

Merrimack Valley Metropolitan Planning Organization Federal Fiscal Years 2021 to 2025 Transportation Improvement Program

Draft Report

April 2020



Prepared by the Merrimack Valley Planning Commission

This document was prepared in cooperation with the Massachusetts Department of Transportation and the U.S. Department of Transportation. (under Contract # 108056 with MassDOT) The views and opinions of the Merrimack Valley Planning Commission expressed herein do not necessarily state or reflect those of the Massachusetts Department of Transportation or the U.S. Department of Transportation.

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Endorsement Page for Federal TIP - Signatures

Merrimack Valley Metropolitan Planning Organization Endorsement of the FFYs 2021-2025 Transportation Improvement Program

Whereas, the Merrimack Valley MPO has completed its review in accordance with Section 176(c) (4) of the Clean Air Act as amended in 1990 [42 U.S.C. 7251 (a)], and hereby certifies that the FFYs 2021-2025 TIP is financially constrained and that the implementation of the Merrimack Valley Metropolitan Planning Organization 2020 Regional Transportation Plan satisfies the conformity criteria specified in both 40 CFR Part 51 and 93 (8/15/1997) and 310 CMR 60.03 (12/30/1994).

Therefore, in accordance with 23 CFR Part 450 Section 322 (Development and content of the Metropolitan Transportation Plan) of the March 16, 2007 Final Rules for Statewide and Metropolitan Planning, the MPO hereby endorses the FFYs 2021-2025 Transportation Improvement Program.

Signatory Certification:

Date: May 27, 2020

Stephanie Pollack
Secretary/
CEO MassDOT

Joseph Costanzo
Administrator/CEO
MVRTA

James Fiorentini
Mayor of Haverhill

Jonathan L. Gulliver
MassDOT Highway
Division Administrator

Paul Materazzo
Town of Andover

Daniel Rivera
Mayor of Lawrence

John Cashell
Town of Georgetown

Neil Harrington
Town of Salisbury

Robert Snow
Town of Rowley

Theresa Park
MVPC Director

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Certification of the Merrimack Valley MPO Transportation Planning Process

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

1. 23 U.S.C. 134, 49 U.S.C. 5303, and this subpart.
2. Sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93.
3. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR Part 21.
4. 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity.
5. Section 1101(b) of the FAST Act (Pub. L. 1194) and 49 CFR Part 26 regarding the involvement of disadvantaged business enterprises in U. S. DOT funded projects.
6. The provisions of the American with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) and 49 CFR Parts 27, 37, and 38.
8. The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance.
9. Section 324 of Title 23 U.S.C. regarding the prohibition of discrimination based on gender.
10. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR Part 27 regarding discrimination against individuals with disabilities.
11. Anti-lobbying restrictions found in 49 USC Part 20. No appropriated funds may be expended by a recipient to influence or attempt to influence an officer or employee of any agency, or a Member of Congress, in connection with the awarding of any Federal contract.

Signatory Certification:

Date: May 27, 2020

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Town of Rowley

Theresa Park
MVPC Director

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310 CMR 60.05: Global Warming Solutions Act – Signatures

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

This will certify that the FFYs 2021-2025 Transportation Improvement Program for the Merrimack Valley Metropolitan Planning Organization is in compliance with all applicable requirements in the State Regulation 310 CMR 60.05: Global Warming Solutions Act Requirements for the Transportation Sector and the Massachusetts Department of Transportation. The regulation requires the Metropolitan Planning Organizations (MPOs) to:

1. 310 CMR 60.05, 5(a)(1): Evaluate and report the aggregate transportation GHG emissions and impacts of RTPs and TIPs;
2. 310 CMR 60.05, 5(a)(2): In consultation with MassDOT, develop and utilize procedures to prioritize and select projects in RTPs and TIPs based on factors that include aggregate transportation GHG emissions impacts;
3. 310 CMR 60.05, 5(a)(3): Quantify net transportation GHG emissions impacts resulting from the projects in RTPs and TIPs and certify in a statement included with RTPs and TIPs pursuant to 23 CFR Part 450 that the MPO has made efforts to minimize aggregate transportation GHG emissions impacts;
4. 310 CMR 60.05, 5(a)(4): Determine in consultation with the RPA that the appropriate planning assumptions used for transportation GHG emissions modeling are consistent with local land use policies, or that local authorities have made documented and credible commitments to establishing such consistency;
5. 310 CMR 60.05, 8(a)(2)(a): Develop RTPs and TIPs;
6. 310 CMR 60.05, 8(a)(2)(b): Ensure that RPAs are using appropriate planning assumptions;
7. 310 CMR 60.05, 8(a)(2)(c): Perform regional aggregate transportation GHG emissions of RTPs and TIPs;
8. 310 CMR 60.05, 8(a)(2)(d): Calculate aggregate transportation GHG emissions for RTPs and TIPs
9. 310 CMR 60.05, 8(a)(2)(e): Develop public consultation procedures for aggregate transportation GHG reporting and related GWSA requirements consistent with current and approved regional public participation plans;
10. 310 CMR 60.05, 8(c): Prior to making final endorsements on the RTPs, TIPs, STIPs, and projects included in these plans, MassDOT and the MPOs shall include the aggregate transportation GHG emission impact assessment in RTPs, TIPs and STIPs and provide an opportunity for public review and comment on the RTPs, TIPs and STIPs.
11. 310 CMR 60.05, 8(a)(1)(c): After a final GHG assessment has been made by MassDOT and the MPOs, MassDOT and the MPOs shall submit MPO-endorsed RTPs, TIPs or projects within 30 days of endorsement to the Department for review of the GHG assessment.

Signatory Certification:

Date: May 27, 2020

Stephanie Pollack
Secretary/CEO MassDOT

Joseph Costanzo
Administrator/CEO
MVRTA Advisory Board

James Fiorentini
Mayor of Haverhill

Jonathan L. Gulliver
MassDOT Highway
Division Administrator

Paul Materazzo
Town of Andover

Daniel Rivera
Mayor of Lawrence

John Cashell
Town of Georgetown

Neil Harrington
Town of Salisbury

Robert Snow
Town of Rowley

Theresa Park
MVPC Director

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**Merrimack Valley Metropolitan Planning Organization
FFYs 2021-2025 Transportation Improvement Program
Draft Report prepared April 2020**

Part A. Introduction

Part A. 1. TIP Development Process

Federal transportation authorization legislation establishes funding categories for transportation projects that may be eligible for Federal funding and sets maximum funding levels per category for each year of the legislation. Projects in this TIP are planned to be primarily funded through the federal transportation act titled “Fixing America’s Surface Transportation Act (FAST Act)” that was signed into law December 4, 2015. The FAST Act funds \$305 billion dollars for transportation for Federal Fiscal Years (FFYs) 2016 through 2020.

The previous legislation “Moving Ahead for Progress in the 21st Century (MAP-21)” established planning factors known as the “MAP-21 eight planning factors”. The FAST Act adds two new planning factors (I and J in the list that follows), the FAST Act stipulates that the metropolitan planning process...

“provide for consideration of projects and strategies that will-

- A) support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;
- B) increase the safety of the transportation system for motorized and non-motorized users;
- C) increase the security of the transportation system for motorized and non-motorized users;
- D) increase the accessibility and mobility of people and for freight;
- E) protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- F) enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;

- G) promote efficient system management and operation;
- H) emphasize the preservation of the existing transportation system;
- I) improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
- J) enhance travel and tourism.”

It is the responsibility of the Federal mandated, State designated, regional Metropolitan Planning Organizations (MPOs) to carry out the Federal transportation planning process in their respective urbanized areas and prepare many Federal transportation documents, including the Transportation Improvement Program (TIP). This process, and the MPOs themselves, were established with the intention to include local and regional input into the Federal transportation planning process.

Based on Federal regulations any transportation project funded through the Federal Highway Administration (FHWA), or the Federal Transit Administration (FTA) must be listed in the appropriate region's Transportation Improvement Program (TIP). MassDOT combines the 13 regional MPO TIPs with statewide projects to produce the Statewide TIP (STIP) from which Federal-aid highway and transit projects are chosen. Without such a listing, Federal Highway funds cannot be expended by the Massachusetts Department of Transportation (MassDOT) on local or State projects. Similarly, the Merrimack Valley Regional Transit Authority (MVRTA) can only receive federal funds for projects listed in the TIP and STIP.

Merrimack Valley Metropolitan Planning Organization (MVMPO)

The MVMPO was first created by the Governor of Massachusetts in 1972. The MVMPO covers the same 15-community geographic area that defines the MVPC region and the MVRTA service area. The current MVMPO membership is as follows:

- Secretary of MassDOT –Stephanie Pollack
- MassDOT Highway Division Administrator –Jonathan L. Gulliver
- Merrimack Valley Planning Commission (MVPC) Director –Theresa Park
- Administrator/CEO Merrimack Valley Regional Transit Authority –Joseph Costanzo
- Mayor of Haverhill –James Fiorentini
- Mayor of Lawrence –Daniel Rivera
- Representing Region 1 (Amesbury, Newburyport, Salisbury) –Neil Harrington
- Representing Region 2 (Newbury, Rowley, West Newbury) –Robert Snow

- Representing Region 3 (Boxford, Georgetown, Groveland, Merrimac) –John Cashell
- Representing Region 4 (Andover, Methuen, North Andover) –Paul Materazzo

Ex officio, non-voting members of the MVMPO include:

- Federal Highway Administration –Massachusetts Division –Jeff McEwen
- Federal Transit Administration – Region I – Peter Butler
- Rockingham Planning Commission MPO (NH), Chairman RPC – Barbara Kravitz
- Boston MPO, President MAPC –Erin Wortman
- Northern Middlesex MPO, Chairman NMCOG –Pat Wojtas
- Nashua MPO (NH), Chairman NRPC –Karin Elmer

The TIP has been prepared in accordance with 23 CFR 450.326.

The development of the TIP starts with the Regional Transportation Plan (RTP). The MVMPO’s RTP is a twenty-year plan for transportation projects that can be programmed for implementation with Federal funds. The RTP is fiscally constrained and lists potential future projects in five-year blocks. Projects were chosen for the RTP based on MAP-21 transportation planning factors, meeting performance measure targets, existing roadway conditions, problems identified through ongoing pavement, congestion, and safety analyses conducted by the MVMPO, local and state project priorities and fiscal factors. Each year, the MVMPO programs projects from the RTP that are ‘ready-to-go’ into its five-year Transportation Improvement Program (TIP). Only those projects that are specifically identified in the RTP, or are consistent with its recommendations, can be programmed in the TIP. The planning tasks conducted in developing the RTP and the TIP are included in the region’s Unified Planning Work Program (UPWP) which is produced for public review annually. The UPWP includes additional transportation planning activities such as intersection and roadway analyses and studies.

Only projects from the RTP first two time bands of years (i.e., 2020 to 2024 and 2025 to 2029) are programmed in the TIP. An inconsistency with spending shown in the RTP is that when the MVMPO’s FFY 2020 RTP was developed, it was assumed the construction of North Avenue in Haverhill would occur in the FFYs 2020 to 2024 time-band. The estimated project cost for this project and for the North Andover Route 114 project have increased significantly to the point where programming both of these projects in the 2021 to 2025 TIP is not financially feasible. Neither project would be ready to advertise until 2023 or later. The Route 114 project has a TEC score of 11.32, the Haverhill North Avenue project has a TEC score of 8.25. In addition the North Andover Route 114 project is further along in the design process, therefore the North Andover Route 114

project is programmed to start in FFY 2023 and then consumes all the regional target funding in FFYs 2024 and 2025 and will also need a small amount of FFY 2026 funding before funding may be available for Haverhill North Avenue.

Projects that appear in the TIP were initiated and selected from a number of sources. Bridge projects have been selected and developed by MassDOT's Bridge section largely based upon the results of their ongoing bridge maintenance program. MassDOT has made it a priority to develop projects that would correct problems in "Structurally Deficient" (SD) bridges. The region's Congestion Management Process is used to identify intersections and roadways where significant congestion exists and measures the levels of congestion at these locations. This information has been used by local communities to develop roadway projects that are programmed in the TIP. Similarly, locations identified as having safety problems in the region's Safety Monitoring System or identified as a "crash cluster" by MassDOT, are used by the Department and local communities to develop TIP projects. Projects that help meet Performance Measures targets are programmed in the TIP.

Bicycle and pedestrian paths and accommodations on roadways and bridges are part of the Massachusetts 2019 Statewide Pedestrian Transportation Plan and 2019 Statewide Bicycle Transportation Plan which strive to consider pedestrians and bicyclists at "the same level of importance as drivers in planning, design and maintenance" including incorporating the safety of these users in projects. These Plans also conduct analyses which locate areas with Potential for Everyday Biking, Gaps in the High Comfort Bikeway Network, Potential for Walkable Trips, Transit Route, and High Pedestrian and Bicycle Crash locations used to initiate projects as well as score projects for the Massachusetts Capital Investment Plan (CIP). All TIP projects are part of the (CIP) which has a category of Expansion Projects which include projects that "expand bicycle and pedestrian networks to provide more transportation options and address health and sustainability objectives". Many bicycle and pedestrian projects are initiated by a municipality because the State provides funding for these projects in the Complete Streets, Shared Use Path, and the Safe Route to Schools Programs.

Part A. 2. Performance Measures

Federal legislation requires states to develop a Transportation Asset Management Plan (TAMP) that includes Performance Measures for NHS roadways and bridges as part of the asset management process. MassDOT Highway Division submitted an initial TAMP to FHWA on April 30, 2018, the final TAMP was submitted in June of 2019.

The *Moving Ahead for Progress in the 21st Century Act (MAP-21)* and the *Fixing America's Surface Transportation Act (FAST)* require State DOTs and MPOs to establish performance measures, and targets for these measures, to be used in assessing the transportation system and programming projects for Federal funding categories provided in the Acts. The Final Rules establishing these measures have been released in three separate rule makings. PM1: "HSIP and Safety Performance Management Measures", PM2: "Pavement and Bridge Condition Performance Measures", and PM3: "System Performance/ Freight/ CMAQ Performance Measures". These Rules define the measures to be used in each of the categories.

The PM1 HSIP and Safety Performance Measures apply to all public roads. The PM2 Pavement and Bridge Performance Measures apply only to NHS (National Highway System) roads and bridges. PM3 Performance Measures apply to various facilities as defined below.

MassDOT has established targets based on these performance measures and the MPOs have worked with MassDOT in either a) choosing the same targets, b) adapting them to the specific region, or c) choosing new targets as goals for the MPO. The MVMPO has adopted all of the targets established by MassDOT. MassDOT and the MPOs will work cooperatively to exchange data and performance targets and measures as required by the legislation.

The following are the performance measures, divided into three categories, as defined by the Final Federal Rules:

HSIP and Safety Performance Management Measures to be applied to all public roads (PM1):

- Number of Fatalities
- Rate of Fatalities
- Number of Serious Injuries
- Rate of Serious Injuries
- Number of non-motorized fatalities and non-motorized serious injuries

Pavement and Bridge Condition Performance Measures (PM2):

- Percentage of Pavements of the Interstate System in Good condition
- Percentage of Pavements of the Interstate System in Poor condition
- Percentage of Pavements of the non-Interstate NHS in Good condition
- Percentage of Pavements of the non-Interstate NHS in Poor condition
- Percentage of NHS bridges by deck area classified as in Good condition
- Percentage of NHS bridges by deck area classified as in Poor condition

MassDOT has submitted a draft NHS Transportation Asset Management Plan (TAMP), as required by MAP-21, to address pavement and bridge conditions on the NHS system. The Final version will be submitted in June 2019.

System Performance/ Freight/ CMAQ Performance Measures (PM3):

- Percent of the Person-Miles Traveled on the Interstate that are Reliable
- Percent of the Person-Miles Traveled on the non-Interstate NHS that are Reliable
- Truck Travel Time Reliability (TTTR) Index on the Interstate System
- Annual Hours of Peak Hour Excessive Delay Per Capita
- Percent of Non-SOV Travel on the NHS System
- Total Emission Reduction of all projects funded with CMAQ in areas designated as nonattainment or maintenance for ozone (O₃), carbon monoxide (CO), or particulate matter (PM₁₀ and PM_{2.5})

The MVMPO will work cooperatively with MassDOT to determine which performance measures the MPO will collect data for and measure, and which MassDOT will collect data for and measure and will exchange data and program projects for funding with consideration of meeting the targets established for each measure. The performance measures will be incorporated into the Transportation Improvement Program (TIP) Transportation Evaluation Criteria (TEC) in the scoring categories as indicated in the TEC Scoring Criteria Chart in Section A.3. of the TIP.

Targets are set by examining historic trends in the data and considering future plans for potential improvements.

Safety Performance Measures (PM1)

The Merrimack Valley MPO has chosen to adopt the statewide safety performance measure targets set by MassDOT for Calendar Year (CY) 2020. In setting these targets, MassDOT has followed FHWA guidelines by using statewide crash data and Highway Performance Monitoring System (HPMS) data for vehicle miles traveled (VMT) in order to calculate 5 year, rolling average trend lines for all FHWA-defined safety measures.

Total Fatalities: Over the last seven years, the number of fatalities in Massachusetts has been relatively stable, fluctuating less than 1 percent with the exception of 2016, when the 5-year average reached 364. That said, the most recent data shows that the five-year average for fatalities in 2018, 358, is the second lowest it has been since the 2008 – 2012 five-year average. The calendar year (CY) 2020 target of 347 was set to reflect an anticipated decrease in fatalities due to data enhancements, safety projects, and strategies and legislative proposals that were part of the 2018 Strategic Highway Safety Plan (SHSP), such as the primary seat belt and hands-free driving laws. It should

be noted that MassDOT's overarching goal is towards zero deaths, which will be pursued through the continued implementation of SHSP strategies.

Similarly, the Merrimack Valley Region number of fatalities is relatively stable with slightly lower numbers of 16 and 17 fatalities averaged over five years for the most recent three rolling 5-year averages ending in years 2016, 2017 and 2018 compared to 19 and 20 fatalities averaged over five years for the 5-year rolling averages ending in years 2012, 2013 and 2014.

Fatality Rate: Partly due to a 0.3% annual increase in VMT and an overarching downward trend in the fatality rate, it is anticipated that the fatality rate from 2013–2017 of 0.59 fatalities per 100 million vehicle miles traveled will drop to 0.56 fatalities per 100 million vehicle miles traveled between 2016–2020. *(Note: Statewide VMTs used to calculate the Projected CY20 Target Fatality Rate were adjusted after state adoption of the 0.56 per 100 million VMT target.)*

The Merrimack Valley Region has also seen a steady downward trend in fatality rate from a high of 0.57 fatalities per 100 million VMT for the 5-year period ending in 2013, down to 0.45 fatalities per 100 million VMT for the 5-year period ending in 2018.

Total Incapacitating Injuries: Although this measure is particularly prone to contextual factors, it is anticipated that there will be an overall decrease in the number of incapacitating injuries due to a continual downward trend line as well as the implementation of countermeasures that are being developed as part of the 2018 Strategic Highway Safety Plan.

The Merrimack Valley number of incapacitating injuries was lowest in the 2012 to 2016 5-year average period at 131, but 2013 to 2017 and 2014 to 2018 at 139 and 141 are significantly lower than the earlier periods that were around 160.

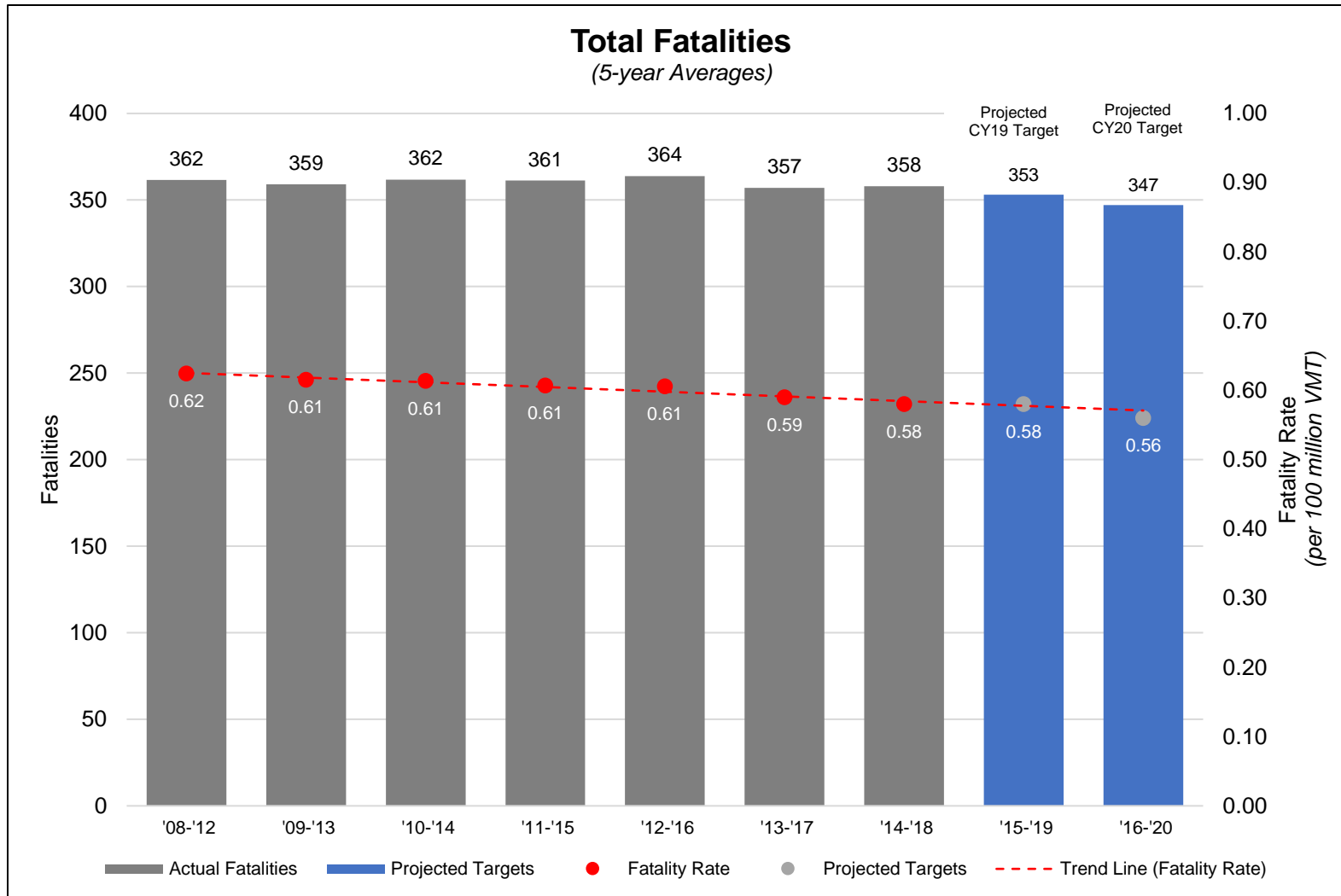
Incapacitating Injuries Rate: Similar to the fatality rate, it is anticipated that the increase in VMT and a downward trend line will result in a drop in the rate of incapacitating injuries from 4.84 per 100 million VMT between 2013–2017 to 4.30 between 2016–2020. *(Note: Statewide VMTs used to calculate the Projected CY20 Target Incapacitating Injury Rate were adjusted after state adoption of the 4.30 per 100 million VMT target.)*

In the Merrimack Valley region the incapacitating injury rate has also decreased from the earlier years with a rate of 3.85 per 100 million VMT the 5-year average from 2014 to 2018 versus 4.6 from 2008 to 2012.

Total Number of Non-Motorized Fatalities and Incapacitating Injuries: The most recent data for non-motorized fatalities and incapacitating injuries indicates that the previously increasing trend decreased in 2017. The CY 2020 target of 505 has been set to reflect continued projected reductions in non-motorized fatalities and injuries due to a number of implementation strategies contained within the Statewide Bike Plan, Statewide Pedestrian Plan, and Strategic Highway Safety Plan.

