

# TIP

## Transportation Improvement Program

**FYY 2017-2021**

**October 1, 2017 to September 30, 2018,**

**METROPOLITAN PLANNING ORGANIZATION  
PIONEER VALLEY REGION, MASSACHUSETTS**

**Endorsed**

This document was prepared under contract with the Massachusetts Department of Transportation. This report was funded in part through grant(s) from the Federal Highway Administration (and Federal Transit Administration), U.S. Department of Transportation. The views and opinions of the authors (or agency) expressed herein do not necessarily reflect those of the state or U.S. Department of Transportation.

# DRAFT TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

2018 - 2022

FOR THE  
METROPOLITAN PLANNING ORGANIZATION  
PIONEER VALLEY REGION,  
MASSACHUSETTS

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# **PREFACE**

## **The Pioneer Valley Region**

The Pioneer Valley Region is comprised of 43 cities and towns covering approximately 1,180 square miles. Home to over 626,000 residents, the Pioneer Valley is the fourth largest metropolitan area in New England. The map on the following page references the Pioneer Valley Region.

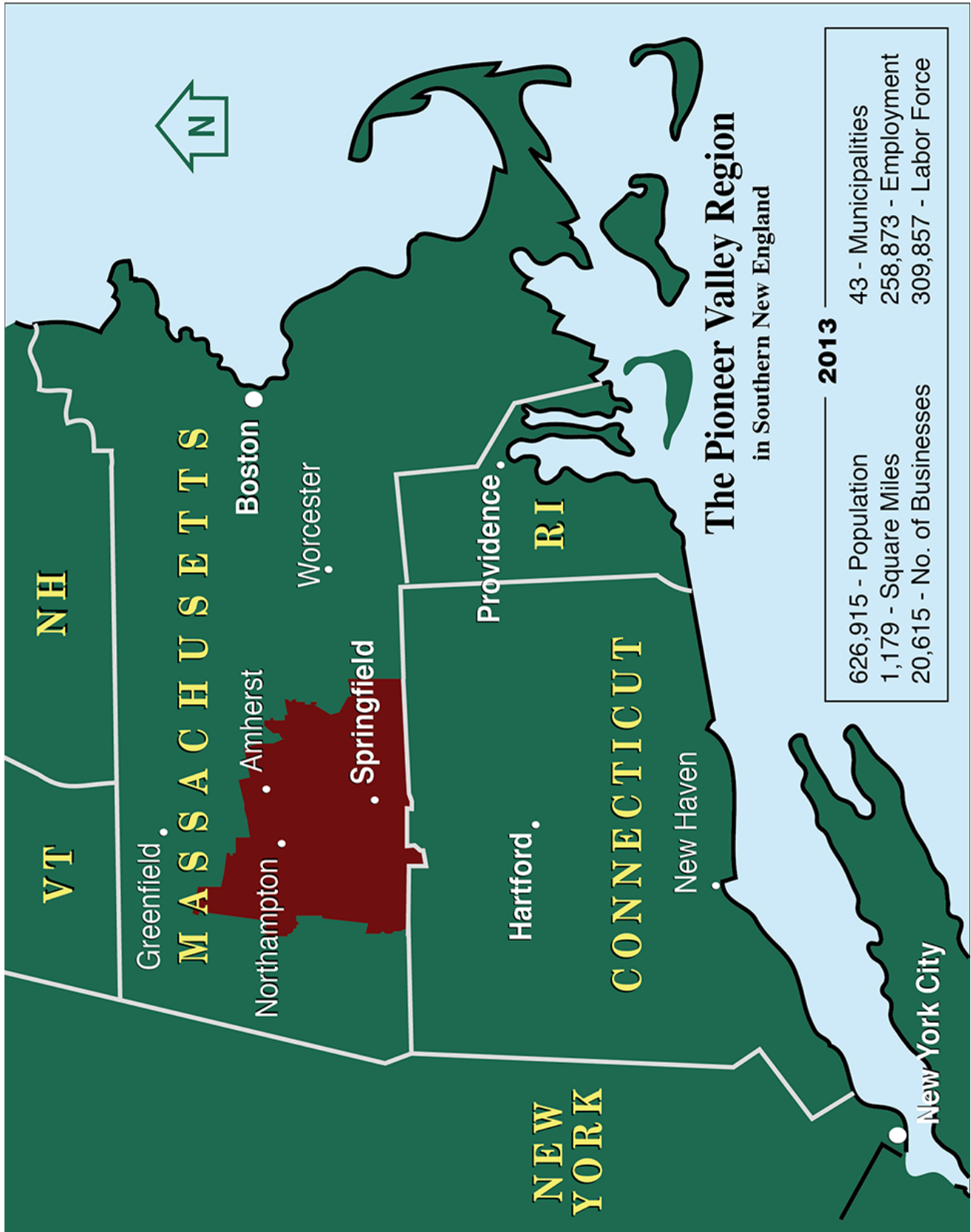
## **TIP Format and MPO Endorsement**

The FFY 2018-2022 TIP has been prepared with completely separate components of the document that are subject to federal review and approval and components that are not. This distinction of a “federal component” was the firm position of the Massachusetts Department of Transportation (MassDOT) as a means to avoid potential problems with adequately satisfying federal financial constraint requirements with the non-federal aid component of the TIP. Although a non-federal component of the TIP is represented, it is understood that this component is not subject to Metropolitan Planning Final Rule 23 CMR 450 section 324, therefore federal review and approval is not required.

The non-federal component is provided for the benefit of the MPO and the constituent communities as a representation of an agreed upon listing of improvement projects to be undertaken entirely with state provided resources. All projects included in the Non Federal Aid (NFA) section of the TIP must be eligible to receive federal funds and be located on a functionally classified road. The separation of federal aid projects from non-federal aid projects by no means represents a lack of commitment by the state to fund all projects specifically programmed in the document. Assuming that adequate funds are available from federal and/or state sources, it can be fully expected that the following project listings can and will be implemented over the FFY 2018-2022 time frame. Pending federal guidance approving the inclusion of non-federal aid projects without secured bonded resources in each year, the TIP will be amended to reinstate all non-federal aid projects into the document endorsed for federal review and approval.

## **MassDOT Commitment to Funding all Designed and Permitted Projects**

The MassDOT has committed to funding all transportation improvement projects that will be ready for advertisement in FFY 2018 and beyond. In response to this commitment, Pioneer Valley local officials in cooperation with regional and state officials from the MassDOT have made a concerted effort to develop a TIP project listing that is truly representative of the projects that will realistically be ready for advertisement in FFY 2018. Funding targets for the Pioneer Valley Region have been issued by MassDOT identifying potential resources for each year of the TIP.



# **I.GENERAL SUPPORT INFORMATION**

## **INTRODUCTION**

The Transportation Improvement Program (TIP) is a requirement of the Metropolitan Transportation Planning Process as described in the Metropolitan Planning Final Rule 23 CFR 450 section 324. This regulation developed by the Federal Department of Transportation defines the Transportation Improvement Program as:

*“A staged, multiyear, intermodal program of transportation projects which is consistent with the metropolitan transportation plan.”*

The Pioneer Valley TIP is a Five-year schedule of priority highway, bridge, transit, and multimodal projects identified by year and location complete with funding source and cost. The TIP is developed annually and is available for amendment and adjustment at any time. Each program year of the TIP coincides with the Federal Fiscal Year calendar, October 1 through September 30. All TIPs and amendments are consistent with the goals and objectives of the Regional Transportation Plan for the Pioneer Valley region. This TIP is financially constrained.

## **FEDERAL AUTHORIZATION**

FAST Act, Fixing America's Surface Transportation (Pub. L. No. 114-94), was signed into law on December 4, 2015. Funding surface transportation programs at over \$305 billion for fiscal years (FY) 2016 through 2020, FAST act replaced MAP-21 which was enacted in 2012. Under the FAST Act all Metropolitan Planning Organizations are required to incorporate ten planning factors. The ten planning factors are as follows:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the safety of the transportation system for motorized and non-motorized users.
3. Increase the security of the transportation system for motorized and non-motorized users.
4. Increase the accessibility and mobility of people and for freight.
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
6. Enhance the integration and connectivity of the transportation system, across and between modes, people and freight.
7. Promote efficient system management and operation.
8. Emphasize the preservation of the existing transportation system.
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
10. Enhancing travel and tourism

The Moving Ahead for Progress in the 21st Century Act (MAP-21), enacted in 2012, included provisions to make the Federal surface transportation more streamlined, performance-based, and multimodal, and to address challenges facing the U.S. transportation system, including improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the



system and freight movement, protecting the environment, and reducing delays in project delivery. The FAST Act builds on the changes made by MAP-21.<sup>1</sup>

The FAST Act specifically addresses all modes of transportation and enhances many of the existing provisions and programs defined in past transportation legislation.

National goal areas continue to be a priority under the FAST Act and address the following areas:

**Safety**—To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

**Infrastructure condition**—To maintain the highway infrastructure asset system in a state of good repair.

**Congestion reduction**—To achieve a significant reduction in congestion on the NHS.

**System reliability**—To improve the efficiency of the surface transportation system.

**Freight movement and economic vitality**—To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.

**Environmental sustainability**—To enhance the performance of the transportation system while protecting and enhancing the natural environment.

**Reduced project delivery delays**—To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

## CONFORMITY WITH THE REGIONAL TRANSPORTATION PLAN

All projects in the TIP come from the 2016 Regional Transportation Plan (RTP). All regionally significant projects included in the TIP were previously included in the air quality analysis completed for the conforming RTP. Because projects in the TIP come from the conforming RTP and all regionally significant RTP projects for 2018 through 2022 (both Federal and Non-Federal Aid) are programmed in the TIP, the same air quality analysis utilized for the RTP can be used for the TIP. Since most all of Massachusetts (with limited exceptions) was designated on 5/21/12 by the United States Environmental Protection Agency as "unclassifiable/attainment" for the latest ozone standard, a conformity determination for the Pioneer Valley 2018-2022 TIP is only required for Carbon monoxide. Further details and background information are provided in Chapter 8.

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<sup>1</sup> <https://www.fhwa.dot.gov/fastact/summary.cfm>

## **METROPOLITAN PLANNING ORGANIZATION**

The Pioneer Valley Metropolitan Planning Organization (MPO) is responsible for developing the TIP. The MPO is comprised of ten members including four independently operating agencies and six locally elected officials:

<b>Name</b>	<b>Title</b>
<b>Stephanie Pollack</b>	<b>Secretary and CEO of the Massachusetts Department of Transportation</b>
<b>Thomas J. Tinlin</b>	<b>Administrator of the Massachusetts Department of Transportation Highway Division</b>
<b>Walter Gunn</b>	<b>Chairman of the Pioneer Valley Executive Committee</b>
<b>Mayor David Narkewicz</b>	<b>Chairman of the Pioneer Valley Transit Authority Advisory Board</b>
<b>Mayor Domenic Sarno</b>	<b>Mayor of Springfield (Center Tier)</b>
<b>Mayor Richard Kos</b>	<b>Mayor of Chicopee (Center Tier)</b>
<b>Mayor Richard Cohen</b>	<b>Mayor of Agawam (Southern Tier)</b>
<b>Douglas Slaughter</b>	<b>Amherst Board of Selectmen (Northern Tier)</b>
<b>George Archible</b>	<b>Belchertown Board of Selectmen (Eastern Tier)</b>
<b>Vacant</b>	<b>Western Tier</b>
<b>Alternates</b>	
<b>Mayor Alexander Morse</b>	<b>City of Holyoke (Central Tier)</b>
<b>Mayor Brian P. Sullivan</b>	<b>City of Westfield (Southern Tier)</b>
<b>Vacant</b>	<b>Northern Tier</b>
<b>Carmina Fernandes</b>	<b>Ludlow Board of Selectmen (Eastern Tier)</b>
<b>Vacant</b>	<b>Western Tier</b>
<b>Ex-Officio (Non-Voting)</b>	
<b>Jeff McEwen</b>	<b>Federal Highway Administration</b>
<b>Mary Beth Mello</b>	<b>Federal Transit Administration</b>
<b>Rick Sullivan</b>	<b>Economic Development Council of Western Massachusetts</b>
<b>James Czach</b>	<b>Chairman – Pioneer Valley Joint Transportation Committee</b>

## **DEVELOPMENT OF THE TIP**

As the lead planning agency for the MPO, the PVPC accepts the responsibility for developing the TIP in a cooperative process with members of the MPO and the general public. The final TIP is voted on for endorsement at a formal meeting of the MPO. The endorsed TIP project listing is included in the State Transportation Improvement Program (STIP) verbatim and requires endorsement by the Governor.

The MPO relies on a transportation advisory committee, the Joint Transportation Committee (JTC) to carry out the cooperative process during TIP development. The JTC is a group of community appointed officials, MPO member representatives, public and private transportation providers, citizens, and special interest groups and agencies. The JTC establishes and recommends to the MPO procedures for submitting, prioritizing and selecting projects for the TIP. PVPC staff provides the technical support to conduct the TIP development activities for the JTC.

Below is a general outline of steps taken during the TIP development process.

- Project proponents (communities, MPO members, agencies) submit projects through the process outlined in Chapter 2 of the Massachusetts Project Development & Design Guidebook (2006)

- Projects are prioritized based on evaluation criteria by MPO staff, JTC representatives, and MassDOT Highway Division staff, and MassDOT staff at a posted meeting open to all.
- The State (thru MassDOT) provides funding targets for all 13 Regional Planning Agencies in Massachusetts.
- JTC reviews and recommends projects by Transportation Evaluation Score (TEC) and readiness to the MPO.
- Draft TIP project listings are prepared by the MPO staff and distributed for review and comment to MPO members.
- MPO meets to make final decisions on the composition of the TIP and to recommend the Draft TIP for general public release as required by the MPO Public Participation Plan for the Pioneer Valley Region.
- Final Draft TIP is distributed for review, consultation and comment in accordance with the adopted MPO Public Participation Plan.
- Public meetings and news releases are conducted to promote public involvement and consultation.
- Comments are compiled and addressed where appropriate.
- Final TIP developed for the JTC's consideration and their recommendation to MPO.
- MPO meets to vote on final adjustments and endorsement of the TIP.
- Endorsed Regional TIPs are compiled by MassDOT to create the STIP.
- Secretary and CEO of MassDOT endorse the STIP (on behalf of the Governor) and submits the STIP to federal agencies for review and approval.
- Federally approved STIP is ready for state implementation (project advertisement).

Amendments and adjustments to the TIP are made on an as needed basis with the additional public review and input for formal amendments only.

### **CONGESTION MANAGEMENT PROCESS (CMP)**

Congestion Management Process means a systematic approach required in transportation management areas (TMAs) that provides for effective management and operation, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding under title 23 U.S.C., and title 49 U.S.C., through the use of travel demand reduction and operational management strategies.

### **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>

### **23 CFR 450.314(h) COOPERATIVELY SHARE PERFORMANCE DATA**

The MPO(s), State(s), and the providers of public transportation shall jointly agree upon and develop specific written provisions for cooperatively developing and sharing information related to transportation performance data, the selection of performance targets, the reporting of performance targets, the reporting of performance to be used in tracking progress toward attainment of critical outcomes for the region of the MPO (see § 450.306(d)), and the collection of data for the State asset management plan for the NHS for each of the following circumstances:

- (i) When one MPO serves an urbanized area,
  - (ii) When more than one MPO serves an urbanized area, and
  - (iii) When an urbanized area that has been designated as a TMA overlaps into an adjacent MPA serving an urbanized area that is not a TMA.
- (2) These provisions shall be documented either:
- (i) As part of the metropolitan planning agreements required under (a), (e), and (g) of this section, or
  - (ii) Documented in some other means outside of the metropolitan planning agreements as determined cooperatively by the MPO(s), State(s), and providers of public transportation.

### **PROJECT PRIORITY CRITERIA AND SELECTION**

MassDOT developed a process and set of criteria to prioritize the region's TIP projects which was modified and endorsed by the MPO. In 2014 PVPC with the assistance of the JTC completed and comprehensive update to the TEC for the PVMPO. The purpose of the update was to bring the TEC up to the current set forth by MAP -21. All projects included in the TIP have been evaluated and assigned a priority value or rating. This process is used as a management tool to identify projects of regional priority and program them accordingly in the TIP.

## TEC SCORING SUMMARY

System Preservation, Modernization and Efficiency	Livability	Mobility	Smart Growth and Economic Development	Safety and Security	Environment and Climate Change	Quality of Life	Environmental Justice
Improves Substandard Pavement 8	Design is consistent with Complete Streets policies 3	Improves efficiency, reliability and attractiveness of public transit 4	Encourages development around existing infrastructure 2	Reduces number and severity of collisions 7	Preserves floodplains and wetlands 1	Enhances or preserves greenways and blueways 1	Reduces and limits disproportionate impacts on an EJ community 1
Improves Intersection Operations 6	Provides multi-modal access to a downtown, village center, or employment center 2	Improves existing peak hour LOS 6	Prioritizes transportation investments that support land use and economic development goals 1	Promotes safe and accessible pedestrian and bike environment 5	Promotes green infrastructure and low impact development to reduce stormwater impacts 2	Improves access to parks, open lands and open space 1	Improves transit for EJ populations 2
In a Congestion Management Process Area 5	Reduces auto-dependency 2	Reduces traffic congestion 7	Provides services to a TOD, TND or cluster development centers 0.5	Improves emergency response 4	Reduced impervious surfaces 0.5	Improves access to jobs 2	Creates an EJ Burden .5
	Project serves a targeted development site 2		Supports mixed-use downtowns and village centers 0.5		Protects or enhances environmental assets 0.5	Preserves historical and cultural resources 0.5	
	Completes off-road bike and ped network 3		Improves intermodal connections 4		Supports Brownfield redevelopment 0.5	Preserves prime agricultural land 0.5	
			Reduces congestion on freight routes 2		Improves air quality 1	Provides safe and reliable access to education 0.5	
					Reduces CO2 emissions 1	Supports designated scenic byways 0.5	
					Promotes mode shift 1	Implements ITS Strategies 2	
					Improves fish and wildlife passage 1	Improves Network Wayfinding 1	
					Supports Green Communities 0.5	Health Impact Assessment 1	
					Improves storm resilience 3	Length of Time on TIP 1	
Maximum Score							
19	12	17	10	16	12	11	3
							100

## PROJECT INITIATION

The Project Needs Form (PNF) is the first document completed at the start of the project development process. The PNF provides sufficient material to understand the transportation need(s), and results in one of the following three outcomes:

- Verification of the problem, need, or opportunity to enable it to move forward into design;
- Determination of the level of further project planning warranted; or,
- Dismissal of a project from further consideration.

The next step in the project development process involves summarizing the findings and direction defined in a Project Initiation Form (PIF) used by the Project Review Committee (PRC) and the MPO for project review and evaluation. The PIF will include the following information to be documented by the proponent:

- Project Type and Description, including locus map
- Summary of Project Planning Process
- Preliminary identification of the Project Category for review and programming purposes
- Definition of the proposed project management responsibility
- Definition of an interagency (including local boards) coordination plan
- Definition of a public outreach plan for the design process
- Project Need Form or Project Planning Report as an attachment
- Transportation Evaluation Criteria as an attachment

The Project Needs and Project Information Form can be found at

<http://www.massdot.state.ma.us/highway/Departments/ProjectManagement/ProjectReviewCommittee.aspx>

## MASSDOT GREENDOT POLICY

MassDOT launched its GreenDOT initiative on June 2, 2010. GreenDOT was developed to assure a coordinated approach to sustainability and to integrate sustainability into the responsibilities and decision-making of all MassDOT employees. The following three mutually-reinforcing goals form the foundation of GreenDOT:

- Reduce greenhouse gas (GHG) emissions
- Promote the healthy transportation modes of walking, bicycling, and public transit
- Support smart growth development

The initiative is a comprehensive response to a range of state and MassDOT laws, policies and initiatives including: the Global Warming Solutions Act, the Green Communities Act, the Healthy Transportation Compact, Leading by Example, YouMoveMassachusetts, and Complete Streets. The Global Warming Solutions Act requires Massachusetts to reduce economy wide GHG emissions: 10% -25% below 1990 levels by 2020 and an 80% reduction below 1990 levels by 2050. The transportation sector is the largest GHG emitter, producing 31% of 1990 emissions and projected to produce 38% of 2020 emissions. GreenDOT also incorporates a statewide mode shift goal to triple the percentage of trips made by bicycling, transit and walking.

GreenDOT is also comprised on an additional by seven goals that can be tied to regional planning efforts. In the Pioneer Valley region, these goals and their recommended strategies have been incorporated into the new Transportation Evaluation Criteria (TEC) used to prioritize transportation improvement projects included as part of the TIP. The Tec is described in greater detail in Chapter 10 of the RTP. Table 1 summarizes the seven GreenDOT goals, their associated strategies and how they are addressed in the TEC for the Pioneer Valley.

**Table 1 Integration of GreenDOT Goals into TIP**

<b>Policy/Planning - Design a Multi-Modal Transportation System, Triple Mode Share of Bicycling, Transit, and Walking, &amp; Promote Healthy Transportation and Livable Communities</b>	
<b>Associated Strategy</b>	<b>RTP/TEC Integration</b>
Providing secure and/or covered bicycle parking and shared used paths	Projects are eligible to receive up to 12 points for bicycle and pedestrian improvements in the "Livability" category. Projects receive 1 point for providing bicycle amenities such as bicycle parking.
Improving access to transit and other vital community services	Projects are eligible to receive up to 4 points by improving access to transit.
Designing complete street projects with municipalities	Complete Streets consistency is worth up to 3 points.
Encouraging Safe Routes to Schools projects	Projects that provide safe and reliable access to education receive 0.5 point.
Incorporating public health impacts in the transportation planning process	Projects that complete a Health Impact Assessment will receive 1 point.
Coordinating on regional and statewide bicycle and pedestrian planning efforts.	Many "Livability" subcategories in the TEC support regional and statewide bicycle and pedestrian planning efforts.
Supporting Bike Share programs locally and regionally.	Projects can receive 2 points for being part of a locally adopted Bike Share Program.
Prioritizing critical pedestrian and bicycle network gaps, i.e. Bay State Greenway	Critical Gaps are identified as part of PVPC's Regional Bicycle Linkages Map. Projects that provide connections to regional bikeways/walkways receive 1 point.
Improving bicycle and pedestrian counts	PVPC collects bicycle and pedestrian movements as part of all intersection turning movement counts.
<b>Air - Reduce Greenhouse Gas Emissions &amp; Improve Air Quality</b>	
<b>Associated Strategy</b>	<b>RTP/TEC Integration</b>
Developing projects to improve air quality	Projects that demonstrate improvements to air quality can receive up to 1 point.
Analyzing GHG reduction strategies in transportation improvement projects and tracking progress	PVPC performs GHG analysis for all proposed RTP and TIP projects.
Setting regional goals for reducing VMT (travel demand)	Projects that demonstrate a significant reduction in single occupant vehicle use will receive 1 point.
Analyzing fleet fuel usage and supporting retrofits and procurement of alternative fuel vehicles	The RTP supports the use of alternatively fueled vehicles. PVTA has hybrid transit vehicles and is in the process of purchasing electric buses.
Supporting alternative fuels vehicle infrastructure	PVTA is in the process of purchasing an electric vehicle charging station.
Increasing bus and transit route efficiency	The PVPC has an ongoing task in its UPWP to study transit route efficiency.

Promoting anti-idling policies and educational outreach	Not specifically addressed in the TEC but included as a Need in the RTP
<b>Energy - Consume Less Energy &amp; Increase Reliance on Renewable Energy</b>	
<b>Associated Strategy</b>	<b>RTP/TEC Integration</b>
Evaluating outdoor lighting and traffic signal systems, and retrofitting where feasible	Upgrades to traffic signal equipment can be worth up to 6 points.
Planning for the implementation of energy efficient measures and renewable energy projects	The RTP incorporates strategies from the Pioneer Valley Clean Energy Plan.
<b>Land - Minimize Energy and Chemicals Used in Maintenance &amp; Enhance Ecological Performance</b>	
<b>Associated Strategy</b>	<b>RTP/TEC Integration</b>
Implementing sustainable stormwater management	Up to 2.5 points can be received through the use of green infrastructure and the reduction of impervious surfaces to manage stormwater.
Protecting and restoring native landscaping, woodland, and urban tree coverage	Projects that protect or enhance environmental assets receive 0.5 point.
Implementing sustainable road salt and sanding practices	Included as a strategy in the RTP.
Designing landscapes for wildlife habitat restoration, safe migration, and accommodation	Improvements to stream crossings and culverts that improve fish and wildlife passage receive 1 point.
Reducing outdoor light pollution	Not specifically addressed.
Advocating for urban trees into Complete Streets designs/studies	Complete Streets consistency is worth up to 3 points.
<b>Materials - Improve Lifecycle Impacts of Investments &amp; Purchase Environmentally Preferred Products</b>	
<b>Associated Strategy</b>	<b>RTP/TEC Integration</b>
Planning for climate resiliency in the development of projects	Projects that preserve floodplains receive 0.5 point. Projects that improve storm resilience in areas prone to flooding receive up to 3 points.
Supporting the use and identify appropriate applications for warm mix and recycled content paving materials	Not specifically addressed.
<b>Waste - Achieve Zero Solid Waste Disposal</b>	
<b>Associated Strategy</b>	<b>RTP/TEC Integration</b>
Identifying projects with zero construction waste diversion goals	Not specifically addressed.
Implementing regional litter prevention programs with their respective municipalities	Not specifically addressed.
<b>Water - Use Less Water &amp; Improve Ecological Function of Water Systems</b>	
<b>Associated Strategy</b>	<b>RTP/TEC Integration</b>
Planning projects that minimize impacts on surface water and enhance wetlands flood storage capacity	Projects that preserve wetlands receive 0.5 point.
Considering sea level rise and storm surge projections in project planning	Projects that improve storm resilience in areas prone to flooding receive up to 3 points.



## PROJECT SELECTION AND PROGRAMMING

The project priority ratings were applied in conjunction with a project's anticipated advertisement schedule. The funding targets provided by the MassDOT to develop the four-year program of the TIP were applied for each year in order to develop this fiscally constrained document. A project was not considered for scheduling in a year earlier than its anticipated schedule regardless of the priority rating. For projects that are expected to be ready to go in the first year of the TIP the top priority projects for that year were funded under the federal aid categories, since these funds are most secure. Once the federal aid funds were completely programmed, non-federal aid funds were programmed to priority projects. This initial assignment procedure was applied to each year of the TIP and is subject to change as the TIP is developed and refined by members of the MPO and the JTC.

## AMENDMENT/ADJUSTMENT OF THE TIP

Amendment means a revision to a long-range statewide or metropolitan transportation plan, TIP, or STIP that involves a major change to a project included in a metropolitan transportation plan, TIP, or STIP, including the addition or deletion of a project or a major change in project cost, project/project phase initiation dates, or a major change in design concept or design scope (e.g., changing project termini or the number of through traffic lanes or changing the number of stations in the case of fixed guideway transit projects). Changes to projects that are included only for illustrative purposes do not require an amendment. An amendment is a revision that requires public review and comment and a redemonstration of fiscal constraint. If an amendment involves "non-exempt" projects in nonattainment and maintenance areas, a conformity determination is required.

Amendments requires formal MPO action, and must follow the requirements outlined in the Pioneer Valley Public Participation Plan (PPP). Additional information regarding the PPP can be found at <http://www.pvpc.org/content/pioneer-valley-public-participation-plan>

Program adjustments can be conducted without formal MPO action in order to minimize constraints on programming projects. Minor adjustments could include such actions as moving projects between Year 1 and Year 2, and minor fluctuations in project description, costs and funding source. This action can be accomplished through an agreed upon administrative action.

## DESCRIPTION OF FUNDING SOURCES

**Interstate Maintenance (IM)** - Resurfacing, restoration and rehabilitation are eligible activities for maintaining Interstate facilities. Reconstruction is also eligible if it does not add capacity. However, high-occupancy-vehicle (HOV) and auxiliary lanes can be added. Funding: federal - 90 %, state - 10 %.

**Surface Transportation Block Grant Program (STBGP)** - This program formerly the Surface Transportation Program (STP) is a flexible funding program that can be used for projects that preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals. Funding: federal - 80%, state - 20%.

**Transportation Alternatives Program (TAP)** - The TAP provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle

facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways. Funding: federal - 80%, state - 20%

**Congestion Mitigation and Air Quality Improvement Program (CMAQ)** - These funds are directed towards transportation projects and programs which reduce transportation-related emissions. These funds are to assist areas designated as nonattainment and maintenance under the Clean Air Act Amendments of 1990. These projects will contribute to meeting the attainment of National Ambient Air Quality Standards (NAAQS). Funding: federal - 80%, state - 20%.

**Highway Safety Improvement Program (HSIP)** – The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance. The goal of HSIP is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. Funding: federal - 80%, state - 20%. HSIP can be funded 90/10 and even 100% federal in certain circumstances.

**Bridges (BR)** - Funds the replacement or repair of structurally deficient or unsafe bridges in urban and rural areas. All bridges, both on and off the federal aid roadway system are eligible for funding. Funding: federal - 80%, state - 20%.

**National Highway Performance Program (NHPP)** - The NHPP provides support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS. NHPP projects must be on an eligible facility and support progress toward achievement of national performance goals for improving infrastructure condition, safety, mobility, or freight movement on the NHS, and be consistent with Metropolitan and Statewide planning requirements. Funding: federal - 80%, state - 20%.

**High Priority Projects (HPP)** High Priority Projects are congressionally earmarked projects that have been deemed as a high priority for the state where the project is located. Funding: federal - 80%, state – 20%

**Section 115 Funds** Included in the Transportation bill as congressional earmarks, each year the earmarks are given a designated funding category. In FFY2005 the funding designation for these projects was Section 115 Funds. Funding: federal – 100%, state – 0%

**Section 117 Funds** Included in the Transportation bill as congressional earmarks, each year the earmarks are given a designated funding category. In FFY2006 the funding designation for these projects was Section 117 Funds. Funding: federal – 100%, state – 0%

**Section 129 Funds** Congressional Earmarks for FFY 2008. Funding: federal – 100%, state – 0%

**Section 125 Funds** Congressional Earmarks for FFY 2009. Funding: federal – 100%, state – 0%

In compliance with FHWA guidelines projects with federal earmarks are only programmed in the FY 2014 to FY 2017 TIP if the total funding is adequate for project implementation. The remaining earmarked projects will be included in appendix Z for informational and tracking purposes.

**Non-Federal Aid (NFA)** - This funding category contains all those projects not receiving federal funds. Various categories of state funding are included in this group including bikeways, State Aid

(Chapter 90), and highway construction and maintenance (Chapter 497). This category is included in the TIP for informational purposes only. Funding: federal - 0 %, state - 100 %.

