

### 7.1.2 System Preservation Costs

The MTP must include a financial section that estimates how much funding will be available over the life of the plan, as detailed in Chapter 4. In addition, funding sources for each project in the plan must be identified, including the resources needed for the maintenance and operation of the existing transportation system. In order to do this we estimated the costs of keeping the existing system in good operational condition. **Table 7-2** identifies the costs associated with the maintenance needs of our transportation system's three major components, roads, bridges, and bus transit.

Allocating \$687 million to maintain our existing system is a high priority and was subtracted from the total funds of \$1.352 billion in order to determine the funds available to implement the various projects and strategies the MTP recommends. Also needed to come out of the total is the cost to implement the projects already committed to in the CCMPO's Transportation Improvement Program (TIP). This TIP cost is \$189 million and includes completion of several major road projects such as Circumferential Highway Segments A and B, and the Champlain Parkway.

**Table 7-2**  
**Estimated Order of Magnitude Cost (2009 dollars) to Preserve the Existing Transportation System**  
**2009-2030**  
**(Federal, State, and Local Funds)**

System	Millions
Highways	\$ 345.8
Bridges	\$ 139.1
Bus Transit	\$ 139.7
Sub-Total	\$ 624.6
10% Contingency	\$ 62.5
<b>Total</b>	<b>\$ 687.1</b>

### 7.1.3 Funds allocated to key priorities

The total funding available for new projects and programs is calculated in **Table 7-3** below.

**Table 7-3**  
**Funds Available for New Projects (2009 dollars)**

Financial Constraints	Millions
Total available	\$ 1,352
System Preservation	\$ 687
Committed Projects	\$ 189
<b>Remaining Total</b>	<b>\$ 476</b>

**Table 7-4** identifies the allocations recommended to the broad MTP categories. These costs and their allocations are based on CCMPO Board decisions in December 2002 when the various strategic elements were discussed. Those decisions form the constituent elements of the MTP and are described broadly in Section 5.6, and in more detail by transportation corridor in Chapter 6.

**Table 7-4  
2030 MTP Capital Costs by Category**

<b>Component</b>	<b>Capital Cost (millions)</b>
System Preservation	\$687.1
TIP Projects	\$188.6
TDM/TSM/ITS	\$18.7
Transit	\$86.4
Arterial and Connector Road Projects	\$82.9
Interstate and Freeway Projects	\$185.8
Bicycle and Pedestrian Projects	\$64.5
<b>Total Capital Costs</b>	<b>\$ 1,314</b>
<b>Total available 2009 – 2030 (2009 dollars)</b>	<b>\$1,352</b>
<b>Balance</b>	<b>\$38</b>

#### **7.1.4 Key Projects and Programs Beyond Fiscal Constraint**

**Table 7-4** allocates funding to broad categories while **Table 7-5** provides more detail by assigning costs to individual projects. The intent of this table is to present all of the MTP’s recommended projects and strategies on one page for easy review. Projects are grouped by type, and information on corridor, location, description, and cost are identified for each. In addition, explanatory notes are added to some items to provide additional detail or important background information. This is as comprehensive a list of the recommended projects and strategies needed to address the County’s transportation needs through 2030 as we can assemble. However, other projects not explicitly identified here are part of the MTP as well. These could include transit operating and capital projects to expand service levels and service areas, passenger amenities, and inter-modal facilities, as well as projects in support of alternative fuels. Funding for these may come from sources such as Job Access, CMAQ, Transportation, Community and System Preservation program (TCSP), STP or NHS transfers, or congressional earmarks.

Other projects, while identified in **Table 7-5**, exceed the budgeted amounts allocated in **Table 7-4**. Some projects, often due to their high cost, will need funding from other sources in order to move forward. Specifically, the needs for arterial improvements (an additional \$197M), and more park and ride/intercept facilities (estimated to be in excess of \$20M), exceed the funding levels identified in **Table 7-4** – Although the estimated \$38M balance could be applied to these investments.

Funding for some of these park and ride and arterial road projects will most likely come from Congressional earmarks expressly appropriated to the projects. Should special funding through Congressional earmarks not occur, the costs to implement these improvements will need to compete with other projects via the normal funding sources, especially the Surface Transportation Program (STP). Should additional funding not become available, those projects beyond the fiscal constraint levels will not be funded. Note that Chittenden County has demonstrated some past success in garnering earmarks, especially for inter-modal facilities and transit projects.

