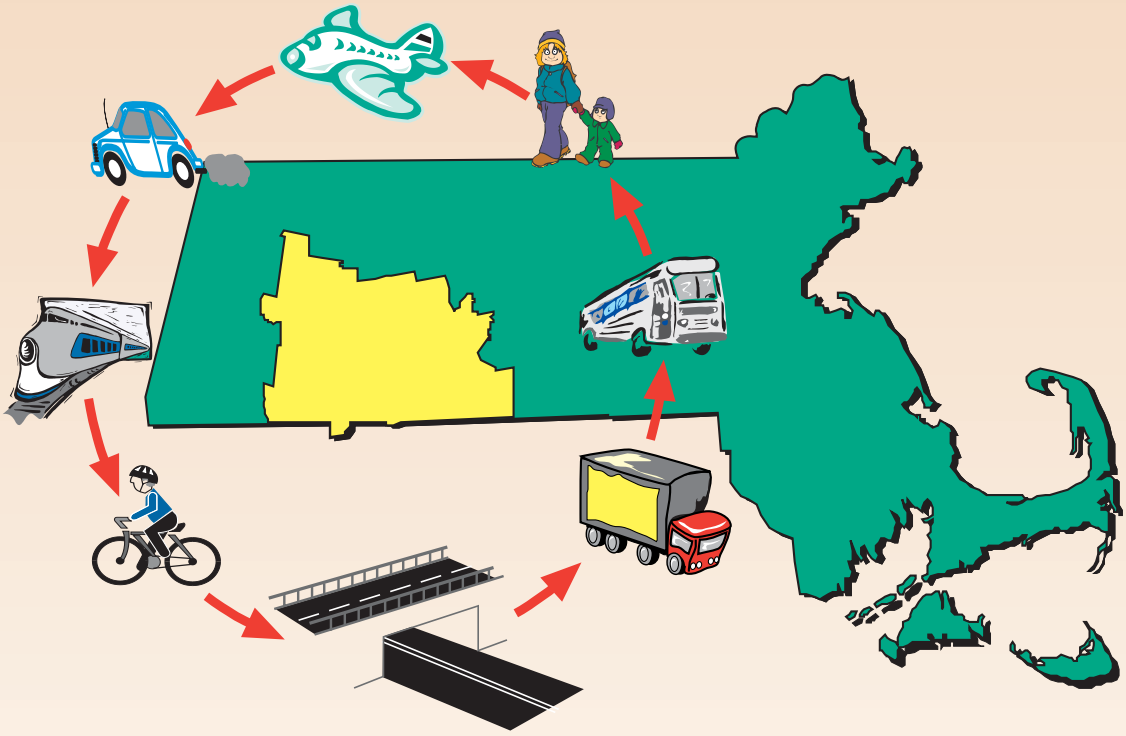
RTP

DRAFT

REGIONAL TRANSPORTATION PLAN

for the Pioneer Valley Metropolitan Planning Organization

2005 Ammendments



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2005 Amendments

to the

Regional Transportation Plan

For the Pioneer Valley Metropolitan Planning Organization

Draft Report – April, 2005

Prepared by the

Pioneer Valley Planning Commission

Pioneer Valley MPO Members

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Henry Barton	Chairman of the Pioneer Valley Executive Committee
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Mayor Charles Ryan	Mayor of Springfield
Mayor Richard Goyette	Mayor of Chicopee
Mayor Edward Gibson	Mayor of West Springfield

Prepared in cooperation with the Executive Office of Transportation, Massachusetts Highway Department, the U.S. Department of Transportation - Federal Highway Administration and Federal Transit Administration, and the Pioneer Valley Transit Authority.

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CHAPTER 1

2005 AMENDMENTS TO THE PIONEER VALLEY REGIONAL TRANSPORTATION PLAN

The Pioneer Valley Regional Transportation Plan (RTP) outlines the direction of transportation planning and improvements for the Pioneer Valley through the year 2025. It provides the basis for all state and federally funded transportation improvement projects and planning studies. This document is an amendment to the current RTP (last published in 2003) and is endorsed by the Pioneer Valley Metropolitan Planning Organization (MPO).

The long range plan concentrates on both existing needs and anticipated future deficiencies in our transportation infrastructure, presents the preferred strategies to alleviate transportation problems, and creates a schedule of regionally significant projects that are financially constrained - in concert with regional goals and objectives and the Transportation Equity Act for the 21st Century (TEA-21) legislation.

In 2004, EPA adopted a new 8-hour ozone standard to replace the previous 1-hour standard. Due to these changes to the National Ambient Air Quality Standards for ground-level ozone, and since Massachusetts has been found to be in non-attainment for those standards, a re-determination of air quality conformity is required at this time.

Similarly, more detailed information is now available on potential long range transportation improvement projects for the region. At the time of publication of the 2003 RTP, studies such as the Merrick-Memorial Neighborhood Plan, the New Haven-Hartford-Springfield Commuter Rail Project and the Connecticut River Crossing Study had not been finalized. Information on anticipated long term transportation improvements projects resulting from these studies was included in the 2003 RTP to the extent possible. This amendment to the 2003 RTP provides more detailed information on the recommendations of the now completed studies and incorporates the projects into Chapter 10 – Long Range Strategies and Projects, Chapter 11 – Financial Element and Chapter 12 – Conformity as appropriate.

