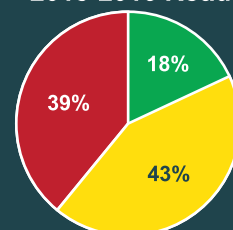


# MICHIGAN'S **ROADS & BRIDGES** 2016 ANNUAL REPORT

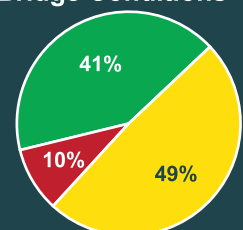


Michigan  
Transportation Asset  
Management Council

2015-2016 Road & Bridge Conditions



Road – Federal-Aid Eligible  
Percent Lane Miles



Bridge – All of Michigan  
Percent of Total

■ GOOD
 ■ FAIR
 ■ POOR

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## ***ACRONYMS AND ABBREVIATIONS USED FREQUENTLY IN THIS REPORT***

**ADARS: Act-51 Distribution and Reporting System**

**BCFS: Bridge Condition Forecasting System**

**CPI: Consumer Price Index**

**CRA: County Road Association (of Michigan)**

**CSS: Center for Shared Solutions (DTMB)**

**CTT: Center for Training and Technology (MTU)**

**DTMB: Michigan Department of Technology, Management and Budget**

**FHWA: Federal Highway Administration**

**FAST: Fixing America's Surface Transportation Act**

**IBR: Inventory Based Rating**

**MAC: Michigan Association of Counties**

**MAP-21: Moving Ahead For Progress in the 21<sup>st</sup> Century**

**MAR: Michigan Association of Regions**

**MDNR: Michigan Department of Natural Resources**

**MDOT: Michigan Department of Transportation**

**MEDC: Michigan Economic Development Corporation**

**MML: Michigan Municipal League**

**MPO: Metropolitan Planning Organization**

**MTA: Michigan Township Association**

**MTPA: Michigan Transportation Planning Association**

**MTU: Michigan Technological University**

**NBI: National Bridge Inventory**

**NFC: National Functional Classification**

**NHS: National Highway System**

**PASER: Pavement Surface Evaluation and Rating**

**RPO: Regional Planning Organization**

**STP: State Transportation Program**

**TAMC: Transportation Asset Management Council**

**Any reference to Act 51 in this document refers to Public Act 51 of 1951**

## EXECUTIVE SUMMARY

The Transportation Asset Management Council (TAMC) was formed under [Public Act \(PA\) 499 of 2002](#) (amended by [PA 338 of 2006](#), [PA 199 of 2007](#), [PA 257 of 2010](#), [PA 298 of 2012](#) and [PA 506 of 2012](#)) to promote the use of asset management practices among Michigan's road owning agencies; to develop a coordinated, unified effort by the various roadway agencies within the state; and to advise the State Transportation Commission (STC) on a statewide asset management strategy.

This Executive Summary provides a few highlights from the 2016 TAMC Annual Report. The full report can be found at [www.michigan.gov/TAMC](http://www.michigan.gov/TAMC).

In November of 2015, the Michigan legislature passed a transportation funding package that will generate approximately \$453 million in additional funds in fiscal year 2017. The package provides for a gradual rise to \$1.2 billion per year in new transportation funding in fiscal year 2021. Beginning in 2022 and continuing on into the future, the funding package then increases every year with the rate of inflation as calculated by the Consumer Price Index (CPI).

In December, 2015, Congress passed reauthorization legislation for the Federal Highway Administration (FHWA) which is expected to result in an approximate five percent increase in federal transportation dollars coming to Michigan. Taken together, and given the current conditions of Michigan's roads and bridges, these influxes of new funds are still not sufficient to improve Michigan's

