction & Widening on Route 18 (Main Street), from Highland Place to Route 139**	**2016-18**
Weymouth	605721	Intersection Improvements at Middle Street, Libbey Industrial Parkway and Tara Drive	
Wilmington	605021	Intersection Improvements on Route 62 (Middlesex Avenue) at Glenn Road and Wildwood Street	
Winchester	**601019**	**Signal & Improvements at 4 Locations on Church Street & Route 3 (Cambridge Street)**	**2014**
Winchester, Stoneham, & Woburn	**604652**	**Tri-Community Bikeway**	**2015**
Winthrop	607244	Reconstruction & Related Work along Winthrop Street & Revere Street Corridor	
Woburn	1449	Route 38 (Main St.) Traffic Lights	
Woburn	604996	Bridge Replacement, New Boston Street over MBTA	LRTP 2016-20
Woburn	**604935**	**Reconstruction of Montvale Avenue, from I-93 Interchange to Central Street**	**2017**
Woburn	1153	Woburn Loop Bikeway Project	

TABLE A-2: FFYs 2015-18 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Wrentham	604745	Reconstruction of Taunton Street (Route 152)	
Wrentham (MassDOT)	603739	Construction of I-495/Route 1A Ramps	

B APPENDIX

Roadway Project Funding Application Forms & Evaluations

This appendix provides an explanation of the project funding application form for roadway projects that is used to understand requests for funding and to evaluate projects for possible programming. MPO staff and project proponents update these project funding application forms when new information becomes available. The forms are used to evaluate projects using criteria that reflect MPO visions and policies. Some information is provided specifically by the project proponent and other information is provided by MPO staff or by various state agencies.

Project funding application forms are available on the MPO website, http://www.ctps.org/. Proponents enter the project information on-line. Other information is input by MPO staff or automatically updated through links to other databases.

ROADWAY PROJECT FUNDING APPLICATION FORMS

Overview Tab

Project Background Information

1 ID Number

The MassDOT Project Information System (PROJIS) number assigned to the project. If the project does not have a PROJIS number, an identification number will be assigned to the project by the MPO for internal tracking purposes.

2 Municipality(ies)

The municipality (or 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

36 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 Average A.M./P.M. Peak Period Speed

The average peak period, through vehicle travel speed along a corridor, for both directions of travel.

32 Average A.M./P.M. Peak Period Speed Index

The level of service (LOS) based on the average peak period, through vehicle travel speed index along a corridor, for both directions of travel. The speed index is the ratio of the average observed peak period travel speed to the posted speed

limit. The LOS associated with the speed index is loosely based on the definition provided by the Highway Capacity Manual (HCM) 2000 for urban streets:

LOS A > 0.9
LOS B > 0.7
LOS C > 0.5
LOS D > 0.4
LOS E > 0.33
LOS F < 0.33

LOS A indicates traffic conditions at primarily free flow or speed limit values, and LOS F indicates the worst traffic conditions, characterized by extremely low speeds and likely congestion at critical signalized locations.

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

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)

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 2009 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, 2009-2011)

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, 2009-2011)

47 *Bicycle-Involved Crashes*

Total bicycle involved crashes. (Source: MassDOT Highway Division, 2009-2011)

48 *Pedestrian-Involved Crashes*

Total pedestrian involved crashes. (Source: MassDOT Highway Division, 2009-2011)

49 *Truck-Involved Crashes*

Total truck involved crashes. (Source: MassDOT Highway Division, 2009-2011)