Strategic planning is a continuing process that produces planning documents and agendas which decision-makers can use to prioritize local needs. A truly effective planning process relies upon the input of the chief elected official(s), city and town staff, and the general public. In addition, the strategic planning process is based on a realistic assessment of external forces--political, social, economic, and technological--that can affect Pioneer Valley communities and residents. All recommendations generated through the strategic planning process must have a real potential for implementation. By developing the RTP for the Pioneer Valley in such a manner, the region will be able to conduct successful transportation improvement programming through the year 2025.

CHAPTER 10

LONG RANGE STRATEGIES AND PROJECTS

1. LONG RANGE PROJECTS

a) 2010 Projects

(1) Union Street CSX Railroad Underpass Improvements, West Springfield

Vanasse Hangen Brustlin, Inc., working in conjunction with the Pioneer Valley Planning Commission and the Town of West Springfield, has prepared this report to assist efforts aimed at developing a redevelopment strategy for the West Springfield CSX rail yard and surrounding neighborhood. The report includes the following:

- A summary of existing conditions including transportation system (roadway, rail, pedestrian, bicycle and transit), safety and security procedures, real estate market conditions, and land use patterns.
- A redevelopment plan including identification of targeted areas for economic development and a series of transportation and rail yard infrastructure improvements aimed at enhancing the viability of the existing rail yard. The plan also identifies a neighborhood improvement strategy including actions aimed at preserving and reinforcing the quality of life within the surrounding residential areas.
- A comprehensive economic analysis of the various redevelopment plans in terms of available market support, private sector financial feasibility and public sector fiscal impact.
- A summary of anticipated environmental benefits and impacts associated with area redevelopment.
- Identification of public improvements and cost estimates associated with the redevelopment plans.
- An implementation strategy including prioritized actions, phasing, responsible parties, and schedule for action.

The Pioneer Valley Planning Commission (PVPC) identified redevelopment of the Merrick-Memorial Neighborhood as one of its top priorities in 2001. The neighborhood is home to the CSX rail yard which is a major component to the regional transportation system. The PVPC allocated funding as part of its FY 2002 Unified Planning Work Program to perform initial data collection and identify potential alternatives to improve access to the rail yard. With the support of Congressman John Olver, the PVPC received a Transportation and Community and System Preservation (TCSP) grant to fund the neighborhood redevelopment planning effort.

The Merrick-Memorial Neighborhood Redevelopment Plan seeks to identify ways to enhance the longstanding relationship between the rail yard and the neighborhood's various constituencies including residents, industrial users and commercial businesses. The plan, currently being administered by the Pioneer Valley Planning Commission through a grant from the federal government, is focused on identifying transportation improvements, economic development options, and appropriate neighborhood linkages between the yard and the surrounding neighborhoods.

A major recommendation of the study was the upgrade of the existing Union Street railroad underpass. This underpass currently provides only 12-feet of vertical clearance, restricting access to larger vehicles to the area. As a result, larger trucks are required to travel through areas that are highly residential in nature in order to access local businesses.

The CSX Union Street Bridge, located over Union Street at the southerly boundary of the Merrick Industrial Area, currently supports six active railroad tracks. Two of these six tracks are main-line tracks for the CSX Boston line, which is the major rail freight corridor servicing New England, operating with as many as 30 trains per day. Two additional tracks on either side of the main-line tracks serve as the lead tracks into both the carload and intermodal portions of the West Springfield freight rail yard. Due to the extensive distance that would be necessary to make the vertical changes necessary in a way to minimize grade change for rail car use, raising the railroad tracks to achieve the necessary clearance is not physically and financially feasible.

Given its current configuration, the Union Street Underpass significantly limits the number of entry points for heavy-vehicle traffic serving the existing industrial areas in the Merrick and Memorial neighborhoods, and in particular the Merrick Industrial Area, which is home to more than 169 industries, including the CSX freight rail operations. The Union Street Underpass serves as a major entry point into the Merrick Industrial Area from the south via Memorial Avenue connecting with Interstate 91. Currently, due to the height limitation of the underpass, trucks cannot utilize this entry point and are forced to access the industrial area using either via Route 20 along Park Street/Park Avenue.

This northerly access point via the boulevard configuration at this section of Route 20 (Park Street/Park Avenue) between Main Street on the east and Western Avenue on the west creates difficulties for larger vehicles attempting to turn south to access the industrial area due to pockets of on-street parking and intersection radii that are substandard for use by most trucks. Larger vehicles also interfere with the operation of the complex intersection of Park Street with Elm Street, Park Avenue and Union Street. There is less than 100 feet of queuing capacity for vehicles between Park Street and Park Avenue, and this contributes to significant congestion in this area. This situation can be further complicated when larger vehicles queue between the two roadways, often causing the line of vehicles to extend into the intersection and block opposing traffic. The use of Route 20 (Park Street/Park Avenue) by trucks servicing the Merrick Industrial Area creates inferior traffic conditions. Diversion of larger vehicles to an alternative route via Route 147 (Memorial Avenue) to Union Street from the south, through an upgraded underpass, would reduce congestion as well as the impact of larger vehicles on the historic common/park area defined by Park Street and Park Avenue.

