



2005 - 2009

Five Year Transportation Program





STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

GLORIA J. JEFF
DIRECTOR

January 2005

Dear Friend:

The Five Year Transportation Program is a transportation blueprint for 2005 through 2009. We use this plan to communicate with Michigan citizens, to maintain stable program delivery, as a critical control point for managing our financing strategies, and to ensure that the Michigan Department of Transportation (MDOT) meets its commitments to the motoring public.

The 2005-2009 Five Year Transportation Program includes highways, bridges, public transit, rail, air, marine and non-motorized transportation. MDOT is responsible for developing a transportation system that makes every citizen mobile, fuels the state's economy and enhances the quality of life in every community. We are equally committed to improving safety and encouraging public involvement.

MDOT's 2005-2009 Five Year Transportation Program comes at the start of our second century. Fifty years ago, we were beginning to build the "Mighty Mac" Bridge that links Michigan's upper and lower peninsulas. Today, MDOT is building a bridge to a 21st century with an integrated transportation system. Such a system will leverage technology and partnerships to move people, goods, services and information to further strengthen Michigan's global competitiveness and our connections with our neighbors, communities, other states, and our international partners in Canada and overseas.

If you have questions about the Five Year Transportation Program and its impact on your community, I encourage you to contact one of MDOT's 26 local Transportation Service Centers (TSCs). A map showing our seven regions and TSCs appears on page 49 of this report. Specific TSC addresses and phone numbers can be found in the white pages of your local telephone directory or online at www.michigan.gov/mdot. To communicate directly with us, please call our toll-free telephone number at 1-888-296-4546. You also can e-mail me at mdotdirector@michigan.gov.

We look forward to your input.

Sincerely,

A handwritten signature in cursive script that reads "Gloria J. Jeff". The signature is written in black ink on a white background.

Gloria J. Jeff
Director

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Providing the highest quality integrated transportation services
for economic benefit and improved quality of life.

2005-2009
Five Year
Transportation
Program

Program Strategies and Statistics

2005-2009 Five Year Transportation Program

Program Strategies and Statistics

The Michigan Department of Transportation (MDOT) FY2005-2009 Transportation Program continues to implement the goals and policies outlined by the State Transportation Commission, emphasizing preservation of the transportation system and providing safe mobility to motorists. The program focuses on making government effective, efficient, and inclusive; providing a safe and secure transportation system; protecting natural resources, air quality, and improving land use practices; and providing economic development opportunities as set forth in Governor Granholm's vision for improving the quality of life and the business climate throughout the State of Michigan.

MDOT will continue to emphasize and strengthen partnering efforts with transportation stakeholders and the general public throughout this five-year transportation program.

As a result of the outstanding partnerships MDOT has with its stakeholders, the M-6 (Paul B. Henry Freeway) project in southern Kent and Ottawa Counties was completed four years ahead of schedule. For more detailed information, please see the accomplishment section of the Grand Region on page 70.

MDOT will also continue to implement processes developed at workshops and stakeholder meetings to incorporate context sensitive solutions into transportation projects, and we will hold public listening sessions on future Five Year Transportation Programs. We are also improving the process of tracking public engagement at the regional level, thereby enhancing local communication and follow up with transportation industry partners and the general public.

Roadway usage on all roads in Michigan rose to 97.8 billion annual vehicle miles traveled (AVMT) in the year 2000. This is a 17 percent increase from a decade ago. Traffic volume and trend information for Michigan's state highway system are major inputs into MDOT's long-range strategies. Since 2000, Michigan has seen a four percent rise in travel on the state trunkline system. Although the state trunkline system comprises only eight percent of Michigan's roadway network, it currently (2004) carries 53 percent (53.6 billion) of total statewide traffic. Travel on state trunkline highways is expected to grow 27 percent to 65.5 billion AVMT in 2025. This is shown on Table A.

Table A also shows the percentage of state trunkline AVMT which occurs under congested conditions. Briefly, traffic flow is characterized by its Level of Service, or LOS. Alpha letter codes for LOS are defined in the 2000 Highway Capacity Manual for inventory data as A-F. Congested conditions are defined as Level of Service F. These conditions represent a volume-to-capacity ratio greater than or equal to 1.

Michigan's freeway system alone carried 57 percent of the AVMT on the state trunkline system in 2000 (see Table A). In that same year, 10 percent of the freeway AVMT (4.9 billion) occurred under congested conditions, based on the definition above. Highway travel in Michigan continues to increase, and with little new road capacity built, urban traffic congestion has worsened.

AVMT has increased by more than half in two decades and nearly a quarter of Michigan's urban interstates and freeways are congested. It is projected that travel on the entire freeway system will grow an additional 24 percent by the year 2025. By 2025, travel under *congested* conditions on the freeway system is projected to increase by 49 percent, to 7.3 billion AVMT (see Table A).

Table A

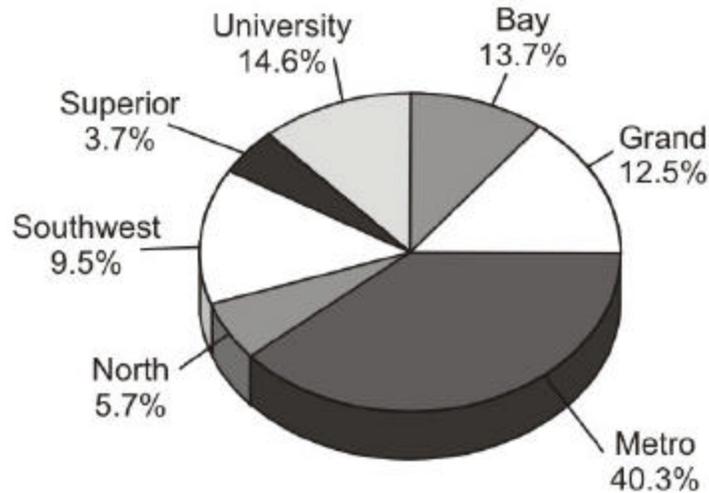
Annual Vehicle Miles of Travel (AVMT) on State Trunkline System

		2000			2025		
		In Billions	percent of System	percent of Total	In Billions	percent of System	percent of Total
Freeway System	UnCongested	24.3	83	47	29.3	80	45 percent
	Congested	4.9	17	10	7.3	20	11 percent
	Total	29.3	100	57	36.6	100	56 percent
Non-Freeway System	UnCongested	20.5	92	40	24.9	86	38 percent
	Congested	1.7	8 %	3 %	4.0	14	6 %
	Total	22.2	100	43	28.9	100	44 percent
Total State Trunk-line System	UnCongested	44.8	87 %		54.3	83 %	
	Congested	6.7	13 %		11.2	17 %	
	Total	51.5	100 %		65.5	100 %	

Congested conditions are defined as Level of Service F. These conditions represent a volume-to-capacity ratio greater than or equal to 1.

Region by Region Comparisons*

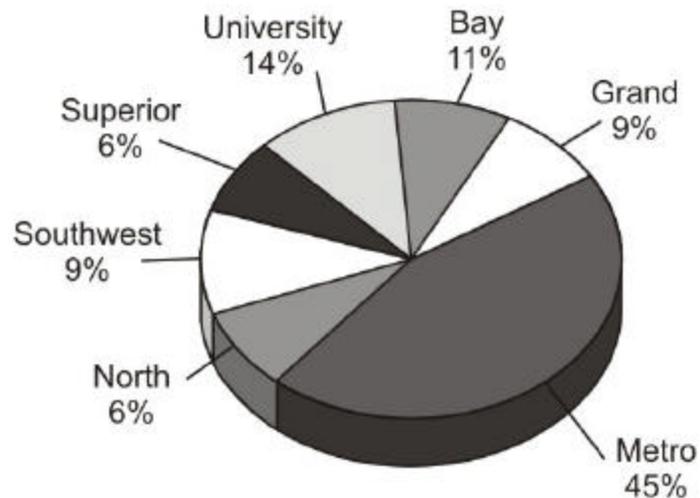
Population Percentage by Region



Source: US Census Bureau, County Population Estimates July, 2003

Region by Region Comparisons

Five Year Program



* Includes road repair and rebuild, bridge preservation, capacity improvements and new roads.

Preservation of Michigan's existing transportation system and the safety of that system remain MDOT's highest priorities. This Five Year Transportation Program will invest more than \$5.9 billion on system preservation through the repair and maintenance of Michigan's roads and bridges. In addition, more than half of the investment programmed for capacity improvements will go toward preserving existing roadway adjacent to those new lanes, thereby helping to grow Michigan's economy simultaneously through both preservation and capacity enhancement. Investments in Michigan's transportation system will focus on a comprehensive safety program and increase emphasis on elderly mobility and expanded work zone safety efforts.

This edition of the Five Year Transportation Program continues the implementation of Governor Granholm's *Preserve First* initiative which began in 2003. The *Preserve First* program places an increased emphasis on preserving our transportation system rather than expanding it.

MDOT has made substantial progress toward our future pavement condition goal of having 95 percent of the freeways and 85 percent of the non-freeways in good condition by 2007. The *Preserve First* focus will allow us to improve the condition of our roads and bridges to protect the investments of Michigan taxpayers.

Preserve First provides approximately \$317 million in additional road and bridge preservation work over the next three years, beginning with the 2005 program. These projects were selected based on a statewide needs evaluation, focusing on freeways and routes carrying high volumes of traffic. An additional \$54 million will be directed to our Safety, Enhancement and Noise Abatement programs for the period covering 2005-2007. *Preserve First* will help ensure continued progress and success in reaching the department's pavement and bridge condition goals.

Economic Benefits

Transportation plays a fundamental role in supporting and growing Michigan's economy and protecting quality of life in our communities. A safe, well maintained and efficient transportation system provides the backbone for all economic activity within the State of Michigan. Without this comprehensive transportation system, Michigan's economy would be at a great competitive disadvantage and the quality of life within our communities would greatly deteriorate. MDOT's investments to maintain Michigan's complex infrastructure network results in benefits both for Michigan's overall economy and for its industry sectors individually.

In 2004, MDOT conducted a study in consultation with the University of Michigan's Institute of Labor and Industrial Relations and the Economic Development Research Group to assess the economic benefits associated with MDOT's road and bridge program. To estimate the impact MDOT's road and bridge investments has on Michigan's economy, an economic/demographic model constructed by Regional Economic Models, Inc. (REMI) of Amherst, Massachusetts was used and adapted by the University of Michigan.

The findings of this study show that in 2005, MDOT's road and bridge system investments will support \$1.539 billion in 2004 dollars of economic activity, measured in terms of Gross State Product, and will create 26,550 jobs. As shown in the table below, a large portion of these employment opportunities benefit the state's construction industry, with the remaining employment opportunities providing the state's economy longer-lived employment growth.

Employment Benefits of MDOT's Road & Bridge Program By Industry, 2005–2009					
Industry	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Total employment	26,550	21,040	20,670	19,410	19,240
Manufacturing	1,012	810	796	771	775
Out-of-state tourism	295	228	225	213	213
Other nonmanufacturing	25,243	20,002	19,649	18,426	18,252
Construction	9,881	7,807	7,396	7,006	6,818
Professional services	4,693	3,535	3,442	3,112	3,052
Business services	1,270	995	986	940	948
Trucking	137	110	109	107	109
Other	9,262	7,555	7,716	7,261	7,325
<p>Note: Out-of-state tourism consists of air transportation (54.5 %), hotels (65.6 %), recreation (11.4 %), eating and drinking (8.0 %), other retail (5.0 5 %), and auto repair (2.9%).</p>					

Over the life of the 2005-2009 Five-Year Program, MDOT estimates its investment will cumulate to provide \$6.541 billion of real Gross State Product benefits.

Investments made on the multi-modal segments of Michigan's transportation system also contribute significant benefits to Michigan's economy. The American Public Transit Association estimates that for every \$10 million spent on transit capital investment, 314 jobs are created. Similarly, every \$10 million spent on transit operations, creates an estimated 570 jobs. Based on these national findings, MDOT estimates its transit capital and local bus operational system investments will support 11,333 jobs in 2005 (*Source: American Public Transit Association, October 1999. Public Transportation and the Nation's Economy: A Quantitative Analysis of Public Transportation's Economic Impact*).

