

# MDOT's Five-Year Road & Bridge Program

With the increased dollars for our program over the past several years, we have expedited program priorities that we couldn't in the past. With the tragedies that the United States has experienced recently, and the severe budget situation that we are currently in, it has become necessary for us to change our direction. Instead of measuring our success only by the condition of our roads in a particular year, we feel it is more important to begin emphasizing what we provide to our citizens and businesses as they go about their daily lives.

With this edition of the Five Year Road & Bridge Program, we will begin to look beyond just the condition of the pavement. The statewide strategies that guided project selection in the past remain solid and appropriate, yet other factors are suggesting that we look at more than just a goal of pavement condition. While the demand for better roads and bridges and increased public accountability are still valid, there is now so much more that is expected of MDOT. As stated in the Foreword, our charge is to make wise transportation investments for the taxpayers of Michigan. This includes not only roads and bridges, but also air, rail, water, and non-motorized paths. While this plan deals predominantly with the highway system, it is important that the public realize that MDOT is truly a multi-modal agency.

The combination of highway and bridge improvement

projects included in this plan pursue the direction set by Governor John Engler, MDOT Director Gregory J. Rosine, and the State Transportation Commission, and are intended to improve Michigan highways through a coordinated effort to achieve specific long-term condition and performance goals for the system.

With the passage of the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), the federal legislation that guides the distribution of Highway Trust Fund dollars, along with the increased revenues provided by the passage of Governor Engler's *Build Michigan II* and *Build Michigan III* plans, MDOT continues an unprecedented program to rebuild and repair Michigan's road and bridge system. Along with the increased dollars, MDOT continues to seek every opportunity to streamline its operations to better serve the traveling public.

All transportation improvements included in this plan 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.

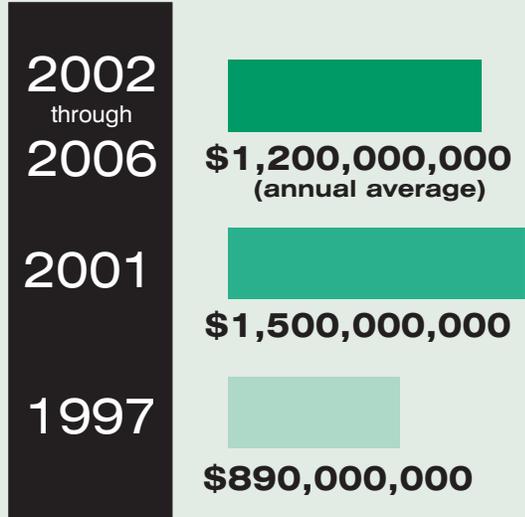
## Please Note:

The 5 Year Road and Bridge Program as presented in this plan is based on the assumptions that Michigan will secure full federal aid revenues as projected prior to the anticipated decrease in Highway Trust Fund (HTF) receipts. We also are assuming that the Diesel Fuel Equity and Simplification package will be enacted by the state Legislature as introduced.

While every effort has been made to ensure that the information included herein is both accurate and reliable, it is expected that some changes will occur over time, especially for projects in the later years of the program. For a variety of reasons, projects may be delayed, expedited, or the scope of a project may be altered in the coming years. For this reason, MDOT updates its five-year plan on an annual basis. At the same time, all of the projects included in this program are consistent with both the State Long Range Plan (SLRP) and the State Transportation Improvement Program (STIP), which contains the Transportation Improvement Programs (TIPs) for the state's Metropolitan Planning Organizations (MPOs).