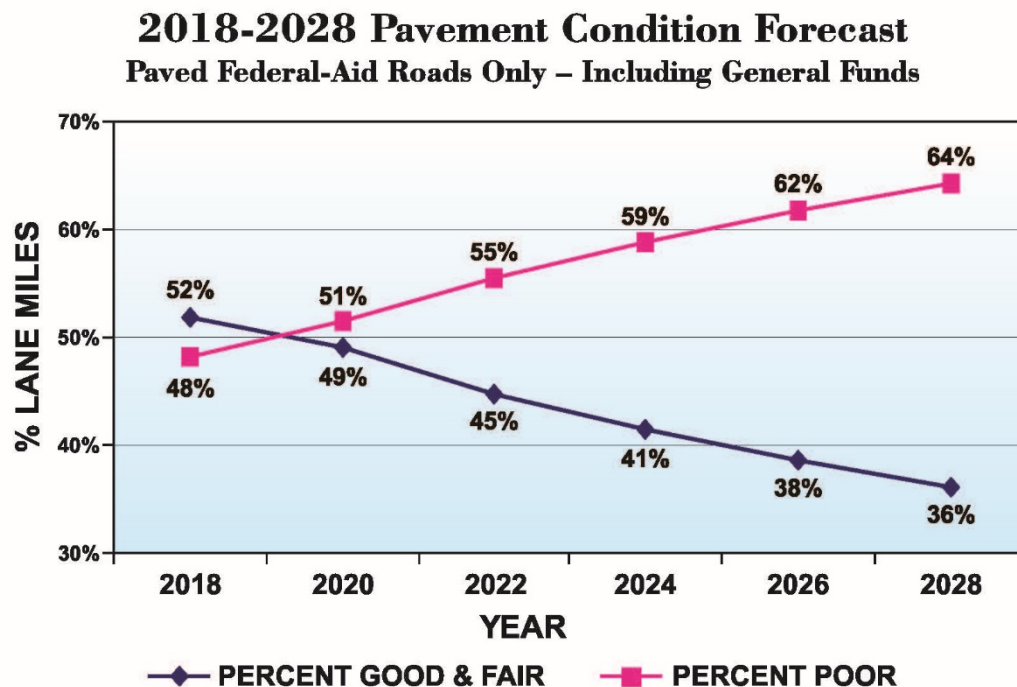


Figure ES- 1

road and bridge problems. Figure ES-1 shows the current projections for just pavement conditions on paved federal aid roads in Michigan using all the expected funding from both state and federal transportation sources. This year's forecast reflects new adjustments in funding expenditures and

pavement preservation strategies. These adjustments were based on detailed records now available to the council.

An analysis of bridge conditions in Michigan shows that bridge owners in the state are currently “holding their own” despite rising costs and revenue challenges. From 2004 to 2012, the overall network of bridges in the state saw a slight but steady improvement in overall condition. However, from 2012 to 2015 the improvement in bridge condition has stagnated and the current forecast shows a gradual decline as the forecast approaches the year 2026.