**Section 5339 Bus and Bus Facilities** – (5309 SAFETEA-LU) Program provides capital funding to replace, rehabilitate, and purchases buses and related equipment and to construct bus related facilities. Funding: Federal - 80%, State - 20%

**Section 5307 Capital** - This program provides grants to Urbanized Areas<sup>1</sup> (UZA) for public transportation capital, planning, job access and reverse commute projects, as well as operating expenses in certain circumstances. These funds constitute a core investment in the enhancement and revitalization of public transportation systems in the nation's urbanized areas, which depend on public transportation to improve mobility and reduce congestion. Federal Share is 80% for Capital Assistance, 50% for Operating Assistance, and 80% for Americans with Disabilities Act (ADA) no-fixed-route paratransit service, using up to 10% of a recipient's apportionment.

**Section 5310** - Section 10 pertains to transportation facilities meeting special needs of the elderly and disabled. Funds allocated under Section 16(b) (2) provide private non-profit corporations and associations with grants and loans to improve the mobility of the elderly and disabled. In Massachusetts, 16(b) (2) funds are administered at the state level by the MASSDOT. These funds typically are used for the purchase of capital items, including lift-equipped vans. Mobility Assistance Program (MAP) funds are intended for use by public agencies, such as municipal councils on aging and the Pioneer Valley Transit Authority (PVRTA) to provide van service to elderly and/or disabled persons.

**Section 5311** - These funds are made available exclusively for public transportation projects outside the urbanized areas. Both capital and operating expenses are eligible.

#### TRANSPORTATION SYSTEM OPERATING AND MAINTENANCE COSTS

The FFY 2018-2022 TIP is consistent with the Regional Transportation Plan (RTP) for the Pioneer Valley Region. Tables 2 and 3 presents the estimates outlined in the RTP of annual expenditures associated with operating and maintaining the transportation system. These estimates represent past expenditures and do not reflect costs associated with maintaining a constant level of system performance.

**Table 2 Transportation Operating and Maintenance Expenditures**

Total Available for Programming in the Pioneer Valley RTP	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	GRAND TOTAL
	Total	Total	Total	Total	Total	Total
	\$ 420,177,748	\$ 426,618,217	\$ 520,221,270	\$ 582,504,200	\$ 623,968,064	\$ 2,573,489,499
Statewide Interstate Maintenance	\$ 29,750,182	\$ 28,157,124	\$ 35,185,257	\$ 39,841,190	\$ 42,920,276	\$ 175,854,029
Statewide NHS	\$ 19,572,131	\$ 18,955,373	\$ 23,686,712	\$ 26,821,085	\$ 28,893,926	\$ 117,929,227
Statewide Bridge	\$ 105,433,448	\$ 102,111,025	\$ 127,598,354	\$ 144,482,963	\$ 155,649,185	\$ 635,274,975
Statewide Infrastructure	\$ 4,219,341	\$ 4,086,381	\$ 5,106,359	\$ 5,782,064	\$ 6,228,925	\$ 25,423,070
Remaining Statewide Programs	\$ 96,040,886	\$ 101,493,887	\$ 126,827,176	\$ 143,609,738	\$ 154,708,473	\$ 622,680,160
NFA Bridge Preservation	\$ 54,049,500	\$ 54,860,243	\$ 55,670,985	\$ 56,481,728	\$ 57,292,470	\$ 278,354,926
Regional Discretionary Funding	\$ 111,112,260	\$ 116,954,184	\$ 146,146,427	\$ 165,485,432	\$ 178,274,809	\$ 717,973,112

Source: Regional Transportation Plan, updated 2016

**Table 3 Transit Operating and Maintenance Expenditures**

Estimated Transit Operating Revenues 2016 - 2040						
	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	Grand Total
State Contract Assistance	\$ 125,723,298	\$ 145,747,760	\$ 168,961,600	\$ 195,872,803	\$ 227,070,262	\$ 863,375,723
Local Assessments	\$ 43,637,997	\$ 49,372,389	\$ 55,860,326	\$ 63,200,831	\$ 71,505,940	\$ 283,577,483
5307 Federal Urbanized Area Formula	\$ 53,120,529	\$ 57,917,522	\$ 62,393,619	\$ 67,215,646	\$ 72,410,341	\$ 313,057,657
5339 Federal **	\$ 3,614,988	\$ 3,937,914	\$ 4,242,253	\$ 4,570,110	\$ 4,923,307	\$ 21,288,572
5310 Federal Elderly & Disabled	\$ 2,704,105	\$ 2,913,090	\$ 3,138,225	\$ 3,380,759	\$ 3,642,038	\$ 15,778,217
Farebox	\$ 41,119,964	\$ 45,399,763	\$ 50,125,006	\$ 55,342,057	\$ 61,102,103	\$ 253,088,893
Advertising, other revenue	\$ 2,948,172	\$ 3,255,020	\$ 3,593,805	\$ 3,967,851	\$ 4,380,829	\$ 18,145,677
Available for Programming in Pioneer Valley RTP	\$ 272,869,053	\$ 308,543,458	\$ 348,314,834	\$ 393,550,057	\$ 445,034,820	\$ 1,768,312,222
Estimated Capital Revenues						
	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	Grand Total
RTACAP	\$ 20,285,825	\$ 22,314,408	\$ 24,545,848	\$ 27,000,433	\$ 29,700,476	\$ 123,846,990
ITC Cap Program	\$ 1,145,277	\$ 1,259,805	\$ 1,385,785	\$ 1,524,364	\$ 1,676,800	\$ 6,992,031
Federal Matching grants	\$ 63,410,806	\$ 69,751,887	\$ 76,727,075	\$ 84,399,783	\$ 92,839,761	\$ 387,129,311
Total Transit Capital Funds for Programming in PV RTP	\$ 84,841,908	\$ 93,326,099	\$ 102,658,709	\$ 112,924,579	\$ 124,217,037	\$ 517,968,332
Grand Total of Revenue	\$ 357,710,961	\$ 401,869,557	\$ 450,973,543	\$ 506,474,636	\$ 569,251,857	\$ 2,286,280,554

Source: Regional Transportation Plan, updated 2016



## **II. PUBLIC PARTICIPATION SUMMARY AND CHANGES**

In accordance with 23 CFR 450.316(a)) The MPO shall develop and use a documented participation plan that defines a process for providing individuals, affected public agencies, representatives of public transportation employees, public ports, freight shippers, providers of freight transportation services, private providers of transportation (including intercity bus operators, employer-based commuting programs, such as carpool program, vanpool program, transit benefit program, parking cash-out program, shuttle program, or telework program), representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with reasonable opportunities to be involved in the metropolitan transportation planning process.

And 23 CFR 450.316(b) In developing metropolitan transportation plans and TIPs, the MPO should consult with agencies and officials responsible for other planning activities within the MPA that are affected by transportation (including State and local planned growth, economic development, tourism, natural disaster risk reduction, environmental protection, airport operations, or freight movements) or coordinate its planning process (to the maximum extent practicable) with such planning activities. In addition, the MPO shall develop the metropolitan transportation plans and TIPs with due consideration of other related planning activities within the metropolitan area, and the process shall provide for the design and delivery of transportation services within the area that are provided by:

The DRAFT FFY 2018-2022 TIP underwent a public review and comment period consistent with the Pioneer Valley Metropolitan Planning Organizations Public Participation Process. This began April 26, 2017 and continued until May 22, 2017. During this time, comments were received from communities, JTC, PVTA, PVPC, MassDOT, and FHWA. A public hearing was held on May 10, 2017 as part of the JTC meeting. Below is a summary of the comments received during the public review and comment period.

#### **Table 4 Comments Received During Public Review**

In addition to the above changes, the Pioneer Valley Transit Authority requested that the following be included: The Pioneer Valley Transit Authority, the FTA Section 5307(c) applicant, has consulted with the Pioneer Valley Planning Commission and concurs that the TIP satisfies the public hearing requirements that pertain to the development of the Program of Projects for regular Section 5307, Urbanized Area Formula Program, grant application including the provision for public notice and the time established for public review and comment.

For FTA projects that are not routine; i.e. Section 5307 applications that required environmental assessment or an environmental impact statement, the public involvement provided herein for TIP review is not sufficient. Additional public involvement will be required by FTA prior to grant approval, as presented in the joint FHWA/FTR environmental regulations, 23 CFR-Part 771.

The Federal Aid (FA) and Non-Federal Aid (NFA) elements were separated into two components. The FA component of the TIP was endorsed by the MPO and the NFA component is included in the main body of the TIP, however, is not subject to federal planning rules.

# III. FEDERAL COMPONENT





## **PIONEER VALLEY MPO ENDORSEMENT**



## **CERTIFICATION OF THE 3-C PLANNING PROCESS**

In accordance with the Metropolitan Planning Final Rule, the Pioneer Valley MPO has completed its review and hereby certifies that the conduct of the 3-C Transportation Planning Process complies with the requirements of CFR 450.334 and includes activities to support the development and implementation of this TIP, the Regional Transportation Plan, and subsequent project development activities, as necessary and to the degree appropriate.

To reinforce this self certification, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) conducted a certification review of the Pioneer Valley MPO planning process in 2015. The two day on-site review was preceded by a desk audit of the major planning documents completed as part of the planning process. Based on the certification review, the transportation planning process for the Pioneer Valley region was found to substantially meet the requirements of 23 CFR 450 Subpart C and 49 CFR 613.

**310 CMR 60.05: GLOBAL WARMING SOLUTIONS ACT REQUIREMENTS**

## FUNDING INFORMATION

### FEDERAL AID TARGETS

The MassDOT provided the revised PVPC federal aid highway funding targets for the region on February 23, 2017. The targets are provided for FFYs 2018 through 2022 and represent both the federal aid portion and respective state match. (See Appendix A for additional information).

During the development of the TIP PVPC staff worked with MassDOT, PVTA, Municipalities with active projects, and project designers to develop current year project cost estimates and design status. Once the draft TIP was programmed, any project expected to receive Target funds was inflated 4% per year starting in FFY2019 in order to reflect year of expenditure (YOE).

Federal financial resources for transit are projected using appropriated amounts provided by the FTA for the funding categories of Sections 5307 and 5311. Section 5309 funds are based on estimates of what will be reasonably available. Due to the discretionary nature of these categories, project line items are maintained in the fourth year of the TIP until an actual grant award is tendered. Section 5310 is programmed through the state and is awarded on a discretionary basis. Projections are based on past experience and the funding level provided by the State.

### FEDERAL AID FINANCIAL CONSTRAINT

The federal aid element of the TIP is financially constrained according to the definition in Federal Register 23 CFR Part 450.324. The federal aid projects programmed for this region reasonably meet the federal aid funding targets provided for the region. Only projects for which funds can reasonably be expected have been included. Table 5 (highway and Table 6 (transit) shows both these target amounts and the amounts programmed for highway projects during fiscal years 2018-2022. Projects that are not charged against the funding targets are not presented in the table. These projects include: Statewide items; and special funding projects. Table 4 shows the projected transit funds for FFY 2017 – 2021.

**Table 5 Federal Highway Financial Plan**

	2018	2019	2020	2021	2022	GRAND TOTAL
<b>Total Target Funds</b>	\$23,910,460	\$24,855,247	\$24,662,830	\$25,233,594	\$25,546,001	<b>\$124,208,132</b>
<b>Total STP</b>	\$19,581,350	\$20,526,137	\$20,333,720	\$20,904,485	\$21,216,891	<b>\$102,562,582</b>
<b>Total CMAQ</b>	\$2,702,480	\$2,702,480	\$2,702,480	\$2,702,480	\$2,702,480	<b>\$13,512,400</b>
<b>Total HSIP</b>	\$1,080,992	\$1,080,992	\$1,080,992	\$1,080,992	\$1,080,992	<b>\$5,404,960</b>
<b>Total TAP</b>	\$545,638	\$545,638	\$545,638	\$545,638	\$545,638	<b>\$2,728,190</b>
<b>Total of Programmed</b>	<b>\$23,165,605</b>	<b>\$24,399,099</b>	<b>\$24,423,045</b>	<b>\$21,826,605</b>	<b>\$25,266,054</b>	<b>\$119,080,408</b>
<b>Programmed STP</b>	\$18,836,495	\$20,069,989	\$20,093,935	\$17,479,495	\$20,936,944	<b>\$100,501,194</b>
<b>Programmed CMAQ</b>	\$2,702,480	\$2,702,480	\$2,702,480	\$2,702,480	\$2,702,480	<b>\$13,512,400</b>
<b>Programmed HSIP</b>	\$1,080,992	\$1,080,992	\$1,080,992	\$1,080,992	\$1,080,992	<b>\$5,404,960</b>
<b>Programmed TAP</b>	\$545,638	\$545,638	\$545,638	\$545,638	\$545,638	<b>\$2,728,190</b>
<b>Difference</b>	<b>\$744,855</b>	<b>\$456,148</b>	<b>\$239,785</b>	<b>\$3,406,989</b>	<b>\$279,947</b>	<b>\$5,127,724</b>

The funding targets were programmed to projects according to project priority rating. Projects were programmed slightly beyond the program target with the understanding that the targets are not earmarks and program levels are expected to fluctuate.

The TIP reflects an emphasis on the maintenance and operation of the current transportation system with the ability to provide capital improvements. The federal aid program for each year consists of almost entirely of maintenance projects for the present transportation system.

The transit program outlined in Table 6 represents both apportioned items as well as discretionary items. The total programmed amount represents both the federal, state and local contributions.

**Table 6 Federal Transit Financial Plan**

	2018	2019	2020	2021	2022	GRAND TOTAL
<b>Transit Capitol Investment</b>	\$56,739,604	\$27,290,659	\$19,243,335	\$21,226,130	\$21,261,043	<b>\$145,760,771</b>
5307	\$18,460,776	\$15,085,036	\$17,771,998	\$20,118,969	\$20,150,132	<b>\$91,586,911</b>
5309	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
5310	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
5311	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
5337	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
5339	\$1,499,331	\$1,855,761	\$1,471,337	\$1,107,161	\$1,110,911	<b>\$7,044,501</b>
5320	\$0		\$0	\$0	\$0	<b>\$0</b>
Other Federal	\$0		\$0	\$0	\$0	<b>\$0</b>
Other Non Federal	\$36,779,497	\$10,349,862	\$0	\$0	\$0	<b>\$47,129,359</b>

The transit projects programmed focus on maintaining and operating the present system while implementing the recommendations of the Comprehensive Service Analysis (CSA) completed in the spring of 2014. For more information regarding the CSA please go to PVTA website. [www.pvta.com](http://www.pvta.com).

#### THE GEOGRAPHIC DISTRIBUTION OF FEDERAL TARGET FUNDS IN THE PIONEER VALLEY METROPOLITAN PLANNING REGION – 2012 TO 2016

PVPC staff reviewed historical project programming for the Transportation Improvement Program (TIP) in order to show the geographic distribution of Federal Target funds in the Pioneer Valley Metropolitan Planning Organization (MPO) region. PVPC staff reviewed year 1 section 1A (Federal Aid Target Projects) for the past 5 years (2013 through 2017) TIP. Table 7 provides the results of this analysis broken out by MPO sub-region while Table 2 provides the results broken out by municipality. Please see page 3 for MPO region map and additional information regarding the composition of the MPO.

As can be seen in Tables 7 and 8 the PVMPO has successfully programmed 34 projects in 19 communities over the past 5 years. The total funding commitment for these projects was just over \$90 million. During this time the PVMPO averaged \$18 million per year in funding. The average

cost per project was \$2.6 million (increase from \$2.4 million last year) or 6.8 projects per year on average. Over the past five years, the PVMPO has committed federal funds for transportation projects in almost half (44%) of the communities in the region.

**Table 7 Projects Completed with Federal Target Funds by MPO Sub-Region (2013-2017)**

MPO Region	2013	2014	2015	2016	2017	Total Projects	Total Funds	% Funds	Population	
Sub-Region 1	2	3	2	2	1	10	\$18,689,801	20.73%	248,238	39.94%
Sub-Region 2	2	0	0	2	1	5	\$19,118,012	21.21%	107,425	17.28%
Sub-Region 3	2	3	1	0	2	8	\$13,554,046	15.03%	105,185	16.92%
Sub-Region 4	1	2	1	3	1	8	\$30,981,892	34.37%	132,675	21.35%
Sub-Region 5	1	0	1	0	1	3	\$7,807,300	8.66%	28,047	4.51%
<b>Totals</b>	<b>8</b>	<b>8</b>	<b>5</b>	<b>7</b>	<b>6</b>	<b>34</b>	<b>\$90,151,051</b>		<b>621,570</b>	

Source: PVPC TIP archives

As can be seen in Table 7, the distribution of funds across the region is similar to the distribution of population across the region. Sub-region 4 received 13% more funding than population over the past 5 years. This was due to the MPO commitment to fund two large projects, one in Belchertown (Route 181 reconstruction for \$9 million) and one in project in Pelham (Amherst Road reconstruction for \$7.2 million). At the request of the MPO, the Pelham project was split in half and funded over two years (2013 and 2015).

The PVMPO is committed to funding transportation improvement projects across the entire region. The community data provided in Table 8 shows the extent to which this has been achieved over the past 5 years. The PVMPO has accomplished this while supporting communities and projects of all shape and size. With the implementation of the new Transportation Evaluation Criteria (TEC) as well as other regional and state initiatives, the PVMPO is positioned to be able to continue to make decisions that will be equitable for the entire region.

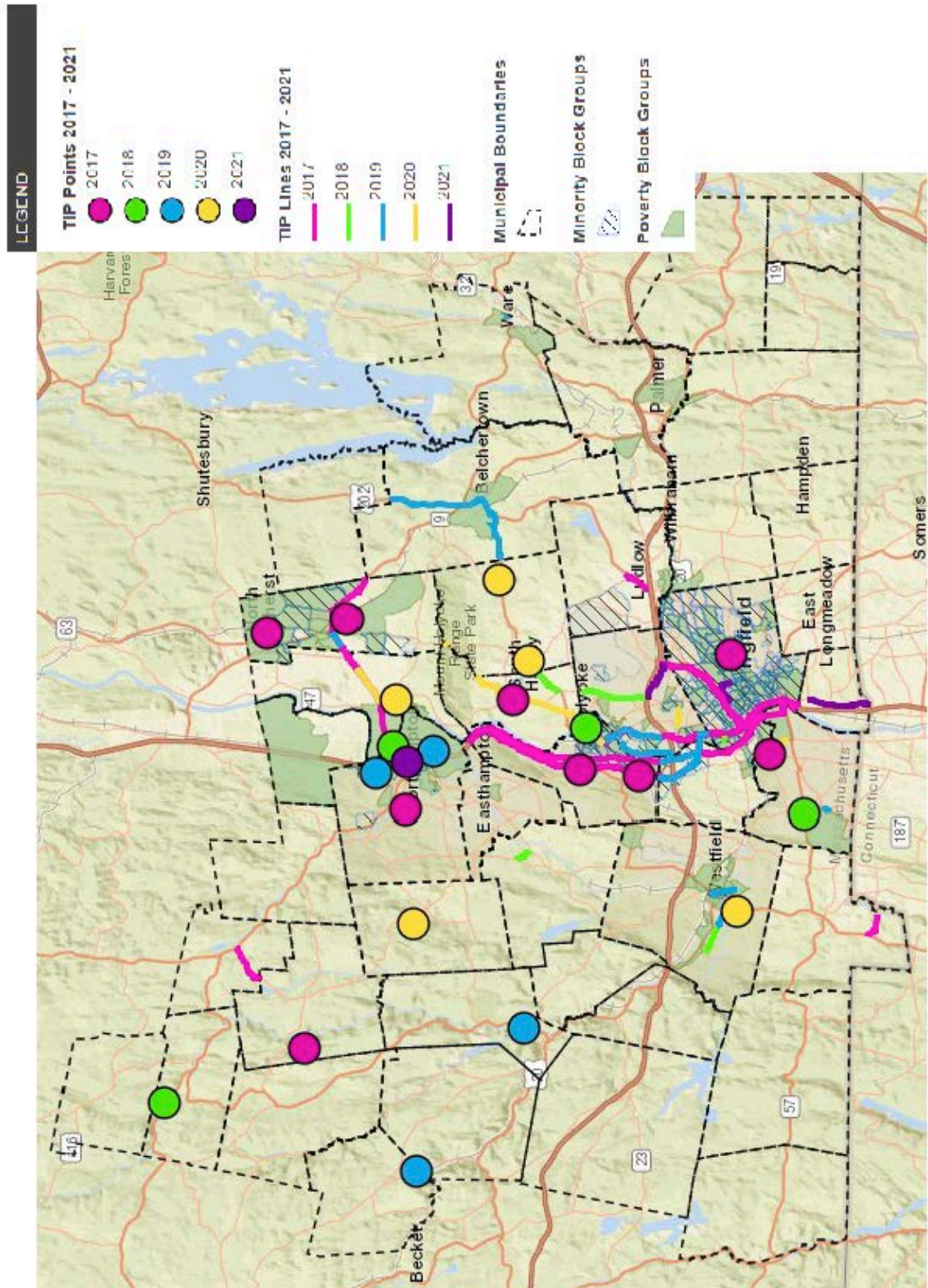


**Table 8 Projects Completed with Federal Target Funds by Municipality (2013-2017)**

Town	2013	2014	2015	2016	2017	Total Projects	Total Funds	% Funds
Agawam						0	\$0	0.00%
Amherst					1	1	\$1,204,050	1.34%
Belchertown		1				1	\$9,551,728	10.60%
Blandford							\$0	0.00%
Brimfield				1		1	\$3,500,000	3.88%
Chester							\$0	0.00%
Chesterfield							\$0	0.00%
Chicopee	1	1				2	\$3,229,316	3.58%
Cummington			1			1	\$1,500,000	1.66%
East Longmeadow							\$0	0.00%
Easthampton	1	1				2	\$5,317,965	5.90%
Goshen					1		\$4,345,300	4.82%
Granby							\$0	0.00%
Granville							\$0	0.00%
Hadley			1			1	\$4,038,060	4.48%
Hampden							\$0	0.00%
Hatfield							\$0	0.00%
Holland							\$0	0.00%
Holyoke	1				1	2	\$3,052,831	3.39%
Huntington							\$0	0.00%
Longmeadow		1		1		2	\$3,512,048	3.90%
Ludlow					1		\$5,848,350	6.49%
Middlefield							\$0	0.00%
Monson							\$0	0.00%
Montgomery							\$0	0.00%
Northampton	1	2			1	4	\$2,993,971	3.32%
Palmer							\$0	0.00%
Pelham	1		1			2	\$7,277,338	8.07%
Plainfield	1					1	\$1,962,000	2.18%
Russell							\$0	0.00%
South Hadley						0	\$0	0.00%
Southampton							\$0	0.00%
Southwick					1		\$7,172,979	7.96%
Springfield		2	2	2		6	\$12,407,654	13.76%
Tolland							\$0	0.00%

Wales							\$0	0.00%
Ware							\$0	0.00%
West Springfield	1					1	\$1,247,950	1.38%
Westfield	1			2		3	\$10,697,083	11.87%
Westhampton							\$0	0.00%
Wilbraham				1		1	\$1,292,428	1.43%
Williamsburg							\$0	0.00%
Worthington							\$0	0.00%
<b>Totals</b>	<b>8</b>	<b>8</b>	<b>5</b>	<b>7</b>	<b>6</b>	<b>34</b>	<b>\$90,151,051</b>	<b>100.00%</b>

Source: PVPC TIP Archive



A higher resolution version of this figure can be found here:  
<http://pvpc.maps.arcgis.com/apps/StorytellingTextLegend/index.html?appid=f54bf3b6d4d04033980dcd9a898b85a3>

## IV. FEDERAL AID REGIONAL PROJECT LISTINGS

The following is a complete listing of the Pioneer Valley Federally Funded Transportation Improvement Projects for Fiscal Years 2018-2022.

### ORGANIZATION OF PROJECT LISTINGS

Each project in the TIP contains the following information:

**MassDOT Project ID** - Project identification numbers given by the Massachusetts Highway Department.

**MassDOT Project Description** – Includes Town or city in which a project is located, and a description of work to be funded under the project.

**MassDOT District** – The MassDOT sub-Region where the project is located, for PVMPO projects will be in either District 1 or District 2.

**Funding Source** - The funding category from which funding is expected.

**Total Programmed Funds** - The total funding for the project under the specified funding source.

**Federal Funds** - The amount of federal dollars allocated for project construction.

**Non-Federal Funds** - The amount of non-federal dollars allocated to the project.

**Additional Information** – Provides additional project information including design status, Transportation Evaluation Criteria (TEC) Score, and YOE Cost.

**Regional Target** - The total combined Federal and State dollar amount provided for project funding.

**TEC Score** – This score is based on criteria developed rank the regional significance of each eligible TIP project



**Table 9 Summary of All Project Funded in Section 1 A Federal Aid Target Projects**

FFY	Municipality	Project Description	ID	Additional Information
2018	Agawam	AGAWAM- INTERSECTION IMPROVEMENTS AT ROUTE 187 & ROUTE 57	604203	60 TEC, Pre 25% (YOE \$3,288,000) HSIP, STP
2018	Northampton	NORTHAMPTON- IMPROVEMENTS ON I-91 INTERCHANGE 19 AT ROUTE 9 AND DAMON ROAD	604597	65 TEC 25% (YOE \$7,438,490) STP, TAP, CMAQ
2018	Westfield	WESTFIELD- ROUTE 20 ACCESS IMPROVEMENTS ON COURT STREET & WESTERN AVENUE, FROM LLEWELLYN DRIVE EASTERLY TO LLOYDS HILL ROAD (PHASE I)	603449	57.5 TEC, 25% Design, (HPP-4287 \$2,503,688 Total with Match) (YOE \$6,133,933) HPP, STP
2018	Southampton	SOUTHAMPTON- RECONSTRUCTION OF GLENDALE ROAD (PHASE II) FROM COLLEGE HIGHWAY (RT 10) NORTHWESTERLY TO POMEROY MEADOW RD (3,801 FEET)	604738	18.8 TEC Score 75% (YOE \$2,710,700) STP
2018	Holyoke	HOLYOKE- RESURFACING & RELATED WORK ON HERITAGE STREET, FRONT STREET & DWIGHT STREET FROM MAPLE ST TO THE 1ST LEVEL CANAL (.54 MILES)	607256	46 TEC Score 25% (YOE \$3,758,081) STP
2018	Holland	HOLLAND- RESURFACING & RELATED WORK ON BRIMFIELD ROAD, FROM THE BRIMFIELD/HOLLAND T.L. TO WALES ROAD (1.4 MILES - PHASE I)	604962	26.5 TEC Score 25% (YOE \$1,140,089) STP
2018	Multiple	AMHERST- HADLEY- NORTHAMPTON- TRANSIT SIGNAL PRIORITY UPGRADES AT VARIOUS LOCATIONS	608786	35 TEC Score Design is underway (YOE \$1,200,000) STP
2019	Springfield	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BAY STREET AND BERKSHIRE AVENUE	608411	47.5 TEC Score 25% (YOE \$1,934,000) STP
2019	Agawam	AGAWAM- RECONSTRUCTION OF ROUTE 187 FROM 425 FT. SOUTH OF S. WESTFIELD STREET TO ROUTE 57 (0.3 MILES - PHASE I)	600513	27 TEC Score PRE 25% (YOE \$2,323,443) STP
2019	Ware	WARE- INTERSECTION IMPROVEMENTS @ MAIN STREET, WEST STREET, NORTH STREET, SOUTH STREET & CHURCH STREET	607987	55 TEC Score 25% (YOE \$2,262,816) STP, TAP, CMAQ
2019	Multiple	HOLYOKE- WEST SPRINGFIELD- REHABILITATION OF ROUTE 5 (RIVERDALE ROAD), FROM I-91 (INTERCHANGE 13) TO MAIN STREET IN HOLYOKE & FROM ELM STREET TO NORTH ELM STREET IN WEST SPRINGFIELD (3.2 MILES)	604209	51 TEC Score Pre 25% (YOE \$4,636,476) STP
2019	Amherst	AMHERST- IMPROVEMENTS & RELATED WORK ON ROUTES 9 & 116, FROM UNIVERSITY DRIVE TO SOUTH PLEASANT STREET (0.8 MILES)	608084	49 TEC Score Pre 25% (YOE \$1,305,886) STP
2019	Northampton	NORTHAMPTON- RECONSTRUCTION OF DAMON ROAD, FROM ROUTE 9 TO ROUTE 5, INCLUDES DRAINAGE SYSTEM REPAIRS & SLOPE STABILIZATION AT THE NORWOTTUCK RAIL TRAIL	608236	66.5 TEC 25% (YOE \$7,152,411) STP, CMAQ
2019	Belchertown	BELCHERTOWN- IMPROVEMENTS & RELATED WORK ON ROUTES 202 & 21, FROM TURKEY HILL ROAD TO SOUTH MAIN STREET (1.2 MILES)	608412	55.5 TEC (YOE \$4,784,000) STP 25% Design submitted March 2017
2020	Westfield	WESTFIELD- IMPROVEMENTS & RELATED WORK ON ROUTE 20, COURT STREET & WESTERN AVENUE, LLOYDS HILL ROAD TO HIGH STREET/MILL STREET INTERSECTION (PHASE II)	607773	48.5 TEC Score 25% (YOE 6,531,379) STP, CMAQ, TAP, STP
2020	Granby	GRANBY- IMPROVEMENTS @ 2 LOCATIONS ON ROUTE 202: SCHOOL STREET & FIVE CORNERS	606895	42 TEC 25% (YOE \$1,371,297) STP
2020	Hadley	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	605032	50 TEC 25% (YOE \$24,840,000) CMAQ, STP Fund A/C \$12,492,652 in FFY2021
2020	Springfield	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BERKSHIRE AVENUE, COTTAGE AND HARVEY STREETS	608718	53 TEC Score PRE 25% (YOE \$2,229,021) STP