### **7.1.5 Constant Dollars vs. Year of Expenditure**

As noted in Chapter four's financial analysis, federal regulations require revenue and cost estimates supporting the MTP to use inflation rates reflecting "year of expenditure" (YoE) dollars. In order to address this that chapter offers revenue and cost forecasts in both constant dollar and YoE formats. Since it is unknown when the MTP's project recommendations will be implemented, assigning a forecast year in order to determine YoE costs poses significant problems especially in the MTP's out years. The constant dollar figures in **Table 7-3** clearly demonstrate that the funding levels for system maintenance and committed projects (TIP), when compared to the revenue estimates reveal a balance for new projects available through the 20 years of this MTP - regardless of when any project advances. However, in order to get an order of magnitude understanding of what the YoE costs and revenues will be if we look out 20 years, the following figures have been extracted from tables in chapter 4:

Cumulative projected funding available, 2010 - 2030	\$1,844,000,000
Cumulative system preservation costs, 2010 – 2030	<u>\$ 958,700,000</u>
Cumulative balance for committed and new projects	\$ 885,300,000

The important point to conclude from this is, whenever the money is expended for projects, sufficient funds will be available to meet the project needs from **Table 7-5**.

Corridor	Location	Project	2009 Estimated Capital Cost (\$m)	Community	Comments
<b>Arterial Projects</b>					
Northern	VT 127	Heineberg Drive	\$4.2	Colchester	
Cross County	VT 2A	I-89 Exit 12 to Old Creamery Road	\$5.4	Williston	
Eastern	US 2	I-89 Exit 11 through Village	\$12.6	Richmond	
Northern	US 7	W. Milton Road to Bombardier	\$7.8	Milton	
Eastern	US 2	Millham Court to Industrial Ave	\$3.6	South Burlington-Williston	
Eastern	Industrial Ave	US 2 to VT 2A	\$6.0	Williston	
Northeast	VT 15	Lee River Rd. to Underhill Flats	\$16.7	Jericho	
Northeast	VT 15	Sand Hill Road to Circ Highway	\$10.8	Essex Town	
Route 116	VT 116	Cheese Factory Road to I-89	\$12.0	So. Burlington	
Regional Core	Champlain Pkwy	Champlain Parkway	NOW IN TIP PROJECTS	Burlington	
Eastern	US 2	Maple Tree Place to No. Williston Road		Williston	\$12.6m - Pending Additional Funding
Eastern	VT 117	Sand Hill Road to Circ Highway		Essex Town	\$5.4m - Pending Additional Funding
Eastern Corridor	US 2	Maple Tree Place to No. & So. Brownell		Williston	\$5.4m - Pending Additional Funding
Northern	US 7	Catamount Industrial Park to US 2		Milton-Colchester	\$6.0m - Pending Additional Funding
Northern	US 7	Tigan St to Severance Corners		Winooski-Colchester	\$16.1m - Pending Additional Funding
Northern	US 2	I-89 Exit 17 to County Line		Milton-Colchester	\$33.4m - Pending Additional Funding
Route 116	VT 116	Shelburne Falls Rd to So. Brownell		Hinesburg-Shelburne-St. George	\$32.4m - Pending Additional Funding
Eastern	Mountain View	Redmond Road to VT 2A		Williston	\$10.7m - Pending Additional Funding
Cross County	VT 2A	Industrial Ave to Five Corners		Williston-Essex Junction	\$10.7m - Pending Additional Funding
Eastern	VT 117	Barber Farm Road to No. Williston Rd		Jericho-Essex Town	\$10.7m - Pending Additional Funding
Eastern Corridor	US 2	Richmond Village to Jonesville		Richmond	\$17.3m - Pending Additional Funding
Route 116	Silver St	VT 116 to Monkton T/L		Hinesburg	\$20.4m - Pending Additional Funding
Northeast	VT 128	VT 15 to Westford T/L		Essex Town	\$12.6m - Pending Additional Funding
Eastern	Williston Rd	I-89 Exit 14 to VT 116		South Burlington	\$3.1m - Pending Additional Funding
		<b>TOTAL ARTERIALS</b>	<b>\$79.0</b>	Cost est=congested length x \$4.9M	\$196.8 million - total projects without funding
<b>Connector Projects</b>					
