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Financial Element





FINANCIAL ELEMENT

As required by SAFETEA-LU regulations regarding Regional Transportation Plans, a financial analysis must be included that examines the anticipated needs of the Region with reasonably expected federal and state funds. This chapter outlines the development of those funding estimates and determines if the Montachusett RTP is fiscally constrained.

Financial Analysis

To assist in the development of this financial component of the RTP, the Office of Transportation Planning (OTP) of the Massachusetts Department of Transportation (MassDOT) developed highway and transit funding estimates for the life span of the document, i.e. to the year 2035.

Highway Funding

Federal and state highway fund estimates were developed by MassDOT in five year increments. Data was provided for the entire Commonwealth as well as for each particular MPO. Assumptions used in compiling this data were as follows:

- Federal funding (Obligation Authority (OA) and redistribution) and state match for the period of 2011 – 2014 reflect current STIP allocations and funding for FFY 2015 is assumed to be equal to estimates for FFY 2014.
- Beginning in 2016 and each year thereafter federal funding is assumed to grow at a rate of 3% per year.
- Deductions for statewide items that cannot be allocated individually to the MPOs - Central Artery and ABP GANs repayments, Planning, and Extra Work Orders/Cost Adjustments - are taken from total available funding, leaving an amount of available federal funding to be allocated in the regional plans.
- Assumed funding for Major Infrastructure Projects, the NHS/IM Programs, the Federal Aid Bridge Program, and Infrastructure Maintenance mirrors the assumptions made for federal funding - 2011-2015 reflect STIP amounts, and thereafter programs are adjusted by a rate of 3% per year.
- The Balance Available for the Statewide Road and Bridge Program is a function of the other assumptions made in the financial plan and represents federal funding after deducting statewide line items and GANS repayments. For 2011-2015, this amount reflects the regional targets provided in the STIP; from 2016 to 2021 it fluctuates based upon the assumed 3% growth in revenue and program costs, as well as the repayment schedule of the ABP GANs; in 2022, the amount balloons to reflect the end of GANs repayments and thereafter it grows at a rate of 3% per year.



- The Non-Federal Aid Program is based upon the existing program and held constant at current amounts for 2012 - 2015. Beginning in 2016 and thereafter, NFA funding is adjusted at a rate of 3% per year.

The following table provides the Statewide federal and state funding estimates developed by MassDOT.

FFY 2012 - 2035 Regional Transportation Plan Funding (thousands)

ESTIMATED FEDERAL FUNDING						
	2012 - 2015	2016 - 2020	2021 - 2025	2026 - 2030	2031 - 2035	TOTAL
Core Program Federal Funds Available	\$2,800,000	\$3,062,310	\$3,550,056	\$4,115,488	\$4,770,978	\$18,298,832
Assumed Redistribution	\$160,000	\$218,736	\$253,575	\$293,963	\$340,784	\$1,267,059
Total Federal Funds Available	\$2,960,000	\$3,281,046	\$3,803,631	\$4,409,451	\$5,111,763	\$19,565,891
Less GANS Payments	\$835,675	\$750,000	\$208,000	\$0	\$0	\$1,793,675
Federal Funds Available for SWRB	\$2,124,325	\$2,531,046	\$3,595,631	\$4,409,451	\$5,111,763	\$17,772,216
Total Funds Available Including State Match	\$2,575,337	\$3,082,235	\$4,392,039	\$5,390,043	\$6,248,537	\$21,688,190
Less Major Infrastructure Project	\$162,750	\$218,736	\$330,459	\$403,776	\$468,087	\$1,583,807
Less Major Infrastructure Project Needs - HPP	\$0	\$0	\$0	\$0	\$0	\$0
Less NHS/Interstate Maintenance Program	\$404,036	\$432,978	\$649,914	\$793,237	\$919,579	\$3,199,743
Less Federal Aid Bridge Needs	\$633,977	\$698,496	\$1,045,163	\$1,274,963	\$1,478,032	\$5,130,632
Less Statewide Items:						
Planning	\$115,000	\$125,773	\$145,806	\$169,029	\$195,951	\$751,559
Extra Work Orders	\$218,850	\$246,078	\$285,272	\$330,709	\$383,382	\$1,464,292
Infrastructure Maintenance	\$329,315	\$280,730	\$388,924	\$474,434	\$550,000	\$2,023,403
Total Statewide Items	\$663,165	\$652,581	\$820,002	\$974,172	\$1,129,333	\$4,239,254
BALANCE AVAILABLE FOR SWRB	\$711,409	\$1,106,893	\$1,567,763	\$1,966,511	\$2,279,726	
Estimated HPP Funding Including State Match	\$0	\$0	\$0	\$0	\$0	\$0
ESTIMATED NON-FEDERAL FUNDING						
TOTAL ESTIMATED NFA FUNDS AVAILABLE	\$750,000	\$820,261	\$950,908	\$1,102,363	\$1,277,941	\$4,901,473
Roads	\$437,473	\$507,151	\$587,927	\$681,568	\$790,125	\$3,004,243
Bridges	\$312,527	\$313,111	\$362,981	\$420,794	\$487,816	\$1,897,229
TOTAL AVAILABLE FOR ALLOCATING IN THE RTP	\$2,991,487	\$3,558,095	\$4,933,130	\$6,015,285	\$6,973,364	\$24,471,360

The statewide figures were then allocated to the various MPO's in the Commonwealth based upon the following assumptions:

- With the exception of funds for the NHS/IM and Bridge Programs, the estimated funding is allocated among the MPOs based upon the existing Massachusetts



Association of Regional Planning Agencies (MARPA) (a working group comprised of the 13 MA RPA's) TIP targets.