Land uses along Memorial Avenue are almost entirely commercial in nature. Similar to Park Street, Memorial Avenue provides four travel lanes; however, on-street parking is not permitted. The intersection of Memorial Avenue with Union Street is configured to allow for greater maneuverability of larger vehicles, and has more capacity than the intersection of Park Street with Elm Street, Park Avenue and Union Street. Union Street serves a mixture of commercial and residential land uses between Park Avenue and the underpass; however, the many side streets connecting Union Street with Main Street in this area are entirely residential. Providing an access point into the Merrick Industrial Area from the south side of the Union Street Underpass, which serves only commercial uses and is significantly wider would dramatically reduce the impact of current truck traffic on the Merrick neighborhood, resolving what has been an ongoing concern to neighborhood residents for many years. In short, the Union Street Underpass improvements will provide significantly enhanced access and improved traffic flow for trucks utilizing the active Merrick Industrial Area.

The upgrade of the Union Street Underpass will create a new truck route into the Merrick Industrial Area using Route 147 (Memorial Avenue). This would allow trucks to enter the

industrial area from Interstate 91 via the Memorial Bridge and Route 5/147 rotary, as opposed to the North End Bridge and Route 5/20 rotary. The most recent traffic counts performed by MassHighway on both bridges were conducted in 1996. The average annual daily traffic (AADT) volume on the North End Bridge was 34,100 vehicles per day while the AADT on the Memorial Bridge was just 23,100 vehicles per day. A 1999 traffic count on the Memorial Bridge recorded an AADT of 23,500 vehicles per day, indicating very low growth in traffic volume on this bridge. Also, the Memorial Bridge was completely reconstructed in the 1990s. Therefore, this new truck route would divert commercial and industrial traffic through an existing commercial area over an upgraded bridge with lower traffic volumes.

b) 2025 Projects

(1) Interstate 91 Interchange 19 Improvements, Northampton

The goal of the Connecticut River Crossing Study, completed in February 2004, was to determine the need for transportation improvements, including a second bridge crossing, in the vicinity of the existing Route 9 Calvin Coolidge Bridge between Hadley and Northampton. The Route 9 corridor experiences severe congestion in this area. MassHighway recently completed a project to expand the Coolidge Bridge from three to four travel lanes. In addition, construction is expected to begin this year to widen Route 9 from two to four travel lanes in Hadley. However, since the closest bridges to the Coolidge Bridge are nearly 10 miles away, MassHighway initiated this study to develop a more comprehensive program of regional solutions to the existing congestion and safety problems in the study area.

Interstate 91 proves a partial interchange at Exit 19, providing a northbound offramp and a southbound onramp. In order to access I-91 in the northbound direction or exit I-91 in the southbound direction vehicles must utilize another exit, driving a somewhat congested and circuitous route. A traffic signal is provided at the intersection of Route 9 with Damon Road and the I-91 northbound Exit 19 offramp. This intersection experiences severe congestion and queues on the Exit 19 offramp can extend back onto the highway during peak periods and special events.

A total of five different improvement alternatives were identified to improve traffic flow and safety in the vicinity of I-91 Exit 19. The preferred alternative consisted of the reconfiguration of this interchange to provide full access to Interstate 91. This would be achieved through the construction of two new ramps immediately north of Route 9 to provide on and offramps to Damon Road. In addition, the existing onramp from Route 9 to I-91 southbound would be modified to provided an enhanced merging lane onto the highway as well as a new southbound offramp. The existing northbound offramp would be enhanced to allow for longer vehicle queues for exiting traffic to Route 9 in the eastbound direction. A coordinated traffic signal system would be designed for the new ramp system.

The PVPC performed an analysis of the proposed new improvements to the Exit 19 interchange using the Pioneer Valley regional transportation model. As a result of the project traffic volumes were projected to decrease on Route 5/10 (King Street) in the vicinity of I-91 Exit 20 by nearly 12,000 vehicles per day. The improvement in general was observed to have a positive effect on traffic in the immediately vicinity of the intersection. The largest increases occurred along the I-91 corridor between Exits 19 and 20 as a result of the enhanced ramp placement. One of the most advantageous impacts of this project is the reduction and/or elimination of left turns currently associated with the existing intersection of Route 9 with Damon Road and the I-91 Exit 19 offramp.

(2) Route 5 Ramp Enhancements, Agawam

Another major recommendation of the Merrick-Memorial Neighborhood Redevelopment Plan was to upgrade an existing roadway to allow truck access from Route 5 into the industrial areas of

West Springfield. Large trucks currently must negotiate either the Route 5/20 rotary or the Route 5/147 rotary to access the industrial areas. While traffic volumes on the Route 5/147 rotary are lower than volumes on the Route 5/20 rotary, the exiting rotary geometry does not allow larger trucks to maintain two travel lanes through the rotary.

Service ramps on Route 5 in Agawam immediately south of the West Springfield Town Line provide access to "M" Street which serves the Bondi's Island Wastewater Treatment Plant and Springfield Landfill. A long range recommendation of the plan is to pursue the enhancement of these existing ramps and improve the connection of Agawam Avenue in West Springfield to "M" Street. This would allow large trucks to enter and exit the industrial areas of West Springfield via Union Street Extension to Agawam Avenue to Route 5. The advantage of this improvement is this new truck route would eliminate the need for large trucks to negotiate the Route 5 rotaries while reducing the number of turning movements required to access the industrial area. Union Street Extension and Agawam Avenue are lower volume roadways serving only commercial and industrial land uses. Both roadways could easily accommodate the increase in truck traffic with no negative impacts on local residences.

c) Transit Improvement Projects

(1) New Haven-Hartford-Springfield Commuter Rail Project

Since 1999 the Pioneer Valley Region and Connecticut have been studying and planning for the implementation of commuter rail service between Springfield, Hartford and New Haven. In June 2003 the Connecticut Department of Transportation began an implementation study for the commuter project which is expected to be completed shortly. The study's recommended alternative is for Commuter rail service to provided on a ½ hourly service basis during commuting times for commuters and passengers for each direction. A detail project summary of the recommended alternative is variable on the project website http://www.nhhsrail.com/RS.htm.