Eastern	Airport Drive	Airport Drive Extension to Airport Parkway	TIP PROJECT	So. Burlington	
Eastern	VT 116/Kimball	VT 116 to Marshall Ave	\$3.9	Williston - So. Burlington	
Eastern	Old Cross Rd	Old Cross Road between Dorset and VT 116	\$0.0	So. Burlington	Local Responsibility
Eastern	Swift St	Swift Street extension between Dorset and VT 116	\$0.0	So. Burlington	Local Responsibility
Eastern	Mary St	Mary Street between Market St & Williston Rd	\$0.0	So. Burlington	Local Responsibility
		<b>TOTAL CONNECTORS</b>	<b>\$3.9</b>		
<b>Bike/Pedestrian Projects</b>					
Countywide	Various	Sidewalk Projects	\$17.1	County-wide	
Northern	Milton Center Path	Milton Path, Colchester line to Village	\$5.0	Colchester - Milton	Shared Use Path
Northern	Causeway	Causeway	\$1.8	Colchester	Improvements to existing facility
Northern	VT 127/Prim Rd. Parallel Path	Lakeshore Dr. - Winooski River/Burlington	\$1.1	Colchester-Burlington	Shared Use Path
Northern	VT 127/Blakely Road	Prim Road - US 2/7	\$1.7	Colchester	"
Northern	Mallets Bay Ave. Path	Blakely Road - Winooski	\$1.3	Colchester	"
Northern	Colchester Bike Path	US 7/2 - VT 127/Mallets Bay Ave.	\$0.5	Colchester	"
Northern	US 7/2 Parallel Path	Milton - VT 127	\$1.5	Milton - Colchester	"
Northern	Severance Rd. Parallel Path	US 7/2 - Essex	\$0.9	Colchester - Essex	"
Northern	Mallets Bay Ave. Path	Colchester - Winooski Center	\$0.3	Colchester - Winooski Center	"
Route 15 West	VT 15 Parallel Path	Winooski - Essex Center	\$0.4	Colchester	"
Northeast	VT 15	VT 15 Path	\$2.6	Essex - Essex Junction	"
Cross County	Essex - Colchester Connector	Colchester - Susie Wilson Road	\$0.2	Colchester - Essex	"
Cross County	Circ Hwy Parallel Path	Severance Rd. - Essex	\$0.5	Colchester - Essex	"
Cross County	Circ Hwy Parallel Path	VT 2A - VT 117	\$2.5	Essex - Colchester	"
Cross County	VT 15 - Circ Highway Path	VT 15 - Circ Highway Path	\$0.8	Essex Center - Essex Junction	"
Cross County	VT 2A Parallel Path	Five Corners - Winooski River/Williston	\$0.3	Essex Junction	"
Cross County	VT 2A	Path from River Cove Road to Winooski River	\$1.6	Williston	"
Cross County	Essex - Williston Village Path	VT 2A - Williston Center	\$1.1	Williston	"
Northeast	Essex - Jericho Path	Essex Center/VT 15 - Jericho	\$1.3	Essex Center - Jericho	"
Northeast	Essex Center Path	Butlers Corner to Essex Center	\$0.5	Essex	"
Northeast	Jericho Center Path	VT 15 - Jericho Center	\$1.6	Jericho	"
Route 116	Hinesburg Village Path	Hinesburg Village to On Road Facilities	\$0.3	Hinesburg	"
Eastern	Cross Vermont Trail	US 2 - Williston Rd/Cochran Road	\$1.3	Richmond	"
Eastern	Muddy Brook	Williston to So. Burlington - So. Brownell Road to Kennedy Dr	\$1.5	Williston - So. Burlington	"
Eastern	Swift St/Muddy Brook Path	US 7 - Interstate 89	\$0.9	South Burlington - Williston	"
Eastern	US 2 Parallel Path	UVM - VT 116	\$0.6	Burlington - So. Burlington	"
Eastern	US 2 - Lime Kiln Bridge Path	US 2 - Winooski River	\$0.9	South Burlington - Winooski	"
Eastern	Taft Corner Connector	VT 2A - Williston Center Path	\$0.4	Williston	"
Eastern	Williston Center - Richmond Path	Williston Center - US 2/Williston	\$1.9	Williston - Richmond	"
Regional Core	Intervale/Ethan Allen Homestead	VT 127 - Winooski	\$0.5	Colchester-Burlington-Winooski	"
Regional Core	Champlain Parkway	Maple St - Austin Dr	\$1.0	Burlington - So. Burlington	"
Regional Core	Colchester Avenue	UVM campus to Winooski River Bridge	\$0.2	UVM - Winooski	"
Regional Core	Rail with Trail Path	Winooski - Intervale/Burlington	\$0.3	Winooski - Intervale/Burlington	"
Southern	Shelburne-So. Burl. Conn. Path	Mid-City Connector - Shelburne	\$1.1	South Burlington - Shelburne	"
Southern	Shelburne Path	Shelburne Path, Village north along Webster Road	\$2.6	Shelburne	"
Southern	South Burlington	Champlain Path (Partial - South Burlington segment)	\$1.8	So. Burlington	"