- Funding assumed for the NHS/IM Program is allocated based upon the regional share of National Highway System mileage.
- Amounts assumed for the Bridge Program are allocated based upon each region's percentage of bridges.

The resulting fund estimates for the Montachusett MPO based upon the above assumptions and allocations are as follows:

FFY 2012 - 2035 Regional Transportation Plan – Montachusett MPO Allocation
(figures in thousands)

	2012 - 2015	2016 - 2020	2021 - 2025	2026 - 2030	2031 - 2035	TOTAL
Total Available for Programming in the Montachusett Region RTP	\$138,594	\$164,569	\$228,784	\$278,970	\$323,403	\$1,134,320
<i>Major Infrastructure Projects</i>	\$7,258	\$9,755	\$14,737	\$18,007	\$20,875	\$70,631
<i>Federal Aid Bridge Projects</i>	\$39,408	\$43,419	\$64,967	\$79,252	\$91,874	\$318,920
<i>NHS/IM Projects</i>	\$12,069	\$12,933	\$19,413	\$23,694	\$27,468	\$95,576
<i>Statewide Maintenance</i>	\$48,133	\$49,100	\$59,751	\$70,319	\$81,519	\$308,822
<i>Regional Discretionary Funding</i>	\$31,726	\$49,363	\$69,916	\$87,699	\$101,667	\$340,370

The estimated MPO allocations for Major Infrastructure Projects and the NHS/IM and bridge programs are included to provide order-of-magnitude guidance. It is understood that there are many methods that could be used to allocate funding for these programs; this is one way. The additional guidance that has been provided for suballocation to the Major Infrastructure, NHS/IM and Bridge programs are provided as a starting point to MPO discussions, but can be adjusted by MPOs, within the overall financial constraint provided in the table, on an as-needed, agreed-to basis.

The Major Infrastructure Program is provided to account for projects of a significant cost that would not normally be expected to be included in an MPO's target component of the TIP. While this program would typically be the source of funding for projects that are regionally significant for air quality, it may also be used to fund large cost non-expansion projects. Most bridge projects, regardless of cost, should be accommodated within the Bridge Program; however, depending upon the magnitude of the project, it may be necessary for a region to fund a particular bridge project under the Major Infrastructure Program.

The funding available should be allocated to operating, maintaining, and improving the highway-funded transportation system. In addition to road projects, this may include bicycle, pedestrian, enhancement, CMAQ, ITS, or any other program for which federal highway funding is expected to be used.




Transit Funding

MassDOT Transit developed and provided each MPO and Regional Transit Authority with funding estimates for transit planning purposes. These estimates were based on the following assumptions:

- Transit Assumptions

The following table provides estimates for the Montachusett Regional Transit Authority (MART) as well as Competitive Statewide Federal Funding estimates.