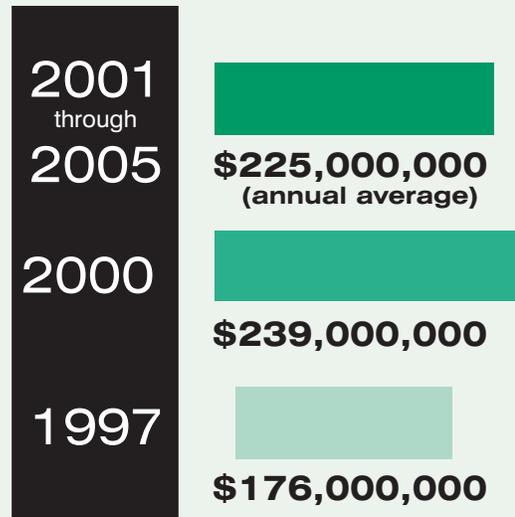
MDOT operates on a fiscal year, rather than a calendar year. The 2002 program may list projects that were completed in 2001. The reason for this is that October to December of 2001 is considered part of the 2002 program.

### Annual Road and Bridge Investments



Each year from 2002 to 2006, MDOT will invest an average of \$1.2 billion to repair and rebuild approximately 1,300 miles of road and approximately 280 bridges on the state highway system. Routine maintenance activities also are included in this investment level.

### Annual Routine Maintenance Budget



Beginning in 2002 and continuing through the life of this five-year program, an average of \$225 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.



**Existing Roads and Bridges**  
**94¢**

**New Roads**  
**6¢**

### Investment in Existing vs. New Roads

MDOT's emphasis continues to be the maintenance of the existing system. Ninety-four cents out of every dollar will be used to preserve and maintain the existing system. The remaining six cents will be used for new roads.

# MDOT'S FIVE-YEAR ROAD & BRIDGE PROGRAM

## 2002-2006 Capital and Maintenance Programs

The Michigan Department of Transportation (MDOT's) Five Year Road & Bridge Program provides details on how the state trunkline system, consisting of more than 9,700 route miles, is maintained. The capital program provides Michigan travelers with an average of nearly 274 miles of improved roads in each of the next five years, as well as repairs to an average of 280 bridges per year. We also will manage our system by extending the life of approximately 1,000 miles of pavement each year through the Capital Preventive Maintenance (CPM) Program. The investment of the Five Year Road and Bridge Program totals \$6.2 billion from 2002 to 2006.

Over the past several years, MDOT has published a Five Year Road & Bridge Program, making a commitment to our customers to have 95 percent of the freeways and 85 percent of the non-freeways in good condition by the year 2007.

We have intentionally accelerated our program, based on the 1997 gas-tax increase and significant new revenues from the federal legislation known as TEA 21. We are currently implementing the financing mechanisms to ensure that we maintain progress toward meeting our condition goals and deliver some projects sooner than expected.

In addition in 2001, we began the implementation of the governor's *Build Michigan III* road infrastructure strategy to meet current economic development needs, reduce congestion, and improve safety along freeways, local roads and state trunklines. These will be financed through the sale of long term bonds.

Due to the recent economic slowdown and the tragedy of September 11, MDOT has been forced to reevaluate our revenue assumptions. Both state and federal revenues have been significantly impacted by these events. State revenue for the five year program is based on the latest consensus forecast from MDOT and the Department of Treasury's Office of Revenue and Tax Analysis (ORTA). In addition, it is assumed that the Diesel Equity and Simplification package will be enacted by the state Legislature as it was introduced. The proposal would increase the diesel fuel tax by 4 cents per gallon and simplify the current method of collection. Of the 4-cent per gallon increase, 85 percent would be directed to improvements on the National Highway System – the routes most used by commercial trucks – and 15 percent would go to reduce the backlog of local critical bridges

in the state. The provisions to simplify the collection process is expected to reduce evasion significantly. MDOT will aggressively pursue these legislative changes needed to preserve the state's road network.

At the federal level, we are continuing our struggle to ensure that Michigan receives its fair share of federal aid in the 2003 budget. While this struggle is moving through Congress, MDOT is assuming that we can win this battle and retain full federal funding. Federal revenue for the program is based on an assumption of 2 percent annual increases in the authorized level of Michigan's FY2001 federal funding. It also is assumed that each year Michigan will receive the same level of Revenue Aligned Budget Authority (RABA) that we received in FY2001. RABA is an annual adjustment to the authorized level of funding based on actual and estimated receipts to the highway account of the federal Highway Trust Fund. In addition to authorized funding and RABA, an increase in federal aid beginning in FY2005 is assumed due to the adoption of the Diesel Equity and Simplification package. The amount of this increase is based on estimates by ORTA.