Aviation activities contribute over \$10 billion annually to Michigan's economy. MDOT's Airport Improvement Program directly supports many sectors of Michigan's economy. Past studies have demonstrated that for every million dollars invested on aviation construction projects, 43 jobs are created. In 2005, MDOT estimates that its Airport Improvement Program will create 9,331 jobs.

According to the Association of American Railroads, approximately 70 percent of the automobiles built in the United States move by rail.

In a typical year, railroads carry a million or more carloads of finished vehicles, plus several hundred thousand carloads of automotive parts and accessories. The State of Michigan's economy and more specifically the automotive manufacturing sector greatly benefits from MDOT's continued investments to the rail freight infrastructure and safety program.

In total, MDOT estimates that its 2005 Transportation Program will generate 47,215 jobs which will directly benefit Michigan's economy.

MDOT's FY2005-2009 program increases emphasis on providing every Michigan citizen with business transportation choices and access, while maintaining and preserving our critical transportation assets.

Through balanced and comprehensive investments in Transportation Economic Development Fund grants, Transportation Enhancement grants, public transit providers, intercity bus lines as well as passenger rail and rail freight systems, MDOT's FY2005-2009 program increases emphasis on providing every Michigan citizen with business transportation choices and access, while maintaining and preserving our critical transportation assets.

Public Involvement/Outreach

MDOT held or participated in approximately 200 public meetings during the 2004 calendar year. These public meetings are generally related to projects requiring environmental impact statements and assessments. MDOT also regularly participates in local public meetings to discuss MDOT projects and works closely with metropolitan planning organizations (MPOs) to develop our transportation plans and programs.

MDOT's Web site provides a wide variety of information including: construction project information, news releases, truck weight and transport permit information, as well as links to doing business with MDOT including construction and service prequalification. MDOT also provides over 35 on-line publications. Please visit our Web site at www.michigan.gov/mdot

In an effort to continue the valuable input from stakeholders and concerned citizens regarding our transportation system, Michigan's second Transportation Summit took place in Lansing on December 15, 2004. The focus of the Transportation Summit was to continue to build on the collective vision for transportation in our state that addresses important issues like the economy, protecting our environment and improving the quality of life for our citizens.

Attendees of the Summit included transportation industry partners, citizens, members of the legislature, academia and the federal governments of the U.S. and Canada. Working together, they have created a vision and a set of action plans for the future of transportation in Michigan.

As part of our continuing public involvement, MDOT posted the draft 2005-2009 Five Year Transportation Program on our website during the week of December 13, 2004 for a short public comment period. MDOT also conducted 21 listening sessions statewide during January 2005. The listening sessions were coordinated by our Office of Communications and our region offices.

The meetings were held at various Transportation Service Center (TSC) locations throughout the state. Approximately 200 people attended these sessions. The attendees included 86 local government officials, 36 unaffiliated citizens, 33 community and business group leaders, and 80 State of Michigan employees.

Comments from many regions referred to the administering of the Preserve First Program, maintaining the current infrastructure, and improving the efficiency of Michigan's current transportation network. To accomplish preservation goals, several regions indicated a need for an increased fuel tax.

Many comments also related to the goal of Strengthening the State's Economy. Public statements from the Superior Region and other regions emphasized the tourism industry's need for an effective, attractive and multi-modal transportation network.

Also, the goal of Basic Mobility was raised in regard to securing and increasing transit funding. In the Grand Region, comments involved increasing transit options within the cities as well as the region, specifically the need for high-occupancy transit, i.e. light rail and others.

Considerable praise was expressed for the work done across the State in recent years. During the listening sessions the public has complimented the success of the M6 freeway through southern Kent and Ottawa Counties and the speed of its completion, the improved safety and efficiency of the I96/Beck Rd interchange in Novi, and the Superior Region notes that 'great progress has been made since 1997. The attendees of the Superior Region meeting noted increased safety on US-2 and US-41 and improved maintenance throughout the region.

Summaries of the listening sessions that were held through January are included in the appropriate Region narratives beginning on page 48.

**2005-2009
Five Year
Transportation
Program**

**Revenue Assumptions and
Investment Strategy**

2005-2009 Five Year Transportation Program

Revenue Assumptions and Investment Strategy

Federal Revenue Assumptions for Highways

The Transportation Equity Act of the 21st Century (TEA-21), the federal legislation which funds highway and transit projects, is now operating under a sixth short-term extension which expires May 31, 2005. The next federal transportation bill will determine how much federal funding Michigan will receive for roads, bridges and transit during the next six years.

The latest extension of TEA-21 continues federal surface transportation programs at funding levels slightly higher than the previous fiscal year. Nearly \$2 billion in Fiscal Year 2004 funds that had been reserved for earmarking will be distributed by formula to the states in Fiscal Year 2005. In addition, corrections were made to compensate states, including Michigan, that were hurt by updated gasoline consumption numbers in the previous extension. These provisions are worth approximately \$80 million to Michigan this year.

Despite the fact that we are beginning our second fiscal year without a federal transportation bill, MDOT has been able to deliver a comprehensive program based on the Governor's Preserve First Initiative and the State Transportation Commission policies. Our investment strategy for the 2005-2009 program strives to use the limited resources that have been provided to continue to implement a comprehensive program that will benefit Michigan's citizens.

The federal aid revenue estimate used to develop the 2005-2009 Five Year Transportation Program for highways is based on MDOT's share of the fiscal year 2003 Federal Aid Highway Program obligation authority of \$31.6 billion nationally. Due to the lack of a new federal highway bill, MDOT has been working under a series of continuing resolutions to partially federal fund our highway program. For planning purposes, FY 2003 is the last full year of federal apportionments available. MDOT has continued assuming a 3.2 percent increase compounded annually over the 2003 levels. Expected federal revenues total \$3.632 billion over the 2005-2009 Five Year Transportation Program timeframe.

State Revenue Assumptions for Highways

The state aid revenue estimate used to develop the 2005-2009 Five Year Transportation Program for highways is based on MDOT's share of the fiscal year 2004 and fiscal year 2005 Michigan Transportation Fund (MTF) as estimated by the Department of Treasury, Economic and Revenue Forecasting Division. Future year state revenue is forecasted using a long range forecasting model.

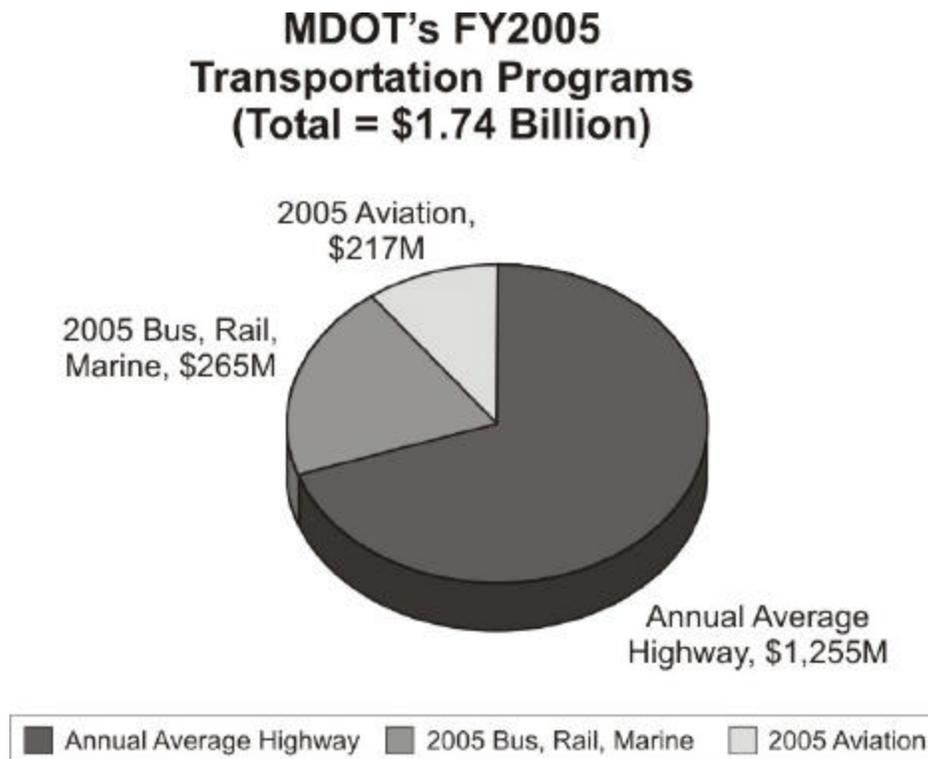
The State revenue estimate accounts for the Diesel Fuel Simplification package and other legislative changes to the MTF (Transportation Administration Collection Fund and trailer registration fees) as signed into Michigan law in 2003.

MDOT's state transportation revenues available for the capital road and bridge program (including routine maintenance) total \$2.786 billion during the 2005-2009 Five Year Transportation Program timeframe.

This Five Year Transportation Program includes a total of \$323 million in bond revenue. This total represents \$260 million in new bonds scheduled for 2006 and \$63 million of unobligated bond revenue from the \$200 million bond issue in 2004. It is assumed that MDOT will convert existing short term notes to long term debt beginning in 2006.

FY 2005-2009 Investment Strategy

This Five Year Transportation Program invests more than \$6.77 billion in MDOT's transportation system. This includes five years of investments in the highway program (Fiscal Year 2005-2009) and one year of investments (FY2005) in the aviation, bus, rail and marine programs. In fiscal year 2005, nearly \$217 million will be invested in the aviation program; nearly \$268 million will be invested in the bus, rail and marine/port programs. An annual average of \$1.255 billion will be invested in the highway program over the 2005-2009 timeframe, including routine maintenance. This investment level is not only fiscally responsible, but supports a program that ensures the preservation and improvement of our transportation network. See the following chart:



2005-2009 Highway Program Investment Strategy

Our five-year investment strategy is a key component of the cooperative planning process and provides the public with a longer term perspective regarding the transportation program. New technology makes it possible to combine long-term goals with current condition data to generate a five year program as well as integrate the data to coordinate road and bridge improvements and achieve new investment efficiencies.

The Michigan Department of Transportation (MDOT) FY2005-2009 Highway Program investments will total approximately \$6.28 billion including pre-construction phases (project scoping, environmental clearance, design, right-of-way acquisition) and construction projects.

This five year transportation program will provide Michigan travelers with an average of approximately 390 miles of improved roads in each of the next five years, as well as repairs to an average of 350 bridges per year. We will also manage our road system by extending the life of approximately 1,500 miles of pavement each year through the Capital Preventive Maintenance (CPM) Program. The investment of the Five Year Highway Program totals \$6.28 billion from 2005 to 2009 or approximately \$1.255 billion annually. The following charts depict MDOT's 2005-2009 Road and Bridge Program Investment Strategy.