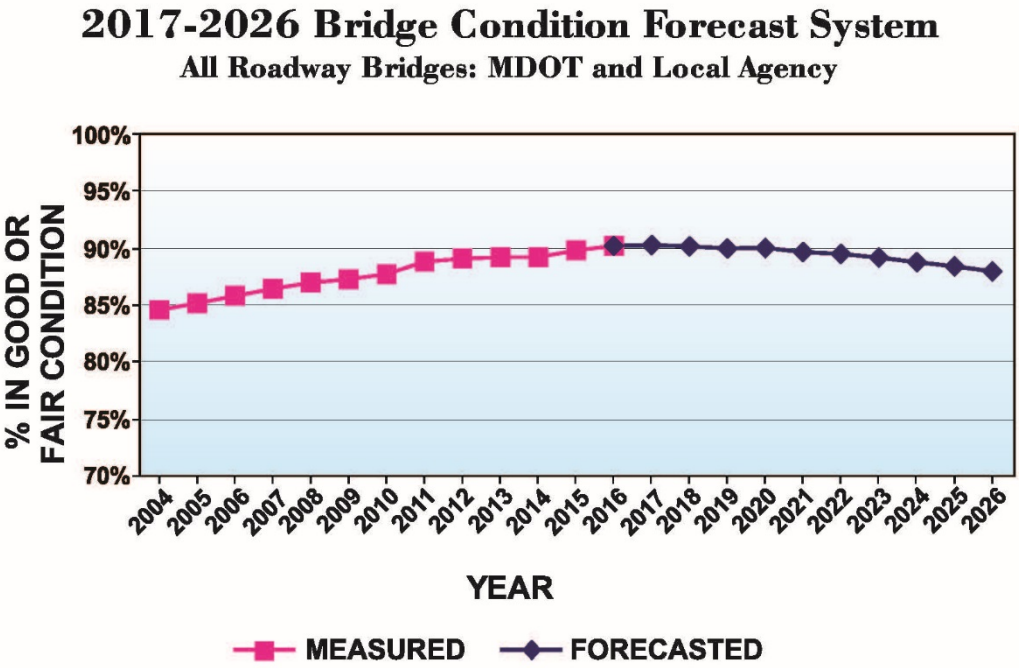


Figure ES- 2

Working from current bridge condition information from the National Bridge Inventory (NBI), the Bridge Condition Forecasting System (BCFS) estimates future condition of bridges in Michigan using bridge deterioration rates, project costs, expected inflation, and planned fix strategies. Figure ES-2 indicates the combined overall bridge condition of all the state’s bridges (both on state trunklines and on bridges owned by counties, cities, and villages) is expected to decline after 2016. By 2025, nearly half of the progress made toward improving bridge conditions since 2004 could be lost. In addition, the condition and forecast data shows the local bridge program could materially benefit from more bridge owning agencies actively adopting good capital preventive maintenance strategies.

While additional transportation funding was recently approved at both the state and federal level, no new funds were earmarked specifically for bridge programs. Therefore, the bridge forecast assumes no additional spending on bridges beyond those funds already designated for that purpose. If the road owning agencies begin programming some of the expected new transportation funds for bridge projects, that will be reflected in future forecasts.

The pessimistic outlook shown in Figures ES-1 and ES-2 is not unique to the TAMC. Both last year’s report from the [21<sup>st</sup> Century Infrastructure Commission \(November 2016\)](#) and a separate report from

the [Roads Innovation Task Force \(September 2016\)](#) painted a similar bleak picture. Even independent national organizations like TRIP<sup>1</sup>, in their recently released study “[Modernizing Michigan's Transportation System Report](#)”, published in early April, 2017 and the American Society of Civil Engineers<sup>2</sup> in their recently released “[2017 Infrastructure Report Card](#)”, published in early March, 2017 indicate that Michigan is facing significant challenges regarding road and bridge infrastructure.

### Current Conditions

Figure ES-3 summarizes the results of the 2015-2016 PASER rating: 18 percent of lane miles on the paved federal aid roads in Michigan were rated in “good” condition, 43 percent were rated in “fair” condition, and, 39 percent were rated in “poor” condition,

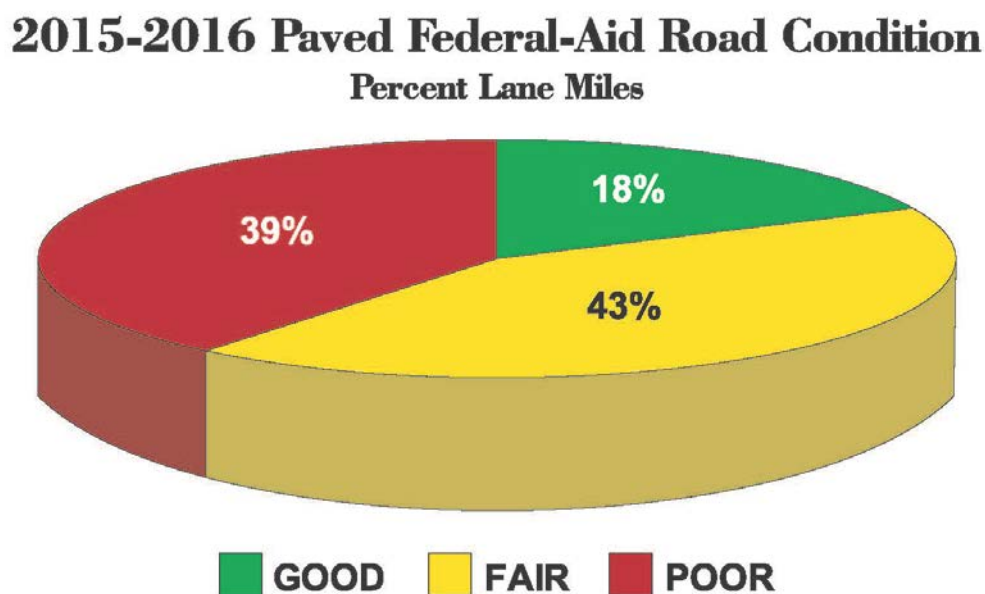


Figure ES- 3

For reporting purposes, the TAMC uses the following scale: road segments rated 8, 9, or 10 are categorized as “good”; segments rated between 5 and 7 are classified as “fair”; and segments rated 4 or less are in “poor” condition. Figure ES-4 shows the breakdown of the 2015-2016 pavement condition by percentage of lane miles on paved federal aid roads in each of the ten individual PASER rating units.