2020	Springfield	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT COTTAGE STREET, INDUSTRY AVENUE AND ROBBINS ROAD	608782	49.5 TEC Score PRE 25% (YOE \$1,944,000) STP
2021	Hadley	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	605032	50 TEC 25% (YOE \$24,840,000) (\$12,347,348 in FFY 2020) \$12,492,652 in FFY2021 CMAQ, STP Fund A/C
2021	Northampton	NORTHAMPTON- INTERSECTION IMPROVEMENTS AT KING STREET, NORTH STREET & SUMMER STREET AND AT KING STREET & FINN STREET	607502	65 TEC, 25% STP, CMAQ (YOE \$3,702,674)
2021	Easthampton	EASTHAMPTON- IMPROVEMENTS AND RELATED WORK ON UNION STREET (ROUTE 141) FROM PAYSON AVENUE TO HIGH STREET (0.36 MILES)	608577	62 TEC Score STP, CMAQ (YOE \$2,281,664)
2021	Holyoke	HOLYOKE- RECONSTRUCTION OF I-91 INTERCHANGE 17 & ROUTE 141	606156	TEC 47.5 Pre 25% STP (YOE \$3,349,615)
2022	West Springfield	WEST SPRINGFIELD- RECONSTRUCTION OF MEMORIAL AVENUE (ROUTE 147), FROM COLONY ROAD TO THE MEMORIAL AVENUE ROTARY (1.4 MILES)	608374	65 TEC Score STP, TAP, HSIP, CMAQ (YOE \$16,564,800)
2022	Chicopee	CHICOPEE- RECONSTRUCTION & RELATED WORK ON FULLER ROAD, FROM MEMORIAL DR (RTE 33) TO SHAWINIGAN DR (2.0 MILES)	604434	49 25% STP, (YOE \$8,701,254)

Table 10 Federally Funded Projects Year 2018

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
■											

► Section 1A / Regionally Prioritized Projects

► Regionally Prioritized Projects

	Intersection improvements program	604203	Pioneer Valley	Agawam	AGAWAM- INTERSECTION IMPROVEMENTS AT ROUTE 187 & ROUTE 57	2	HSIP	\$ 1,080,992	\$ 972,893	\$ 108,099	60 TEC, Pre 25% (YOE \$3,288,000) HSIP, STP
	Intersection improvements program	604203	Pioneer Valley	Agawam	AGAWAM- INTERSECTION IMPROVEMENTS AT ROUTE 187 & ROUTE 57	2	CMAQ	\$ 2,207,008	\$ 1,765,606	\$ 441,402	60 TEC, Pre 25% (YOE \$3,288,000) HSIP, STP
	Roadway reconstruction program	604597	Pioneer Valley	Northampton	NORTHAMPTON- IMPROVEMENTS ON I-91 INTERCHANGE 19 AT ROUTE 9 AND DAMON ROAD	2	TAP	\$ 545,638	\$ 436,510	\$ 109,128	65 TEC 25% (YOE \$7,438,490) STP, TAP, CMAQ
	Roadway reconstruction program	604597	Pioneer Valley	Northampton	NORTHAMPTON- IMPROVEMENTS ON I-91 INTERCHANGE 19 AT ROUTE 9 AND DAMON ROAD	2	STP	\$ 6,397,380	\$ 5,117,904	\$ 1,279,476	65 TEC 25% (YOE \$7,438,490) STP, TAP, CMAQ
	Roadway reconstruction program	604597	Pioneer Valley	Northampton	NORTHAMPTON- IMPROVEMENTS ON I-91 INTERCHANGE 19 AT ROUTE 9 AND DAMON ROAD	2	CMAQ	\$ 495,472	\$ 396,378	\$ 99,094	65 TEC 25% (YOE \$7,438,490) STP, TAP, CMAQ
	Roadway reconstruction program	603449	Pioneer Valley	Westfield	WESTFIELD- ROUTE 20 ACCESS IMPROVEMENTS ON COURT STREET & WESTERN AVENUE, FROM LLEWELLYN DRIVE EASTERLY TO LLOYDS HILL ROAD (PHASE I)	2	STP	\$ 3,630,245	\$ 2,904,196	\$ 726,049	57.5 TEC, 25% Design, (HPP-4287 \$2,503,688 Total with Match) (YOE \$6,133,933) HPP, STP DOT cost \$4,800,000
	Roadway reconstruction program	604738	Pioneer Valley	Southampton	SOUTHAMPTON- RECONSTRUCTION OF GLENDALE ROAD (PHASE II) FROM COLLEGE HIGHWAY (RT 10) NORTHWESTERLY TO POMEROY MEADOW RD (3,801 FEET)	2	STP	\$ 2,710,700	\$ 2,168,560	\$ 542,140	18.8 TEC Score 75% (YOE \$2,710,700) STP
	Roadway reconstruction program	607256	Pioneer Valley	Holyoke	HOLYOKE- RESURFACING & RELATED WORK ON HERITAGE STREET, FRONT STREET & DWIGHT STREET FROM MAPLE ST TO THE 1ST LEVEL CANAL (.54 MILES)	2	STP	\$ 3,758,081	\$ 3,006,465	\$ 751,616	46 TEC Score 25% (YOE \$3,758,081) STP
	Roadway reconstruction program	604962	Pioneer Valley	Holland	HOLLAND- RESURFACING & RELATED WORK ON BRIMFIELD ROAD, FROM THE BRIMFIELD/HOLLAND T.L. TO WALES ROAD (1.4 MILES - PHASE I)	2	STP	\$ 1,140,089	\$ 912,071	\$ 228,018	26.5 TEC Score 25% (YOE \$1,140,089) STP
	Intersection Improvements	608786	Pioneer Valley	Multiple	AMHERST- HADLEY- NORTHAMPTON- TRANSIT SIGNAL PRIORITY UPGRADES AT VARIOUS LOCATIONS	2	STP	\$ 1,200,000	\$ 960,000	\$ 240,000	35 TEC Score Design is underway (YOE \$1,200,000) STP
Regionally Prioritized Projects subtotal ►								\$ 23,165,605	\$ 18,640,583	\$ 4,525,022	◄ 80% Federal + 20% Non-Federal

► Section 1A / Fiscal Constraint Analysis

				Total Regional Federal Aid Funds Programmed ►		\$ 23,165,605	\$ 23,910,460	◄ Total	\$ 744,855	Target Funds Available
				STP programmed ►		\$ 18,836,495	\$ 19,581,351	◄ Max STP	\$ 744,856	STP available
				HSIP programmed ►		\$ 1,080,992	\$ 1,080,992	◄ Min. HSIP	\$ (0)	HSIP recommended met
				CMAQ programmed ►		\$ 2,702,480	\$ 2,702,480	◄ Min. CMAQ	\$ (0)	CMAQ recommended met
				TAP programmed ►		\$ 545,638	\$ 545,638	◄ Min. TAP	\$ (1)	TAP amount exceeded!

Section 1A Instructions: MPO Template Name) Choose Regional Name from dropdown n list to populate header and MPO column; Column C) Enter ID from ProjectInfo; Column E) Choose Municipality Name from dropdown n list; Column H) Choose the Funding Source being used for the project - if multiple funding sources are being used enter multiple lines; Column I) Enter the total amount of funds being programmed in this fiscal year and for each funding source; Column J) Federal funds autocalculates. Please verify the amount and only change if needed for flex. Column K) Non-federal funds autocalculates. Please verify the split/match - if matching an FTA flex, coordinate with Rail & Transit Division before programming; Column L) Enter Additional Information as described - please do not use any other format.



Table 10: Federally Funded Projects Year 2018 (Continued)

►Section 1B / Earmark or Discretionary Grant Funded Projects											
►Other Federal Aid											
	Earmark Discretionary	603449	Pioneer Valley	Westfield	WESTFIELD- ROUTE 20 ACCESS IMPROVEMENTS ON COURT STREET &	2	HPP	\$ 2,503,688	\$ 2,002,950	\$ 500,738	57.5 TEC, 25% Design, (HPP-4287 \$2,503,688 Total with Match) (YOE \$6,133,933) HPP, STP
	Earmark Discretionary	Project #	Pioneer Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -	
Other Federal Aid subtotal ►								\$ 2,503,688	\$ 2,002,950	\$ 500,738	◄ Funding Split Varies by Funding Source
►Section 2A / State Prioritized Reliability Projects											
►Bridge Program / Inspections											
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Bridge Program / Inspections subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
►Bridge Program / Off-System											
	Bridge Program	Project #	MPO	Municipalities	Description	District	STP-BR-OFF	\$ -	\$ -	\$ -	
Bridge Program / Off-System subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
►Bridge Program / On-System (NHS)											
	Bridge Program	600936	Pioneer Valley	Holyoke	HOLYOKE- BRIDGE REPLACEMENT, H-21-018, LYMAN STREET OVER FIRST LEVEL CANAL	2	NHPP-On	\$ 11,762,603	\$ 9,410,082	\$ 2,352,521	
Bridge Program / On-System (NHS) subtotal ►								\$ 11,762,603	\$ 9,410,082	\$ 2,352,521	◄ Funding Split Varies by Funding Source
►Bridge Program / On-System (Non-NHS)											
	Bridge Program	PV0002	Pioneer Valley	Palmer	PALMER - BRIDGE REHABILITATION, P-01-005, MAIN STREET OVER QUABOAG RIVER	2	NHPP-Off	\$ 3,000,000	\$ 2,400,000	\$ 600,000	
Bridge Program / On-System (Non-NHS) subtotal ►								\$ 3,000,000	\$ 2,400,000	\$ 600,000	◄ 80% Federal + 20% Non-Federal
►Bridge Program / Systematic Maintenance											
	Bridge Program	607939	Pioneer Valley	Cummington	CUMMINGTON- BRIDGE MAINTENANCE, C-21-025, ROUTE 9 OVER THE WESTFIELD RIVER	1	NHPP-Off	\$ 312,000	\$ 249,600	\$ 62,400	
Bridge Program / Systematic Maintenance subtotal ►								\$ 312,000	\$ 249,600	\$ 62,400	◄ Funding Split Varies by Funding Source
►Interstate Pavement											
	Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Interstate Pavement subtotal ►								\$ -	\$ -	\$ -	◄ 90% Federal + 10% Non-Federal
►Non-Interstate Pavement											
	Non-Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Non-Interstate Pavement subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
►Roadway Improvements											
	Roadway Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
Roadway Improvements subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
►Safety Improvements											
	Safety Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
Safety Improvements subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source

Table 10: Federally Funded Projects Year 2018 (Continued)

► Section 2B / State Prioritized Modernization Projects											
► ADA Retrofits											
	ADA Retrofits	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
ADA Retrofits subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Intersection Improvements											
	Intersection Improvements	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Intersection Improvements subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Intelligent Transportation Systems											
	Intelligent Transportation Systems	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Intelligent Transportation System subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Roadway Reconstruction											
	Roadway Reconstruction	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Roadway Reconstruction subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Section 2C / State Prioritized Expansion Projects											
► Bicycles and Pedestrians											
	Bicycles and Pedestrians	607589	Pioneer Valley	Springfield	SPRINGFIELD- NORTH END PEDESTRIAN PATH CONSTRUCTION (UNDER THE CONNECTICUT RIVER RAILROAD), BETWEEN PLAINFIELD STREET AND BIRNIE AVENUE, INCLUDES CONSTRUCTION OF NEW UNDERPASS S-24-044	2	CMAQ	\$ 7,062,111	\$ 5,649,689	\$ 1,412,422	Construction / PSAC score 33
Bicycles and Pedestrians subtotal ►								\$ 7,062,111	\$ 5,649,689	\$ 1,412,422	◄ 80% Federal + 20% Non-Federal
► Capacity											
	Capacity	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Capacity subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Section 3 / Planning / Adjustments / Pass-throughs											
► Planning / Adjustments / Pass-throughs											
	Planning / Adjustments / Pass-throughs	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Other Statewide Items subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Section 4 / Non-Federally Aided Projects											
► Non-Federally Aided Projects											
	Non Federal Aid	Project #	MPO	Municipalities	Description	District	NFA	\$ -		\$ -	
Non-Federal Aid subtotal ►								\$ -		\$ -	◄ 100% Non-Federal
2018 Summary								TIP Section 1 - TIP Section 4: Total of All Projects ▼			
Total ►								\$ 47,806,007	\$ -	\$ 47,806,007	◄ Total Spending in Region
Federal Funds ►								\$ 38,352,904		\$ 38,352,904	◄ Total Federal Spending in Region
Non-Federal Funds ►								\$ 9,453,102	\$ -	\$ 9,453,102	◄ 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>

Table 11: Federally Funded Projects 2019

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable: a)</i> Planning / Design / or Construction; <i>b)</i> total project cost and funding sources used; <i>c)</i> advance construction status; <i>d)</i> MPO project score; <i>e)</i> name of entity receiving a transfer; <i>f)</i> name of entity paying the non-state non-federal match; <i>g)</i> earmark details; <i>h)</i> TAP project proponent; <i>i)</i> other information
► Section 1A / Regionally Prioritized Projects											
► Regionally Prioritized Projects											
	Intersection improvements program	608411	Pioneer Valley	Springfield	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BAY STREET AND BERKSHIRE AVENUE	2	STP	\$ 853,408	\$ 682,726	\$ 170,682	47.5 TEC Score 25% (YOE \$1,934,000) STP
	Intersection improvements program	608411	Pioneer Valley	Springfield	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BAY STREET AND BERKSHIRE AVENUE	2	HSIP	\$ 1,080,992	\$ 972,893	\$ 108,099	47.5 TEC Score 25% (YOE \$1,934,000) STP
	Roadway reconstruction program	600513	Pioneer Valley	Agawam	AGAWAM- RECONSTRUCTION OF ROUTE 187 FROM 425 FT. SOUTH OF S. WESTFIELD STREET TO ROUTE 57 (0.3 MILES - PHASE I)	2	STP	\$ 2,323,443	\$ 1,858,755	\$ 464,689	27 TEC Score PRE 25% (YOE \$2,323,443) STP
	Intersection improvements program	607987	Pioneer Valley	Ware	WARE- INTERSECTION IMPROVEMENTS @ MAIN STREET, WEST STREET, NORTH STREET, SOUTH STREET & CHURCH STREET	2	CMAQ	\$ 1,000,000	\$ 800,000	\$ 200,000	55 TEC Score 25% (YOE \$2,262,816) STP, TAP, CMAQ
	Intersection improvements program	607987	Pioneer Valley	Ware	WARE- INTERSECTION IMPROVEMENTS @ MAIN STREET, WEST STREET, NORTH STREET, SOUTH STREET & CHURCH STREET	2	TAP	\$ 545,638	\$ 436,510	\$ 109,128	55 TEC Score 25% (YOE \$2,262,816) STP, TAP, CMAQ
	Intersection improvements program	607987	Pioneer Valley	Ware	WARE- INTERSECTION IMPROVEMENTS @ MAIN STREET, WEST STREET, NORTH STREET, SOUTH STREET & CHURCH STREET	2	STP	\$ 717,178	\$ 573,742	\$ 143,436	55 TEC Score 25% (YOE \$2,262,816) STP, TAP, CMAQ
	Roadway reconstruction program	604209	Pioneer Valley	Multiple	HOLYOKE- WEST SPRINGFIELD- REHABILITATION OF ROUTE 5 (RIVERDALE ROAD), FROM I-91 (INTERCHANGE 13) TO MAIN STREET IN HOLYOKE & FROM ELM STREET TO NORTH ELM STREET IN WEST SPRINGFIELD (3.2 MILES)	2	STP	\$ 4,636,143	\$ 3,708,914	\$ 927,229	51 TEC Score Pre 25% (YOE \$4,636,476) STP
	Roadway reconstruction program	608084	Pioneer Valley	Amherst	AMHERST- IMPROVEMENTS & RELATED WORK ON ROUTES 9 & 116, FROM UNIVERSITY DRIVE TO SOUTH PLEASANT STREET (0.8 MILES)	2	STP	\$ 1,305,886	\$ 1,044,709	\$ 261,177	49 TEC Score Pre 25% (YOE \$1,305,886) STP
	Roadway reconstruction program	608236	Pioneer Valley	Northampton	NORTHAMPTON- RECONSTRUCTION OF DAMON ROAD, FROM ROUTE 9 TO ROUTE 5, INCLUDES DRAINAGE SYSTEM REPAIRS & SLOPE STABILIZATION AT THE NORWOTTUCK RAIL TRAIL	2	CMAQ	\$ 1,702,480	\$ 1,361,984	\$ 340,496	66.5 TEC 25% (YOE \$7,152,411) STP, CMAQ
	Roadway reconstruction program	608236	Pioneer Valley	Northampton	NORTHAMPTON- RECONSTRUCTION OF DAMON ROAD, FROM ROUTE 9 TO ROUTE 5, INCLUDES DRAINAGE SYSTEM REPAIRS & SLOPE STABILIZATION AT THE NORWOTTUCK RAIL TRAIL	2	STP	\$ 5,449,931	\$ 4,359,945	\$ 1,089,986	66.5 TEC 25% (YOE \$7,152,411) STP, CMAQ
	Roadway reconstruction program	608412	Pioneer Valley	Belchertown	BELCHERTOWN- IMPROVEMENTS & RELATED WORK ON ROUTES 202 & 21, FROM TURKEY HILL ROAD TO SOUTH MAIN STREET (1.2 MILES)	2	STP	\$ 4,784,000	\$ 3,827,200	\$ 956,800	55.5 TEC (YOE \$4,784,000) STP 25% Design submitted March 2017
	#N/A		Pioneer Valley		#N/A	#N/A		\$ -	\$ -	\$ -	
	#N/A		Pioneer Valley		#N/A	#N/A		\$ -	\$ -	\$ -	
Regionally Prioritized Projects subtotal ►								\$ 24,399,099	\$ 19,627,379	\$ 4,771,721	◄ 80% Federal + 20% Non-Federal

Table 11: Federally Funded Projects Year 2019 (Continued)

Section 1A / Fiscal Constraint Analysis																
<p><u>Section 1A Instructions:</u> <b>MPO Template Name</b>) Choose Regional Name from dropdown list to populate header and MPO column;</p> <p><b>Column C)</b> Enter ID from ProjectInfo; <b>Column E)</b> Choose Municipality Name from dropdown list; <b>Column H)</b> Choose the Funding Source being used for the project - if multiple funding sources are being used enter multiple lines; <b>Column I)</b> Enter the total amount of funds being programmed in this fiscal year and for each funding source; <b>Column J)</b> Federal funds autocalculates. Please verify the amount and only change if needed for flex. <b>Column K)</b> Non-federal funds autocalculates. Please verify the split/match - if matching an FTA flex, coordinate with Rail &amp; Transit Division before programming; <b>Column L)</b> Enter Additional Information as described - please do not use any other format.</p>								Total Regional Federal Aid Funds Programmed ▶				\$ 24,399,099	\$ 24,855,247	◀Total Budget	\$ 456,148	Target Funds Available
								STP programmed ▶				\$ 20,069,989	\$ 20,526,138	◀ Max STP	\$ 456,148	STP available
								HSIP programmed ▶				\$ 1,080,992	\$ 1,080,992	◀ Min. HSIP	\$ (0)	HSIP recommended met
								CMAQ programmed ▶				\$ 2,702,480	\$ 2,702,480	◀ Min. CMAQ	\$ (0)	CMAQ recommended met
								TAP programmed ▶				\$ 545,638	\$ 545,638	◀ Min. TAP	\$ (1)	TAP amount exceeded!
Remaining HSIP, CMAQ, and TAP Funds								\$ 456,148								
Section 1B / Earmark or Discretionary Grant Funded Projects																
Other Federal Aid																
	Earmark Discretionary	Project #	Pioneer Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -						
	Earmark Discretionary	Project #	Pioneer Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -						
Other Federal Aid subtotal ▶								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source					
Section 2A / State Prioritized Reliability Projects																
Bridge Program / Inspections																
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -						
Bridge Program / Inspections subtotal ▶								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source					
Bridge Program / Off-System																
	Bridge Program	608249	Pioneer Valley	Middlefield	MIDDLEFIELD- BRIDGE REPLACEMENT, M-19-010, CHESTER ROAD OVER SMART BROOK	1	STP-BR-OFF	\$ 1,306,800	\$ 1,045,440	\$ 261,360	Construction					
Bridge Program / Off-System subtotal ▶								\$ 1,306,800	\$ 1,045,440	\$ 261,360	◀ 80% Federal + 20% Non-Federal					
Bridge Program / On-System (NHS)																
	Bridge Program	606552	Pioneer Valley	Northampton	NORTHAMPTON- BRIDGE RECONSTRUCTION, N-19-059, I-91 OVER US 5/BMRR & N-19-060, I-91 OVER HOCKANUM ROAD	2	NHPP-On	\$ 56,891,767	\$ 45,513,413	\$ 11,378,353	Construction					
Bridge Program / On-System (NHS) subtotal ▶								\$ 56,891,767	\$ 45,513,413	\$ 11,378,353	◀ Funding Split Varies by Funding Source					
Bridge Program / On-System (Non-NHS)																
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-Off	\$ -	\$ -	\$ -						
Bridge Program / On-System (Non-NHS) subtotal ▶								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal					
Bridge Program / Systematic Maintenance																
	Bridge Program	608258	Pioneer Valley	Huntington	HUNTINGTON- SYSTEMATIC BRIDGE MAINTENANCE, H-27-007, ROUTE 112 OVER WEST BRANCH OF WESTFIELD RIVER	1	NHPP-Off	\$ 419,445	\$ 335,556	\$ 83,889	Construction					
Bridge Program / Systematic Maintenance subtotal ▶								\$ 419,445	\$ 335,556	\$ 83,889	◀ Funding Split Varies by Funding Source					
Interstate Pavement																
	Interstate Pavement	607560	Pioneer Valley	Multiple	CHICOPEE- HOLYOKE- INTERSTATE MAINTENANCE & RELATED WORK ON I-391	2	NHPP	\$ 11,309,875	\$ 10,178,888	\$ 1,130,988	Construction / Includes \$416,000 of stormwater improvements					
Interstate Pavement subtotal ▶								\$ 11,309,875	\$ 10,178,888	\$ 1,130,988	◀ 90% Federal + 10% Non-Federal					

Table 11: Federally Funded Projects Year 2019 (Continued)

► Non-Interstate Pavement											
	Non-Interstate Pavement	607474	Pioneer Valley	Multiple	GRANBY- SOUTH HADLEY- RESURFACING & RELATED WORK ON ROUTE 202, FROM LYMAN STREET SOUTH HADLEY TO PLEASANT STREET GRANBY (2 MILES)	2	NHPP	\$ 3,313,440	\$ 2,650,752	\$ 662,688	Construction
	Non-Interstate Pavement	608811	Pioneer Valley	Ware	WARE- RESURFACING AND RELATED WORK ON ROUTE 9	2	NHPP	\$ 1,365,000	\$ 1,092,000	\$ 273,000	Construction
Non-Interstate Pavement subtotal ►								\$ 4,678,440	\$ 3,742,752	\$ 935,688	◄ 80% Federal + 20% Non-Federal
► Roadway Improvements											
	Roadway Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
Roadway Improvements subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Safety Improvements											
	Safety Improvements	608600	Pioneer Valley	Multiple	CHICOPEE- WEST SPRINGFIELD- HIGHWAY LIGHTING UPGRADE ON I-91	2	STP	\$ 3,286,141	\$ 2,628,913	\$ 657,228	Construction
	Safety Improvements	607736	Pioneer Valley	Chicopee	CHICOPEE- SIGNAL & INTERSECTION IMPROVEMENTS AT 13 INTERSECTIONS ALONG ROUTE 33 (MEMORIAL DRIVE), FROM FULLER ROAD TO ABBEY STREET	2	HSIP	\$ 6,001,387	\$ 5,401,248	\$ 600,139	Construction
Safety Improvements subtotal ►								\$ 9,287,528	\$ 8,030,161	\$ 1,257,367	◄ Funding Split Varies by Funding Source
► Section 2B / State Prioritized Modernization Projects											
► ADA Retrofits											
	ADA Retrofits	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
ADA Retrofits subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Intersection Improvements											
	Intersection Improvements	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Intersection Improvements subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Intelligent Transportation Systems											
	Intelligent Transportation Systems	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Intelligent Transportation System subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Roadway Reconstruction											
	Roadway Reconstruction	606555	Pioneer Valley	Northampton	NORTHAMPTON- ROUNDABOUT CONSTRUCTION AT INTERSECTION ROUTES 5/10 (NORTH KING STREET) & HATFIELD STREET	2	CMAQ	\$ 2,874,895	\$ 2,299,916	\$ 574,979	Construction / PSAC score 36.5
	Roadway Reconstruction	608790	Pioneer Valley	Holyoke	HOLYOKE- IMPROVEMENTS AT KELLY COMMUNITY SCHOOL (SRTS)	2	TAP	\$ 926,875	\$ 741,500	\$ 185,375	Construction / TAP project proponent is Holyoke
Roadway Reconstruction subtotal ►								\$ 3,801,770	\$ 3,041,416	\$ 760,354	◄ 80% Federal + 20% Non-Federal
► Section 2C / State Prioritized Expansion Projects											
► Bicycles and Pedestrians											
	Bicycles and Pedestrians	603783	Pioneer Valley	Westfield	WESTFIELD- COLUMBIA GREENWAY RAIL TRAIL CONSTRUCTION (CENTER DOWNTOWN SECTION), FROM EAST SILVER STREET TO COWLES COURT, INCLUDES W-25,014, W-25-015, W-25-016, W-25-017, W-25-018 & W-25-019	2	CMAQ	\$ 6,532,895	\$ 5,226,316	\$ 1,306,579	Construction / PSAC score 39.5
Bicycles and Pedestrians subtotal ►								\$ 6,532,895	\$ 5,226,316	\$ 1,306,579	◄ 80% Federal + 20% Non-Federal

Table 11: Federally Funded Projects Year 2019 (Continued)

► Capacity											
	Capacity	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
	Capacity	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Capacity subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Section 3 / Planning / Adjustments / Pass-throughs											
► Planning / Adjustments / Pass-throughs											
	Planning / Adjustments / Pass-throughs	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Other Statewide Items subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Section 4 / Non-Federally Aided Projects											
► Non-Federally Aided Projects											
	Non Federal Aid	Project #	MPO	Municipalities	Description	District	NFA	\$ -		\$ -	
Non-Federal Aid subtotal ►								\$ -		\$ -	◄ 100% Non-Federal
2019 Summary								TIP Section 1 - TIP Section 4: Total of All 3: ▼ ▼ Projects ▼			
Total ►								\$ 118,627,619	\$ -	\$ 118,627,619	◄ Total Spending in Region
Federal Funds ►								\$ 96,741,320		\$ 96,741,320	◄ Total Federal Spending in Region
Non-Federal Funds ►								\$ 21,886,298	\$ -	\$ 21,886,298	◄ 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>



Table 12: Federally Funded Projects 2020

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
► Section 1A / Regionally Prioritized Projects											
► Regionally Prioritized Projects											
	Roadway reconstruction program	607773	Pioneer Valley	Westfield	WESTFIELD- IMPROVEMENTS & RELATED WORK ON ROUTE 20, COURT STEET & WESTERN AVENUE, LLOYDS HILL ROAD TO HIGH STREET/MILL STREET INTERSECTION (PHASE II)	2	HSIP	\$ 1,080,992	\$ 972,893	\$ 108,099	48.5 TEC Score 25% (YOE 6,531,379) STP, CMAQ, TAP, STP
	Roadway reconstruction program	607773	Pioneer Valley	Westfield	WESTFIELD- IMPROVEMENTS & RELATED WORK ON ROUTE 20, COURT STEET & WESTERN AVENUE, LLOYDS HILL ROAD TO HIGH STREET/MILL STREET INTERSECTION (PHASE II)	2	CMAQ	\$ 500,000	\$ 400,000	\$ 100,000	48.5 TEC Score 25% (YOE 6,531,379) STP, CMAQ, TAP, STP
	Roadway reconstruction program	607773	Pioneer Valley	Westfield	WESTFIELD- IMPROVEMENTS & RELATED WORK ON ROUTE 20, COURT STEET & WESTERN AVENUE, LLOYDS HILL ROAD TO HIGH STREET/MILL STREET INTERSECTION (PHASE II)	2	TAP	\$ 545,638	\$ 436,510	\$ 109,128	48.5 TEC Score 25% (YOE 6,531,379) STP, CMAQ, TAP, STP
	Roadway reconstruction program	607773	Pioneer Valley	Westfield	WESTFIELD- IMPROVEMENTS & RELATED WORK ON ROUTE 20, COURT STEET & WESTERN AVENUE, LLOYDS HILL ROAD TO HIGH STREET/MILL STREET INTERSECTION (PHASE II)	2	STP	\$ 4,404,749	\$ 3,523,799	\$ 880,950	48.5 TEC Score 25% (YOE 6,531,379) STP, CMAQ, TAP, STP
	Intersection improvements program	606895	Pioneer Valley	Granby	GRANBY- IMPROVEMENTS @ 2 LOCATIONS ON ROUTE 202: SCHOOL STREET & FIVE CORNERS	2	STP	\$ 1,371,297	\$ 1,097,038	\$ 274,259	42 TEC 25% (YOE \$1,371,297) STP
	Capacity program	605032	Pioneer Valley	Hadley	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	2	CMAQ	\$ 2,202,480	\$ 1,761,984	\$ 440,496	50 TEC 25% (YOE \$24,840,000) CMAQ, STP Fund A/C \$12,492,652 in FFY2021
	Capacity program	605032	Pioneer Valley	Hadley	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	2	STP	\$ 10,144,868	\$ 8,115,894	\$ 2,028,974	50 TEC 25% (YOE \$24,840,000) CMAQ, STP Fund A/C \$12,492,652 in FFY2021
	Intersection improvements program	608718	Pioneer Valley	Springfield	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BERKSHIRE AVENUE, COTTAGE AND HARVEY STREETS	2	STP	\$ 2,229,021	\$ 1,783,217	\$ 445,804	53 TEC Score PRE 25% (YOE \$2,229,021) STP
	Intersection improvements program	608782	Pioneer Valley	Springfield	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT COTTAGE STREET, INDUSTRY AVENUE AND ROBBINS ROAD	2	STP	\$ 1,944,000	\$ 1,555,200	\$ 388,800	49.5 TEC Score PRE 25% (YOE \$1,944,000) STP
Regionally Prioritized Projects subtotal ►								\$ 24,423,045	\$ 19,646,535	\$ 4,776,510	◄ 80% Federal + 20% Non-Federal
► Section 1A / Fiscal Constraint Analysis											
Total Regional Federal Aid Funds Programmed ►								\$ 24,423,045	\$ 24,662,830	◄ Total	\$ 239,785 Target Funds Available
STP programmed ►								\$ 20,093,935	\$ 20,333,721	◄ Max STP	\$ 239,786 STP available
HSIP programmed ►								\$ 1,080,992	\$ 1,080,992	◄ Min. HSIP	\$ (0) HSIP recommended met
CMAQ programmed ►								\$ 2,702,480	\$ 2,702,480	◄ Min. CMAQ	\$ (0) CMAQ recommended met
TAP programmed ►								\$ 545,638	\$ 545,638	◄ Min. TAP	\$ (1) TAP amount exceeded!

[Section 1A Instructions:](#) MPO Template Name) Choose Regional Name from dropdown list to populate header and MPO column; Column C) Enter ID from ProjectInfo; Column E) Choose Municipality Name from dropdown n list; Column H) Choose the Funding Source being used for the project - if multiple funding sources are being used enter multiple lines; Column I) Enter the total amount of funds being programmed in this fiscal year and for each funding source; Column J) Federal funds autocalculates. Please verify the amount and only change if needed for flex. Column K) Non-federal funds autocalculates. Please verify the split/match - if matching an FTA flex, coordinate with Rail & Transit Division before programming; Column L) Enter Additional Information as described - please do not use any other format.

