

ROADS AND BRIDGES

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OVERVIEW

There was a time when Michigan's extensive network of roads and bridges enabled its millions of residents to travel safely and freely and its tens of thousands of businesses to serve their customers efficiently. But now 38% of Michigan's roads are in poor or mediocre condition and 25% of its bridges are structurally deficient or functionally obsolete. US truckers rate Michigan roads as third worst in the country. Congestion of urban-area roads ranks eighth worst among the fifty states. Along with these problems, road and bridge funding is declining. Without increased funding, Michigan's transportation network will continue to deteriorate and fail to meet demand. Continuing to shortchange the transportation system will lead to declining quality of life for its residents, and reduced economic competitiveness in the global economy. Bold action beyond the federal stimulus package is required now to address long-term funding.

BACKGROUND

Michigan residents enjoy modern lifestyles that rely on a high level of personal and commercial mobility. Annual vehicle travel in Michigan has increased between 1990 and 2005 by 28%, from 81 billion vehicle miles of travel (VMT) in 1990 to 104 billion VMT. Traffic volumes and congestion have decreased since then, due to the price of gas and the current economic recession, but congestion still exists and continues to impede motorist's travel and economic development. The Road Information Program (TRIP) estimates that travel on Michigan's roads and highways will increase by 25% by 2020, to 130 billion VMT per year. Increased VMT will worsen the condition of an already deteriorated road and bridge network. In addition, traffic congestion will continue as a growing burden in Michigan's major urban areas, impeding the state's economic development. In 2005, 39%

of Michigan's urban highways (interstates and other freeways) were congested compared to 23% in 2000.

The efficiency of Michigan's transportation system, particularly its highways and border crossings, is critical to the health of the state's economy. The advent of modern national and global communications and the impact of free trade in North America and elsewhere have resulted in a significant increase in freight movement. The quality of the transportation system is key to a business' ability to compete locally, nationally and internationally.

An efficient transportation system is vital to successful commerce. Businesses choose to locate and expand in regions with a well-designed and highly accessible network of roads and bridges. Numerous firms cite reliable access to the Interstate highway system and other major routes as a major factor in their choice. A 2002 comprehensive report by the Transportation Research Board, a division of the National Research Council, on the movement of freight in the US found that a region's ability or failure to minimize traffic congestion and provide reliable freight movement has a significant impact on job creation or relocation. The report states that "workplaces and residences will move away from congestion within metropolitan areas and from more congested to less congested regions within the United States."

The Federal Highway Administration estimates that commercial trucking will increase by 50% in Michigan by the year 2020. Currently on an annual basis, \$389 billion in goods are shipped out of Michigan and another \$407 billion in goods are shipped into the state.

CURRENT CONDITIONS

Michigan's road system is deteriorating. According to the Michigan Asset Management Council, the condition of 10,000 lane-miles of Michigan's federal-aid-eligible roads (i.e., state and primary local roads) went from either "good" or "fair" to "poor" between 2004 and 2007. The Highway, Bridge, and Roads Subcommittee of the Citizens Advisory Committee to the State Transportation Funding Task Force, in a July 2008 report, identified six primary causes for this. They are:

- A history of under-funding: According to US Census Bureau data, Michigan has ranked among the bottom ten states in per-capita state and local road funding for more than 40 years.
- Declining revenues: Michigan's road funding has been declining, in real dollars, for the last 18 months, following nearly a decade of stagnant revenues. That decade of stagnation alone resulted in a significant decline in purchasing power due to inflation. The current five-year plan of the Michigan Department of Transportation (MDOT) shows an additional 15% decline in funding between 2008 and 2011.
- Rising costs: The costs associated with constructing and maintaining roads are increasing dramatically (most are increasing far more than the rate of consumer inflation) at the same time that road funding is declining.
- Aging infrastructure: Current maintenance efforts of Michigan's road agencies cannot keep pace with the deterioration of its rapidly aging road infrastructure.
- Rising demand: Despite Michigan's slow population growth in recent years and a temporary decline in VMT due to the state's current economic struggles, demand for its roads is expected to continue to rise in the long term. The fact that vehicles continue to become more fuel efficient means these increased miles of travel will generate less and less revenue per mile of travel under the current funding methodology.



- Diversion of available funds: The state is skimming millions of dollars from its transportation fund and transferring those dollars to other state departments, in the form of interdepartmental grants (IDGs).

Another issue for Michigan's roads and bridges, which many states do not face, is the numerous freeze/thaw cycles and associated road-clearing operations they undergo. The freeze/thaw cycles cause continual breakdown of road and bridge surfaces, which escalate quickly once initial deterioration occurs. The road clearing operations often include high salt applications (even compared to other northern states) and are especially tough on bridges, causing corrosion and concrete deterioration from chloride intrusion.

All of this has resulted in a road system that is recognized as one of the worst in the United States. Groups ranging from the nation's truckers to one of the most respected academic institutions dedicated to studying the nation's transportation system (The Texas Transportation Institute at Texas A&M University) have come to the same conclusion: Michigan's roads are worse than those in most other states, in terms of both the condition of road surfaces and the congestion levels in the large urban areas. This situation is not unique to any one of the three levels of road jurisdiction in the state (MDOT, county and city/village). In fact, numerous sources reveal that roads at all levels are either already in dire condition (county and city/village roads) or will reach that point in the coming years (MDOT roads) if funding is not increased.

Consider these national rankings from the 2007 Annual Report on the Performance of State Highway Systems, published by the Reason Foundation:

- Michigan has the 8th worst road system based on overall performance.

