MICHIGAN'S ROADS AND BRIDGES ANNUAL REPORT

2024

Dear Reader,

On behalf of the Michigan Transportation Asset Management Council (TAMC), I am pleased to present the 2024 Roads and Bridges Annual Report. Our shared efforts in advancing asset management practices across Michigan's road-owning agencies are highlighted in this report.

Since the Council's establishment under Public Act 499 of 2002, TAMC has continually evolved in scope and impact. Our work now extends beyond roads and bridges, as we collaborate closely with the Michigan Infrastructure Council (MIC) and the Water Asset Management Council (WAMC) to build a unified, statewide approach to infrastructure stewardship. These partnerships are essential to developing a coordinated strategy that meets Michigan's diverse and growing infrastructure needs.

We were proud to participate in the 2024 Integrated Infrastructure Conference in Grand Rapids, where asset management leaders gathered to exchange insights, celebrate progress, and reinforce our shared commitment to best asset management practices.

Among our most encouraging findings this year are the results of the 2024 Pavement Condition Data collection efforts, which show a measurable improvement in the overall condition of our road network. This progress reflects the dedication of road-owning agencies statewide and underscores the power of data-driven decision-making in delivering tangible results for Michigan roads. Additionally, the 2024 Non-Federal-Aid Data Collection Program was successful in that it doubled the miles of data collected on the system. This continuous collection of this data helps to ensure that all public roads, regardless of funding classification, are represented in our statewide asset management strategies.

I extend my deepest gratitude to every individual and organization that has contributed to the work of TAMC. Your participation through data collection, planning, analysis, and education has been instrumental in laying the groundwork for our shared success. I especially want to recognize the commitment and contributions of our many road-owning agencies.

Looking ahead, I encourage you to engage with our training programs and utilize our data visualization tools to support your work effectively. I also invite you to submit nominations for TAMC's annual awards, an opportunity to celebrate the exemplary work happening across our state.

In closing, I extend my heartfelt appreciation to each of you for your dedication to TAMC's mission. Together, we are advancing asset management practices and securing a stronger, more sustainable future for Michigan's infrastructure.

Sincerely,

Ryan Buck, TAMC Chair

MAJOR TAKEAWAYS FROM 2024

Roads

2024 marked the fourth year in a row that the percentage of roads in good condition is higher than when the PASER system was first introduced in 2004. The federal-aid road network saw a 3% increase to 28% of roads in good condition and a 1% decrease in poor to 32%.

Miles of data collected on non-federal-aid roads and gravel road ratings increased in 2024 due to added investment supporting collection efforts. See the 2024 Road Condition section for more information.

Culverts and Bridges

In 2024, the TAMC announced the Culvert Asset Management Award, along with the option to submit culvert condition data in Roadsoft. In 2025, the TAMC will release a new Culvert Asset Management Plan (CAMP) template as part of the Transportation Asset Management Plan (TAMP).

In 2024, 72 local agency bridges were closed due to poor and severe conditions, five more than in 2023. Long-term funding challenges continue. See the 2024 Bridge Condition section for more information.

2024 Federal-Aid Pavement Condition

Percent Lane Miles

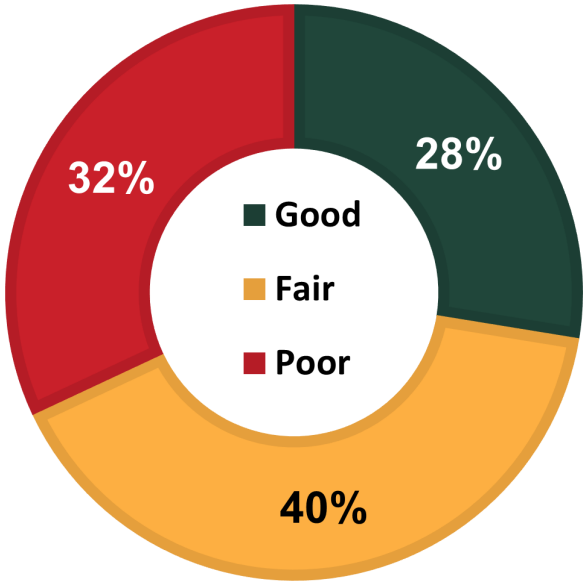

Figure 1: Source – 2023/20204 PASER Data Collection

2024 Bridge Condition

All Roadway Bridges

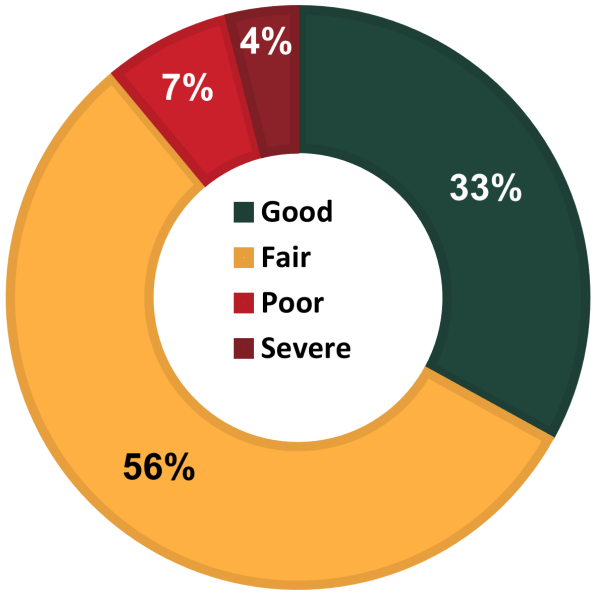

Figure 2: Source – 2023/20204 PASER Data Collection

To see dashboards for all agencies and an interactive map, visit www.Michigan.Gov/TAMC.

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2024 ROAD CONDITIONS

Waldon Road, Oakland County

PAVED FEDERAL-AID ROAD CONDITION

One of TAMC's main charges is to determine the condition of paved federal-aid roads, which account for 1/3 of Michigan roads and carry over 95% of the traffic.