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<sup>1</sup> Founded in 1971, TRIP is a private nonprofit organization that researches, evaluates and distributes economic and technical data on surface transportation issues. More about the organization can be found at: <http://tripnet.org/>

<sup>2</sup> The American Society of Civil Engineers represents more than 150,000 members of the civil engineering profession in 177 countries. Founded in 1852, ASCE is the nation’s oldest engineering society. More about the organization can be found at: <http://www.asce.org/>

## 2015-2016 PASER Ratings

### Percent Lane Miles

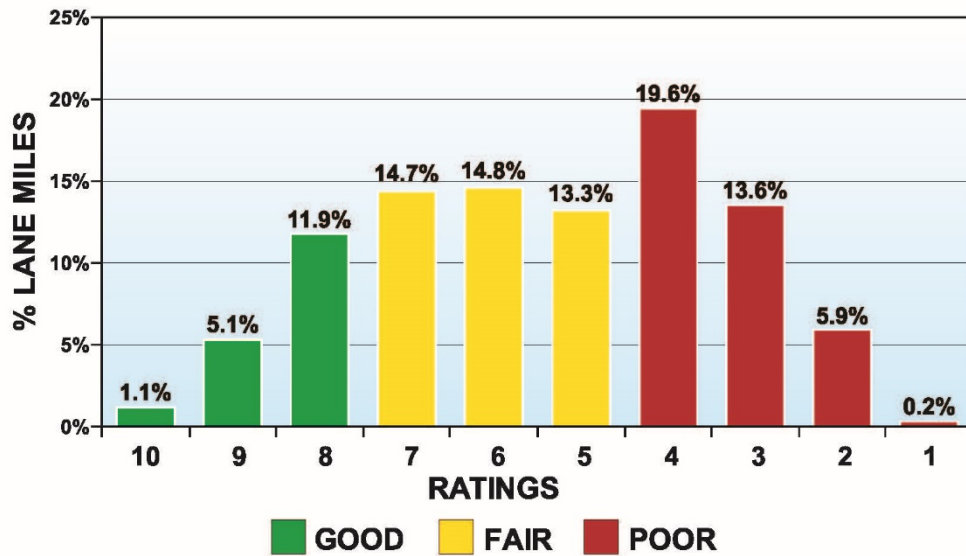


Figure ES- 4

Figure ES-5 shows the trend in pavement condition on federal aid roads in Michigan over the past ten years. Clearly, the overall condition of the federal-aid system is getting significantly worse with more miles currently in poor condition than in good condition.

## 2007-2016 Pavement Condition

### Paved Federal-Aid Roads

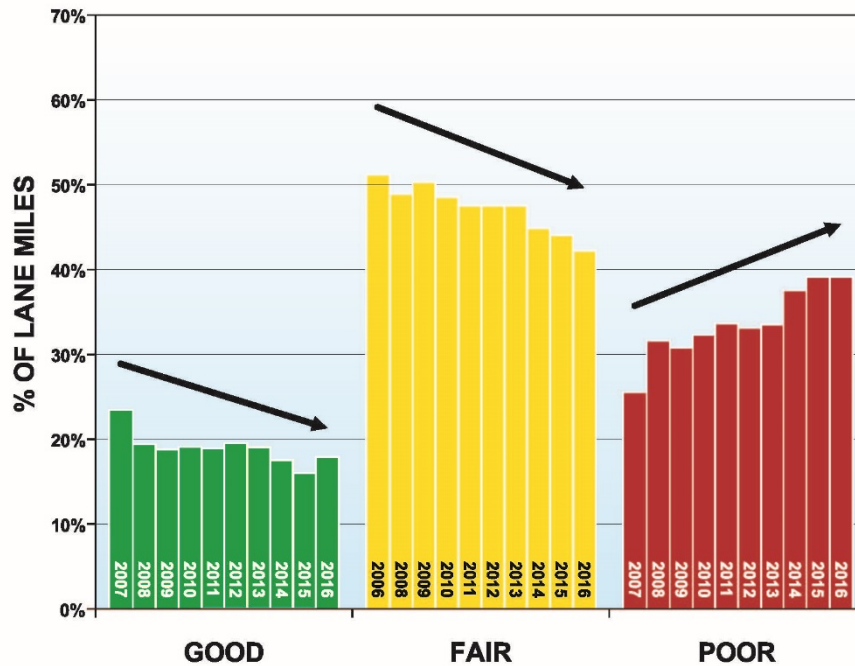


Figure ES- 5

The cost of returning a road from poor to good condition requires that the road be structurally improved. The cost of returning a road from fair condition to good condition means that capital preventive maintenance (CPM) must be performed. It costs four to five times as much perform structural improvements than it costs to perform capital preventive maintenance.