Beyond just the loss of dollars for road improvements, it is important to understand that any loss in road construction equals a major loss in jobs. It has been estimated that for every \$100,000 spent on highway construction, one job in the construction sector is created and one job in the retail trade, services, manufacturing, and supplier industries is created.

Category funding for road and bridge improvements during the next five years are as follows:

	Annual Average	5 Year Total
<b>REPAIR AND REBUILD ROADS</b>		
Preserve Road Surface and Base <sup>1</sup>	\$ 327 million	\$ 1,633 million
Passing Relief Lanes <sup>1</sup>	\$ 16 million	\$ 80 million
Capacity Improvements <sup>1</sup>	\$ 152 million	\$ 760 million
Research Capacity Improvements	\$ 39 million	\$ 193 million
<b>TOTAL REPAIR AND REBUILD ROADS</b>	<b>\$ 534 million</b>	<b>\$ 2,666 million</b>
<b>MAINTENANCE ACTIVITIES</b>		
Routine Maintenance	\$ 225 million	\$ 1,126 million
Capital Preventive Maintenance (CPM) - Road	\$ 60 million	\$ 300 million
<b>TOTAL MAINTENANCE</b>	<b>\$ 285 million</b>	<b>\$ 1,426 million</b>
<b>BRIDGES (Rehabilitation<sup>1</sup> and CPM)</b>		
	\$ 196 million	\$ 980 million
<b>TOTAL REPAIR &amp; REBUILD ROAD &amp; BRIDGES</b>	<b>\$ 1,015 million</b>	<b>\$ 5,072 million</b>
<b>NEW ROADS</b>		
New Road Construction <sup>1</sup>	\$ 77 million	\$ 384 million
Research New Roads	\$ 12 million	\$ 60 million
<b>TOTAL NEW ROADS</b>	<b>\$ 89 million</b>	<b>\$ 444 million</b>
<b>OTHER</b>		
Safety Programs	\$ 50 million	\$ 250 million
Federal Mandates <sup>2</sup>	\$ 60 million	\$ 302 million
TEDF/TEA-21 High Priority Projects <sup>3</sup>	\$ 7 million	\$ 34 million
State Programs <sup>4</sup>	\$ 39 million	\$ 195 million
<b>TOTAL OTHER</b>	<b>\$ 156 million</b>	<b>\$ 781 million</b>
<b>TOTAL FIVE-YEAR TRUNKLINE PROGRAM<sup>5</sup></b>	<b>\$ 1,260 million<sup>5</sup></b>	<b>\$ 6,297 million<sup>5</sup></b>

1 Project lists included in the Five-Year Road & Bridge Program document.

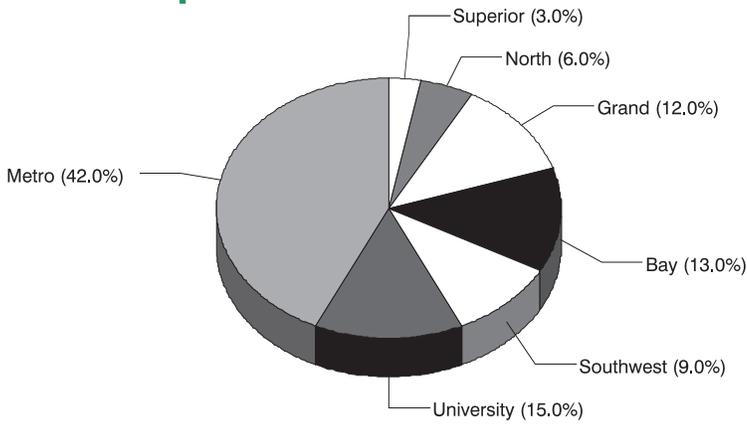
2 Includes CMAQ, Enhancement and other programs

3 TEDF is the Transportation Economic Development Fund; TEA-21 is the Transportation Equity Act for the 21<sup>st</sup> Century, the federal highway authorization act.