Beginning in 2003, MDOT, county, regional, and metropolitan planning agencies joined together to pursue this statewide effort.

Under the direction of TAMC, PASER is the measure chosen to identify the condition of pavements. For over 20 years, PASER has been a consistent and reliable data source.

PASER CONDITION RATINGS		
	GOOD CONDITION	Routine Maintenance Candidate
	FAIR CONDITION	Preventive Maintenance or Rehabilitation Candidate
	POOR CONDITION	Rehabilitation or Reconstruction Candidate

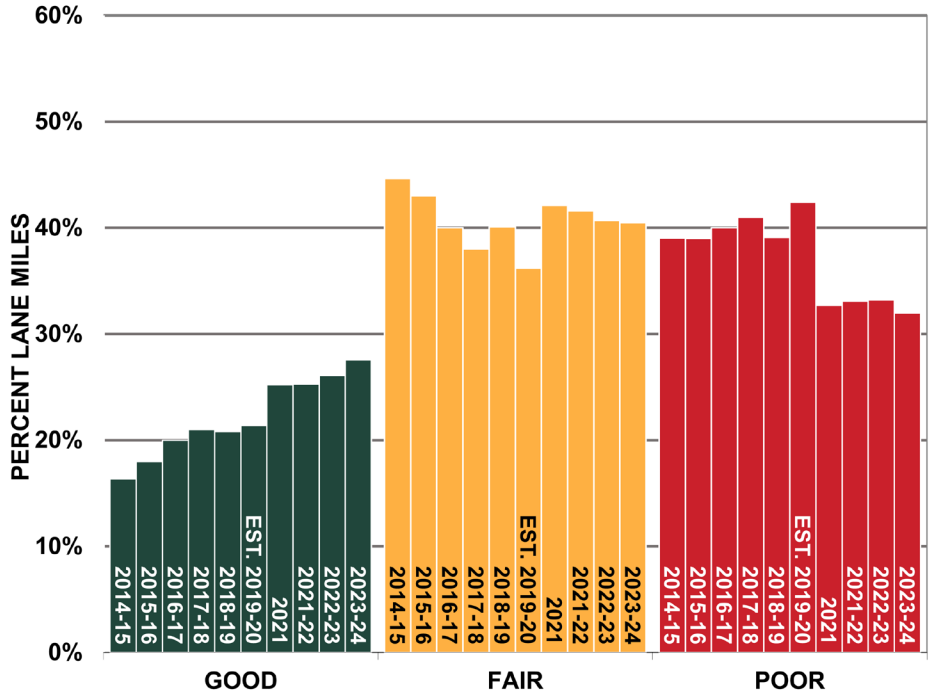


Figure 3: Source – 2014/15 - 2023/24 PASER Data Collection

The trend graph in **Figure 3** displays the percentage of lane miles rated good, fair, and poor between 2014/15 and 2023/24. The percentage of roads in good condition is the highest since 2004. The percentage of roads in fair has remained stable since 2021.

This trend is not expected to continue as paved federal-aid roads are expected to deteriorate, outpacing the potential funding available to maintain the network. See the Pavement Condition Forecast section for more details.

Note: Due to COVID-19, no data was collected in 2020. Data from 2019-20 is estimated. 100% federal-aid road condition data was collected in 2021.

2024 PAVED FEDERAL-AID ROAD CONDITION

Road agencies report on the condition of all paved federal-aid roads over the course of two years. **Figure 4** is a map showing roads rated in 2023 and 2024. About 63% of the 88,000 lane miles were collected in 2024, and the remaining lane miles were collected in 2023.

Collecting PASER data statewide is a coordinated effort made by Regional Planning Agencies (RPA) and Metropolitan Planning Organizations (MPO) working with local agencies in their area. A total of 320 road agencies collected 90% or more of their data again in 2024, indicating the value of this inventory effort in data-driven decision-making. **Figure 5** shows a composite of these data collection efforts, with 32% of Michigan's lane miles still in poor condition, which has slowly decreased over the past five years.