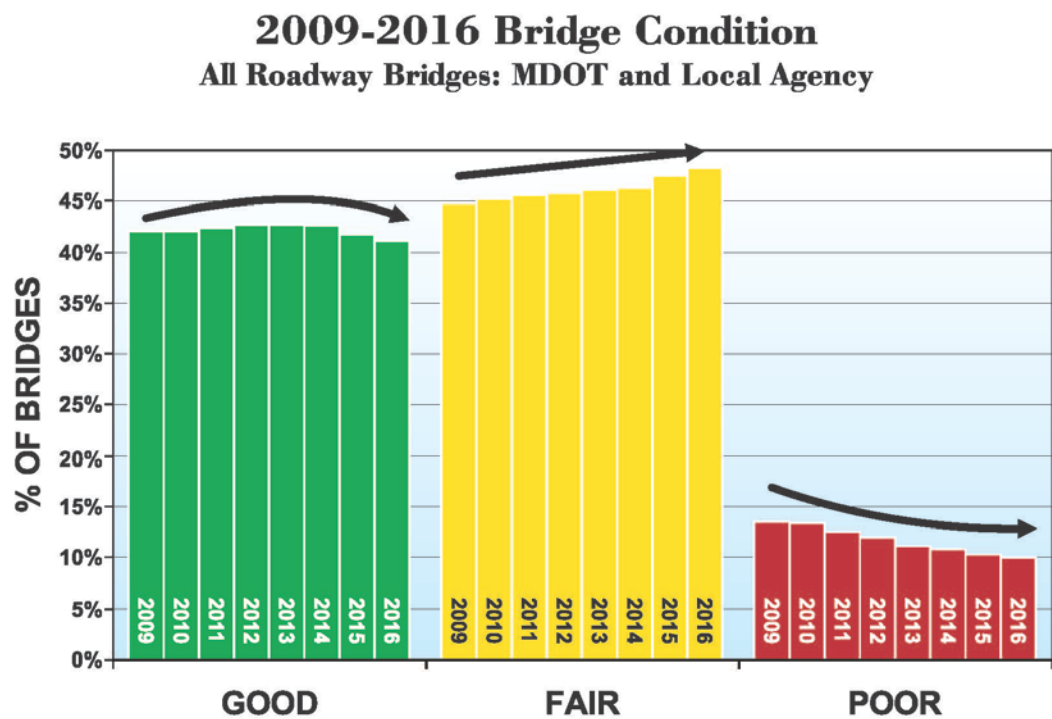


Figure ES- 6

Figure ES-6 summarizes the trend in the percentage of Michigan bridges in good, fair, and poor condition for the past eight years. Michigan bridge owners and decision makers have reduced the percentage of bridges in poor condition while increasing the number of bridges in good and fair condition.



**TRANSPORTATION ASSET MANAGEMENT COUNCIL (TAMC)**

**COUNCIL MEMBERS for 2016**

**AND THE ORGANIZATIONS THEY REPRESENT**

**Joanna Johnson (TAMC Chair),  
County Road Association of Michigan (CRA)**

**Brad Wieferich,  
Michigan Department of Transportation  
(MDOT)**

**William McEntee (TAMC Vice-Chair), CRA**

**Don Disselkoen,  
Michigan Association of Counties (MAC)**

**Bob D. Slattery Jr.,  
Michigan Municipal League (MML)**

**John Egalhaaf,  
Michigan Association of Regions (MAR)**

**Dale Kerbyson,  
MML**

**Jonathon R. Start,  
Michigan Transportation Planning Association  
(MTPA)**

**Dave Wresinski,  
MDOT**

**Jennifer Tubbs,  
Michigan Townships Association (MTA)**

**Rob Surber, Michigan Center for Shared Solutions (Non-Voting)**

**The term of John Egalhaaf expired in May of 2016 and Derek Bradshaw was named as the new TAMC Representative for the MAR.**

**The term of Dale Kerbyson expired at the end of 2016 and Gary Mekjian, P.E. was selected to replace him as one of two TAMC Representatives for the MML**

*For brief biographical and contact information, please visit:*

<http://tamc.mcgi.state.mi.us/TAMC/#/aboutus>

This report was prepared by the staff of the TAMC Support Division, MDOT

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