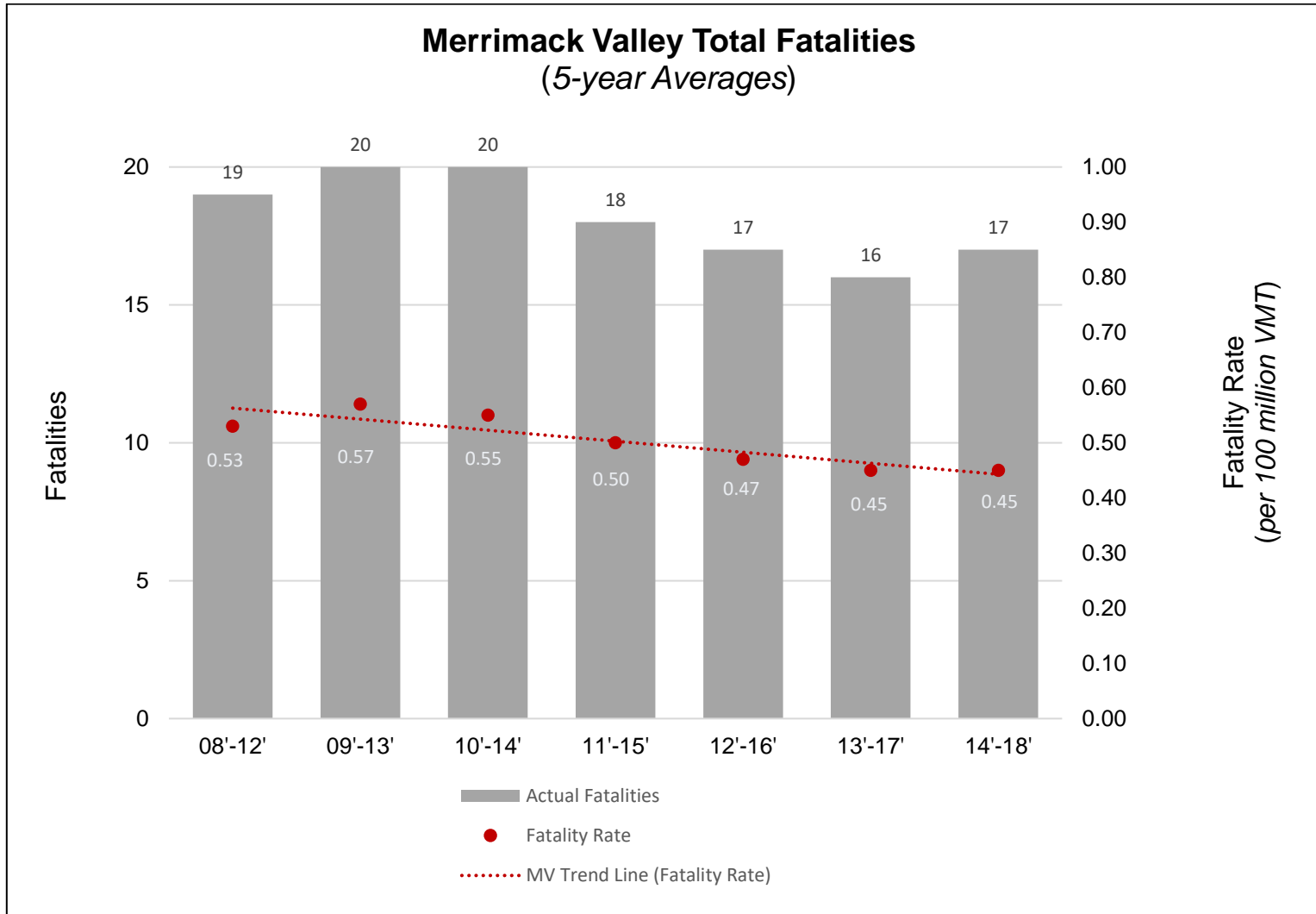
The total number of non-motorized fatalities and incapacitating injuries has increased slightly in the most recent 5-year periods to 18 from 2012 to 2016 and 19 from 2013 to 2017 and 2014 to 2018. The earlier 5-year periods had an average of 16 from 2009 to 2013 and 17 the remaining 3 time periods.

Figure 1 Statewide Total Fatalities and Fatal Crash Rates – 5-Year Averages

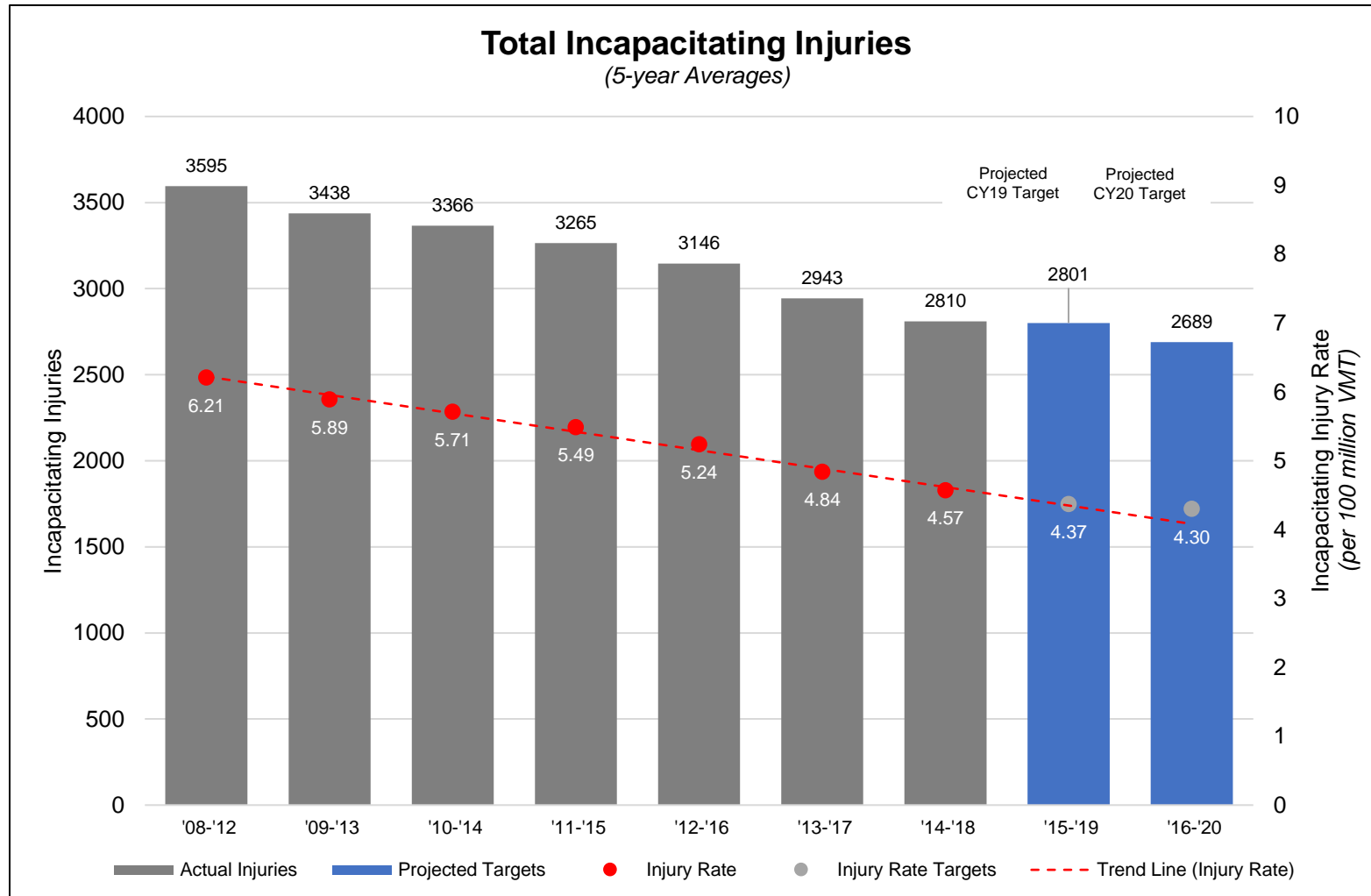


Graph Source: MassDOT

Figure 2 Merrimack Valley Total Fatalities and Fatal Crash Rates – 5-Year Averages



**Figure 3 Statewide Total Incapacitating Injuries and Incapacitating Injury Crash Rates
5 Year Averages**



Graph Source: MassDOT

**Figure 4 Merrimack Valley Total Incapacitating Injuries and Incapacitating Injury Crash Rates
5-Yr Averages**

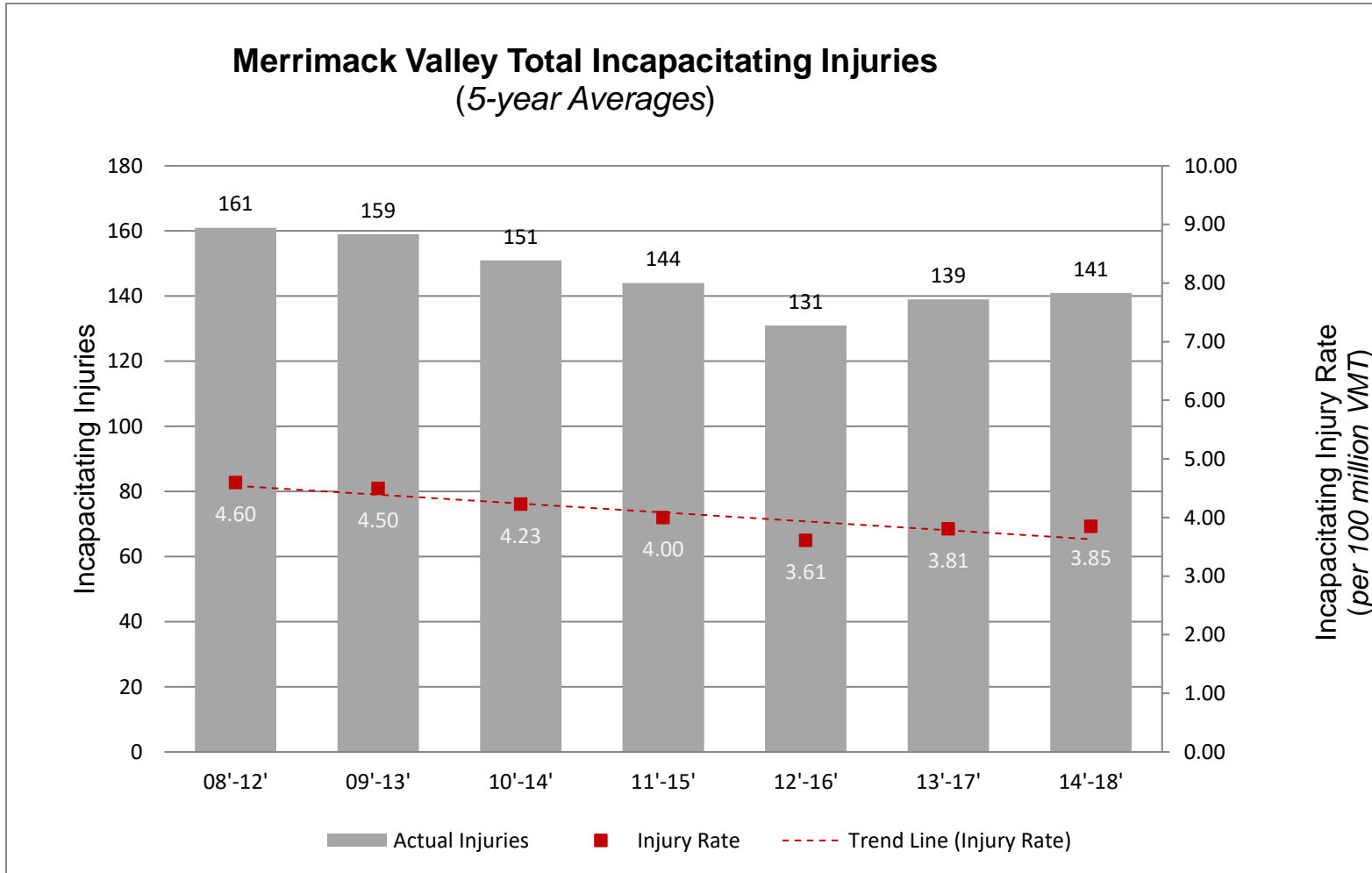
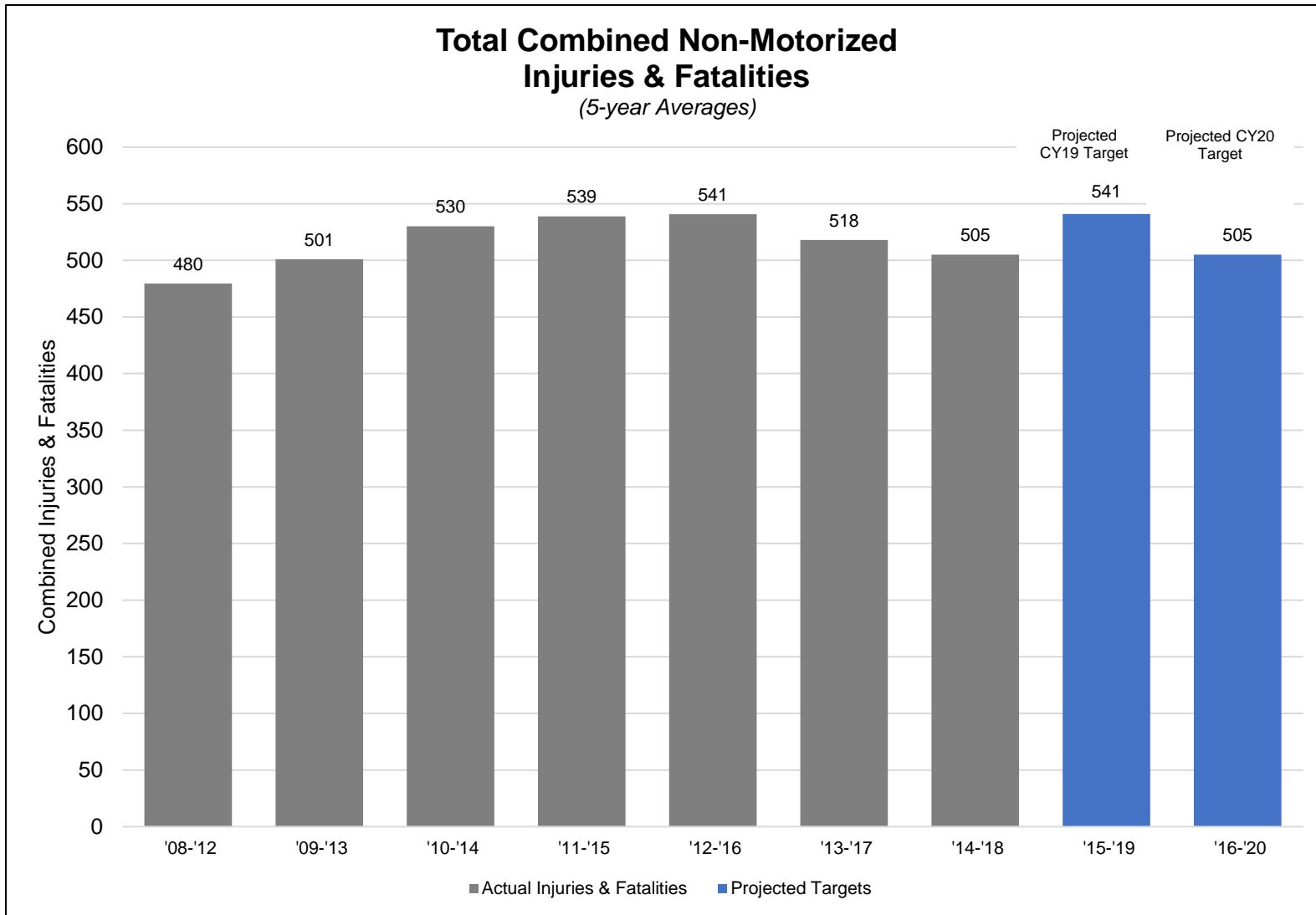
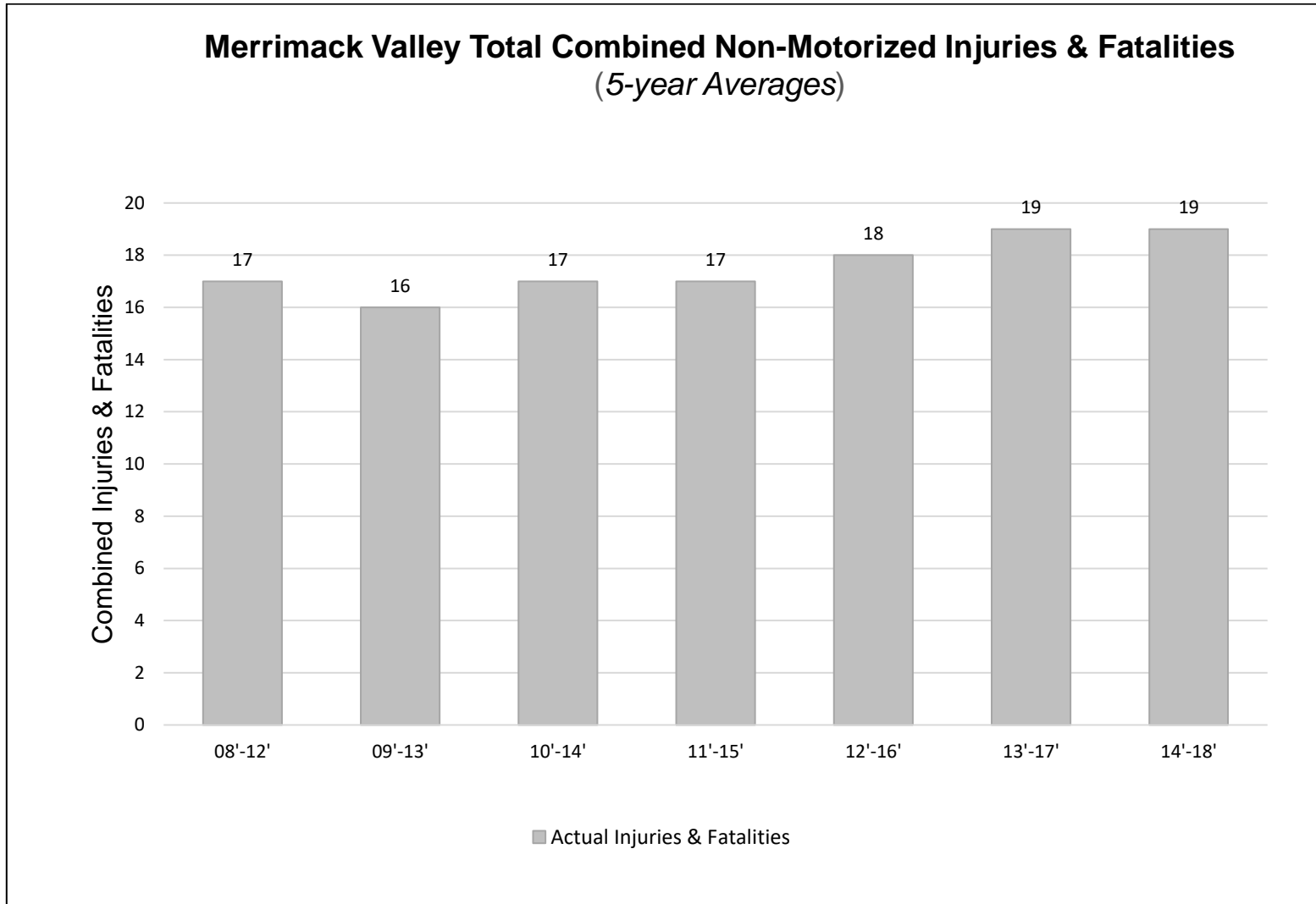


Figure 5 Statewide Total Combined Non-Motorized Injuries & Fatalities



Graph Source: MassDOT

Figure 6 Merrimack Valley Total Combined Non-Motorized Injuries & Fatalities



In recent years, MassDOT and the Merrimack Valley MPO have invested in “complete streets”, bicycle and pedestrian infrastructure, intersection and safety improvements in both the Capital Investment Plan (CIP) and Statewide Transportation Improvement Program (STIP) to address increasing mode share and to incorporate safety mitigation elements into projects. Moving forward, Merrimack Valley MPO, alongside MassDOT, is actively seeking to improve data collection and methodology for bicycle and pedestrian VMT counts and to continue analyzing crash clusters and crash counts that include both motorized and non-motorized modes in order to address safety issues at these locations.

Bridge & Pavement Performance Measures (PM 2)

The Merrimack Valley MPO has chosen to adopt the 2-year (2020) and 4-year (2022) statewide bridge and pavement performance measure targets set by MassDOT. MassDOT was required to adopt a statewide target by May 20th, 2018, with MPOs either adopting the statewide target or establishing their own by November 2018. In setting these targets, MassDOT has followed FHWA guidelines by measuring bridges and pavement condition using the 9-point National Bridge Inventory Standards (NBIS); the International Roughness Index (IRI); the presence of pavement rutting; and the presence of pavement cracking. 2-year and 4-year targets were set for six individual performance measures: percent of bridges in good condition; percent of bridges in poor condition; percent of Interstate pavement in good condition; percent of Interstate pavement in poor condition; percent of non-Interstate pavement in good condition; and percent of non-Interstate pavement in poor condition. All of the above performance measures are tracked in greater detail in MassDOT’s Transportation Asset Management Plan (TAMP), which is due to be finalized in July 2019.

Targets for bridge-related performance measures were determined by identifying which bridge projects are programmed and projecting at what rate bridge conditions deteriorate. The bridge-related performance measures measure the percentage of deck area, rather than the total number of bridges.

Performance targets for pavement-related performance measures were based on a single year of data collection, and thus were set to remain steady under the guidance of FHWA. These measures are to be revisited at the 2-year mark (2020), once three years of data are available, for more informed target setting.

MassDOT continues to measure pavement quality and to set statewide short-term and long-term targets in the MassDOT Performance Management Tracker using the Pavement Serviceability Index (PSI), which differs from IRI. These measures and targets are used in conjunction with federal measures to inform program sizing and project selection.

Performance Measure	Current (2017)	2-year target (2020)	4-year target (2022)
Bridges in good condition	15.22%	15%	16%
Bridges in poor condition	12.37%	13%	12%
Interstate Pavement in good condition	74.2%	70%	70%
Interstate Pavement in poor condition	0.1%	4%	4%
Non-Interstate Pavement in good condition	32.9%	30%	30%
Non-Interstate Pavement in poor condition	31.4%	30%	30%

Reliability, Congestion, & Emissions Performance Measures (PM3)

Merrimack Valley MPO has chosen to adopt the 2-year (2020) and 4-year (2022) statewide reliability, congestion, and emissions performance measure targets set by MassDOT. MassDOT was required to adopt a statewide target by May 20th, 2018, with MPOs either adopting the statewide target or establishing their own by November 2018. MassDOT followed FHWA regulation in measuring Level of Travel Time Reliability (LOTTR) on both the Interstate and non-Interstate NHS as well as Truck Travel Time Reliability (TTTR) on the Interstate system using the National Performance Management Research Dataset (NPMRDS) provided by FHWA. These performance measures aim to identify the predictability of travel times on the roadway network by comparing the average travel time along a given segment against longer travel times. For LOTTR, the performance of all segments of the Interstate and of the non-Interstate NHS are defined as either reliable or unreliable based on a comparison between the 50th percentile travel time and the 80th percentile travel time, and the proportion of reliable segments is reported. For TTTR, the ratio between the 50th percentile travel time and the 90th percentile travel time for trucks only along the Interstate system is reported as a statewide measure. As this data set has but one year of consistent data, FHWA guidance has been to set conservative targets and to adjust future targets once more data becomes available. To that end, MassDOT’s reliability performance targets are set to remain the same.

The Merrimack Valley MPO an agency whose planning area includes communities in the Boston Urbanized Area (UZA), and as a signatory to the 2018 Boston UZA Memorandum of Understanding (Boston UZA MOU)—has also adopted 2-year (2020) and 4-

year (2022) Boston UZA-wide congestion performance measure targets. These performance measures are the percentage of non-single occupancy vehicle (SOV) travel and the Peak Hour Excessive Delay (PHED). Targets were developed in coordination with state Departments of Transportation and neighboring MPOs with planning responsibility for portions of the Boston UZA.

The percentage of non-SOV travel is approximated using the U.S. Census Bureau's American Community Survey (ACS) Journey-to-Work data. In the Boston UZA, the proportion of non-SOV travel has been steadily increasing and is projected to continue increasing at a rate of 0.32% annually.

PHED is measured by totaling the number of hours spent in excessive delay (defined as travel time at 20 miles per hour or at 60% of the posted speed limit, whichever is greater) in peak hours (between 6:00am and 10:00, and between 3:00pm and 7:00pm) divided by the total UZA population. As of target-setting, there was only one year of data available. As such, the performance targets have been set flat until further data is available.

Emissions reduction targets are measured as the sum total of all emissions reductions anticipated through CMAQ-funded projects in non-attainment or air quality maintenance areas (currently the cities of Lowell, Springfield, Waltham, and Worcester, and the town of Oak Bluffs) identified in the Statewide Transportation Improvement Program (STIP). This anticipated emissions reduction is calculated using the existing CMAQ processes.