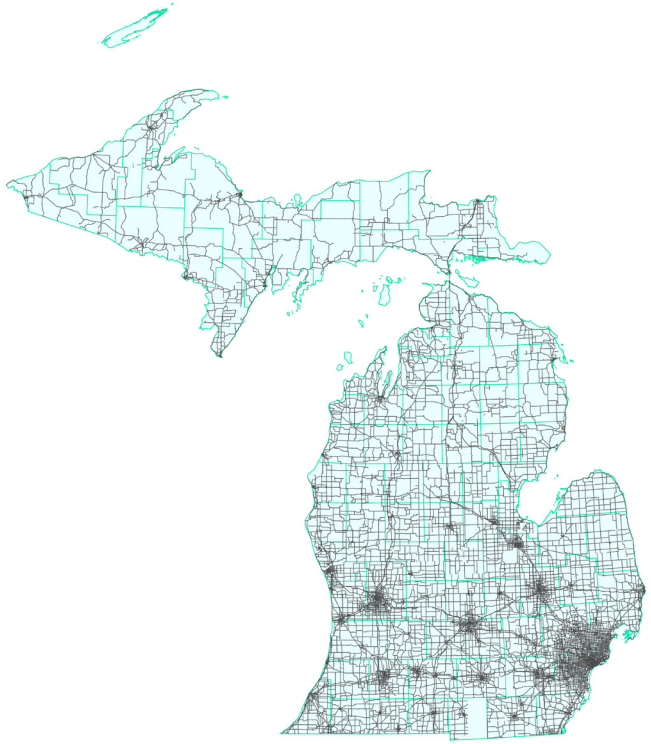


Figure 4: Source – 2024 PASER Data Collection

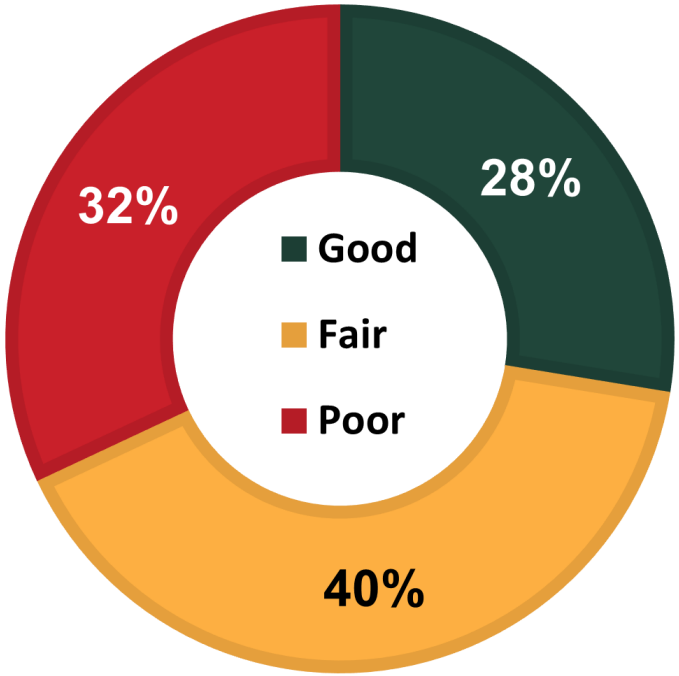


Figure 5: Source – 2024 PASER Data Collection by Lane Miles

PAVEMENT CYCLE OF LIFE

The pavement cycle of life in **Figure 6** illustrates the change in the condition of federal-aid pavement over a three-year period from 2022 to 2024.

During this period, 17% of the network experienced an improvement in pavement condition. Of the total increase, 6.6% of the network improved from poor to good, indicative of reconstruction and rehabilitation efforts. A 4.7% improvement from poor to fair and 6.5% from fair to good is indicative of light or heavy capital maintenance projects.

The chart also indicates a total decrease in condition of 20.2% for the same time period. A similar decrease of approximately 9-10% between the rating categories of good to fair and fair to poor is consistent with the regular deterioration rate of untreated roads.

When comparing the 17.7% increase in condition vs. the 20.2% decrease in condition, the overall condition of the network has declined by 2.5%, which is half of the 5% deterioration rate experienced between 2021 and 2023.

In simplified terms, roads deteriorate faster than the agencies can repair. Much of this is attributed to increased labor, materials, mobilization, and construction costs. The Pavement Condition Forecast further examines this trend.

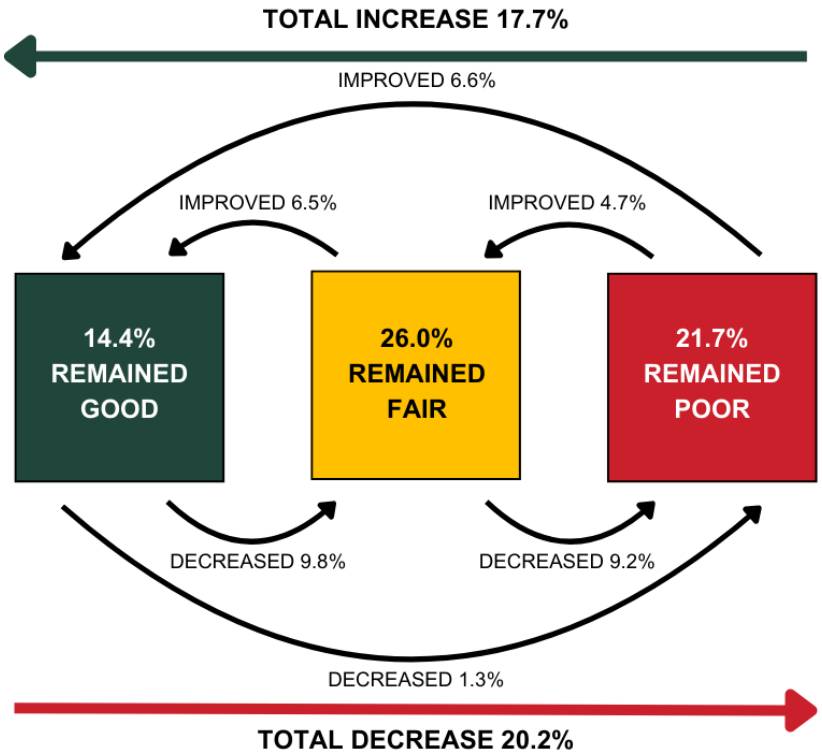


Figure 6: Pavement Cycle of Life: Source – 2022-2024 PASER

PAVEMENT CONDITION FORECAST

Approach for 2026-2036:

The Pavement Condition Forecasting System (PCFS) estimates the future condition of pavements. Examples of criteria that support the PCFS include current pavement condition, road deterioration rates, project costs, expected inflation, fix strategies, and revenues. The forecast also takes into consideration that regions across the state have different challenges when it comes to road repairs and improvements.

Data from the IRT was used to determine varying treatment type costs more accurately across the state. (See Investment Reporting Section.) Factors that affect the repairs and improvement costs include:

- Size of the project
- Location
- Impact of frost freeze levels
- Existing soils
- Exposure to extreme heat
- Traffic volume and vehicle classification
- Age and composition of existing base
- Increased cost of materials, mobilization, and labor

In 2024, the path of using two-member rating teams continued to assist agencies in collection efforts as resources remain stretched. Ratings are also compared by quality review teams to ensure a high level of data accuracy.

Using regionally based treatment type costs, individual regional forecasts were developed for 2026-2036. These forecasts were then combined to predict the future condition of pavements across the state.

The statewide pavement forecast indicates a continued decline in federal-aid roads, as displayed in **Figure 7** on page 10. By 2036, it is forecast that only 18% of the roads will be in good condition while roads in fair condition will drop to 36%. Over those 10 years, the roads in poor condition will reach 46% of the network.