50 *Natural Hazard Zoness*

- 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

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
029492	Bedford, Billerica, and Burlington	Middlesex Turnpike Improvements, from Crosby Drive North to Manning Road (Phase III)	Model
606134	Boston	Traffic Signal Improvements on Blue Hill Avenue and Warren Street	To Be Determined
606284	Boston	Improvements to Commonwealth Avenue, from Amory Street to Alcorn Street	57 Tons of CO_2 Reduced
605789	Boston	Reconstruction of Melnea Cass Boulevard	To Be Determined
605110	Brookline	Intersection & Signal Improvements at Route 9 & Village Square (Gateway East)	22 Tons of CO_2 Reduced
604810	Marlborough	Reconstruction of Route 85 (Maple Street)	325 Tons of CO_2 Reduced
605657	Medway	Reconstruction on Route 109, from Holliston Street to 100 Feet West of Highland Street	352 Tons of CO_2 Reduced
1571	Regionwide	Intersection Improvement Program	
605146	Salem	Reconstruction on Canal Street, from Washington Street & Mill Street to Loring Avenue & Jefferson Avenue	18 Tons of CO_2 Reduced
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
601579	Wayland	Signal & Intersection Improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)	115 Tons of CO_2 Reduced
601630	Weymouth	Reconstruction & Widening on Route 18 (Main Street), from Highland Place to Route 139	Model
604935	Woburn	Reconstruction of Montvale Avenue, from I-93 Interchange to Central Street	46 Tons of CO_2 Reduced
604531	Acton	Assabet River Rail Trail	183 Tons of CO_2 Reduced
1630	Bedford	Safe Routes to School (John Glenn Middle)	Assumed Nominal Reduction in CO_2 from Pedestrian Infrastructure
606316	Brookline	Pedestrian Bridge Rehabilitation over MBTA off Carlton Street	Assumed Nominal Reduction in CO_2 from Pedestrian Infrastructure
605189	Concord	Bruce Freeman Rail Trail, Phase 2C	79 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
606223	Concord, Acton	Bruce Freeman Rail Trail Construction (Phase II-B)	To Be Determined
1595	Everett	Safe Routes to School (Madelaine English)	Assumed Nominal Reduction in CO_2 from Pedestrian Infrastructure
607329	Lynnfield, Wakefield	Rail Trail Extension, from the Galvin Middle School to Lynnfield/Peabody Town Line	To Be Determined
607920	Milton	Safe Routes to School (Glover Elementary School)	Assumed Nominal Reduction in CO_2 from Pedestrian Infrastructure
1596	Revere	Safe Routes to School (Garfield Elementary & Middle School)	Assumed Nominal Reduction in CO_2 from Pedestrian Infrastructure
1529	Saugus	Safe Routes to School (Veterans Memorial)	Assumed Nominal Reduction in CO_2 from Pedestrian Infrastructure
607892	Somerville	Safe Routes to School (Healey School)	Assumed Nominal Reduction in CO_2 from Pedestrian Infrastructure
1594	Watertown	Safe Routes to School (Hosmer Elementary)	Assumed Nominal Reduction in CO_2 from Pedestrian Infrastructure
1631	Weymouth	Safe Routes to School (Pingree Elementary)	Assumed Nominal Reduction in CO_2 from Pedestrian Infrastructure
604652	Winchester, Stoneham, and Woburn	Tri-Community Bikeway	435 Tons of CO_2 Reduced
600867	Boston	Bridge Replacement, Massachusetts Avenue (Route 2A) over Commonwealth Avenue	No CO_2 Impact
604173	Boston	Bridge Rehabilitation, North Washington Street over the Charles River	Assumed Nominal Reduction in CO_2 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 in CO_2 from Pedestrian Infrastructure
1626	Danvers	Bridge Replacement, D-03-018, Route 128 over Waters River	No CO_2 Impact
604796	Dedham	Bridge Replacement, Providence Highway over Mother Brook	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
605883	Dedham	Bridge Replacement, Needham Street over Great Ditch	No CO_2 Impact
607273	Franklin	Bridge Demolition, F-08-005, Old State Route 140 over MBTA/CSX & New Pedestrian Bridge Construction	Assumed Nominal Reduction in CO_2 from Pedestrian Infrastructure
607338	Gloucester	Bridge Preservation, Route 128 over Annisquam River (Phase II)	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 in CO_2 from Pedestrian Infrastructure
606632	Hopkinton and Westborough	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 in CO_2 from Pedestrian Infrastructure
604655	Marshfield	Bridge Replacement, Beach Street over the Cut River	Assumed Nominal Reduction in CO_2 from Pedestrian Infrastructure
607915	Newton and Wellesley	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
1565	Statewide	Accelerated Bridge Program - Bridge	No CO_2 Impact
607507	Wakefield	Bridge Deck Replacement, W-01-021 (2MF) Hopkins Street over I-95 / ST 128	Assumed Nominal Reduction in CO_2 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
456661	Regionwide	Clean Air and Mobility	To Be Determined
606381	Arlington and Belmont	Highway Lighting Repair & Maintenance on Route 2	No CO_2 Impact
1621	Beverly	Resurfacing & Related Work on Route 128	No CO_2 Impact
605733	Boston	Highway Lighting System Replacement on I-93, from Southhampton Street to Neponset Avenue	No CO_2 Impact
087790	Canton, Dedham, and Norwood	Interchange Improvements at I-95/I-93/University Avenue/I-95 Widening	Model
606146	Canton, Norwood, and Westwood	Ramp Construction on I-95 (NB) & Improvements on Dedham Street, Includes Replacement of 4 Signalized Intersections	Model