- Michigan has the 4th worst rural interstate conditions.
- Michigan has the 8th worst urban interstate conditions.
- Michigan is 8th in the nation in congested roads in urbanized areas.
- Michigan is 6th in the nation in the total cost of road miles needed.

Consider this ranking from Overdrive Magazine's 2007 survey of the nation's truckers, published in the Highway Report Card Survey 2007: Michigan has the 3rd worst road conditions in the nation.

Consider this data published by The Road Information Program (TRIP):

- 38% of Michigan's major roads are rated in poor or mediocre condition, including interstates, state highways, and key local roads and urban streets. Half of these roads are in poor condition.
- 25% (over 2,700), of the state's bridges are either structurally deficient or functionally obsolete, directly impacting safety and mobility due to weight restrictions, narrow lanes and other correctable factors.
- The average one-way commute time in Michigan increased 15% between 1990 and 2000. That works out to an additional three working days over the course of a year.
- By 2030, unless additional roadway capacity is added, rush hour travel in the Detroit, Lansing, and Grand Rapids areas will take significantly longer to complete than during non-rush hour, up to 50% longer.
- Driving on crumbling roads costs each Michigan motorist approximately \$400 to \$500 annually, depending on location, for a statewide total of \$2.6 billion per year.
- Driving on congested roads costs the average urban Michigan motorists an annual amount varying from \$300 in Grand Rapids to nearly \$1,000 in Detroit, for a total of \$2.3 billion per year.
- Roads that lack sufficient lanes, have



sharp curves, have inadequately designed intersections or interchanges, or lack updated safety features (i.e. guardrail, clear distances, barriers, updated breakaway lights and other appurtenances) put motorists, pedestrians and bicyclists at risk and contribute to approximately one-third of all traffic accidents in Michigan.

- Traffic crashes and fatalities in which roadway design is an important factor cost Michigan motorists \$2.1 billion annually, approximately \$250 per motorist.

Michigan's bridges fare better than its roads. In 2004, 29% of the state's bridges were structurally deficient or functionally obsolete. In 2008 that figure had decreased to 25%, according to the Better Roads 2008 Bridge Inventory. This improvement in bridge condition was better than that of any state in the country. The condition of Michigan's bridges now ranks 21st worst in the nation.

FUNDING SITUATION

Current funding of Michigan's transportation network is insufficient. More money must be made available to make necessary repairs to roads and bridges, to relieve current and future traffic congestion, and to improve the movement of freight. Inadequate investment in the road system today will mean not only accelerated deterioration but increased maintenance costs in the future.

According to the July 2008 report by Citizens Advisory Committee on Transportation Funding, Michigan's roads and bridges will require an estimated annual investment of \$6.1 billion – nearly two times the current funding level – for basic improvements of its road and bridge system.

The report states that under Michigan's current funding mechanisms:

- Between 2010 and 2015, the Michigan Department of Transportation will lose an average of \$750 million per year and local transportation agencies will lose an average of \$204 million per year due to the State's inability to match available federal road funds.
- A total of 23,000 road lane miles will need to be repaired or replaced by 2015, while expected funding will pay for only 876 lane miles, just 4% of what's needed.
- An additional 30% of Michigan roads will decline to fair or poor condition over the next decade.

The February 2009 American Recovery and Reinvestment Act will help the funding situation in the short term. But long-term funding depends largely on reauthorization of the current federal legislation for transportation funding, SAFETEA-LU (Safe, Accountable, Flexible, Efficient, Transportation Equity Act – A Legacy for Users), which expires in 2009, and on Michigan's ability to match the funds made available. Under the state's current funding mechanisms, Michigan stands to lose nearly \$1 billion in federal funds each year, because its transportation agencies will not have enough revenue to provide the required matching funds.

Current mechanisms for state funding utilize vehicle-registration fees and motor-fuel taxes for the bulk of the state's transportation revenue. However, revenue from motor-fuel taxes has declined as travel on Michigan roads decreases and fuel efficiency of motor vehicles, especially with the advent of electric-powered cars, increases. Other mechanisms for generating funds must be considered.

GRADES

Category Grade

Roads

D

Bridges

C



CONCLUSIONS

A deteriorating and inadequate highway transportation system costs Michigan motorists billions of dollars every year in wasted time and fuel, injuries and fatalities caused by traffic crashes, and wear and tear on their vehicles. Making needed improvements to Michigan's roads and bridges is key to providing a safer, more efficient transportation system that will save lives, decrease the amount of time wasted and money spent by motorists, and improve the state's economic livelihood.

Allowing the crisis of insufficient funding to go unchecked will put the state in a position from which it may never recover, forever relegating it to inferior status among its fellow states. State leaders must acknowledge the gravity of the road and bridge crisis and provide creative, substantial and sustainable funding to put Michigan back on the road to prosperity.

SOURCES

1. "Paying the Price for Inadequate Roads in Michigan" by The Road Information Program (TRIP, a national transportation research group) published in May of 2007.
2. "Michigan Road's in Crisis" by the Highway, Bridge, and Roads Subcommittee of the Citizens Advisory Committee (commissioned by the Governor as part of the State Transportation Funding Task Force assembled in 2008), published in July 2008.
3. "Transportation Solutions, A Report on Michigan's Transportation Needs and Funding Alternatives" by The Michigan Transportation Funding Task Force, November 2008.
4. Five-Year Transportation Program 2008-2012 presented by Kirk Steudle, MDOT Director, to the State Transportation Commission on November 29, 2007.