Significant increased costs for pavement fixes also contribute to less pavement being improved. Investments starting in 2017 (See PASER History) are not predicted to maintain or improve the system in the future. Without additional and consistent long-term investment, the percentage of roads in poor condition will continue to increase as the increasing construction cost outpaces the ability to fix them.

Forecasts indicate that a decline in the condition of the federal-aid system is inevitable. Looking at past forecasts and current actual ratings, there is confidence in the results of the pavement forecasts. In 2022, it was forecasted that the condition of the system would show the road network at 25% good, 42% fair, and 33% poor. Condition data collected in 2024 shows the forecast developed in 2022 was not far off from the measured 28% good, 40% fair, and 32% poor. This analysis shows the forecasts are valuable, and effective asset management strategies used by road agencies may slow down the rate of deterioration. Continued analysis will determine forecast accuracy and the effect of asset management strategies.

PAVEMENT CONDITION FORECAST 2026-2036

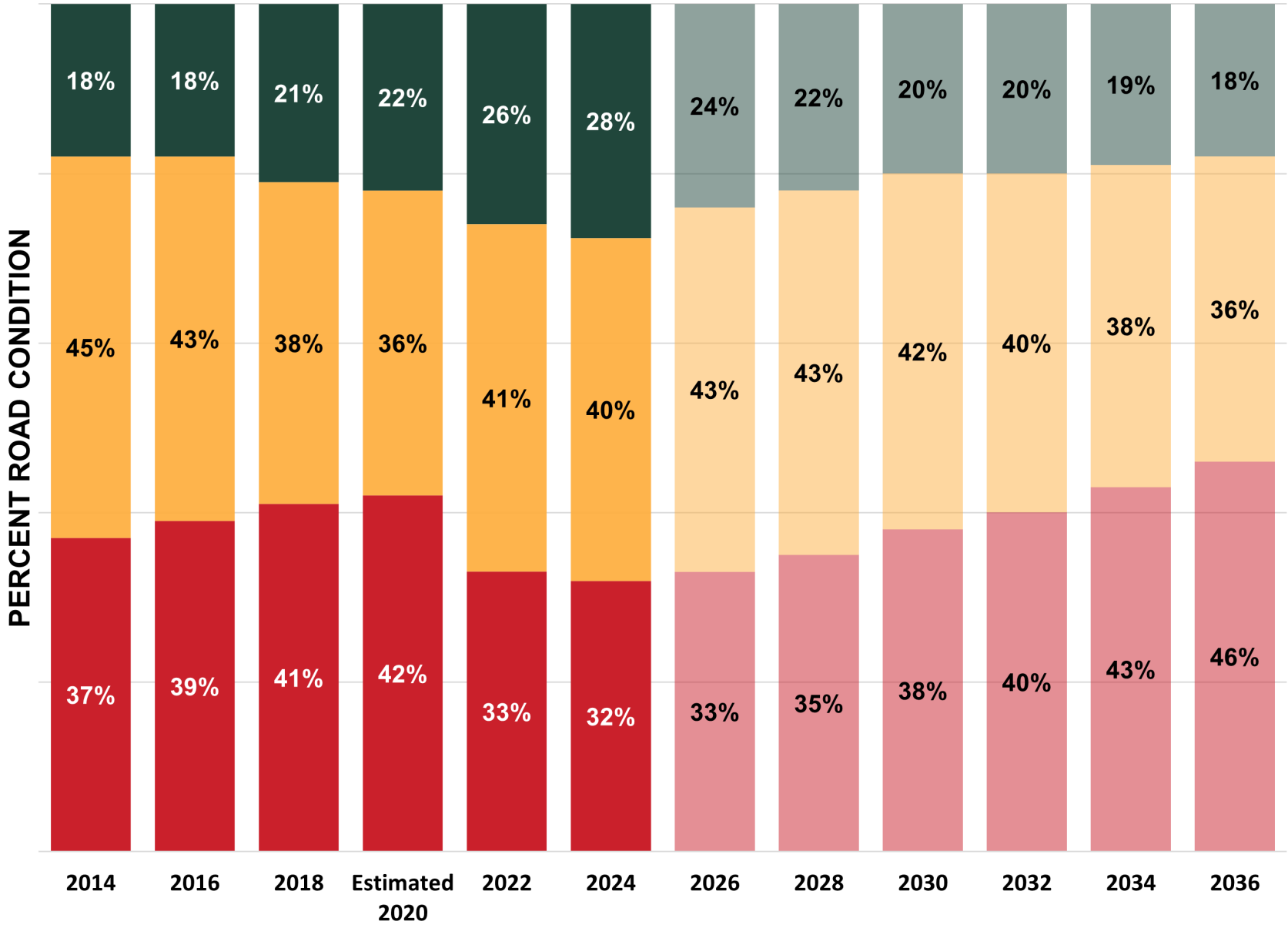


Figure 7: Source – 2024 TAMC

2024 NON-FEDERAL-AID (NFA) ROAD CONDITION

There are over 165,000 lane miles of both paved and unpaved NFA roads in Michigan. The federal government classifies these roads as being “local roads.” Some agencies may not have resources to collect NFA data each year, however, many local road agencies choose to rate some or all of their NFA roads each year.

To provide a more accurate look at the condition of the NFA system and to stay consistent with FA data analysis, two years’ worth of NFA data was analyzed.

Approximately 48,934 NFA lane miles were rated in 2023 and 2024. **Figure 8** shows a map of these ratings collected by local road agencies. Of these roads, 44% were found to be in poor condition, as displayed in **Figure 9**, which is 3% less than from 2022/2023.

Local road agencies use ratings on both FA and NFA roads to help manage their road network.