MDOT's Five Year Road and Bridge Program

<i>REPAIR AND REBUILD ROADS AND BRIDGES</i>	Annual Average	Five-Year Total
REPAIR AND REBUILD ROADS		
Preserve Roads (Rehabilitation and Reconstruction) ⁽¹⁾	\$ 410 million	\$ 2,052 million
Non-Freeway Resurfacing	\$ 11 million	\$ 55 million
Passing Relief Lanes ⁽¹⁾	\$ 9 million	\$ 45 million
TOTAL REPAIR AND REBUILD ROADS	\$ 430 million	\$ 2,152 million
MAINTENANCE ACTIVITIES		
Routine Maintenance	\$ 269 million	\$ 1,344 million
Capital Preventive Maintenance (CPM) - Road	\$ 95 million	\$ 476 million
TOTAL MAINTENANCE	\$ 364 million	\$ 1,820 million
BRIDGES (Rehabilitation and CPM)	\$ 196 million	\$ 980 million
TOTAL REPAIR AND REBUILD ROADS AND BRIDGES	\$ 990 million	\$ 4,952 million
CAPACITY IMPROVEMENTS ⁽⁵⁾ AND NEW ROADS		
Capacity Improvements ⁽¹⁾	\$ 58 million	\$ 292 million
Research Capacity Improvements	\$ 6 million	\$ 30 million
New Road Construction ⁽¹⁾	\$ 2 million	\$ 10 million
Research New Roads	\$ 3 million	\$ 13 million
TOTAL CAPACITY IMPROVEMENTS & NEW ROADS	\$ 69 million	\$ 345 million
SAFETY PROGRAMS	\$ 55 million	\$ 274 million
OTHER		
Federal Mandates ⁽²⁾	\$ 81 million	\$ 407 million
TEDF ⁽³⁾	\$ 2 million	\$ 9 million
State Programs ⁽⁴⁾	\$ 58 million	\$ 288 million
TOTAL OTHER	\$ 141 million	\$ 704 million
TOTAL FIVE-YEAR TRUNKLINE PROGRAM	\$ 1,255 million ⁽⁵⁾	\$ 6,275 million ⁽⁵⁾

Source: Estimated Capital Outlay Program Template

1 Project lists included in the Five Year Road & Bridge Program document. Preserve First funding included.

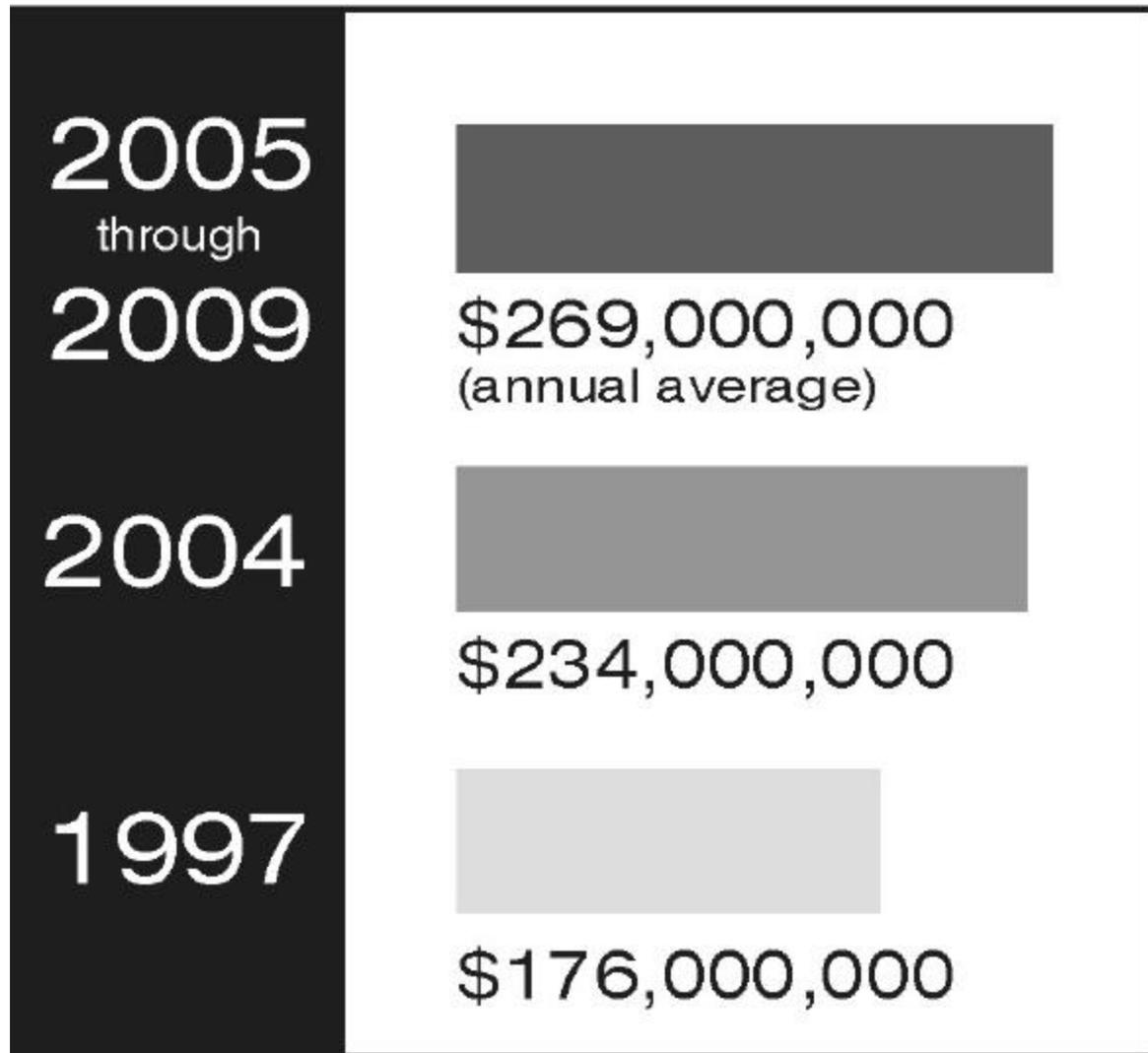
2 Includes CMAQ, Enhancement, ITS, Noise Abatement and other programs.

3 TEDF is the Transportation Economic Development Fund.

4 State programs include the Michigan Institutional Roads (MIR) program, Non-discretionary "M" Program, State Railroad Crossing program, Program Development and Scoping, Advanced ROW Acquisition, Jurisdictional Transfers, and Carpool Parking Lot program.

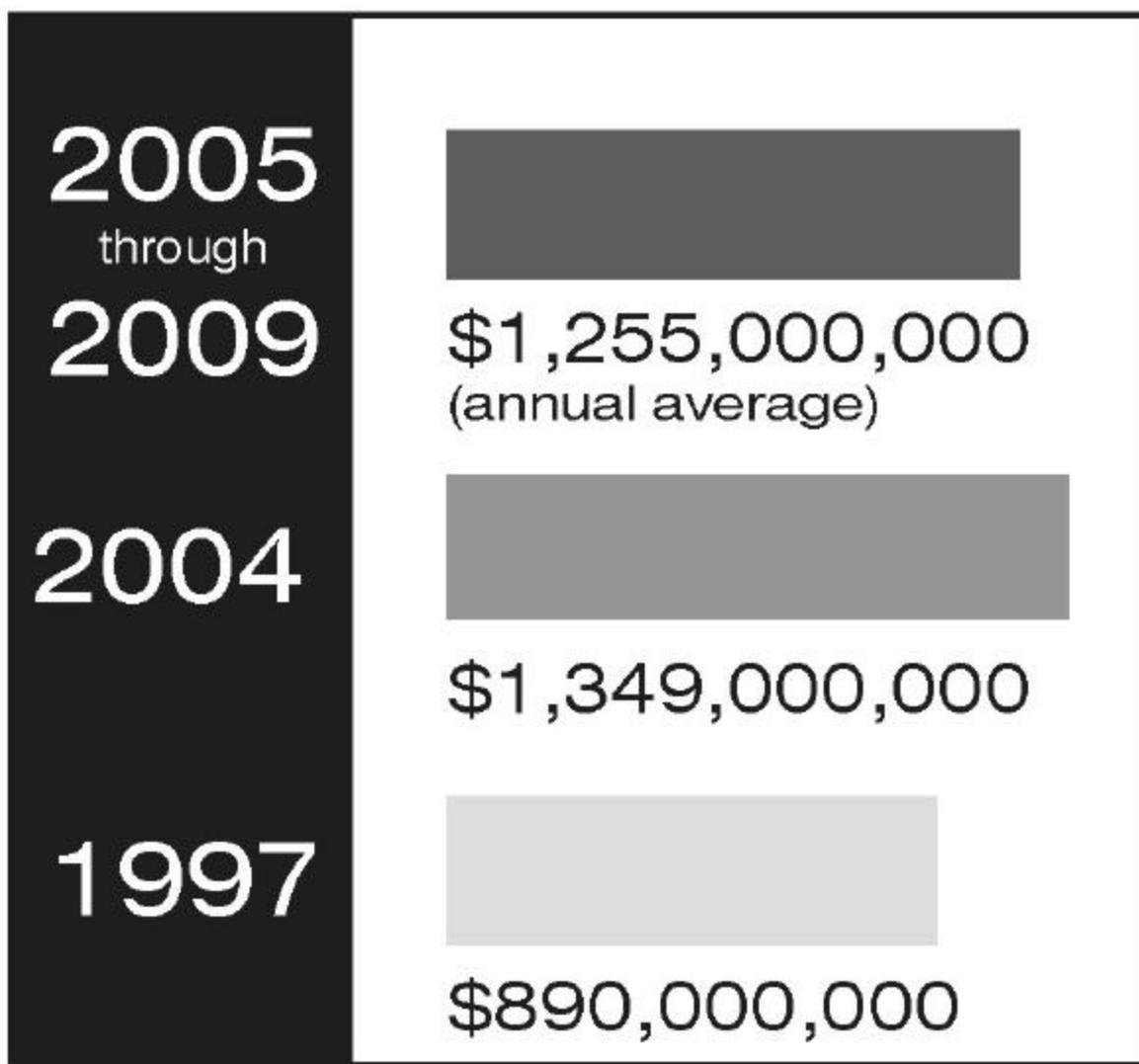
5 A substantial portion of a CI project is preservation of the existing road.

Annual Routine Maintenance Budget

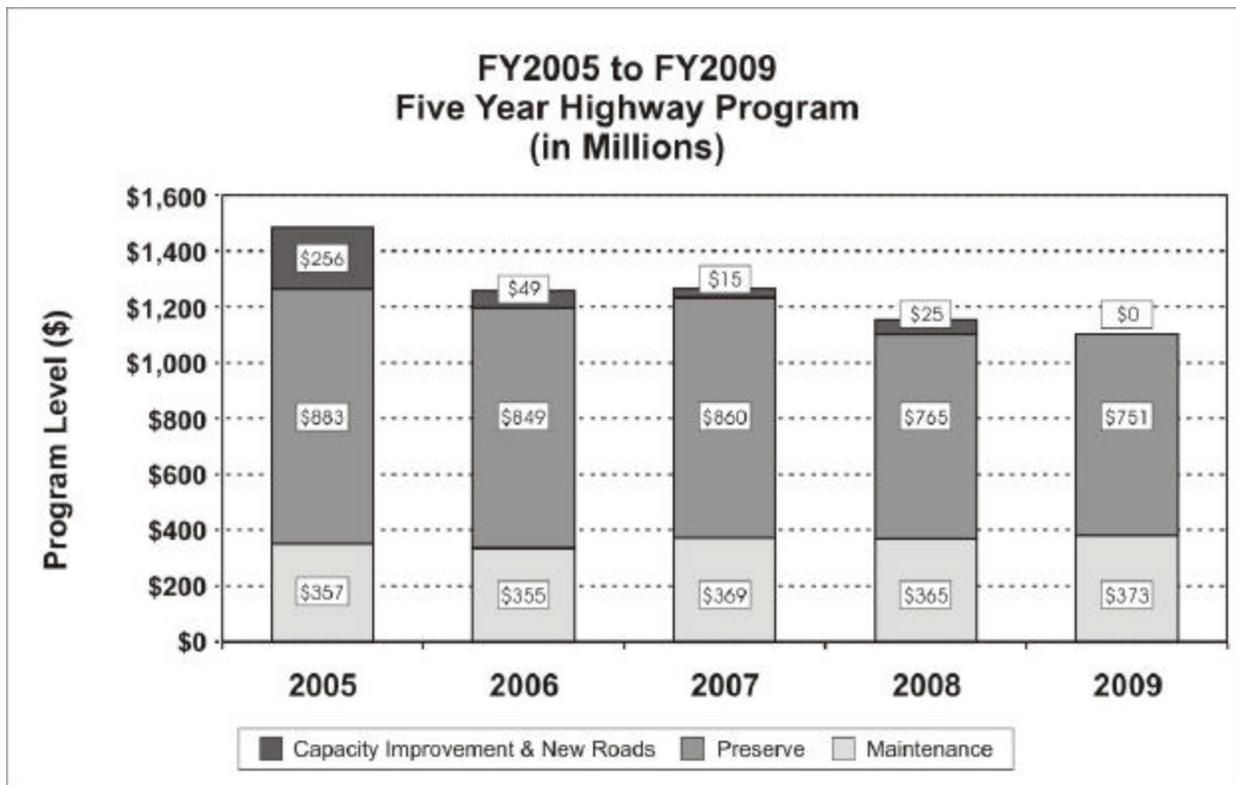


Beginning in 2005 and continuing through the life of this Five-Year Program, an average of \$269 million per year will be spent for routine maintenance. Routine maintenance consists of many important day-to-day activities including pothole filling, snow plowing, sweeping, and grass cutting. This effort continues the increased funding for routine maintenance beyond the \$176 million spent in 1997.