Montachusett Regional Transit Authority Federal Fiscal Year 2012 – 2036

Massachusetts Transit Program Funding Forecasts 2012-2036 As of August 18, 2011							 v 2.3	
RTA		MART						
Recipient Name:		Montachusett RTA						
MPO:		Montachusett						
Federal Formula Program		Note	FFY 2012-2016	FFY 2017-2021	FFY 2022-2026	FFY 2027-2031	FFY 2032-2036	Total
\$ 5307	Urbanized Area Formula		\$ 13,860,789	\$ 16,068,454	\$ 18,627,742	\$ 21,594,658	\$ 25,034,127	\$ 95,185,769
\$ 5309	Capital Fixed Guideway Program	A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commonwealth Programs for RTA		Note	FFY 2012-2016	FFY 2017-2021	FFY 2022-2026	FFY 2027-2031	FFY 2032-2036	Total
SCA	State Contract Operating Assistance		\$ 22,196,774	\$ 25,723,000	\$ 29,806,000	\$ 34,545,000	\$ 40,040,000	\$ 152,310,774
RTACAP	RTA Capital Assistance Program		\$ 2,827,921	\$ 3,683,298	\$ 4,051,628	\$ 4,456,791	\$ 4,902,470	\$ 19,922,108
ITCCAP	RTA Intermodal Assistance Program	D	\$ 53,000	\$ -	\$ -	\$ -	\$ -	\$ 53,000
Statewide Programs for all eligible participants		Note	FFY 2012-2016	FFY 2017-2021	FFY 2022-2026	FFY 2027-2031	FFY 2032-2036	Total
\$ 5310	Elderly/Persons with Disabilities	B	\$ 14,542,206	\$ 16,837,000	\$ 19,481,000	\$ 22,543,000	\$ 26,097,000	\$ 99,500,206
\$ 5311	Rural Area/Non Urbanized	B	\$ 13,917,629	\$ 16,124,000	\$ 18,676,000	\$ 21,634,000	\$ 25,063,000	\$ 95,414,629
\$ 5311(f)	Intercity bus		\$ 2,783,522	\$ 3,218,000	\$ 3,718,000	\$ 4,297,000	\$ 4,969,000	\$ 18,985,522
MAP	Mobility Assistance Program	C	\$ 18,721,340	\$ 21,703,164	\$ 25,159,916	\$ 29,167,238	\$ 33,812,823	\$ 128,564,481
RBAP	Regional Bus Fleet Acquisition Program	E	\$ 6,500,000	\$ 8,250,000	\$ 9,075,000	\$ 9,982,500	\$ 10,980,750	\$ 44,788,250
RTAP	Rural Transportation Assistance		\$ 542,519	\$ 620,000	\$ 701,000	\$ 800,000	\$ 915,000	\$ 3,578,519
MassDOT	MassDOT Admin		\$ 5,558,272	\$ 6,417,000	\$ 7,389,000	\$ 8,512,000	\$ 9,821,000	\$ 37,697,272
JARC & New Freedom Programs		Note	FFY 2012-2016	FFY 2017-2021	FFY 2022-2026	FFY 2027-2031	FFY 2032-2036	Total
\$ 5316	Jobs Access Reverse Commute	C	\$ 15,402,464	\$ 17,805,000	\$ 20,537,000	\$ 23,711,000	\$ 27,391,000	\$ 104,846,464
	MassDOT Admin		\$ 1,179,833	\$ 1,358,000	\$ 1,561,000	\$ 1,796,000	\$ 2,071,000	\$ 7,965,833
	Boston		\$ 8,400,344	\$ 9,734,000	\$ 11,270,000	\$ 13,048,000	\$ 15,109,000	\$ 57,561,344
	Small Urban		\$ 1,568,566	\$ 1,811,000	\$ 2,086,000	\$ 2,406,000	\$ 2,777,000	\$ 10,648,566
	Rural		\$ 649,566	\$ 745,000	\$ 848,000	\$ 970,000	\$ 1,110,000	\$ 4,322,566
	Central Mass		\$ 1,218,213	\$ 1,406,000	\$ 1,615,000	\$ 1,858,000	\$ 2,141,000	\$ 8,238,213
	Cape Cod		\$ 510,298	\$ 585,000	\$ 661,000	\$ 755,000	\$ 861,000	\$ 3,372,298
	Pioneer Valley		\$ 1,875,643	\$ 2,166,000	\$ 2,496,000	\$ 2,878,000	\$ 3,322,000	\$ 12,737,643
\$ 5317	New Freedom	C	\$ 11,851,934	\$ 13,690,000	\$ 15,780,000	\$ 18,202,000	\$ 21,013,000	\$ 80,536,934
	MassDOT Admin		\$ 921,992	\$ 1,065,000	\$ 1,221,000	\$ 1,401,000	\$ 1,610,000	\$ 6,218,992
	Boston		\$ 6,595,232	\$ 7,641,000	\$ 8,848,000	\$ 10,245,000	\$ 11,870,000	\$ 45,199,232
	Small Urban		\$ 1,132,658	\$ 1,306,000	\$ 1,503,000	\$ 1,731,000	\$ 1,991,000	\$ 7,663,658
	Rural		\$ 570,042	\$ 650,000	\$ 740,000	\$ 843,000	\$ 965,000	\$ 3,768,042
	Central Mass		\$ 874,160	\$ 1,003,000	\$ 1,151,000	\$ 1,321,000	\$ 1,518,000	\$ 5,867,160
	Cape Cod		\$ 514,742	\$ 590,000	\$ 666,000	\$ 760,000	\$ 866,000	\$ 3,396,742
	Pioneer Valley		\$ 1,243,108	\$ 1,435,000	\$ 1,651,000	\$ 1,901,000	\$ 2,193,000	\$ 8,423,108
All programs subject to the appropriation of the sponsoring entity.								
Federal Program and State Contract Assistance escalations based on 2.00% annual inflation (per Federal Reserve guidance)								
State Capital programs are actual programmed through 2016; 10% increase every fifth year thereafter.								
A WRTA is only RTA with 5309 funds included								
B Competitive program with funding allocated based on actual application and award.								
C Competitive program with funding allocated based on actual application and award. Amount displayed reflects upper annual potential award.								
D ITCCAP program sunsets by 2014 and merges into RTACAP program								
E New program, replacing and modifying the former IBCAP program. RTAs are eligible to apply to lease this fleet if operated in the MassDOT network.								



Cost Estimates

In order to establish the magnitude of regional needs, cost estimates for various improvement strategies were developed. These estimates were then used to establish potential project costs for the identified recommendations within the various chapters of the RTP. MassDOT Highway was consulted regarding several project improvement strategies for input on current cost trends.