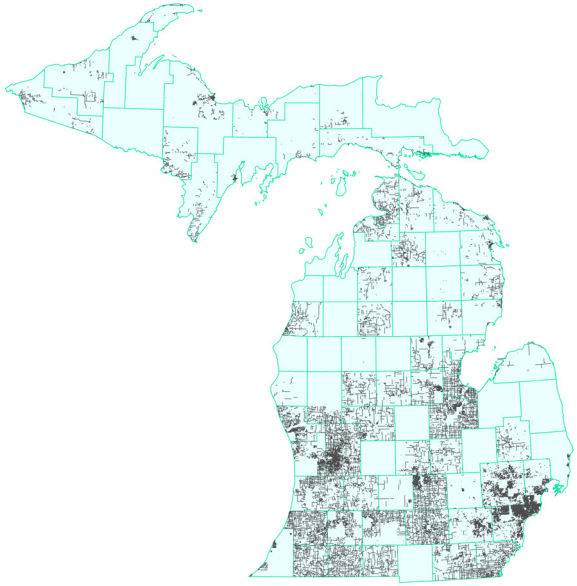


Figure 8: Source – 2024 PASER Data Collection

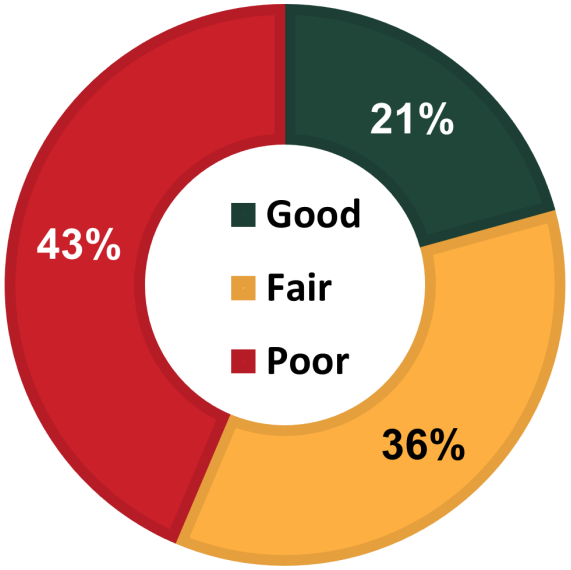


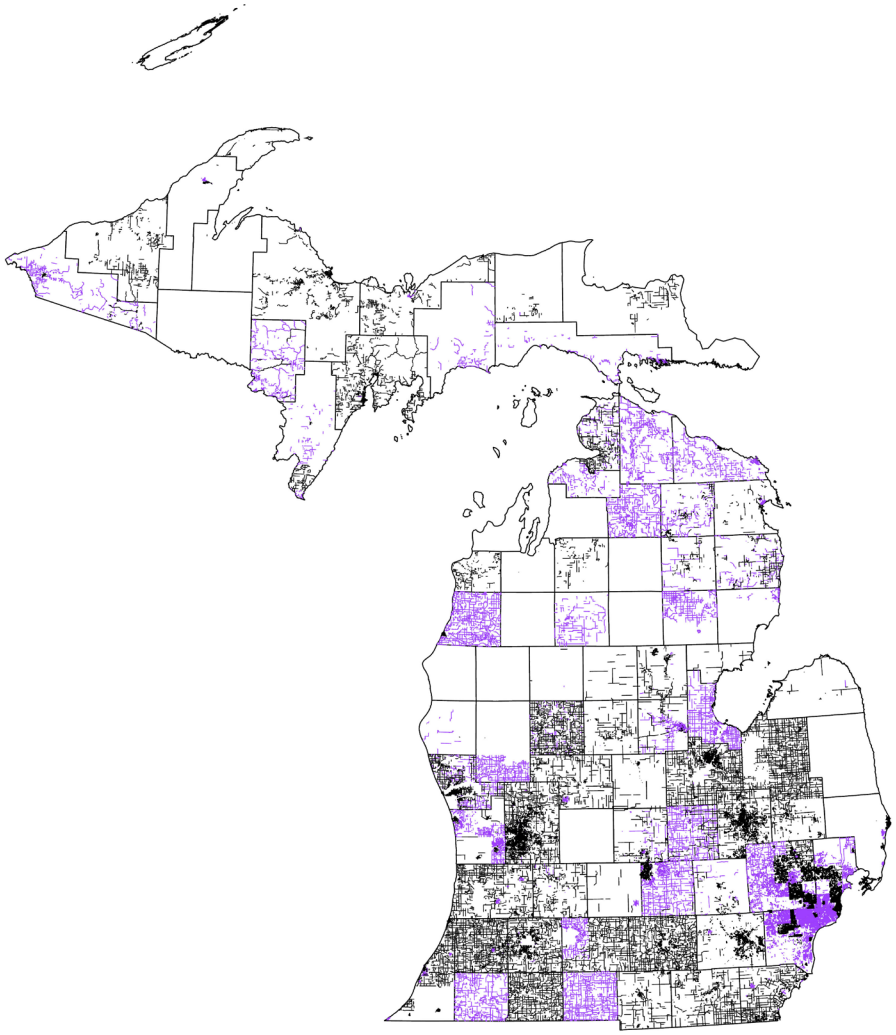
Figure 9: Source – 2024 PASER Data Collection by Lane Miles

2024 NON-FEDERAL-AID ROAD CONDITION (CONT.)

In 2024, the TAMC developed a one-time Work Project to allocate funds for Non-Federal-Aid data collection. This one-time program was announced statewide and gave local agencies the opportunity to work with their regions to submit reimbursement requests for their effort to collect condition data on non-federal-aid eligible roads. The TAMC received requests from 77 agencies totaling approximately $511,000 to cover the collection of over 24,000 lane miles. With a limited amount of funds, the TAMC was able to reimburse approximately $306,000 to 44 agencies through 14 Regional Planning Agencies/Metropolitan Planning Organizations to collect data on over 13,000 miles of non-federal-aid roads.

The success of this one-time program was evident when assessing the total number of NFA centerline miles collected in 2024 versus past years. From 2021-2023, an average of 12,527 NFA lane miles were collected each year. With the additional promotion and reimbursement for this effort in 2024, a total 24,850 NFA miles were collected, which is approximately 20% of the NFA network and close to the 27,850 centerline miles of FA collected.