Annual Road and Bridge Investments



Each year from 2005 to 2009, MDOT will invest an average of \$1.255 billion to improve approximately 390 miles of road and approximately 350 bridges on the state highway system. Routine maintenance activities also are included in this investment level.



The FY2005-2009 Highway Program focuses on preserving and maintaining the state's roads and bridges. This is accomplished through a combination of long-term fixes (reconstruction), intermediate fixes (resurfacing/rehabilitation), an aggressive capital preventive maintenance program, as well as routine maintenance. The above chart demonstrates the emphasis on preservation of our system.

FY2005 Multi-Modal Program Investment Strategy

MDOT undertakes additional aeronautics activities funded via its operating appropriations. These include actions to increase aviation safety, pilot knowledge and skills; undertake airport and flight school licensing, aircraft registration, and increase the number of airports capable of all-weather access.

The FY 2005 Michigan Department of Transportation (MDOT) appropriation act (Act Number 361, Public Act of 2004) provides funding for the Multi-Modal Transportation Services Bureau (MMTSB) and the associated programs in Sections 114 through 118. This includes funding for aeronautics, local and intercity transit, and rail freight and rail passenger, and port and marine.

Aviation

MDOT FY 2005 Airport Improvement Program (AIP) provides funding for approximately 236 public-use airports for capital improvement projects and pavement maintenance. Of the 236 eligible airports, 93 airports receive federal entitlement funding as part of the National Plan of Integrated Airport Systems.

As the majority of Michigan’s public-use airports that receive federal entitlement funds are owned and operated by local governments, projects using these funds are selected by the airport sponsors and not MDOT.

MDOT can and does provide supplemental funding for many projects and makes the decision which projects receive these supplemental funds. The Federal Aviation Administration (FAA) also provides supplemental funding for projects at airports that the FAA selects. In addition, there are state and local funded only projects that are used for both the federally eligible and non-eligible airports. The anticipated program level for Michigan’s Airport Improvement Program is \$217 million. All of the projects accomplished using these funds will provide safety and security benefits. Additionally, there are infrastructure preservation benefits and capacity improvements. In addition to the projects contacted through MDOT, the airports contract direct for a significant amount of work using these funds. These funds will be used to support the programs mentioned above. The breakdown by airport classification is as follows:

Primary Airports.....	\$137.0 million
General Aviation Airports	\$79.5 million
State Wide Programs.....	\$0.5 million
FY 2005 Airport Improvement Programs.....	\$217.0 million

Aeronautics and Commission Administration/Management

The Michigan Aeronautics Commission (MAC) is responsible for the safe development of aviation in Michigan, and in concert with federal and local governments, to maintain safe and cost effective facilities that will serve the needs of commercial and private air users.

In addition, the Commission undertakes efforts to improve the accessibility of Michigan communities by facilitating retention and development of commercial passenger and freight services. Programs and activities provide for the protection and promotion of safety, effecting uniform laws relating to development and regulation of aeronautics; developing and implementing aeronautical rules and regulations, developing a statewide system of airports; developing and implementing programs to improve commercial passenger and cargo service, developing and implementing methods to insure the future of Michigan’s airport system, minimizing the loss of public use airports; elimination of costly and unnecessary duplication of functions, coordinating activities and programs with federal authorities, all to be done to further the public interest and aeronautical progress within the State of Michigan.

The following information list many programs administered by the Aeronautics Commission.

Operation of State Airports

The MMTSB is responsible for the operation of state-owned airports. This responsibility currently extends to five airports. These responsibilities are all currently delegated, through contractual agreements, to various public and private agencies. These state owned aeronautical facilities include: Romeo State Airport, Plymouth-Mettetal Airport, Linden-Price Airport, Houghton Lake State Airport, Mackinac Island Airport.

The Sidnaw Prickett-Grooms Field facility has been permanently closed and the property is in the process of being removed from the list of airports open to the public.

Air Service

Michigan's aviation system in 2003 served over 37 million passengers on scheduled air carrier aircraft at 18 commercial service airports. As emphasized by the \$32.9 billion in goods exported internationally in 2002, Michigan's commerce depends upon a quality multi-modal transportation system. Aviation is an important element of that system, transporting both people and goods quickly, safely, and efficiently. Additionally, Michigan's extensive tourism industry requires efficient air transportation to support development. Since Michigan is removed from the nation's primary east/west highway corridors and has a peninsular geography, quality air service is essential for access to and from many Michigan communities and to support our state's economic growth.

Air Transport

The Air Transport program provides aircraft, pilots, and mechanics in support of MDOT's role in airport inspection, navigation aid and weather systems maintenance, safety and education, airport development programs as well as other MDOT responsibilities and program activities. Secondly, the air transport program is responsible for providing safe, efficient and reliable air transport service to the executive, legislative and judicial areas of government and other state agencies.

Air Transport also provides and maintains aircraft to support the mission of MDOT including land use determination, and aerial photography for highway design/survey. Air Transport personnel provide support for other MDOT activities and provide maintenance for all its aircraft, limited maintenance of Department of Natural Resources, Department of Military and Veterans Affairs, and Michigan State Police aircraft.

Aviation Safety and Education

The Aviation Safety program has two components. An internal safety and training program is designed to provide recurrent training for the MDOT's pilots and aircraft maintenance personnel. The second component of the safety program is an active external safety initiative for Michigan pilots. This program is conducted in cooperation, and under the terms of a Memorandum of Understanding, with the Federal Aviation Administration.

The Aviation Education program is primarily for teachers in the K-12 schools. It is designed to show educators how aviation concepts can be included in everyday classroom activities as a motivator for learning. The program also seeks to promote aviation as a career option for young people.

Aeronautics Capital Improvement Program

MDOT maintains and updates a five-year funding program based on available federal funding and information provided for the airport authorities. The program provides a view of funding needed in the future at each of the public-use airports. Any capital improvement project involving state or federal funds must be environmentally cleared. MDOT has been appointed by FAA to act as lead agency for environmental review.

MDOT staff review and coordinate environmental documentation on all airport projects and maintains an updated as-built construction file for all state capital improvement projects. MDOT coordinates Disadvantage Business Enterprise (DBE) requirements with airport sponsors and the FAA, which involves developing DBE programs for sponsors involved with federal and state funded projects.

The Aeronautics Capital Improvements Program consists of the following components:

Federal/State/Local Grants

This program involves the administration of federal, state, and local funds for capital improvement projects to over 100 eligible state airports. Eligible airports are required to adhere to an airport master plan, environmental property acquisition, and contractual requirements for airport sponsors.

The Bureau prepares a statewide program for airport development and manages individual program projects. The majority of these grants are 95 percent federal, 2.5 percent state match, and 2.5 percent local match.

State/Local Grants

This program matches state and local funds for capital improvement projects. State funds must be matched by local funds at a 50-50 basis or under the small airports program, at a 90-10 ratio. This program is targeted to smaller projects, or to projects that do not meet the federal funding or eligibility criteria.

Airport Loans

The program consists of administering airport sponsors' requests for loans to Michigan airports. Loans are issued to publicly-owned airports for airport improvement projects on a priority basis and are allowed to borrow up to \$100,000. The interest rate is established by the state treasurer and has a maximum of six percent. The repayment schedule dictates yearly installments for a 10-year period or less. Loans can be used for local-only projects or as part of the airport sponsor's match in state/local or federal/state/local projects.

Airport Zoning Plans

Airport zoning plans are prepared for an individual airport and may cover height and land use restrictions. Some zoning ordinances involve the bureau through representation on their boards. Forty-five airports have adopted an airport zoning ordinance. MDOT is responsible for advertising and promoting zoning for height and land use control.

Safety and Compliance Programs – Hazard Evaluation and Determinations

MDOT administers the Michigan Tall Structures Act. Under the requirements of the act, MDOT reviews proposed construction of utility lines, tall structures, radio and television towers in the vicinity of airports and airways for airport safety and airspace protection. A permit is issued for those proposals that do not adversely affect navigable airspace.

Safety and Compliance Programs – Licensing of Public-Use Airports

MDOT annually completes a compliance evaluation/tracking and licenses each of the approximately 240 open-to-the-public airports in Michigan.

This is done to assure the airports comply with the standards of the Michigan Aeronautics Code and to gather data for a state directory and aeronautical chart.

Safety and Compliance Programs – Flight School Licensing MDOT licenses flight schools as required by the Michigan Aeronautics Code. Flight schools requesting an initial license receive an on-site, detailed review of compliance items as well as guidance materials to assist them in serving their customers.

Safety and Compliance Programs – Michigan Airport Directory and Aeronautical Chart MDOT publishes an annual Airport Directory and Aeronautical Chart using data from airport inspections and numerous other local, state, and federal sources through the aviation network. One complimentary chart is provided to each licensed pilot in Michigan. The data found in the Airport Directory serve as a reference to pilots seeking operational data information.

Bus, Marine, and Railroad Programs

Local and Intercity Transit

The programs in this category provide funding for operating and capital support for local systems that provide passenger transportation services to the general public, senior citizens and persons with disabilities. The majority of these services are provided via bus and van. The programs are supported by state Comprehensive Transportation Fund (CTF) and federal funds issued to the State and passed through to local operators.

In FY2005, the CTF appropriations for these programs were cut significantly due to reductions in sales tax revenues, including legislatively mandated reductions in the contributions of the sales tax to the CTF. As a result the FY2005 program reflects program reductions and program eliminations. The programs unfunded in FY 2005 are shown below for reference, it is not known if MDOT will seek restoration of these programs (or programs with similar purposes) in the future appropriations.

The FY2005 budget for these programs reflects anticipated increases in federal funds in a number of areas, including: Local Bus Operating/Federal Non-urban Formula; Service Development and New Technology; Specialized Services (proposed Federal "New Freedom" Program) and Transportation to Work. The increases represent potential program enhancements proposed as a part of federal reauthorization that will likely not be realized in FY2005. In addition, some of the federal programs require state matching funds from programs that have been eliminated or reduced in FY2005 and as such not all available federal dollars may be accessed in FY2005. For these two reasons, the total program budget could be overstated in terms of the federal funds that will be expended in FY2005

All of the state and federal revenue appropriated for these programs support local transportation services provided by government agencies and authorities, non-profit agencies and private sector contractors. The federal funds shown below represent only the portion of federal funds made available to local operations through MDOT. The majority of federal transit funding is awarded directly from the Federal Transit Administration (FTA) to local agencies and is not passed through MDOT; therefore the majority of the funds are not shown in MDOT's budget.

The FY2005 budget including appropriated state, federal and local funds, for local passenger (bus) programs is \$236.02 million. The FY2004 program had as its primary focus the maintenance of existing operations and routine capital investment for safety, security and preservation. The FY2004 program also included training, demonstration and application of new technologies, and demonstration of new service, including regional coordination and a rideshare program. The FY2005 maintains the primary focus of the FY2004 programs (with reduced capital investment) and includes the elimination of all other programs.