Measure	Current (2017)	2-year (2020)	4-year (2022)
Non-Interstate LOTTR	80%	80%	80%
Interstate LOTTR	68%	68%	68%
TTR	1.85	1.85	1.85
PHED (Boston UZA)	18.31	18.31	18.31
% non-SOV (Boston UZA)	33.6% (2016)	34.82%	35.46%
Emissions Reductions	Baseline (FFY 14–17)	1,622 CO 497.9 Ozone	TBD CO (Springfield) 1.1 Ozone

MassDOT/ Adopted by MVMPO Performance Measures/ Targets Summary Table

Performance Measure Category	Performance Measure	Recent Data	Targets
PM1: HSIP and Safety	Number of Fatalities Statewide (All Public Roads)	358 average number of fatalities/year for 2014 to 2018	CY 2019 Target = 353 CY 2020 Target = 347 fatalities
PM1: HSIP and Safety	Rate of Fatalities Statewide (All Public Roads)	0.58 fatalities per 100 million vehicles miles traveled per year average for 2014 to 2018	CY 2019 Target = 0.58 CY 2020 Target = 0.56 fatalities per 100 million vehicle miles traveled
PM1: HSIP and Safety	Number of Incapacitating Injuries Statewide (All Public Roads)	2,810 average number of incapacitating injuries per year average from 2014 to 2018	CY 2019 Target = 2,801 CY 2020 Target = 2,689 serious injuries
PM1: HSIP and Safety	Rate of Incapacitating Injuries Statewide (All Public Roads)	4.57 incapacitating injuries per 100 million vehicle miles traveled per year average for 2014 to 2018	CY 2019 Target = 4.37 CY 2020 Target = 4.30 serious injuries per 100 million vehicle miles traveled
PM1: HSIP and Safety	Number of Non-motorized Fatalities and Non-motorized Serious Injury Statewide (All Public Roads)	505 average number of combined serious injuries and fatalities per year for non-motorized modes for 2014 to 2018	CY 2019 Target = 541 CY 2020 Target = 505 combined fatalities and serious injuries for non-motorized modes

MassDOT/ Adopted by MVMPO Performance Measures/ Targets Summary Table (Cont.)

Performance Measure Category	Performance Measure	Recent Data	Targets
PM2: Pavement and Bridge Condition	Percentage of Pavements of the Interstate System in Good Condition Statewide	74.2% in CY 2017	CY 2020 Target = 70% CY 2022 Target = 70%
PM2: Pavement and Bridge Condition	Percentage of Pavements of the Interstate System in Poor Condition Statewide	0.1% in CY 2017	CY 2020 Target = 4% CY 2022 Target = 4%
PM2: Pavement and Bridge Condition	Percentage of Pavements of the non-Interstate NHS in Good Condition Statewide	32.9 % in CY 2017	CY 2020 Target = 30% CY 2022 Target = 30%
PM2: Pavement and Bridge Condition	Percentage of Pavements of the non-Interstate NHS in Poor Condition Statewide	31.4% in CY 2017	CY 2020 Target = 30% CY 2022 Target = 30%

MassDOT/ Adopted by MVMPO Performance Measures/ Targets Summary Table (Cont.)

Performance Measure Category	Performance Measure	Recent Data	Targets
PM2: Pavement and Bridge Condition	Percentage of NHS bridges by deck area in Good Condition Statewide	15.22% Currently	CY 2020 Target = 15% CY 2022 Target = 16%
PM2: Pavement and Bridge Condition	Percentage of NHS bridges by deck area in Poor Condition Statewide	12.37% Currently	CY 2020 Target = 13% CY 2022 Target = 12%
PM3: System Performance/ Freight/ CMAQ	Percent of Person-Miles Traveled on the Interstate that are Reliable Statewide	68 % in CY 2017	CY 2020 Target = 68% CY 2022 Target = 68%
PM3: System Performance/ Freight/ CMAQ	Percent of Person-Miles Traveled on the Non-Interstate NHS that are Reliable Statewide	80% in CY 2017	CY 2020 Target = 80% CY 2022 Target = 80%

MassDOT/ Adopted by MVMPO Performance Measures/ Targets Summary Table (Cont.)

Performance Measure Category	Performance Measure	Recent Data	Targets
PM3: System Performance/ Freight/ CMAQ	Truck Travel Time Reliability (TTTR) Index on the Interstate System Statewide	TTTR index in CY 2017 = 1.85	CY 2020 Target = 1.85 CY 2022 Target = 1.85
PM3: System Performance/ Freight/ CMAQ	Annual Hours of Peak Hour Excessive Delay (PHED) per Capita in the UZA	PHED per capita in CY 2017 = 18.31 hours per person in the UZA	2018-2019 Two-year Target = 18.3 2018-2021 Four-year Target = 18.3
PM3: System Performance/ Freight/ CMAQ	Percent of Non-SOV Travel on the NHS System in the UZA	CY 2016 Non-SOV Travel on the NHS in the UZA = 33.6%	CY 2020 Target = 34.5% CY 2022 Target = 35.1%

**Performance Target(s) Project Will Help Meet
(2021 to 2025 Statewide and Regional Target Funds)**

Year (s) Program- med	City / Town	Project Description	Total Cost Programmed	Federal Performance Target(s) Project Will Help Meet
2024- 2025	Andover	Andover- Bridge Rehabilitation, A-09-036, I-495 over St 28 (SB), A-09-037, I-495 over B&M and MBTA, A-09-041, I-495 over St 28 (NB) (# 606522)	\$36,054,012	1) Percentage of NHS bridges classified as in Good condition. 2) Percentage of Pavements of the Interstate System in Good Condition and in Poor Condition 3) Percent of the Person-Miles Traveled on the Interstate that are Reliable. 4) Truck Travel Time Reliability (TTTR) Index on the Interstate System.
2022	Georgetown / Boxford	Georgetown - Boxford Border to Boston Trail, from Georgetown Road to West Main Street (Route 97) (# 607541)	\$2,520,436	1) Number of non-motorized fatalities and non-motorized serious injury. 2) Percent change in Tailpipe CO ₂ Emissions on the NHS Compared to Calendar Year 2017 Level.
2024	Georgetown / Newbury	Georgetown - Newbury Border to Boston Trail, (Northern Georgetown to Byfield Section) (# 607542)	\$5,685,060	Number of non-motorized fatalities and non-motorized serious injury.

**Performance Target(s) Project Will Help Meet
(2021 to 2025 Statewide and Regional Target Funds)**

Year (s) Program- med	City / Town	Project Description	Total Cost Programmed	Federal Performance Target(s) Project Will Help Meet
2021	Groveland	Groveland – Groveland Community Trail, from Main Street to King Street (# 608298)	\$1,984,861	1) Number of non-motorized fatalities and non-motorized serious injury. 2) Percent change in Tailpipe CO ₂ Emissions on the NHS Compared to Calendar Year 2017 Level.
2021- 2023	Haverhill	Haverhill – Bridge Replacement, H-12-039, I-495 (NB & SB) over Merrimack River (# 605306) (AC Yrs 4 to 6 of 6)	\$46,503,796	1) Percentage of NHS bridges classified as in Good condition. 2) Percentage of Pavements of the Interstate System in Good Condition and in Poor Condition 3) Percent of the Person-Miles Traveled on the Interstate that are Reliable. 4) Truck Travel Time Reliability (TTTR) Index on the Interstate System.
2023- 2025	Haverhill	Haverhill – Bridge Replacement, H-12-040, I-495 (NB & SB) over Merrimack River (#609466) (AC Yrs 1,2 & 3 of 4)	\$94,747,200	1) Percentage of NHS bridges classified as in Good condition. 2) Percentage of Pavements of the Interstate System in Good Condition and in Poor Condition 3) Percent of the Person-Miles Traveled on the Interstate that are Reliable. 4) Truck Travel Time Reliability (TTTR) Index on the Interstate System.

**Performance Target(s) Project Will Help Meet
(2021 to 2025 Statewide and Regional Target Funds) (Cont.)**

Year (s) Program- med	City / Town	Project Description	Total Cost Programmed	Federal Performance Target(s) Project Will Help Meet
2024- 2025	Haverhill	Haverhill – Bridge Replacement, H-12-007 & H-12-025, Bridge Street (SR 125) over the Merrimack River (# 605304) (AC Yrs 1 & 2 of 5)	\$45,861,496	<ul style="list-style-type: none"> 1) Percentage of NHS bridges classified as in Good condition. 2) Percentage of Pavements of the Non-Interstate NHS in Good Condition and in Poor Condition 3) Percent of the Person-Miles Traveled on the Non- Interstate NHS that are Reliable.
2021	Haverhill	Haverhill – Intersection Improvements at Rt 110 / Rt 108 (#608761)	\$1,980,067	<ul style="list-style-type: none"> 1) Number and Rate of Fatalities 2) Number and Rate of Serious Injuries 3) Number of non-motorized fatalities and non-motorized serious injury. 4) Percent change in Tailpipe CO₂ Emissions on the NHS Compared to Calendar Year 2017 Level. 5) Percent of the Person-Miles Traveled on the non-Interstate NHS that are Reliable.

**Performance Target(s) Project Will Help Meet
(2021 to 2025 Statewide and Regional Target Funds) (Cont.)**

Year (s) Program- med	City / Town	Project Description	Total Cost Programmed	Federal Performance Target(s) Project Will Help Meet
2022	Lawrence	Lawrence – Intersection Improvements at Merrimack Street and South Broadway (Route 28) (# 609509)	\$1,610,960	1) Number and Rate of Fatalities 2) Number and Rate of Serious Injuries 3) Number of non-motorized fatalities and non-motorized serious injury. 4) Percent change in Tailpipe CO ₂ Emissions on the NHS Compared to Calendar Year 2017 Level. 5) Percent of the Person-Miles Traveled on the non-Interstate NHS that are Reliable.
2021	Lawrence	Lawrence – Intersection Improvements at South Broadway (Route 28) and Mount Vernon Street (# 609251)	\$1,013,739	1) Number and Rate of Fatalities 2) Number and Rate of Serious Injuries 3) Number of non-motorized fatalities and non-motorized serious injury. 4) Percent change in Tailpipe CO ₂ Emissions on the NHS Compared to Calendar Year 2017 Level. 5) Percent of the Person-Miles Traveled on the non-Interstate NHS that are Reliable.

**Performance Target(s) Project Will Help Meet
(2021 to 2025 Statewide and Regional Target Funds) (Cont.)**

Year (s) Program- med	City / Town	Project Description	Total Cost Programmed	Federal Performance Target(s) Project Will Help Meet
2023	Lawrence	Lawrence – Lawrence Manchester Rail Corridor (LMRC) Rail Trail (# 608930)	\$16,087,005	Number of non-motorized fatalities and non-motorized serious injury
2022	Methuen	Methuen – Intersection Improvements at Riverside Drive and Burnham Road (# 610658)	\$967,200	Number of non-motorized fatalities and non-motorized serious injury
2022	Newbury - Newburyport - Salisbury	Newbury - Newburyport - Salisbury - Resurfacing and related work on Route 1 (# 608494)	\$9,807,200	Percentage of Pavements of the non-Interstate NHS in Good condition.
2021	Newburyport	Newburyport – Riverfront Clipper City Rail Trail Construction (# 610663)	\$1,900,802	Number of non-motorized fatalities and non-motorized serious injury.
2023-2025	North Andover	North Andover - Corridor Improvements on Route 114, between Route 125 (Andover Street) & Stop & Shop Drive-way (# 608095)	\$26,906,532	1) Number of non-motorized fatalities and non-motorized serious injury. 2) Percentage of Pavements of the non-Interstate NHS in Good condition. 3) Percent of the Person-Miles Traveled on the non-Interstate NHS that are Reliable. 4) Number and Rate of Serious Injuries

**Performance Target(s) Project Will Help Meet
(2021 to 2025 Statewide and Regional Target Funds) (Cont.)**

Year (s) Program- med	City / Town	Project Description	Total Cost Programmed	Federal Performance Target(s) Project Will Help Meet
2025	Rowley	Rowley – Safety Improvements at Route 1, Central and Glen Streets (# 609392)	\$2,368,068	1) Number and rate of fatalities. 2) Number and rate of Serious Injuries
2023	Salisbury	Salisbury – Reconstruction of Route 1 (Lafayette Road) (# 602202)	\$6,837,285	Number of non-motorized fatalities and non-motorized serious injury.
2021	MVRTA	MVRTA – Flex to FTA to Replace Yr 2009 Buses with new Buses Delivery 2022 (7 of 9) (# S10777)	\$3,467,361	Percent of Person-Miles Traveled on the Non-Interstate NHS that are Reliable Statewide

Transit Asset Management (TAM) Plan Performance Management Targets

The MVRTA just recently completed its March 2020 TAM Plan, which has yet to be adopted by the MVRTA Advisory Board. The MPO will adopt targets within 180 days of the MVRTA adopting the new targets.

The following information is from the MVRTA Transit Asset Management Plan prepared 8/20/2018.

Annual Performance Targets and Measures

As a recipient of Federal Transit Administration funds, the MVRTA is required to develop and maintain a Transit Asset Management Plan per Federal Transit Administration's (FTA's) Final Rule at 49 CFR Part 625. As defined by the Rule, Transit Asset Management (TAM) is the strategic and systematic practice of processing, operating, inspecting, maintaining, rehabilitating and replacing transit capital assets to manage their performance, risks and cost over their life cycles to provide safe, cost effective and reliable public transportation.

The preparation of the TAM is based on identifying the transit assets which the MVRTA owns and has direct Capital responsibility for and the performance measures included in the Final Rule that relate to these identified assets. A completed TAM plan is required by September 30, 2018.

	Performance Measure
Equipment Non-revenue support-service and maintenance vehicles	Percentage of vehicles met or exceeded Useful Life Benchmark
Rolling Stock Revenue vehicles by mode, bus/ van	Percent of vehicles met or exceeded Useful Life Benchmark
Facilities Maintenance and administrative facilities: and passenger stations (buildings) and parking facilities	Percentage of Assets with condition rating below 3.0 on FTA Transit Economic Requirements Model (TERM) Scale.

Using these Performance Measures leads to the setting of targets against the defined Useful Life Benchmark (ULB). FTA defines as:

The expected lifecycle of a capital asset for a particular Transit Provider’s operating environment, or the acceptable period of use in service for a particular Transit Provider’s operating environment.

The MVRTA has defined the ULB as presented in FTA circular C 5010.1E for buses and vans:

Minimum Service-life for Buses and Vans

Category	Length	Minimum Life	
		(Whichever comes first)	
		Years	Miles
Heavy-Duty Large Bus	35 to 45 ft.	12	500,000
Heavy-Duty Small Bus	30 ft.	10	350,000
Medium-Duty Transit Bus	30 ft.	7	200,000
Light-Duty Mid-Sized Bus	25 to 35 ft.	5	150,000
Light Duty Small Bus, Cutaways and Modified Van	16 to 28 ft.	4	100,000

For the August 2018 TAM Plan the MVRTA prepared the following targets:

Transit TAM Targets

Percent of revenue vehicles that have met or exceeded their useful life benchmark:

Bus 5% (Replace 3 model year 2007 buses FFY 2019 = 3/58)

Van 0%

Non-revenue vehicles - percent of service vehicles that have met or exceeded their useful life benchmark:

Maintenance Trucks 0%

SUV (Supervisory vehicle) 14% (Replace 1 model year 2013 supervisory vehicle FFY 2019 = 1/7)

Facility - percent of facilities rated below 3 on the condition scale:

Passenger/ Parking facilities 0% (McGovern Center, Gateway Surface Parking, Haverhill Intermodal Parking, Costello Center)

Administrative/ maintenance facilities 0% (85 Railroad Ave. HQ)

In January 2019 the Merrimack Valley MPO voted to adopt the transit TAM performance measure targets set by MVRTA for 2019.

MVRTA/ Adopted by MVMPO Performance Measures/ Targets Summary Table

Category	Performance Measure	2019 Targets
Equipment Non-revenue support-service and maintenance vehicles	Percentage of vehicles met or exceeded Useful Life Benchmark	Maintenance Trucks – 0% SUV (Supervisory Vehicle) – 14%
Rolling Stock Revenue vehicles by mode, bus/ van	Percent of vehicles met or exceeded Useful Life Benchmark	Bus – 5% Van – 0%
Facilities Maintenance and administrative facilities: and passenger stations (buildings) and parking facilities	Percentage of Assets with condition rating below 3.0 on FTA Transit Economic Requirements Model (TERM) Scale.	Passenger/ Parking facilities – 0% Administrative/ Maintenance facilities – 0%

Part A. 3. Prioritization

The FFYs 2021-2025 Merrimack Valley Metropolitan Planning Organization's Transportation Improvement Program (TIP) contains Federal-aid project programming information for five years. For each year, gross estimates of project costs are listed in the federal fiscal year of the proposed advertise date. Federal fiscal years begin on October 1 and run through September 30. For example, FFY 2021 begins on October 1, 2020 and ends on September 30, 2021. The advertising dates shown for roadway projects were determined based on information provided by the Capital Expenditure and Program Office within MassDOT, the MassDOT District 4 Office, and MVMPO member communities. The MVRTA and MassDOT's Rail and Transit Division determined programming dates for transit projects.

Projects are programmed in the region's TIP based on a number of factors. These include the project's score based upon the MPO's Transportation Evaluation Criteria (TEC), project cost and the availability of STBG funding in the years covered in the document. Road and bridge project selection is also largely dependent upon the current and expected design status for each project, which can be affected by such factors as environmental permitting and Right-of-Way (ROW) status. For bridge projects, information from MassDOT's Bridge section is given primary consideration when scheduling projects.

Transportation Evaluation Criteria

In 2003, the MPOs worked with the then Massachusetts Executive Office of Transportation and Public Works (EOTPW) to develop objective evaluation criteria that could be applied to transportation projects in the Commonwealth. Early in 2004, EOTPW asked planning staff from the then MassHighway Planning, the MassHighway district offices and the regional planning agencies to apply these criteria to projects within their respective Metropolitan Planning Organizations (MPOs). Application of these criteria include not only an evaluation of the magnitude of improvement in the condition, mobility, and safety of transportation projects, but also an evaluation of their community effects and support, the land use and economic development impact, and the environmental effects. A score valued from -3 to 3 is assigned to each of the criteria. In fact, there is at least one score associated with each of the FAST Act ten planning factors. The scores within each category are averaged and then the category averages are added together to reach the total score. The following chart illustrates the data and scoring criteria for each TEC element as well as the planning factors considered in each element, and which TEC elements will be affected by performance measures.

Consideration of whether a project contributes to Climate Resiliency has been added to the TEC process for the MVMPO 2021 to 2025 TIP in the Environmental Effects section of the evaluation form, under the Air Quality/Climate Effects scoring component. The project receives one point under this criteria if the project involves widening a culvert and the project receives one point if it raises a facility (for example a bridge, roadway or trail) in a flood prone area.

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Condition				
A. Magnitude of pavement condition improvements	Use Pavement Condition Index (PCI) (if available) to rate current condition as excellent, good, fair, or poor. If not available, use pavement condition description from other sources.	Poor = 3 to 2 Fair = 2 to 1 Good = 1 to 2 Excellent = 0 to 1	Pavement conditions often vary across the project limits, and therefore scores have a range. Excellent current condition may score a 1 if project is not expected to be programmed for several years.	Preservation; Safety; Resiliency & reliability; Economic Vitality. Contributes to meeting Pavement Performance Measure Targets of 70% Interstate or 30% Non-Interstate NHS Pavements in Good Condition and/or 4% max. Interstate or 30% max. Non-Interstate Pavements in Poor Condition Statewide
B. Magnitude of improvement of other infrastructure	Types and number of upgrades	Major Upgrade such as widening a bridge = 3 Multiple upgrades from list of drainage improvements, new sidewalks, new signals, signal upgrades, adding turn lanes, etc. = 3 to 2 One or two of above upgrades = 2 to 1 No Upgrades = 0		Preservation; Safety; Resiliency & reliability; Accessibility & mobility; Environmental and economic sustainability; Enhance travel & tourism; Note that all roadway projects consider drainage improvements.

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Mobility				
A. Effect on magnitude and duration of congestion	Magnitude of current congestion, measured by Level of Service, traffic delays, or queue lengths, if available. If there is not currently congestion, then score is zero unless project causes congestion.	Significant reduction in congestion = 3 Moderate reduction in congestion = 2 Small reduction in congestion = 1 No change in congestion = 0 Small increase in congestion = -1 Moderate increase in congestion = -2 Significant increase in congestion = -3	If there is not currently congestion, then score is zero unless project causes new congestion.	Economic Vitality; Accessibility and Mobility; Resiliency and reliability; Enhance travel and tourism. Contributes to meeting System Performance Measure Targets of 68% Interstate or 80% Non-Interstate NHS person-miles travelled that are reliable Statewide and/or 1.85 Truck Travel Time Reliability Index Statewide
B. Effect on travel time and connectivity / access	Types and numbers of upgrades, such as, improves travel time by widening shoulders, or signal improvements; provides new access, connects existing trails, etc.	Major Upgrade such as providing new roadway access = 3 Multiple upgrades from signal improvements, new sidewalks, adding turn lanes, new trail = 3 to 2 One or two of above upgrades, or new = 2 to 1 No Upgrades = 0	Additional point (not above 3) if providing connectivity between schools, businesses, and other activity centers.	Economic Vitality; Accessibility and Mobility; Resiliency and reliability; Connectivity; Enhance travel and tourism.

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Mobility (Cont.)				
C. Effect on other modes using the facility	Types and numbers of upgrades to Other modes (means of travel)	Major Upgrade for Other mode of transportation = 3 Multiple upgrades from adding bike lanes, new sidewalks, wheelchair ramps, proximity to transit facilities = 3 to 2 One or two of above upgrades = 2 to 1 No Upgrades to Other modes = 0		Economic Vitality; Safety; Security; Accessibility and Mobility; Environmental and economic sustainability; Connectivity; Resiliency and reliability; Enhance travel and tourism. Contributes to meeting System Performance Measure Target of 34.5% Non-SOV travel on the NHS in the UZA
D. Effect on regional and local traffic	Whether affects traffic outside of the project limits locally, and beyond that, regionally	Is on the NHS, a State numbered route, connector, or highly traveled local road; and: Substantially improves traffic regionally = 3 Moderately improves traffic regionally = 2 to 1 Substantially or moderately improves traffic locally = 2 to 1 Neutral = 0 Negative scores if adversely affects traffic to the degrees and geography above.		Economic Vitality; Accessibility and Mobility; Efficient System Management; Enhance travel and tourism.

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Safety and Security				
A. Effect on crash rate compared to State average	Whether location is designated a State defined Crash Cluster location (HSIP eligible) and the EPDO score assigned by that performance measure, or crash rate compared to State average, other safety concerns	High EPDO score, crash cluster, Top 100 crash locations = 3 Higher than average crash rate/ EPDO score = 2 Lower than average crash rate, but safety concerns are being addressed = 1 No effect on crash rate = 0		Safety; Efficient System Management; Resiliency and Reliability. Contributes to meeting HSIP and Safety Performance Measure Targets for number of fatalities and serious injuries, rates of fatality and serious injury Statewide on all public roads.
B. Effect on bicycle and pedestrian safety	Includes improvements that effect bicycle and pedestrian safety or is detrimental to pedestrian bicycle safety.	Major Upgrade, separate bike lane, or shared use path = 3 Multiple upgrades from list of: widening shoulders for bikes; new or improved sidewalks; new pedestrian signals; wheelchair ramps; etc. = 3 to 2 One or two of above upgrades = 2 to 1 No Upgrades = 0 Could use negative scores if detrimental to bike / pedestrian safety	Additional point (not above 3) if improvements are near schools or other areas frequented by bicyclists and/ or pedestrians, or there is a history of crashes involving bikes and/or pedestrians.	Safety; Resiliency and Reliability; Enhance Travel and Tourism. Contributes to meeting HSIP and Safety Performance Measure Targets for Number of non-motorized fatalities and serious injuries Statewide on all public roads.

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Safety and Security (Cont.)				
C. Effect on transportation security and evacuation	Is on the NHS. Is a community designated evacuation route. Is within 10 miles of a nuclear power plant.	Will significantly improve travel along an evacuation route = 3 Is an evacuation route within 10 miles of a nuclear power plant, or is on the NHS and improves travel = 2 Is an evacuation route or Is within 10 miles of a nuclear power plant, or in on the NHS = 1 Is not any of the 3 listed in the data column = 0		Security; Safety.
Community Effects and Support				
A. Residential effects: ROW, noise, aesthetic, cut through traffic, and other.	Degree of effect on residential aspects.	Improves these aspects: Significantly = 3 Moderately = 2 Slightly = 1 No effect on these aspects = 0 Creates negative effects from these aspects: Slightly = -1 Moderately = -2 Significantly = -3		Environmental Sustainability;

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Community Effects and Support (Cont.)				
B. Public, local government, legislative, and regional support	Degree of support.	Improves these aspects: Greatly Supported = 3 Moderately Supported = 2 Somewhat Supported = 1 Not Supported, or unknown = 0 Some Opposition = -1		
C. Effect on service to minority or low-income neighborhoods. (Title VI and EJ)	Increased or decreased service to Title VI and EJ neighborhoods	Improves service to Title VI or EJ neighborhoods: Significantly = 3 Moderately = 2 Slightly = 1 No effect on Title VI or EJ neighborhood = 0 Slightly decreased service = - 1 Moderately decreased service = - 2 Significantly decreased service = - 3		Quality of Life; Accessibility and Mobility; Resiliency and Reliability; Enhance Travel and Tourism.

