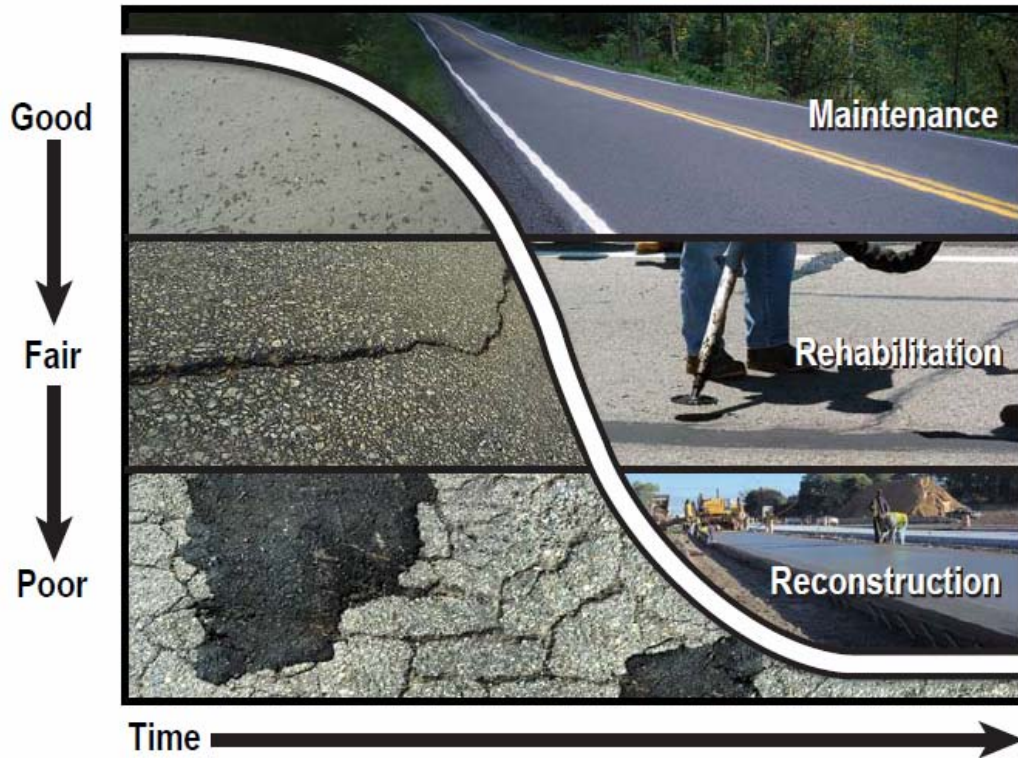


MICHIGAN'S
**ROADS &
BRIDGES** 2008
ANNUAL REPORT



 MICHIGAN TRANSPORTATION
ASSET MANAGEMENT COUNCIL

ROAD DETERIORATION



The “S” curve superimposed over the photos on the cover represents the typical deterioration rate of paved roads. Applying the right pavement “fix” at the right point of the curve is the core of pavement management.

To learn more about pavement management and to read other reports by Michigan’s Transportation Asset Management Council please go to <http://www.michigan.gov/mdotamc>

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EXECUTIVE SUMMARY

After review of the 2008 pavement condition data, the Michigan Transportation Asset Management Council (Council) has come to the conclusion that Michigan's roads are deteriorating at an increasingly rapid rate. Over the course of a single year, the percentage of roads in poor condition increased from 25 percent in 2007 to 32 percent. This represents more than 17,378 lane miles of the federal-aid-eligible roads.

Allowing this trend to continue will have significant financial and economic consequences. For example, the cost of returning a poor road to good condition is four to five times greater than the cost of maintaining a road in fair condition. Allowing more roads to reach poor condition will dramatically increase the costs of repairing Michigan's road network.

In previous years, the Council collected pavement ratings on 100 percent of the federal-aid eligible roads. While the Council set a target for collecting 50 percent in 2008, approximately 65 percent of the state's 54,878 lane miles of paved federal-aid eligible roads were actually collected. Of those miles, 17,341 lane miles were in poor condition (31.6%), 26,890 lane miles were in fair condition (49%), 10,646 lane miles were in good condition (19.4%).

The costs of this continued deterioration are significant. In 2004, it would have cost about \$3.7 billion to bring all poor and fair federal-aid roads up to a good rating. In 2008, it would have cost \$7.2 billion, almost double what it would have cost in 2004. This represents \$3.5 billion in lost value of our road assets. The adoption of good pavement and asset management practices by all road agencies can help check this deterioration and the resulting loss of value, but these practices by themselves will be insufficient.