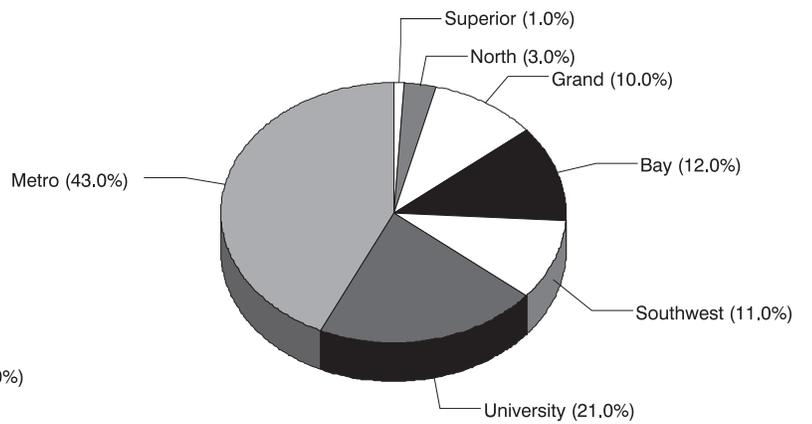
4 State programs include the Michigan Institutional Roads program; Non-discretionary "M" Program; State Railroad Crossing program; Program Development and Scoping; and Jurisdictional Transfers.

5 Volume IV of the 12 year Road & Bridge Program (2002 -2006) does not include \$270 million of Build Michigan III EDF and local negotiated projects for the cities and counties, as previously included in Volume III (2001 - 2005)