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Community Effects and Support (Cont.)				
D. Other impacts / benefits to minority or low-income neighborhoods. (Title VI and EJ)	Number / degree of positive or negative impacts to Title VI and EJ neighborhoods	Positive Impacts to Title VI or EJ neighborhoods: Significant = 3 Moderate = 2 Slight = 1 No effect on Title VI or EJ neighborhood = 0 Negative Impacts to Title VI or EJ neighborhoods: Slight = - 1 Moderate = - 2 Significant = - 3		Quality of Life.
E. Effect on development and redevelopment of housing stock	Number / degree of positive or negative effects on development and redevelopment of housing stock	Positive Impacts to development / redevelopment of housing stock: Significant = 3 Moderate = 2 Slight = 1 No effect on development or redevelopment of housing stock = 0 Negative Impacts to development / redevelopment of housing stock: Slight = - 1 Moderate = - 2 Significant = - 3		Economic Vitality; Quality of Life.

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Land Use and Economic Development				
A. Business effects: ROW, noise, traffic, parking, freight access and other.	Degree of effect on business aspects.	Improves these aspects: Significantly = 3 Moderately = 2 Slightly = 1 No effect on these aspects = 0 Creates negative effects from these aspects: Slightly = -1 Moderately = -2 Significantly = -3		Economic Vitality; Accessibility and Mobility.
B. Sustainable development effects. Consistent with Merrimack Valley Priority Growth Strategy (MVPGS).	Number / degree of positive or negative effects on sustainable development and proximity to State and/or Regional Priority Development Areas (PDA)	Positive Impacts to sustainable development: Significant = 3 Moderate = 2 Slight = 1 No effect on development or redevelopment of housing stock = 0 Negative Impacts to development / redevelopment of housing stock: Slight = - 1 Moderate = - 2 Significant = - 3	Additional points, (not above 3) if located in or near a State or Regional Priority Development Area	Economic Vitality; Consistency with State and local planned growth.

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Land Use and Economic Development (Cont.)				
C. Consistent with regional land-use and economic development plans and Merrimack Valley Priority Growth Strategy (MVPGS).	Degree of consistency with regional plans	Consistent with regional plans: Significantly = 3 Moderately = 2 Slightly = 1 Neutral = 0 Not Consistent with regional Plans: Slightly = - 1 Moderately = - 2 Significantly = - 3	Additional points (not above 3) if located in or near a Regional Priority Development Area	Economic Vitality; Consistency with State and local planned growth and economic development plans.
D. Effect on job creation.	Estimated job creation	Effect on job creation: Significant = 3 Moderate = 2 Slight = 1 Neutral = 0 Elimination of jobs: Slight = - 1 Moderate = - 2 Significant = - 3		Economic Vitality.

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Environmental Effects				
A. Air Quality / Climate effects	Green House Gas Analysis Results	Effect on Air Quality: Quantified decrease in emissions = 2 or 1 Qualitative decrease in emissions = 1 No effect on emissions = 0 Qualitative increase in emissions = -1 Quantified increase in emissions = - 2 or - 1 Climate Effects Resiliency: A culvert is being widened = 1 A facility (ex. bridge, road or trail) in a flood prone area is being raised = 1		Protect and Enhance the Environment. Preservation; Resiliency & reliability; Reduce or mitigate stormwater impacts; Contributes to meeting CMAQ Performance Measure Target of 18.3 Annual Hours of Peak Hour Excessive Delay (PHED) per Capita in the UZA
B. Water Quality / supply effects; wetlands effects.	Number / degree of positive or negative effects on water quality / supply effects; wetlands effects.	Effect on Water Quality / supply and wetlands: Positive effect: Significant = 3 Moderate = 2 Slight = 1 Neutral = 0 Negative Effect: Slight = - 1 Moderate = - 2 Significant = - 3		Protect and Enhance the Environment; Reduce or mitigate stormwater impacts.

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Environmental Effects (Cont.)				
C. Historic and cultural resource effects	Proximity / degree of positive or negative effects on historic and cultural resources	Positive effect on historic and cultural resources: Significant = 3 Moderate = 2 Slight = 1 Neutral = 0 Negative Effect: Slight = - 1 Moderate = - 2 Significant = - 3	Often considers improved access to nearby resources.	Economic Vitality; Accessibility and Mobility; Quality of Life; Enhance Travel and Tourism.
D. Effect on wildlife habitat and endangered species.	Location of project in State Estimated Habitat of Rare Wildlife or State Priority Habitat of Rare Species	Positive effect on wildlife or endangered species in a State designated area: Significant = 3 Moderate = 2 Slight = 1 Not in a wildlife or endangered species area = 0 Negative effect on wildlife or endangered species in a State designated area.: Slight = - 1 Moderate = - 2 Significant = - 3		Protect and Enhance the Environment.

The resulting Transportation Evaluation Criteria (TEC) scores for selected projects in the Merrimack Valley region that were derived by applying these criteria are shown in Appendix C. It is the goal of the MVMPO that these criteria ratings, along with information related to the readiness of projects, will make the planning process, and more specifically, the selection and prioritization of projects, more transparent to the general public. A sample project evaluation sheet showing the various criteria is in Appendix D.

The use of these TEC scores also allows the Merrimack Valley MPO to meet FAST Act requirements for programming Transportation Alternatives (TA) funding (similar to TAP funding from the previous legislation). TA funding is a set-aside of Surface Transportation Block Grant Programming (STBG) through a competitive process and, in general, helps to manage performance by focusing available funding on the highest regional priorities. It also helps to draw attention to the reader that FAST Act is a very Performance Measure - oriented piece of legislation.

Part A. 4. Public Participation

The principal objective of this document is the provision of an additional point for public access to and review of the transportation planning process. This FFYs 2021-2025 Transportation Improvement Program was developed in accordance with the Public Participation Process established for the Merrimack Valley Metropolitan Planning Organization (MVMPO). The MVMPO amended its current Public Involvement Process in March of 2017, it is contained in the MVMPO Public Participation Plan as Amended through March 2017 on the MVPC website under Transportation Reports. The Process applies to the development of the Transportation Improvement Program (TIP), the Regional Transportation Plan (RTP) and the Unified Planning Work Program (UPWP). The Public Involvement Process endorsed by the MVMPO is also used by the MVRTA as its public involvement process. The notice of public involvement and time established for review and comment for the development of this TIP satisfies the Program of Project requirements established by the Federal Transit Administration (FTA).

The Merrimack Valley MPO's Public Participation Plan as amended through March 2017, reflects the consultation requirements identified in the FAST Act of 2015 and prior federal transportation authorizations, and the existing transportation planning regulations developed by the U.S. Department of Transportation for the development of Regional Transportation Plans and Transportation Improvement Programs. This document identifies a number of stakeholders to be consulted in developing these documents. In developing the Draft FFYs 2021-2025 Transportation Improvement Program, all MVMPO stakeholders were given notice that the process of developing the FFYs 2021-

2025 TIP was beginning. Stakeholders were also notified of the availability of the draft document for public review and comment.

Public Participation Plan Stakeholder List

Listed below are categories of interested individuals, organizations and other stakeholders (Interested Parties) identified by the MVMPO for inclusion in the PPP. They are defined based on the individual groups identified in the FAST Act of 2015 and prior federal transportation authorizations, and the existing transportation planning regulations developed by the U.S. Department of Transportation.

The MVMPO continues to add individuals, organizations or other stakeholders to this list and their addition is not considered an act requiring the formal amendment of the PPP. Similarly, any of the individuals or organizations identified below may request to be removed from the mailing list and such action does not necessitate a formal PPP amendment.

Individuals, including:

- Interested individuals, business persons
- Merrimack Valley Transportation Committee (MVTC) members
- Libraries
- City/Town Clerks
- MVMPO Region Congressional Delegation
- MVMPO Region Legislative Delegation

Affected public agencies, including:

- Boards of Selectmen / City Councils
- Chief Elected Officials
- City and Town Engineers
- Federal Emergency Management Agency
- Federal Highway Administration
- Federal Transit Administration
- Greater Derry-Salem Cooperative Alliance for Regional Transportation (CART)
- Local Departments of Public Works
- Local Police Departments
- Local Traffic and Safety Committees

- Massachusetts Department of Environmental Protection
- MBTA Commuter Rail Officials
- Massachusetts Executive Office of Housing and Economic Development
- Massachusetts Executive Office of Public Safety and Security
- MassDOT
- Merrimack Valley Regional Transit Authority
- Metropolitan Area Planning Council
- Nashua Regional Planning Commission
- Rockingham Planning Commission
- U.S. Environmental Protection Agency

Representatives of public transportation employees, including:

- Truck Driver's Union Local #170

Freight shippers, including:

- P.J. Murphy Transportation
- JB Hunt
- Estes Express
- Shaheen Brothers
- ABF Freight
- PanAm Railways
- Bonney's Express

Providers of freight transportation services, including:

- United Parcel Service
- Federal Express

Private profit- and non-profit providers of transportation in the region. including:

- Assist Incorporated
- C&J Transportation
- Cape Ann Transit Authority (CATA)
- Central Wheelchair and Van Transportation
- EMT Corporation
- Local Taxi Companies
- Northern Essex Elder Transportation (NEET)
- Other Transportation Providers Identified in the Regional Transportation Plan
- The Coach Company
- TransCare

Representatives of users of public transportation. including:

- American Training, Inc.
- Cambridge College
- Community Action Incorporated (CAI)
- Emmaus, Inc.
- Elder Services of the Merrimack Valley
- Local Senior Centers/Councils on Aging
- Northeast Independent Living Program
- Merrimack College
- Merrimack Valley Hospice
- Merrimack Valley Workforce Investment Board, Inc.
- Northern Essex Community College
- Office of Employment Services

Representatives of bicyclist and pedestrian advocacy organizations.

including:

- Andover Trails Committee
- Bay Circuit Alliance
- Coastal Trails Coalition
- Essex National Heritage Commission
- Essex County Trail Association
- Groveland Open Space and Recreation Committee

- MassBike
- Merrimack Valley Off-Road Trails Committee

Representatives for the community of individuals with disabilities.

including:

- Executive Office of Health and Human Services
- Northeast Independent Living Program
- Department of Mental Health
- Massachusetts Commission for the Blind
- Area Nursing Homes
- United Cerebral Palsy
- CLASS Inc.
- Fidelity House
- Association of Retarded Persons (ARC)

Organizations and facilities that serve low-income and minority households who traditionally have been underserved by existing transportation systems and may face challenges accessing employment and other services. includ-

ing:

- MVRTA Transit Centers in Amesbury, Haverhill and Lawrence (post notices)
- Social Security Offices
- Employment Offices (post notices)
- Ethnic, Civic/Social, Faith-Based and Veterans Organizations
- Merrimack Valley Goodwill
- Area Hospitals
- Salvation Army
- Groundwork Lawrence
- Lawrence Community Works
- United Way of the Merrimack Valley
- Methuen Arlington Neighborhood, Inc.
- YMCA/YWCA

Agencies and officials responsible for other planning activities within the MPA that are affected by transportation, including:

a. State and local planned growth:

1. Area Planning Boards
2. Mass Development
3. Merrimack Valley Transportation Management Association
4. The Junction Transportation Management Organization

b. Economic development:

1. Chambers of Commerce
2. Economic Development Administration
3. Local Community Development Directors
4. Merrimack Valley Economic Development Council

c. Environmental agencies and federal lands:

1. Andover Village Improvement Society (AVIS)
2. Essex County Greenbelt Association
3. Local Conservation Commissions
4. MassRiverways
5. Merrimack River Watershed Council
6. National Park Service
7. Powwow River Watershed Association
8. Parker River Clean Water Association
9. Shawsheen River Watershed Association
10. Trustees of Reservations
11. U.S. Environmental Protection Agency (EPA)
12. U.S. Fish and Wildlife Service

d. Airport operations:

1. Lawrence Airport Commission

e. Other Interested Parties

1. Conservation Law Foundation

The notices were sent directly to almost 500 email addressees representing these groups. Notices were put in newspapers and on cable community television directing the public to the MVPC website which contained the notice and the materials for review.

In addition to these direct mailings, and in accordance with this process, public notice of the Draft FFYs 2021-2025 Transportation Improvement Program was published in the *Lawrence Eagle Tribune*, *Newburyport Daily News*, *Haverhill Gazette* (Published Weekly) and *Rumbo News* informing the public of its right to comment on the document which would be available on the MVPC website from May 1, 2020 through May 21, 2020. It said that comments would be received through May 21, 2020 and that two separate Virtual public hearings on the document would take place on May 13, 2020 from 1:00 p.m. to 2:00 p.m. and from 6:00 p.m. to 7:00 p.m. The meetings were held Virtually due to COVID-19 Virus restrictions. The MVMPO will summarize comments that are received during the 21-day review and comment period and will include this summary in the Final FFYs 2021-2025 TIP.

Public input in developing the TIP was sought at the following meetings in 2019 and 2020:

- October 23, 2019, January 22, 2020, February 26, 2020, March 25, 2020 (held Virtually due to COVID-19 Virus restrictions), and April 22, 2020 (held Virtually due to COVID-19 Virus restrictions) MVMPO Meetings;
- February 6, 2020, March 5, 2020 MVRTA Advisory Board meetings held at the MVRTA Office;
- February 20, 2020 and April 16, 2020 (held Virtually due to COVID-19 Virus restrictions) Merrimack Valley Planning Commission (MVPC) meetings;
- February 12, 2020 DPW Directors/Stormwater Collaborative Meeting

The above meetings were held at the Merrimack Valley Planning Commission unless otherwise stated.

Part A. 5. Amendment/ Adjustment Procedures

A few changes have been made to the TIP Amendment/ Adjustment procedures beginning with the FFYs 2021 to 2025 TIP to align with MassDOT's Amendment procedures for the State Transportation Improvement Program (STIP). The changes are:

- Cost change thresholds constituting a Major change requiring an Amendment will apply to decreases in cost, as well as increases, approved by MassDOT Office of Transportation Planning (OTP), and will apply to projects in any Fiscal Year, not just Fiscal Year 1;
- Moving a project between any years, not just advancement of other than a Fiscal Year 2 project, requires an Amendment.
- Major change in project/ project phase initiation dates or design has been changed to major change in project scope large enough to necessitate an additional review by MassDOT's Project Review Committee (PRC) typically accompanied by major project cost change.
- Adding Exceptions to these procedures and Exception to 21-day review period. (See final paragraph of the Procedures below.)

The following amendment/adjustment procedures are hereby adopted to consist of the following:

Minor adjustments to the TIP do not require formal MPO action and can be made via the administrative action of the Merrimack Valley MPO. These minor adjustments are limited to:

- Changing the scope and description of a project as long as they are minor changes;
- Changing funding amounts that are less than a ten percent increase in project cost if project cost is more than \$5 million dollars;
- Changing funding amounts that are an increase of less than \$500,000 if project cost is \$5 million dollars or less;
- Changing funding sources.

Major changes continue to require MPO action through the formal amendment process. Major changes would require a twenty-one-day public review and comment period that includes a public hearing. These changes include, but are not limited to:

- Moving a currently programmed project earlier or later than an originally programmed year;
- MassDOT Office of Transportation Planning (OTP) approved ten percent or more increases, or decreases, in the construction cost estimate for a project costing more than \$5 million dollars;

- MassDOT OTP approved project cost increase, or decrease, of \$500,000 or more, in the construction cost estimate for a project costing \$5 million dollars or less;
- Adding a new project.
- Deleting a project
- Major change in project scope large enough to necessitate an additional review by MassDOT's Project Review Committee (PRC) – typically accompanied by major project cost change.
- Exceptions

Although the MVMPO typically holds a 21-day public comment period for amendments, in the event of extenuating circumstances beyond the agency's control, the comment period may be shortened or waived in consultation with FHWA Division Office and/or the FTA Regional Office. Additionally, MassDOT may make exceptions to the procedures outlined above and treat amendments as adjustments and/or adjustments as administrative modifications, but these exceptions will also require coordination with and concurrence by MassDOT's federal partners and the affected MPO.

Part A. 6. High Priority Projects

SAFETEA-LU contained a number of earmarked transportation projects that were to receive federal funding. Specific funding amounts were obligated to each of these projects, but no additional funding was included in SAFETEA-LU to complete them. Consequently, states with these projects must implement them within the annual federal authorization limits established in the legislation. The Merrimack Valley region contains eleven such projects which are shown below along with their status:

<u>Highway High Priority Projects</u>	<u>Status</u>
Amesbury/Newburyport – Rehabilitation of I-95 Whittier Bridge	Project Complete
Andover – Design, Engineering and Construction at I-93 The Junction Interchange, (Andover, Tewksbury, and Wilmington)	Project Deactivated
Haverhill – Construct Haverhill intermodal center access and vehicle capacity improvements.	Project Complete
Lawrence – Design and construct Canal and Union Street Corridor improvements.	Project Complete
Lawrence – Construct access improvements to the Lawrence Gateway Project.	Project Complete
Methuen – Design, engineering and construction of Methuen Rotary alternative at I-93 and Routes 110 and 113.	Project Complete
Newbury – Rehabilitation and paving of Parker River Road	Project Complete
North Andover – Improvements to Mass. Ave., Andover St., Osgood St., Salem St and Johnson St. in the Old Town Center of North Andover	Project Complete
Parker River National Wildlife Refuge – Preliminary engineering for Rehabilitation and paving of Sunset Drive in National Wildlife Refuge	Project Complete
Salisbury to Boxford – Design, Engineer, Permit and Construct “Border to Boston Bikeway” rail trail project	Project Under Design

<u>Transit Projects for Bus and Bus-Related Facilities and Clean Fuels Grant Program</u>	<u>Status</u>
Haverhill – Design and Construct Intermodal Transit Parking Improvements.	Project Complete (see above)
Lawrence – Gateway Intermodal and Quadrant Area Reuse Project.	Project Complete (see above)
Newburyport – Design and Construct Intermodal Facility	Project Complete

Part A. 7. Advance Construction

Advance Construction is a Federal-aid fund management tool, which as described by the Federal Highway Administration website:

“...allows states to begin a project even in the absence of sufficient Federal-aid obligation authority to cover the Federal share of project costs. It is codified in Title 23, Section 115. Advance construction eliminates the need to set aside full obligational authority before starting projects...At some future date when the state does have sufficient obligational authority, it may convert an advance-constructed project to a Federal-aid project by obligating the permissible share of its Federal-aid funds and receiving subsequent reimbursements.”

In other words, the state pays for the project with non-Federal-aid funds to begin with and can later seek reimbursement of the Federal share of the funding category’s project cost by obligating Federal-aid funding in future years.

Projects must meet the following criteria before they can be designated to use the Advanced Construction (AC) funding mechanism:

1. The project’s estimated Federal participating cost exceeds the **total** regional annual target (i.e. sum of HSIP, CMAQ, TA and Non HSIP/CMAQ/TA), and
2. Construction, based on an engineering review of the project, will take place during all the years for which federal funding is programmed.

The following projects are programmed in the FFY 2021-2025 TIP using this Advance Construction (AC) method:

- | | |
|----------------|--|
| Haverhill – | Bridge Replacement, H-12-039, I-495 (NB & SB) over Merrimack River |
| North Andover- | Corridor Improvements on Route 114, between Rt 125 (Andover St) & Stop & Shop Driveway |
| Haverhill - | Bridge Replacement, H-12-040, I-495 (NB & SB) over Merrimack River |
| Haverhill - | Bridge Replacement, H-12-007 & H-12-025, Bridge Street (SR 125) over Merrimack River and the Abandoned B&M RR (Proposed Bikeway) |
| Andover - | Bridge Rehabilitation, A-09-036, I-495 over St 28 (SB), A-09-037, I-495 over B&M and MBTA, A-09-041, I-495 over St 28 (NB) |

Part A. 8. Transportation Funding Programs

Projects listed in the TIP must show the sources of funding that will be used to complete the project. The projects in the FFYs 2021 -2025 TIP are slated to use funding from the following Federal-aid funding programs identified in the FAST Act federal transportation funding authorization. Please note that in some cases Federal-aid funding is from older funding programs established in earlier legislation such as SAFETEA-LU and MAP-21. Projects may also receive non-Federal Aid funding which is shown in the project listings.

Highway Projects

Bridge Replacement and Rehabilitation ((BR) (continued in FAST Act)) - funds replacement and repair of Structurally Deficient or unsafe bridges in urban and rural areas on any public road. Bridges can be on the federal aid system (BR ON) or off system (BR OFF).

Funding: Federal - 80%, State - 20%

Congestion Mitigation and Air Quality Improvement Program ((CMAQ) (continued in FAST Act)) – funds projects that reduce congestion and improve air quality.

Funding: Federal - 80%, State - 20%

High Priority Projects (HPP) (Carryover from SAFETEA-LU) – funds up to 80% of the costs of specific transportation projects identified in SAFETEA-LU. These projects have a separate allocation, but do not receive additional funds, and are therefore subject to the state’s federal authorization limit.

Funding: Federal- 80%, State – 20%

Highway Safety Improvement Program ((HSIP) (continued in FAST Act)) - funds safety improvement projects at high crash locations and Railway-Highway Crossings.

Funding: Federal - 90%, State – 10%

National Highway Performance Program (NHPP) (continued in FAST Act) - funds projects on all National Highway System Roadways.

Funding: Varies, generally Federal - 80%, State – 20%, but for the Interstate System, Federal - 90%, State – 10%

Non-Federal Aid (NFA) - funds construction, reconstruction, and improvement projects on roads and bridges in urban and rural areas.

Funding: State - 100% (Transportation Bond Bill), or Private - 100%

Transportation Funding Programs - Highway Projects (Continued)

Surface Transportation Block Grant Program (STBG) (STP) – (also known as the Surface Transportation Program (STP) from previous legislation) - funding for any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.

STP Enhancements ((STP E) ((SAFETEA-LU; not continued in MAP-21)) - a portion of Surface Transportation Program funding for enhancement projects chosen by states and localities.

Funding: Federal -80%, State - 20%

Transportation Alternatives Program (TAP) – (MAP-21, replaced in FAST Act with Transportation Alternatives (TA) set aside of STBG funds) - funds for projects which can be defined as transportation alternatives including bicycle and pedestrian facilities, enhanced mobility, community improvements, environmental mitigations, and various other types of transportation alternatives as defined in FAST Act.

Funding: Federal - 80%, State - 20%

Transit Projects

Projects from the following Federal-aid (FAST Act) and non-Federal-aid funding categories are shown in the FFY 2021-2025 TIP.

Section 5307 (Capital and Planning) (continued in FAST Act) - funds routine capital projects and planning assistance in urban areas. This is an urban formula grant program for MVRTA Preventative Maintenance and ADA costs.

Funding: Federal - 80%, State - 20% (Bond Issue Funds) (capital and planning expenses)

State funding for the MVRTA's operating budget is provided through an agreement with the Transit Division of MassDOT. Local funds are derived from community assessments based on the number of route miles and special services operated within each community.

The Merrimack Valley Planning Commission will provide the 20% match for the planning activities it will conduct for the Merrimack Valley Regional Transit Authority under its Section 5307 transit planning contract with the Authority.

Section 5309 (continued in FAST Act) - funds capital projects in urban areas which can be characterized as major capital investments in public transportation equipment and facilities. This is a discretionary grant program.

Funding: Federal - 80%, State - 20% (Transportation Bond Issue)

Section 5310 (continued in FAST Act)- provides capital funds, through the State, to private non-profit corporations and organizations to assist them in providing transportation services to meet the special needs of elderly and disabled persons.

Funding: Federal - 80%, Funding Applicant - 20%

Section 5339 (continued in FAST Act) - provides capital funds, through the State, for bus and bus related equipment and facilities.

Funding: Federal - 80%, Funding Applicant - 20%

Organization of Project Listings – Highway Projects

The TIP includes sections that identify the MPO's priority road and bridge projects using a format prescribed by MassDOT's Office of Transportation Planning. MassDOT is aligning the FFYs 2021 to 2025 Statewide Transportation Improvement Program (STIP) with the MassDOT Capital Investment Plan (CIP). The CIP identifies three capital planning priorities: reliability, modernization and expansion investments. The STIP will now align program names with CIP investment priorities as follows:

Reliability

- Bridge program (including investments in inspections, systematic maintenance, on-system NHS bridges, on-system non-NHS bridges, and off-system bridges)
- Interstate pavement program
- Non-Interstate DOT pavement program
- Roadway improvements program
- Safety improvements program

Modernization

- ADA retrofits program
- Intersection improvements program
- Intelligent Transportation Systems program
- Roadway reconstruction program

Expansion

- Bicycles and Pedestrians program
- Capacity program

For the FFYs 2021 to 2025 TIP, the Regional Target funding amounts, distributed via statewide formula to the regions across the state, are initially programmed by the regions as STBG (also known as STP) funding category projects and MassDOT will inform regions if projects are to be partitioned by the HSIP, CMAQ and TAP categories.