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	Municipality(ies)	MassDOT Project Description	Analysis of GHG Impact
607174	Chelsea	Resurfacing and Related Work on Route 1	No CO_2 Impact
606176	Foxborough, Plainville and Wrentham	Interstate Maintenance & Related Work on I-495 (NB & SB)	No CO_2 Impact
606546	Franklin	Interstate Maintenance & Related Work on I-495	No CO_2 Impact
607700	Lexington, Burlington, and Woburn	Highway Lighting Branch Circuit Re-Cabling From Six (6) Lighting Load Centers along Route I-95 (128) Lexington-Woburn	No CO_2 Impact
607477	Lynnfield and Peabody	Resurfacing and Related Work on Route 1	No CO_2 Impact
1624	Marshfield	Resurfacing & Related Work on Route 3	No CO_2 Impact
1623	Marshfield, Duxbury, and Plymouth	Resurfacing & Related Work on Route 3	No CO_2 Impact
603917	Medford, Stoneham, Woburn, and Reading	Highway Lighting Rehabilitation on I-93 (Phase II)	No CO_2 Impact
603711	Needham and Wellesley	Rehab/Replacement of 6 Bridges on I-95/Route 128 (Add-a-Lane Contract 5)	Model
607481	Randolph, Quincy, and Braintree	Resurfacing and Related Work on I-93	No CO_2 Impact
1622	Saugus	Resurfacing & Related Work on Route 1	No CO_2 Impact
1568	Boston	Fairmount Improvements	Model
1570	Cambridge and Somerville	Green Line Extension Project - Extension to College Avenue with the Union Square Spur	Model
1569	Medford and Somerville	Green Line Extension Project (Phase II), Medford Hillside (College Avenue) to Mystic Valley Parkway/Route 16	Model
1572	Boston	Red Line-Blue Line Connector Design	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	ELEVATORS & ESCALATORS	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
MBTA	REVENUE VEHICLES (RED AND ORANGE LINE - NEW VEHICLE PROCUREMENT)	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 2014 Highway Projects Status

This appendix lists information about the status of roadway projects in the federal fiscal year 2014 element of the FFYs 2014–17 TIP.

TABLE D-1
Advanced Construction Projects

Project Number	Project Description	District	Funding Source(s)
602984	Concord- Lincoln- Limited Access Highway Improvements at Route 2 & 2A, between Crosby's Corner & Bedford Road, includes C-19-024	4	HSIP
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 2014

Project Number	Project Description	District	Funding Source(s)
607472	Burlington- Tyngsborough- Pavement Preservation At Various Locations on Route 3	4	NHSPP
603462	Duxbury- Intersection Improvements at Kingstown Way (Route 53) & Winter Street	5	CMAQ
604660	Everett- Medford- Bridge Replacements, Revere Beach Parkway (Route 16), E-12-004=M-12-018 Over The Malden River (Woods Memorial Bridge) & M-12-017 Over MBTA And Rivers Edge Drive	4	ABP-GANS
607338	Gloucester- Bridge Preservation, G-05-017, Route 128 Over Annisquam River (Phase II)	4	BR-AC
601553	Melrose- Intersection & Signal Improvement to Lebanon Street, From Lynde Street to Main Street	4	CMAQ
605729	Quincy- Intersection & Signal Improvements at Hancock Street & East/West Squantum Streets	6	CMAQ
601705	Reading- Reconstruction of West Street, from Woburn City Line to Summer Ave/Willow Street	4	STP
	Regionwide- Intersection Improvement Program		CMAQ
606171	Sharon- Interstate Maintenance & Related Work on I-95	5	IM
606639	Weymouth- Braintree- Resurfacing & Related Work on Route 3	6	NHSPP

TABLE D-3

Projects Expected to be Advertised in FFY 2014

Project Number	Project Description	District	Funding Source(s)
604532	Acton- Carlisle- Westford- Bruce Freeman Rail Trail Extension, Including 6 Railroad Bridges & 1 New Bridge Over Route 2A/119 (Phase II-A)	3	CMAQ, TE
606885	Arlington- Bikeway Connection at Intersection Route 3 and Route 60	4	CMAQ
605895	Bellingham- Bridge Demolition, B-06-011, Route 126 over CSX Railroad (Abandoned) & Installation Of Bike Path Culvert	3	BR
600220	Beverly- Reconstruction & Signal Improvements on Rantoul Street (Route 1A) From Cabot Street (South) to Cabot Street (North)	4	CMAQ, STP
606889	Boston- Improvements Along Gainsborough and St. Botolph Streets	6	HPP & TI
604761	Boston- Multi-use Trail Construction (South Bay Harbor) From Ruggles Station to Fort Point Channel	6	TAP, CMAQ
604796	Dedham- Bridge Replacement, D-05-033, Providence Highway over Mother Brook	6	BR-AC
602602	Hanover- Reconstruction of Washington Street (Route 53) and Related Work From the Route 3 Northbound Ramp to Webster Street (Route 123)	5	STP
607447	Malden- Safe Routes To School (Beebe School)	4	SRTS
607441	Manchester By The Sea- Safe Routes To School (Memorial Elementary)	4	SRTS
607209	Somerville- Reconstruction Of Beacon Street, From Oxford Street To Cambridge C.L.	4	STP-Flex
607449	Westwood- Safe Routes To School (Downey School)	6	SRTS
601019	Winchester- Signal & Improvements At 4 Locations On Church Street & Route 3 (Cambridge Street)	4	CMAQ