The service would operate on the existing 62 mile Amtrak owned Springfield Line connecting the three cities. The rail corridor crosses the MA/CT border in Longmeadow and continues to Union Station in Springfield. Union Station would be the primary station located in Massachusetts with the possibility of another station located in Downtown Springfield

The project is expected to have a significant impact on the 13 railroad station areas serving the 17 communities along the rail corridor. The service would connect the third, forth and fifth largest metropolitan areas in New England and provide a connection to Amtrak and Metro North Service into the New York Region.

In Springfield the project could have a direct and significant impact on the Union Station Redevelopment and the surrounding downtown area. The rail service would bring a large number of commuters through the station as well as opening housing and business opportunities for people looking to live or work in any of the three cities or other communities.

The Connecticut Department of Transportation will be completing the Study and Implementation Plan in January 2005. They will submit the plan to the Connecticut Transportation Strategy Board for a recommendation before seeking funding from the Connecticut Legislature and moving forward with design, environmental, and preliminary engineering on the project. It is estimated that the service could begin within 4 years from a legislative commitment to fund the project.

Pioneer Valley Planning Commission and the City of Springfield have asked the Executive Office of Transportation to provide Connecticut with a formal indication of interest on behalf of Massachusetts to move forward with advanced environmental, design, engineering, and project financial analysis.

(2) I-91/Conn River Corridor Passenger Rail Study

The Connecticut River Valley has long served as a critical transportation corridor for New England and as a connection between New York and Eastern Canada. Some of the earliest north south railroads in North America connected the cities and towns along the Connecticut River providing the first rail links between Boston, New York and Montreal.

This Passenger Rail Study will consider the options for providing improved passenger rail in the "Knowledge Corridor". This corridor encompasses Interstate 91 along the Connecticut River, is known as the Knowledge Corridor due to the high concentration of colleges, universities and medical institutions that spread along its length. It is an important cultural and economic engine in Massachusetts, Connecticut, Vermont, and New Hampshire. This corridor also serves as the transportation backbone of Western Massachusetts.

The Pioneer Valley Planning Commission in partnership with the Pioneer Valley Transit Authority will shortly begin this study contingent on the award of federal funds contained in the FFY 05 transportation bill.

The rail corridor that developed along the Connecticut River hosted significant levels of both passenger and freight service well into the last century. Different segments of the rail corridor were constructed and owned by different railroad companies and that condition remains today. From the south, the 62 mile long rail segment between New Haven, Hartford and Springfield was originally the New Haven Railroad and is currently owned and operated by Amtrak as the Springfield Line. The 54 mile long segment between Springfield and East Northfield is the former Boston and Maine and now Guilford Rail System's Conn River line. The final 70 mile section between East Northfield and White River Junction is owned by New England Central Railroad and has portions in both Vermont and New Hampshire.

The expectation that this study will provide long term phased implementation strategy for passenger rail service in this corridor**.** It is intended that this project will build on the existing planning efforts by CDOT for New Haven Hartford Springfield and support implementation of commuter rail service to Springfield. The study will primarily access the feasibility of rail passenger service between Springfield and White River Junction, Vermont. However due to the interrelated nature of the corridor elements of this project will focus on the entire 186 mile corridor.

The project is part of a larger system of proposed projects. The study will be conducted in conjunction with other ongoing efforts including New Haven – Hartford - Springfield Commuter Rail Study and would seek to develop a unified New England approach to providing rail service along the Knowledge Corridor.

CHAPTER 11

FINANCIAL ELEMENT

Title 23 CFR Section 450.322 and 310 CMR 60.03(9) require the RTP to be financially constrained. The financial element must demonstrate which projects can be implemented using current revenue sources and which are to be implemented using proposed revenue sources, while the existing transportation system is being adequately operated and maintained. Projects can only be programmed up to the congressionally authorized spending amounts in any individual fiscal year.

The estimate of revenue for the region will be highly dependent upon the funding allocated to Massachusetts in the reauthorization of TEA-21. Estimates of the projected revenue sources have been made by the PVPC based on past historical trends and the latest information provided by the Executive Office of Transportation. Financial constraint will be maintained in the 2005 Amendments to the RTP.

1. REVENUE

The overall RTP, and each fiscal year contained herein, is financially constrained to the annual federal apportionment and projections of state resources reasonably expected to be available during the appropriate time-frame. Projections of federal resources are based upon the estimated apportionment of the federal authorizations as allocated to the region by the state or as allocated among the various MPOs according to federal formulae or MPO agreement. Projections of state resources are based upon the most recent estimates at the time of publication.

Estimate of available transit revenue for this update which include farebox, local, state and federal sources were aggregated through the life of the RTP using the funding total from the most recent data and based on historical data from the PVTA. A summary of the projected transportation revenue from 2004 – 2028 is presented in Table 11-1.