The breakdown for the anticipated \$236.02 million in program funding for this category is as follows:

Local Services	
Specialized Services.....	\$8.20 million (1)
Local Bus Operating/Federal Non-urban formula.....	\$176.28 million (2)
Service Development and New Technology.....	\$1.45 million (3)
Regional Service Coordination.....	\$0.00 million
Transportation to Work.....	\$8.60 million (4)
Bus Capital.....	\$38.5 million (5)
Ridesharing.....	\$0.00 million
Vanpooling.....	\$0.19 million
Municipal Credits.....	\$2.00 million
Planning Grants.....	\$0.80 million
FY2005 Local transit Programs.....	\$236.02 million

Additional Notes:

- (1) Includes a \$4.6 million increase in federal from FY2004 based on anticipated new federal program dependent on federal reauthorization. An increase in program effort in FY2005 is unlikely.
- (2) Includes a \$3.7 million increase in federal from FY2004 based on anticipated increased federal funding dependent on federal reauthorization. An increase in program effort in FY2005 is unlikely.
- (3) Includes a \$100,000 increase in federal funds from FY2004 based on anticipated new federal program dependent on federal reauthorization and a \$200,000 decrease (complete elimination) in the state funds needed to access the federal funds. A decrease in program effort in FY2005 is likely.
- (4) Includes a \$4.3 million increase in federal funds from FY2004 based on anticipated new federal program dependent on federal reauthorization and a \$2.2 million decrease in the state funds needed to access the federal funds. A decrease in program effort in FY2005 is likely.
- (5) Includes an \$8.0 million decrease in federal funds, because the federal appropriation authority has been overstated, with more federal funds being awarded directly to local authorities. Also includes a \$6.5 million decrease in the state funds needed to access federal funds awarded to MDOT and to local agencies. A decrease in program effort in FY2005 is likely.

Intercity Bus Programs

The Intercity Bus programs provide capital investments for bus and/or rail passenger facilities, bus operating subsidies and intercity bus capital. The five state contracted routes are the Upper Peninsula Greyhound service (three routes) and the Northern Lower Peninsula Indian Trails services (two routes, one each, along the east and west coast lines).

The intercity bus capital program provides new motor coaches for any intercity route in Michigan to ensure quality and accessible equipment for bus passengers in Michigan. Intercity operating assistance is a focus along with capital investments in infrastructure for facilities and vehicles. These improvements are for safety, security and preservation.

In FY2005, the CTF appropriations for some of these programs were cut significantly due to reductions in sales tax revenues, including legislatively mandated reductions in the contributions of the sales tax to the CTF. In addition, the FY2005 budget for the Intercity Service Development program reflects an anticipated increase in federal funds based on potential program enhancements proposed as a part of federal reauthorization that will likely not be realized in FY2005. The program is overstated in terms of the federal funds that will be expended in FY2005

All of the State and federal revenue appropriated for these programs support local transportation services provided by the private sector and capital improvements undertaken by local government agencies and authorities that support both public and private transportation services.

Intercity Terminals.....	\$1.55 million (1)
Intercity Service Development.....	\$4.85 million (2)
Intercity Bus Capital	\$2.50 million (3)

FY2005 Intercity Bus Service Programs.....\$8.90 million

- (1) (Terminals) Reflects a \$1.3 million reduction from FY2004
- (2) (Service Development) Includes a \$1.9 million increase from FY2004 based on the need for additional federal authority and an anticipated increase in federal funding dependent on federal reauthorization. An increase in program effort in FY2005 is unlikely.
- (3) (Capital) Reflects a \$500,000 reduction from FY2004

The following information list many programs administrated by the Passenger Transportation Division.

Local Bus Operating Assistance

This program provides funding for operating expenses of local transit agencies/authorities. Act 51, of the Public Acts of 1951, as amended, sets the state assistance at up to 50 percent of eligible operating expenses for urbanized areas over 100,000 population and up to 60 percent for nonurbanized areas and urbanized areas under 100,000 population.

Specialized Services

The Specialized Services program provides operating assistance for public transportation services primarily geared toward the elderly and persons with disabilities.

Vanpooling

This program funds the continuation of “MichiVan” vanpool services to qualified commuting groups of four or more persons throughout the state. MichiVan is an energy-efficient form of transportation that contributes to the relief of traffic congestion and air pollution. The program serves both employer and employee needs.

Bus Transit Capital

This program provides capital grants, largely as match to federal grants, to local transit systems and specialized service providers. This program is required under Act 51 of the Public Acts of 1951, as amended, which requires the use of Comprehensive Transportation Funds to match federal grants.

Intercity Bus Equipment

This program provides capital assistance to ensure that safe, modern vehicles are used to serve intercity bus travelers throughout Michigan. It enhances the operating safety and attractiveness of such service through provision of new equipment.

Intercity Bus Service Development

This program provides financial support to intercity bus passenger services across the state of Michigan to avoid isolation of small communities, support tourism and economic development, and provide a connection to the national bus system.

Intercity Bus and Limousine Regulatory

This program includes the licensing and safety inspection of intercity bus carriers operating in the state of Michigan and the licensing and regulation of limousines.

Intercity Terminal Development

This program provides funding for construction of safe and convenient facilities for the public traveling by intercity bus and rail. Significant segments of the population served include students, families, the disabled, and the elderly. Intercity terminals contribute to economic development in local areas. The funds may be used to match federal grants to transit agencies for intercity terminal projects.

Federal Non-urban Operating and Capital

This program provides Federal 49 USC 5311 funds for operating or capital assistance in non-urbanized areas of the state (under 50,000 population) including intercity bus service. This program is permitted under Act 51, of the Public Acts of 1951, as amended, and is required to make use of federal transit funds allocated to Michigan for specific purposes/projects.

Planning Grants

Several urban transit agencies utilize Federal Transit Administration funds under 49 USC 5307 for planning tasks directly related to the area’s transit program. The Planning Grants program provides matching funds on an 80 percent FTA, 10 percent state, and 10 percent local basis. The federal funds are granted directly to local transit agencies.

Service Development and New Technology

This program provides federal funds for local transit related projects in areas of research, development, demonstration, training, planning and coordination, and special operational and technical projects. In the FY2005 budget no state funds were appropriated to match these federal funds.

Port and Marine

The programs in this category provide funding to eligible port authorities and to eligible transportation authorities which provide public ferryboat services. By statute, upon city, county and state approvals of a port authority's operating budget, up to 50 percent is funded by the state and 25 percent each from the city and county. The Marine Passenger program contributes capital support to eligible transportation authorities. Not included in these programs is: 1) operating assistance provide to public marine passenger services through the Local Bus Operating program; the anticipated FY2005 operating assistance for marine passenger services is \$1.5 million and 2) anticipated commitment of CTF bond revenues to match FHWA funds for construction of a marine passenger terminal and dock on the Detroit River. The Marine Passenger program contributes capital support to eligible transportation authorities.

Port Development.....	\$0.50 million
Marine Passenger.....	\$0.80 million

FY2005 Marine and Port Services Programs.....\$1.30 million

Marine Passenger

This program provides capital assistance to Michigan's two publicly owned ferry operations – the Eastern Upper Peninsula Transportation Authority and the Beaver Island Transportation Authority to improve dock infrastructure, vessels, and support equipment. Residents of Beaver, Drummond, Neebish, and Sugar Islands depend on these services for transportation to the mainland.

Detroit/Wayne County Port Authority

MDOT contracts with the Detroit-Wayne County Port Authority (DWCPA) to provide funding to support port operations for the movement of goods and the promotion/development of transportation, industrial, recreational, and commercial facilities within its jurisdiction.

Passenger Rail and Freight

Freight Program

Programs in the Rail Freight Infrastructure and Safety category provide management of approximately 650 miles of state-owned rail lines, provide loans or grants to railroad companies, and others, to improve rail infrastructure or promote economic development. These programs also regulate highway-railroad crossings and provide funding for safety enhancements at those crossings. The regulatory and safety functions are supported with MDOT's operating funds. The anticipated program funding for rail freight infrastructure is \$7.29 million. Safety and security are the focus of the highway-railroad grade crossing program.

The infrastructure investments on the state owned rail lines are again for safety and security and preservation with some minor capacity expansions in the form of new siding tracks. The breakdown by program is as follows:

Highway-Railroad Grade Crossing Safety.....	\$6.44 million
Property Management.....	\$1.00 million
Preservation and Development.....	\$ 4.44 million
Michigan Rail Loan Assistance Program (MiRLAP).....	\$.10 million

FY2005 Rail Freight Infrastructure and Safety Programs\$11.98 million

The following list many programs administrated by the Freight Safety and Services Division.

Freight Property Management – State-Owned Rail Line Management Program

MDOT owns nearly 650 miles of active rail lines and contracts with five private railroad companies to provide service to rail users located on those lines. The State-Owned Line Management Program includes contracts with those private operators or other contractors for the management of the lines’ physical property.

Track rehabilitation work was completed on 52.5 miles of track. Rehabilitation work was completed on 8 railroad bridges. Additional, 42 bridges were inspected. Vegetation control was applied to 481 miles to ensure safe railroad operations and to extend cross-tie life.

Through the property management program the Department invests approximately \$1.5 million annually for vegetation control along with bridge, culvert and crossing repairs on state-owned property. Due to a reduction in funding FS&SD will be investing \$1 million in FY 2005.

Freight Preservation and Development

The preservation and development program undertakes capital improvements to enhance rail service in rural areas and small towns served by the state-owned rail infrastructure throughout Michigan.

Through the Economic Development program financial assistance is offered to rail users in the development and/or expansion of business and industries. The program offers financial assistance in the form of loan/grants covering up to 50 percent of the rail freight portion of the project when the rail improvement facilitates economic development.

Rail Infrastructure Loan Program [Commonly referred to as the Michigan Rail Loan Assistance Program (MiRLAP)]

The Michigan Rail Loan Assistance Program (MiRLAP) is a self sustaining revolving (no interest) loan program to assist the rail industry to preserve and improve Michigan's rail infrastructure and contribute to the stability and growth of the state's business and industry.

The loans are limited to one million dollars per project and can be used for track rehabilitation; bridge and culvert repair; new construction, transload facilities, and rail consolidation projects with a repayment period of up to ten years. The MiRLAP loans fund up to 90 percent of the rail portion of the project costs with at least a 10 percent funding match from the applicant. The application deadline for FY2005 call for projects is January 10, 2005.

A call for projects was held and six successful applicants were approved for contracts for interest free loans to improve and preserve Michigan's rail infrastructure. This resulted in four loans for a total of \$2.75 million.

Rail Safety Program

The Local Grade Crossing Program provides local agencies and railroad company's assistance with developing and implementing projects that enhance motorist safety at public highway-railroad crossings, including [safety enhancement](#), [closure](#), and surface repair [pilot](#) projects. In FY 2004 MDOT conducted on-site reviews for 2402 of the public highway-railroad grade crossings in the state. These regulatory and safety functions are supported with the Department's operating funds.

Rail Passenger Services

This program is comprised of two basic components. The first is capital investments for high speed rail on the federally designated Detroit-Chicago Corridor. MDOT has focused on track rehabilitations and train control system improvements between Kalamazoo and Niles. These improvements have allowed maximum trains speeds to increase from 79 MPH to 90 MPH. This is the only section of track outside the Northeast Corridor between Washington D.C. and Boston, MA where maximum train speeds have increased above 79 MPH in over 25 years.

The second component is oversight of the operating contracts for the Grand-Rapids-Chicago, Pere Marquette service and the Port Huron-Chicago, Blue Water service. The intercity rail passenger services between Grand Rapids and Chicago, Port Huron and Chicago, and Pontiac, Detroit and Chicago link southern Michigan communities to the Amtrak national system. The primary funding focus of this program is to provide state operating assistance for the Grand Rapids-Chicago and Port Huron-Chicago Amtrak routes.

The long term capital investments are to improve and expand intercity passenger rail service through the introduction of high speed rail on the Detroit-Chicago corridor. These infrastructure investments are for safety and security, as well as capacity and speed improvements. This program does not include any funding from the Intercity Terminal program included as a part of the Intercity Bus Programs.