Figure 10 provides a visual representation of the increased effort to capture condition data on the NFA system. **Roads in black were rated between 2021-2023, roads in purple were rated in 2024.** This map also highlights the additional efforts needed to fill in the gaps in the network. The TAMC is working to promote and provide resources for the collection of NFA data, as a full data set does not currently exist. To begin forecasting efforts on the NFA network, the TAMC would need a full data set and consistently reported data.



Non-Federal-Aid Road Network Data Collected between 2021-2024

Figure 10: Source – 2021-2024 PASER Data Collection

GRAVEL ROADS AND INVENTORY BASED RATING (IBR)

In 2018, gravel roads IBR was introduced. This is a similar effort to PASER on paved roads with supported training by TAMC based on a 0-9 rating scale. See example IBR numbers on page 14. The IBR rating system provides added tools to manage this important and often missed element of Michigan's road infrastructure.

Figure 11 shows the total lane miles of IBR ratings collected on gravel roads from 2022-2024. (This chart was revised from the 2022 report to show both Federal-Aid and NFA gravel roads.) At this time, the total number of gravel road lane miles is unknown. The TAMC continues to promote the collection of inventory and condition data throughout the state to develop a more accurate database. The large increase in mileage collected in 2024 is attributed to the NFA Work Project discussed on page 12.

Miles of Gravel Roads Rated Per Year

2022-2024

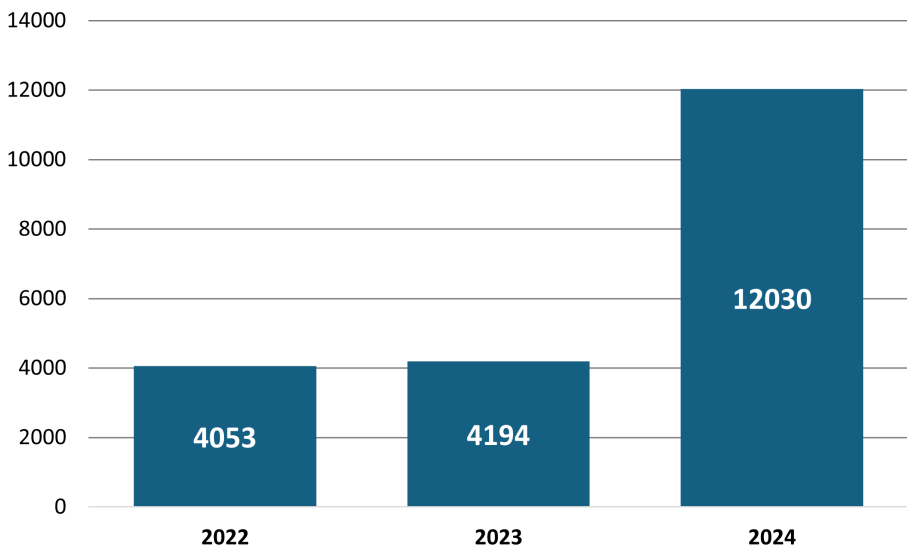


Figure 11: Source – 2024 IBR Data Collection

Some road agencies make the decision to return a paved road back to a gravel road. This is often due to costs but also as an asset management strategy that helps balance the total road network and improve the level of service expectations.

Note: Teams collecting PASER ratings for paved roads can also attend training to collect IBR for gravel roads.

County Road 581 Hill Cut, Dickinson County

To learn more about IBR and gravel road condition ratings, visit: https://ctt.mtu.edu/publications-resources/inventory-based-rating-system; https://ctt.mtu.edu/sites/default/files/resources/ibr-system/ibrmanual.pdf; or visit https://ctt.mtu.edu/training

EXAMPLES OF IBR NUMBERS ON GRAVEL ROADS

9 IBR Number 9

Surface Width: Good
Drainage Adequacy: Fair
Structural Adequacy: Good

8 IBR Number 8

Surface Width: Fair
Drainage Adequacy: Good
Structural Adequacy: Good

5 IBR Number 5

Surface Width: Good
Drainage Adequacy: Poor
Structural Adequacy: Poor

5 IBR Number 5

Surface Width: Poor
Drainage Adequacy: Good
Structural Adequacy: Good

Rabbit Bay Road, Lake Linden

2024 BRIDGE CONDITIONS

Mackinac Bridge, Saint Ignace

STATEWIDE BRIDGE CONDITIONS

The National Bridge Inspection Standards (NBIS) defines a bridge as a structure carrying traffic with a span greater than 20 feet. Condition ratings are based on a 0-9 scale and assigned for each culvert or the deck, superstructure, and substructure of each bridge. These ratings are recorded in the National Bridge Inventory (NBI) database.

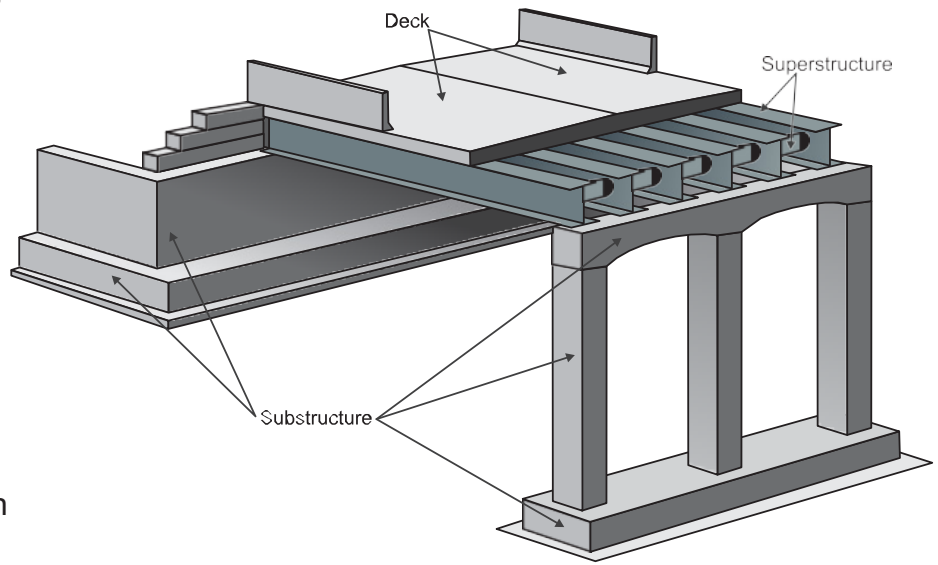


Figure 12 displays the percent of bridges in good, fair, and poor condition between 2015 and 2024. In 2024, around 7% of NBI structures in Michigan are in poor/severe condition. This means that 1,281 bridges need major rehabilitation or are candidates for replacement.