According to preliminary data collected by the Council in 2008, the condition of the non-federal-aid eligible roads may even be worse. The 10,600 miles of non-federal-aid roads rated in 2008 comprise 21,428 lane miles. The 2008 ratings reveal that 9,223 lane miles or 43 percent are in poor condition. This compares to 32 percent of the federal-aid eligible roads in poor condition.

Michigan's bridges have a significantly higher percentage of deficient bridges than the average of other Great Lake states. In 2008, 14 percent of state-owned bridges were deficient, and 17 percent of the county and local bridges were deficient. If Michigan's bridges are to be the equal of its neighboring states, sound asset management must continue to be followed and greater resources must be found.

Progress has been made in reducing the number of poor bridges under state jurisdiction, and there has been a significant increase in the number of bridges rated fair. The trend for local agency bridges is somewhat different. While the number of local bridges in poor condition has remained constant, there is a trend of good bridges moving into the fair category.

The condition of the state trunk line bridges is expected to improve over the next ten years, local bridges are expected to decline. Part of the reason for the forecasted condition differences between the state-owned bridges and local bridges is that the Michigan Department of Transportation (MDOT) has an aggressive preventive maintenance program (18 percent of its total budget) while most local agencies are not able to put much money toward on-going capital preventive maintenance.

The winter of 2007 – 2008 played a significant role in the increased deterioration of the state's road system. Many miles of structurally weak roads that had stood up to past, milder winters were decimated by heavy snowfalls and frequent freeze – thaw cycles. Every indication points to this trend continuing.

CONDITION OF THE SYSTEM: 2008

Roads

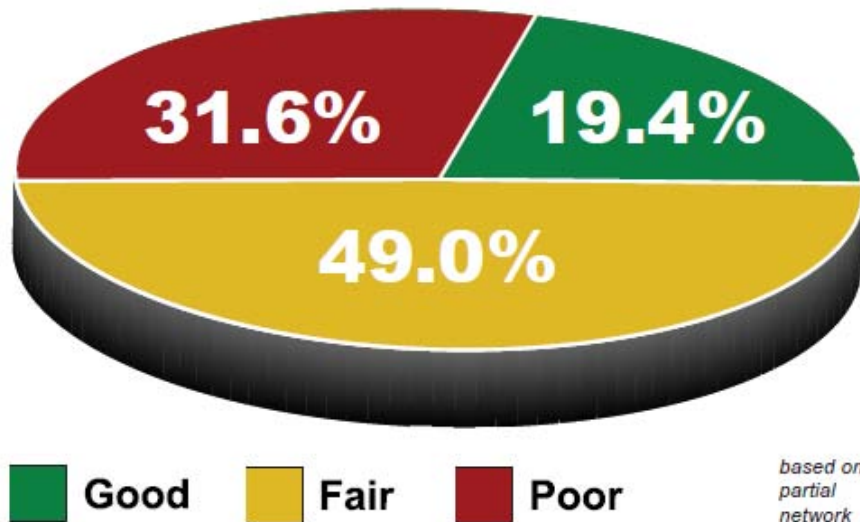
The federal law governing transportation funding changed in July 2005, reducing the number of centerline miles of roads eligible for federal aid from about 43,000 to 39,700. Of this remaining number, roughly 38,700 miles are paved. In 2008, the Council required that only 50 percent of the paved federal-aid eligible roads be rated in 2008, with the other 50 percent being rated in 2009. Even though agencies were only required to report 50 percent, approximately 65 percent of these roads were rated and reported in 2008. Over 100 teams of trained raters assessed the condition of 54,878 lane miles of paved federal-aid eligible roads. The collection of roadway condition data by the Council is a cooperative effort involving teams of county, city, state and regional planning staff members. Individuals must attend PASER training each year before being allowed to rate the roads. This effort was coordinated by the 21 regional planning and metropolitan planning organizations.

The data is reported in lane miles. A lane mile is determined by multiplying the number of lanes by the length of the road. For example, if you were surveying five miles of two-lane road, you would be rating ten lane miles. If it were a four-lane road, then you would have twenty lane miles.