Table 11-1 - Projected Revenue

Revenue Source	Projected Funding 2005 - 2029
Federal and State Highway Funding (includes state match)	$1,343,022,726.20
Federal Transit Funding Section 5307 formula	$181,014,075.00
Section 5309 Discretionary Funds	$102,200,000.00
Section 5310 (Elderly and Persons with Disabilities)	$13,750,000.00
Section 5311 (Non-urbanized Area Formula	$3,175,000.00
Discretionary State Capital Assistance	$44,572,665.44
Local assistance	$137,992,925.00
Farebox Revenue	$185,344,450.00
Federal Grants	$12,500,000.00
State Contract Assistance (SCA)	$331,159,400.00
Total	**$2,354,731,241.64**

2. EXPENDITURES

a) Operating and Maintenance

A review of the past Transportation Improvement Programs was conducted to estimate the annual programmed funds for system operating and maintenance activities for all transportation modes. Transit fleet and capital improvement estimates are based on average equipment lifespan and past spending history. The following assumptions should be noted:

- Annual estimates do not take into account inflation.
- Off-TIP project funding has been included in the financial element.
- Annual Highway and Bridge Maintenance is 75% of the total Highway and Bridge Funding.

A summary of the estimated operating and maintenance expenditures for the Pioneer Valley Region is presented in Table 11-2.

Table 11-2 - Operating and Maintenance Expenditures

System Expenditures	Annual Expenditure	Projected Funding 2000 - 2025
Annual Highway and Bridge Maintenance	$40,290,681.79	$1,007,267,044.65
Annual Transit Operations & Maintenance	$30,734,219.00	$768,355,475.00
Annual Commuter Rail Operating Expenses	$1,000,000.00	$20,000,000.00
Annual Transit Capital Investment	$8,000,000.00	$200,000,000.00
Sub-Total		$1,995,622,519.65

b) Future Projects

The RTP must identify the recommended transportation projects categorized by their air quality conformity status. Projects identified as non-exempt must be included in the air quality conformity analysis for the appropriate conformity year based on the expected completion date of the project. Projects that have not been defined to the extent to determine their exemption status have been assumed to be "non-exempt" for the purposes of this plan. All project costs must be estimated and summed over the twenty-five year life of the plan. The cost of the projects identified reflect generic project cost estimates provided by the Commonwealth and/or the most recent Transportation Improvement Program. Projects recommended for further study may not have any associated costs due to a lack of planning or design data. A summary of the estimated funding requirements for specific transportation projects in the Pioneer Valley Region is presented in Table 11-3.

Table 11-3 - Recommended Transportation Project Cost Estimates

Project Description	City/Town	Total Cost
Bikeway - Main Street to Robinson State Park	Agawam	$635,000
South End Bridge Improvements	Agawam	$80,000,000
Route 57 Phase II - Route 187 to Southwick Town Line	Agawam	$28,000,000
Improvements to Route 5 Access Ramps	Agawam	$5,000,000
Route 116 Relocation: 5300ft. north from S. Hadley TL	Amherst	$1,320,000
UMass Multimodal Transfer center	Amherst	$10,000,000
Downtown Intermodal Center	Belchertown	Further study
Maple Street Bridge Enhancement: Restoration	Chester	$614,288
Chicopee Riverwalk	Chicopee	$1,118,788
Connecticut Riverwalk Plainfield Street to Nash Field	Chicopee	$1,289,000
Front Street reconstruction/replace signals	Chicopee	$4,588,000
Rte 116: Repair: BR# C-13-012, H-21-030	Chicopee/Holyoke	$18,750,000
Rotary Improvements	E. Longmeadow	$900,000
Construct Rail Trail: East Longmeadow to Springfield Line	E. Longmeadow	$658,000
Manhan Rail Trail-Northampton to Easthampton	E.Hamp./N.Hamp.	$1,500,000
Manhan/Norwottuck Rail Trail connections	E.Hmptn/N.Hmptn	$780,500
Norwottuck Rail Trail Parking Enhancements	Hadley	$100,000
Intersection of Route 9 and Route 47 Improvements	Hadley	$300,000
Commercial Street-Reconstruction: I-391 to Appleton St.	Holyoke	$3,400,000
Holyoke Canalwalk	Holyoke	$6,500,000
Elmwood Bypass	Holyoke	$24,000,000
Transfer Center	Holyoke	$2,000,000
Route 202/Westfield Road Intersection Improvements	Holyoke	$677,950
Route 141 Traffic Signals at Jarvis Street	Holyoke	$312,500
Route 5 Signal Coordination	Holyoke/W. Springfield	$1,000,000
Route 5 Traffic Signal Improvements	Longmeadow	Further Study
I-91 Exit 19 Improvements	Northampton	$8,000,000
Damon Road Reconstruction: Rte. 9 to King St. (Rte. 5)	Northampton	$3,250,000
Improvement: signalization North Maple/Bridge Road	Northampton	$525,000
Northampton Bikepath-Look Park Extension to Williamsburg Line	Northampton	$2,059,935
Manhan Rail Trail-Norwottuck Rail Trail Downtown Connector Link	Northampton	$1,600,000
Route 66 Connector	Northampton	$1,500,000
Norwottuck Rail Trail Damon Road extension	Northampton	$729,750
Business Park link with Route 66 and Route 10	Northampton	$250,000
Earle Street State Hospital property access	Northampton	$562,500
Route 9 at Bridge Road improvements	Northampton	$750,000
Manhan Rail Trail from Earle Street to Ferry Street	Northampton	$3,125,000
Downtown Intermodal Center	Northampton	Further study
Route 32 Reconstruction: Stimpson St. to Ware TL	Palmer	$6,000,000
Alternative energy source fueling stations	Regionwide	Further study
Southern I-91 ITS Improvements	Regionwide	$8,000,000
ADA Automatic Announcing System	Regionwide	$5,000,000
AVL transit system integrator	Regionwide	$1,875,000
Regional Park and Ride Lot improvements	Regionwide	$1,000,000
Commuter Rail - Springfield to New Haven	Regionwide	$30,000,000
Route 10/202 Resurface: Westfield CL to CT SL	Southwick	$5,500,000
Southwick Rails to Trails Bikepath along Penn. Central Line	Southwick	$2,600,000
Central Street at Hancock Street intersection improvements	Springfield	$200,000
Highland Division Rail Trail	Springfield	$300,000
Union Station Redevelopment	Springfield	$24,820,000
I-291 Slip Ramp	Springfield	$3,000,000
Install signals at Birnie Ave and Prospect Street	W. Springfield	$375,000
Route 5 to Brush Hill connector	W. Springfield	$925,000
Intersection improvements - Amostown Road at Dewey Street	W. Springfield	$320,000
Improvements to rail underpass	W. Springfield	$15,000,000
Ware River Valley Greenway Trail and Covered Bridge Preservation	Ware	$1,400,000
Great River Bridge: Construction: BR# W-25-010 over the Westfield River	Westfield	$20,000,000
Rte 187 traffic improvements-Highway and Bridge Improvement	Westfield	$5,000,000
Columbia Greenway Rail Trail	Westfield	$8,000,000
Downtown Intermodal Center	Westfield	$1,700,000
Route 20 Spec Pond Project	Wilbraham	$874,000
		$357,685,211