Section 1A / Regionally Prioritized Projects

- Federal-Aid STBG Projects Using MVMPO Target Authority (STBG)
- Federal-Aid HSIP Projects Using MVMPO Target (HSIP)
- Federal-Aid CMAQ Projects Using MVMPO Target (CMAQ)
- Federal-Aid TAP (now set aside of STBG funding) Projects Using MVMPO Target (TAP)

Section 1B / Earmark or Discretionary Grant Funded Projects (Provided by MassDOT)

- Federal-Aid Earmark or Discretionary Grant Funded Projects

Section 2A / State Prioritized Reliability Projects (Provided by MassDOT)

- Bridge Program / Inspections
- Bridge Program / Off-System
- Bridge Program / On-System (NHS)
- Bridge Program / On-System (Non-NHS)
- Bridge Program / Systematic Maintenance
- Interstate Pavement
- Non-Interstate Pavement
- Roadway Improvements
- Safety Improvements

Section 2B / State Prioritized Modernization Projects (Provided by MassDOT)

- ADA Retrofits
- Intersection Improvements
- Intelligent Transportation Systems
- Roadway Reconstruction

Section 2C / State Prioritized Expansion Projects (Provided by MassDOT)

- Bicycles and Pedestrians
- Capacity

Section 3 / Planning / Adjustments / Pass-throughs (Provided by MassDOT)

- Planning / Adjustments / Pass-throughs

Section 4 / Non-Federally Aided Projects (Provided by MassDOT)

- Non-Federal Aid

Each highway project in the TIP contains the following information:

Amendment/Adjustment Type – used to identify the type of amendment when changes are made to the document.

STIP Program – STIP program names as defined in the Organization of Highway Project Listings section above.

MassDOT Project ID - project identification numbers given by MassDOT for each highway and bridge project.

MPO – identifies the Metropolitan Planning Organization within which the project is located.

Municipality Name – identifies the community where the project is located.

MassDOT Project Description–includes the community, or communities, in which the project is located and a brief description of work to be funded under the project. This description is exactly the same as MassDOT has input to its project information pages.

MassDOT District -MassDOT highway district number (Merrimack Valley MPO is part of District 4);

Funding Source - abbreviation for the funding category from which funding is expected. (Funding categories and abbreviations are explained at the beginning of Part A.8.);

Total Programmed Funds- estimated cost of project in Fiscal Year in which advertising is expected; *

Federal Funds – portion of Total Programmed Funds provided by Federal Funding;

Non-Federal Funds– portion of Total Programmed Funds not provided by Federal Funding, but required as matching funds in order to receive Federal Funds;

Additional Information - a) Planning / Design / 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.

* Inflation increases project costs and therefore **the project costs** have been increased by **4% each** future year of the TIP.

Organization of Project Listings – Transit Projects

Each transit project in the TIP contains the following information:

Project Number – Transit Project number from MassDOT

Agency – MVRTA (Merrimack Valley Regional Transit Authority) is the regional transit authority;

Line Item – The FTA Line Item number

Project Description – a brief description of work to be funded under the project;

Carry Over – indicates whether Carry over funding is being used;

Federal Funds – Portion of Total Programmed Funds provided by Federal Funding;

RTACAP – Regional Transit Authority State Capital Assistance - portion of Total Programmed Funds not provided by Federal Funding, but required as matching funds in order to receive Federal Funds, coming from State source;

SCA – State Contract Assistance - portion of Total Programmed Funds not provided by Federal Funding, but required as matching funds in order to receive Federal Funds, coming from State source;

TDC –Transportation Development Credits, and

Local Funds – portion of Total Programmed Funds not provided by Federal Funding but required as matching funds in order to receive Federal Funds, coming from local funding sources other than State funding sources.

Total - estimated total cost of project.

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Part B. Project Listings
Highway Projects



Merrimack Valley Region Program

STIP: 2021 - 2025 (D)

Program	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Total Programmed Funds	Federal Funds	Non-Federal Funds	
Federal Fiscal Year 2021										
Section 1A / Regionally Prioritized Projects							\$10,346,830	\$8,277,464	\$2,069,366	
Bicycle and Pedestrian	608298	Merrimack Valley	Groveland	GROVELAND- GROVELAND COMMUNITY TRAIL, FROM MAIN STREET TO KING STREET	4	STBG	\$1,984,861	\$1,587,889	\$396,972	
Roadway Reconstruction	608761	Merrimack Valley	Haverhill	HAVERHILL- INTERSECTION RECONSTRUCTION ON ROUTE 108 (NEWTON ROAD) AT ROUTE 110 (KENOZA AVENUE AND AMESBURY ROAD)	4	STBG	\$1,980,067	\$1,584,054	\$396,013	
Roadway Reconstruction	609251	Merrimack Valley	Lawrence	LAWRENCE- INTERSECTION IMPROVEMENTS AT SOUTH BROADWAY (ROUTE 28) AND MOUNT VERNON STREET	4	STBG	\$1,013,739	\$810,991	\$202,748	
Bicycle and Pedestrian	610663	Merrimack Valley	Newburyport	NEWBURYPORT- RIVERFRONT CLIPPER CITY RAIL TRAIL CONSTRUCTION	4	STBG	\$1,900,802	\$1,520,642	\$380,160	
Flex to FTA	S10777	Merrimack Valley		MVRTA FLEX TO FTA TO REPLACE YR 2009 BUSES WITH NEW BUSES DELIVERY 2022 (7 of 9)		STBG	\$3,467,361	\$2,773,889	\$693,472	
							STBG Programmed	\$10,346,830	\$8,277,464	\$2,069,366
Total Programmed for Merrimack Valley Region Projects*							\$10,346,830	\$8,277,464	\$2,069,366	
Program Target for Merrimack Valley Region Projects							\$10,778,653	\$8,622,922	\$2,155,731	
Target Funds Available for Merrimack Valley Region Projects							\$431,823	\$345,458	\$86,365	
Section 2A / State Prioritized Reliability Projects							\$15,305,880	\$12,244,704	\$3,061,176	
Bridge On-system NHS	605306	Merrimack Valley	Haverhill	HAVERHILL- BRIDGE REPLACEMENT, H-12-039, I-495 (NB & SB) OVER MERRIMACK RIVER	4	NHPP	\$15,305,880	\$12,244,704	\$3,061,176	

* Only includes funds counting against obligation authority



Merrimack Valley Region Program

STIP: 2021 - 2025 (D)

Program	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2022									
Section 1A / Regionally Prioritized Projects							\$2,578,160	\$2,062,528	\$515,632
Intersection Improvements	609509	Merrimack Valley	Lawrence	LAWRENCE- INTERSECTION IMPROVEMENTS AT MERRIMACK STREET AND SOUTH BROADWAY (ROUTE 28)	4	STBG	\$1,610,960	\$1,288,768	\$322,192
Intersection Improvements	610658	Merrimack Valley	Methuen	METHUEN- INTERSECTION IMPROVEMENTS AT RIVERSIDE DRIVE AND BURNHAM ROAD	4	STBG	\$967,200	\$773,760	\$193,440
STBG Programmed							\$2,578,160	\$2,062,528	\$515,632
Total Programmed for Merrimack Valley Region Projects*							\$2,578,160	\$2,062,528	\$515,632
Program Target for Merrimack Valley Region Projects							\$10,998,131	\$8,798,505	\$2,199,626
Target Funds Available for Merrimack Valley Region Projects							\$8,419,971	\$6,735,977	\$1,683,994
Section 2A / State Prioritized Reliability Projects							\$28,010,883	\$22,408,706	\$5,602,177
Non-Interstate Pavement	608494	Merrimack Valley	Multiple	NEWBURY- NEWBURYPORT- SALISBURY- RESURFACING AND RELATED WORK ON ROUTE 1	4	NHPP	\$9,807,200	\$7,845,760	\$1,961,440
Bridge On-system NHS	605306	Merrimack Valley	Haverhill	HAVERHILL- BRIDGE REPLACEMENT, H-12-039, I-495 (NB & SB) OVER MERRIMACK RIVER	4	NHPP	\$18,203,683	\$14,562,946	\$3,640,737
Section 2C / State Prioritized Expansion Projects							\$2,520,436	\$2,016,349	\$504,087
Bicycle and Pedestrian	607541	Merrimack Valley	Multiple	GEORGETOWN- BOXFORD- BORDER TO BOSTON TRAIL, FROM GEORGETOWN ROAD TO WEST MAIN STREET (ROUTE 97)	4	CMAQ	\$2,520,436	\$2,016,349	\$504,087

* Only includes funds counting against obligation authority



Merrimack Valley Region Program

STIP: 2021 - 2025 (D)

Program	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Total Programmed Funds	Federal Funds	Non-Federal Funds	
Federal Fiscal Year 2023										
Section 1A / Regionally Prioritized Projects							\$11,238,340	\$8,990,672	\$2,247,668	
Roadway Reconstruction	602202	Merrimack Valley	Salisbury	SALISBURY- RECONSTRUCTION OF ROUTE 1 (LAFAYETTE ROAD)	4	STBG	\$6,837,284	\$5,469,827	\$1,367,457	
Roadway Reconstruction	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN ROUTE 125 (ANDOVER STREET) & STOP & SHOP DRIVEWAY	4	STBG	\$4,401,056	\$3,520,845	\$880,211	
							STBG Programmed	\$11,238,340	\$8,990,672	\$2,247,668
Total Programmed for Merrimack Valley Region Projects*							\$11,238,340	\$8,990,672	\$2,247,668	
Program Target for Merrimack Valley Region Projects							\$11,238,340	\$8,990,672	\$2,247,668	
Target Funds Available for Merrimack Valley Region Projects							\$0	\$0	\$0	
Section 2A / State Prioritized Reliability Projects							\$30,859,874	\$24,687,899	\$6,171,975	
Bridge On-system NHS	605306	Merrimack Valley	Haverhill	HAVERHILL- BRIDGE REPLACEMENT, H-12-039, I-495 (NB & SB) OVER MERRIMACK RIVER	4	NHPP	\$12,994,233	\$10,395,386	\$2,598,847	
Bridge On-system NHS	609466	Merrimack Valley	Haverhill	HAVERHILL- BRIDGE REPLACEMENT, H-12-040, I-495 (NB & SB) OVER MERRIMACK RIVER	4	NHPP	\$17,865,641	\$14,292,513	\$3,573,128	
Section 2C / State Prioritized Expansion Projects							\$16,087,005	\$12,869,604	\$3,217,401	
Bicycle and Pedestrian	608930	Merrimack Valley	Lawrence	LAWRENCE- LAWRENCE MANCHESTER RAIL CORRIDOR (LMRC) RAIL TRAIL	4	CMAQ	\$16,087,005	\$12,869,604	\$3,217,401	

* Only includes funds counting against obligation authority



Merrimack Valley Region Program

STIP: 2021 - 2025 (D)

Program	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Total Programmed Funds	Federal Funds	Non-Federal Funds	
Federal Fiscal Year 2024										
Section 1A / Regionally Prioritized Projects							\$11,385,638	\$9,108,510	\$2,277,128	
Roadway Reconstruction	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN ROUTE 125 (ANDOVER STREET) & STOP & SHOP DRIVEWAY	4	STBG	\$11,385,638	\$9,108,510	\$2,277,128	
							STBG Programmed	\$11,385,638	\$9,108,510	\$2,277,128
Total Programmed for Merrimack Valley Region Projects*							\$11,385,638	\$9,108,510	\$2,277,128	
Program Target for Merrimack Valley Region Projects							\$11,385,638	\$9,108,510	\$2,277,128	
Target Funds Available for Merrimack Valley Region Projects							\$0	\$0	\$0	
Section 2A / State Prioritized Reliability Projects							\$76,149,623	\$60,919,698	\$15,229,925	
Bridge On-system NHS	606522	Merrimack Valley	Andover	ANDOVER- BRIDGE REHABILITATION, A-09-036, I-495 OVER ST 28 (SB), A-09-037, I-495 OVER B&M AND MBTA, A-09-041, I-495 OVER ST 28 (NB)	4	NHPP	\$15,056,661	\$12,045,329	\$3,011,332	
Bridge On-system NHS	609466	Merrimack Valley	Haverhill	HAVERHILL- BRIDGE REPLACEMENT, H-12-040, I-495 (NB & SB) OVER MERRIMACK RIVER	4	NHPP	\$43,180,558	\$34,544,446	\$8,636,112	
Bridge On-system NHS	605304	Merrimack Valley	Haverhill	HAVERHILL- BRIDGE REPLACEMENT, H-12-007 & H-12-025, BRIDGE STREET (SR 125) OVER THE MERRIMACK RIVER AND THE ABANDONED B&M RR (PROPOSED BIKEWAY)	4	NHPP	\$17,912,404	\$14,329,923	\$3,582,481	
Section 2C / State Prioritized Expansion Projects							\$5,685,060	\$4,548,048	\$1,137,012	
Bicycle and Pedestrian	607542	Merrimack Valley	Multiple	GEORGETOWN- NEWBURY- BORDER TO BOSTON TRAIL (NORTHERN GEORGETOWN TO BYFIELD SECTION)	4	CMAQ	\$5,685,060	\$4,548,048	\$1,137,012	

* Only includes funds counting against obligation authority



Merrimack Valley Region Program

STIP: 2021 - 2025 (D)									
Program	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2025									
Section 1A / Regionally Prioritized Projects							\$11,119,839	\$8,895,871	\$2,223,968
Roadway Reconstruction	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN ROUTE 125 (ANDOVER STREET) & STOP & SHOP DRIVEWAY	4	STBG	\$11,119,839	\$8,895,871	\$2,223,968
STBG Programmed							\$11,119,839	\$8,895,871	\$2,223,968
Total Programmed for Merrimack Valley Region Projects*							\$11,119,839	\$8,895,871	\$2,223,968
Program Target for Merrimack Valley Region Projects							\$11,119,839	\$8,895,871	\$2,223,968
Target Funds Available for Merrimack Valley Region Projects							\$0	\$0	\$0
Section 2A / State Prioritized Reliability Projects							\$82,647,444	\$66,117,955	\$16,529,489
Bridge On-system NHS	606522	Merrimack Valley	Andover	ANDOVER- BRIDGE REHABILITATION, A-09-036, I-495 OVER ST 28 (SB), A-09-037, I-495 OVER B&M AND MBTA, A-09-041, I-495 OVER ST 28 (NB)	4	NHPP	\$20,997,351	\$16,797,881	\$4,199,470
Bridge On-system NHS	609466	Merrimack Valley	Haverhill	HAVERHILL- BRIDGE REPLACEMENT, H-12-040, I-495 (NB & SB) OVER MERRIMACK RIVER	4	NHPP	\$33,701,001	\$26,960,801	\$6,740,200
Bridge On-system NHS	605304	Merrimack Valley	Haverhill	HAVERHILL- BRIDGE REPLACEMENT, H-12-007 & H-12-025, BRIDGE STREET (SR 125) OVER THE MERRIMACK RIVER AND THE ABANDONED B&M RR (PROPOSED BIKEWAY)	4	NHPP	\$27,949,092	\$22,359,274	\$5,589,818
Section 2B / State Prioritized Modernization Projects							\$2,368,068	\$2,131,261	\$236,807
Intersection Improvements	609392	Merrimack Valley	Rowley	ROWLEY- SAFETY IMPROVEMENTS AT ROUTE 1, CENTRAL AND GLEN STREETS	4	HSIP	\$2,368,068	\$2,131,261	\$236,807
Merrimack Valley Region Total Program Summary							\$306,303,080	\$245,279,271	\$61,023,809

* Only includes funds counting against obligation authority

Part B. Project Listings (Cont.)

Transit Projects

**TIP FFYs 2021 – 2025 Transit Projects
2021**

FTA Section 5307										
Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	RTACAP	SCA	TDC	Local Funds	Total
RTD0008602	MVRTA	114211	SGR Replace 1 model yr 2016 supervisory vehicle		\$38,320	\$9,580	\$0	\$0	\$0	\$47,900
	MVRTA		Replace Model Yr 2009 buses delivery 2022 (2 of 9)		\$495,337	\$495,337				\$990,674
RTD0009132	MVRTA	114409	SGR Replace Security Camera system at McGovern Center	2020 - \$104,800	\$104,800	\$26,200				\$131,000
RTD0008595	MVRTA	300901	OPERATING ASSISTANCE		\$558,120	\$0	\$558,120	\$0	\$0	\$1,116,240

**TIP FFYs 2021 – 2025 Transit Projects
2021 (Cont.)**

FTA Section 5307 (Cont.)										
Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	RTACAP	SCA	TDC	Local Funds	Total
RTD0008592	MVRTA	117A00	PREVENTIVE MAINTENANCE		\$2,796,775	\$0	\$699,195	\$0	\$0	\$3,495,970
RTD0008594	MVRTA	442400	SHORT RANGE TRANSIT PLANNING		\$80,000	\$0	\$0	\$0	\$20,000	\$100,000
RTD0009131	MVRTA	114305	Riverbank stabilization Construction	2020 - \$1,400,265	\$1,400,265	\$350,065	\$0	\$0	\$0	\$1,750,330
RTD0008596	MVRTA	111215	Replace 16 Model Yr 2015 vans with new Delivery 2021		\$590,240	\$590,240	\$0	\$0	\$0	\$1,180,480

**TIP FFYs 2021 – 2025 Transit Projects
2021 (Cont.)**

FTA Section 5307 (Cont.)										
Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	RTACAP	SCA	TDC	Local Funds	Total
RTD0008593	MVRTA	117C00	NON-FIXED ROUTE ADA PARA SERVICE		\$1,392,850	\$0	\$348,215	\$0	\$0	\$1,741,065
FTA Section 5307 Total					\$7,456,707	\$1,471,422	\$1,605,530	\$0	\$20,000	\$10,553,659
Non-Federal Aid										
Project Number	Agency	Line Item	Project Description		Federal Funds	RTACAP	SCA	TDC	Local Funds	Total
	MVRTA		MVRTA FLEX TO FTA TO REPLACE YR 2009 BUSES WITH NEW BUSES DELIVERY 2022 (7 OF 9) (STBG MATCH ON HWY TIP PROJECT #S10777) (NON-FEDERAL AID)			\$693,472				\$693,472
Non-Federal Aid Total						\$693,472				\$693,472

**TIP FFYs 2021 – 2025 Transit Projects
2022**

FTA Section 5307										
Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	RTACAP	SCA	TDC	Local Funds	Total
RTD0008609	MVRTA	114211	SGR Replace 2 model year 2016 supervisory vehicles		\$78,190	\$19,550	\$0	\$0	\$0	\$97,740
RTD0008597	MVRTA	117A00	PREVENTIVE MAINTENANCE		\$2,889,070	\$0	\$722,265	\$0	\$0	\$3,611,335
RTD0008599	MVRTA	442400	SHORT RANGE TRANSIT PLANNING		\$80,000	\$0	\$0	\$0	\$20,000	\$100,000
RTD0008600	MVRTA	300901	OPERATING ASSISTANCE		\$644,945	\$0	\$644,945	\$0	\$0	\$1,289,890
RTD0008598	MVRTA	117C00	NON-FIXED ROUTE ADA PARA SERVICE		\$1,441,305	\$0	\$360,325	\$0	\$0	\$1,801,630
Federal Aid Total					\$5,133,510	\$19,550	\$1,727,535		\$20,000	\$6,900,595

**TIP FFYs 2021 – 2025 Transit Projects
2023**

FTA Section 5307										
Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	RTACAP	SCA	TDC	Local Funds	Total
RTD0008604	MVRTA	300901	OPERATING ASSISTANCE		\$739,365	\$0	\$739,365	\$0	\$0	\$1,478,730
RTD0008606	MVRTA	111202	Replace 4 Model Yr 2011 buses delivery 2023		\$1,004,800	\$1,004,800		\$0	\$0	\$2,009,600
RTD0008960	MVRTA	114211	SGR Replace 1 model year 2017 supervisory vehicle		\$40,265	\$10,070	\$0	\$0	\$0	\$50,335
RTD0008608	MVRTA	442400	SHORT RANGE TRANSIT PLANNING		\$80,000	\$0		\$0	\$20,000	\$100,000
RTD0008603	MVRTA	117A00	PREVENTIVE MAINTENANCE		\$2,984,410	\$0	\$746,100	\$0	\$0	\$3,730,510

**TIP FFYs 2021 – 2025 Transit Projects
2023 (Cont.)**

FTA Section 5307 (Cont.)										
Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	RTACAP	SCA	TDC	Local Funds	Total
RTD0008607	MVRTA	111215	Replace 6 model yr 2017 vans delivery 2023		\$234,810	\$234,810		\$0	\$0	\$469,620
RTD0008605	MVRTA	117C00	NON-FIXED ROUTE ADA PARA SERVICE		\$1,488,870	\$0	\$372,220	\$0	\$0	\$1,861,090
FTA Section 5307 Total					\$6,572,520	\$1,249,680	\$1,857,685	\$0	\$20,000	\$9,699,885

**TIP FFYs 2021 – 2025 Transit Projects
2024**

FTA Section 5307										
Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	RTACAP	SCA	TDC	Local Funds	Total
RTD0008961	MVRTA	114211	SGR Replace 1 model year 2018 supervisory vehicle		\$41,475	\$10,370	\$0	\$0	\$0	\$51,845
RTD0008614	MVRTA	442400	SHORT RANGE TRANSIT PLANNING		\$80,000	\$0	\$0	\$0	\$20,000	\$100,000
RTD0008611	MVRTA	117000	PREVENTIVE MAINTENANCE		\$2,894,615	\$0	\$723,650	\$0	\$0	\$3,618,265
RTD0008613	MVRTA	117C00	Non-fixed Route ADA paratransit service		\$1,444,205	\$0	\$361,050	\$0	\$0	\$1,805,255
RTD0008610	MVRTA	111202	SGR Replace model yr 2011 Buses Delivery 2024 (4 of 8)		\$1,049,485	\$1,049,485				\$2,098,970

**TIP FFYs 2021 – 2025 Transit Projects
2024 (Cont.)**

FTA Section 5307 (Cont.)										
Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	RTACAP	SCA	TDC	Local Funds	Total
RTD0008612	MVRTA	300901	OPERATING ASSISTANCE		\$714,840	\$0	\$714,840	\$0	\$0	\$1,429,680
FTA Section 5307 Total					\$6,224,620	\$1,059,855	\$1,799,540	\$0	\$20,000	\$9,104,015

**TIP FFYs 2021 – 2025 Transit Projects
2025**

FTA Section 5307										
Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	RTACAP	SCA	TDC	Local Funds	Total
RTD0008963	MVRTA		PREVENTIVE MAINTENANCE		\$2,952,505	\$0	\$738,125	\$0	\$0	\$3,690,630
RTD0008965	MVRTA		NON-FIXED ROUTE ADA PARA SERVICE		\$1,473,090	\$0	\$368,275	\$0	\$0	\$1,841,365
RTD0008962	MVRTA		SHORT RANGE TRANSIT PLANNING		\$80,000	\$0	\$0	\$0	\$20,000	\$100,000
RTD0008964	MVRTA		OPERATING ASSISTANCE		\$729,135	\$0	\$729,135	\$0	\$0	\$1,458,270
RTD0008615	MVRTA		SGR Replace Model Yr 2012 Buses 4 of 8 Delivery 2025		\$1,096,920	\$1,096,920				\$2,193,840

**TIP FFYs 2021 – 2025 Transit Projects
2025 (Cont.)**

FTA Section 5307 (Cont.)										
Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	RTACAP	SCA	TDC	Local Funds	Total
RTD0008966	MVRTA		SGR Replace 1 model year 2019 supervisory vehicle		\$42,305	\$10,575	\$0	\$0	\$0	\$52,880
FTA Section 5307 Total					\$6,373,955	\$1,107,495	\$1,835,535	\$0	\$20,000	\$9,336,985

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Summary of Highway Project Listings by Town