Since 2014, there has been a steady decline in the number of bridges in good condition and a rise in the number of bridges in fair condition. These trends indicate the continued statewide deterioration of bridges and the significant need for increased investment.

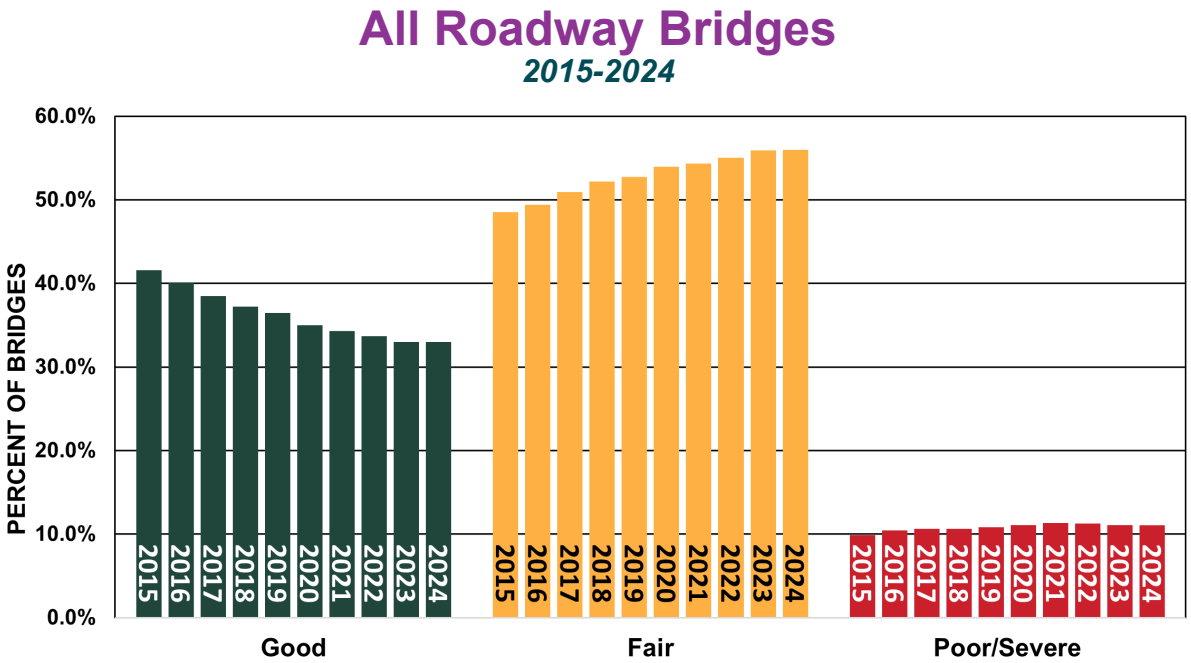


Figure 12: Source – 2015-2024 Michigan Bridge Inventory

COMPARING BRIDGE CONDITIONS

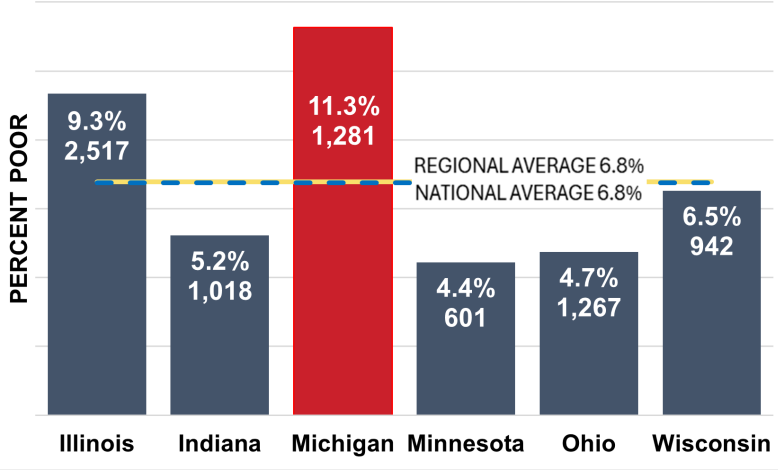
Michigan lags behind its neighboring Great Lakes States in terms of bridge condition. As displayed in **Figure 13**, Michigan has the highest percentage of poor bridges in the Great Lakes Region and also has slightly more poor bridges than the national average. More concerning, when measuring the bridges in severe condition or those requiring additional monitoring, immediate action, or at risk of closure, Michigan has over double the percentage of bridges with NBI ratings of three or less than the regional and national average.

Bridge counts have been added below the percentage condition ratings.