Based upon this information, the following estimates were utilized as part of the cost estimation procedure for identified improvements:

Generalized Unit Costs For Projects

Improvement	Unit Cost
New Signalized Intersection with minor curbwork and paving (no geometrics)	\$200,000 - 250,000 / intersection
Geometric Improvements	
- Urban	\$750,000 - 1,000,000 / intersection
- Rural	\$500,000 - 850,000 / intersection
New Highway (w/o ROW costs, bridges or interchanges)	\$2,000,000 - 4,000,000 / lane / mile
Add a lane to existing highway (w/o ROW costs, bridges or interchanges)	\$4,000,000 - 5,000,000 / lane / mile
Add an HOV lane (concurrent flow, no bridges)	\$1,500,000 - 2,000,000 / lane / mile
Highway resurfacing	
- Interstate	\$250,000 / lane / mile
- Non-interstate	\$150,000 / lane / mile
(including average associated drainage work, striping improvements, etc.)	
New Bridge	
- < 2,000 sq ft	\$350 - 1,200 / sq ft
- 2,000 - 5,000 sq ft	\$300 - 1,100 / sq ft
- 5,000 - 10,000 sq ft	\$250 - 660 / sq ft
- > 10,000 sq ft	\$230 - 1,000 / sq ft
- Highway approach work	Calculate total, then add 10%
- Contingencies	Add 35% to running total
Bridge Restructuring/Rehabilitation	60% of final cost calculation for new bridge
New Bike Path (w/o ROW costs, lighting or crossings)	\$600,000 - \$1,500,000 / mile

Source: MassDOT Highway Division



Inflation Factor

One area of concern expressed by FHWA related to inflation over the life of the plan and the effect it would have on project costs and estimates. As indicated above, MassDOT adjusted federal funding estimates by 3% per year to develop the Transportation Plan Funding figures. To address the issue of inflation on the developed project estimates, FHWA has developed a “Year of Expenditure” (YOE) policy. This policy addresses potential inflationary issues by adjusting costs for projects programmed in outer years of the document by a 4 percent per year factor.

Regional Funding Needs

Based upon the projects and recommendations developed in the RTP, the following is the estimated funding needs for the Montachusett Region. Categories correspond to those developed by MassDOT. Figures for FFY 2012-2015 are derived from the FFY 2012-2015 Montachusett TIP. For a detailed listing of recommendations/projects within each category, please refer to the various chapters of the RTP.



Highway

2012-2015 Montachusett RTP Needs Estimate

<i>Major Infrastructure Projects</i>		
Community	Project	Cost
Leominster	Route 13 from Hawes St. to Prospect St. - Reconstruction	\$6,837,466
TOTAL		\$6,837,466
<i>Federal Aid Bridge Projects</i>		
Community	Project	Cost
Leominster	Bridge Replacement, L-08-014, Whitney Street	\$2,585,032
Royalston	Bridge Replacement, R-12-004, Northeast Fitzwilliam Road	\$1,559,649
Leominster	Bridge Reconstruction, L-08-024, Route 12	\$8,050,000
Leominster	Bridge Replacement, L-08-028, Hamilton Street	\$5,978,914
Westminster	Bridge Replacement, W-28-017, Route 12 (Ashburnham Rd)	\$1,497,600
Regionwide	Bridge Projects Prioritized by MassDOT	\$19,736,805
TOTAL		\$39,408,000
<i>NHS/IM Projects</i>		
Community	Project	Cost
Sterling	Resurfacing and Related Work on I-190	\$10,823,904
Regionwide	NHS/IM Projects Prioritized by MassDOT	\$1,245,096
TOTAL		\$12,069,000
<i>Statewide Maintenance</i>		
Community	Project	Cost
Athol/ Petersham	Resurfacing & Related Work on Route 32	\$2,954,567
Fitchburg	Resurfacing of Route 31 (Ashby State Road)	\$2,203,200
Templeton	Reconstruction of Baldwinville Road	\$5,357,811
Regionwide	State Jurisdiction Federal Aid Eligible roadways	\$7,087,651
TOTAL		\$17,603,229
<i>Regional Discretionary Funding</i>		
Community	Project	Cost
Lancaster	Intersection Improvements @ Five Corners	\$1,027,189
Lancaster	Reconstruction on Route 70 (Lunenburg Road) At Old Union Turnpike	\$2,147,258
Leominster	Intersection & Signal Improvements at Merriam Avenue and Lindell Avenue	\$533,582
Winchendon	North Worcester County Bikepaths - North Central Pathway - Phase V	\$1,959,202
Regionwide	Local Jurisdiction Federal Aid eligible roadways	\$19,003,708
TOTAL		\$24,670,939
TOTAL 2012-2015		\$100,588,633