Table 12: Federally Funded Projects Year 2020 (Continued)

►Section 1B / Earmark or Discretionary Grant Funded Projects											
►Other Federal Aid											
	Earmark Discretionary	Project #	Pioneer Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -	
	Earmark Discretionary	Project #	Pioneer Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -	
Other Federal Aid subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
►Section 2A / State Prioritized Reliability Projects											
►Bridge Program / Inspections											
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Bridge Program / Inspections subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
►Bridge Program / Off-System											
	Bridge Program	608631	Pioneer Valley	Westhampton	WESTHAMPTON- BRIDGE REPLACEMENT, W-27-005, KINGS HIGHWAY OVER N BRANCH MANHAN RIVER	2	STP-BR-OFF	\$ 3,072,000	\$ 2,457,600	\$ 614,400	
Bridge Program / Off-System subtotal ►								\$ 3,072,000	\$ 2,457,600	\$ 614,400	◀ 80% Federal + 20% Non-Federal
►Bridge Program / On-System (NHS)											
	Bridge Program	608460	Pioneer Valley	Hadley	HADLEY- BRIDGE REPLACEMENT, H-01-005, BAY ROAD (ROUTE 47) OVER THE FORT RIVER	2	NHPP-On	\$ 5,857,180	\$ 4,685,744	\$ 1,171,436	
	Bridge Program	400103	Pioneer Valley	Westfield	WESTFIELD- BRIDGE REPLACEMENT, W-25-006, ROUTE 10/202 (SOUTHWICK ROAD) OVER THE LITTLE RIVER	2	NHPP-On	\$ 13,276,980	\$ 10,621,584	\$ 2,655,396	
Bridge Program / On-System (NHS) subtotal ►								\$ 19,134,160	\$ 15,307,328	\$ 3,826,832	◀ Funding Split Varies by Funding Source
►Bridge Program / On-System (Non-NHS)											
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-Off	\$ -	\$ -	\$ -	
Bridge Program / On-System (Non-NHS) subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
►Bridge Program / Systematic Maintenance											
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-On	\$ -	\$ -	\$ -	
Bridge Program / Systematic Maintenance subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
►Interstate Pavement											
	Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Interstate Pavement subtotal ►								\$ -	\$ -	\$ -	◀ 90% Federal + 10% Non-Federal
►Non-Interstate Pavement											
	Non-Interstate Pavement	608473	Pioneer Valley	South Hadley	SOUTH HADLEY- RESURFACING AND RELATED WORK ON ROUTE 116	2	NHPP	\$ 2,255,688	\$ 1,804,550	\$ 451,138	Construction
Non-Interstate Pavement subtotal ►								\$ 2,255,688	\$ 1,804,550	\$ 451,138	◀ 80% Federal + 20% Non-Federal
►Roadway Improvements											
	Roadway Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
Roadway Improvements subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
►Safety Improvements											
	Safety Improvements	608575	Pioneer Valley	Multiple	CHICOPEE TO HOLYOKE- GUIDE AND TRAFFIC SIGN REPLACEMENT ON I-391	2	HSIP	\$ 542,872	\$ 488,585	\$ 54,287	Construction
Safety Improvements subtotal ►								\$ 542,872	\$ 488,585	\$ 54,287	◀ Funding Split Varies by Funding Source





Table 12: Federally Funded Projects Year 2020 (Continued)

►Section 4 / Non-Federally Aided Projects										
►Non-Federally Aided Projects										
	Non Federal Aid	Project #	MPO	Municipalities	Description	District	NFA	\$ -		\$ -
Non-Federal Aid subtotal►								\$ -		\$ - ◀100% Non-Federal
2020 Summary								TIP Section 1 - TIP Section 4: Total of All Projects ▼		
Total ►								\$ 60,061,623	\$ -	\$ 60,061,623 ◀ Total Spending in Region
Federal Funds ►								\$ 48,480,485		\$ 48,480,485 ◀ Total Federal Spending in Region
Non-Federal Funds ►								\$ 11,581,138	\$ -	\$ 11,581,138 ◀ 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>

Table 13: Federally Funded Projects Year 2021

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
► Section 1A / Regionally Prioritized Projects											
► Regionally Prioritized Projects											
	Capacity program	605032	Pioneer Valley	Hadley	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	2	HSIP	\$ 1,080,992	\$ 972,893	\$ 108,099	50 TEC 25% (YOE \$24,840,000) (\$12,347,348 in FFY 2020) \$12,492,652 in FFY2021 CMAQ, STP Fund A/C
	Capacity program	605032	Pioneer Valley	Hadley	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	2	TAP	\$ 545,638	\$ 436,510	\$ 109,128	50 TEC 25% (YOE \$24,840,000) (\$12,347,348 in FFY 2020) \$12,492,652 in FFY2021 CMAQ, STP Fund A/C
	Capacity program	605032	Pioneer Valley	Hadley	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	2	STP	\$ 10,866,022	\$ 8,692,818	\$ 2,173,204	50 TEC 25% (YOE \$24,840,000) (\$12,347,348 in FFY 2020) \$12,492,652 in FFY2021 CMAQ, STP Fund A/C
	Intersection improvements program	607502	Pioneer Valley	Northampton	NORTHAMPTON- INTERSECTION IMPROVEMENTS AT KING STREET, NORTH STREET & SUMMER STREET AND AT KING STREET & FINN STREET	2	CMAQ	\$ 1,240,000	\$ 992,000	\$ 248,000	65 TEC, 25% STP, CMAQ (YOE \$3,702,674)
	Intersection improvements program	607502	Pioneer Valley	Northampton	NORTHAMPTON- INTERSECTION IMPROVEMENTS AT KING STREET, NORTH STREET & SUMMER STREET AND AT KING STREET & FINN STREET	2	STP	\$ 2,462,674	\$ 1,970,139	\$ 492,535	65 TEC, 25% STP, CMAQ (YOE \$3,702,674)
	Roadway reconstruction program	608577	Pioneer Valley	Easthampton	EASTHAMPTON- IMPROVEMENTS AND RELATED WORK ON UNION STREET (ROUTE 141) FROM PAYSON AVENUE TO HIGH STREET (0.36 MILES)	2	CMAQ	\$ 1,462,480	\$ 1,169,984	\$ 292,496	62 TEC Score STP, CMAQ (YOE \$2,281,664)
	Roadway reconstruction program	608577	Pioneer Valley	Easthampton	EASTHAMPTON- IMPROVEMENTS AND RELATED WORK ON UNION STREET (ROUTE 141) FROM PAYSON AVENUE TO HIGH STREET (0.36 MILES)	2	STP	\$ 819,184	\$ 655,347	\$ 163,837	62 TEC Score STP, CMAQ (YOE \$2,281,664)
	Roadway reconstruction program	606156	Pioneer Valley	Municipalities	HOLYOKE- RECONSTRUCTION OF I-91 INTERCHANGE 17 & ROUTE 141	2	STP	\$ 3,349,615	\$ 2,679,692	\$ 669,923	TEC 47.5 Pre 25% STP (YOE \$3,349,615)
Regionally Prioritized Projects subtotal ►								\$ 21,826,605	\$ 17,569,384	\$ 4,257,222	◄ 80% Federal + 20% Non-Federal
► Section 1A / Fiscal Constraint Analysis											
Total Regional Federal Aid Funds Programmed ►								\$ 21,826,605	\$ 25,233,594	◄ Total	\$ 3,406,988 Target Funds Available
STP programmed ►								\$ 17,497,495	\$ 20,904,485	◄ Max STP	\$ 3,406,989 STP available
HSIP programmed ►								\$ 1,080,992	\$ 1,080,992	◄ Min. HSIP	\$ (0) HSIP recommended met
CMAQ programmed ►								\$ 2,702,480	\$ 2,702,480	◄ Min. CMAQ	\$ (0) CMAQ recommended met
TAP programmed ►								\$ 545,638	\$ 545,638	◄ Min. TAP	\$ (1) TAP amount exceeded!

Section 1A Instructions: **MPO Template Name**) Choose Regional Name from dropdown list to populate header and MPO column; **Column C)** Enter ID from ProjectInfo; **Column E)** Choose Municipality Name from dropdown list; **Column H)** Choose the Funding Source being used for the project - if multiple funding sources are being used enter multiple lines; **Column I)** Enter the total amount of funds being programmed in this fiscal year and for each funding source; **Column J)** Federal funds autocalculates. Please verify the amount and only change if needed for flex. **Column K)** Non-federal funds autocalculates. Please verify the split/match - if matching an FTA flex, coordinate with Rail & Transit Division before programming; **Column L)** Enter Additional Information as described - please do not use any other format.

Table 13: Federally Funded Projects Year 2021 (Continued)

►Section 1B / Earmark or Discretionary Grant Funded Projects											
►Other Federal Aid											
	Earmark Discretionary	Project #	Pioneer Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -	
	Earmark Discretionary	Project #	Pioneer Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -	
Other Federal Aid subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
►Section 2A / State Prioritized Reliability Projects											
►Bridge Program / Inspections											
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Bridge Program / Inspections subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
►Bridge Program / Off-System											
	Bridge Program	Project #	MPO	Municipalities	Description	District	STP-BR-OFF	\$ -	\$ -	\$ -	
Bridge Program / Off-System subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
►Bridge Program / On-System (NHS)											
	Bridge Program		#N/A		#N/A		#N/A		\$ -	\$ -	
Bridge Program / On-System (NHS) subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
►Bridge Program / On-System (Non-NHS)											
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-Off	\$ -	\$ -	\$ -	
Bridge Program / On-System (Non-NHS) subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
►Bridge Program / Systematic Maintenance											
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-On	\$ -	\$ -	\$ -	
Bridge Program / Systematic Maintenance subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
►Interstate Pavement											
	Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Interstate Pavement subtotal ►								\$ -	\$ -	\$ -	◄ 90% Federal + 10% Non-Federal
►Non-Interstate Pavement											
	Non-Interstate Pavement	608487	Pioneer Valley	Westfield	WESTFIELD- RESURFACING AND RELATED WORK ON ROUTE 10 AND 202	2	NHPP	\$ 2,775,360	\$ 2,220,288	\$ 555,072	Construction
	Non-Interstate Pavement	608489	Pioneer Valley	Wilbraham	WILBRAHAM- RESURFACING AND RELATED WORK ON ROUTE 20	2	NHPP	\$ 9,086,000	\$ 7,268,800	\$ 1,817,200	Construction
Non-Interstate Pavement subtotal ►								\$ 11,861,360	\$ 9,489,088	\$ 2,372,272	◄ 80% Federal + 20% Non-Federal
►Roadway Improvements											
	Roadway Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
Roadway Improvements subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
►Safety Improvements											
	Safety Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
Safety Improvements subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source

Table 13: Federally Funded Projects Year 2021 (Continued)

► ADA Retrofits											
	ADA Retrofits	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
ADA Retrofits subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Intersection Improvements											
	Intersection Improvements	Project #	MPO	Municipalities	Description	District	HSIP	\$ -	\$ -	\$ -	
Intersection Improvements subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Intelligent Transportation Systems											
	Intelligent Transportation	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Intelligent Transportation System subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Roadway Reconstruction											
	Roadway Reconstruction	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Roadway Reconstruction subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Section 2C / State Prioritized Expansion Projects											
► Bicycles and Pedestrians											
	Bicycles and Pedestrians	602912	Pioneer Valley	Chicopee	CHICOPEE- CHICOPEE RIVER RIVERWALK MULTI-USE PATH CONSTRUCTION, FROM GRAPE STREET TO FRONT STREET (NEAR ELLERTON STREET) (1 MILE)	2	CMAQ	\$ 2,273,910	\$ 1,819,128	\$ 454,782	Construction / PSAC score 29
	Bicycles and Pedestrians	608157	Pioneer Valley	Springfield	SPRINGFIELD- MCKNIGHT COMMUNITY TRAIL CONSTRUCTION, FROM ARMORY STREET TO HAYDEN AVENUE (1.5 MILES)	2	CMAQ	\$ 3,968,300	\$ 3,174,640	\$ 793,660	Construction / PSAC score 30.5
Bicycles and Pedestrians subtotal ►								\$ 3,968,300	\$ 3,174,640	\$ 793,660	◄ 80% Federal + 20% Non-Federal
► Capacity											
	Capacity	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Capacity subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Section 3 / Planning / Adjustments / Pass-throughs											
► Planning / Adjustments / Pass-throughs											
	Planning / Adjustments / Pass-throughs	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Other Statewide Items subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Section 4 / Non-Federally Aided Projects											
► Non-Federally Aided Projects											
	Non Federal Aid	Project #	MPO	Municipalities	Description	District	NFA	\$ -		\$ -	
Non-Federal Aid subtotal ►								\$ -		\$ -	◄100% Non-Federal
2021 Summary								TIP Section 1 - TIP Section 4: Total of All Projects ▼			
								Total ►	\$ 37,656,265	\$ -	\$ 37,656,265 ◄ Total Spending in Region
								Federal Funds ►	\$ 30,233,112		\$ 30,233,112 ◄ Total Federal Spending in Region
								Non-Federal Funds ►	\$ 7,423,154	\$ -	\$ 7,423,154 ◄ 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>

Table 14: Federally Funded Projects Year 2022

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
► Section 1A / Regionally Prioritized Projects											
► Regionally Prioritized Projects											
	Roadway reconstruction program	608374	Pioneer Valley	West Springfield	WEST SPRINGFIELD- RECONSTRUCTION OF MEMORIAL AVENUE (ROUTE 147), FROM COLONY ROAD TO THE MEMORIAL AVENUE ROTARY (1.4 MILES)	2	HSIP	\$ 1,080,992	\$ 972,893	\$ 108,099	65 TEC Score STP, TAP, HSIP, CMAQ (YOE \$17,980,000)
	Roadway reconstruction program	608374	Pioneer Valley	West Springfield	WEST SPRINGFIELD- RECONSTRUCTION OF MEMORIAL AVENUE (ROUTE 147), FROM COLONY ROAD TO THE MEMORIAL AVENUE ROTARY (1.4 MILES)	2	CMAQ	\$ 2,702,480	\$ 2,161,984	\$ 540,496	65 TEC Score STPBG, TAP, HSIP, CMAQ (YOE \$17,980,000)
	Roadway reconstruction program	608374	Pioneer Valley	West Springfield	WEST SPRINGFIELD- RECONSTRUCTION OF MEMORIAL AVENUE (ROUTE 147), FROM COLONY ROAD TO THE MEMORIAL AVENUE ROTARY (1.4 MILES)	2	TAP	\$ 545,638	\$ 436,510	\$ 109,128	65 TEC Score STP, TAP, HSIP, CMAQ (YOE \$17,980,000)
	Roadway reconstruction program	608374	Pioneer Valley	West Springfield	WEST SPRINGFIELD- RECONSTRUCTION OF MEMORIAL AVENUE (ROUTE 147), FROM COLONY ROAD TO THE MEMORIAL AVENUE ROTARY (1.4 MILES)	2	STP	\$ 12,235,690	\$ 9,788,552	\$ 2,447,138	65 TEC Score STP, TAP, HSIP, CMAQ (YOE \$16,564,800)
	Roadway reconstruction program	604434	Pioneer Valley	Chicopee	CHICOPEE- RECONSTRUCTION & RELATED WORK ON FULLER ROAD, FROM MEMORIAL DR (RTE 33) TO SHAWINIGAN DR (2.0 MILES)	2	STP	\$ 8,701,254	\$ 6,961,003	\$ 1,740,251	49 25% STP, (YOE \$8,701,254)
Regionally Prioritized Projects subtotal ►								\$ 25,266,054	\$ 20,320,942	\$ 4,945,112	◄ 80% Federal + 20% Non-Federal
► Section 1A / Fiscal Constraint Analysis											
Total Regional Federal Aid Funds Programmed ►								\$ 25,266,054	\$ 25,546,001	◄ Total	\$ 279,947 Target Funds Available
STP programmed ►								\$ 20,936,944	\$ 21,216,891	◄ Max STP	\$ 279,947 STP available
HSIP programmed ►								\$ 1,080,992	\$ 1,080,992	◄ Min. HSIP	\$ (0) HSIP recommended met
CMAQ programmed ►								\$ 2,702,480	\$ 2,702,480	◄ Min. CMAQ	\$ (0) CMAQ recommended met
TAP programmed ►								\$ 545,638	\$ 545,638	◄ Min. TAP	\$ (1) TAP amount exceeded!

**Section 1A Instructions:** MPO Template Name) Choose Regional Name from dropdown list to populate header and MPO column; Column C) Enter ID from ProjectInfo; Column E) Choose Municipality Name from dropdown list; Column H) Choose the Funding Source being used for the project - if multiple funding sources are being used enter multiple lines; Column I) Enter the total amount of funds being programmed in this fiscal year and for each funding source; Column J) Federal funds autocalculates. Please verify the amount and only change if needed for flex. Column K) Non-federal funds autocalculates. Please verify the split/match - if matching an FTA flex, coordinate with Rail & Transit Division before programming; Column L) Enter Additional Information as described - please do not use any other format.

Table 14: Federally Funded Projects Year 2022 (Continued)

►Section 1B / Earmark or Discretionary Grant Funded Projects												
►Other Federal Aid												
	Earmark Discretionary	Project #	Pioneer Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -		
	Earmark Discretionary	Project #	Pioneer Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -		
Other Federal Aid subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source	
►Section 2A / State Prioritized Reliability Projects												
►Bridge Program / Inspections												
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -		
Bridge Program / Inspections subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source	
►Bridge Program / Off-System												
	Bridge Program	PV0004	Pioneer Valley	Northampton	NORTHAMPTON - BRIDGE REPLACEMENT, N-19-068, OLD SPRINGFIELD ROAD OVER MILL RIVER	2	STP-BR-OFF	\$ 3,981,120	\$ 3,184,896	\$ 796,224	Construction	
	Bridge Program	608847	Pioneer Valley	Wales	WALES - BRIDGE REPLACEMENT, W-02-002, HOLLAND ROAD OVER WALES BROOK	2	STP-BR-OFF	\$ 540,096	\$ 432,077	\$ 108,019	Construction	
	Bridge Program	608846	Pioneer Valley	Monson	MONSON - BRIDGE REPLACEMENT, M-27-015, OLD WALES ROAD OVER CONANT BROOK	2	STP-BR-OFF	\$ 1,742,784	\$ 1,394,227	\$ 348,557	Construction	
Bridge Program / Off-System subtotal ►								\$ 6,264,000	\$ 5,011,200	\$ 1,252,800	◄ 80% Federal + 20% Non-Federal	
►Bridge Program / On-System (NHS)												
	Bridge Program	608848	Pioneer Valley	Springfield	SPRINGFIELD, BRIDGE REPLACEMENT, S-24-016, ARMORY STREET OVER CSX RR	2	NHPP-On	\$ 5,723,440	\$ 4,578,752	\$ 1,144,688	Construction	
	Bridge Program	608853	Pioneer Valley	Springfield	SPRINGFIELD, BRIDGE REPLACEMENT, S-24-026, ARMORY STREET OVER CSX RR (ABANDONED)	2	NHPP-On	\$ 3,948,640	\$ 3,158,912	\$ 789,728	Construction / YEAR 1 AC OF 3, \$117,077,490	
Bridge Program / On-System (NHS) subtotal ►								\$ 9,672,080	\$ 7,737,664	\$ 1,934,416	◄ Funding Split Varies by Funding Source	
►Bridge Program / On-System (Non-NHS)												
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-Off	\$ -	\$ -	\$ -		
Bridge Program / On-System (Non-NHS) subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal	
►Bridge Program / Systematic Maintenance												
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-On	\$ -	\$ -	\$ -		
Bridge Program / Systematic Maintenance subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source	
►Interstate Pavement												
	Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -		
Interstate Pavement subtotal ►								\$ -	\$ -	\$ -	◄ 90% Federal + 10% Non-Federal	
►Non-Interstate Pavement												
	Non-Interstate Pavement	608466	Pioneer Valley	Multiple	BELCHERTOWN- GRANBY- RESURFACING AND RELATED WORK ON ROUTE 202	2	NHPP	\$ 4,484,189	\$ 3,587,351	\$ 896,838	Construction	
Non-Interstate Pavement subtotal ►								\$ 4,484,189	\$ 3,587,351	\$ 896,838	◄ 80% Federal + 20% Non-Federal	
►Roadway Improvements												
	Roadway Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -		
Roadway Improvements subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal	
►Safety Improvements												
	Safety Improvements	Project #	MPO	Municipalities	Description	District	HSIP	\$ -	\$ -	\$ -		
Safety Improvements subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source	



Table 14: Federally Funded Projects Year 2022 (Continued)

► ADA Retrofits											
	ADA Retrofits	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
ADA Retrofits subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Intersection Improvements											
	Intersection Improvements	Project #	MPO	Municipalities	Description	District	HSIP	\$ -	\$ -	\$ -	
Intersection Improvements subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Intelligent Transportation Systems											
	Intelligent Transportation	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Intelligent Transportation System subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Roadway Reconstruction											
	Roadway Reconstruction	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Roadway Reconstruction subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Section 2C / State Prioritized Expansion Projects											
► Bicycles and Pedestrians											
	Bicycles and Pedestrians		#N/A	Springfield	#N/A	#N/A		\$ -	\$ -		
Bicycles and Pedestrians subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Capacity											
	Capacity	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Capacity subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Section 3 / Planning / Adjustments / Pass-throughs											
► Planning / Adjustments / Pass-throughs											
	Planning / Adjustments / Pass-throughs	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Other Statewide Items subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Section 4 / Non-Federally Aided Projects											
► Non-Federally Aided Projects											
	Non Federal Aid	Project #	MPO	Municipalities	Description	District	NFA	\$ -		\$ -	
Non-Federal Aid subtotal ►								\$ -		\$ -	◄ 100% Non-Federal
2022 Summary								TIP Section 1 - TIP Section 4: Total of All 3: ▼ ▼ Projects ▼			
								Total ►	\$ 45,686,323	\$ -	\$ 45,686,323 ◄ Total Spending in Region
								Federal Funds ►	\$ 36,657,158		\$ 36,657,158 ◄ Total Federal Spending in Region
								Non-Federal Funds ►	\$ 9,029,165	\$ -	\$ 9,029,165 ◄ Total Non-Federal Spending in Region

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**PROJECT CURRENTLY UNDER DESIGN AWAITING FUNDING**

**Table 15: Projects Awaiting Design and Funds**

FFY Year	Community	SID	Project Name and Description	Design	TEC Score	Estimated Cost
	Agawam	607626	AGAWAM- RESURFACING & RELATED WORK ON ROUTE 159, FROM MEADOW STREET TO 150 FT. SOUTH OF SUFFIELD STREET (1.1 MILES)	75	30.0	\$1,450,653
	Agawam	607316	RECONSTRUCTION OF ROUTE 187, FROM SOUTHWICK/SPRINGFIELD STREET TO ALLISON LANE (1.29 MILES - PHASE II)	25	33.8	\$5,562,610
2019	Agawam	600513	RECONSTRUCTION OF ROUTE 187 FROM 425 FT. SOUTH OF S. WESTFIELD STREET TO ROUTE 57 (0.3 MILES - PHASE I)	25	27.0	\$2,234,080
2018	Agawam	604203	Route 187/57 Intersection Improvements	0	60.0	\$3,288,000
	Agawam	603372	RECONSTRUCTION ON ROUTE 5 CONNECTOR TO ROUTE 57, INCLUDES A-05-013 & A-05-014	0	53.0	\$11,670,939
	Agawam	607317	Route 187 Reconstruction from Allison Ln to Westfield City Line, 1.69 miles(Phase III)	0	33.8	\$7,589,668
	Agawam	607876	Sidewalk Construction on Route 159 From CT Line to Woodcliff Ave and From South St to River Road	0	13.5	\$450,265
	Agawam	608549	AGAWAM- RESURFACING AND RELATED WORK ON RIVER ROAD, FROM 575 FEET SOUTH OF CHESTNUT LANE TO SCHOOL STREET (1.8 MILES)	0	10.5	\$1,763,512.40
2019	Amherst	608084	Improvements and Related Work on Route 9 and 116 from University Drive to South Pleasant Street (0.8 miles)	0	49.0	\$1,255,660
	Amherst / Belchertwon	608719	AMHERST- BELCHERTOWN- NORWOTTUCK RAIL TRAIL RESURFACING, FROM STATION ROAD IN AMHERST TO WARREN WRIGHT ROAD IN BELCHERTOWN (1.5 MILES)	0	11.5	\$1,083,220.00
2018	Amherst / Hadley / Northampton	608786	TRANSIT SIGNAL PRIORITY UPGRADES AT VARIOUS LOCATIONS	NA	35.0	\$1,200,000.00
2019	Belchertown	608412	BELCHERTOWN- IMPROVEMENTS & RELATED WORK ON ROUTES 202 & 21, FROM TURKEY HILL ROAD TO SOUTH MAIN STREET (1.2 MILES)	0	55.5	\$4,600,000
2021 NHPP	Belchertwon / Granby	608466	BELCHERTOWN- GRANBY- RESURFACING AND RELATED WORK ON ROUTE 202	0	17	\$4,491,288.00
2022	Chicopee	604434	RECONSTRUCTION & RELATED WORK ON FULLER ROAD, FROM MEMORIAL DR (RTE 33) TO SHAWINIGAN DR (2.0 MILES)	25	49.0	\$7,501,081

2018 SW HSIP	Chicopee	607736	CHICOPEE- SIGNAL & INTERSECTION IMPROVEMENTS AT 13 INTERSECTIONS ALONG ROUTE 33 (MEMORIAL DRIVE), FROM FULLER ROAD TO ABBEY STREET	0	41.0	\$5,800,000
	Chicopee	606892	SLOPE PROTECTION IMPROVEMENTS AT I-391 BRIDGE OVER THE CONNECTICUT RIVER	0	6.5	\$282,650
	Cummington	606797	Route 9 Retaining Wall	0	8.0	\$1,660,000
2021	Easthampton	608577	EASTHAMPTON- IMPROVEMENTS AND RELATED WORK ON UNION STREET (ROUTE 141) FROM PAYSON AVENUE TO HIGH STREET (0.36 MILES)	0	62.0	\$2,037,200.00
	Easthampton/ Southampton	608423	IMPROVEMENTS AND RELATED WORK ON TWO SECTIONS OF ROUTE 10 IN EASTHAMPTON AND SOUTHAMPTON	0	28.5	\$2,799,540
	Goshen	602888	Route 9 reconstruction	0	21.5	\$7,500,000
2020	Granby	606895	Route 202 Intersection Improvements 2 Locations @ 5 Corners and @ School Street	25	42.0	\$1,224,372
2018 NHPP	Granby / South Hadley	607474	GRANBY- SOUTH HADLEY- RESURFACING & RELATED WORK ON ROUTE 202, FROM LYMAN STREET SOUTH HADLEY TO PLEASANT STREET GRANBY (2 MILES)	0	20.5	\$1,872,000
	Granville	608736	GRANVILLE- RECONSTRUCTION OF ROUTE 57	0	19.0	\$7,000,000
2020/2021 A/C	Hadley	605032	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	25	50.0	\$23,000,000
	Hadley	608089	INTERSECTION, BICYCLE AND PEDESTRIAN IMPROVEMENTS @ ROUTES 9, 116 & WESTGATE CENTER DRIVE	0	25.5	\$1,544,720
	Hadley	607886	RESURFACING AND RELATED WORK ON ROUTE 47 FROM COMINS DRIVE TO OLD RIVER DRIVE, INCLUDES CULVERT REPLACEMENT AT RUSSELVILLE BROOK	0	16 (2.88)	\$2,100,000
	Hadley	606547	PEDESTRIAN SIGNAL INSTALLATION AT 2 LOCATIONS ALONG ROUTE 9 NEAR WEST ST	0	14.5	\$134,600
	Hatfield	608553	HATFIELD- RESURFACING AND RELATED WORK ON ROUTES 5 & 10, FROM 350 FEET NORTH OF CHURCH AVE TO THE WHATELY TOWN LINE (3.2 MILES)	0	6.5	\$3,124,760.40
2018	Holland	604962	HOLLAND- RESURFACING & RELATED WORK ON BRIMFIELD ROAD, FROM THE BRIMFIELD/HOLLAND T.L. TO WALES ROAD (1.4 MILES - PHASE I)	25	26.5	\$1,140,089

	Holland	608727	HOLLAND- RESURFACING & RELATED WORK ON BRIMFIELD ROAD, FROM WALES ROAD TO STURBRIDGE STREET (0.9 MILES - PHASE II)	25	26.5	\$1,051,476
2018	Holyoke	607256	RESURFACING & RELATED WORK ON HERITAGE STREET, FRONT STREET & DWIGHT STREET FROM MAPLE ST TO THE 1ST LEVEL CANAL (.54 MILES)	25	47.0	\$3,758,081
2019 SW CMAQ	Holyoke	606450	TRAFFIC SIGNAL UPGRADES AT 15 INTERSECTIONS ALONG HIGH & MAPLE STREETS	25	45.5	\$4,234,543
2021	Holyoke	606156	RECONSTRUCTION OF I-91 INTERCHANGE 17 & ROUTE 141	0	46.5	\$2,990,728
2019	Holyoke /West Springfield	604209	REHABILITATION OF ROUTE 5 (RIVERDALE ROAD), FROM I-91 (INTERCHANGE 13) TO MAIN STREET IN HOLYOKE & FROM ELM STREET TO NORTH ELM STREET IN WEST SPRINGFIELD (3.2 MILES)	0	51.0	\$4,457,830
	Longmeadow	607430	RESURFACING & RELATED WORK ON LONGMEADOW STREET (ROUTE 5), FROM THE CT S.L. TO CONVERSE STREET (2.88 MILES)	25	44.5	\$5,900,000
	Longmeadow / Springfield	606469	RETAINING WALL REPLACEMENT/REHABILITATION ON I-91 (SB)			\$6,143,750
2019	Northampton	608236	NORTHAMPTON- RECONSTRUCTION OF DAMON ROAD, FROM ROUTE 9 TO ROUTE 5, IONSTRUNCLUDES DRAINAGE SYSTEM REPAIRS & SLOPE STABILIZATION AT THE NORWOTTUCK RAIL TRAIL (old#180525)	25	66.5	\$6,877,318
2018	Northampton	604597	I-91 INTERCHANGE 19 IMPROVEMENTS AT ROUTE 9 AND DAMON RD	25	65.0	\$7,438,490
2018 SW CMAQ	Northampton	606555	NORTHAMPTON- ROUNDABOUT CONSTRUCTION AT INTERSECTION ROUTES 5/10 (NORTH KING STREET) & HATFIELD STREET	25	55.0	\$4,612,652
	Northampton	608729	NORTHAMPTON- IMPROVEMENTS AND RELATED WORK ON MAIN STREET (ROUTE 9) FROM MASONIC STREET TO MARKET/HAWLET STREET (0.33 MILES)	0	74.0	\$5,354,523.20
	Northampton	607893	NORTHAMPTON- INTERSECTION IMPROVEMENTS @ ELM STREET, MAIN STREET, WEST STREET, STATE STREET & NEW SOUTH STREET	0	68.0	\$2,000,000
2021	Northampton	607502	INTERSECTION IMPROVEMENTS AT KING STREET, NORTH STREET & SUMMER STREET AND AT KING STREET & FINN STREET	0	65.0	\$3,305,959