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

Project Number	Project Description	District	Funding Source(s)
605146	Salem- Reconstruction on Canal Street, From Washington Street & Mill Street to Loring Avenue & Jefferson Avenue	4	CMAQ, STP

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

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 2013 Transit Projects – Section 5307

Mode	Type	Detail	Funds Programmed	Pending	Completed	Approved
Subway	Red Line Signal Upgrade	Upgrades to Red Line Signal System	$8,000,000	$8,000,000		
Subway	Government Center Station	Reconstruction of Government Center Station	$53,492,698			$53,492,698
Subway	State Street Station	Improvements to State Street Station	$17,197,512	$17,197,512		
Subway	Red Line Leak Repairs	Repairs to tunnel system	$20,317,216			
Systemwide	Bridge Program	Improvements to bridge infrastructure	$16,000,000	$16,000,000		
Systemwide	Systems Upgrades	TBD	$6,198,310			
Systemwide	Preventive Maintenance	Preventive Maintenance	$12,000,000			$12,000,000
	Section 5307 MBTA Total		**$133,205,736**	**$41,197,512**	**$0**	**$65,492,698**

TABLE E-2
FFY 2013 Transit Projects Section 5337

Mode	Type	Detail	Funds Programmed	Pending	Completed	Approved
Green Line	Green Line Car #8 Upgrades	Vehicle improvements	$9,400,000			$9,400,000
Red Line	Red Line Floating Slab	Improvements to slab between Harvard - Alewife	$7,599,443	$7,599,443		
Systemwide	Parking System	Alewife and South Shore parking garages	$8,500,000			
Systemwide	Stations & Facilities	Improvements to multiple station and facilities	$41,954,867			
Systemwide	Bridge Program	Improvements to bridge infrastructure	$48,000,000		$48,000,000	
Systemwide	AFC Upgrades	Relational database/operational system	$4,080,000		$4,080,000	
	Section 5337 MBTA Total		**$119,534,310**	**$7,599,443**	**$52,080,000**	**$9,400,000**

TABLE E-3
FFY 2013 Transit Projects Section 5339

Mode	Type	Detail	Funds Programmed	Pending	Completed	Approved
Systemwide	Systems Upgrades	TBD	$5,202,388			
	Section 5339 MBTA Total		**$5,202,388**	**$0**	**$0**	**$0**

TABLE E-4

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			
Commuter Rail	Revenue Vehicles	Procurement of Option Locomotives	$52,647,920			
Red Line	Red Line Signal Upgrade	Upgrade signals on Red Line	$15,200,000			
Systemwide	Power Program	Improvements to power infrastructure	$28,513,462			
Systemwide	Systems Upgrades	TBD	$2,324,134			
Systemwide	Preventive Maintenance	Preventive Maintenance	$12,000,000			
	Section 5307 MBTA Total		**$134,685,516**	**$0**	**$0**	**$0**

TABLE E-5

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	$19,600,557			
Systemwide	Stations & Facilities	Improvements to multiple station and facilities	$40,000,000			
Systemwide	Bridge Program	Improvements to bridge infrastructure	$60,000,000			
Systemwide	Systems Upgrades	TBD	$1,589,989			
	Section 5337 MBTA Total		**$121,190,546**	**$0**	**$0**	**$0**

TABLE E-6

FFY 2014 Transit Projects - Section 5339

Mode	Type	Detail	Funds Programmed	Pending	Completed	Approved
Systemwide	Systems Upgrades	TBD	$5,287,027			
	Section 5339 MBTA Total		**$5,287,027**	**$0**	**$0**	**$0**

APPENDIX

Public Comments on the Draft FFYs 2015 – 18 TIP

This appendix will contain a table of summarized public comments on the draft FFYs 2015-18 TIP received during the public comment period.