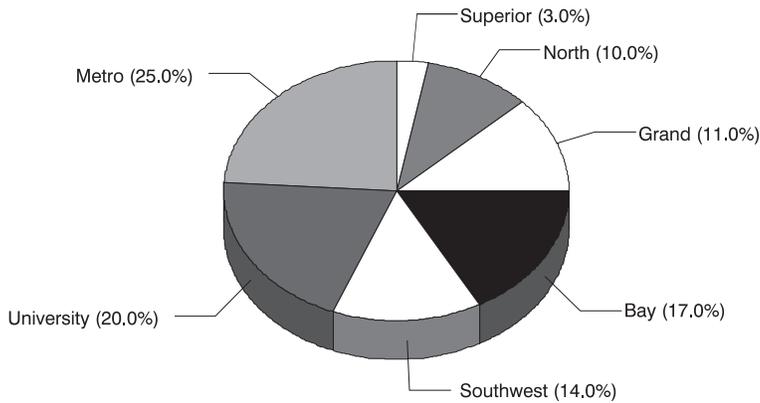
## Total Population



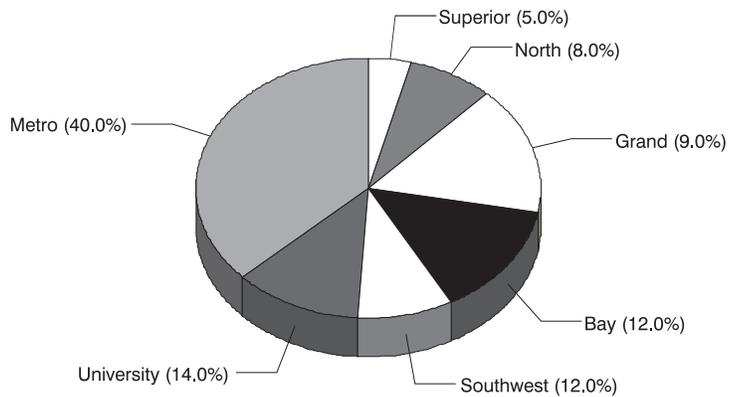
## Freeway Traffic



## Freeway Lane Miles

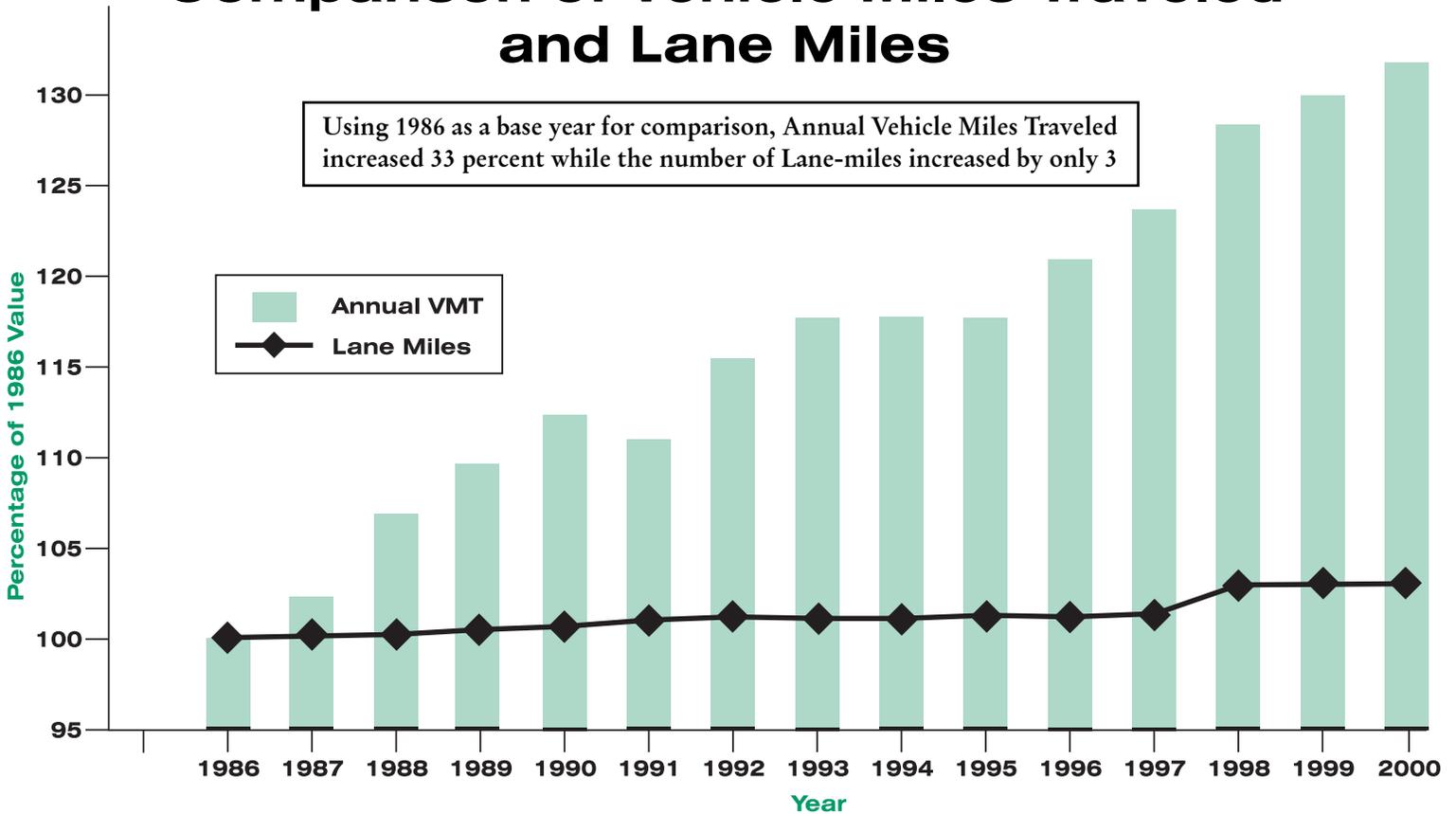


## Five-Year Program\*



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

# Comparison of Vehicle Miles Traveled and Lane Miles



Source: MDOT Transportation Management Systems on State Trunkline, 1986 to 2000

Note: State trunkline representations exclude approximately 870 miles of ramps, connectors and service drives also under MDOT jurisdiction.