	Northampton	605048	IMPROVEMENTS ON ROUTE 5 (MOUNT TOM ROAD) - FROM BRIDGE E-5-4 OVER THE MANHAN RIVER TO 850' SOUTH OF I-91 NB EXIT 18 RAMP (0.85 MILES)	0	40.0	\$1,200,112
	Northampton	608161	NORTHAMPTON- RETAINING WALL REPLACEMENT AT CULVERT UNDER NORTH KING STREET (ROUTE 5&10), 300 FEET SOUTH OF COLES MEADOW ROAD (MM 25.4)	0	18.0	\$1,440,000
	Palmer	603873	RESURFACING & RELATED WORK ON ROUTE 20 - FROM EAST OF RTE 32 INTERSECTION EASTERLY TO MM 81.7 (2.0 MILES)	0	24.5	\$2,250,000
	Palmer	601504	RECONSTRUCTION OF ROUTE 32, FROM 765 FT. SOUTH OF STIMSON STREET TO 1/2 MILES SOUTH OF RIVER STREET (PHASE I) (1.63 MILES) (TFPC \$6,134,080) <b>HPP Eamark \$2,500,000</b>	0	18.0	<b>\$3,570,304</b>
	Palmer	607372	PALMER- RECONSTRUCTION OF ROUTE 32, FROM 1/2 MILE SOUTH OF RIVER STREET TO THE WARE T.L. (PHASE II) (2.1 MILES)	0	14.0	\$8,476,770
	South Hadley	608785	MAIN STREET ROAD IMPROVEMENT PROJECT	0	37.5	\$3,000,000
	South Hadley	608473	SOUTH HADLEY- RESURFACING AND RELATED WORK ON ROUTE 116	0	26.0	\$2,338,560.00
	South Hadley	606452	RESURFACING & RELATED WORK ON ROUTE 116 (AMHERST ROAD), FROM WOODBRIDGE STREET TO PEARL STREET	0	21.5	\$1,630,070
2018	Southampton	604738	RECONSTRUCTION OF GLENDALE ROAD (PHASE II) FROM COLLEGE HIGHWAY (RT 10) NORTHWESTERLY TO POMEROY MEADOW RD (3,801 FEET)	75	18.8 (3.38)	\$2,710,700
	Southampton	604653	REHABILITATION OF EAST STREET - FROM COLLEGE HIGHWAY EASTERLY TO COUNTY ROAD (2.6 MILES)	25	31.5	\$5,022,200
	Southwick	606141	RECONSTRUCTION OF FEEDING HILLS ROAD (ROUTE 57), FROM COLLEGE HIGHWAY TO THE AGAWAM T.L.	0	38.5	\$4,080,000
	Southwick	604155	RESURFACING & RELATED WORK ON ROUTE 10/202, COLLEGE HIGHWAY (NORTHERLY SECTION) FROM THE WESTFIELD/SOUTHWICK T.L. TO TANNERY ROAD (1.4 MILES)	0	18.0	\$1,440,000
	Springfield	608717	SPRINGFIELD- RECONSTRUCTION OF SUMNER AVENUE AT DICKINSON STREET AND BELMONT AVENUE (THE "X")	0	67.5	\$6,159,500.00
2020	Springfield	608718	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BERKSHIRE AVENUE, COTTAGE AND HARVEY	0	53.0	\$2,063,908.40

			STREETS			
2020	Springfield	608782	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT COTTAGE STREET, ROBBINS ROAD AND INDUSTRY AVE	0	49.5	\$1,800,000
2019	Springfield	608411	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BAY STREET AND BERKSHIRE AVENUE	0	47.5	\$1,860,000
	Wales	608163	WALES- RECONSTRUCTION & IMPROVEMENTS ON MONSON ROAD, FROM THE MONSON T.L. TO REED HILL ROAD (1.5 MILES)	0	39.5	\$3,452,400
	Wales	605669	PEDESTRIAN ACCESS IMPROVEMENTS & RELATED WORK ON ROUTE 19	0	9.0	\$312,500
2019	Ware	607987	WARE- INTERSECTION IMPROVEMENTS @ MAIN STREET, WEST STREET, NORTH STREET, SOUTH STREET & CHURCH STREET	25	55.0	\$2,175,785
	Ware	603874	RESURFACING & RELATED WORK ON ROUTE 9, FROM .1 MILE WEST OF THE WARE T.L. EASTERLY TO MM 64.7 IN WARE (2.1 MILES)	0	15.0	\$1,273,145
2022	West Springfield	608374	RECONSTRUCTION OF MEMORIAL AVENUE (ROUTE 147), FROM COLONY ROAD TO THE MEMORIAL AVENUE ROTARY (1.4 MILES)	0	65.0	\$14,280,000
	West Springfield	604746	BRIDGE REPLACEMENT, W-21-006, CSX RAILROAD OVER UNION STREET	0	21.0	\$12,403,054
2018	Westfield	603449	WESTFIELD- ROUTE 20 ACCESS IMPROVEMENTS ON COURT STREET & WESTERN AVENUE, FROM LLEWELLYN DRIVE EASTERLY TO LLOYDS HILL ROAD (PHASE I) Cost = \$6,133,933 - \$2,503,688HPP	25	57.5	\$3,630,245
2020	Westfield	607773	WESTFIELD- IMPROVEMENTS & RELATED WORK ON ROUTE 20, COURT STEET & WESTERN AVENUE, LLOYDS HILL ROAD TO HIGH STREET/MILL STREET INTERSECTION (PHASE II) Eastern Section	25	48.5	\$6,047,573
2020 NHPP	Westfield	608487	WESTFIELD- RESURFACING AND RELATED WORK ON ROUTE 10 AND 202	0	21	\$2,760,000
	Westfield	604445	RECONSTRUCTION ON ROUTE 187, INCLUDES REPLACEMENT OF W-25-002, SHERMAN'S MILL BRIDGE OVER GREAT BROOK AT PONTOOSIC ROAD			\$6,250,000
2020 NHPP	Wilbraham	608489	WILBRAHAM- RESURFACING AND RELATED WORK ON ROUTE 20	0	36.0	\$9,441,500
	Williamsburg	607231	Reconstruction of High Street and Mountain Street	0	13.0	\$3,600,000
	Worthington	606912	Route 143 Reconstruction and Related Work	25	40.0	\$14,800,000

**Table 15: Projects Awaiting Design and Funds (CMAQ Eligible)**

FFY	Community	SID	Project Name and Description	Design	TEC Score	Estimated Cost
2018	Agawam	604203	Route 187/57 Intersection Improvements	0	58.0	\$3,288,000
	Agawam	603372	RECONSTRUCTION ON ROUTE 5 CONNECTOR TO ROUTE 57, INCLUDES A-05-013 & A-05-014	0	53.0	\$2,234,080
2019 SW CMAQ	Chicopee	602911	CONNECTICUT RIVERWALK & BIKEWAY CONSTRUCTION, FROM BOAT RAMP NEAR I-90 TO NASH FIELD (2.5 MILES) INCL NEW BRIDGE OVER OVERFLOW CHANNEL	75	27 (4.85)	\$3,122,734
2022	Chicopee	604434	RECONSTRUCTION & RELATED WORK ON FULLER ROAD, FROM MEMORIAL DR (RTE 33) TO SHAWINIGAN DR (2.0 MILES)	25	48.0	\$7,501,081
2021 SW CMAQ	Chicopee	602912	CHICOPEE RIVER RIVERWALK MULTI-USE PATH CONSTRUCTION, FROM GRAPE STREET TO FRONT STREET (NEAR ELLERTON STREET) (1 MILE)	25	28 (5.02)	\$2,030,278
2018 Sw HSIP	Chicopee	607736	CHICOPEE- SIGNAL & INTERSECTION IMPROVEMENTS AT 13 INTERSECTIONS ALONG ROUTE 33 (MEMORIAL DRIVE), FROM FULLER ROAD TO ABBEY STREET	0	41.0	\$5,800,000
2020	Granby	606895	Route 202 Intersection Improvements 2 Locations @ 5 Corners and @ School Street	25	42.0	\$1,224,372
2020 SW CMAQ	Holyoke	606450	TRAFFIC SIGNAL UPGRADES AT 15 INTERSECTIONS ALONG HIGH & MAPLE STREETS	25	45.5	\$4,234,543
2020	Holyoke	606156	RECONSTRUCTION OF I-91 INTERCHANGE 17 & ROUTE 141	0	46.5	\$2,990,728
2021	Holyoke /West Springfield	604209	REHABILITATION OF ROUTE 5 (RIVERDALE ROAD), FROM I-91 (INTERCHANGE 13) TO MAIN STREET IN HOLYOKE & FROM ELM STREET TO NORTH ELM STREET IN WEST SPRINGFIELD (3.2 MILES)	0	51.0	\$4,457,830
2019	Northampton	608236	NORTHAMPTON- RECONSTRUCTION OF DAMON ROAD, FROM ROUTE 9 TO ROUTE 5, IONSTRUNCLUDES DRAINAGE SYSTEM REPAIRS & SLOPE STABILIZATION AT THE NORWOTTUCK RAIL TRAIL (old#180525)	25	66.5	\$2,710,700
2018	Northampton	604597	I-91 INTERCHANGE 19 IMPROVEMENTS AT ROUTE 9 AND DAMON RD	25	65.0	\$7,438,490
2018 SW CMAQ	Northampton	606555	NORTHAMPTON- ROUNDABOUT CONSTRUCTION AT INTERSECTION ROUTES 5/10 (NORTH KING STREET)	25	55.0	\$4,612,652



			& HATFIELD STREET			
	Northampton	608729	NORTHAMPTON- IMPROVEMENTS AND RELATED WORK ON MAIN STREET (ROUTE 9) FROM MASONIC STREET TO MARKET/HAWLET STREET (0.33 MILES)	0	74.0	\$5,900,000.00
	Northampton	607893	NORTHAMPTON- INTERSECTION IMPROVEMENTS @ ELM STREET, MAIN STREET, WEST STREET, STATE STREET & NEW SOUTH STREET	0	68.0	\$2,000,000
2021	Northampton	607502	INTERSECTION IMPROVEMENTS AT KING STREET, NORTH STREET & SUMMER STREET AND AT KING STREET & FINN STREET	0	65.0	\$2,610,000
	Northampton	608413	NORTHAMPTON- ROCKY HILL GREENWAY MULTI-USE TRAIL, FROM THE MANHAN RAIL TRAIL TO ROCKY HILL ROAD (0.4 MILES)	0	32.0	\$621,050
	Southampton	607823	GREENWAY RAIL TRAIL CONSTRUCTION, FROM COLEMAN RD TO ROUTE 10 (3.5 MILES)	0	20	\$6,080,722
2018 SW CMAQ	Springfield	607589	SPRINGFIELD- NORTH END PEDESTRIAN PATH CONSTRUCTION (UNDER THE CONNECTICUT RIVER RAILROAD), BETWEEN PLAINFIELD STREET AND BIRNIE AVENUE, INCLUDES CONSTRUCTION OF NEW BRIDGE S-24-044	25	25.0	\$7,062,118
2019	Springfield	608411	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BAY STREET AND BERKSHIRE AVENUE	0	47.5	\$1,860,000
2021 SW CMAQ	Springfield	608157	SPRINGFIELD- MCKNIGHT COMMUNITY TRAIL CONSTRUCTION, FROM ARMORY STREET TO HAYDEN AVENUE (1.5 MILES)	0	30.5	\$3,311,946
2019	Ware	607987	WESTFIELD- ROUTE 20 ACCESS IMPROVEMENTS ON COURT STREET & WESTERN AVENUE, FROM LLEWELLYN DRIVE EASTERLY TO LLOYDS HILL ROAD (PHASE I) Cost = \$6,133,933 - \$2,503,688HPP	25	55.0	\$3,630,245
2022	West Springfield	608374	This is a Complete Streets project for the Memorial Avenue (Route 147) corridor.	0	65.0	\$15,500,000
2020	Westfield	607773	WESTFIELD- IMPROVEMENTS & RELATED WORK ON ROUTE 20, COURT STEET & WESTERN AVENUE, LLOYDS HILL ROAD TO HIGH STREET/MILL STREET INTERSECTION (PHASE II) Eastern Section	25	48.5	\$6,047,573

2019 SW CMAQ	Westfield	603783	COLUMBIA GREENWAY RAIL TRAIL – Central Section extending from the south bank of the Westfield River to Main Street (approx. 1 mile with access ramps) and including 1 historic bridge preservation and 4 bridge replacements over roadways.	75	36.51 (6.58)	\$6,250,000
	Westfield	608073	WESTFIELD RIVER LEVEE MULTI-USE PATH CONSTRUCTION, FROM CONGRESS ST TO WILLIAMS RIDING WAY (NEAR MEADOW ST) (2MILES)	0	36	\$4,801,730
	Williamsburg	608787	RECONSTRUCTION OF MEMORIAL AVENUE (ROUTE 147), FROM COLONY ROAD TO THE MEMORIAL AVENUE ROTARY (1.4 MILES)	0	29.0	\$14,280,000

**Table 15: Projects Awaiting Design and Funds (Appendix Z) (Cont.) High Priority Project Listing (HPP)**

Project Description	City/Town	Project ID	Funding	Fed. Funds	State Funds	Total	Notes
Route 20 Access Improvements on Court Street & Western Avenue This reconstruction project on city-owned streets begins at Court Street at the intersection of Mill and High Street, and runs 0.2 miles westerly to Western Avenue, then westerly 2.25 miles to the intersection of Bates Road. The project will include traffic signal installation at Lloyd's Hill and an upgrade at Mill and High Streets	Westfield	603449	HPP-4287	\$2,002,950	\$500,738	\$2,503,688	
Route 32 Ware Road Reconstruction (\$22,854,850)	Palmer	601504	HPP-4287	\$2,303,744	\$575,936	\$2,879,680	
		602844; 604443; 603783					#602844 was advertised on 9/30/06; #604443 was advertised on 8/8/09
Design and construction of Southwick and Westfield Rail Trail	Southwick/Westfield	603783	HPP-1656	\$1,857,506	\$464,377	\$46,779	#604451 was advertised on 9/1/2007
*Construct Access roads to Hospital Hill (\$1,652,818)	Northampton	604451	HPP-158	\$302,865	\$75,716	\$378,581	#604447 was advertised on 9/22/07
*State St. Corridor Redevelopment Project (\$18,052,897)	Springfield	604447	HPP-217	\$899,056	\$224,764	\$1,123,820	#602338 was advertised on 12/6/2008
*Design and construct 1.5 mile Red Stone Rail Trail(\$1,112,074)	East Longmeadow	602338	HPP-578	\$224,764	\$56,191	\$280,955	#604822 was advertised on 9/8/2007
*Intersection improvements Memorial Park II - Roosevelt Ave. (\$2,310,853)	Springfield	604822	HPP-836	\$149,843	\$37,461	\$187,304	
Design north and southbound ramps on I-91 at Exit 19 (\$15,000,000)	Northampton	604597	HPP-847	\$224,764	\$56,191	\$280,955	
Upgrade Route 9 - Calvin Coolidge bridge (1998) (\$31,840,515)	Hadley	124913	HPP - 862	\$83,828	\$20,957	\$104,785	#124913 was advertised on 9/30/2000
<b>Total Project Cost</b>				<b>\$8,049,320</b>	<b>\$2,012,330</b>	<b>\$10,061,650</b>	
Earmarks located in Appendix Z will remain un-programmed until full project funding is available							

Projects list in appendix Z are shown for informational purposes and are not programmed in the TIP. If additional funds become available projects from this list could be added if the selected project would be ready for advertisement in that program year

## **V. Transit Project Listing for FFY 2018-2022**

The following is a complete listing of programmed transit projects for FFY 2018-2022



**Table 16: FFY 2018 Transit Project Information**

FTA Progra m	Project Number	Transit Agency	FTA Activity Line Item	Project Description	Carryover (unobligated)	Federal Funds	State Funds	TDC	Local Funds	Total Cost
<b>5307</b>										
	5307 RTD0005802	Pioneer Valley Transit Authority	117A00	Preventive Maintenance		\$4,520,000	\$1,130,000	\$0	\$0	\$5,650,000
	5307 RTD0005803	Pioneer Valley Transit Authority	117C00	ADA Operating Projects		\$1,231,541	\$307,885	\$0	\$0	\$1,539,426
	5307 RTD0005804	Pioneer Valley Transit Authority	442301	Planning		\$221,400	\$55,350	\$0	\$0	\$276,750
	5307 RTD0005805	Pioneer Valley Transit Authority	114406	Purchase & Replace Shop Equipment		\$116,000	\$29,000	\$0	\$0	\$145,000
	5307 RTD0005806	Pioneer Valley Transit Authority	119302	Transit Enhancements: Shelters		\$100,000	\$25,000	\$0	\$0	\$125,000
	5307 RTD0005807	Pioneer Valley Transit Authority	119308	Transit Enhancements: Signs/Lighting		\$12,000	\$3,000	\$0	\$0	\$15,000
	5307 RTD0005813	Pioneer Valley Transit Authority	114211	Support Vehicle (1)		\$48,000	\$12,000	\$0	\$0	\$60,000
	5307 RTD0005814	Pioneer Valley Transit Authority	114402	Environmental Compliance		\$60,000	\$15,000	\$0	\$0	\$75,000
	5307 RTD0005815	Pioneer Valley Transit Authority	119306	Purchase bicycle Equipment for shelters and buses		\$4,000	\$1,000	\$0	\$0	\$5,000
	5307 RTD0005860	Pioneer Valley Transit Authority	114411	Replacement Supervisory Vehicles (3)		\$80,000	\$20,000	\$0	\$0	\$100,000
	5307 RTD0005861	Pioneer Valley Transit Authority	111215	Replacement Vans (4)		\$227,036	\$56,759	\$0	\$0	\$283,795
	5307 RTD0005827	Pioneer Valley Transit Authority	111204	Replace Mini Buses for Shuttles (3)		\$216,000	\$54,000	\$0	\$0	\$270,000
	5307 RTD0005832	Pioneer Valley Transit Authority	114402	Design/Construction Admin to retrofit SATCO to Paratransit		\$160,000	\$40,000	\$0	\$0	\$200,000
	5307 RTD0006252	Pioneer Valley Transit Authority	114302	Cottage Street Design and Construction Administration, Year 2		\$3,909,174	\$0	\$977,294	\$0	\$3,909,174
	5307 RTD0006253	Pioneer Valley Transit Authority	114401	Window and brick restoration, PVRTA Admin & SATCO Admin		\$596,000	\$149,000	\$0	\$0	\$745,000
	5307 RTD0006183	Pioneer Valley Transit Authority	111201	Replacement 40' Buses (4)		\$621,519	\$621,519	\$0	\$918,593	\$2,161,631
	5307 RTD0005828	Pioneer Valley Transit Authority	114220	Misc. Communications Systems and ITS		\$2,320,000	\$580,000	\$0	\$0	\$2,900,000
Subtotal						\$14,442,670	\$3,099,513	\$977,294	\$918,593	\$18,460,776
<b>5309</b>										
Subtotal						\$0	\$0	\$0	\$0	\$0
<b>5310</b>										
Subtotal						\$0	\$0	\$0	\$0	\$0
<b>5311</b>										
Subtotal						\$0	\$0	\$0	\$0	\$0

Table 16: FFY 2018 Transit Project Information (Continued)

5337					Subtotal	\$0	\$0	\$0	\$0	\$0
5339										
5339	RTD0005862	Pioneer Valley Transit Authority	111216	Purchase - Replacement: Vans (23)	\$1,186,905	\$312,426	\$0	\$0	\$1,499,331	
					Subtotal	\$1,186,905	\$312,426	\$0	\$0	\$1,499,331
5320					Subtotal	\$0	\$0	\$0	\$0	\$0
Other Federal					Subtotal	\$0	\$0	\$0	\$0	\$0
Other Non-Federal										
Other	RTD0005831	Pioneer Valley Transit Authority	114302	Construct Cottage Street Facility, Year 2	\$0	\$36,779,497	\$0	\$0	\$36,779,497	
Non-Federal					Subtotal	\$0	\$36,779,497	\$0	\$0	\$36,779,497
					Total	\$15,629,575	\$40,191,436	\$977,294	\$918,593	\$56,739,604

Table 17: FFY 2019 Transit Project Information

FTA Program	Project Number	Transit Agency	FTA Activity Line Item	Project Description	Carryover (unobligated)	Federal Funds	State Funds	TDC	Local Funds	Total Cost
5307										
5307	RTD0005808	Pioneer Valley Transit Authority	114406	Purchase & Replace Shop Equipment	2018 - \$480,000	\$480,000	\$120,000	\$0	\$0	\$600,000
5307	RTD0005809	Pioneer Valley Transit Authority	114402	REHAB/RENOVATE - Environmental Compliance	2018 - \$120,000	\$120,000	\$30,000	\$0	\$0	\$150,000
5307	RTD0005810	Pioneer Valley Transit Authority	119302	Purchase Bus Shelters, benches, trash receptacles,etc.	2018 - \$100,000	\$100,000	\$25,000	\$0	\$0	\$125,000
5307	RTD0005811	Pioneer Valley Transit Authority	119308	Purchase & Replace signage and lighting	2018 - \$12,000	\$12,000	\$3,000	\$0	\$0	\$15,000
5307	RTD0005812	Pioneer Valley Transit Authority	119306	Purchase bicycle Equipment for shelters and buses	2018 - \$4,000	\$4,000	\$1,000	\$0	\$0	\$5,000
5307	RTD0005816	Pioneer Valley Transit Authority	442400	Transportation Planning	2018 - \$226,935	\$226,935	\$56,734	\$0	\$0	\$283,669
5307	RTD0005817	Pioneer Valley Transit Authority	117C00	ADA Service subsidy	2018 - \$1,250,014	\$1,250,014	\$312,504	\$0	\$0	\$1,562,518
5307	RTD0005818	Pioneer Valley Transit Authority	117A00	Preventive Maintenance	2018 - \$4,633,000	\$4,633,000	\$1,158,250	\$0	\$0	\$5,791,250
5307	RTD0005837	Pioneer Valley Transit Authority	114211	Purchase & Replace support vehicles	2018 - \$520,000	\$520,000	\$130,000	\$0	\$0	\$650,000
5307	RTD0005838	Pioneer Valley Transit Authority	114411	Purchase replacement supervisory vehicles (1)	2018 - \$28,000	\$28,000	\$7,000	\$0	\$0	\$35,000
5307	RTD0005839	Pioneer Valley Transit Authority	116220	Information Technology Systems	2018 - \$2,600,000	\$2,600,000	\$650,000	\$0	\$0	\$3,250,000
5307	RTD0006103	Pioneer Valley Transit Authority	114302	Cottage Street Design and Construction Administration, Year 3	2018 - \$2,160,579	\$2,160,579	\$0	\$540,145	\$0	\$2,160,579
5307	RTD0006333	Pioneer Valley Transit Authority	111215	BUY REPLACEMENT VAN (7)	2018 - \$365,616	\$365,616	\$91,404	\$0	\$0	\$457,020
Subtotal						\$12,500,144	\$2,584,892	\$540,145	\$0	\$15,085,036
5309										
Subtotal						\$0	\$0	\$0	\$0	\$0
5310										
Subtotal						\$0	\$0	\$0	\$0	\$0
5311										
Subtotal						\$0	\$0	\$0	\$0	\$0
5337										
Subtotal						\$0	\$0	\$0	\$0	\$0



Table 18: FFY 2019 Transit Project Information (Continued)

5339										
5339	RTD0005864	Pioneer Valley Transit Authority	111215	Purchase Replacement Vans (27)	2018 - \$849,907	\$849,907	\$1,005,854	\$0	\$0	\$1,855,761
					Subtotal	\$849,907	\$1,005,854	\$0	\$0	\$1,855,761
5320										
					Subtotal	\$0	\$0	\$0	\$0	\$0
Other Federal										
					Subtotal	\$0	\$0	\$0	\$0	\$0
Other Non-Federal										
Other	RTD0005870	Pioneer Valley Transit Authority	114302	Retrofit SATCO facility to paratransit		\$0	\$525,000	\$0	\$0	\$525,000
Other	RTD0006102	Pioneer Valley Transit Authority	114302	Cottage Street Construction, Year 3		\$0	\$9,824,862	\$0	\$0	\$9,824,862
					Subtotal	\$0	\$10,349,862	\$0	\$0	\$10,349,862
					Total	\$13,350,051	\$13,940,608	\$540,145	\$0	\$27,290,659

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

Table 18: FFY 2020 Transit Project Information

FTA Program	Project Number	Transit Agency	FTA Activity Line Item	Project Description	Carryover (unobligated)	Federal Funds	State Funds	TDC	Local Funds	Total Cost
5307										
	5307 RTD0004756	Pioneer Valley Transit Authority	114220	Information Technology Systems	2019 - \$2,400,000	\$2,400,000	\$600,000	\$0	\$0	\$3,000,000
	5307 RTD0005820	Pioneer Valley Transit Authority	119202	Purchase Bus Shelters, benches, trash receptacles,etc.	2019 - \$100,000	\$100,000	\$25,000	\$0	\$0	\$125,000
	5307 RTD0005821	Pioneer Valley Transit Authority	119208	Purchases signage and lighting	2019 - \$12,000	\$12,000	\$3,000	\$0	\$0	\$15,000
	5307 RTD0005822	Pioneer Valley Transit Authority	119206	Purchase bicycle Equipment for shelters and buses	2019 - \$4,000	\$4,000	\$1,000	\$0	\$0	\$5,000
	5307 RTD0005823	Pioneer Valley Transit Authority	114402	Environmental Compliance	2019 - \$60,000	\$60,000	\$15,000	\$0	\$0	\$75,000
	5307 RTD0005824	Pioneer Valley Transit Authority	442301	Planning Services - Long Term System	2019 - \$232,608	\$232,608	\$58,152	\$0	\$0	\$290,760
	5307 RTD0005825	Pioneer Valley Transit Authority	117C00	ADA Service subsidy	2019 - \$1,287,796	\$1,287,796	\$321,949	\$0	\$0	\$1,609,745
	5307 RTD0005826	Pioneer Valley Transit Authority	117A00	Preventive Maintenance	2019 - \$4,748,825	\$4,748,825	\$1,187,206	\$0	\$0	\$5,936,031
	5307 RTD0005843	Pioneer Valley Transit Authority	111201	Buy Replacement 40' Electric Bus (20)	2019 - \$2,232,731	\$2,232,731	\$2,232,731	\$0	\$0	\$4,465,462
	5307 RTD0005845	Pioneer Valley Transit Authority	114411	Replace support vehicle (1)	2019 - \$60,000	\$60,000	\$15,000	\$0	\$0	\$75,000
	5307 RTD0005846	Pioneer Valley Transit Authority	114406	Purchase & Replace Shop Equipment	2019 - \$240,000	\$240,000	\$60,000	\$0	\$0	\$300,000
	5307 RTD0006099	Pioneer Valley Transit Authority	114402	Convert SATCO Maintenance Facility to Paratransit Operations	2019 - \$1,500,000	\$1,500,000	\$375,000	\$0	\$0	\$1,875,000
					Subtotal	\$12,877,960	\$4,894,038	\$0	\$0	\$17,771,998
5309										
					Subtotal	\$0	\$0	\$0	\$0	\$0
5310										
					Subtotal	\$0	\$0	\$0	\$0	\$0
5311										
					Subtotal	\$0	\$0	\$0	\$0	\$0
5337										
					Subtotal	\$0	\$0	\$0	\$0	\$0
5339										
	5339 RTD0005866	Pioneer Valley Transit Authority	111215	Purchase Replacement Vans (21)	2019 - \$875,595	\$875,595	\$595,742	\$0	\$0	\$1,471,337
					Subtotal	\$875,595	\$595,742	\$0	\$0	\$1,471,337

Table 19: FFY 2020 Transit Project Information (Continued)

5320						
Subtotal		\$0	\$0	\$0	\$0	\$0
Other Federal						
Subtotal		\$0	\$0	\$0	\$0	\$0
Other Non-Federal						
Subtotal		\$0	\$0	\$0	\$0	\$0
Total		\$13,753,555	\$5,489,780	\$0	\$0	\$19,243,335

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

Table 20: FFY 2021 Transit Project Information

FTA Progra m	Project Number	Transit Agency	FTA Activity Line Item	Project Description	Carryover (unobligated)	Federal Funds	State Funds	TDC	Local Funds	Total Cost
5307										
5307	RTD0005847	Pioneer Valley Transit Authority	111201	Replacement 40-FT Non-Electric BUS (9)	2020 - \$2,653,409	\$2,653,409	\$4,443,408	\$0	\$0	\$7,096,817
5307	RTD0005849	Pioneer Valley Transit Authority	114411	Replace Support Vehicles (10)	2020 - \$120,000	\$120,000	\$30,000	\$0	\$0	\$150,000
5307	RTD0005850	Pioneer Valley Transit Authority	114411	Replace Supervisory Vehicles (5)	2020 - \$28,000	\$28,000	\$7,000	\$0	\$0	\$35,000
5307	RTD0005851	Pioneer Valley Transit Authority	114406	Purchase/Replace Shop Equipment	2020 - \$88,000	\$88,000	\$22,000	\$0	\$0	\$110,000
5307	RTD0005852	Pioneer Valley Transit Authority	114402	Environmental Compliance	2020 - \$60,000	\$60,000	\$15,000	\$0	\$0	\$75,000
5307	RTD0005853	Pioneer Valley Transit Authority	119402	Bus Shelters, Benches, Trash Receptacles	2020 - \$100,000	\$100,000	\$25,000	\$0	\$0	\$125,000
5307	RTD0005854	Pioneer Valley Transit Authority	119408	Bus Stop Signage and Lighting	2020 - \$12,000	\$12,000	\$3,000	\$0	\$0	\$15,000
5307	RTD0005855	Pioneer Valley Transit Authority	119406	Bicycle access equipment for buses and shelters	2020 - \$4,000	\$4,000	\$1,000	\$0	\$0	\$5,000
5307	RTD0005856	Pioneer Valley Transit Authority	116202	Information Technology Systems	2020 - \$2,400,000	\$2,400,000	\$600,000	\$0	\$0	\$3,000,000
5307	RTD0005857	Pioneer Valley Transit Authority	440000	PLANNING	2020 - \$238,424	\$238,424	\$59,606	\$0	\$0	\$298,030
5307	RTD0005858	Pioneer Valley Transit Authority	300900	ADA OPERATING ASSISTANCE	2020 - \$1,307,113	\$1,307,113	\$326,778	\$0	\$0	\$1,633,891
5307	RTD0005859	Pioneer Valley Transit Authority	117A00	PREVENTIVE MAINTENANCE	2020 - \$4,867,546	\$4,867,546	\$1,216,886	\$0	\$0	\$6,084,432
5307	RTD0005868	Pioneer Valley Transit Authority	111215	Buy replacement Vans (21)	2020 - \$1,192,639	\$1,192,639	\$298,160	\$0	\$0	\$1,490,799
Subtotal						\$13,071,131	\$7,047,838	\$0	\$0	\$20,118,969
5309										
Subtotal						\$0	\$0	\$0	\$0	\$0
5310										
Subtotal						\$0	\$0	\$0	\$0	\$0
5311										
Subtotal						\$0	\$0	\$0	\$0	\$0
5337										
Subtotal						\$0	\$0	\$0	\$0	\$0
5339										
5339	RTD0006325	Pioneer Valley Transit Authority	111215	Buy replacement Vans (15)	2020 - \$885,729	\$885,729	\$221,432	\$0	\$0	\$1,107,161
Subtotal						\$885,729	\$221,432	\$0	\$0	\$1,107,161