2016-2035 Montachusett RTP Cost Estimates

	2016-2020	2021-2025	2026-2030	2031-2035	2016-2035
<i>Major Infrastructure Projects</i> Regionwide Major Infrastructure Projects	\$4,577,866	\$4,408,000	\$18,007,000	\$0	\$26,992,866
<i>Federal Aid Bridge Projects</i> Regionwide Bridge Rehabilitation & Reconstruction Structurally Deficient & Functionally Obsolete Bridges NOTE: MassDOT Highway Division responsible for bridge priorities and cost estimates. MMPO expects to receive adequate funding to maintain bridges in the Region.	\$43,419,000	\$64,967,000	\$79,252,000	\$91,874,000	\$279,512,000
<i>NHS/IM Projects</i> Regionwide NHS/IM Projects Note: MassDOT Highway Division responsible for NHS/IM priorities and cost estimates. MMPO expects needs to equal available funding in the Region.	\$12,933,000	\$19,413,000	\$23,694,000	\$27,468,000	\$83,508,000
<i>Statewide Maintenance</i> Regionwide Maintenance to 259 mi. of State Jurisdiction Fed Aid roads	\$39,235,209	\$45,563,469	\$51,891,728	\$58,219,988	\$194,910,395
<i>Regional Discretionary Funding</i> Regionwide Safety Improvements Regionwide Intersection/Geometric Improvements Regionwide Maintenance Projects Regionwide Other (Discretionary) Projects Includes Maintenance to 384 mi. Local Jurisdiction Fed Aid roads	\$1,877,015 \$6,060,647 \$38,216,334 \$3,209,004 \$49,363,000	\$2,658,537 \$8,584,085 \$54,128,259 \$4,545,119 \$69,916,000	\$3,334,731 \$10,767,430 \$67,895,677 \$5,701,162 \$87,699,000	\$3,865,861 \$12,482,381 \$78,709,561 \$6,609,197 \$101,667,000	\$11,736,145 \$37,894,544 \$238,949,830 \$20,064,482 \$308,645,000
Total	\$149,528,075	\$204,267,469	\$260,543,729	\$279,228,988	\$893,568,261

Total Estimated Needs for Montachusett RTP – Highway 2012-2035

Project Category	Estimated Needs					Total
	2012-2015	2016-2020	2021-2025	2026-2030	2031-2035	2012-2035
Major Infrastructure Projects	\$6,837,466	\$4,577,866	\$4,408,000	\$18,007,000	\$0	\$33,830,332
Federal Aid Bridge Projects	\$39,408,000	\$43,419,000	\$64,967,000	\$79,252,000	\$91,874,000	\$318,920,000
NHS/IM Projects	\$12,069,000	\$12,933,000	\$19,413,000	\$23,694,000	\$27,468,000	\$95,577,000
Statewide Maintenance	\$17,603,229	\$39,235,209	\$45,563,469	\$51,891,728	\$58,219,988	\$212,513,624
Regional Discretionary Funding	\$24,670,939	\$49,363,000	\$69,916,000	\$87,699,000	\$101,667,000	\$333,315,939
TOTAL ESTIMATED FUNDING NEEDS	\$100,588,633	\$149,528,075	\$204,267,469	\$260,543,729	\$279,228,988	\$994,156,894



Major Infrastructure Projects

Air Quality Analysis Year	Air Quality Status	Community	Project/ Recommendation	2012-2015	2016-2020	2021-2025	2026-2030	2031-2035
-	Exempt	Westminster	Various improvements along Rte. 140 recommended in Corridor Profile				\$18,007,000*	
-	Exempt	Ayer	Intersection of Main St./Park St. - Parking Facility Construction		\$4,577,866			
2020	Non-Exempt	Leominster	Route 13 from Hawes St. to Prospect St. - Reconstruction	\$6,837,466				
2025	Non-Exempt	Athol	Route 2 at South Athol Road - New Interchange			\$4,408,000		
Totals				\$6,837,466	\$4,577,866	\$4,408,000	\$18,007,000*	\$0

Note: Westminster Route 140 Improvements Total Project Cost in 2026-2030 estimated at \$23,220,000 to be split between Major Infrastructure Program (\$18,007,000) and Regionwide Other (Discretionary) Projects (\$5,213,000).

Other Regionally Significant and Major Projects List

Regionally Significant Projects						
Air Quality Analysis Year	Air Quality Status	Community	Project	Estimated Cost	Year of Expenditure Cost	Time Frame
2016	Non-Exempt	Fitchburg/Westminster	New Wachusett Commuter Rail Station	\$55,000,000	\$55,000,000	2012-2015
2016	Non-Exempt	Ayer to South Acton	Fitchburg Line Commuter Rail Improvements (double track)	\$150,000,000	\$150,000,000	2012-2015

Other Major Projects						
Air Quality Analysis Year	Air Quality Status	Community	Project	Estimated Cost	Year of Expenditure Cost	Time Frame
-	Exempt	Fitchburg/ Leominster/ Westminster	Rte. 2 - Oak Hill Rd. to Vicinity of Damon Rd. - Reconstruction	\$20,000,000	\$38,400,000	2031-2035
-	Exempt	Leominster	Bridge Reconstruction, L-08-024, Route 12 Over Route 2 (EB & WB)	\$10,657,500	\$10,657,500	2012-2015



Transit

The following table summarizes anticipated needs by the Regional Transit Authority over the life of this plan. Where applicable, needs are identified by funding category.