The FY2005 appropriation is \$1.1 million less than the FY2004 appropriation. The effect of this reduction is to eliminate any new capital investments on the federally designated Detroit-Chicago high speed corridor.

FY2005 Rail Passenger Services Program.....\$7.20 million

The **Midwest Regional Rail System** (MWRRS) reflects a fundamental change in the delivery of intercity passenger rail service in the Midwest, primarily using existing rail rights-of-way shared with freight and commuter rail to provide increased train speeds, frequency, system connectivity and service reliability. The MWRRS, with Chicago as its hub, is a 3000-mile intercity passenger rail network serving 90 percent of the 60.3 million people living in the Midwest nine-state region. The MWRRS features a safe, reliable, comfortable and convenient service using modern trains traveling at speeds up to 110 mph to provide up to 10 daily round trips depending on the corridor. The system reduces travel time up to 50 percent, improves service reliability, expands regional travel services, improves passenger and freight train safety, and creates development opportunities.

In Michigan, this could result in up to nine daily round trips between Detroit and Chicago consisting of a mix of express and local service. Trains would travel at speeds up to 110 mph in the Detroit-Chicago corridor reducing travel times to approximately four hours. In addition, one daily round trip would be provided between Kalamazoo and Detroit and one daily round trip between Kalamazoo and Chicago. These would provide mid-Michigan communities early morning arrivals in Detroit and Chicago respectively. Service would also be upgraded from one to four daily round trips on the Grand Rapids-Chicago and Port Huron-Chicago routes. Feeder bus routes would compliment the intercity passenger rail service connecting communities from one to two hours away to selected rail stations by meeting several of the train departures and arrivals.

Regarding costs, the MWRRS is a major infrastructure project consisting of a total capital cost of \$7.7 billion (\$6.6 billion in infrastructure and \$1.1 billion in train equipment) extending over a 10-year period. Michigan's portion of this infrastructure investment would be \$1.1 billion. It is estimated that development of this system would create 2,000 permanent jobs and 8,000 construction jobs. At the same time, assuming the system becomes fully operational, the MWRRS would provide the potential for generating an additional \$2.6 billion in public/private sector benefits through improved and increased amenities in stations, and sound development and job growth in the vicinity of stations.

**2005-2009
Five Year
Transportation
Program**

**Safety and Security Strategies, Preserving the
System, and Expanding the System**

2005-2009 MDOT Five Year Transportation Program Safety and Security Strategies

History of Homeland Security in MDOT

MDOT has been involved in the State's traditional emergency management for more than 50 years. Many recall the "civil defense" plans from the 1950's. Since then, an all-hazards approach to emergency management which included enemy attack has been used. Following the events of Sept 11, 2001, MDOT developed a Threat Assessment Team. This team has expanded to cover all modes of transportation to become the Transportation Risk Assessment and Protection (TransRAP) Team with a dual role as the Transportation Subcommittee for Critical Infrastructure Protection Committee.

Homeland Protection Board

Governor Granholm signed Executive Order 2003-06 forming the Homeland Protection Board. The Homeland Protection Board is responsible for the development, implementation, and revision of an effective and coordinated homeland security strategy. The Board is also responsible for the state's domestic preparedness including continuing to strengthen the state's capabilities to detect, prepare for, prevent, secure and protect against, respond to and recover from, any terrorist threats or attacks. Director Gloria Jeff is an appointed member of the Homeland Protection Board representing the transportation sector.

In early 2004, through diligent work within MDOT, the Homeland Protection Board incorporated transportation into the State Homeland Security Strategy*. This inclusion has been used as an example for other states. In addition, MDOT continuously prepares to respond to terrorist incidents through its emergency planning, training and exercising efforts. Many state agencies, including the state departments of Transportation, Military Affairs, Environmental Quality, Agriculture, and Community Health, have a critical role to play in Michigan's response and recovery plans.

The Critical Infrastructure Protection (CIP) Committee is an advisory Committee that reports to the Board. This committee works to determine interdependencies between sectors such as energy, water, agriculture, transportation, etc.

One function of the Transportation Risk Assessment and Protection Team is to serve as a CIP subcommittee. Members represent MDOT's Aeronautics, Passenger Rail & Freight, Border Crossings, Highway and Roads, as well as Michigan State Police Motor Carrier Enforcement, Department of Labor and Economic Growth Motor Carrier Licensing and Department of Information Technology. This group assisted in the development and directs the implementation steps of the strategy*.

MDOT is actively participating in the protection of critical infrastructure with the state and federal agency partners in homeland security. The transportation strategy* remains focused on the protective measures for the international border crossings.

One component in providing this protection and coordination includes reviewing key transportation facilities and systems based on vulnerability and risk assessments. By objectively reviewing the likelihood and the susceptibility of hazards or threats, the impacts for the physical assets and the community can be quantified.

Homeland security preparedness efforts must be designed to address the physical security enhancements at the border crossings while continuing to facilitate mobility.

Critical Infrastructures (CI) are the physical systems and assets so vital to the people of the State of Michigan or the nation that their incapacity or destruction would have a debilitating impact that would seriously weaken the state's security, economic stability, public safety or threaten the public health, safety, and welfare.

Key Assets (KA) are defined in the National Strategy for Homeland Security as: "Individual targets whose destruction would not endanger vital systems, but could create local disaster or profoundly damage our Nation's [States] morale or confidence."

In Michigan, Critical Infrastructure and Key Assets at the state and local levels were identified during the assessment process.

Highways and Roads

MDOT is responsible for approximately 9,700 miles of state highways which includes Michigan's 1240 miles of interstate highways. By using our Region boundaries, MDOT's all-hazard approach (which focuses on general preparedness rather than readiness for a specific type of disaster) reaches out to the local agencies through existing relationships with the municipal and county roads agencies as well as local emergency management coordinators. In addition to state highways there are roughly 110,000 miles of local roadway. These highways and roads include 11,000 bridges throughout the state (4,300 of these bridges are under MDOT jurisdiction).

In order to keep state highways safe from terrorist attack, MDOT is actively reviewing the entire transportation network to closely evaluate how various components are connected and what risks exist from potential threats. Plans* have been in place for some time now regarding threats to the state's highway system.

MDOT has evacuation routes and scenarios plotted out regarding the necessary closure of any part of the state's transportation network. This includes the need to redirect traffic from a major interstate in order to protect motorists or provide easy access into or out of a community along that freeway corridor. The plans, which were originally drawn up for weather-related catastrophes, have been used from time to time to address problems caused by serious traffic accidents. These plans are kept up-to-date to ensure they are as complete as possible for any scenario that may occur.

Border Crossings and the Mackinac Bridge

Michigan's border crossings and international trade corridors are critical to the well-being of the local, state, and national economies and therefore critical to the national security.

It is Michigan's vision to establish and maintain a transportation border infrastructure network that allows for the seamless movement of people, goods, and services in a cost-efficient, timely, and safe and secure manner. MDOT continues to improve the protection, collaboration and coordination with homeland security agencies in the development, construction, and operation of border facilities.

MDOT shares the ownership of two of the three bridge border crossings (International and Blue Water bridges) with Canadian partners. The Ambassador Bridge is privately owned. There is also one vehicular tunnel crossing (Detroit Windsor Tunnel) and several rail and ferry crossing.

MDOT completed a second round of security assessments for the International Bridge, the Mackinaw Bridge and the Blue Water Bridge with partners from the federal government. Members of the federal team included military and economic specialists. These bridges are critical to the state's economy and to the national security. Each of the bridges received high marks from the team.

MDOT's original assessments from 2002 defined a strong path to follow and the federal team validated and verified the results. The Mackinac Bridge overall implementation of the assessment plan is one of the strongest in the nation and a model for other bridges. In addition, action plans* taken at these MDOT owned bridges have been developed to respond to the Department of Homeland Security terrorist threat level.

*For security reasons, details of strategies and plans are not being released to the public.

Border Crossing Policy

The world's largest bilateral trade relationship exists between the United States and Canada, with Michigan positioned as a leader in international trade. Goods and people moving across Michigan's borders significantly impact the economies of Michigan and Ontario, and the economies of the United States, Canada and other nations. Recognizing Michigan's vision and common goals with Ontario to establish and maintain a transportation border that facilitates and encourages the seamless, safe and secure transport of goods, people and services in a cost-efficient and timely manner, the State Transportation Commission adopted the following policy statements on October 28, 2004.

The Michigan Department of Transportation shall:

1. Work to assure adequate transportation capacity at Michigan's border crossings to facilitate, advance and in part provide for the seamless movement of people and goods between Michigan and Ontario;
2. Provide for the protection of and upgrade the transportation facilities on our borders through collaborative initiatives with the private sector and other governmental agencies to provide an appropriate level of redundancy among crossings and to ensure continued access for international trade and commerce between the U.S. and Canada;

3. Study needs for improving and expanding the transportation structures and infrastructures and identify advancing technologies through persistent research and analysis in order to continue to adapt to the demand of international trade and commerce;
4. Work to enhance cooperation, coordination, and communication with U.S. and Canadian border inspection and transportation agencies, local and regional governments, private operators, crossing users, neighborhoods, and other stakeholders affected by border crossings, in order to facilitate continued improvement to both the mobility and safety of border crossings;
5. Collaborate closely with state, local, provincial and private sector partners to proactively address topics of mutual interest that impact border crossings;
6. Work to increase federal funding for border transportation infrastructure capacity and safety improvements, and to use funding effectively to achieve the intent of this policy;
7. Work cooperatively with the other agencies responsible for improvements to border inspection processes, and encourage them to facilitate the movement of low-risk passengers and cargo, provide adequate inspection staffing levels, and implement the utilization of technological advancements that can reduce border transit times while enhancing security.

Trains and Buses

Studies have shown that the actual terrorism activity involving transportation on bridges is five percent. The remaining ninety-five percent of terrorist activity is on buses, passenger rail and subway trains. This is a major concern for any of these modes of transportation.

In Michigan, this includes:

- 180 carriers providing bus service
- Three routes designated for passenger rail travel
- More than 30 rail freight companies
- Local transit in 15 urban areas
- 20 ferry services including three international crossings

MDOT reviews interdependencies and coordinates with private agencies and local jurisdictions.

Motor Carrier

In the hazardous materials motor carrier sector, MDOT continues to work with the partners in Michigan State Police and Michigan Department of Labor and Economic Growth's Motor Carrier Division. In 2001, there were more than 525 motor carrier licensing applications. Since 2002, the Michigan Public Service Commission has included specific applications for hazardous materials licenses. MDOT is the hazardous materials routing designation agency and Michigan State Police is responsible for enforcement.

The goal in hazardous material transportation is to deny the terrorist the ability to use legitimate businesses, infrastructure or vehicles as weapons.

Aviation

In Michigan, there are approximately 236 airports for public use. Half of the airports are publicly owned and the other half are privately owned. The Aviation staff in MDOT provides security training through safety seminars, educational services and aviation events as well as working with the Federal Aviation Administration (FAA).

The U.S. Department of Homeland Security's Transportation Security Administration regulates and enforces security for passenger air transportation.

Information Technology

MDOT is connected to the transportation system electronically in many ways such as the Michigan Intelligent Traffic System (MITS) in the Metro Detroit area and voice and data communication. MITS can assist in moving traffic efficiently during emergencies and crisis situations.

MDOT partners with the Department of Information Technology to assure secure connections and maintain data backup and recovery systems. MDOT continues to update the business continuity plan and the disaster recovery plan in regards to IT needs.

Protection for Transportation

MDOT has identified vulnerabilities and leveraged "best practices" to minimize them. Current strategies and plans are regularly reviewed and updated as part of incident management. MDOT staff works with others on overlapping issues to be proactive and adaptive.

Safety and Security Strategy and the State Long Range Plan

The goals of the state long range plan provide direction for all transportation programs using federal funds. Promoting the safety and security of the transportation system for users and passengers, pedestrians and motorized and non-motorized vehicles is one of our goals.