It is projected that overall traffic along Michigan’s freeway system will grow an additional 24 percent by 2025. The completion of the I-69, NAFTA, and the opening of the second span of the Blue Water Bridge in Port Huron are major influences on the significant increases. I-94 and I-69 are two of Michigan’s most significant freeway transportation corridors for the movement of both people and commerce. Some sections along these routes have experienced a growth in traffic of up to 55 percent from 1993 to 1998.

Michigan’s freeway system carries 57 percent of the total state trunkline annual vehicle miles of travel (AVMT), of which 4.9 billion occurs under congested conditions, defined as volume equal or greater than capacity. By 2025, travel under congested conditions is projected to increase by 48 percent, to 7.9 billion. Currently, 17 percent of freeway AVMT occurs at or above the design capacity. This is projected to grow to 20 percent by 2025.

In southeastern Michigan, our most populous area, AVMT has increased by 23 percent while lane-miles have increased by only 5.4 percent from 1986 to 1997. Almost 65 percent

of the trunkline AVMT occurs on the freeway system. From 1991-1997, AVMT on the area’s freeway system increased by 7.3 percent with only a 1.5 percent increase in freeway lane miles. Correspondingly, AVMT on the non-freeway trunkline has not increased.

This trend, however, is worsening. By 2025, the AVMT on southeastern Michigan freeways is projected to increased by 6 percent, while AVMT on non-freeway trunkline is expected to grow by 15 percent. Our challenge is to be able to move more people and goods on the existing system. Therefore, planning and implementing freeway management strategies to provide for the efficient movement of goods and services is critical. Actions to be considered include, but are not limited to, changes in the transportation system by providing added capacity, Intelligent Transportation Systems (ITS), and changing the characteristics of demand.

The information is from our State of the System report. The full report can be accessed on our Web site at [www.mdot.state.mi.us/planning/sos](http://www.mdot.state.mi.us/planning/sos).

# Region Strategies

To accomplish our statewide long-range strategies, each of MDOT's seven regions has developed appropriate action strategies to implement the projects necessary to achieve the 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.

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 Road & Bridge Program. Each region section contains the following:

**Regional Highlights:** A small map and text describing the region, its roads and bridges, and the major projects that will be undertaken there in the next five years. Included in this will be :

- **Past Accomplishments**
- **Five Year Road & Bridge Program**
- **Corridor Improvement Strategies**
- **Capacity Improvements and New Roads and**
- **Research Projects.**

**Project Lists:** The project lists are separated into two sections. The first contains road and bridge rehabilitation and reconstruction projects. The second contains capacity improvements and new roads. The lists were separated because the phases involved in capacity improvements and new roads can take several years. Most road and bridge rehabilitation and reconstruction projects are completed in one year. In each case, the lists are organized first by route, then by county, then by year.

For those reviewing the project lists, the bridge program is fully programmed for the first two years of the five year program, but only partially programmed in the last three years. Thus, all of the projects for the years 2004-2006 are not currently listed in the program. More projects, typically CPM projects, will be added to 2004-2006 as we get closer to those years and the latest inspection information is available and analyzed. The dollar amounts planned for bridges as listed in the summaries of the Five-Year totals and Annual Averages includes all of the investments planned, not just those bridge projects represented in the project lists.

For capacity improvements and new road projects, the project lists include the following phases:

- **EPE** - early preliminary engineering, which includes preliminary corridor location work, alternative determination, and environmental studies
- **PE** - preliminary engineering, which includes design work
- **ROW** - right-of-way acquisition
- **CON** - construction.

# MDOT Regions and Transportation Service Centers