MART Capital & Operating Needs

Federal Formula Program			MART Needs		
Funding Category	Project Description	Funding Sub Category	FFY 2012 TO FFY2015	FFY 2016 TO FFY2036	TOTAL 2012-2036
5307	Urban Assistance Formula (5307) - Urban Operating Assistance & Capital Purchase/Improvements	Operating & Capital	\$10,922,375	\$84,263,394	\$95,185,769
<i>Subtotal</i>			<i>\$10,922,375</i>	<i>\$78,956,291</i>	<i>\$89,878,666</i>
Statewide Programs for Eligible Participants					
5311	Non-Urbanized Area Formula (5311&5340) - Operating Assistance Rural	Operating	\$836,725	\$6,455,130	\$7,291,855
<i>Subtotal</i>			<i>\$836,725</i>	<i>\$6,455,130</i>	<i>\$7,291,855</i>
5310	Elderly & Disabled (5310) - MAP Purchases (Elderly & Disabled)	Capital	\$1,984,085	\$15,306,721	\$17,290,806
<i>Subtotal</i>			<i>\$1,984,085</i>	<i>\$15,306,721</i>	<i>\$17,290,806</i>
JARC & New Freedom Programs					
5316	JARC (5316) - Operating Assistance & Capital - Small Urban & Rural Only (Supports Link Service)	JARC	\$627,545	\$5,841,345	\$6,468,890
<i>Subtotal</i>			<i>\$627,545</i>	<i>\$5,841,345</i>	<i>\$6,468,890</i>
5317	New Freedoms (5317) - New Freedoms - Small Urban & Rural Only	Capital	\$168,750	\$2,331,250	\$2,500,000
<i>Subtotal</i>			<i>\$168,750</i>	<i>\$2,331,250</i>	<i>\$2,500,000</i>
Other Capital & Operating Needs - MART					
5309	A&E North Leominster Commuter Rail Parking Garage/CPS	Capital	\$120,800	\$0	\$120,800
	North Leominster Garage Construction	Capital	\$7,500,000	\$0	\$7,500,000
	Bus Park & Ride Gardner	Capital	\$0	\$500,000	\$500,000
	Wind/Solar Power System at Commuter Parking Facilities	Capital	\$0	\$3,500,000	\$3,500,000
	Parking Facility Shirley/ Devens	Capital	\$0	\$10,000,000	\$10,000,000
<i>Subtotal</i>			<i>\$7,620,800</i>	<i>\$14,000,000</i>	<i>\$21,620,800</i>
5307/5309	Bus and Van Procurement	Capital	\$1,440,000	\$18,560,000	\$20,000,000
	Electrical Vehicle Recharging Stations at Commuter Parking Facilities	Capital	\$0	\$2,500,000	\$2,500,000
	Secure Bicycle Parking at Commuter Rail Stations	Capital	\$60,000	\$440,000	\$500,000
	Asset Management	Capital	\$0	\$1,000,000	\$1,000,000
<i>Subtotal</i>			<i>\$1,500,000</i>	<i>\$22,500,000</i>	<i>\$24,000,000</i>



MART Capital & Operating Needs (cont)

Additional Funds - Earmarks/Grants (Awarded)

5309 TIGGER	Construct/Install Energy Management System	Capital	\$1,518,750	\$0	\$1,518,750
<i>Subtotal</i>			<i>\$1,518,750</i>	<i>\$0</i>	<i>\$1,518,750</i>
Total RTA Needs			\$25,179,030	\$150,697,840	\$175,876,870

Comparison of Funds – Available vs. Needs

The following table provides a comparison of available funds, as provided by MassDOT, with project needs for the Montachusett Region for both Highway and Transit.