Southern	Shelburne to Charlotte	Champlain Path	\$2.6	Shelburne/Charlotte	"
Southern	Shelburne to South Burlington	Champlain Path	\$1.5	Shelburne/Charlotte	"
Southern	Burlington-So. Burlington Path	So. Burl.-Burlington connection across US7 along Queen City Park Rd	\$0.7	So. Burlington - Burlington	"
		<b>TOTAL BIKE/PEDESTRIAN</b>	<b>\$64.5</b>		All projects are from the 2003 Bike/Ped Plan
<b>Interstate Projects</b>					
Northern	I-89	I-89 Exit at West Milton Road	\$29.3	Milton	
Cross County	Circ	Segments G & H of Circumferential Highway	\$49.9	Essex-Colchester	To include 2 park and ride facilities
Cross County	Circ	Segments I & J of Circumferential Highway	\$27.6	Colchester	
Northern	I-89	Widen I-89 to 3 Lanes - Exit 13 north to Circ Highway interchange	\$37.5	South Burlington -Colchester	
Eastern	I-89	Reconstruct Exit 12	\$6.1	Williston	
Eastern	I-89	Reconstruct Exit 14	\$6.1	So. Burlington	To include a park and ride facility
Eastern	I-89/VT116	New Interchange at I-89/VT 116	\$29.3	So. Burlington	To include a park and ride facility
		<b>TOTAL INTERSTATE</b>	<b>\$185.8</b>		
<b>TDM/TSM/ITS Projects</b>					
Northern		US 2, US 7, VT 15 Corridors - UTMS	\$1.0	Burl, So. Burl, Winooski, Colch, Essex	Urban Traffic Management System, ITS
Northern	I-89 Exit 16	Park & Ride	\$1.2	Colchester	TDM
Northern	VT 127	Park & Ride at Heineberg Bridge	\$1.2	Colchester	TDM
Route 15 West	VT 15	VT 15 Corridor - ITS Improvements	\$0.7	Essex-Colchester-Winooski	ITS
Northeastern	VT 15, CCCH	P&R Lot - Lang Farm	\$0.6	Essex	TDM
Eastern	I-89/189	I-89 Exits 12-16 & I-89/189 ATMS	\$1.0	Williston-S.Burl-Winooski-Colch.	Advanced Traffic Management Systems, ITS
Eastern	I-89 Exit 14	Intercept/Satellite Park & Ride Facility	\$0.0	So. Burlington	Earmark funding anticipated (not accounted for in fiscal constraint total).
Eastern	I-89 Exit 11	Expanded Park & Ride	\$1.2	Richmond	Expand existing facility
Southern	US 7	US Route 7 Shelburne Road Smart Corridor	\$1.0	Shelburne-So. Burlington	ITS investments
Southern	US 7	US Route 7 Shelburne Rd Smart Corridor - Northern Extension	\$0.8	Burlington	ITS
Regional Core	Burlington	Champlain Parkway - ATMS	\$0.6	Burlington	Advanced Traffic Management Systems, ITS
Cross County	Circ	Circ Highway Segments A-F - ATMS	\$0.6	Williston-Essex-Colchester	Advanced Traffic Management Systems, ITS
Regional Core	Lakeside Ave and Champlain Pkwy	Intercept/Satellite Park & Ride Facility	\$0.0	Burlington	Earmark funding anticipated (not accounted for in fiscal constraint total).
Route 15 West	VT 15/Barnes Ave.	Intercept/Satellite Park & Ride Facility	\$0.0	Colchester	Earmark funding anticipated (not accounted for in fiscal constraint total).
Countywide	Various	Regional Traveler & Tourism Information System (County-wide)	\$0.5	Countywide	ITS
Countywide	TBD	Traffic Management Information Center	\$0.4	Countywide	ITS
Countywide	Employment Centers	Employer Programs	\$1.2	Various Locations	See Figure 5-4 - TDM
Countywide	Various	Minor Intersection Improvements	\$6.5	Various Locations	See Figure 5-5 - TSM
		<b>TOTAL TDM/TSM/ITS</b>	<b>\$18.7</b>		ITS projects from 2002 ITS Plan, Park & Rides from 2004 P&R Plan
<b>Transit Projects</b>					
Regional Core	Tri-Center Transit	Tri-center Transit Recommendations	\$22.5	Burlington-So. Burlington - Winooski	High Frequency Transit Connections from 1996 conclusion of LRT studies
Route 15 West	VT 15	Burlington-Essex Commuter Rail	\$31.4	Burlington-Essex	From Corridor Alternatives Analysis report
Countywide		Expand Rail to Surrounding Counties	\$21.5	Franklin, Addison, Washington Cntys.	
Countywide		Transit ITS	\$3.5	CCTA Service Area	ITS
Countywide		Expand Bus Service	\$7.6	County-wide	
		<b>TOTAL TRANSIT</b>	<b>\$86.4</b>		

**Table 7-5  
Projects and Programs**