3. FINANCIAL CONSTRAINT

The estimated available funds for the region must be greater than or equal to the financial needs of the region over the life of the plan in order to maintain financial constraint. A demonstration of Financial Constraint is presented in Table 11-4. As can be seen from the table, the Pioneer Valley Regional Transportation Plan is financially constrained over the life of the plan.

Table 11-4 - Financial Constraint

Projected Revenue	$ 2,354,731,241.64
Projected Operations and Maintenance	$ 1,995,622,519.65
Estimated Project Costs	$ 357,685,211.00
Total Revenue	$ 2,354,731,241.64
Total Expenditures	$ 2,353,307,730.65
Net	$ 1,423,510.99

CHAPTER 12

CONFORMITY

1. Introduction

The 1990 Clean Air Act Amendments (CAAA) require Metropolitan Planning Organizations within ozone non-attainment areas to perform air quality conformity determinations prior to the approval of Transportation Plans and Transportation Improvement Programs, and at such other times as required by regulation. Conformity is a way to ensure that federal funding and approval goes to those transportation activities that are consistent with air quality goals. Due to changes to the National Ambient Air Quality Standards for ground-level ozone, and since Massachusetts has been found to be in non-attainment for those standards, a re-determination of conformity is required at this time, as required by Federal Regulations 40 CFR Part 93, and the Massachusetts Conformity Regulations (310 CMR 60.03). Additional detailed information regarding regulatory framework, conformity requirements, latest planning assumptions, and conformity consultation procedures can be found in the 2003 Regional Transportation Plan of the Pioneer Valley MPO. As conformity for projects from the Pioneer Valley Transportation Improvement Program (TIP) results from have a conforming transportation plan, this conformity determination also includes the projects

2. Background

Western Massachusetts has been classified as a "non-attainment area" for ozone (O_3). This area includes all of Berkshire, Franklin, Hampden, and Hampshire counties. With this non-attainment classification, the CAAA require the Commonwealth to reduce its emissions of volatile organic compounds (VOCs) and nitrogen oxides (NOx), the two major precursors to ground-level ozone formation, to achieve attainment of the ozone standard.

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

On October 1, 1998, the Massachusetts Department of Environmental Protection (DEP) submitted to EPA a revision to the Massachusetts SIP for Ozone, which included a 2003 mobile source emission budget for the one-hour ozone standard. This budget was found adequate for conformity purposes by EPA on February 19, 1999, and has since been used in all subsequent conformity determinations for Western Massachusetts.

In 2004, EPA adopted a new 8-hour ozone standard to replace the previous 1-hour standard. The new standard is violated if the three-year average of the fourth-highest 8-hour ozone concentration at any one monitoring location equals or exceeds 0.85 parts per million of ozone. On April 15, 2004, EPA announced the 8-hour ozone non-attainment area designations, which went into effect on June 15, 2004. All of Massachusetts, Connecticut, and Rhode Island, and parts of New Hampshire and Maine, are classified as being in non-attainment. Massachusetts has two moderate non-attainment areas under

the 8-hour ozone standard: the Boston-Lawrence-Worcester (Eastern Massachusetts) Area, and the Springfield (Western Massachusetts) Area. Concurrent with those designations, EPA announced that the 1-hour ozone standard would be revoked as of June 15, 2005. Conformity determinations made under the 1-hour standard, including the determination currently in effect for Western Massachusetts, would lapse upon its revocation; therefore, new conformity determinations based on the 8-hour standard for metropolitan area long-range transportation plans and TIPs must be in place by June 15, 2005 to avoid a conformity lapse and a resulting potential delay or loss of federal transportation funding.