**Summary of Highway Projects by Town
(2021 to 2025 Regional Target Funds)**

Year (s) Programmed	City / Town	Project Description	Total Cost Programmed
2021	Groveland	Groveland - Groveland Community Trail, from Main Street to King Street (# 608298)	\$1,984,861
2021	Haverhill	Haverhill – Intersection Improvements at Rt 110 / Rt 108 (# 608761)	\$1,980,067
2022	Lawrence	Lawrence – Intersection Improvements at Merrimack Street and South Broadway (Route 28) (# 609509)	\$1,610,960
2021	Lawrence	Lawrence – Intersection Improvements at South Broadway (Route 28) and Mount Vernon Street (# 609251)	\$1,013,739
2022	Methuen	Methuen – Intersection Improvements at Riverside Drive and Burnham Road (# 610658)	\$967,200
2021	Newburyport	Newburyport – Riverfront Clipper City Rail Trail Construction (# 610663)	\$1,900,802
2023-2025	North Andover	North Andover - Corridor Improvements on Route 114, between Route 125 (Andover Street) & Stop & Shop Driveway (# 608095) *	\$26,906,532*
2023	Salisbury	Salisbury – Reconstruction of Route 1 (Lafayette Road)	\$6,837,284

* North Andover Route 114 is AC'd FFY 2023 to 2026, FFY 2026 = \$ 155,262, Total Project Cost =\$27,061,794

**Summary of Highway Projects by Town
(2021 to 2025 Regional Target Funds)**

Year (s) Programmed	City / Town	Project Description	Total Cost Programmed
2021	MVRTA	MVRTA – Flex to FTA to Replace Yr 2009 Buses with new Buses Delivery 2022 (7 of 9) (# S10777)	\$3,467,361

**Summary of Programmed Highway Funds by Town
(2021 to 2025 Regional Target Funds)**

Project Description	Total Cost Programmed
Groveland Total	\$1,984,861
Haverhill Total	\$1,980,067
Lawrence Total	\$2,624,699
Methuen Total	\$967,200
Newburyport Total	\$1,900,802
North Andover Total	\$26,906,532
Salisbury Total	\$6,837,284
MVRTA Total	\$3,467,361
Regional Total	\$46,668,806

**Summary of Highway Projects by Town
(2021 to 2025 Statewide and Regional Target Funds)**

Year (s) Programmed	City / Town	Project Description	Total Cost Programmed
2024-2025	Andover	Andover- Bridge Rehabilitation, A-09-036, I-495 over St 28 (SB), A-09-037, I-495 over B&M and MBTA, A-09-041, I-495 over St 28 (NB) (# 606522)	\$36,054,012*
2022	Georgetown / Boxford	Georgetown - Boxford Border to Boston Trail, from Georgetown Road to West Main Street (Route 97) (# 607541)	\$2,520,436
2024	Georgetown / Newbury	Georgetown - Newbury Border to Boston Trail, (Northern Georgetown to Byfield Section) (# 607542)	\$5,685,060
2021	Groveland	Groveland - Groveland Community Trail, from Main Street to King Street (# 608298)	\$1,984,861
2024-2025	Haverhill	Haverhill- Bridge Replacement, H-12-007 & H-12-025, Bridge Street (SR 125) over the Merrimack River and the Abandoned B&M RR (Proposed Bikeway) (# 605304)	\$45,861,496
2021-2023	Haverhill	Haverhill - Bridge Replacement, H-12-039, I-495 (NB & SB) over Merrimack River (# 605306)	\$46,503,796*
2023-2025	Haverhill	Haverhill - Bridge Replacement, H-12-040, I-495 (NB & SB) over Merrimack River (# 609466)	\$94,747,200

* Andover (# 606522) is AC'd FFY 2024 to 2028, Total Project Cost = \$131,458,071
Haverhill (# 605304) is AC'd FFY 2024 to 2028, Total Project Cost = \$116,320,512
Haverhill (# 605306) is AC'd FFY 2018 to 2023, Total Project Cost = \$108,833,832
Haverhill (# 609466) is AC'd FFY 2023 to 2026, Total Project Cost = \$99,783,090

**Summary of Highway Projects by Town
(2021 to 2025 Statewide and Target Funds) (Cont.)**

Year (s) Programmed	City / Town	Project Description	Total Cost Programmed
2021	Haverhill	Haverhill – Intersection Reconstruction on Route 108 (Newton Road) at Route 110 (Kenoza Avenue and Amesbury Road) (# 608761)	\$1,980,067
2021	Lawrence	Lawrence – Intersection Improvements at South Broadway (Route 28) and Mount Vernon Street (# 609251)	\$1,013,739
2022	Lawrence	Lawrence – Intersection Improvements at Merrimack Street and South Broadway (Route 28) (# 609509)	\$1,610,960
2023	Lawrence	Lawrence – Lawrence Manchester Rail Corridor (LMRC) Rail Trail (# 608930)	\$16,087,005
2022	Methuen	Methuen – Intersection Improvements at Riverside Drive and Burnham Road (# 610658)	\$967,200
2022	Newbury - Newburyport - Salisbury	Newbury - Newburyport - Salisbury - Resurfacing and related work on Route 1 (# 608494)	\$9,807,200
2021	Newburyport	Newburyport – Riverfront Clipper City Rail Trail Construction	\$1,900,802

**Summary of Highway Projects by Town
(2021 to 2025 Statewide and Target Funds) (Cont.)**

Year (s) Programmed	City / Town	Project Description	Total Cost Programmed
2023-2025	North Andover	North Andover - Corridor Improvements on Route 114, between Route 125 (Andover Street) & Stop & Shop Driveway (# 608095)	\$26,906,533*
2025	Rowley	Rowley – Safety Improvements at Route 1, Central and Glen Streets (# 609392)	\$2,368,068
2023	Salisbury	Salisbury – Reconstruction of Route 1 (Lafayette Road) (# 602202)	\$6,837,284
2021	MVRTA	MVRTA – Flex to FTA to Replace Yr 2009 Buses with new Buses Delivery 2022 (7 of 9) (#S10777)	\$3,467,361

*North Andover (# 608095) is AC'd FFY 2023 to 2026, Total Project Cost =\$27,061,794

**Summary of Programmed Highway Funds by Town
(2021 to 2025 Statewide and Regional Target Funds)**

Project Description	Total Cost Programmed
Andover Total	\$36,054,012
Boxford Total	\$1,260,218
Georgetown Total	\$4,102,748
Groveland Total	\$1,984,861
Haverhill Total	\$189,092,559
Lawrence Total	\$18,711,704
Methuen Total	\$967,200
Newbury Total	\$6,111,597
Newburyport Total	\$5,169,869
North Andover Total	\$26,906,533
Rowley Total	\$2,368,068
Salisbury Total	\$10,106,350
MVRTA Total	\$3,467,361
Regional Total	\$306,303,080

Part C. Federal Requirements

Part C.1. Highway Program Financial Plan

The TIP must be financially constrained, meaning projects included in the TIP must have an identified funding source. Funding levels for Federal Fiscal Years 2021-2025 have been developed cooperatively between the State and the MPOs as part of the TIP development process. The following tables depict the resulting financial plan for each of the five fiscal years. FHWA provides the state with the expected Federal Funding available for each year of the TIP this estimated Title 23 Base Obligation Authority is listed first to which is added a “Planned redistribution request” estimated to be \$50,000,000 each year of the TIP. (Toward the end of the FFY any state that has not spent their Federal Obligation Authority returns that authority, and the Federal government redistributes those funds to the other states.) The Total estimated Federal Funds available to Massachusetts is estimated to be between approximately 671 million dollars and 711 million dollars for each of FFYs 2021 to 2025. The State then subtracts annual debt service payments for the Accelerated Bridge Program (ABP) Grant Application Notes (GANs) which range from 82 million dollars to almost 94 million dollars for each year over the five years of the TIP. The State generally provides the 20% match required for the Federal funds resulting in estimated funds ranging from approximately 728 million dollars to approximately 763 million dollars available Statewide for highway program funding for each of the five years of the TIP.

MassDOT Highway Division, Office of Transportation Planning (OTP), and the Federal Aid Programming and Reimbursement Office (FAPRO) then decide the amount of funding needed for Statewide items such as Interstate Maintenance, district-wide contracts, planning and transportation demand management. Those funds are subtracted from the total and the remaining is available for regional priorities, which ranges from \$243,332,161 in FFY 2021 to \$257,035,098 in FFY 2025.

This funding is then allocated to MPOs based upon the existing Massachusetts Association of Regional Planning Agencies (MARPA) TIP target distribution formula. This “MARPA” formula is based mainly on each MPO’s road mileage and population. The MVMPO’s share is 4.4296%, resulting in the funding available for regional priorities to be; \$10,778,653 in FFY 2021; \$10,998,131 in FFY 2022; \$11,238,340 in FFY 2023; \$11,385,638 in FFY 2024 and \$11,119,839 in FFY 2025.

In FFY 2017 MassDOT ended funding for the regional major infrastructure program after the I-91 Viaduct in Springfield project had been completed. These funds will be reallocated to the Regional Target program for prioritization by MPOs across the state.

Inflation increases project costs and therefore project costs have been increased 4% per year.

**FFY 2021–2025 STIP
2021–2025 BUDGET (Federal Aid + Match)**

	2021 Current Obligation authority	2021 Proposed Obligation authority (91%)*	2022 Current Obligation authority	2022 Proposed Obligation authority (91%)*
Base obligation authority	\$ 641,988,270.00	\$ 621,541,829.00	\$ 658,744,163.00	\$ 634,503,827.00
Planned redistribution request	\$ 50,000,000.00	\$ 50,000,000.00	\$ 50,000,000.00	\$ 50,000,000.00
Total estimated funding available	\$ 691,988,270.00	\$ 671,541,829.00	\$ 708,744,163.00	\$ 684,503,827.00
ABP GANS Repayment	\$ (85,190,000.00)	\$ (82,375,000.00)	\$ (89,590,000.00)	\$ (86,470,000.00)
Total non-earmarked funding available (federal aid)	\$ 606,798,270.00	\$ 589,166,829.00	\$ 619,154,163.00	\$ 598,033,827.00
Total non-earmarked funding available (federal aid + match)	\$ 750,612,944.18	\$ 728,325,042.88	\$ 766,455,220.10	\$ 739,775,237.22
Planning and Pass-throughs (excluding EWO)	\$ 47,887,887.47	\$ 48,138,639.97	\$ 47,887,887.47	\$ 48,186,662.47
Funding for Regional Priorities**	\$ 243,332,160.75	\$ 243,332,160.75	\$ 248,287,195.75	\$ 248,287,195.75
Highway Division Programs***	\$ 459,392,895.96	\$ 436,854,242.16	\$ 470,280,136.87	\$ 443,301,379.00

**FFY 2021–2025 STIP
2021–2025 BUDGET (Federal Aid + Match) (Cont.)**

	2023 Current Obligation Authority	2023 Proposed Obligation authority (91%)*	2024 Current Obligation authority	2024 Proposed Obligation authority (91%)*
Base obligation authority	\$ 676,662,004.60	\$ 647,736,142.00	\$ 689,684,332.90	\$ 661,244,412.00
Planned redistribution request	\$ 50,000,000.00	\$ 50,000,000.00	\$ 50,000,000.00	\$ 50,000,000.00
Total estimated funding available	\$ 726,662,004.60	\$ 697,736,142.00	\$ 739,684,332.90	\$ 711,244,412.00
ABP GANS Repayment	\$ (93,985,000.00)	\$ (89,510,000.00)	\$ (98,715,000.00)	\$ (93,985,000.00)
Total non-earmarked funding available (federal aid)	\$ 632,677,004.60	\$ 608,226,142.00	\$ 640,969,332.90	\$ 617,259,412.00
Total non-earmarked funding available (federal aid + match)	\$ 782,700,504.29	\$ 752,059,445.48	\$ 792,949,657.91	\$ 763,212,630.54
Planning and Pass-throughs (excluding EWO)	\$ 45,080,547.47	\$ 45,428,785.47	\$ 45,080,547.47	\$ 45,479,733.47
Funding for Regional Priorities**	\$ 253,709,791.53	\$ 253,709,791.53	\$ 257,035,097.92	\$ 257,035,097.92
Highway Division Programs***	\$ 483,910,165.28	\$ 452,920,868.48	\$ 490,834,012.52	\$ 460,697,799.14

*Base Obligation Authority based on 2.1% growth rate from actual FFY 2020 apportionment and average of Fast Act Obligation Authority (91%) through FFY 2020

**MPO TIP targets will be held harmless from the change in proposed Obligation Authority

***MassDOT Highway Division programs (including EWO Awards/Adjustments) need revised based on new ABP GANS schedule and proposed Obligation Authority

**FFY 2021–2025 STIP
2021–2025 BUDGET (Federal Aid + Match) (Cont.)**

		2025 Proposed Obligation authority (91%)*
	Base obligation authority \$	675,034,391
	Planned redistribution request \$	50,000,000
	Total estimated funding available \$	725,034,391
	ABP GANS Repayment \$	(122,185,000)
	Total non-earmarked funding available	\$ 602,849,391.00
	Total non-earmarked funding available (federal aid + match)	\$ 745,410,138.60
	Planning and Pass-throughs (excluding EWO)	\$ 45,479,733.47
	3.5596% Berkshire	\$ 8,935,836
	42.9671% Boston	\$ 107,862,383
	4.5851% Cape Cod	\$ 11,510,198
	8.6901% Central Mass	\$ 21,815,177
	2.5397% Franklin	\$ 6,375,531
	0.3100% Martha's Vineyard	\$ 778,208
	4.4296% Merrimack Valley	\$ 11,119,839
	4.4596% Montachusett	\$ 11,195,149
	0.2200% Nantucket	\$ 552,277
	3.9096% Northern Middlesex	\$ 9,814,457
	4.5595% Old Colony	\$ 11,445,933
	10.8099% Pioneer Valley	\$ 27,136,613
	8.9601% Southeastern Mass	\$ 22,492,971
	Funding for Regional Priorities	\$251,034,571.91
	Highway Division Programs	\$448,895,833.23

**Base Obligation Authority based on 2.1% growth rate from actual FFY 2020 apportionment and average of Fast Act Obligation Authority (91%) through FFY 2020*

***MPO TIP targets will be held harmless from the change in proposed Obligation Authority*

****MassDOT Highway Division programs (including EWO/Awards/Adjustments) need revised based on new ABP GANS schedule and proposed Obligation Authority*

The following table shows the total federal programmed amounts in this TIP for each of the five years covered in this document. The funding summaries below show the total Operating and Maintenance costs versus Capital and Other costs, for each year of the TIP. A fiscal constraint finding for the State Transportation Improvement Program will include the cost of operating and maintaining the existing MVMPO transportation system.

Highway Program Financial Plan Table

Merrimack Valley Metropolitan Planning Organization

FFY 2021-2025 Transportation Improvement Program

(FHWA - related funding categories only)

Total Costs including Federal and State Match*

Figures include Federal Aid “target” program & statewide funding

Fiscal Year	Federal Programmed Operating/ Maintenance Costs*(inc. Match)	Federal Programmed Capital and Other Costs*(inc. Match)	Total Federal + Match Programmed*	Total Federal + Match Estimated Available Funds*
2021	\$21.77	\$3.88	\$25.65	\$26.08
2022	\$30.59	\$2.52	\$33.11	\$41.53
2023	\$42.10	\$16.09	\$58.19	\$58.19
2024	\$87.53	\$5.69	\$93.22	\$93.22
2025	\$96.14	\$0	\$96.14	\$96.14

* Millions of dollars

The financial plan contained herein is financially constrained and indicates that the Merrimack Valley Metropolitan Planning Organization's FFYs 2021-2025 TIP reflects an emphasis on the maintenance and operation of the current roadway and bridge system with the ability to provide additional capital improvements. Only projects for which funds can be expected have been included.

Appendix B of this document includes a list of Non-federal-aid transportation projects in the region. The projects listed in Appendix B are an integral part of the planning, programming, and priority setting process of the MVMPO but have no available funding source.

Summary of Highway Funding Categories

The following tables contain a breakdown of the project cost totals and federal aid cost portions by federal aid funding categories for each fiscal year and the expected available resources to cover the cost.

Cost Estimates and Available Resources

Summary by Funding Category

Highway Projects Federal Fiscal Year 2021

Highway FFY 2021	Estimated Needs MVMPO (in 1000s) Federal Portion of Cost	Estimated Needs MVMPO (in 1000s) Total Project Cost	Available Resources MVMPO Projects (in 1000s) (From Region Target if not Statewide Category)
Regional Target Congestion Mitigation/AQ Program (CMAQ)	\$0	\$0	\$0
Regional Target Highway Safety Program (HSIP)	\$0	\$0	\$0
Regional Target Surface Transportation Block Grant Program (STBG)	\$8,277.46	\$10,346.83	\$10,778.65
Regional Target Transportation Alternatives Program (TAP)	\$0	\$0	\$0
Regional Target Subtotals	\$8,277.46	\$10,346.83	\$10,778.65
Statewide On-System Bridges (NHPP-On)	\$12,244.70	\$15,305.88	\$15,305.88
Total FFY 2021	\$20,522.16	\$25,652.71	\$26,084.53

Cost Estimates and Available Resources
Summary by Funding Category
Highway Projects Federal Fiscal Year 2022

Highway FFY 2022	Estimated Needs MVMPO (in 1000s) Federal Portion of Cost	Estimated Needs MVMPO (in 1000s) Total Project Cost	Available Resources MVMPO Projects (in 1000s) (From Region Target if not Statewide Category)
Regional Target Congestion Mitigation/AQ Program (CMAQ)	\$0	\$0	\$0
Regional Target Highway Safety Program (HSIP)	\$0	\$0	\$0
Regional Target Surface Transportation Block Grant Program (STBG)	\$2,062.53	\$2,578.16	\$10,998.13
Regional Target Transportation Alternatives Program (TAP)	\$0	\$0	\$0
Regional Target Subtotals	\$2,062.53	\$2,578.16	\$10,998.13
Statewide Bicycle and Pedestrians (CMAQ)	\$2,016.35	\$2,520.44	\$2,520.44
Statewide On-System Bridges (NHPP)	\$14,562.95	\$18,203.68	\$18,203.68
Statewide Non-Interstate Pavement (NHPP)	\$7,845.76	\$9,807.20	\$9,807.20
Total FFY 2022	\$26,487.59	\$33,109.48	\$41,529.45

**Cost Estimates and Available Resources
Summary by Funding Category
Highway Projects Federal Fiscal Year 2023**

Highway FFY 2023	Estimated Needs MVMPO (in 1000s) Federal Portion of Cost	Estimated Needs MVMPO (in 1000s) Total Project Cost	Available Resources MVMPO Projects (in 1000s) (From Region Target if not Statewide Category)
Regional Target Congestion Mitigation/AQ Program (CMAQ)			
Regional Target Highway Safety Program (HSIP)			
Regional Target Surface Transportation Block Grant Program (STBG)	\$8,990.67	\$11,238.34	\$11,238.34
Regional Target Transportation Alternatives Program (TAP)			
Regional Target Subtotals	\$8,990.67	\$11,238.34	\$11,238.34
Statewide On-System Bridges (NHPP-On)	\$24,687.90	\$30,859.87	\$30,859.87
Statewide Bicycle and Pedestrians (CMAQ)	\$12,869.60	\$16,087.01	\$16,087.01
Total FFY 2023	\$46,548.17	\$58,185.22	\$58,185.22

Cost Estimates and Available Resources
Summary by Funding Category
Highway Projects Federal Fiscal Year 2024

Highway FFY 2024	Estimated Needs MVMPO (in 1000s) Federal Portion of Cost	Estimated Needs MVMPO (in 1000s) Total Project Cost	Available Resources MVMPO Projects (in 1000s) (From Region Target if not Statewide Category)
Regional Target Surface Transportation Block Grant Program (STBG)	\$9,108.51	\$11,385.64	\$11,385.64
Regional Target Subtotals	\$9,108.51	\$11,385.64	\$11,385.64
Statewide Bicycle and Pedestrians (CMAQ)	\$4,548.05	\$5,685.06	\$5,685.06
Statewide (SW) Bridges On-System (NHPP-On)	\$60,919.70	\$76,149.62	\$76,149.62
Total FFY 2024	\$74,576.26	\$93,220.32	\$93,220.32

Cost Estimates and Available Resources

Summary by Funding Category

Highway Projects Federal Fiscal Year 2025

Highway FFY 2025	Estimated Needs MVMPO (in 1000s) Federal Portion of Cost	Estimated Needs MVMPO (in 1000s) Total Project Cost	Available Resources MVMPO Projects (in 1000s) (From Region Target if not Statewide Category)
Regional Target Surface Transportation Block Grant Program (STBG)	\$8,895.87	\$11,119.84	\$11,119.84
Regional Target Subtotals	\$8,895.87	\$11,119.84	\$11,119.84
Statewide (SW) Bridges On-System (NHPP-On)	\$66,117.96	\$82,647.44	\$82,647.44
Statewide Intersection Improvements (HSIP)	\$2,131.26	\$2,368.07	\$2,368.07
Total FFY 2025	\$77,145.09	\$96,135.35	\$96,135.35

Part C. 2. Transit Program Financial Plan

Planning Justification for Transit Projects

The Merrimack Valley region's FFYs 2021-2025 TIP federal aid transit projects are to be carried out using Sections 5307 received by the MVRTA from the FTA with the exception of the provision of operating assistance, the planning justification for the Section 5307 projects are contained in the Merrimack Valley Regional Transit Authority's Five-Year Capital Program for 2021-2025.

MVRTA Financial Status

The FAST Act requires that projects appearing in the TIP must have an identified source of funding that will allow them to be completed within the time period contemplated. Transit projects appearing in the FY 2021-2025 TIP meet this criterion.