Highway

2012 - 2035 Available Funds vs Estimated Needs Comparison

Project Category	2012-2015	2016-2020	2021-2025	2026-2030	2031-2035	2012-2035
Major Infrastructure Projects	\$7,258,000	\$9,755,000	\$14,737,000	\$18,007,000	\$20,875,000	\$70,631,000
Federal Aid Bridge Projects	\$39,408,000	\$43,419,000	\$64,967,000	\$79,252,000	\$91,874,000	\$318,920,000
NHS/IM Projects	\$12,069,000	\$12,933,000	\$19,413,000	\$23,694,000	\$27,468,000	\$95,577,000
Statewide Maintenance	\$48,133,000	\$49,100,000	\$59,751,000	\$70,319,000	\$81,519,000	\$308,822,000
Regional Discretionary Funding	\$31,726,000	\$49,363,000	\$69,916,000	\$87,699,000	\$101,667,000	\$340,370,000
TOTAL AVAILABLE FUNDING	\$138,594,000	\$164,569,000	\$228,784,000	\$278,970,000	\$323,403,000	\$1,134,320,000
Major Infrastructure Projects	\$6,837,466	\$4,577,866	\$4,408,000	\$18,007,000	\$0	\$33,830,332
Federal Aid Bridge Projects	\$39,408,000	\$43,419,000	\$64,967,000	\$79,252,000	\$91,874,000	\$318,920,000
NHS/IM Projects	\$12,069,000	\$12,933,000	\$19,413,000	\$23,694,000	\$27,468,000	\$95,577,000
Statewide Maintenance	\$17,603,229	\$39,235,209	\$45,563,469	\$51,891,728	\$58,219,988	\$212,513,624
Regional Discretionary Funding	\$24,670,939	\$49,363,000	\$69,916,000	\$87,699,000	\$101,667,000	\$333,315,939
TOTAL ESTIMATED FUNDING NEEDS	\$100,588,633	\$149,528,075	\$204,267,469	\$260,543,729	\$279,228,988	\$994,156,894
Major Infrastructure Projects	\$420,534	\$5,177,134	\$10,329,000	\$0	\$20,875,000	\$36,800,668
Federal Aid Bridge Projects	\$0	\$0	\$0	\$0	\$0	\$0
NHS/IM Projects	\$0	\$0	\$0	\$0	\$0	\$0
Statewide Maintenance	\$30,529,771	\$9,864,791	\$14,187,531	\$18,427,272	\$23,299,012	\$96,308,376
Regional Discretionary Funding	\$7,055,061	\$0	\$0	\$0	\$0	\$7,054,061
TOTAL DIFFERENCE AVAILABLE - NEEDS	\$38,005,367	\$15,041,925	\$24,516,531	\$18,427,271	\$44,174,012	\$140,163,106

Please note as indicated in the assumptions provided for the MassDOT funding estimates, the “additional guidance that has been provided for sub allocation to the Major Infrastructure, Interstate Maintenance and Bridge programs are provided as a starting point to MPO discussions, but can be adjusted by MPOs, within the overall financial constraint provided in the table, on an as-needed basis.”

In order to establish funding levels in each of the various categories under the Regional Discretionary Funding line item, past projects were examined and a historical trend was



developed. Projects from FFY 2008 to 2015, were examined and categorized as a safety improvement, an intersection/geometric improvement, a maintenance project or an other (discretionary) project (i.e. transportation enhancement, bridge, etc.). The table below illustrates the percentage breakdown for the categories.

Regionwide Discretionary Funding Allocation Historical Trend - FFY 2008-2015

Safety Improvements	4%
Intersection/Geometric Improvements	12%
Maintenance Projects	77%
Other (Discretionary) Projects	7%

Carrying these percentages through for 2016 to 2035, the following distribution of total Regional Discretionary funds across all subcategories was calculated.

Regional Discretionary Funding Estimates

	2012-2015	2016-2020	2021-2025	2026-2030	2031-2035	2012-2035
Regionwide Safety Improvements	\$1,027,189	\$1,877,015	\$2,658,537	\$3,334,731	\$3,865,861	\$12,763,334
Regionwide Intersection/Geometric Improvements	\$2,680,840	\$6,060,647	\$8,584,085	\$10,767,430	\$12,482,381	\$40,575,384
Regionwide Maintenance Projects	\$19,003,708	\$38,216,334	\$54,128,259	\$67,895,677	\$78,709,561	\$257,953,538
Regionwide Other (Discretionary) Projects	\$1,959,202	\$3,209,004	\$4,545,119	\$5,701,162	\$6,609,197	\$22,023,684
Totals	\$24,670,939	\$49,363,000	\$69,916,000	\$87,699,000	\$101,667,000	\$333,315,939

It should be noted that Highway Safety Improvement Program (HSIP) funds have been allocated to various projects in the FFY 2012-2015 Transportation Improvement Program at a level of approximately \$445,955 per year. However, in most cases these safety funds make up a portion of a larger more expensive project and in the development of the tables outlined above these safety funds were not culled out. The total project costs were therefore incorporated into Regionwide Intersection/Geometric Improvements, Maintenance Projects or Other (Discretionary) Projects.

Pavement preservation needs for the Region as identified in Chapter 5 Infrastructure also indicate that the anticipated needs will likely exceed the available funds. To address some of these identified preservation needs, it is anticipated that the MPO will continue to make the same level of investment in Regional Discretionary Funding for Maintenance Projects as past trends, i.e. from 2012 to 2035 approximately \$257,953,538 or 77% of total Regional Discretionary Funds.



Transit

The following table identifies state funding forecasts that are available to MART as either exclusive formula funds or through competitive statewide grants.