3. Conformity Determinations

In 2003, air quality analyses were conducted on behalf of all the 2003 Regional Transportation Plans, the purposes of which were to evaluate the RTPs' air quality impacts on the State Implementation Plan. Conformity determinations were performed to ensure that all regionally significant projects were included in the RTPs.

Accordingly, the Executive Office of Transportation found the emission levels from the 2003 Regional Transportation Plan updates to be in conformance with the SIP. The Pioneer Valley MPO certified that all activities outlined in the 2003 Pioneer Valley Regional Transportation Plan:

- will not cause or contribute to any new violation of any standard in any area
- will not increase the frequency or severity of any existing violation of any standard in any area
- will not delay the timely attainment of any standard or any required interim emission reductions or other milestones in any area

a) 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.

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*

b) Air Quality Conformity Analysis

The conformity test is to show consistency with the emissions budgets set forth in the SIP. Specific information regarding the analysis methods, latest planning assumptions, and consultation procedures are all detailed in the 2003 RTP. The estimated emissions for the Western Massachusetts Ozone Nonattainment Area include all the following MPOs:

- Berkshire Region MPO
- Franklin Regional Council of Governments*
- Pioneer Valley MPO

** This region is considered to be a MPO for planning purposes.*

Horizon years for transportation model and emissions analysis have been established following 40 CFR 93.106(a) of the Federal Conformity Regulations. The years for which the model(s) were run are shown below:

- 1990 - Milestone Year - This year was established as the original base year in the SIP for calculation of emission reductions of VOCs, NOx and CO (This year has become outdated and is no longer represented in the modeling).

- 2000 - Milestone Year – This year is currently being used by the statewide travel demand model as the new base year for calculation of emission reductions of VOCs and NOx.

- 2007 - Milestone Year

- 2010 - Milestone Year – Attainment year

- 2015 - Analysis Year

- 2025 - Horizon Year – last forecast year of transportation plan

Conformity is demonstrated by showing consistency with the mobile source emission budget for the Western Massachusetts Ozone Non-attainment Area. For CO in Springfield, EPA believes that measures currently being implemented in Massachusetts should provide adequate assurance of maintenance status and should keep CO concentrations well below the NAAQS; in addition, DEP has projected that CO emissions in 2012 will be well below the levels in the 1996 inventory. Therefore, EPA is no longer requiring either the "less than 1990" emissions test or the setting of an emissions budget for CO in Springfield.

The Executive Office of Transportation, Office of Transportation Planning estimated the emissions for VOC and NOx for all areas and all MPOs (emissions for the Berkshire Region were estimated from the Berkshire regional travel demand model and were included in the final totals). The VOC mobile source emission budget for 2003 for the Western Massachusetts Ozone Nonattainment Area has been set at 23.770 tons per summer day and the 2003 mobile source budget for NOx is 49.110 tons per summer day (these budgets have been carried forward to 2007, the next milestone year). As shown in Tables 1 and 2, the results of the air quality analysis demonstrate that the VOC and NOx emissions from all Action scenarios are less than the VOC and NOx emissions budgets for the Western Massachusetts Ozone Nonattainment Area*:

Table 12-1 - VOC Emissions Estimates for the Western Massachusetts Ozone Non-attainment Area

(all emissions in tons per summer day)

Year	Pioneer Valley MPO Action Emissions	Western MA Action Emissions	Budget	Difference (Action – Budget)
2000		31.845	n/a	n/a
2007		14.252	23.770	- 9.518
2010			23.770	
2015		7.255	23.770	- 16.515
2025		5.632	23.770	- 18.138

** The values provided here are preliminary; initial calculations indicate that the action emission estimates will be less than the emission budgets. Final emission estimates may be obtained by contacting the Pioneer Valley Regional Planning Commission at (413) 781-6045 after April 30, 2005.*

TABLE 12-2 - NOx Emissions Estimates for the Western Massachusetts Ozone Non-attainment Area

(all emissions in tons per summer day)

Year	Pioneer Valley MPO Action Emissions	Western MA Action Emissions	Budget	Difference (Action – Budget)
2000		59.139	n/a	n/a
2007		36.405	49.110	- 12.705
2010			49.110	
2015		13.438	49.110	- 35.672
2025		5.950	49.110	-43.160

** The values provided here are preliminary; initial calculations indicate that the action emission estimates will be less than the emission budgets. Final emission estimates may be obtained by contacting the Pioneer Valley Regional Planning Commission at (413) 781-6045 after April 30, 2005.*

c) Contributions to Reductions in CO Non-attainment Areas

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

4. Conclusion

The Pioneer Valley Region MPO has conducted an air quality analysis of the 2003 Pioneer Valley Regional Transportation Plan and its 2005 Amendments as well as the 2005 Transportation Improvement Program and its latest conformity determination. The purpose of the analysis is to evaluate the air quality impacts of the Plan on the SIP. The analysis evaluates the change in ozone precursor emissions (VOCs, and NOx) due to the implementation of the 2003 Pioneer Valley Regional Transportation Plan and its 2005 Amendments. The modeling procedures and assumptions used in this air quality analysis follow guidance from EPA and the Commonwealth and are consistent with all present and past procedures used by the Massachusetts DEP to develop and amend the SIP.