To improve the safety and security of our transportation system MDOT is working with other organizations specifically to improve the security of our transportation systems in the wake of the September 11, 2001, terrorist attacks, and that effort will continue. The safety of our transportation systems is a fundamental decision and consideration in every transportation investment every project MDOT undertakes. MDOT will also continue to work closely with other organizations to improve transportation safety.

One of major strategies is to focus our investment on corridors of higher significance. These corridors provide higher levels of support to the state and national economy, and to the movement of goods, services and people. The importance of these corridors requires that we rebuild and modernize them, and ensure the highest level of safety and security within them.

Another strategy that MDOT is developing is a comprehensive approach to the safety and security of the state's border infrastructure. Protecting these facilities while ensuring the efficient movement of people and goods between the U.S. and Canada, is critical to the economic health of the state and the nation. Changes in transportation technology, such as Intelligent Transportation Systems (ITS) and alternative fuel vehicles will also have an impact. We must continue to be concerned about the impact of transportation on our natural and human environment and we must improve the safety and security of our transportation systems.

Traffic Safety Goals and Strategies

The department, working in partnership with the Governor's Traffic Safety Advisory Commission, has initiated development of a Michigan Comprehensive Highway Safety Plan. This includes the goal of reducing fatalities on all Michigan roadways to 1.0 per 100 million vehicle miles traveled by 2008. (Current rate is about 1.3).

In order to meet this goal, the department will continue its comprehensive \$58 million Safety Program to provide:

- Improved driver guidance,
- Warning for motorists who leave the roadway,
- Minimal consequences of leaving the roadway,
- Improved safety at identified locations and
- Uniform application and replacement of traffic control devices for the efficient and safe operation of our roadway system.

With the addition of Safety as a separate goal, the department has identified five focus areas to concentrate on when additional federal funds become available.

These focus areas are the Elder Driver, Pedestrians, Traffic Operations, Roadway Delineation, and Safety Improvement Program.

In 2001, 16 percent of drivers were 65 or over. By 2020, this figure will increase to 25 percent. MDOT recognizes the influence of the elder driver and their impact on the safety and traffic operations on Michigan's roadways. To gain an increased understanding of what can be done for this driving population MDOT, as part of the 2004 North American Conference on Elderly Mobility, sponsored a demonstration roadway in downtown Detroit of various traffic control devices. From this demonstration roadway the initiatives being evaluated are brighter sign legends and clearer fonts on guide signs and increased traffic signal visibility.

Pedestrians are another concern of the department. In response MDOT is developing pedestrian signal guidelines for the uniform application of such devices including countdown and audible pedestrian signals. Countdown pedestrian signals provide additional information to pedestrians on how much time is remaining to cross the roadway thus allowing them to adjust walking speed and provide peace of mind.

Studies have shown properly timed signal systems improve corridor travel time, reduce individual intersection delay by 37 percent, and result in a nine percent fuel savings.

In 2004, 625 traffic signals in Oakland County (both trunkline and non-trunkline) and 150 in Wayne/Macomb Counties (trunkline only) were retimed.

While a major undertaking traffic signal corridors need to be retimed on a periodic basis to ensure efficient operation. MDOT's proposed goal is to retime corridors every eight years.

Another tool in our operations toolbox is the roundabout. This type of intersection treatment replaces traffic signals with a free-flowing traffic facility, which has been shown to significantly reduce intersection crashes when applied to appropriate locations. Presently a roundabout is being constructed in Macomb County at M-53 and 18 ½ mile Road and another is being planned for in 2006 for the I-75 and M-81 ramps.

For roadside delineation the department does not want to stop with its efforts of wider edge line pavement markings. Additional roadside delineation in the form of larger and brighter delineators and a marking in the rumble strip are being considered. The use of a marking in a rumble strip has proven to act as a wet, nighttime delineation system. Typical pavement markings do not function fully when covered by a film of water.

The Safety Improvement Program has been proven successful with the construction of road improvement projects in response to traffic crash analysis. These projects typically involve improving safety at high crash intersections. Because of this success the department proposes increasing the existing \$19 million budget.

As part of its Five Year Plan, the department will continue with the current Traffic and Safety Program and its evaluation of devices in the focus areas. With reauthorization the department recommends increasing the Safety Program to \$75 million.

2005-2009 Five-Year Transportation Program

Preserving the System

Multi-Modal Program

During Fiscal Year 2005, MDOT will enter into contracts with public transportation providers (transit agencies, specialized service providers and intercity bus carriers) using funds appropriated from the CTF and previously issues state bonds for operating and capital assistance. It is the department's goal to preserve the existing public transportation programs and services, but it is not clear at this time if the available funding (bond and CTF) will be adequate to accomplish this goal. By no means is the FY 2005 level of state funding providing for growth or expansion of the existing programs and services.

Local transit agencies will be provided a \$161.7 millions of operating assistance. This is the same level of funding provided to the transit agencies in FY 2004. Specialized service providers will receive \$3.6 million. This is a reduction of \$300,000

A total of \$15.6 million of CTF and bond funds will be used to match federal grants awarded to the MDOT or direct to the transit agencies. At this point it is not known if this level of funding will be adequate to match all federal funds. Historically, the program goal has been to provide the entire match obligation (20 percent) for all awarded federal capital funds. Legislatively, the MDOT is only obligated, by Act 51, to provide a minimum of 66 percent of the match with the public transportation service provider being responsible for the other 33 percent. In recent years, with reductions in CTF funds, MDOT has become more dependent on bond funds to provide the entire 20 percent match. This year MDOT may not be able to provide the entire 20 percent match therefore we are currently re-examining the program goal of providing the entire 20 percent match to federal funds. The following is a summary of how the match will be used:

- \$1.3 million to support intercity bus service in the Upper Peninsula and Northern Michigan, plus federal funds that become available.
- \$2.5 million to purchase intercity motor coaches for lease to Indian Trails and Greyhound. Additional funds will be provided from the bus loan fund derived from the sale of motor coaches returned to the program.
- \$3.3 million to support the state transportation to work service. Additional funding from Family Independence Agency and the Michigan Department of Labor and Economic Growth (Career Development). All these funds are used to match federal JARC grants. This including match for prior year federal grant awards to Grand Rapids, Flint and Detroit that could not be matched with available during the FY04 funds.

United We Ride: This is a federal lend effort to improve efficiency through enhanced federal, state and local coordination of human services transportation.

MDOT is using a \$35,000 federal grant to work with the other state agencies to seek customer and stakeholder feedback and develop a comprehensive state action plan. In FY2005, the Department will undertake a major rehabilitation project on approximately 26 miles of track in the Bay Region and statewide approximately 50 Highway-railroad crossing improvement projects and up to 11 surface-repair pilot projects will be funded.

The MiRLAP application deadline for FY2005 call for projects is January 10, 2005. The Department anticipates several projects will be funded from this call for projects.

The FY 2005 operating contract for the Port Huron-Chicago, Blue Water service and the Grand Rapids-Chicago, Pere Marquette service and the marketing program for these services will require the entire program appropriation this year, the Department is focusing on efforts to continue to grow the ridership on these two services.

In addition, the program staff will focus on existing projects to:

- Improve speeds on the Amtrak Ownership between Kalamazoo and Niles, design of track improvements in Battle Creek
- Produce station designs for Detroit and Dearborn
- Work with other Midwest states and Michigan communities on the Midwest Regional Rail System plan
- Work with Southeast Michigan Council of Governments on the Ann Arbor to Detroit Commuter study

Highway Program

The road and bridge preservation projects included in the five-year program are prioritized based on approved asset management strategies, with a specific focus on repairing our worst roads and bridges and extending the life of roads and bridges to keep them in good condition. Our programs include a combination of long-term fixes (reconstruction), intermediate fixes (resurfacing/rehabilitation), an aggressive capital preventive maintenance (CPM) program, and routine maintenance of the system.

This edition of the Five Year Transportation Program continues the implementation of Governor Granholm's *Preserve First* initiative which began in 2003. The *Preserve First* program places an increased emphasis on preserving our transportation system rather than expanding it.

MDOT has made substantial progress toward our future pavement condition goal of having 95 percent of the freeways and 85 percent of the non-freeways in good condition by 2007. The *Preserve First* focus will allow us to improve the condition of our roads and bridges to protect the investments of Michigan taxpayers.

Preserve First provides approximately \$317 million in additional road and bridge preservation work over the next three years, beginning with the 2005 program. These projects were selected based on a statewide needs evaluation, focusing on freeways and routes carrying high volumes of traffic.

An additional \$54 million will be directed to our Safety, Enhancement and Noise Abatement programs for the period covering 2005-2007. *Preserve First* will help ensure continued progress and success in reaching the department's pavement and bridge condition goals.

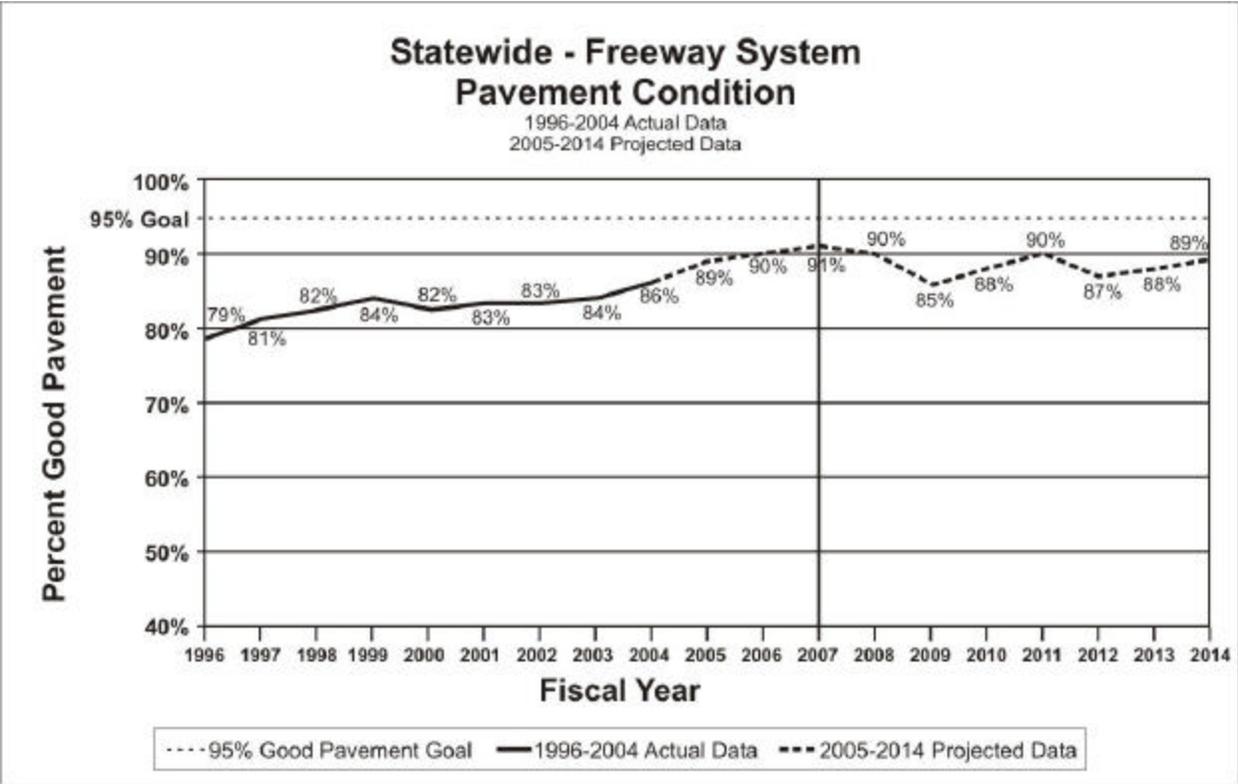
Pavement Condition Forecast

The Road Quality Forecasting System (RQFS) is a strategy analysis tool used by MDOT to project results of pavement rehabilitation policies and proposed projects. Working from current pavement condition, age, and type and factoring in aging and fix strategies, RQFS estimates future condition of the state trunkline system.