Table 20: FFY 2021 Transit Project Information (Continued)

5320						
Subtotal		\$0	\$0	\$0	\$0	\$0
Other Federal						
Subtotal		\$0	\$0	\$0	\$0	\$0
Other Non-Federal						
Subtotal		\$0	\$0	\$0	\$0	\$0
Total		\$13,956,860	\$7,269,270	\$0	\$0	\$21,226,130

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

Table 20: FFY 2022 Transit Project Information

FTA Progra m	Project Number	Transit Agency	FTA Activity Line Item	Project Description	Carryover (unobligated)	Federal Funds	State Funds	TDC	Local Funds	Total Cost
5307										
	5307 RTD0006119	Pioneer Valley Transit Authority	111201	Purchase 40' Replacement Buses Electric (15)	2021 - \$653,453	\$653,453	\$1,948,871	\$0	\$0	\$2,602,324
	5307 RTD0006150	Pioneer Valley Transit Authority	111202	Replace 35' Buses (4)	2021 - \$2,700,947	\$2,700,947	\$2,700,947	\$0	\$0	\$5,401,894
	5307 RTD0006151	Pioneer Valley Transit Authority	111204	Replace mini Buses (4)	2021 - \$320,000	\$320,000	\$80,000	\$0	\$0	\$400,000
	5307 RTD0006153	Pioneer Valley Transit Authority	114211	Purchase replacement support vehicles (1)	2021 - \$80,000	\$80,000	\$20,000	\$0	\$0	\$100,000
	5307 RTD0006156	Pioneer Valley Transit Authority	114411	Replace Supevisory Vehicles (4)	2021 - \$112,000	\$112,000	\$28,000	\$0	\$0	\$140,000
	5307 RTD0006157	Pioneer Valley Transit Authority	114406	Purchase shop equipment	2021 - \$88,000	\$88,000	\$22,000	\$0	\$0	\$110,000
	5307 RTD0006158	Pioneer Valley Transit Authority	114402	Environmental Compliance	2021 - \$60,000	\$60,000	\$15,000	\$0	\$0	\$75,000
	5307 RTD0006159	Pioneer Valley Transit Authority	119402	Purchase Shelters and shelter accessories	2021 - \$100,000	\$100,000	\$25,000	\$0	\$0	\$125,000
	5307 RTD0006161	Pioneer Valley Transit Authority	119408	Signage & Lighting	2021 - \$12,000	\$12,000	\$3,000	\$0	\$0	\$15,000
	5307 RTD0006162	Pioneer Valley Transit Authority	119406	Bike Access for shelters and Buses	2021 - \$4,000	\$4,000	\$1,000	\$0	\$0	\$5,000
	5307 RTD0006164	Pioneer Valley Transit Authority	116202	Information Technology Systems	2021 - \$2,400,000	\$2,400,000	\$600,000	\$0	\$0	\$3,000,000
	5307 RTD0006265	Pioneer Valley Transit Authority	117A00	Preventive Maintenance	2021 - \$4,989,234	\$4,989,234	\$1,247,309	\$0	\$0	\$6,236,543
	5307 RTD0006266	Pioneer Valley Transit Authority	117C00	NON FIXED ROUTE ADA PARA SERV	2021 - \$1,307,113	\$1,307,113	\$326,778	\$0	\$0	\$1,633,891
	5307 RTD0006267	Pioneer Valley Transit Authority	442301	LONGTERM TRANS PLAN - SYSTEM LEVEL	2021 - \$244,384	\$244,384	\$61,096	\$0	\$0	\$305,480
Subtotal						\$13,071,131	\$7,079,001	\$0	\$0	\$20,150,132
5309										
Subtotal						\$0	\$0	\$0	\$0	\$0
5310										
Subtotal						\$0	\$0	\$0	\$0	\$0
5311										
Subtotal						\$0	\$0	\$0	\$0	\$0
5337										
Subtotal						\$0	\$0	\$0	\$0	\$0
5339										
	5339 RTD0006324	Pioneer Valley Transit Authority	111215	Purchase Replacement Vans (15)	2021 - \$888,729	\$888,729	\$222,182	\$0	\$0	\$1,110,911
Subtotal						\$888,729	\$222,182	\$0	\$0	\$1,110,911

Table 20: FFY 2022 Transit Project Information (Continued)

5320						
Subtotal		\$0	\$0	\$0	\$0	\$0
Other Federal						
Subtotal		\$0	\$0	\$0	\$0	\$0
Other Non-Federal						
Subtotal		\$0	\$0	\$0	\$0	\$0
Total		\$13,959,860	\$7,301,183	\$0	\$0	\$21,261,043

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

## **VI. STATEWIDE FEDERAL AID PROJECT LISTING**

The MassDOT provided each planning agency a listing of statewide items anticipated for FFY 2018 to 2022. These items are to be funded separately from the regional TIP program. This information is provided in the following Tables.



**Table 21 Statewide Federal Aid Project Listing**

STIP Program ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼
<b>2018</b>					
Bridge Program	Holyoke	HOLYOKE- BRIDGE REPLACEMENT, H-21-018, LYMAN STREET OVER FIRST LEVEL CANAL	2	NHPP-On	\$ 11,762,603
Bridge Program	Palmer	PALMER - BRIDGE REHABILITATION, P-01-005, MAIN STREET OVER QUABOAG RIVER	2	NHPP-Off	\$ 3,000,000
Bridge Program	Cummington	CUMMINGTON- BRIDGE MAINTENANCE, C-21-025, ROUTE 9 OVER THE WESTFIELD RIVER	1	NHPP-Off	\$ 312,000
Bicycles and Pedestrians	Springfield	SPRINGFIELD- NORTH END PEDESTRIAN PATH CONSTRUCTION (UNDER THE CONNECTICUT RIVER RAILROAD), BETWEEN PLAINFIELD STREET AND BIRNIE AVENUE, INCLUDES CONSTRUCTION OF NEW UNDERPASS S-24-044	2	CMAQ	\$ 7,062,111
<b>2019</b>					<b>\$ 22,136,714</b>
Bridge Program	Middlefield	MIDDLEFIELD- BRIDGE REPLACEMENT, M-19-010, CHESTER ROAD OVER SMART BROOK	1	STP-BR-OFF	\$ 1,306,800
Bridge Program	Huntington	HUNTINGTON- SYSTEMATIC BRIDGE MAINTENANCE, H-27-007, ROUTE 112 OVER WEST BRANCH OF WESTFIELD RIVER	1	NHPP-Off	\$ 419,445
Interstate Pavement	Multiple	CHICOPEE- HOLYOKE- INTERSTATE MAINTENANCE & RELATED WORK ON I-391	2	NHPP	\$ 11,309,875
Non-Interstate Pavement	Multiple	GRANBY- SOUTH HADLEY- RESURFACING & RELATED WORK ON ROUTE 202, FROM LYMAN STREET SOUTH HADLEY TO PLEASANT STREET GRANBY (2 MILES)	2	NHPP	\$ 3,313,440
Non-Interstate Pavement	Ware	WARE- RESURFACING AND RELATED WORK ON ROUTE 9	2	NHPP	\$ 1,365,000
Safety Improvements	Multiple	CHICOPEE- WEST SPRINGFIELD- HIGHWAY LIGHTING UPGRADE ON I-91	2	STP	\$ 3,286,141
Safety Improvements	Chicopee	CHICOPEE- SIGNAL & INTERSECTION IMPROVEMENTS AT 13 INTERSECTIONS ALONG ROUTE 33 (MEMORIAL DRIVE), FROM FULLER ROAD TO ABBEY STREET	2	HSIP	\$ 6,001,387
Roadway Reconstruction	Northampton	NORTHAMPTON- ROUNDABOUT CONSTRUCTION AT INTERSECTION ROUTES 5/10 (NORTH KING STREET) & HATFIELD STREET	2	CMAQ	\$ 2,874,895
Roadway Reconstruction	Holyoke	HOLYOKE- IMPROVEMENTS AT KELLY COMMUNITY SCHOOL (SRTS)	2	TAP	\$ 926,875
					<b>\$ 30,803,858</b>

STIP Program ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼
<b>2020</b>					
Bridge Program	Westhampton	WESTHAMPTON- BRIDGE REPLACEMENT, W-27-005, KINGS HIGHWAY OVER N BRANCH MANHAN RIVER	2	STP-BR-OFF	\$ 3,072,000
Bridge Program	Hadley	HADLEY- BRIDGE REPLACEMENT, H-01-005, BAY ROAD (ROUTE 47) OVER THE FORT RIVER	2	NHPP-On	\$ 5,857,180
Bridge Program	Westfield	WESTFIELD- BRIDGE REPLACEMENT, W-25-006, ROUTE 10/202 (SOUTHWICK ROAD) OVER THE LITTLE RIVER	2	NHPP-On	\$ 13,276,980
Non-Interstate Pavement	South Hadley	SOUTH HADLEY- RESURFACING AND RELATED WORK ON ROUTE 116	2	NHPP	\$ 2,255,688
Safety Improvements	Multiple	CHICOPEE TO HOLYOKE- GUIDE AND TRAFFIC SIGN REPLACEMENT ON I-391	2	HSIP	\$ 542,872
Intersection Improvements	Springfield	SPRINGFIELD- IMPROVEMENTS ON ST JAMES AVENUE AT ST JAMES BOULEVARD AND CAREW STREET AT TAPLEY STREET	2	HSIP	\$ 2,688,000
Intersection Improvements	Holyoke	HOLYOKE- TRAFFIC SIGNAL UPGRADES AT 15 INTERSECTIONS ALONG HIGH & MAPLE STREETS	2	CMAQ	\$ 4,573,306
Bicycles and Pedestrians	Westfield	WESTFIELD- COLUMBIA GREENWAY RAIL TRAIL CONSTRUCTION (CENTER DOWNTOWN SECTION), FROM EAST SILVER STREET TO COWLES COURT, INCLUDES W-25-014, W-25-015, W-25-016, W-25-017, W-25-018 & W-25-019	2	CMAQ	\$ 6,784,160
Bicycles and Pedestrians	Chicopee	CHICOPEE- CONNECTICUT RIVERWALK & BIKEWAY CONSTRUCTION, FROM BOAT RAMP NEAR I-90 TO NASH FIELD (2.5 MILES), INCLUDES NEW BRIDGE C-13-060 OVER OVERFLOW CHANNEL	2	CMAQ	\$ 3,372,552
<b>2021</b>					<b>\$ 42,422,738</b>
Bridge Program	Greenfield	GREENFIELD- BRIDGE REPLACEMENT, G-12-052 (0XR) & G-12-053 (0XT), I-91 (NB & SB) OVER BMRR	2	NHPP-On	\$ 17,082,074
Non-Interstate Pavement	Westfield	WESTFIELD- RESURFACING AND RELATED WORK ON ROUTE 10 AND 202	2	NHPP	\$ 2,775,360
Non-Interstate Pavement	Wilbraham	WILBRAHAM- RESURFACING AND RELATED WORK ON ROUTE 20	2	NHPP	\$ 9,086,000
Bicycles and Pedestrians	Chicopee	CHICOPEE- CHICOPEE RIVER RIVERWALK MULTI-USE PATH CONSTRUCTION, FROM GRAPE STREET TO FRONT STREET (NEAR ELLERTON STREET) (1 MILE)	2	CMAQ	\$ 2,273,910
					<b>\$ 31,217,344</b>

<b>STIP Program ▼</b>	<b>Municipality Name ▼</b>	<b>MassDOT Project Description ▼</b>	<b>MassDOT District ▼</b>	<b>Funding Source ▼</b>	<b>Total Programmed Funds ▼</b>
<b>2022</b>					
Bridge Program	Hardwick	HARDWICK - BRIDGE REPLACEMENT, H-08-003, CREAMERY ROAD OVER WARE RIVER	2	STP-BR-OFF	\$ 4,123,104
Bridge Program	Northampton	NORTHAMPTON - BRIDGE REPLACEMENT, N-19-068, OLD SPRINGFIELD ROAD OVER MILL RIVER	2	STP-BR-OFF	\$ 3,981,120
Bridge Program	Wales	WALES - BRIDGE REPLACEMENT, W-02-002, HOLLAND ROAD OVER WALES BROOK	2	STP-BR-OFF	\$ 540,096
Bridge Program	Monson	MONSON - BRIDGE REPLACEMENT, M-27-015, OLD WALES ROAD OVER CONANT BROOK	2	STP-BR-OFF	\$ 1,742,784
Bridge Program	Springfield	SPRINGFIELD, BRIDGE REPLACEMENT, S-24-016, ARMORY STREET OVER CSX RR	2	NHPP-On	\$ 5,723,440
Bridge Program	Springfield	SPRINGFIELD, BRIDGE REPLACEMENT, S-24-026, ARMORY STREET OVER CSX RR (ABANDONED)	2	NHPP-On	\$ 3,948,640
Non-Interstate Pavement	Multiple	BELCHERTOWN- GRANBY- RESURFACING AND RELATED WORK ON ROUTE 202	2	NHPP	\$ 4,484,189
Bicycles and Pedestrians	Springfield	SPRINGFIELD- MCKNIGHT COMMUNITY TRAIL CONSTRUCTION, FROM ARMORY STREET TO HAYDEN AVENUE (1.5 MILES)	2	CMAQ	\$ 3,968,300
					<b>\$ 28,511,673</b>
					<b>5 Year \$</b>
					<b>Total 155,092,327</b>

## **VII. PROJECT IMPLEMENTATION**

The TIP is also used as a management tool for monitoring the progress and implementation of the RTP and previous TIP's. The award status of FFY 2016-2017 TIP projects are identified in table 22.

**Table 22 Project Implementation**

Year	Highway Project Description	SID	Funding	Programmed	Status
2016	LONGMEADOW- RESURFACING & RELATED WORK ON CONVERSE STREET, FROM LAUREL STREET TO DWIGHT STREET (2.04 MILES)	606445	STP	\$2,742,048	Construction
2016	WESTFIELD- RECONSTRUCTION OF ROUTE 187 (LITTLE RIVER ROAD) AND SHAKER ROAD	604446	STP, TAP	\$6,206,561	Construction
2016	WILBRAHAM- RECONSTRUCTION OF BOSTON ROAD (ROUTE 20) FROM DUDLEY STREET TO 400FT. EAST OF DUMAINE STREET (0.28MILES)	607869	STP	\$1,292,428	Construction
2016	BRIMFIELD- STURBRIDGE- RESURFACING & RELATED WORK ON ROUTE 20, BEGINNING EAST OF NEW HOLLAND ROAD (MM 87.8), ENDING WEST OF GALILEO DRIVE (MM 91.9)	608022	STP	\$3,500,000	Construction
2016	SPRINGFIELD- SIGNAL & INTERSECTION IMPROVEMENTS @ ROOSEVELT AVENUE & ISLAND POND ROAD, ROOSEVELT AVENUE & ALDEN STREET	605385	CMAQ, HSIP	\$2,297,372	Construction
2016	WESTFIELD- COLUMBIA GREENWAY RAIL TRAIL CONSTRUCTION, NORTH SECTION - FROM COWLES COURT ACCESS RAMPS TO THE WESTFIELD RIVER BRIDGE INCLUDES REHAB OF W-25-036 (WESTFIELD RIVER CROSSING)	604968	CMAQ	\$3,004,516	Construction
2016	SPRINGFIELD - UNION STATION REDEVELOPMENT		CMAQ	\$750,873	Construction
2016	SOUTH HADLEY- SIGNAL & INTERSECTION IMPROVEMENTS AT ROUTE 202 (GRANBY ROAD) & ROUTE 33 (LYMAN STREET)	607735	SW HSIP	\$550,000	Construction
2016	SOUTHAMPTON - SAFE ROUTES TO SCHOOL - NORRIS ELEMENTARY SCHOOL (100%)	607453	SRS	\$832,000	Construction
2016	SOUTHWICK- INTERSECTION IMPROVEMENTS AT FOUR LOCATIONS ON ROUTE 57 (FEEDING HILLS ROAD)	603477	SW CMAQ	\$3,551,223	Construction
2016	WEST SPRINGFIELD - ADAPTIVE SIGNAL CONTROL ON ROUTE 5 (RIVERDALE STREET)	608280	SW HSIP	\$540,981	Construction
2016	WEST SPRINGFIELD- CONNECTICUT RIVERWALK & BIKEWAY EXTENSION, FROM ELM STREET TO DOTY CIRCLE, INCLUDES PEDESTRIAN BRIDGE W-21-020	603730	SW-STP	\$ 1,840,736	Construction

Year	Highway Project Description	SID	Funding	Programme d	Status
2017	PIONEER VALLEY REGIONAL BICYCLE SHARE (PHASE 1)	PV001	CMAQ	\$ 1,343,971	Not Advertised
2017	HOLYOKE- IMPROVEMENTS TO LOWER WESTFIELD ROAD ON I-91 (INTERCHANGE 15)	606903	STP	\$ 1,700,004	Not Advertised
2017	AMHERST- HADLEY- SIDEWALK & WHEELCHAIR RAMP CONSTRUCTION ON ROUTE 9	608023	STP, TAP	\$ 1,204,050	Construction
2017	SOUTHWICK- RECONSTRUCTION CONGAMOND ROAD (ROUTE 168), FROM COLLEGE HIGHWAY & ENDS 250 FEET SHORT OF STATE LINE (1.2 MILES)	604033	STP, CMAQ	\$ 7,172,979	Not Advertised
2017	LUDLOW- RECONSTRUCTION OF CENTER STREET (ROUTE 21), FROM 35' WEST OF BEACHSIDE DRIVE WESTERLY TO GAS LINE BESIDE MTA OVERPASS (3,500 FEET)	605011	STP, HSIP, TAP	\$ 5,845,350	Not Advertised
2017	GOSHEN- RESURFACING & RELATED WORK ON WEST STREET	605150	STP	\$ 3,800,000	Not Advertised
2017	AGAWAM- WEST SPRINGFIELD- BRIDGE REPLACEMENT, A-05-002=W-21-014, ROUTE 147 OVER THE WESTFIELD RIVER & INTERSECTION & SIGNAL IMPROVEMENTS @ 3 LOCATIONS	605384	NHPP	\$ 23,173,893	Not Advertised
2017	AMHERST- BRIDGE REPLACEMENT, A-08-008, MILL STREET OVER MILL RIVER	607528	NHPP	\$ 2,075,400	Not Advertised
2017	CHESTERFIELD- BRIDGE REPLACEMENT, C-12-009, IRELAND STREET OVER WEST BRANCH BRONSON BROOK	607549	NHPP	\$ 3,341,040	Not Advertised
2017	CHICOPEE- SPRINGFIELD- INTERSTATE MAINTENANCE & RELATED WORK ON I-291	608211	IM	\$ 4,118,400	Construction
2017	AGAWAM- CHICOPEE- HOLYOKE- WEST SPRINGFIELD- STORMWATER IMPROVEMENTS ALONG I-91, I-391, ROUTE 57 AND ROUTE 5	608192	IM	\$ 1,276,062	Construction



## VIII. Air Quality Conformity Information

Since most all of Massachusetts (with limited exceptions) was designated on 5/21/12 by the United States Environmental Protection Agency as “unclassifiable/attainment” for the latest ozone standard, a conformity determination for the Pioneer Valley 2018-2022 TIP is not required for ozone. Conformity determination is however required for carbon monoxide. Further details and background information are provided below:

### **Carbon Monoxide**

A new transportation conformity determinations for carbon monoxide is required for the 2018-2022 TIP in Central Massachusetts MPO (Worcester); Pioneer Valley MPO (Springfield); Boston MPO (Waltham and Boston Area); Northern Middlesex MPO (Lowell).

The Boston Carbon Monoxide Area (nine communities - Boston, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, and Somerville) has a maintenance plan in place with a SIP-Approved 2010 motor vehicle carbon monoxide emission budget in place requiring a regional emission analysis for any carbon monoxide conformity determination of the Boston CO Area.

Limited Maintenance Plans are in place for Worcester; Springfield; Waltham and Lowell, hence regional emissions analyses are assumed to satisfy the budget test in these areas.

### **Ozone**

As of July 20, 2013, Dukes County, Massachusetts [Dukes County Wampanoag Tribe of Gay Head (Aquinnah) of Massachusetts] is nonattainment, classification marginal, for the 2008 8-Hour Ozone National Ambient Air Quality Standard (NAAQS), also known as the 2008 ozone standard. However, Interagency Transportation Conformity Consultation has determined Dukes County, Massachusetts to be an isolated rural nonattainment area for the 2008 8-hour ozone standard. An ozone conformity determination is required when the isolated rural area (Dukes County) includes non-exempt projects in its STIP/TIP and TP. See 40 CFR Section 109(g) for conformity in isolated rural nonattainment and maintenance areas.

### **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 U.S. 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 re-designated as maintaining the standard. A conformity determination is a demonstration that 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.

The entire Commonwealth of Massachusetts was previously classified as nonattainment for ozone, and was divided into two nonattainment areas. The Eastern Massachusetts ozone nonattainment area included Barnstable, Bristol, Dukes, Essex, Middlesex, Nantucket, Norfolk, Plymouth, Suffolk, and Worcester counties. Berkshire, Franklin, Hampden, and Hampshire counties comprised the Western Massachusetts ozone nonattainment area. With these classifications, the 1990 Clean Air Act Amendments (CAAA)



required the Commonwealth to reduce its emissions of volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>), the two major precursors to ozone formation to achieve attainment of the ozone standard.

As of April 22, 2002, the city of Springfield was re-designated as being in attainment for carbon monoxide (CO) with an EPA-approved limited maintenance plan. In areas with approved limited maintenance plans, federal actions requiring conformity determinations under the transportation conformity rule are considered to satisfy the "budget test" (as budgets are treated as not constraining in these areas for the length of the initial maintenance period). Any future required "project level" conformity determinations for projects located within this community will continue to use a "hot-spot" analysis to assure that any new transportation projects in this CO attainment area do not cause or contribute to carbon monoxide non-attainment.

### **Legislative and Regulatory 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 a second time to 2007.

In 1997, the EPA proposed a new, eight-hour ozone standard that replaced the one-hour standard, effective June 15, 2005. Scientific information had shown that ozone could affect human health at lower levels, 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, and was separated into two nonattainment areas—Eastern Massachusetts and Western Massachusetts.

In March 2008, EPA published revisions to the eight-hour ozone NAAQS establishing a level of 0.075 ppm, (March 27, 2008; 73 FR 16483). In 2009, EPA announced it would reconsider this standard because it fell outside of the range recommended by the Clean Air Scientific Advisory Committee. However, EPA did not take final action on the reconsideration so the standard would remain at 0.075 ppm.

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

On May 21, 2012, (77 FR 30088), the final rule 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 published on May 21, 2012 (77 FR 30160), revoked the 1997 ozone NAAQS to occur one year after the July 20, 2012 effective date of the 2008 NAAQS.

Also on 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 nonattainment is Dukes County. All other Massachusetts counties were classified as unclassifiable/attainment. Therefore, conformity for ozone in the Pioneer Valley MPO does not require conformity under the current 2008 standard and the MPO does not need to perform a conformity determination for ozone on the program.

## IX. Greenhouse Gas Monitoring and Evaluation

### Introduction

This section summarizes the greenhouse gas (GHG) impacts that are anticipated to result from the projects that are included in this FFY 2017 – 2019 Transportation Improvement Program (TIP). It includes a summary of the state laws and policies that call for reducing greenhouse gas in order to mitigate global climate change, actions that are being to respond to these state laws and policies, the role of regional planning and TIP development in reducing GHG emission and tracking these reductions, and the projected GHG emission impacts from the projects programmed in the TIP.

### State Policy Context

The Global Warming Solutions Act (GWSA), which was signed into law in August 2008, makes Massachusetts a leader in setting aggressive and enforceable GHG reduction targets, and implementing policies and initiatives to achieve these targets. In keeping with the law, on December 29, 2010 the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA), in consultation with other state agencies and the public, released the Massachusetts *Clean Energy and Climate Plan for 2020*. In December 2014 the Department of Environmental Protection issued new regulations that require Metropolitan Planning Organizations to quantify impacts from project investments, track progress towards reductions, and consider impacts in the prioritization of GHG impacts from project investments. The targets for overall statewide GHG emissions are:



### GreenDOT Policy

The transportation sector is the single largest emitter of greenhouse gases, accounting for over a third of GHG emissions, and therefore the transportation sector is a key focus of the *Clean Energy and Climate Plan*. MassDOT's approach to supporting the implementation of the plan is set forth 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 public transit.** MassDOT will achieve this by pursuing multi-modal, “complete streets” design standards; providing choice in transportation services; and by working with MPOs and other partners to prioritize and program a balance of 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 enable denser, smart growth development patterns that support reduced GHG emissions.
-

## **GreenDOT Policy and Metropolitan Planning Organizations**

The Commonwealth's thirteen metropolitan planning organizations (MPOs) are integrally involved in helping to achieve the GreenDOT goals and supporting the GHG reductions mandated under the GWSA. The MPOs are most directly involved in helping to achieve the GHG emissions reductions under the second goal – to promote healthy transportation modes through prioritizing and programming an appropriate balance of roadway, transit, bicycle and pedestrian investments – and assist in the third goal by supporting smart growth development patterns through the creation of a balanced multi-modal transportation system. This will be realized through the transportation goals and policies espoused in the 2017 Regional Transportation Plans (RTPs), the major projects planned in the RTPs, and the mix of new transportation projects that are programmed and implemented through the TIPs. The GHG tracking and evaluation processes enable the MPOs to identify the anticipated GHG impacts of the planned and programmed projects, and also to use GHG impacts as a criterion in prioritizing transportation projects.

### **Regional GHG Tracking and Evaluation in RTPs**

MassDOT coordinated with MPOs and regional planning agency (RPA) staffs on the implementation of GHG tracking and evaluation in development of each MPO's 2035 RTPs, which were adopted in September 2011. This collaboration has continued for the MPO's 2040 RTPs and 2017-19 TIPs.

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 2040 no-build and build conditions.

All of the MPOs included these GHG emission projections in their RTPs, along with a discussion of climate change and a statement of MPO support for reducing GHG emissions as a regional goal.

### **Project-Level GHG Tracking and Evaluation in the Transportation Improvement Program**

It is also important to monitor and evaluate the GHG impacts of the transportation projects that are programmed in the MPO Transportation Improvement Programs (TIP). The TIP includes both the larger, regionally-significant projects from the RTPs, which have already had their aggregate GHG impacts calculated and reported in the RTP, as well as smaller projects that are not included in the RTP but that may nevertheless have impacts on GHG emissions. The principal objective of this tracking is to enable the MPOs to evaluate 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 the following approach for identifying anticipated GHG impacts and quantifying GHG impacts of projects, when appropriate, through the TIP. Different types of projects will have different anticipated GHG emissions impacts. The different project categories are outlined on the next two pages with this region's project tracking sheet on the third page.

### **Calculation of GHG Impacts for TIP Projects**

The Office of Transportation Planning at MassDOT provided the spreadsheets that are used for determining Congestion Management and Air Quality Improvement (CMAQ) eligibility. These spreadsheets require the same inputs as the CMAQ calculations, and have been adapted to provide CO<sub>2</sub> impacts. The data and analysis required for these calculations is available from functional design reports that should be submitted for projects that would produce a measurable GHG impact.

## Projects with Quantified Impacts

RTP Projects - Major capacity expansion projects would be expected to have a significant impact on GHG emissions. However, these projects are included in the RTPs and analyzed using the statewide model or Boston regional model, which would reflect their GHG impacts. Therefore, no independent TIP calculations are required.

- **Quantified Decrease in Emissions** - Projects that would be expected to produce a measurable decrease in emissions. The approach for calculating these impacts is described below. These projects should be categorized in the following manner:
- **Quantified Decrease in Emissions from Traffic Operational Improvement** - An intersection reconstruction or signalization project that is projected to reduce delay and congestion.
- **Quantified Decrease in Emissions from Pedestrian and Bicycle Infrastructure** - A shared-use path that would enable increased walking and biking and decreased vehicle-miles traveled (VMT).
- **Quantified Decrease in Emissions from New/Additional Transit Service** - A bus or shuttle service that would enable increased transit ridership and decreased VMT
- **Quantified Decrease in Emissions from a Park and Ride Lot** A park-and-ride lot that would enable increased transit ridership/ increased ridesharing and decreased VMT
- **Quantified Decrease in Emissions from Bus Replacement**  
A bus replacement that would directly reduce GHG emissions generated by that bus service.
- **Quantified Decrease in Emissions from Complete Streets Improvements**  
Improvements to roadway networks that include the addition of bicycle and pedestrian accommodations where none were present before.
- **Quantified Decrease in Emissions from Other Improvement**

Quantified Increase in Emissions – Projects that would be expected to produce a measurable increase in emissions

## Projects with Assumed Impact

**No Assumed Impact/Negligible Impact on Emission** - Projects that do not change the capacity or use of a facility (e.g. a resurfacing project that restores a roadway to its previous condition, or a bridge rehabilitation/replacement that restores the bridge to its previous condition) would be assumed to have no GHG impact.