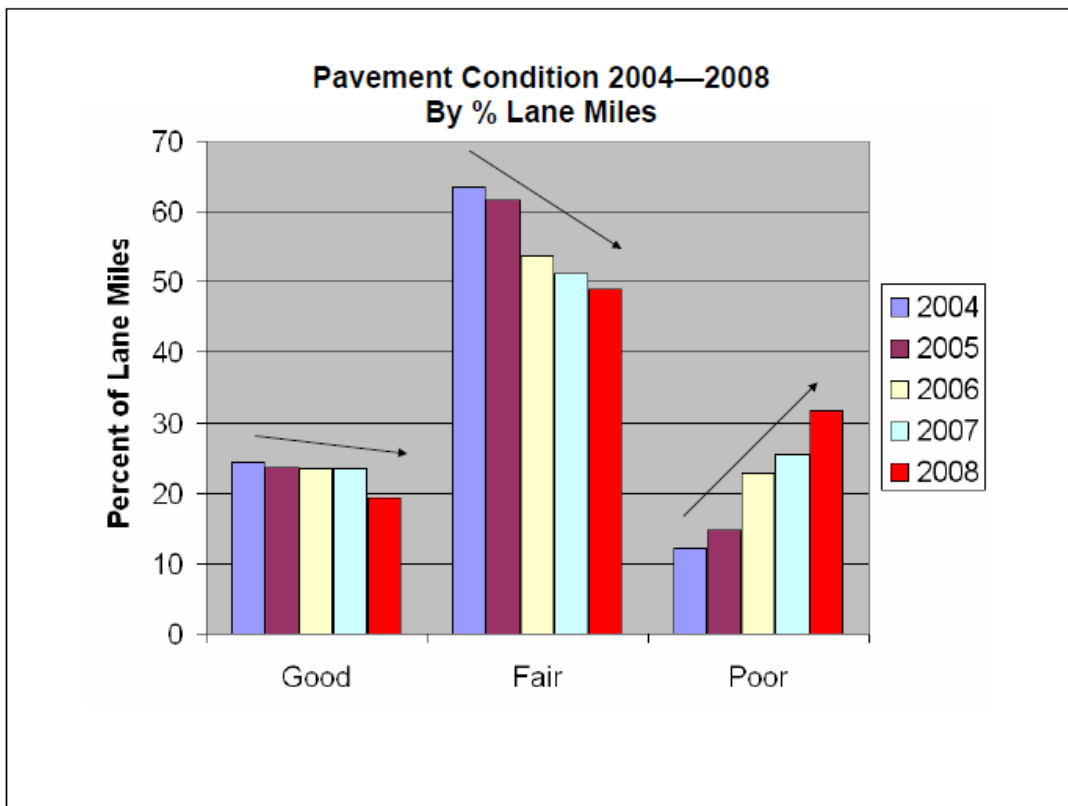
The results of the 2008 rating reveal that 17,341 lane miles were in poor condition, 26,890 lane miles were in fair condition, 10,646 lane miles were in good condition.

2008 ROAD CONDITION IN LANE MILES

Source TAMC 2008 PASER Data Collection



After five years of pavement ratings, it is clear that Michigan’s roads are deteriorating faster than they can be maintained. There has been a dramatic increase in the number of lane miles needing structural improvement (rehabilitation and reconstruction). These are roads in “poor” condition. In 2004, 13.6 percent of lane miles were identified as needing structural improvement. By 2008, that number had more than doubled to 31.6 percent. In 2004, nearly 88 percent of the federal-aid system could be considered in good or fair shape. By 2008, that figure fell to 68.4 percent. Clearly, the overall condition of the federal-aid system is getting significantly worse with more miles in poor condition than in good condition. The cost of returning a poor road to good condition is four to five times greater than the cost of returning a fair road to good condition. Allowing more roads to reach poor condition will dramatically increase the costs of repairing Michigan’s road network. Unfortunately, the current trend is for more roads to lapse into a poor condition.



the local agency bridge network of good bridges moving into the fair categories. This is reasonable since the network is aging, but it does show the importance of preventive maintenance for local agency bridges. By increasing the number of rehabilitation projects on poor bridges, the local agencies will be able to reduce the number of poor bridges also.

FIVE YEAR TREND ANALYSIS

Roads

The chart below shows that 42.3 percent of Michigan's roads have deteriorated over the last five years (2004 – 2008). During that period, 16.3 percent of the roads went from good to fair, 23 percent went from fair to poor, and 3 percent slid all the way from good to poor. In that same five year period, only 14.6 percent of the roads were improved: 9.3 percent from fair to good, 1.9 percent from poor to fair and 3.4 percent from poor to good.