The EOT has found the emission levels from all areas and all MPOs in Western Massachusetts – including from the 2003 Pioneer Valley Regional Transportation Plan, its 2005 Amendments and the 2005 Pioneer Valley Transportation Improvement Program– to be in conformance with the SIP according to conformity criteria. Specifically, the following conditions are met:

- The VOC emissions for the Action (build) scenarios are less than the 2003 VOC mobile source emission budget for analysis years 2007 through 2025.
- The NOx emissions for the Action (build) scenario are less than the 2003 NOx mobile source emission budget for analysis years 2007 through 2025.

In accordance with Section 176(c)(4) of the Clean Air Act as amended in 1990, the MPO for the Pioneer Valley Region has completed its review and hereby certifies that the 2003 Pioneer Valley Regional Transportation Plan, its 2005 Amendments and the 2005 Pioneer Valley Transportation Improvement Program and its latest conformity determination conditionally conforms with 40 CFR Part 93, and 310 CMR 60.03, and is consistent with the air quality goals in the Massachusetts State Implementation Plan.

a) Public Participation Procedures

Title 23 CFR Section 450.324 and 310 CMR 60.03(6)(h) require that the development of the Regional Transportation Plan, TIP, 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 Pioneer Valley MPO's public participation program was formally adopted on August, 31, 2000. The development and adoption of this program conforms to the requirements of the sections cited above. It guarantees public access to the RTP and all supporting documentation, provides for public notification of the availability of the RTP and the public's right to review the document and comment thereon, and provides a 30-day public review and comment period prior to the adoption of the RTP and related certification documents by the MPO.

On April 15, 2005, a legal notice was placed in the Springfield Republican and the Hampshire Daily Gazette informing the public of its right to comment on this conformity determination. During the 30-day public comment period, any comments received [were] incorporated into this Plan. This allowed ample opportunity for public comment and MPO review of the draft document. On May 26, 2005 the Pioneer Valley Executive Committee [is expected to recommend] that the MPO endorse it and, subsequently, the Pioneer Valley MPO [is expected to endorse] the 2005 air quality conformity determination on _____. These procedures comply with the associated federal requirements.

PIONEER VALLEY MPO ENDORSEMENT SHEET

The signatures below signify that all members of the Pioneer Valley Region Metropolitan Planning Organization, or their designees, have met on May 18, 2005 and discussed the following item for endorsement: Amendments to The Currently Adopted Pioneer Valley Regional Transportation Plan and Air Quality Determination.

Furthermore, in accordance with 23 CFR Part 450 Section 322 (Metropolitan transportation planning process: Transportation plan) of the October 28, 1993 Final Rules for Statewide and Metropolitan Planning, the Committee of Signatories representing the Metropolitan Planning Organization (MPO) for the Pioneer Valley Region hereby endorses the 2000 Regional Transportation Plan (RTP).

Also, in accordance with Section 176(c) (4) of the Clean Air Act as amended in 1990 [42 U.S.C. 7251 (a)], the MPO for the Pioneer Valley Region has completed its review and hereby certifies that implementation of the Pioneer Valley MPO 2000 Regional Transportation Plan satisfies the conformity criteria specified in both 40 CFR Parts 51 and 93 (August 15, 1997) and 310 CMR 60.03 (December 30, 1994); furthermore this plan includes all regionally significant transportation projects contained in the previously endorsed Pioneer Valley MPO 2001-2006 Transportation Improvement Program (TIP). The projects in the TIP are of the same design and concept that were analyzed in the Regional Transportation Plan. Therefore, no new air quality analysis is required for the TIP. Both the Pioneer Valley Region 2000 Regional Transportation Plan and the Pioneer Valley MPO 2001-2006 Transportation Improvement Program are consistent with the air quality goals of, and in conformity with, the Massachusetts State Implementation Plan.

Executive Office of Transportation and Construction (EOT)

I, Secretary of the Executive Office of Transportation, hereby

☑ Endorse ☐ Do Not Endorse the above referenced item.

for John Cogliano — 5/18/05 Date
Secretary - EOT

Massachusetts Highway Department (MHD)

I, Acting Commissioner of the Massachusetts Highway Department, hereby

☑ Endorse ☐ Do Not Endorse the above referenced item.

for Thomas Warczila — 05/18/05 Date
Acting Commissioner - MHD

Pioneer Valley Planning Commission (PVPC)

I, Chair of the Pioneer Valley Planning Commission, hereby

☑ Endorse ☐ Do Not Endorse the above referenced item.

for Henry Barton — 5/18/05 Date
Chair - PVPC

Pioneer Valley Transit Authority (PVTA)

I, Chair of the Pioneer Valley Transit Authority, hereby

☑ Endorse ☐ Do Not Endorse the above referenced item.

James St. Amand
Chair - PVTA

5-18-05
Date

City of Holyoke

I, Mayor of the City of Holyoke, hereby

☐ Endorse ☐ Do Not Endorse the above referenced item.

Michael J. Sullivan
Mayor-Holyoke

Date

City of Westfield

I, Mayor of the City of Westfield hereby

☑ Endorse ☐ Do Not Endorse the above referenced item.

Richard Sullivan
Mayor-Westfield

5/18/05
Date

Town of Longmeadow

I, Board of Selectmen member of the Town of Longmeadow, hereby

☑ Endorse ☐ Do Not Endorse the above referenced item.

Brian Ashe
Selectman- Longmeadow

5/18/05
Date

Vacant

I, Board of Selectmen member of the VACANT, hereby

☐ Endorse ☐ Do Not Endorse the above referenced item.

Selectman-

Date