**Assumed Nominal Decrease in Emissions** - Projects that would be expected to produce a minor decrease 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 there may be not data or analysis to support any projections of GHG impacts. These projects should be categorized as a Qualitative Decrease in Emissions.

**Assumed Nominal Increase in Emissions** - Projects that would be expected to produce a minor increase in emissions that cannot be calculated with any precision. The projects should be categorized as a Qualitative Increase in Emissions.

## Regional Greenhouse Gas Impact Summary Tables for FFY 2018 – 2022 TIP

The following table (table 23) summarize the calculated quantitative and assumed qualitative impacts of the projects included in the regional FFY 2018 – 2022 TIP.



**Table 23 Greenhouse Gas Summary Tables FFY 2018-2022**

Project ID	Project Description	Total Cost	Analysis	GHG CO2 Impact (kg/yr)	Impact Description
604203	AGAWAM- INTERSECTION IMPROVEMENTS AT ROUTE 187 & ROUTE 57	\$ 1,080,992	Quantified	3,406	Quantified Decrease in Emissions from Traffic Operational Improvement
604203	AGAWAM- INTERSECTION IMPROVEMENTS AT ROUTE 187 & ROUTE 57	\$ 2,207,008			
604597	NORTHAMPTON- IMPROVEMENTS ON I-91 INTERCHANGE 19 AT ROUTE 9 AND DAMON ROAD	\$ 545,638	Quantified	17,566	Quantified Decrease in Emissions from Traffic Operational Improvement
604597	NORTHAMPTON- IMPROVEMENTS ON I-91 INTERCHANGE 19 AT ROUTE 9 AND DAMON ROAD	\$ 6,397,380			
604597	NORTHAMPTON- IMPROVEMENTS ON I-91 INTERCHANGE 19 AT ROUTE 9 AND DAMON ROAD	\$ 495,472			
603449	WESTFIELD- ROUTE 20 ACCESS IMPROVEMENTS ON COURT STREET & WESTERN AVENUE, FROM LLEWELLYN DRIVE EASTERLY TO LLOYDS HILL ROAD (PHASE I)	\$ 3,630,245	Quantified	3224.4	Quantified Decrease in Emissions from Complete Streets Project
604738	SOUTHAMPTON- RECONSTRUCTION OF GLENDALE ROAD (PHASE II) FROM COLLEGE HIGHWAY (RT 10) NORTHWESTERLY TO POMEROY MEADOW RD (3,801 FEET)	\$ 2,710,700	Quantified	1462.1	Quantified Decrease in Emissions from Complete Streets Project
607256	HOLYOKE- RESURFACING & RELATED WORK ON HERITAGE STREET, FRONT STREET & DWIGHT STREET FROM MAPLE ST TO THE 1ST LEVEL CANAL (.54 MILES)	\$ 3,758,081	Quantified	3226.5	Quantified Decrease in Emissions from Complete Streets Project
604962	HOLLAND- RESURFACING & RELATED WORK ON BRIMFIELD ROAD, FROM THE BRIMFIELD/HOLLAND T.L. TO WALES ROAD (1.4 MILES - PHASE I)	\$ 1,140,089	Quantified	280	Quantified Decrease in Emissions from Complete Streets Project
608786	AMHERST- HADLEY- NORTHAMPTON- TRANSIT SIGNAL PRIORITY UPGRADES AT VARIOUS LOCATIONS	\$ 1,200,000	Qualitative		Qualitative Decrease in Emissions
603449	WESTFIELD- ROUTE 20 ACCESS IMPROVEMENTS ON COURT STREET & WESTERN AVENUE, FROM LLEWELLYN DRIVE EASTERLY TO LLOYDS HILL ROAD (PHASE I)	\$ 2,503,688			
600936	HOLYOKE- BRIDGE REPLACEMENT, H-21-018, LYMAN STREET OVER FIRST LEVEL CANAL	\$11,762,603			No assumed impact/negligible impact on emissions
PV0002	PALMER - BRIDGE REHABIILITATION, P-01-005, MAIN STREET OVER QUABOAG RIVER	\$ 3,000,000			No assumed impact/negligible impact on emissions

**Table 23 Greenhouse Gas Summary Tables FFY 2018-2022 (Continued)**

607939	CUMMINGTON- BRIDGE MAINTENANCE, C-21-025, ROUTE 9 OVER THE WESTFIELD RIVER	\$ 312,000			No assumed impact/negligible impact on emissions
607589	SPRINGFIELD- NORTH END PEDESTRIAN PATH CONSTRUCTION (UNDER THE CONNECTICUT RIVER RAILROAD), BETWEEN PLAINFIELD STREET AND BIRNIE AVENUE, INCLUDES CONSTRUCTION OF NEW UNDERPASS S-24-044	\$ 7,062,111	Quantified	405	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
		<b>2018 Quantified Impact</b>		<b>29,570</b>	
608411	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BAY STREET AND BERKSHIRE AVENUE	\$ 853,408	Qualitative		Qualitative Decrease in Emissions
608411	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BAY STREET AND BERKSHIRE AVENUE	\$ 1,080,992	Qualitative		Qualitative Decrease in Emissions
600513	AGAWAM- RECONSTRUCTION OF ROUTE 187 FROM 425 FT. SOUTH OF S. WESTFIELD STREET TO ROUTE 57 (0.3 MILES - PHASE I)	\$ 2,323,443			
607987	WARE- INTERSECTION IMPROVEMENTS @ MAIN STREET, WEST STREET, NORTH STREET, SOUTH STREET & CHURCH STREET	\$ 1,000,000	Qualitative		Qualitative Decrease in Emissions
607987	WARE- INTERSECTION IMPROVEMENTS @ MAIN STREET, WEST STREET, NORTH STREET, SOUTH STREET & CHURCH STREET	\$ 545,638			
607987	WARE- INTERSECTION IMPROVEMENTS @ MAIN STREET, WEST STREET, NORTH STREET, SOUTH STREET & CHURCH STREET	\$ 717,178			
604209	HOLYOKE- WEST SPRINGFIELD- REHABILITATION OF ROUTE 5 (RIVERDALE ROAD), FROM I-91 (INTERCHANGE 13) TO MAIN STREET IN HOLYOKE & FROM ELM STREET TO NORTH ELM STREET IN WEST SPRINGFIELD (3.2 MILES)	\$ 4,636,143	Quantified	7,843	Quantified Decrease in Emissions from Complete Streets Project
608084	AMHERST- IMPROVEMENTS & RELATED WORK ON ROUTES 9 & 116, FROM UNIVERSITY DRIVE TO SOUTH PLEASANT STREET (0.8 MILES)	\$ 1,305,886			
608236	NORTHAMPTON- RECONSTRUCTION OF DAMON ROAD, FROM ROUTE 9 TO ROUTE 5, INCLUDES DRAINAGE SYSTEM REPAIRS & SLOPE STABILIZATION AT THE NORWOTTUCK RAIL TRAIL	\$ 1,702,480	Quantified	1,983	Quantified Decrease in Emissions from Traffic Operational Improvement
608236	NORTHAMPTON- RECONSTRUCTION OF DAMON ROAD, FROM ROUTE 9 TO ROUTE 5, INCLUDES DRAINAGE SYSTEM REPAIRS & SLOPE STABILIZATION AT THE NORWOTTUCK RAIL TRAIL	\$ 5,449,931			
608412	BELCHERTOWN- IMPROVEMENTS & RELATED WORK ON ROUTES 202 & 21, FROM TURKEY HILL ROAD TO SOUTH MAIN STREET (1.2 MILES)	\$ 4,784,000	Qualitative		Qualitative Decrease in Emissions

**Table 23 Greenhouse Gas Summary Tables FFY 2018-2022 (Continued)**

608249	MIDDLEFIELD- BRIDGE REPLACEMENT, M-19-010, CHESTER ROAD OVER SMART BROOK	\$ 1,306,800			No assumed impact/negligible impact on emissions
606552	NORTHAMPTON- BRIDGE RECONSTRUCTION, N-19-059, I-91 OVER US 5/BMRR & N-19-060, I-91 OVER HOCKANUM ROAD	\$56,891,767			No assumed impact/negligible impact on emissions
608258	HUNTINGTON- SYSTEMATIC BRIDGE MAINTENANCE, H-27-007, ROUTE 112 OVER WEST BRANCH OF WESTFIELD RIVER	\$ 419,445			No assumed impact/negligible impact on emissions
607560	CHICOPEE- HOLYOKE- INTERSTATE MAINTENANCE & RELATED WORK ON I-391	\$11,309,875			No assumed impact/negligible impact on emissions
607474	GRANBY- SOUTH HADLEY- RESURFACING & RELATED WORK ON ROUTE 202, FROM LYMAN STREET SOUTH HADLEY TO PLEASANT STREET GRANBY (2 MILES)	\$ 3,313,440	Quantified	2,726	Quantified Decrease in Emissions from Complete Streets Project
608811	WARE- RESURFACING AND RELATED WORK ON ROUTE 9	\$ 1,365,000	Qualitative		Qualitative Decrease in Emissions
608600	CHICOPEE- WEST SPRINGFIELD- HIGHWAY LIGHTING UPGRADE ON I-91	\$ 3,286,141			No assumed impact/negligible impact on emissions
607736	CHICOPEE- SIGNAL & INTERSECTION IMPROVEMENTS AT 13 INTERSECTIONS ALONG ROUTE 33 (MEMORIAL DRIVE), FROM FULLER ROAD TO ABBEY STREET	\$ 6,001,387	Qualitative		Qualitative Decrease in Emissions
606555	NORTHAMPTON- ROUNDABOUT CONSTRUCTION AT INTERSECTION ROUTES 5/10 (NORTH KING STREET) & HATFIELD STREET	\$ 2,874,895	Qualitative		Qualitative Decrease in Emissions
608790	HOLYOKE- IMPROVEMENTS AT KELLY COMMUNITY SCHOOL (SRTS)	\$ 926,875	Qualitative		Qualitative Decrease in Emissions
603783	WESTFIELD- COLUMBIA GREENWAY RAIL TRAIL CONSTRUCTION (CENTER DOWNTOWN SECTION), FROM EAST SILVER STREET TO COWLES COURT, INCLUDES W-25,014, W-25-015, W-25-016, W-25-017, W-25-018 & W-25-019	\$ 6,532,895	Quantified	4,458	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
		<b>2019 Quantified Impact</b>	<b>17,010</b>		
607773	WESTFIELD- IMPROVEMENTS & RELATED WORK ON ROUTE 20, COURT STEET & WESTERN AVENUE, LLOYDS HILL ROAD TO HIGH STREET/MILL STREET INTERSECTION (PHASE II)	\$ 1,080,992	Quantified	1,290	Quantified Decrease in Emissions from Complete Streets Project
607773	WESTFIELD- IMPROVEMENTS & RELATED WORK ON ROUTE 20, COURT STEET & WESTERN AVENUE, LLOYDS HILL ROAD TO HIGH STREET/MILL STREET INTERSECTION (PHASE II)	\$ 500,000			



**Table 23 Greenhouse Gas Summary Tables FFY 2018-2022 (Continued)**

607773	WESTFIELD- IMPROVEMENTS & RELATED WORK ON ROUTE 20, COURT STEET & WESTERN AVENUE, LLOYDS HILL ROAD TO HIGH STREET/MILL STREET INTERSECTION (PHASE II)	\$ 545,638			
607773	WESTFIELD- IMPROVEMENTS & RELATED WORK ON ROUTE 20, COURT STEET & WESTERN AVENUE, LLOYDS HILL ROAD TO HIGH STREET/MILL STREET INTERSECTION (PHASE II)	\$ 4,404,749			
606895	GRANBY- IMPROVEMENTS @ 2 LOCATIONS ON ROUTE 202: SCHOOL STREET & FIVE CORNERS	\$ 1,371,297	Qualitative		Qualitative Decrease in Emissions
605032	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	\$ 2,202,480	Qualitative		Qualitative Decrease in Emissions
605032	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	\$10,144,868			
608718	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BERKSHIRE AVENUE, COTTAGE AND HARVEY STREETS	\$ 2,229,021	Qualitative		Qualitative Decrease in Emissions
608782	SPRINGFIELD- INTERSECTION IMPROVEMENTS AT COTTAGE STREET, INDUSTRY AVENUE AND ROBBINS ROAD	\$ 1,944,000	Qualitative		Qualitative Decrease in Emissions
608631	WESTHAMPTON- BRIDGE REPLACEMENT, W-27-005, KINGS HIGHWAY OVER N BRANCH MANHAN RIVER	\$ 3,072,000			No assumed impact/negligible impact on emissions
608460	HADLEY- BRIDGE REPLACEMENT, H-01-005, BAY ROAD (ROUTE 47) OVER THE FORT RIVER	\$ 5,857,180			No assumed impact/negligible impact on emissions
400103	WESTFIELD- BRIDGE REPLACEMENT, W-25-006, ROUTE 10/202 (SOUTHWICK ROAD) OVER THE LITTLE RIVER	\$13,276,980			No assumed impact/negligible impact on emissions
608473	SOUTH HADLEY- RESURFACING AND RELATED WORK ON ROUTE 116	\$ 2,255,688			
608575	CHICOPEE TO HOLYOKE- GUIDE AND TRAFFIC SIGN REPLACEMENT ON I-391	\$ 542,872			No assumed impact/negligible impact on emissions
608560	SPRINGFIELD- IMPROVEMENTS ON ST .JAMES AVENUE AT ST JAMES BOULEVARD AND CAREW STREET AT TAPLEY STREET	\$ 2,688,000	Qualitative		Qualitative Decrease in Emissions
606450	HOLYOKE- TRAFFIC SIGNAL UPGRADES AT 15 INTERSECTIONS ALONG HIGH & MAPLE STREETS	\$ 4,573,306	Qualitative		Qualitative Decrease in Emissions
602911	CHICOPEE- CONNECTICUT RIVERWALK & BIKEWAY CONSTRUCTION, FROM BOAT RAMP NEAR I-90 TO NASH FIELD (2.5 MILES), INCLUDES NEW BRIDGE C-13-060 OVER OVERFLOW CHANNEL	\$ 3,372,552	Quantified	73,253	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure

**Table 23 Greenhouse Gas Summary Tables FFY 2018-2022 (Continued)**

605032	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	\$ 1,080,992	Qualitative		Qualitative Decrease in Emissions
605032	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	\$ 545,638			
605032	HADLEY- RECONSTRUCTION ON ROUTE 9, FROM MIDDLE STREET TO MAPLE/SOUTH MAPLE STREET	\$ 10,866,022			
607502	NORTHAMPTON- INTERSECTION IMPROVEMENTS AT KING STREET, NORTH STREET & SUMMER STREET AND AT KING STREET & FINN STREET	\$ 1,240,000	Qualitative		Qualitative Decrease in Emissions
607502	NORTHAMPTON- INTERSECTION IMPROVEMENTS AT KING STREET, NORTH STREET & SUMMER STREET AND AT KING STREET & FINN STREET	\$ 2,462,674			
608577	EASTHAMPTON- IMPROVEMENTS AND RELATED WORK ON UNION STREET (ROUTE 141) FROM PAYSON AVENUE TO HIGH STREET (0.36 MILES)	\$ 1,462,480	Quantified	226,787	Quantified Decrease in Emissions from Traffic Operational Improvement
608577	EASTHAMPTON- IMPROVEMENTS AND RELATED WORK ON UNION STREET (ROUTE 141) FROM PAYSON AVENUE TO HIGH STREET (0.36 MILES)	\$ 819,184			
606156	HOLYOKE- RECONSTRUCTION OF I-91 INTERCHANGE 17 & ROUTE 141	\$ 3,349,615	Qualitative		Qualitative Decrease in Emissions
608487	WESTFIELD- RESURFACING AND RELATED WORK ON ROUTE 10 AND 202	\$ 2,775,360			No assumed impact/negligible impact on emissions
608489	WILBRAHAM- RESURFACING AND RELATED WORK ON ROUTE 20	\$ 9,086,000			No assumed impact/negligible impact on emissions
602912	CHICOPEE- CHICOPEE RIVER RIVERWALK MULTI-USE PATH CONSTRUCTION, FROM GRAPE STREET TO FRONT STREET (NEAR ELLERTON STREET) (1 MILE)	\$ 2,273,910	Quantified	3,248	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
			<b>2021 Quantified Impact</b>	<b>230,035</b>	

**Table 22 Transit Greenhouse Gas Summary Tables FFY 2018-2022**

608374	WEST SPRINGFIELD- RECONSTRUCTION OF MEMORIAL AVENUE (ROUTE 147), FROM COLONY ROAD TO THE MEMORIAL AVENUE ROTARY (1.4 MILES)	\$ 1,080,992	Qualitative		Qualitative Decrease in Emissions
608374	WEST SPRINGFIELD- RECONSTRUCTION OF MEMORIAL AVENUE (ROUTE 147), FROM COLONY ROAD TO THE MEMORIAL AVENUE ROTARY (1.4 MILES)	\$ 2,702,480			
608374	WEST SPRINGFIELD- RECONSTRUCTION OF MEMORIAL AVENUE (ROUTE 147), FROM COLONY ROAD TO THE MEMORIAL AVENUE ROTARY (1.4 MILES)	\$ 545,638			
608374	WEST SPRINGFIELD- RECONSTRUCTION OF MEMORIAL AVENUE (ROUTE 147), FROM COLONY ROAD TO THE MEMORIAL AVENUE ROTARY (1.4 MILES)	\$12,235,690			
604434	CHICOPEE- RECONSTRUCTION & RELATED WORK ON FULLER ROAD, FROM MEMORIAL DR (RTE 33) TO SHAWINIGAN DR (2.0 MILES)	\$ 8,701,254	Quantified	205,299	Quantified Decrease in Emissions from Traffic Operational Improvement
PV0004	NORTHAMPTON - BRIDGE REPLACEMENT, N-19-068, OLD SPRINGFIELD ROAD OVER MILL RIVER	\$ 3,981,120			No assumed impact/negligible impact on emissions
608847	WALES - BRIDGE REPLACEMENT, W-02-002, HOLLAND ROAD OVER WALES BROOK	\$ 540,096			No assumed impact/negligible impact on emissions
608846	MONSON - BRIDGE REPLACEMENT, M-27-015, OLD WALES ROAD OVER CONANT BROOK	\$ 1,742,784			No assumed impact/negligible impact on emissions
608848	SPRINGFIELD, BRIDGE REPLACEMENT, S-24-016, ARMORY STREET OVER CSX RR	\$ 5,723,440			No assumed impact/negligible impact on emissions
608853	SPRINGFIELD, BRIDGE REPLACEMENT, S-24-026, ARMORY STREET OVER CSX RR (ABANDONED)	\$ 3,948,640			No assumed impact/negligible impact on emissions
608466	BELCHERTOWN- GRANBY- RESURFACING AND RELATED WORK ON ROUTE 202	\$ 4,484,189	Quantified	3,812	Quantified Decrease in Emissions from Complete Streets Project
608157	SPRINGFIELD- MCKNIGHT COMMUNITY TRAIL CONSTRUCTION, FROM ARMORY STREET TO HAYDEN AVENUE (1.5 MILES)	\$ 3,968,300	Quantified	13,099	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
<b>2022 Quantified Ir 222,209</b>					

**Table 22 Transit Greenhouse Gas Summary Tables FFY 2018-2022 (Continued)**

**Table 22 Transit Greenhouse Gas Summary Tables FFY 2018-2022 (Continued)**

**Table 22 Transit Greenhouse Gas Summary Tables FFY 2018-2022 (Continued)**

**Table 22 Transit Greenhouse Gas Summary Tables FFY 2018-2022 (Continued)**

# APPENDICES





# APPENDIX A: MassDOT Targets

# Final 2018-2022 State Transportation Improvement Program Budgets

	2018	2019	2020	2021	2022	2018-2022 Total	Annual Average
Base obligation authority	\$ 598.18	\$ 611.68	\$ 626.33	\$ 641.99	\$ 668.74	\$ 3,136.92	\$ 627.38
Planned redistribution request	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 250.00	\$ 50.00
<b>Total obligation authority</b>	<b>\$ 648.18</b>	<b>\$ 661.68</b>	<b>\$ 676.33</b>	<b>\$ 691.99</b>	<b>\$ 708.74</b>	<b>\$ 3,386.92</b>	<b>\$ 677.38</b>
ABP GANS Repayment	\$ (62.99)	\$ (66.02)	\$ (104.28)	\$ (107.70)	\$ (116.77)	\$ (467.75)	\$ (91.55)
<b>Total federal funding with match</b>	<b>\$ 711.66</b>	<b>\$ 732.55</b>	<b>\$ 704.43</b>	<b>\$ 734.06</b>	<b>\$ 745.33</b>	<b>\$ 3,628.03</b>	<b>\$ 725.61</b>
<b>Planning / Adjustments / Pass-throughs</b>							
Award adjustments, change orders, etc.	\$ 37.50	\$ 31.25	\$ 25.00	\$ 25.00	\$ 25.00	\$ 150.00	\$ 30.00
Metropolitan planning	\$ 10.84	\$ 10.84	\$ 10.84	\$ 10.84	\$ 10.84	\$ 54.19	\$ 10.84
State planning and research	\$ 17.53	\$ 17.53	\$ 17.53	\$ 17.53	\$ 17.53	\$ 87.67	\$ 17.53
Recreational trails	\$ 1.48	\$ 1.48	\$ 1.48	\$ 1.48	\$ 1.48	\$ 7.42	\$ 1.48
Railroad grade crossings	\$ 5.31	\$ 4.75	\$ 2.50	\$ 2.50	\$ 2.50	\$ 17.56	\$ 3.51
MassRides program	\$ -	\$ 3.33	\$ 3.33	\$ 3.33	\$ 3.33	\$ 13.30	\$ 2.66
<b>subtotal of planning / adjustments / pass-throughs</b>	<b>\$ 72.67</b>	<b>\$ 69.18</b>	<b>\$ 66.93</b>	<b>\$ 60.68</b>	<b>\$ 60.68</b>	<b>\$ 330.14</b>	<b>\$ 66.03</b>
<b>Funding sources for regional priorities</b>							
Congestion Mitigation/Air Quality Improvements	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 125.00	\$ 25.00
Highway Safety Improvement Program	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 50.00	\$ 10.00
Transportation Alternatives Program	\$ 5.73	\$ 5.73	\$ 5.73	\$ 5.73	\$ 5.73	\$ 28.64	\$ 5.73
Surface Transportation Program Block Grant	\$ 180.46	\$ 185.20	\$ 187.42	\$ 192.70	\$ 195.59	\$ 945.38	\$ 189.08
<b>regional share % subtotal of funding for regional priorities</b>	<b>\$ 271.19</b>	<b>\$ 278.13</b>	<b>\$ 278.13</b>	<b>\$ 233.43</b>	<b>\$ 236.32</b>	<b>\$ 1,149.02</b>	<b>\$ 229.80</b>
<b>3.5596% Berkshire</b>	<b>\$ 7.87</b>	<b>\$ 8.12</b>	<b>\$ 8.12</b>	<b>\$ 8.31</b>	<b>\$ 8.41</b>	<b>\$ 40.90</b>	<b>\$ 8.18</b>
42.9671% Boston	\$ 95.04	\$ 98.79	\$ 98.03	\$ 100.30	\$ 101.54	\$ 493.70	\$ 98.74
4.5951% Cape Cod	\$ 10.14	\$ 10.43	\$ 10.46	\$ 10.70	\$ 10.84	\$ 52.63	\$ 10.54
8.6901% Central Mass	\$ 19.22	\$ 19.98	\$ 19.83	\$ 20.29	\$ 20.54	\$ 99.95	\$ 19.97
2.5397% Franklin	\$ 5.62	\$ 5.84	\$ 5.79	\$ 5.93	\$ 6.00	\$ 29.18	\$ 5.84
0.3100% Martha's Vineyard	\$ 0.69	\$ 0.71	\$ 0.71	\$ 0.72	\$ 0.73	\$ 3.56	\$ 0.71
4.4296% Merrimack Valley	\$ 9.80	\$ 10.15	\$ 10.11	\$ 10.34	\$ 10.47	\$ 50.90	\$ 10.18
4.4596% Montachusett	\$ 9.86	\$ 10.25	\$ 10.17	\$ 10.41	\$ 10.54	\$ 51.24	\$ 10.25
0.2200% Nantucket	\$ 0.49	\$ 0.51	\$ 0.50	\$ 0.51	\$ 0.52	\$ 2.59	\$ 0.51
3.5096% Northern Middlesex	\$ 8.65	\$ 8.99	\$ 8.92	\$ 9.13	\$ 9.24	\$ 44.92	\$ 8.98
4.5596% Old Colony	\$ 10.09	\$ 10.43	\$ 10.40	\$ 10.64	\$ 10.78	\$ 52.39	\$ 10.48
10.8099% Pioneer Valley	\$ 23.91	\$ 24.86	\$ 24.66	\$ 25.23	\$ 25.65	\$ 124.21	\$ 24.84
8.9601% Southeastern Mass	\$ 19.82	\$ 20.60	\$ 20.44	\$ 20.92	\$ 21.17	\$ 102.95	\$ 20.59
<b>Highway Division programs</b>	<b>\$ 417.80</b>	<b>\$ 433.44</b>	<b>\$ 409.35</b>	<b>\$ 439.95</b>	<b>\$ 448.33</b>	<b>\$ 2,148.88</b>	<b>\$ 429.78</b>
<b>Reliability programs</b>	<b>\$ 361.69</b>	<b>\$ 365.35</b>	<b>\$ 343.44</b>	<b>\$ 305.38</b>	<b>\$ 317.29</b>	<b>\$ 1,691.95</b>	<b>\$ 339.27</b>
Bridge program	\$ 213.53	\$ 186.41	\$ 193.53	\$ 175.83	\$ 193.53	\$ 962.61	\$ 192.52
Inspections	\$ 17.90	\$ -	\$ 17.90	\$ -	\$ 17.90	\$ 53.70	\$ 10.74
Systematic maintenance	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 50.00	\$ 10.00
On-system NHS (minimum)	\$ 118.63	\$ 118.63	\$ 118.63	\$ 118.63	\$ 118.63	\$ 593.13	\$ 118.63
On-System Non-NHS	\$ 31.39	\$ 22.16	\$ 11.39	\$ 11.39	\$ 11.39	\$ 87.66	\$ 17.53
Off-system	\$ 35.63	\$ 35.63	\$ 35.63	\$ 35.63	\$ 35.63	\$ 178.13	\$ 35.63
Interstate pavement program	\$ 49.56	\$ 41.39	\$ 41.76	\$ 33.91	\$ 31.96	\$ 203.68	\$ 40.74
Non-interstate DOT pavement program	\$ 63.20	\$ 91.50	\$ 81.48	\$ 73.75	\$ 71.25	\$ 381.18	\$ 76.24
Roadway improvements program	\$ 4.38	\$ 2.50	\$ 3.75	\$ 3.75	\$ 1.25	\$ 15.63	\$ 3.13
Safety improvements program	\$ 31.03	\$ 35.56	\$ 22.92	\$ 19.44	\$ 19.31	\$ 128.25	\$ 25.65
<b>Modernization programs</b>	<b>\$ 36.11</b>	<b>\$ 45.08</b>	<b>\$ 40.92</b>	<b>\$ 99.37</b>	<b>\$ 96.04</b>	<b>\$ 317.53</b>	<b>\$ 63.51</b>
ADA retrofits program	\$ -	\$ 3.00	\$ -	\$ 1.75	\$ -	\$ 4.75	\$ 0.95
Intersection improvements program	\$ 17.36	\$ 22.08	\$ 19.17	\$ 18.47	\$ 16.67	\$ 93.75	\$ 18.75
Intelligent Transportation Systems program	\$ 12.90	\$ 13.75	\$ 12.90	\$ 10.00	\$ 10.00	\$ 58.75	\$ 11.75
Roadway reconstruction program	\$ 6.25	\$ 6.25	\$ 9.25	\$ 69.15	\$ 69.38	\$ 160.28	\$ 32.06
<b>Expansion programs</b>	<b>\$ 20.00</b>	<b>\$ 25.00</b>	<b>\$ 25.00</b>	<b>\$ 35.00</b>	<b>\$ 35.00</b>	<b>\$ 140.00</b>	<b>\$ 28.00</b>
Bicycles and pedestrians program	\$ 20.00	\$ 25.00	\$ 25.00	\$ 35.00	\$ 35.00	\$ 140.00	\$ 28.00
Capacity program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Budgeted Funding</b>	<b>\$ 711.66</b>	<b>\$ 732.55</b>	<b>\$ 704.43</b>	<b>\$ 734.06</b>	<b>\$ 745.33</b>	<b>\$ 3,628.03</b>	<b>\$ 725.61</b>