Transit Program Financial Plan Table

Merrimack Valley Metropolitan Planning Organization
 FFYs 2021-2025 Transportation Improvement Program
 (FTA related funding categories only)
 Total Costs including Federal, State and Local*

Fiscal Year	Federal Programmed Operating/ Maintenance Costs* (inc. Match)	Federal Programmed Capital and Other Costs* (inc. Match)	Total Federal + Match Programmed*	Total Federal + Match Estimated Available Funds*
2021	\$10.45	\$0.10	\$10.55	\$10.55
2022	\$6.80	\$0.10	\$6.90	\$6.90
2023	\$9.60	\$0.10	\$9.70	\$9.70
2024	\$9.00	\$0.10	\$9.10	\$9.10
2025	\$9.24	\$0.10	\$9.34	\$9.34

* Millions of dollars

**Cost Estimates and Available Resources
Summary by Funding Category
2021 Transit Projects**

FTA Funding Program Summaries (Federal dollars only)

Merrimack Valley Regional Transit Authority FTA Funding Programs	Estimated Authorization FFY 2021	Regional TIP FFY 2021	Balance FFY 2021
Section 5307 Capital and Planning Formula	\$6,170,880	\$4,540,742	\$1,630,138
Section 5307 Transit Enhancements			
Subtotal	\$6,170,880	\$4,540,742	\$1,630,138
Section 5307 Capital and Planning Formula Carryover	\$2,915,965	\$2,915,965	\$0
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover			
Subtotal	\$2,915,965	\$2,915,965	\$0
Section 5307 Total	\$9,086,845	\$7,456,707	\$1,630,138
Section 5309 Bus			
Section 5309 Fixed Guideway			
Section 5309 Total			
Section 5310 Elderly and Disabled			
Section 5310 Elderly and Disabled Carryover			
Federal Aid Total	\$9,086,845	\$7,456,707	\$1,630,138
Other Transit Funding			

Summary of Transit Funding Categories

Cost Estimates and Available Resources

Summary by Funding Category

2022 Transit Projects

FTA Funding Program Summaries (Federal dollars only)

Merrimack Valley Regional Transit Authority FTA Funding Programs	Estimated Authorization FFY 2022	Regional TIP FFY 2022	Balance FFY 2022
Section 5307 Capital and Planning Formula	\$6,299,235	\$3,503,372	\$2,795,863
Section 5307 Transit Enhancements			
Subtotal	\$6,299,235	\$3,503,372	\$2,795,863
Section 5307 Capital and Planning Formula Carryover	\$1,630,138	\$1,630,138	\$0
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover			
Subtotal	\$1,630,138	\$1,630,138	\$0
Section 5307 Total	\$7,929,373	\$5,133,510	\$2,795,863
Section 5309 Bus			
Section 5309 Fixed Guideway			
Section 5309 Total			
Section 5310 Elderly and Disabled			
Section 5310 Elderly and Disabled Carryover			
Federal Aid Total	\$7,929,373	\$5,133,510	\$2,795,863
Other Transit Funding (Non-Federal Aid)			

**Cost Estimates and Available Resources
Summary by Funding Category
2023 Transit Projects**

FTA Funding Program Summaries (Federal dollars only)

Merrimack Valley Regional Transit Authority FTA Funding Programs	Estimated Authorization FFY 2023	Regional TIP FFY 2023	Balance FFY 2023
Section 5307 Capital and Planning Formula	\$6,430,260	\$3,776,657	\$2,653,603
Section 5307 Transit Enhancements			
Subtotal	\$6,430,260	\$3,776,657	\$2,653,603
Section 5307 Capital and Planning Formula Carryover	\$2,795,863	\$2,795,863	\$0
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover			
Subtotal	\$2,795,863	\$2,795,863	\$0
Section 5307 Total	\$9,226,123	\$6,572,520	\$2,653,603
Section 5309 Bus			
Section 5309 Fixed Guideway			
Section 5309 Total			
Section 5310 Elderly and Disabled			
Section 5310 Elderly and Disabled Carryover			
Section 5339 Bus and Bus Related Equipment and Facilities			
Federal Aid Total	\$9,226,123	\$6,572,520	\$2,653,603
Other Transit Funding (Non-Federal Aid)	\$0	\$0	\$0

**Cost Estimates and Available Resources
Summary by Funding Category
2024 Transit Projects**

FTA Funding Program Summaries (Federal dollars only)

Merrimack Valley Regional Transit Authority FTA Funding Programs	Estimated Authorization FFY 2024	Regional TIP FFY 2024	Balance FFY 2024
Section 5307 Capital and Planning Formula	\$6,564,010	\$3,571,017	\$2,992,993
Section 5307 Transit Enhancements			
Subtotal	\$6,564,010	\$3,571,017	\$2,992,993
Section 5307 Capital and Planning Formula Carryover	\$2,653,603	\$2,653,603	\$0
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover			
Subtotal	\$2,653,603	\$2,653,603	\$0
Section 5307 Total	\$9,217,613	\$6,224,620	\$2,992,993
Section 5309 Bus			
Section 5309 Fixed Guideway			
Section 5309 Total			
Section 5310 Elderly and Disabled			
Section 5310 Elderly and Disabled Carryover			
Section 5339 Bus and Bus Related Equipment and Facilities			
Federal Aid Total	\$9,217,613	\$6,224,620	\$2,992,993
Other Transit Funding (Non-Federal Aid)	\$0	\$0	\$0

**Cost Estimates and Available Resources
Summary by Funding Category
2025 Transit Projects**

FTA Funding Program Summaries (Federal dollars only)

Merrimack Valley Regional Transit Authority FTA Funding Programs	Estimated Authorization FFY 2025	Regional TIP FFY 2025	Balance FFY 2025
Section 5307 Capital and Planning Formula	\$6,700,540	\$3,380,962	\$3,319,578
Section 5307 Transit Enhancements			
Subtotal	\$6,700,540	\$3,380,962	\$3,319,578
Section 5307 Capital and Planning Formula Carryover	\$2,992,993	\$2,992,993	\$0
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover			
Subtotal	\$2,992,993	\$2,992,993	\$0
Section 5307 Total	\$9,693,533	\$6,373,955	\$3,319,578
Section 5309 Bus			
Section 5309 Fixed Guideway			
Section 5309 Total			
Section 5310 Elderly and Disabled			
Section 5310 Elderly and Disabled Carryover			
Section 5339 Bus and Bus Related Equipment and Facilities			
Federal Aid Total	\$9,693,533	\$6,373,955	\$3,319,578
Other Transit Funding (Non-Federal Aid)	\$0	\$0	\$0

MVRTA Transit Operations and Maintenance Summary Table

State Fiscal Year 2019 (Actual), 2020 (Adopted Budget), and 2021 to 2025 (Projected)

The numbers below represent actual numbers for the previous year, the current year budget/forecast approved by the MVRTA Advisory Board, and Projections for the out-years. These numbers indicate that there are sufficient revenues projected to meet the operating needs of the MVRTA.

	Audit	Adopted Budget	DRAFT Budget	Projected	Projected	Projected	Projected
Operating Revenue	Actual	Current	Yr One	Yr Two	Yr Three	Yr Four	Yr Five
	2019	2020	2021	2022	2023	2024	2025
Farebox	\$1,907,935	\$1,851,640	\$1,957,500	\$1,888,855	\$1,907,735	\$1,926,185	\$1,944,815
Section 5307	\$4,195,800	\$4,313,850	\$4,637,100	\$4,749,280	\$4,657,960	\$4,887,350	\$5,128,040
Section 5311							
CMAQ/TDM							
Fully Funded*							
Job Access/ Reverse Commute							
New Freedom							

MVRTA Transit Operations and Maintenance Summary Table

State Fiscal Year 2019 (Actual), 2020 (Adopted Budget), and 2021 to 2025 (Projected) (Continued)

	Audit	Adopted Budget	Draft Budget	Projected	Projected	Projected	Projected
Operating Revenue	Actual	Current	Yr One	Yr Two	Yr Three	Yr Four	Yr Five
	2019	2020	2021	2022	2023	2024	2025
Advertising	\$25,000	\$25,000	\$30,000	\$25,000	\$25,000	\$25,000	\$25,000
Interest Income	\$2,000	\$10,000	\$12,000	\$10,000	\$10,000	\$10,000	\$10,000
Rental Income							
State Contract Assistance**	\$6,836,165	\$7,253,005	\$7,509,670	\$7,694,700	\$7,887,070	\$8,084,245	\$8,286,350
Local Assessment	\$3,725,510	\$3,810,715	\$4,607,705	\$4,007,285	\$4,109,345	\$4,214,010	\$4,321,340
Other: (Define)	\$962,855	\$1,041,510	\$1,109,365	\$1,083,585	\$1,105,260	\$1,127,360	\$1,149,900
Total Revenue	\$17,646,465	\$18,305,720	\$19,863,340	\$19,458,705	\$19,702,370	\$20,274,150	\$20,865,445

MVRTA Transit Operations and Maintenance Summary

State Fiscal Year 2019 (Actual), 2020 (Adopted Budget), and 2021 to 2025 (Projected) (Continued)

Operating Expenses ***	Actual	Current	Yr One	Yr Two	Yr Three	Yr Four	Yr Five
	2019	2020	2021	2022	2023	2024	2025
Total (See Below)	\$17,646,465	\$18,305,720	\$19,863,340	\$19,458,705	\$19,702,370	\$20,274,150	\$20,865,445

Footnotes:

* Fully funded refers to contract work often to Human Service Agencies

** Operating assistance provided by the State

*** Description of Operating Expenses: Salaries and Wages; Fringe Benefits: Legal, Accounting and Professional Services; Promotion/Marketing; Insurance; Equipment Leases and Rentals; Real Property Leases and Rentals; Non-capitalized Maintenance/Repair; Fuel costs; Tire costs; Office Supplies and Equipment; Interest expense; Utilities; Management Fees; Travel and Training; and Other miscellaneous expense items.

Part C. 3. Status on Implementation of FFY 2020 TIP Projects
FFY 2020 Highway Project List

Regional Target Projects

Project ID	Location	Project Description	Mass DOT District	Funding Category	Total Programmed Funds	Project Status
602418	Amesbury	Amesbury – Reconstruction of Elm Street	4	STBG	\$7,223,053	Advertised 7/13/2019.
608027	Haverhill	Haverhill – Bradford Rail Trail Extension from Route 125 to Railroad Street	4	STBG/ TAP	\$1,766,108	100% Design March 2020. Amend # 6 Increased Project Cost from \$848,345 to \$1,766,108.
605306	Haverhill	Haverhill – Bridge Replacement, H-12-039, I-495 (NB & SB) over Merrimack River	4	NHPP-ON	\$15,305,880	Contract Awarded 5/14/2018. Under Construction. AC Year 3 of 6. Total project cost to \$118,786,388.

Part C. 3. Status on Implementation of FFY 2020 TIP Projects

FFY 2020 Transit Project List

5307								
Project Number	Project Description	Carry Over	Federal Funds	State Funds	TDC	Local Funds	Total	Project Status
RTD0007680	Preventive Maintenance Expense		\$2,658,530	\$664,630	\$0	\$0	\$3,323,160	Ongoing
RTD0007681	Non-Fixed Route ADA para serv		\$1,322,605	\$330,650	\$0	\$0	\$1,653,255	Ongoing
RTD0007682	SHORT RANGE TRANSIT PLANNING		\$80,000	\$0	\$0	\$20,000	\$100,000	Ongoing
RTD0007683	OPERATING ASSISTANCE		\$430,775	\$430,775	\$0	\$0	\$861,550	Ongoing
RTD0007687	Replace 3 Model Yr 2007 buses delivery 2020		\$1,101,720	\$275,430	\$0	\$0	\$1,377,150	Complete
RTD0007695	SGR Riverbank stabilization Construction		\$1,400,265	\$350,065	\$0	\$0	\$1,750,330	Moved to FFY 2021
RTD0007696	SGR Replace 1 model year 2013 supervisory vehicle		\$37,225	\$9,305			\$46,530	Complete

Part C. 3. Status on Implementation of FFY 2020 TIP Projects

FFY 2020 Transit Project List (Cont.)

5307								
Project Number	Project Description	Federal Funds	State Funds	TDC	MAP	Local Funds	Total	Project Status
RTD0008295	Northern Essex Elder Transport Driving Forward 2020	\$12,500	\$0	\$0		\$12,500	\$25,000	Ongoing
	Purchase On-board Automatic Passenger Counter (APC)	\$371,280	\$0	\$92,820		\$0	\$371,280	Ongoing
RTD0008311	Town of Andover Buy replacement van (1)				\$55,280	\$13,820	\$69,100	Ongoing
RTD0008320	Town of Salisbury Buy van for service expansion (1)				\$54,400	\$13,600	\$68,000	Ongoing

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Part C. 4. Air Quality Conformity

Air Quality Conformity Determination Merrimack Valley MPO FFY 2021-2025 Transportation Improvement Program and 2020-2040 Regional Transportation Plan

This section documents the latest air quality conformity determination for the 1997 ozone National Ambient Air Quality Standards (NAAQS) in the Merrimack Valley MPO Region. It covers the applicable conformity requirements according to the latest regulations, regional designation status, legal considerations, and federal guidance. Further details and background information are provided below:

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. Clean Air Act (CAA) section 176(c) (42 U.S.C. 7506(c)) requires that federally funded or approved highway and transit activities are consistent with (“conform to”) the purpose of the State Implementation Plan (SIP). Conformity to the purpose of the SIP means that means Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) funding and approvals are given to highway and transit activities that will not cause or contribute to new air quality violations, worsen existing violations, or delay timely attainment of the relevant NAAQS or any interim milestones (42 U.S.C. 7506(c)(1)). EPA’s transportation conformity rules establish the criteria and procedures for determining whether metropolitan transportation plans, transportation improvement programs (TIPs), and federally supported highway and transit projects conform to the SIP (40 CFR Parts 51.390 and 93).

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.

Legislative and Regulatory Background

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_x), the two major precursors to ozone formation to achieve attainment of the ozone standard.

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 re-consideration 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 designated as attainment/unclassified for the 2008 standard. On March 6, 2015, (80 FR 12264, effective April 6, 2015) EPA published the Final Rulemaking, “Implementation of the 2008 National Ambient Air Quality Standards (NAAQS) for Ozone: State Implementation Plan Requirements; Final Rule.” This rulemaking confirmed the removal of transportation conformity to the 1997 Ozone NAAQS.

However, on February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit in *South Coast Air Quality Mgmt. District v. EPA* (“South Coast II,” 882 F.3d 1138) held that transportation conformity determinations must be made in areas that were either nonattainment or maintenance for the 1997 ozone NAAQS and attainment for the 2008 ozone NAAQS when the 1997 ozone NAAQS was revoked. These conformity determinations are required in these areas after February 16, 2019. On November 29, 2018, EPA issued Transportation Conformity Guidance for the South Coast II Court Decision (EPA-420-B-18-050, November 2018) that addresses how transportation conformity determinations can be made in areas. According to the guidance, both Eastern and Western Massachusetts, along with several other areas across the country, are now defined as “orphan nonattainment areas” – areas that were designated as nonattainment for the 1997 ozone NAAQS at the time of its revocation (80 FR 12264, March 6, 2015) and were designated attainment for the 2008 ozone NAAQS in EPA’s original designations rule for this NAAQS (77 FR 30160, May 21, 2012)

Current Conformity Determination

After 2/16/19, as a result of the court ruling and the subsequent federal guidance, transportation conformity for the 1997 NAAQS – intended as an “anti-backsliding” measure – now applies to both of Massachusetts’ orphan areas. Therefore, this conformity determination is being made for the 1997 ozone NAAQS on the Merrimack Valley MPO FFY 2021-2025 Transportation Improvement Program and 2020-2040 Regional Transportation Plan.

The transportation conformity regulation at 40 CFR 93.109 sets forth the criteria and procedures for determining conformity. The conformity criteria for TIPs and RTPs include: latest planning assumptions (93.110), latest emissions model (93.111), consultation (93.112), transportation control measures (93.113(b) and (c), and emissions budget and/or interim emissions (93.118 and/or 93.119).

For the 1997 ozone NAAQS areas, transportation conformity for TIPs and RTPs for the 1997 ozone NAAQS can be demonstrated without a regional emissions analysis, per 40 CFR 93.109(c). This provision states that the regional emissions analysis requirement applies one year after the effective date of EPA’s nonattainment designation for a NAAQS and until the

effective date of revocation of such NAAQS for an area. The 1997 ozone NAAQS revocation was effective on April 6, 2015, and the South Coast II court upheld the revocation. As no regional emission analysis is required for this conformity determination, there is no requirement to use the latest emissions model, or budget or interim emissions tests.

Therefore, transportation conformity for the 1997 ozone NAAQS for the Merrimack Valley MPO FFY 2021-2025 Transportation Improvement Program and 2020-2040 Regional Transportation Plan can be demonstrated by showing that remaining requirements in Table 1 in 40 CFR 93.109 have been met. These requirements, which are laid out in Section 2.4 of EPA's guidance and addressed below, include:

Latest planning assumptions (93.110)

- Consultation (93.112)
- Transportation Control Measures (93.113)
- Fiscal Constraint (93.108)

Latest Planning Assumptions:

The use of latest planning assumptions in 40 CFR 93.110 of the conformity rule generally apply to regional emissions analysis. In the 1997 ozone NAAQS areas, the use of latest planning assumptions requirement applies to assumptions about transportation control measures (TCMs) in an approved SIP (See following section on Timely Implementation of TCMs).

Consultation:

The consultation requirements in 40 CFR 93.112 were addressed both for interagency consultation and public consultation. Interagency consultation was conducted with FHWA, FTA, US EPA Region 1, MassDEP, and the other Massachusetts MPOs, with the most recent conformity consultation meeting held on March 6, 2019 (this most recent meeting focused on understanding the latest conformity-related court rulings and resulting federal guidance). This ongoing consultation is conducted in accordance with the following:

- Massachusetts' Air Pollution Control Regulations 310 CMR 60.03 "Conformity to the State Implementation Plan of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 USC or the Federal Transit Act"
- The Commonwealth of Massachusetts Memorandum of Understanding by and between Massachusetts Department of Environmental Protection, Massachusetts Executive Office of Transportation and Construction, Massachusetts Metropolitan Planning Organizations concerning the conduct of transportation-air quality planning in the development and implementation of the state implementation plan" (note: this MOU is currently being updated)

Public consultation was conducted consistent with planning rule requirements in 23 CFR 450.

Title 23 CFR Section 450.324 and 310 CMR 60.03(6)(h) requires that the development of the TIP, RTP, and related certification documents provide an adequate opportunity for public review and comment. Section 450.316(b) also establishes the outline for MPO public participation programs. The Merrimack Valley MPO's Public Participation Plan was formally adopted in 2017. (MVMPO Public Participation Plan as Amended through March 2017) is posted on the MVPC.org website under Transportation - Merrimack Valley Metropolitan Planning Organization – Other MPO Documents. The Public Participation Plan ensures that the public will have access to the TIP/RTP and related documents, provides for public notification of the availability of the TIP/RTP and the public's right to review the document and comment thereon, and provides a 21-day public review and comment period prior to the adoption of the TIP/RTP and related certification documents.

The public comment period for this conformity determination commenced on May 1, 2020. Following the 21-day public comment period, any comments received will be incorporated into the document. This allows ample opportunity for public comment and MPO review of the draft document. The public comment period will close on May 21, 2020 and subsequently, the Merrimack Valley MPO is expected to endorse this air quality conformity determination before June 2020. These procedures comply with the associated federal requirements.

Timely Implementation of Transportation Control Measures:

Transportation Control Measures (TCMs) have been required in the SIP in revisions submitted to EPA in 1979 and 1982. All SIP TCMs have been accomplished through construction or through implementation of ongoing programs. All of the projects have been included in the Region's Transportation Plan (present or past) as recommended projects or projects requiring further study. These projects are:

Extension/ Addition of Bus Routes
Construction of Park and Ride Lots
Intersection Improvements
Demand Responsive Transit
Institution of Express/ Shuttle Bus Services
Subscription Van Service
Double peak-hour fixed route bus service in Lawrence and Haverhill

DEP submitted to EPA its strategy of programs to show Reasonable Further Progress of a 15% reduction of VOCs in 1996 and the further 9% reduction of NOx toward attainment of the National Ambient Air Quality Standards (NAAQS) for ozone in 1999. Within that strategy there are no specific TCM projects. The strategy does call for traffic flow improvements to reduce congestion and, therefore, improve air quality. Other transportation-related projects that have been included in the SIP control strategy are listed below:

- *Enhanced Inspection and Maintenance Program*

- *California Low Emission Vehicle Program*
- *Reformulated Gasoline for On- and Off-Road Vehicles*
- *Stage II Vapor Recovery at Gasoline Refueling Stations*
- *Tier I Federal Vehicle Standards*

Fiscal Constraint:

Transportation conformity requirements in 40 CFR 93.108 state that TIPs and transportation plans must be fiscally constrained consistent with DOT's metropolitan planning regulations at 23 CFR part 450. The Merrimack Valley MPO 2021-2025 Transportation Improvement Program and 2020-2040 Regional Transportation Plan are fiscally constrained, as demonstrated in the MVMPO RTP Fiscal Constraint Chapter and in the MVMPO TIP Part C.1. Highway Program Financial Plan and Part C.2. Transit program Financial Plan.

In summary and based upon the entire process described above, the Merrimack Valley MPO has prepared this conformity determination for the 1997 Ozone NAAQS in accordance with EPA's and Massachusetts' latest conformity regulations and guidance. This conformity determination process demonstrates that the FFY 2021-2025 Transportation Improvement Program and the 2020-2040 Regional Transportation Plan meet the Clean Air Act and Transportation Conformity Rule requirements for the 1997 Ozone NAAQS, and have been prepared following all the guidelines and requirements of these rules during this time period.

Therefore, the implementation of the Merrimack Valley MPO's FFY 2021-2025 Transportation Improvement Program and the 2020-2040 Regional Transportation Plan are consistent with the air quality goals of, and in conformity with, the Massachusetts State Implementation Plan.

Part C. 5. Special Efforts - ADA

Projects Required for Implementation of ADA

Another requirement of 23 CFR 450.324 is that projects required for the implementation of the Americans with Disabilities Act (ADA) should be so marked. There are no projects in this TIP listing that are required for the implementation of the Americans with Disabilities Act and therefore no projects are marked as such. There are projects to replace existing accessible transit vehicles with new accessible transit vehicles, but these are replacements not implementations.

Part C. 6. Title VI Notice to Beneficiaries

The Merrimack Valley Planning Commission (MVPC) operates its programs, services and activities in compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of **race, color or national origin** (including **limited English proficiency**) be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal assistance. Related federal nondiscrimination laws administered by the Federal Highway Administration, the Federal Transit Administration, or both, prohibit discrimination on the basis of **age, sex and disability**. These protected categories are contemplated within MVPC's Title VI Program consistent with federal interpretation and administration. Additionally, MVPC provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with U.S. Department of Transportation policy and guidance on federal Executive Order 13166.

MVPC also complies with the Massachusetts Public Accommodation Law, M.G.L. Chapter 272, Sections 92a, 98, and 98a prohibiting making any distinction, discrimination, or restriction in admission to or treatment in a place of public accommodation based upon **race, color, religious creed, national origin, sex, sexual orientation, disability, or ancestry**. Likewise, MVPC complies with the Governor's Executive Order 526, Section 4 requiring that all of its programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for shall be conducted without unlawful discrimination based upon **race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status** (including Vietnam-era veterans), or **background**.

Additional Information

To request additional information regarding Title VI and related federal and state nondiscrimination obligations, please contact:

Title VI Program Coordinator
Merrimack Valley Metropolitan Planning Organization
c/o Merrimack Valley Planning Commission
160 Main Street
Haverhill, MA 01830-5061
(978) 374-0519, extension 15
akomornick@mvpc.org

Complaint Filing

To file a complaint alleging a violation of Title VI or related federal nondiscrimination law, contact the Title VI Program Coordinator (above) within one hundred and eighty (180) days of the alleged discriminatory conduct.

To file a complaint alleging a violation of the Commonwealth's Public Accommodation Law, contact the Massachusetts Commission Against Discrimination within three hundred (300) days of the alleged discriminatory conduct at:

Massachusetts Commission Against Discrimination (MCAD)
One Ashburton Place, 6th Floor
Boston, MA 02109
(617) 994-6000
TTY: (617) 994-6196

Translation

English

If this information is needed in another language, please contact the MVMPO Title VI/Nondiscrimination Coordinator at 978-374-0519 ext. 15.

Spanish

Si necesita esta información en otro idioma, por favor contacte al coordinador de MVMPO del Título VI/Contra la Discriminación al 978-374-0519 ext. 15.

Portuguese

Caso estas informações sejam necessárias em outro idioma, por favor, contate o Coordenador de Título VI e de Não Discriminação da MVMPO pelo telefone 978-374-0519, Ramal 15.

Chinese Simple

如果需要使用其它语言了解信息，请联系Merrimack Valley大都会规划组织（MVMPO）《民权法案》第六章协调员，电话978-374-0519，转15。

Chinese Traditional

如果需要使用其他語言瞭解資訊，請聯繫Merrimack Valley大都會規劃組織（MVMPO）《民權法案》第六章協調員，電話978-374-0519，轉15。

Vietnamese

Nếu quý vị cần thông tin này bằng tiếng khác, vui lòng liên hệ Điều phối viên Luật VI/Chống phân biệt đối xử của MVMPO theo số điện thoại 978-374-0519, số máy nhánh 15.

French Creole

Si yon moun vle genyen enfòmasyon sa yo nan yon lòt lang, tanpri kontakte Kowòdinatè kont Diskriminasyon/MVMPO Title VI la nan nimewo 978-374-0519, ekstansyon 15.

Russian

Если Вам необходима данная информация на любом другом языке, пожалуйста, свяжитесь с Координатором Титула VI/Защита от дискриминации в MVMPO по тел: 978-374-0519, добавочный 15.

French

Si vous avez besoin d'obtenir une copie de la présente dans une autre langue, veuillez contacter le coordinateur du Titre VI/anti-discrimination de MVMPO en composant le 978-374-0519, poste 15.

Italian

Se ha bisogno di ricevere queste informazioni in un'altra lingua si prega di contattare il coordinatore del MVMPO del Titolo VI e dell'ufficio contro la discriminazione al 978-374-0519 interno 15.

Mon-Khmer, Cambodian

ប្រសិនបើលោក-អ្នកត្រូវការបកប្រែពីភាសានេះ

សូមទាក់ទងអ្នកសម្របសម្រួលជំពូកទី6/គ្មានការរើសអើងរបស់ MVMPO តាមរយៈលេខទូរស័ព្ទ 978-374-0519 រួចភ្ជាប់ទៅលេខ 15។

Arabic

إذا كنت بحاجة إلى هذه المعلومات بلغة أخرى، يُرجى الاتصال بمنسق الفقرة السادسة لمنع التمييز التابع لمنظمة التخطيط الحضري في ميريماك فالي على الهاتف: 978-374-0519 و ثم اضغط الأرقام 15.

Part C. 7. Environmental Justice

Environmental Justice from a transportation perspective is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of transportation laws, regulations, and policies.

"Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

MVMPO Merrimack Valley Transportation Committee Equity Working Group

The MVMPO Merrimack Valley Transportation Committee's (MVTC) purpose is to advise the MVMPO and participate in the MVMPO region's federally certified transportation planning process. Its membership provides for the involvement of local government officials, transportation professionals, transportation providers, and individuals experienced in economic development, freight, commuter rail, smart growth, environmental issues, regional planning, and other interest groups, ensuring broad representation and a geographical balance of its participants.

MVTC Equity Working Group

The MVMPO is responsible for promoting, securing and evaluating public involvement in its transportation planning process. In particular, it is responsible for identifying and seeking meaningful participation of the region's minority and low-income (Environmental Justice) populations – and in working to reduce participation barriers for such populations.

The MVMPO's established EJ process includes identification of Census-based statistical areas within its region where:

- a) the percentage of minority populations exceeds the average percentage of minority population for the region as a whole;
- b) household incomes are 65% or less of area median income (AMI), and
- c) there are concentrations of households with limited English proficiency (LEP).