Remaining Service Life (RSL) is defined as the estimated remaining time in years until a pavement's most cost-effective treatment is either reconstruction or major rehabilitation. Pavements with an RSL of two years or less are considered to be in the "poor" pavement category.

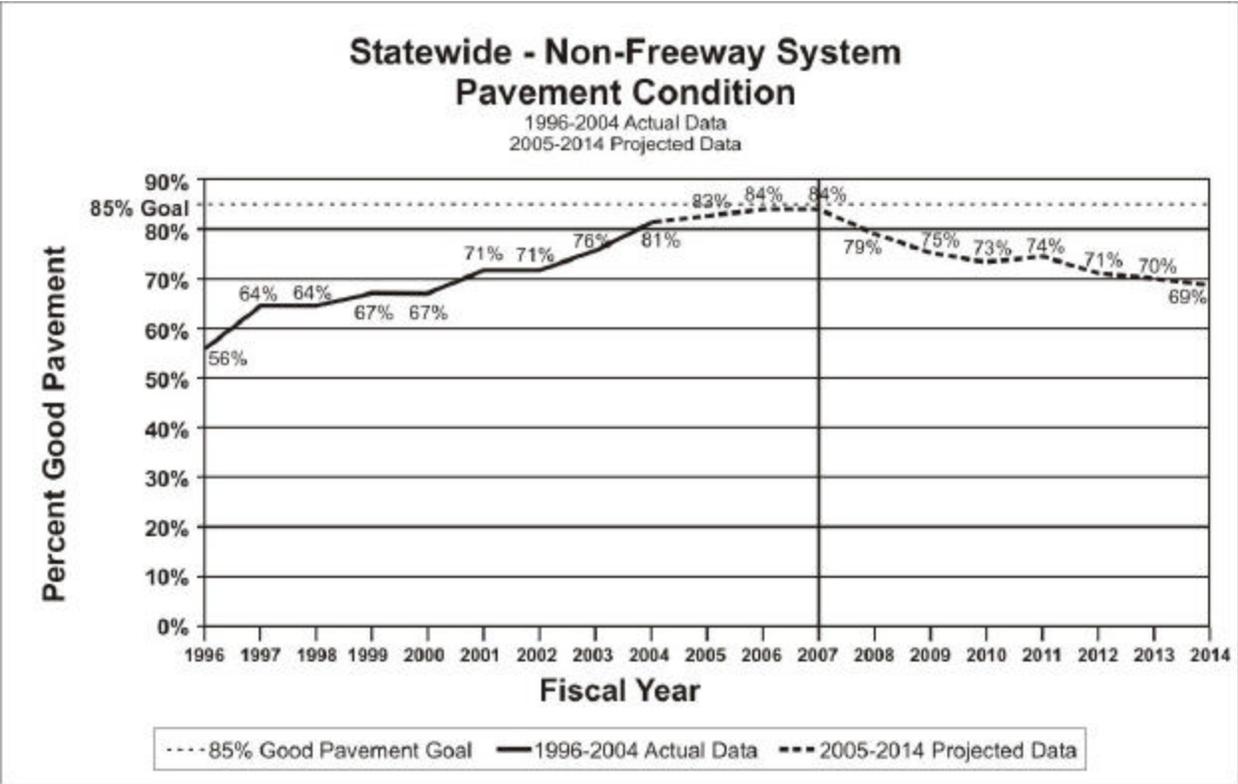
Based upon the strategies and projects contained in this 2005-2009 Five Year Transportation Program, we have used the RQFS tool to forecast future pavement condition of MDOT's freeway and non-freeway systems.

The following graph shows that progress continues to be made in increasing the percent of good pavements on the freeway network. At the end of FY 2004, 86 percent of MDOT's freeway system was in good condition. RQFS forecasts project that by the end of FY 2007 91 percent of the freeway system will be in good condition. If the same investment level was maintained through 2014, it is anticipated that MDOT would be able to maintain the condition state of approximately 90 percent of freeway pavements in good condition.



Similarly, MDOT forecasts that progress will continue to be made on the non-freeway system to increase the percentage of those pavements in good condition by FY 2007. At the end of FY 2004, 81 percent of MDOT's non-freeway system was in good condition. RQFS forecasts project that by the end of FY 2007 84 percent of the non-freeway system will be in good condition.

If the same investment level was maintained through 2014, it is anticipated that MDOT would be unable to maintain this condition state. Strategy analysis is ongoing to determine the investment level necessary to maintain the non-freeway system percentage of pavements in good condition at a high level.

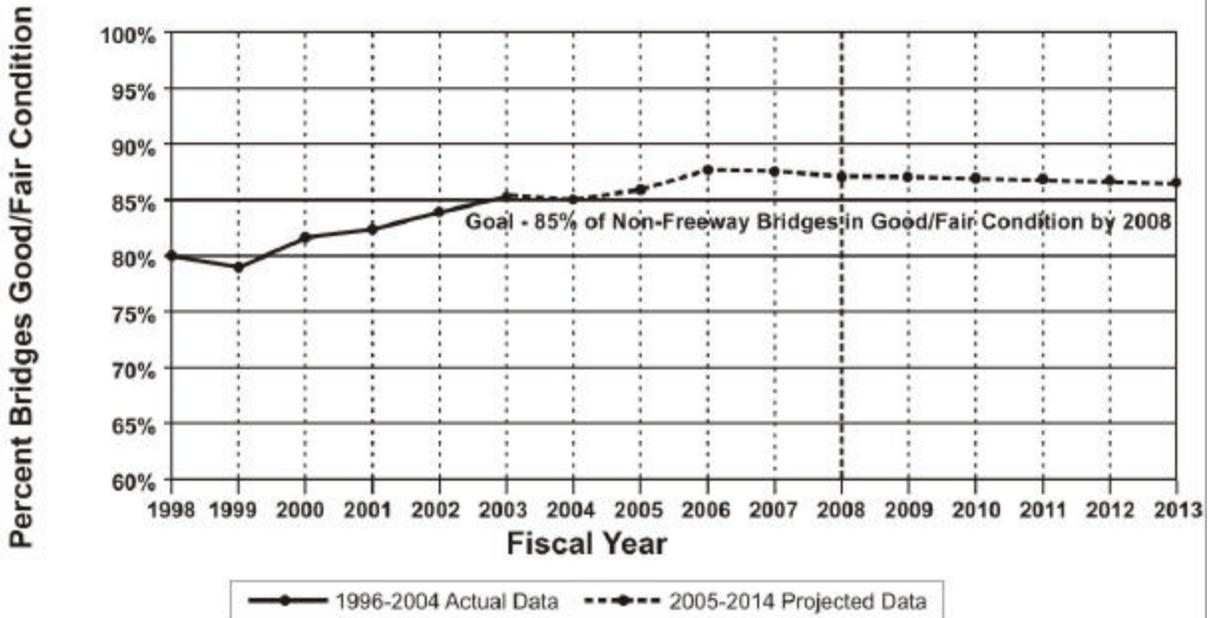


Bridge Condition Forecast

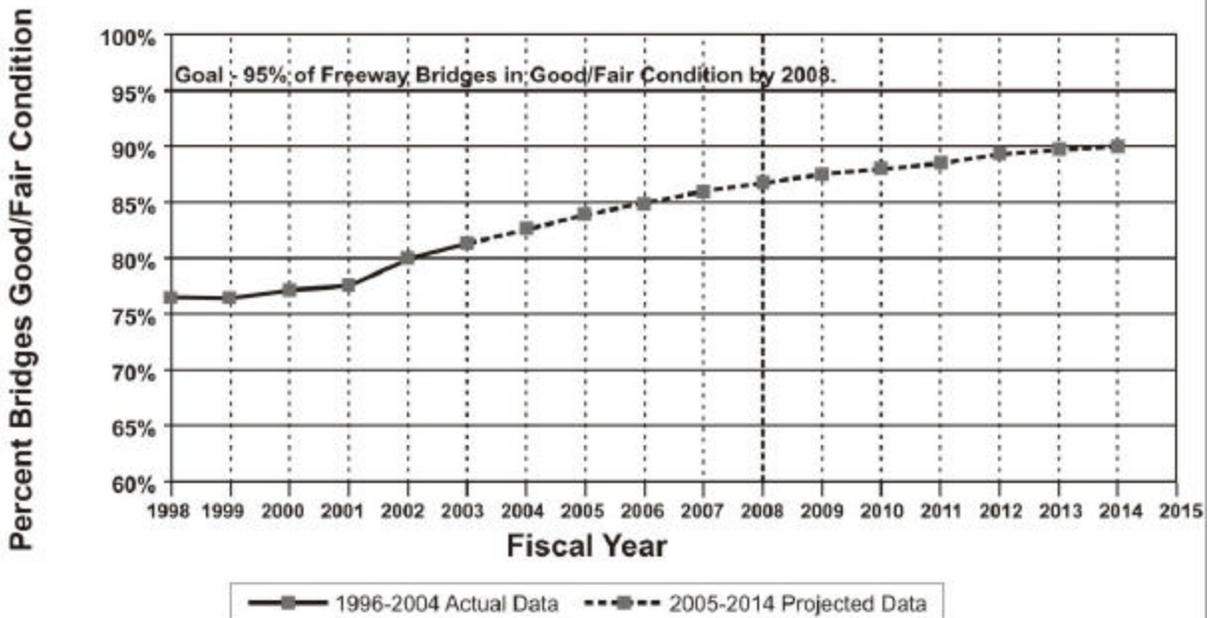
MDOT's Bridge Management System (BMS) is an important part of our overall asset management process. BMS is a strategic approach to linking data, strategies, programs and projects into a systematic process to ensure achievement of desired results. An important BMS tool used by MDOT to develop preservation policies is the Bridge Condition Forecasting System (BCFS). Working from current bridge condition, bridge deterioration rate, project cost, expected inflation, and fix strategies, BCFS estimates future condition of the state trunkline bridge system.

As shown in the charts below, we have met and will sustain the non-freeway bridge goal, and we are making good, steady progress towards our freeway bridge goal. Projections show that we will reach a freeway bridge condition of approximately 87 percent by 2008.

Statewide - Bridge Condition Non-Freeway



Statewide - Bridge Condition Freeway



2005-2009 Five Year Transportation Program Region Strategies and Highlights

To accomplish our statewide long-range strategies, each of MDOT's seven regions has developed appropriate action strategies to identify and implement the projects necessary to achieve statewide goals. The overall program is based on achieving condition goals within annual investment targets, but the projects reflect each region's careful efforts to coordinate road and bridge work, preserve the existing system, address access and safety needs, and make the most effective use of anticipated revenue. These strategies recognize the variability in each region as to the type and age of facilities as well as the type of travel, weather, soils, etc.

Through regional cooperation with our local partners, MDOT regions strive to deliver improved roads and bridges to the traveling public statewide. The narratives on the following pages describe recent accomplishments and important activities planned for the next five years. The pages that follow provide additional details about Michigan's highway system and the strategies underlying the project selection process for the various programs described in the Five-Year Transportation Program. Each region section contains the following:

- **Region Introduction**
- **2004 Accomplishments**
- **Five Year Road and Bridge Program**
Please note: Five Year Road and Bridge Program investment levels represent the construction phase of road and bridge preservation projects and capacity improvements and new roads projects where applicable.
- **Corridor Improvement Strategies**
Please note: The Capacity Improvement and New Roads Region highlights will be discussed separately in a new section of the 2005-2009 Five Year Transportation Program entitled "Expanding the System."
- **Project Lists**
The project list contained at the end of each region's narrative contains road and bridge rehabilitation and reconstruction projects. The lists are organized first by project type, then by county, then by route.

For those reviewing the project lists, the bridge program is fully programmed for the first two years of the five year program, and partially programmed in the last three years. Thus, all of the projects for years 2007-2009 are not currently listed in the program. More projects, typically Capital Preventive Maintenance projects, will be added to the 2005-2009 programs as we get closer to those years and the latest inspection information is available and analyzed.