## Final 2018-2022 State Transportation Improvement Program Budgets

2018

	Obligation authority (federal aid only)	Matching funds	Total funding (federal aid + match)		
Base obligation authority	\$ 598,178,885				
Planned redistribution request	\$ 50,000,000				
Total Estimated Funding Available	\$ 648,178,885				
ABP GANS Repayment	\$ (62,985,000)				
Total non-earmarked funding available	\$ 585,193,885	\$ 126,467,333	\$ 711,661,218		
Planning / Adjustments / Pass-throughs					
Award adjustments, change orders, etc.	\$ 30,000,000	\$ 7,500,000	\$ 37,500,000		
Metropolitan planning	\$ 8,670,263	\$ 2,167,566	\$ 10,837,829		
State planning and research	\$ 14,026,697	\$ 3,506,674	\$ 17,533,371		
Recreational trails	\$ 1,186,729	\$ 296,682	\$ 1,483,411		
Railroad grade crossings	\$ 4,250,000	\$ 1,062,500	\$ 5,312,500		
MassRides program	\$ -	\$ -	\$ -		
subtotal of planning / adjustments / pass-throughs	\$ 58,133,689	\$ 14,533,422	\$ 72,667,111		
Funding sources for regional priorities					
Congestion Mitigation Air Quality Improvements	\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
Highway Safety Improvement Program	\$ 9,000,000	\$ 1,000,000	\$ 10,000,000		
Transportation Alternatives Program	\$ 4,581,858	\$ 1,145,465	\$ 5,727,323		
Surface Transportation Program Block Grant	\$ 144,370,142	\$ 36,092,536	\$ 180,462,678		
subtotal of funding for regional priorities	\$ 177,952,000	\$ 43,238,000	\$ 221,190,000		
regional share %					
	CMAQ	HSIP	TAP	STPBG	Total
3.5596 Berkshire	\$ 889,911	\$ 355,964	\$ -	\$ 6,627,701	\$ 7,873,577
42.9671 Boston	\$ 10,741,776	\$ 4,296,710	\$ 2,929,085	\$ 77,071,365	\$ 95,038,936
4.5851 Cape Cod	\$ 1,146,285	\$ 458,514	\$ 205,809	\$ 8,331,266	\$ 10,141,874
8.6901 Central Mass	\$ 2,172,533	\$ 869,013	\$ 490,405	\$ 15,689,750	\$ 19,221,701
2.5397 Franklin	\$ 634,937	\$ 253,975	\$ -	\$ 4,728,753	\$ 5,617,664
0.3100 Martha's Vineyard	\$ 77,492	\$ 30,997	\$ -	\$ 577,131	\$ 685,620
4.4296 Merrimack Valley	\$ 1,107,389	\$ 442,956	\$ 351,000	\$ 7,896,392	\$ 9,797,737
4.4596 Montachusett	\$ 1,114,889	\$ 445,955	\$ 86,238	\$ 8,217,005	\$ 9,864,087
0.2200 Nantucket	\$ 54,995	\$ 21,998	\$ -	\$ 409,577	\$ 486,569
3.9096 Northern Middlesex	\$ 977,402	\$ 390,961	\$ 281,909	\$ 6,997,392	\$ 8,647,664
4.5595 Old Colony	\$ 1,139,886	\$ 455,954	\$ 344,808	\$ 8,144,607	\$ 10,085,255
10.8099 Pioneer Valley	\$ 2,702,480	\$ 1,080,992	\$ 545,638	\$ 19,581,351	\$ 23,910,460
8.9601 Southeastern Mass	\$ 2,240,026	\$ 896,010	\$ 492,430	\$ 16,190,387	\$ 19,818,854
Highway Division programs	\$ 349,108,196	\$ 68,695,911	\$ 417,804,107		
Reliability programs	\$ 303,108,196	\$ 58,584,800	\$ 361,692,996		
Bridge program	\$ 170,824,000	\$ 42,706,000	\$ 213,530,000		
Inspections	\$ 14,320,000	\$ 3,580,000	\$ 17,900,000		
Systematic maintenance	\$ 8,000,000	\$ 2,000,000	\$ 10,000,000		
On-system NHS (minimum)	\$ 94,900,000	\$ 23,725,000	\$ 118,625,000		
On-System Non-NHS	\$ 25,104,000	\$ 6,276,000	\$ 31,380,000		
Off-system	\$ 28,500,000	\$ 7,125,000	\$ 35,625,000		
Interstate pavement program	\$ 44,605,000	\$ 4,956,111	\$ 49,561,111		
Non-interstate DOT pavement program	\$ 56,879,196	\$ 6,319,911	\$ 63,199,107		
Roadway improvements program	\$ 3,500,000	\$ 875,000	\$ 4,375,000		
Safety improvements program	\$ 27,300,000	\$ 3,727,778	\$ 31,027,778		
Modernization programs	\$ 30,000,000	\$ 6,111,111	\$ 36,111,111		
ADA retrofits program	\$ -	\$ -	\$ -		
Intersection improvements program	\$ 15,000,000	\$ 2,361,111	\$ 17,361,111		
Intelligent Transportation Systems program	\$ 10,000,000	\$ 2,500,000	\$ 12,500,000		
Roadway reconstruction program	\$ 5,000,000	\$ 1,250,000	\$ 6,250,000		
Expansion programs	\$ 16,000,000	\$ 4,000,000	\$ 20,000,000		
Bicycles and pedestrians program	\$ 16,000,000	\$ 4,000,000	\$ 20,000,000		
Capacity program	\$ -	\$ -	\$ -		
Total Budgeted Funding	\$ 648,178,885	\$ 126,467,333	\$ 711,661,218		

## Final 2018-2022 State Transportation Improvement Program Budgets

2019

	Obligation authority (federal aid only)	Matching funds	Total funding (federal aid + match)			
Base obligation authority	\$ 611,680,644					
Planned redistribution request	\$ 50,000,000					
<b>Total Estimated Funding Available</b>	<b>\$ 661,680,644</b>					
ABP GANS Repayment	\$ (66,015,000)					
<b>Total non-earmarked funding available</b>	<b>\$ 595,665,644</b>	<b>\$ 136,881,689</b>	<b>\$ 732,547,333</b>			
<b>Planning / Adjustments / Pass-throughs</b>						
Award adjustments, change orders, etc.	\$ 25,000,000	\$ 6,250,000	\$ 31,250,000			
Metropolitan planning	\$ 8,670,263	\$ 2,167,566	\$ 10,837,829			
State planning and research	\$ 14,026,697	\$ 3,506,674	\$ 17,533,371			
Recreational trails	\$ 1,186,729	\$ 296,682	\$ 1,483,411			
Railroad grade crossings	\$ 3,800,000	\$ 950,000	\$ 4,750,000			
MassRides program	\$ 2,660,000	\$ 665,000	\$ 3,325,000			
subtotal of planning / adjustments / pass-throughs	\$ 55,343,689	\$ 13,835,922	\$ 69,179,611			
<b>Funding sources for regional priorities</b>						
Congestion Mitigation Air Quality Improvements	\$ 20,000,000	\$ 5,000,000	\$ 25,000,000			
Highway Safety Improvement Program	\$ 9,000,000	\$ 1,000,000	\$ 10,000,000			
Transportation Alternatives Program	\$ 4,581,858	\$ 1,145,465	\$ 5,727,323			
Surface Transportation Program Block Grant	\$ 151,362,142	\$ 37,840,536	\$ 189,202,678			
subtotal of funding for regional priorities	\$ 184,944,000	\$ 44,986,000	\$ 229,930,000			
regional share %						
	CMAQ	HSIP	TAP	STPBG	Total	
3.5596	Berkshire	\$ 889,911	\$ 355,964	\$ -	\$ 6,938,814	\$ 8,184,689
42.9671	Boston	\$ 10,741,776	\$ 4,296,710	\$ 2,929,085	\$ 80,826,690	\$ 98,794,261
4.5851	Cape Cod	\$ 1,146,285	\$ 458,514	\$ 205,809	\$ 8,732,008	\$ 10,542,616
8.6901	Central Mass	\$ 2,172,533	\$ 869,013	\$ 490,405	\$ 16,449,267	\$ 19,981,218
2.5397	Franklin	\$ 634,937	\$ 253,975	\$ -	\$ 4,950,727	\$ 5,839,638
0.3100	Martha's Vineyard	\$ 77,492	\$ 30,997	\$ -	\$ 604,223	\$ 712,712
4.4296	Merrimack Valley	\$ 1,107,389	\$ 442,956	\$ 351,000	\$ 8,283,535	\$ 10,184,880
4.4596	Montachusett	\$ 1,114,889	\$ 445,955	\$ 86,238	\$ 8,606,770	\$ 10,253,853
0.2200	Nantucket	\$ 54,995	\$ 21,998	\$ -	\$ 428,803	\$ 505,795
3.9096	Northern Middlesex	\$ 977,402	\$ 390,961	\$ 281,909	\$ 7,339,092	\$ 8,989,364
4.5595	Old Colony	\$ 1,139,886	\$ 455,954	\$ 344,808	\$ 8,543,111	\$ 10,483,760
10.8099	Pioneer Valley	\$ 2,702,480	\$ 1,080,992	\$ 545,638	\$ 20,526,138	\$ 24,855,247
8.9601	Southeastern Mass	\$ 2,240,026	\$ 896,010	\$ 492,430	\$ 16,973,500	\$ 20,601,967
Highway Division programs	\$ 355,377,955	\$ 78,059,767	\$ 433,437,722			
Reliability programs	\$ 297,977,955	\$ 65,376,433	\$ 363,354,388			
Bridge program	\$ 149,127,955	\$ 37,281,989	\$ 186,409,944			
Inspections	\$ -	\$ -	\$ -			
Systematic maintenance	\$ 8,000,000	\$ 2,000,000	\$ 10,000,000			
On-system NHS (minimum)	\$ 94,900,000	\$ 23,725,000	\$ 118,625,000			
On-System Non-NHS	\$ 17,727,955	\$ 4,431,989	\$ 22,159,944			
Off-system	\$ 28,500,000	\$ 7,125,000	\$ 35,625,000			
Interstate pavement program	\$ 42,650,000	\$ 4,738,889	\$ 47,388,889			
Non-interstate DOT pavement program	\$ 73,200,000	\$ 18,300,000	\$ 91,500,000			
Roadway improvements program	\$ 2,000,000	\$ 500,000	\$ 2,500,000			
Safety improvements program	\$ 31,000,000	\$ 4,555,556	\$ 35,555,556			
Modernization programs	\$ 37,400,000	\$ 7,683,333	\$ 45,083,333			
ADA retrofits program	\$ 2,400,000	\$ 600,000	\$ 3,000,000			
Intersection improvements program	\$ 19,000,000	\$ 3,083,333	\$ 22,083,333			
Intelligent Transportation Systems program	\$ 11,000,000	\$ 2,750,000	\$ 13,750,000			
Roadway reconstruction program	\$ 5,000,000	\$ 1,250,000	\$ 6,250,000			
Expansion programs	\$ 20,000,000	\$ 5,000,000	\$ 25,000,000			
Bicycles and pedestrians program	\$ 20,000,000	\$ 5,000,000	\$ 25,000,000			
Capacity program	\$ -	\$ -	\$ -			
<b>Total Budgeted Funding</b>	<b>\$ 661,680,644</b>	<b>\$ 136,881,689</b>	<b>\$ 732,547,333</b>			

## Final 2018-2022 State Transportation Improvement Program Budgets

		Obligation authority (federal aid only)	Matching funds	Total funding (federal aid + match)		
2020	Base obligation authority	\$ 626,330,019				
	Planned redistribution request	\$ 50,000,000				
	Total Estimated Funding Available	\$ 676,330,019				
	ABP GANS Repayment	\$ (104,275,000)				
	Total non-earmarked funding available	\$ 572,055,019	\$ 132,376,857	\$ 704,431,876		
Planning / Adjustments / Pass-throughs						
	Award adjustments, change orders, etc.	\$ 25,000,000	\$ 6,250,000	\$ 31,250,000		
	Metropolitan planning	\$ 8,670,263	\$ 2,167,566	\$ 10,837,829		
	State planning and research	\$ 14,026,697	\$ 3,506,674	\$ 17,533,371		
	Recreational trails	\$ 1,186,729	\$ 296,682	\$ 1,483,411		
	Railroad grade crossings	\$ 2,000,000	\$ 500,000	\$ 2,500,000		
	MassRides program	\$ 2,660,000	\$ 665,000	\$ 3,325,000		
	subtotal of planning / adjustments / pass-throughs	\$ 53,543,689	\$ 13,385,922	\$ 66,929,611		
Funding sources for regional priorities						
	Congestion Mitigation Air Quality Improvements	\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
	Highway Safety Improvement Program	\$ 9,000,000	\$ 1,000,000	\$ 10,000,000		
	Transportation Alternatives Program	\$ 4,581,858	\$ 1,145,465	\$ 5,727,323		
	Surface Transportation Program Block Grant	\$ 149,938,142	\$ 37,484,536	\$ 187,422,678		
regional share %	subtotal of funding for regional priorities	\$ 183,520,000	\$ 44,630,000	\$ 228,150,000		
	CMAQ	HSIP	TAP	STPBG	Total	
3.5596	Berkshire	\$ 889,911	\$ 355,964	\$ -	\$ 6,875,452	\$ 8,121,328
42.9671	Boston	\$ 10,741,776	\$ 4,296,710	\$ 2,929,085	\$ 80,061,875	\$ 98,029,447
4.5851	Cape Cod	\$ 1,146,285	\$ 458,514	\$ 205,809	\$ 8,650,392	\$ 10,461,000
8.6901	Central Mass	\$ 2,172,533	\$ 869,013	\$ 490,405	\$ 16,294,583	\$ 19,826,534
2.5397	Franklin	\$ 634,937	\$ 253,975	\$ -	\$ 4,905,519	\$ 5,794,430
0.3100	Martha's Vineyard	\$ 77,492	\$ 30,997	\$ -	\$ 598,705	\$ 707,194
4.4296	Merrimack Valley	\$ 1,107,389	\$ 442,956	\$ 351,000	\$ 8,204,689	\$ 10,106,034
4.4596	Montachusett	\$ 1,114,889	\$ 445,955	\$ 86,238	\$ 8,527,390	\$ 10,174,472
0.2200	Nantucket	\$ 54,995	\$ 21,998	\$ -	\$ 424,888	\$ 501,880
3.9096	Northern Middlesex	\$ 977,402	\$ 390,961	\$ 281,909	\$ 7,269,501	\$ 8,919,773
4.5595	Old Colony	\$ 1,139,886	\$ 455,954	\$ 344,808	\$ 8,461,951	\$ 10,402,600
10.8099	Pioneer Valley	\$ 2,702,480	\$ 1,080,992	\$ 545,638	\$ 20,333,721	\$ 24,662,830
8.9601	Southeastern Mass	\$ 2,240,026	\$ 896,010	\$ 492,430	\$ 16,814,010	\$ 20,442,477
Highway Division programs		\$ 334,991,330	\$ 74,360,935	\$ 409,352,265		
Reliability programs		\$ 280,591,330	\$ 62,844,268	\$ 343,435,598		
Bridge program		\$ 154,820,000	\$ 38,705,000	\$ 193,525,000		
	Inspections	\$ 14,320,000	\$ 3,580,000	\$ 17,900,000		
	Systematic maintenance	\$ 8,000,000	\$ 2,000,000	\$ 10,000,000		
	On-system NHS (minimum)	\$ 94,900,000	\$ 23,725,000	\$ 118,625,000		
	On-System Non-NHS	\$ 9,100,000	\$ 2,275,000	\$ 11,375,000		
	Off-system	\$ 28,500,000	\$ 7,125,000	\$ 35,625,000		
Interstate pavement program		\$ 37,585,665	\$ 4,176,185	\$ 41,761,850		
Non-interstate DOT pavement program		\$ 65,185,665	\$ 16,296,416	\$ 81,482,081		
Roadway improvements program		\$ 3,000,000	\$ 750,000	\$ 3,750,000		
Safety improvements program		\$ 20,000,000	\$ 2,916,667	\$ 22,916,667		
Modernization programs		\$ 34,400,000	\$ 6,516,667	\$ 40,916,667		
ADA retrofits program		\$ -	\$ -	\$ -		
Intersection improvements program		\$ 17,000,000	\$ 2,166,667	\$ 19,166,667		
Intelligent Transportation Systems program		\$ 10,000,000	\$ 2,500,000	\$ 12,500,000		
Roadway reconstruction program		\$ 7,400,000	\$ 1,850,000	\$ 9,250,000		
Expansion programs		\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
Bicycles and pedestrians program		\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
Capacity program		\$ -	\$ -	\$ -		
Total Budgeted Funding		\$ 676,330,019	\$ 132,376,857	\$ 704,431,876		

# Final 2018-2022 State Transportation Improvement Program Budgets

2021

	Obligation authority (federal aid only)	Matching funds	Total funding (federal aid + match)			
Base obligation authority	\$ 641,988,270					
Planned redistribution request	\$ 50,000,000					
Total Estimated Funding Available	\$ 691,988,270					
ABP GANS Repayment	\$ (107,700,000)					
Total non-earmarked funding available	\$ 584,288,270	\$ 139,844,542	\$ 734,060,812			
Planning / Adjustments / Pass-throughs						
Award adjustments, change orders, etc.	\$ 20,000,000	\$ 5,000,000	\$ 25,000,000			
Metropolitan planning	\$ 8,670,263	\$ 2,167,566	\$ 10,837,829			
State planning and research	\$ 14,026,697	\$ 3,506,674	\$ 17,533,371			
Recreational trails	\$ 1,186,729	\$ 296,682	\$ 1,483,411			
Railroad grade crossings	\$ 2,000,000	\$ 500,000	\$ 2,500,000			
MassRides program	\$ 2,660,000	\$ 665,000	\$ 3,325,000			
subtotal of planning / adjustments / pass-throughs	\$ 48,543,689	\$ 12,135,922	\$ 60,679,611			
Funding sources for regional priorities						
Congestion Mitigation Air Quality Improvements	\$ 20,000,000	\$ 5,000,000	\$ 25,000,000			
Highway Safety Improvement Program	\$ 9,000,000	\$ 1,000,000	\$ 10,000,000			
Transportation Alternatives Program	\$ 4,581,858	\$ 1,145,465	\$ 5,727,323			
Surface Transportation Program Block Grant	\$ 154,162,142	\$ 38,540,536	\$ 192,702,678			
regional share %	subtotal of funding for regional priorities	\$ 187,744,000	\$ 45,686,000	\$ 233,430,000		
	CMAQ	HSIP	TAP	STPBG	Total	
3.5596	Berkshire	\$ 889,911	\$ 355,964	\$ -	\$ 7,063,402	\$ 8,309,277
42.9671	Boston	\$ 10,741,776	\$ 4,296,710	\$ 2,929,085	\$ 82,330,538	\$ 100,298,110
4.5851	Cape Cod	\$ 1,146,285	\$ 458,514	\$ 205,809	\$ 8,892,488	\$ 10,703,096
8.6901	Central Mass	\$ 2,172,533	\$ 869,013	\$ 490,405	\$ 16,753,422	\$ 20,285,373
2.5397	Franklin	\$ 634,937	\$ 253,975	\$ -	\$ 5,039,618	\$ 5,928,529
0.3100	Martha's Vineyard	\$ 77,492	\$ 30,997	\$ -	\$ 615,071	\$ 723,561
4.4296	Merrimack Valley	\$ 1,107,389	\$ 442,956	\$ 351,000	\$ 8,438,570	\$ 10,339,915
4.4596	Montachusett	\$ 1,114,889	\$ 445,955	\$ 86,238	\$ 8,762,855	\$ 10,409,937
0.2200	Nantucket	\$ 54,995	\$ 21,998	\$ -	\$ 436,502	\$ 513,495
3.9096	Northern Middlesex	\$ 977,402	\$ 390,961	\$ 281,909	\$ 7,475,928	\$ 9,126,200
4.5595	Old Colony	\$ 1,139,886	\$ 455,954	\$ 344,808	\$ 8,702,695	\$ 10,643,344
10.8099	Pioneer Valley	\$ 2,702,480	\$ 1,080,992	\$ 545,638	\$ 20,904,485	\$ 25,233,594
8.9601	Southeastern Mass	\$ 2,240,026	\$ 896,010	\$ 492,430	\$ 17,287,104	\$ 20,915,571
Highway Division programs		\$ 348,000,581	\$ 82,022,620	\$ 439,951,201		
Reliability programs		\$ 239,280,581	\$ 56,370,398	\$ 305,578,979		
Bridge program		\$ 140,500,000	\$ 35,125,000	\$ 175,625,000		
Inspections		\$ -	\$ -	\$ -		
Systematic maintenance		\$ 8,000,000	\$ 2,000,000	\$ 10,000,000		
On-system NHS (minimum)		\$ 94,900,000	\$ 23,725,000	\$ 118,625,000		
On-System Non-NHS		\$ 9,100,000	\$ 2,275,000	\$ 11,375,000		
Off-system		\$ 28,500,000	\$ 7,125,000	\$ 35,625,000		
Interstate pavement program		\$ 24,744,581	\$ 3,300,953	\$ 33,009,534		
Non-interstate DOT pavement program		\$ 54,036,000	\$ 14,750,000	\$ 73,750,000		
Roadway improvements program		\$ 3,000,000	\$ 750,000	\$ 3,750,000		
Safety improvements program		\$ 17,000,000	\$ 2,444,444	\$ 19,444,444		
Modernization programs		\$ 80,720,000	\$ 18,652,222	\$ 99,372,222		
ADA retrofits program		\$ 1,400,000	\$ 350,000	\$ 1,750,000		
Intersection improvements program		\$ 16,000,000	\$ 2,472,222	\$ 18,472,222		
Intelligent Transportation Systems program		\$ 8,000,000	\$ 2,000,000	\$ 10,000,000		
Roadway reconstruction program		\$ 55,320,000	\$ 13,830,000	\$ 69,150,000		
Expansion programs		\$ 28,000,000	\$ 7,000,000	\$ 35,000,000		
Bicycles and pedestrians program		\$ 28,000,000	\$ 7,000,000	\$ 35,000,000		
Capacity program		\$ -	\$ -	\$ -		
Total Budgeted Funding		\$ 691,988,270	\$ 139,844,542	\$ 734,060,812		



## Final 2018-2022 State Transportation Improvement Program Budgets

				Obligation authority (federal aid only)	Matching funds	Total funding (federal aid + match)
				Base obligation authority	\$ 658,744,163	
				Planned redistribution request	\$ 50,000,000	
				<b>Total Estimated Funding Available</b>	<b>\$ 708,744,163</b>	
				ABP GANS Repayment	\$ (116,770,949)	
<b>Total non-earmarked funding available</b>				\$ 591,973,214	\$ 141,648,314	\$ 745,333,528
<b>Planning / Adjustments / Pass-throughs</b>						
Award adjustments, change orders, etc.				\$ 20,000,000	\$ 5,000,000	\$ 25,000,000
Metropolitan planning				\$ 8,670,263	\$ 2,167,566	\$ 10,837,829
State planning and research				\$ 14,026,697	\$ 3,506,674	\$ 17,533,371
Recreational trails				\$ 1,186,729	\$ 296,682	\$ 1,483,411
Railroad grade crossings				\$ 2,000,000	\$ 500,000	\$ 2,500,000
MassRides program				\$ 2,660,000	\$ 665,000	\$ 3,325,000
<i>subtotal of planning / adjustments / pass-throughs</i>				\$ 48,543,689	\$ 12,135,922	\$ 60,679,611
<b>Funding sources for regional priorities</b>						
Congestion Mitigation Air Quality Improvements				\$ 20,000,000	\$ 5,000,000	\$ 25,000,000
Highway Safety Improvement Program				\$ 9,000,000	\$ 1,000,000	\$ 10,000,000
Transportation Alternatives Program				\$ 4,581,858	\$ 1,145,465	\$ 5,727,323
Surface Transportation Program Block Grant				\$ 156,474,142	\$ 39,118,536	\$ 195,592,678
<i>regional share % subtotal of funding for regional priorities</i>				\$ 190,056,000	\$ 46,264,000	\$ 236,320,000
	CMAQ	HSIP	TAP	STPBG	<b>Total</b>	
3.5596	Berkshire	\$ 889,911	\$ 355,964	\$ -	\$ 7,166,275	\$ 8,412,151
42.9671	Boston	\$ 10,741,776	\$ 4,296,710	\$ 2,929,085	\$ 83,572,288	\$ 101,539,859
4.5851	Cape Cod	\$ 1,146,285	\$ 458,514	\$ 205,809	\$ 9,024,998	\$ 10,835,606
8.6901	Central Mass	\$ 2,172,533	\$ 869,013	\$ 490,405	\$ 17,004,566	\$ 20,536,518
2.5397	Franklin	\$ 634,937	\$ 253,975	\$ -	\$ 5,113,017	\$ 6,001,928
0.3100	Martha's Vineyard	\$ 77,492	\$ 30,997	\$ -	\$ 624,030	\$ 732,519
4.4296	Merrimack Valley	\$ 1,107,389	\$ 442,956	\$ 351,000	\$ 8,566,584	\$ 10,467,929
4.4596	Montachusett	\$ 1,114,889	\$ 445,955	\$ 86,238	\$ 8,891,736	\$ 10,538,818
0.2200	Nantucket	\$ 54,995	\$ 21,998	\$ -	\$ 442,860	\$ 519,852
3.9096	Northern Middlesex	\$ 977,402	\$ 390,961	\$ 281,909	\$ 7,588,916	\$ 9,239,188
4.5595	Old Colony	\$ 1,139,886	\$ 455,954	\$ 344,808	\$ 8,834,466	\$ 10,775,114
10.8099	Pioneer Valley	\$ 2,702,480	\$ 1,080,992	\$ 545,638	\$ 21,216,891	\$ 25,546,001
8.9601	Southeastern Mass	\$ 2,240,026	\$ 896,010	\$ 492,430	\$ 17,546,051	\$ 21,174,518
Highway Division programs				\$ 353,373,525	\$ 83,248,392	\$ 448,333,917
<b>Reliability programs</b>				<b>\$ 246,873,525</b>	<b>\$ 58,706,725</b>	<b>\$ 317,292,250</b>
Bridge program				\$ 154,820,000	\$ 38,705,000	\$ 193,525,000
Inspections				\$ 14,320,000	\$ 3,580,000	\$ 17,900,000
Systematic maintenance				\$ 8,000,000	\$ 2,000,000	\$ 10,000,000
On-system NHS (minimum)				\$ 94,900,000	\$ 23,725,000	\$ 118,625,000
On-System Non-NHS				\$ 9,100,000	\$ 2,275,000	\$ 11,375,000
Off-system				\$ 28,500,000	\$ 7,125,000	\$ 35,625,000
Interstate pavement program				\$ 22,909,525	\$ 3,196,169	\$ 31,961,694
Non-interstate DOT pavement program				\$ 51,144,000	\$ 14,250,000	\$ 71,250,000
Roadway improvements program				\$ 1,000,000	\$ 250,000	\$ 1,250,000
Safety improvements program				\$ 17,000,000	\$ 2,305,556	\$ 19,305,556
<b>Modernization programs</b>				<b>\$ 78,500,000</b>	<b>\$ 17,541,667</b>	<b>\$ 96,041,667</b>
ADA retrofits program				\$ -	\$ -	\$ -
Intersection improvements program				\$ 15,000,000	\$ 1,666,667	\$ 16,666,667
Intelligent Transportation Systems program				\$ 8,000,000	\$ 2,000,000	\$ 10,000,000
Roadway reconstruction program				\$ 55,500,000	\$ 13,875,000	\$ 69,375,000
<b>Expansion programs</b>				<b>\$ 28,000,000</b>	<b>\$ 7,000,000</b>	<b>\$ 35,000,000</b>
Bicycles and pedestrians program				\$ 28,000,000	\$ 7,000,000	\$ 35,000,000
Capacity program				\$ -	\$ -	\$ -
<b>Total Budgeted Funding</b>				<b>\$ 708,744,163</b>	<b>\$ 141,648,314</b>	<b>\$ 745,333,528</b>





## **APPENDIX B: Summary of Operation and Maintenance Expenditures**

## **To Be Added to Final Document**





## APPENDIX C: Metropolitan Planning Area (MPA) State and Local Consulted Agencies

As required in MAP-21, the Moving Ahead for Progress in the 21st Century Act (P.L. 112-141) consulted with agencies and officials responsible for other planning activities within the MPA (metropolitan planning area) that are affected by transportation (including State and local planned growth, economic development, environmental protection, airport operations, or freight movements) or coordinate its planning process (to the maximum extent practicable) with such planning activities

PVMPO fulfilled these requirements through the processes tied to the Joint Transportation Committee (JTC). Listed below are two tables, table 25 list agencies with transportation interest in the Metropolitan Planning Area (MPA) that were contacted for the purpose of consultation while developing the TIP. Table 26 lists the agencies from table 26 which responded and coordinated meetings were held during TIP development.

**Table 25: Agencies Contacted**

Agency	Agency Location
Westfield River Wild and Scenic Advisory Committee	Haydenville
MassDOT - Office of Transportation Planning	Boston
FEDERAL HIGHWAY ADMIN	Cambridge
US EPA	Boston
MassDOT	Boston
COUNCIL ON AGING	Granby
AIR QUALITY CONTROL (DEP)	Boston
FEDERAL TRANSIT ADMIN	Cambridge
MassDOT Highway Division District 1& 2	Northampton/Lenox
OFFICE OF SOCIAL CONCERN	Springfield
Economic Development Council of Western Mass	Springfield
PETER PAN BUS LINES, INC.	Springfield
Pioneer Valley Transit Authority (PVTA)	Springfield
BARNES AIRPORT	Westfield
Pioneer Valley RR	Westfield
Bike/Ped Community (MassBike)	Williamsburg
UMASS Transit	Amherst
UMASS Traveler Information Center (RTIC)	Amherst
Columbia Greenway Rail Trail Committee	Westfield

These agencies are solicited to comment and provide relevant information during TIP development and are invited to attend all meetings and workshop involving project evaluation. Agendas and information in regards the TIP and its development are distributed by mail prior to meetings as outlined in the Public Participation Plan for the Pioneer Valley.

**Table 26: Agencies Providing Consultation)**


## APPENDIX D: FAST Act Performance Management Information

The FHWA and FTA are jointly issuing this final rule to update the regulations governing the development of metropolitan transportation plans (MTP) and programs for urbanized areas, long-range statewide transportation plans and programs, and the congestion management process as well as revisions related to the use of and reliance on planning products developed during the planning process for project development and the environmental review process. The changes reflect the passage of the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation (FAST) Act. The MAP-21 continues many provisions related to transportation planning from prior laws; however, it introduces transformational changes and adds some new provisions. The FAST Act makes minor edits to existing provisions. The changes make the regulations consistent with current statutory requirements and implement the following: A new mandate for State departments of transportation (hereafter referred to simply as "States") and metropolitan planning organizations (MPO) to take a performance-based approach to planning and programming; a new emphasis on the nonmetropolitan transportation planning process, by requiring States to have a higher level of involvement with nonmetropolitan local officials and providing a process for the creation of regional transportation planning organizations (RTPO); a structural change to the membership of the larger MPOs; a new framework for voluntary scenario planning; new authority for the integration of the planning and environmental review processes; and a process for programmatic mitigation plans.<sup>2</sup>

PVPC accomplishes these requirements through the recent update to the Transportation Evaluation Criteria (TEC) for the Pioneer Valley MPO. The table below shows the relationship between FAST act planning factors and our TEC criteria. The TEC criteria is mainly based of PVPC various data driven process which include Pavement, Congestion, Safety as well as other readily available data.

Fast Act Planning Factors Relationship to the Transportation Evaluation Criteria (TEC)

Factor	Fast Act 10 Planning Factors Description	TEC Scoring Criteria
1	Support the economic vitality of the metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency.	Smart Growth and Economic Development, System Preservation, Modernization and Efficiency
2	Increase the safety of the transportation system for motorized and non-motorized users.	Safety and Security, Quality of Life
3	Increase the security of the transportation system for motorized and non-motorized users.	Safety and Security, Quality of Life
4	Increase the accessibility and mobility of people and for freight.	Mobility, Smart Growth and Economic Development
5	Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.	Environment and Climate Change, Quality of Life, Livability, Smart Growth and Economic Development

<sup>2</sup> <https://www.federalregister.gov/articles/2016/05/27/2016-11964/statewide-and-nonmetropolitan-transportation-planning-metropolitan-transportation-planning#h-9>



6	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	Smart Growth and Economic Development, Mobility
7	Promote efficient system management and operation.	System Preservation, Modernization and Efficiency, Mobility
8	Emphasize the preservation of the existing transportation system.	System Preservation, Modernization and Efficiency
9	Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.	Environment and Climate Change
10	Enhancing travel and tourism.	Mobility, Quality of Life