State Funding Forecasts

Federal Formula Program

Funding Category	Project Description	FFY 2012-2016	FFY 2017-2021	FFY 2022-2026	FFY 2027-2031	FFY 2032-2036	Total 2012-2036
5307	Urbanized Area Formula	\$13,860,789	\$16,068,454	\$18,627,742	\$21,594,658	\$25,034,127	\$95,185,769
<i>Subtotal</i>		\$13,860,789	\$16,068,454	\$18,627,742	\$21,594,658	\$25,034,127	\$95,185,769

Commonwealth Programs for RTA

Funding Category	Project Description	FFY 2012-2016	FFY 2017-2021	FFY 2022-2026	FFY 2027-2031	FFY 2032-2036	Total 2012-2036
SCA	State Contract Operating Assistance	\$22,196,774	\$25,723,000	\$29,806,000	\$34,545,000	\$40,040,000	\$152,310,774
RTACAP	RTA Capital Assistance Program	\$2,827,921	\$3,683,298	\$4,051,628	\$4,456,791	\$4,902,470	\$19,922,108
ITCCAP	RTA Intermodal Assistance Program	\$53,000	\$0	\$0	\$0	\$0	\$53,000
<i>Subtotal</i>		\$25,077,695	\$29,406,298	\$33,857,628	\$39,001,791	\$44,942,470	\$172,285,882

Competitive Statewide Funding Forecasts for All Eligible Participants

Funding Category	Project Description	FFY 2012-2016	FFY 2017-2021	FFY 2022-2026	FFY 2027-2031	FFY 2032-2036	Total 2012-2036
5311	Rural Area/Non Urbanized	\$13,917,629	\$16,124,000	\$18,676,000	\$21,634,000	\$25,063,000	\$95,414,629
5311(f)	Intercity bus	\$2,783,522	\$3,218,000	\$3,718,000	\$4,297,000	\$4,969,000	\$18,985,522
MAP	Mobility Assistance Program	\$18,721,340	\$21,703,164	\$25,159,916	\$29,167,238	\$33,812,823	\$128,564,481
RBFAP	Regional Bus Fleet Acquisition Program	\$6,500,000	\$8,250,000	\$9,075,000	\$9,982,500	\$10,980,750	\$44,788,250
RTAP	Rural Transportation Assistance	\$542,519	\$620,000	\$701,000	\$800,000	\$915,000	\$3,578,519
MassDOT	MassDOT Admin	\$5,558,272	\$6,417,000	\$7,389,000	\$8,512,000	\$9,821,000	\$37,697,272
<i>Subtotal</i>		\$48,023,282	\$56,332,164	\$64,718,916	\$74,392,738	\$85,561,573	\$329,028,673

JARC & New Freedom Programs

Funding Category	Project Description	FFY 2012-2016	FFY 2017-2021	FFY 2022-2026	FFY 2027-2031	FFY 2032-2036	Total 2012-2036
5316	Jobs Access Reverse Commute	\$15,402,464	\$17,805,000	\$20,537,000	\$23,711,000	\$27,391,000	\$104,846,464
	Small Urban	\$1,568,566	\$1,811,000	\$2,086,000	\$2,406,000	\$2,777,000	\$10,648,566
	Rural	\$649,566	\$745,000	\$848,000	\$970,000	\$1,110,000	\$4,322,566
5317	New Freedom	\$11,851,934	\$13,690,000	\$15,780,000	\$18,202,000	\$21,013,000	\$80,536,934
	Small Urban	\$1,132,658	\$1,306,000	\$1,503,000	\$1,731,000	\$1,991,000	\$7,663,658
	Rural	\$570,042	\$650,000	\$740,000	\$843,000	\$965,000	\$3,768,042
<i>Subtotal</i>		\$31,175,231	\$36,007,000	\$41,494,000	\$47,863,000	\$55,247,000	\$211,786,231



Summary Table - MART Needs vs RTA & State Funding Forecasts

	Total 2012-2035
MART Funding Needs - Operating (5307/5311/5316)	\$108,946,514
Other Funding Needs - Capital (5310/5317/5309/5307/TIGGER)	\$66,930,356
TOTAL NEEDS	\$175,876,870
	Total 2012-2036
Funding Forecasts - MART (5307)	\$95,185,769
Funding Forecast - Commonwealth Programs (SCA/RTACAP/ITCCAP)	\$172,285,882
Funding Forecasts - Competitive (5311/MAP/RBFAP/RTAP/MassDOT)	\$329,028,673
Funding Forecasts - Competitive JARC/New Freedom (5316/5317)	\$211,786,231
TOTAL FORECASTS	\$808,286,555

Conclusion

Highway

Based upon the estimates outlined above, for the Montachusett Region, the Total Available Funds for the 2012 – 2035 years (\$1,134,320,000) exceeds the Total Financial Needs for the 2012 – 2035 years (\$994,156,894) identified in the RTP.

It should also be noted that it is anticipated that several projects currently identified for further study will utilize most, if not all or more, of any fund balance. In addition, given the issues involved in determining future funding allocations, the needs of the region may exceed anticipated revenues.

Transit

Based upon the estimates outlined above, for the Montachusett Region, the Total Available Funds for the 2012 – 2035 years (\$808,286,555) exceeds the Total Financial Needs for the 2012 – 2035 years (\$175,876,870) identified in the RTP.

It should also be noted that some of the available funds identified are competitive grant programs available to multiple agencies in the Commonwealth. The funding forecast for MART, exclusive of these programs, account for \$95,185,769 (i.e. Funding Category 5307) of the estimated available funds for the time period 2012-2036. The funding need associated with the 5307 program only during this same time frame is estimated at \$95,185,769.