The MVMPO established an Equity Working Group to provide the MVMPO members and staff with the perspectives of individuals and organizations representing low-income and minority populations. It is also an opportunity for MVMPO staff and EJ stakeholders to exchange information, evaluate policies, plans and projects, and generate ideas for future projects. The MVMPO staff regularly consults with members of the Equity Working Group.

To help inform the work of the MVMPO, it is helpful to have members of the Equity Working Group who have individual and/or collective knowledge and expertise in working with EJ populations on:

- a) Disabilities
- b) Education
- c) English proficiency
- d) Elder Affairs
- e) Faith-based community service
- f) Minority advocacy
- g) Neighborhood organization
- h) Non-profit community development
- i) Public Health
- j) Veterans Affairs
- k) Workforce training and development

Part C. 8. Equity Analysis

The following tables illustrate a geographic and social equity analysis of highway funding in the Merrimack Valley MPO region. Haverhill, Lawrence and Methuen are designated as Title VI and Environmental Justice (EJ) communities. The Title VI communities have Census Tracts with higher than average percentage of minorities than the regional average percentage and the same three communities are EJ communities with lower than average median income in some Census Tracts.

The following table shows the percent of population in Title VI / EJ communities relative to the percent of Federal highway funding programmed in the 2021 to 2025 TIP.

	Region Population (ACS 11 to 15)	Percent of Total Population	TIP Project Investment	Percent of Projects by Total Investment
Within Title VI / EJ community	189,490	55%	\$212,238,824	69%
Outside Title VI / EJ community	154,420	45%	\$94,064,256	31%
Total	343,910	100%	\$306,303,080	100%

This table illustrates consistency between the percent of population in Title VI/ EJ areas and the percent of funding in those areas.

Persons with Limited English Proficiency (LEP) are those who self-report on the Census as speaking English ‘less than very well’. USDOT guidance defines “Safe harbor” languages as those non-English languages that are spoken by LEP persons who make up at least 5% of the population, or 1,000 individuals, whichever is less. Using this definition for LEP people ages 5+ living in the region the number of LEP individuals exceeds the 1,000-person threshold in Spanish (32,513 people) and Chinese (1,124 people). The LEP persons in these two languages represent 83% of all LEP people in the region. Communities with more than 1,000 individuals whose “Safe-harbor” language is Spanish are Haverhill (3,010 people), Lawrence (25,355 people) and Methuen (3,352 people). Andover has the highest number of individuals (630 people) whose “Safe-harbor” language is Chinese. Therefore these 4 communities are considered LEP communities.

The following table shows the percent of population age 5+ in LEP communities relative to the percent of Federal highway funding programmed in the 2021 to 2025 TIP.

	Region Population Age 5+ (ACS 11 to 15)	Percent of Total Population Age 5+ (ACS 11 to 15)	TIP Project Investment	Percent of Projects by Total Investment
Within LEP community	208,754	65%	248,292,836	81%
Outside LEP community	112,973	35%	58,010,244	19%
Total	321,727	100%	\$306,303,080	100%

This table illustrates consistency between the percent of population in LEP areas and the percent of funding in those areas.

All of the Federal transit funding (100%) is considered to benefit Title VI, EJ and LEP communities because all of the MVRTA fixed routes originate in the Title VI / EJ / LEP communities of Haverhill or Lawrence, or provide connections to these routes. The paratransit service also provides access to and from the Title VI, EJ and LEP communities.

All but one of the MVMPO region communities have had, or are programmed to have, Federally funded projects from 2016 to 2025. (Looking at the tables that follow West Newbury, which is not a Title VI / EJ or LEP community, does not have a federally funded project in the ten-year period, however it did have a Federally funded project in 2015.

The tables on the following pages show the projects included in the analysis for FFYs 2021 to 2025 and a summary chart showing the number of projects and the funding by community, and whether the community is a Title VI (high percentage of minorities), an EJ (high percentage of low-income households) and/or LEP community. This is followed by a table and analysis chart for projects programmed in FFYs 2016 to 2020.

For Title VI and EJ communities, the results show that for FFYs 2021 to 2025, 41% of the total number of projects are in Title VI and EJ communities. Considering the data for percent of funding, 69% of the funding is in Title VI and EJ communities.

For LEP communities, the results show that for FFYs 2021 to 2025, 45% of the total number of projects are in LEP communities. Considering the data for percent of funding, 81% of the funding is in LEP communities.

For Title VI and EJ communities, the results show that for FFYs 2016 to 2020, 57% of the total number of projects are in Title VI communities and EJ communities. Considering the data for percent of funding, 69% of the funding is in Title VI communities and EJ communities.

For LEP communities, the results show that for FFYs 2016 to 2020, 63% of the total number of projects are in LEP communities. Considering the data for percent of funding, 77% of the funding is in LEP communities.

All of the Transit funding (100%) is considered to benefit Title VI, EJ and LEP communities because all of the MVRTA fixed routes originate in Haverhill or Lawrence, or provide connections to these routes. The paratransit service also provides access to and from the Title VI and EJ communities. The only mappable transit project in the FFYs 2021 to 2025 TIP is the SGR Riverbank Stabilization project it is labelled on the relevant maps as RTD - 9131. It is also the only mappable transit project in FFYs 2016 to 2020 project list it is labelled on these maps as RTD-7695. The transit project maps also include the fixed-route bus service routes.

Equity Analysis Maps

[MVMPO: FFYs 2021 to 2025 TIP Projects by Community](#)

[MVMPO: FFYs 2016 to 2020 Projects by Community](#)

[MVMPO: FFYs 2021 to 2025 Statewide and Regional Target Highway Projects overlaid on Low Income and Minority Tracts](#)

[MVMPO: FFYs 2021 to 2025 Transit Projects and MVRTA Bus Routes overlaid on Low Income and Minority Tracts](#)

[MVMPO: FFYs 2016 to 2020 Statewide and Regional Target Highway Projects overlaid on Low Income and Minority Tracts](#)

[MVMPO: FFYs 2016 to 2020 Transit Projects and MVRTA Bus Routes overlaid on Low Income and Minority Tracts](#)

**FFYs 2021 to 2025 MVMPO Statewide and Regional Target Highway Funding
Projects by Community for Equity Analysis**

Community	Project Number	Project Description	Total Funding Programmed	FFY	Title VI Community	EJ Community	LEP Community
Andover	606522	Andover- Bridge Rehab., I-495 over Rt. 28 and RR	\$36,054,012	2024 - 2025	No	No	Yes
Georgetown/ Boxford	607541	Georgetown/ Boxford Border to Boston Trail	\$2,520,436	2022	No	No	No
Georgetown/ Newbury	607542	Georgetown/ Newbury Border to Boston Trail	\$5,685,060	2024	No	No	No
Groveland	608298	Groveland Community Trail	\$1,984,861	2021	No	No	No
Haverhill	605306	Haverhill- Bridge Replacement I-495 over Merrimack (H-12-039)	\$46,503,796	2021 to 2023	Yes	Yes	Yes
Haverhill	609466	Haverhill- Bridge Replacement I-495 over Merrimack (H-12-040)	\$94,747,200	2023 to 2025	Yes	Yes	Yes
Haverhill	605304	Haverhill- Bridge Replacement Bridge St (Rt 125) over Merrimack and B&M RR	\$45,861,496	2024 to 2025	Yes	Yes	Yes

Projects by Community for Equity Analysis (Cont.)

Communi- nity	Project Number	Project Descrip- tion	Total Funding Pro- grammed	FFY	Title VI Com- mu- nity	EJ Com- mu- nity	LEP Com- mu- nity
Haverhill	608761	Haverhill- Intersec- tion Reconstruction Rt 108 (Newton Rd) at Rt 110	\$1,980,067	2021	Yes	Yes	Yes
Lawrence	609509	Lawrence – Inter- section Improve- ments at Merrimack Street and South Broadway (Route 28)	\$1,610,960	2022	Yes	Yes	Yes
Lawrence	609251	Lawrence – Inter- section Improve- ments at South Broadway (Route 28) and Mount Vernon Street	\$1,013,739	2021	Yes	Yes	Yes
Lawrence	608930	Lawrence- Law- rence Manchester Rail Corridor (LMRC) Rail Trail	\$16,087,005	2023	Yes	Yes	Yes
Methuen	610658	Methuen – Intersec- tion Improvements at Riverside Drive and Burnham Road	\$967,200	2022	Yes	Yes	Yes

Projects by Community for Equity Analysis (Cont.)

Community	Project Number	Project Description	Total Funding Programmed	FFY	Title VI Community	EJ Community	LEP Community
Newbury/ Newburyport/ Salisbury	608494	Newbury/ Newburyport/ Salisbury Resurfacing Route 1	\$9,807,200	2022	No	No	No
Newburyport	610663	Newburyport – Riverfront Clipper City Rail Trail Construction	\$1,900,802	2021	No	No	No
North Andover	608095	North Andover-Corridor Rt.114 from Andover St. to Stop & Shop	\$26,906,533	2023 to 2025	No	No	No
Rowley	609392	Rowley – Safety Improvements at Route 1, Central and Glen Streets	\$2,368,068	2025	No	No	No
Salisbury	602202	Salisbury Reconstruction of Route 1 (Lafayette Rd)	\$6,837,284	2023	No	No	No
MVRTA	S10777	MVRTA – Flex to FTA for 4 of 9 Buses	\$3,467,361	2021	Yes	Yes	Yes
	Total	Projects 21 to 25	\$306,303,080				

FFYs 2021 to 2025 MVMPO Equity Analysis Highway Funding

Community	Number of Projects	Percent Of Projects	TIP Funding	Percent of Funding	Title VI Community	EJ Community	LEP Community
Amesbury	0	0%	\$0	0%	No	No	No
Andover	1	5%	\$36,054,012	11.8%	No	No	Yes
Boxford	1	5%	\$1,260,218	0.4%	No	No	No
Georgetown	2	9%	\$4,102,748	1.3%	No	No	No
Groveland	1	5%	\$1,984,861	0.6%	No	No	No
Haverhill	4	18%	\$189,092,559	61.7%	Yes	Yes	Yes
Lawrence	3	14%	\$18,711,704	6.1%	Yes	Yes	Yes
Merrimac	0	0%	\$0	0.0%	No	No	No
Methuen	1	5%	\$967,200	0.3%	Yes	Yes	Yes
Newbury	2	9%	\$6,111,597	2.0%	No	No	No
Newburyport	2	9%	\$5,169,869	1.7%	No	No	No
North Andover	1	5%	\$26,906,533	8.8%	No	No	No
Rowley	1	5%	\$2,368,068	0.8%	No	No	No
Salisbury	2	9%	\$10,106,350	3.3%	No	No	No
West Newbury	0	0%	\$0	0.0%	No	No	No
MVRTA	1	5%	\$3,467,361	1.1%	Yes	Yes	Yes
Total	22		\$306,303,080				

Percent of Projects in Title VI Community = 41%

Percent of Projects in EJ Community = 41%

Percent of Projects in LEP Community = 45%

Percent of Funding in Title VI Community = 69%

Percent of Funding in EJ Community = 69%

Percent of Funding in LEP Community = 81%

**FFYs 2016 to 2020 MVMPO Statewide and Regional Target Highway Funding
Projects by Community for Equity Analysis**

Communi- ty	Project Number	Project De- scription	Total Funding Pro- grammed	FFY	Title VI Com- mu- nity	EJ Com- mu- nity	LEP Com- mu- nity
Amesbury	602418	Amesbury - Elm St. Reconstruc- tion (2019 = \$3,955,071, 2020 = \$7,223,053)	\$11,178,124	2019- 2020	No	No	No
Amesbury	606669	Amesbury- Pow- wow Riverwalk	\$671,207	2017	No	No	Yes
Amesbury/ Salisbury	607737	Amesbury- Salisbury Trail Connector at I- 95	\$3,167,723	2018	No	No	No
Andover/ Lawrence	606574	Andover/ Law- rence IM I-495	\$14,396,000	2016	No/ Yes	No/ Yes	Yes/ Yes
Andover/ Methuen	607561	Andover/ Me- thuen IM I-93	\$13,932,707	2017	No/ Yes	No/ Yes	Yes/ Yes
Groveland	605114	Groveland Rt 97 (School St & Salem St)	\$2,040,502	2016	No	No	No
Haverhill	608027	Haverhill Brad- ford Rail Trail Ext.	\$1,766,108	2020	Yes	Yes	Yes
Haverhill	607573	Haverhill- Route 97 (Broadway)	\$6,526,912	2017	Yes	Yes	Yes

**FFYs 2016 to 2020 MVMPO Statewide and Regional Target Highway Funding
Projects by Community for Equity Analysis (Cont.)**

Communi- ty	Project Num- ber	Project Description	Total Funding Pro- grammed	FFY	Title VI Com- mu- nity	EJ Com- mu- nity	LEP Com- mu- nity
Haverhill	606161	Haverhill- Improve- ments on Main St (Rt. 125)	\$3,635,519	2016	Yes	Yes	Yes
Haverhill	605306	Haverhill- Bridge Re- placement I-495 over Merrimack (2018 = \$19,797,733, 2019 = \$23,703,426, 2020 = \$15,305,880	\$58,807,039	2018 - 2020	Yes	Yes	Yes
Haverhill/ Merrimac/ Amesbury/ Salisbury	608187	Guide Signs on I-495	\$4,451,342	2017	Yes/ No	Yes/ No	Yes/ No
Lawrence	608946	Lawrence- Haverhill St (Route 110) at Ames Street	\$1,267,500	2018	Yes	Yes	Yes
Lawrence	608261	Lawrence- Marston St./ Ferry St./ Commonwealth Ave.	\$1,350,694	2017	Yes	Yes	Yes
Lawrence	608002	Lawrence- Safe Routes to School Bruce Elementary	\$2,016,148	2017	Yes	Yes	Yes
Lawrence	608407	Lawrence- Signals/ ADA along Common & Lowell Streets	\$2,880,512	2016	Yes	Yes	Yes

**FFYs 2016 to 2020 MVMPO Statewide and Regional Target Highway Funding
Projects by Community for Equity Analysis (Cont.)**

Communi- ty	Project Num- ber	Project Description	Total Funding Pro- grammed	FFY	Title VI Com- mu- nity	EJ Com- mu- nity	LEP Com- mu- nity
Lawrence/ North Andover	608809	Lawrence- North Andover- Resurfac- ing Route 114	\$2,123,453	2018	Yes/ No	Yes/ No	Yes/ No
Lawrence/ North Andover	607985	Lawrence- North Andover- IM on I-495	\$7,198,000	2016	Yes/ No	Yes/ No	Yes/ No
Methuen	607476	Methuen- Rt 213 Re- surfacing and Bridge Repairs	\$11,987,868	2016	Yes	Yes	No
New- buryport	608792	Newburyport- SRTS	\$1,866,615	2019	No	No	No
North Andover	606159	North Andover- Rt 125/ Mass Ave	\$5,446,662	2019	No	No	No
MVRTA	604585	Flex to FTA for MVRTA Cleaner Fuel Buses	\$645,840	2017	Yes	Yes	Yes
MVRTA	MV000 1	Flex to FTA for MVRTA Cleaner Fuel Buses	\$698,541	2019	Yes	Yes	Yes
MVRTA	MV000 3	Flex to FTA for MVRTA Bike Racks for Buses and for Transportation Cen- ters	\$110,000	2019	Yes	Yes	Yes

**FFYs 2016 to 2020 MVMPO Statewide and Regional Target Highway Funding
Projects by Community for Equity Analysis (Cont.)**

Communi- city	Project Number	Project Description	Total Funding Pro- grammed	FFY	Title VI Com- mu- nity	EJ Com- mu- nity	LEP Com- mu- nity
Salisbury	605020	Salisbury- Multi-use trail extension (Borders-to-Boston), includes new bridge S-02-004	\$7,184,196	2018	No	No	No
		Total All Projects 2016 to 2020	\$182,908,965				

FFYs 2016 to 2020 MVMPO Equity Analysis Highway Funding

Community	Number of Projects	Percent Of Projects	TIP Funding	Percent of Funding	Title VI Community	EJ Community	LEP Community
Amesbury	4	13%	\$14,916	9%	No	No	No
Andover	2	7%	\$14,164,354	9%	No	No	Yes
Boxford	0	0%	\$0	0%	No	No	No
Georgetown	0	0%	\$0	0%	No	No	No
Groveland	1	3%	\$2,040,502	1%	No	No	No
Haverhill	5	17%	\$72,219,359	46%	Yes	Yes	Yes
Lawrence	7	23%	\$15,774,581	10%	Yes	Yes	Yes
Merrimac	1	3%	\$1,483,781	1%	No	No	No
Methuen	2	7%	\$18,954,222	12%	Yes	Yes	Yes
Newbury	0	0%	\$0	0%	No	No	No
Newburyport	1	3%	\$1,866,615	1%	No	No	No
North Andover	2	7%	\$6,508,389	4%	No	No	No
Rowley	0	0%	\$0	0%	No	No	No
Salisbury	2	7%	\$8,768,057	6%	No	No	No
West Newbury	0	0%	\$0	0%	No	No	No
MVRTA	3	10%	\$1,454,381	1%			
Total	38		\$158,151,211				

Percent of Projects in Title VI Community = 57%

Percent of Projects in EJ Community = 57%

Percent of Projects in LEP Community = 63%

Percent of Funding in Title VI Community = 69%

Percent of Funding in EJ Community = 69%

Percent of Funding in LEP Community = 77%

FFYs 2021 to 2025 Transit Projects

FFY Year	Project Number	Project Description	Total Project Cost
2021	RTD0009132	SGR Replace Security Camera system at McGovern Center	\$131,000
2021	RTD0008602	SGR Replace 1 Model Yr 2016 supervisory vehicle	\$47,900
2021		Replace Model Yr 2009 Buses Delivery 2022 (2 of 9)	\$990,674
2021	RTD0008595	Operating Assistance	\$1,116,240
2021	RTD0008592	Preventive Maintenance	\$3,495,970
2021	RTD0007686	Short Range Transit Planning	\$100,000
2021	RTD0009131	Riverbank stabilization Construction	\$1,750,330
2021	RTD0008596	Replace 16 Model Yr 2015 vans with new	\$1,180,480
2021	RTD0008593	Non-Fixed Route ADA Para Serv	\$1,741,065
2022	RTD0008609	SGR Replace 2 Model Yr 2016 supervisory vehicles	\$97,740
2022	RTD0008597	Preventive Maintenance	\$3,611,335
2022	RTD0008599	Short Range Transit Planning	\$100,000
2022	RTD0008600	Operating Assistance	\$1,289,890
2022	RTD0008598	Non-Fixed Route ADA Para Serv	\$1,801,630

FFYs 2021 – 2025 MVMPO Transit Projects Funding (Cont.)

FFY Year	Project Number	Project Description	Total Project Cost
2023	RTD0008604	Operating Assistance	\$1,478,730
2023	RTD0008606	Replace 4 Model Yr 2011 buses delivery 2023	\$2,009,600
2023	RTD0008960	SGR Replace 1 Model Yr 2017 supervisory vehicle	\$50,335
2023	RTD0008608	Short Range Transit Planning	\$100,000
2023	RTD0008603	Preventive Maintenance	\$3,730,510
2023	RTD0008607	Replace 6 Model Yr 2017 vans delivery 2023	\$469,620
2023	RTD0008605	Non-Fixed Route ADA Para Serv	\$1,861,090
2024	RTD0008961	SGR Replace 1 model year 2018 supervisory vehicle	\$51,845
2024	RTD0008614	Short Range Transit Planning	\$100,000
2024	RTD0008611	Preventive Maintenance	\$3,618,265
2024	RTD0008613	Non-Fixed Route ADA Para Serv	\$1,805,255
2024	RTD0008610	SGR Replace model yr 2011 Buses Delivery 2024 (4 of 8)	\$2,098,970
2024	RTD0008612	Operating Assistance	\$1,429,680
2025	RTD0008963	Preventive Maintenance	\$3,690,630
2025	RTD0008665	Non-Fixed Route ADA Para Serv	\$1,841,365

FFYs 2021 – 2025 MVMPO Transit Projects Funding (Cont.)

FFY Year	Project Number	Project Description	Total Project Cost
2025	RTD0008962	Short Range Transit Planning	\$100,000
2025	RTD0008964	Operating Assistance	\$1,458,270
2025	RTD0008615	SGR Replace model yr 2012 Buses Delivery 2025 (4 of 8)	\$2,193,840
2025	RTD0008966	SGR Replace 1 model year 2019 supervisory vehicle	\$52,880
		Total Transit Project Funding 2021 to 2025	\$45,595,139

FFYs 2016 – 2020 MVMPO Transit Projects Funding

FFY Year	Project Number	Project Description	Total Project Cost
2016		ADA Operating Expense	\$1,311,195
2016		Preventive Maintenance	\$3,131,330
2016		Operating Assistance	\$684,350
2016		Short Range Transit Planning	\$50,000
2016		MVPC Technical Support to MVRTA	\$50,000
2016		Replace 5 Model Yr 2011 Paratransit Vehicles	\$320,000
2016		Acquire Support Vehicles	\$90,000
2017	RTD0004541	ADA Operating Expense	\$1,371,830
2017	RTD0004542	Preventive Maintenance	\$3,054,810
2017	RTD0004552	Operating Assistance	\$1,257,050
2017	RTD0004550	Short Range Transit Planning	\$100,000
2017	RTD0004932	Replace 7 Model Yr 2004 Buses with new	\$2,989,000
2017	RTD0004919	Replace Parking Facilities Revenue Collection Equipment	\$300,000
2017	RTD0004989	Bus/ Van Mobile Location Project	\$300,000

FFYs 2016 – 2020 MVMPO Transit Projects Funding (Cont.)

FFY Year	Project Number	Project Description	Total Project Cost
2017	RTD0004540	Refurbish Engines on 8 Model Year 2011 Buses	\$280,000
2017	RTD0004990	Replace 1 Model Yr 2013 Support Vehicle	\$46,350
2018	RTD0005637	ADA Operating Expense	\$1,413,370
2018	RTD0005638	Preventive Maintenance	\$3,152,905
2018	RTD0005639	Refurbish Engine/ trans 8 model year 2012 buses	\$264,000
2018	RTD0005642	Operating Assistance	\$643,010
2018	RTD0005643	Short Range Transit Planning	\$100,000
2018	RTD0005656	Replace 6 Model Yr 2004 buses delivery 2018	\$2,689,500
2018	RTD0005662	Replace 1 Model Yr 2013 Support Vehicle	\$47,750
2019	RTD0006769	Preventive Maintenance	\$3,250,095
2019	RTD0006770	ADA Operating Expense	\$1,456,420
2019	RTD0006771	Short Range Transit Planning	\$100,000
2019	RTD0006772	Operating Assistance	\$780,250
2019	RTD0007127	SGR Riverbank stabilization Design/Permitting	\$235,035

FFYs 2016 – 2020 MVMPO Transit Projects Funding (Cont.)

FFY Year	Project Number	Project Description	Total Project Cost
2019	RTD0007126	SGR Refurbish 4 vehicle lifts	\$400,000
2019	RTD0006785	Replace 1 Model Yr 2013 Support Vehicle	\$45,205
2020	RTD0007680	Preventive Maintenance	\$3,323,160
2020	RTD0007681	Non-Fixed Route ADA Para Serv	\$1,653,255
2020	RTD0007682	Short Range Transit Planning	\$100,000
2020	RTD0007683	Operating Assistance	\$861,550
2020	RTD0007687	Replace 3 Model Yr 2007 buses delivery 2020	\$1,377,150
2020	RTD0007695	SGR Riverbank stabilization Construction	\$1,750,330
2020	RDT0007696	SGR Replace 1 Model Year 2013 supervisory vehicle	\$46,530
2020	RDT0008295	NEET Driving Forward 2020	\$25,000
2020	RTD0008320	Town of Salisbury MAP Van for Svc Expansion (1)	\$68,000
2020	RTD0008311	Town of Andover MAP Buy Replacement Van (1)	\$69,100
2020	RTD0009193	Purchase On-board Automatic Passenger Counters (APC)	\$371,280
		Total Transit Funding 2016 to 2020	\$39,558,810

List of Appendices in Separate File

The following Appendices can be found in a separate file titled “Appendices to the Draft MVMPO 2021 to 2025 TIP April 2020”

- Appendix A Other Regional Priority Bridge Projects
- Appendix B Other Regional Priority Roadway Projects
- Appendix C Transportation Evaluation Criteria Summary
- Appendix D Sample Project Evaluation Worksheet
- Appendix E Greenhouse Gas (GHG) Monitoring and Evaluation
- Appendix F Completed Highway and Transit Projects GHG Summary
- Appendix G List of Acronyms
- Appendix H Key to Maps Showing Locations of Transportation Projects