NBI CONDITION RATINGS		
7-9	GOOD CONDITION	Routine Maintenance Candidate.
5-6	FAIR CONDITION	Preventive Maintenance or Rehabilitation Candidate.
4	POOR CONDITION	Rehabilitation or Reconstruction Candidate. Routine maintenance often requires work or closures.
2-3	SERIOUS OR CRITICAL CONDITION	Emergency repair, high-priority major rehabilitation, or replacement candidate. **Unless closely monitored, it may be necessary to close until corrective action can be taken.**
0-1	SERIOUS OR CRITICAL CONDITION	Major Rehabilitation or Replacement Candidate **(road is closed to traffic).**

2024 Percent Poor Bridges

NBI 4 or Less



2024 Percent Severe Bridges

NBI 3 or Less

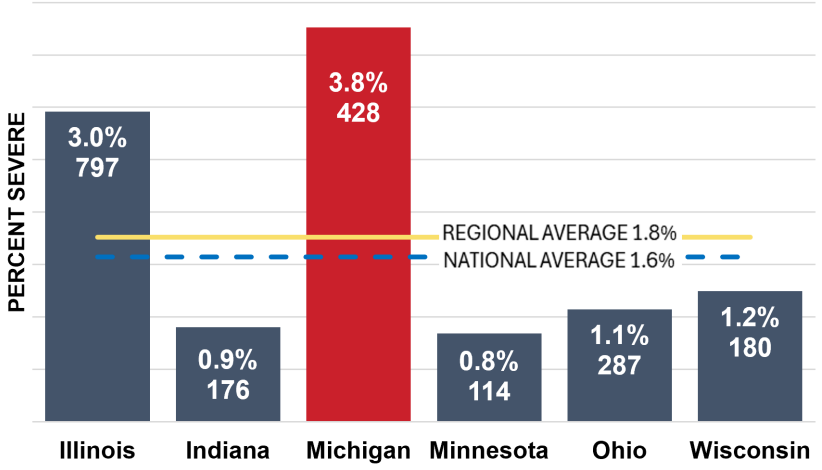


Figure 13: Source – 2024 Michigan Bridge Inventory

2024 MDOT BRIDGE CONDITIONS

Unlike roads, all bridges are considered federal-aid eligible. **Figure 14** shows that of the 4,504 bridges owned by MDOT, nearly 6% are in poor or severe condition, and 71% are in fair condition. This large population of bridges in fair condition represents previous investments in preservation.

Until recently, MDOT has been able to maintain the number of bridges in fair condition before they reach the poor category while increasing the number of bridges in good and fair condition. Aging infrastructure and rising construction and material costs, along with not enough existing revenue or new revenue to maintain our aging bridges, have reversed some of that progress.

Maintaining or improving the bridges rated good or fair is imperative to prevent the number of bridges in the poor category from increasing.

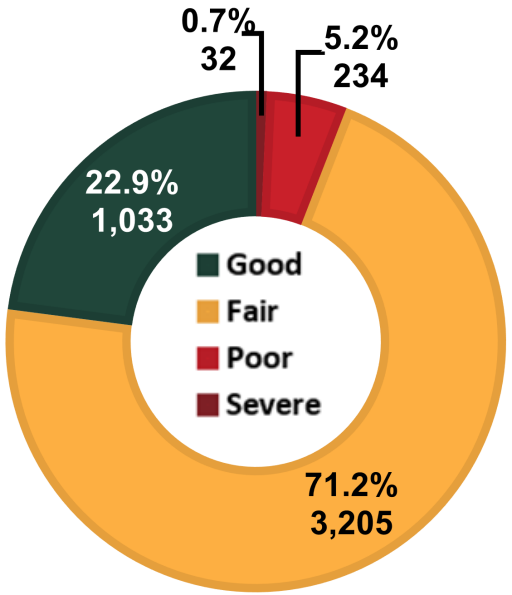


Figure 14: Source – 2024 Michigan Bridge Inventory

2024 LOCAL ROAD AGENCY BRIDGE CONDITIONS

There are 6,756 local road agency bridges. **Figure 15** shows that local road agencies continue to manage both a larger percentage of good bridges and a larger percentage of poor and severe bridges than MDOT. Many local road agencies are working to embrace preservation strategies but are prevented by the overwhelming need of the bridges in the worst conditions.

Figure 15 indicates that 596 bridges, 8.8% of the local agency bridges are in poor condition and are candidates for major rehabilitation or replacement. When the bridge no longer has the strength to bear the loads for which it was designed, the bridge must be posted for lower loads to maintain safety.

A bridge in severe condition often needs expensive emergency repairs, temporary supports, or shoulder closures. Ultimately, the inability to obtain funding will result in a safety risk to the public, and the bridge will have to be closed. At the end of 2024, 72 local road agency bridges were closed due to conditions. Even with the increase in bridge funding in the last five years, there has been more than a 20% increase in the number of bridges closed to the public.

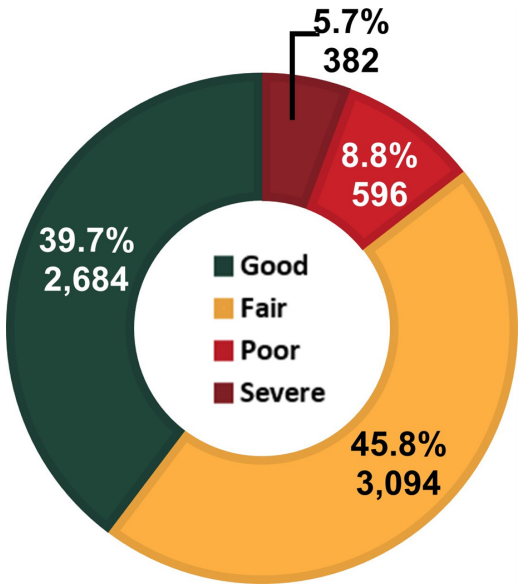


Figure 15: Source – 2024 National Bridge Inventory

Inkster Avenue, Kalamazoo, Michigan

CHANGES IN BRIDGE CONDITIONS

Figure 16 illustrates the changes in the condition of bridges throughout Michigan over a four-year period from 2021-2024.

During this period of time, there was a 5.42% improvement and an 11.3% decrease in the condition of bridges statewide. In 2024, the bridge system experienced an overall decline of 5.88%, compared to decline of 4.9% in 2023.

Bridges are deteriorating faster than road agencies can repair or replace them. Much of this is attributed to increased costs for labor, materials, mobilization, and construction in general. This trend is further examined in the Bridge Condition Forecast section.

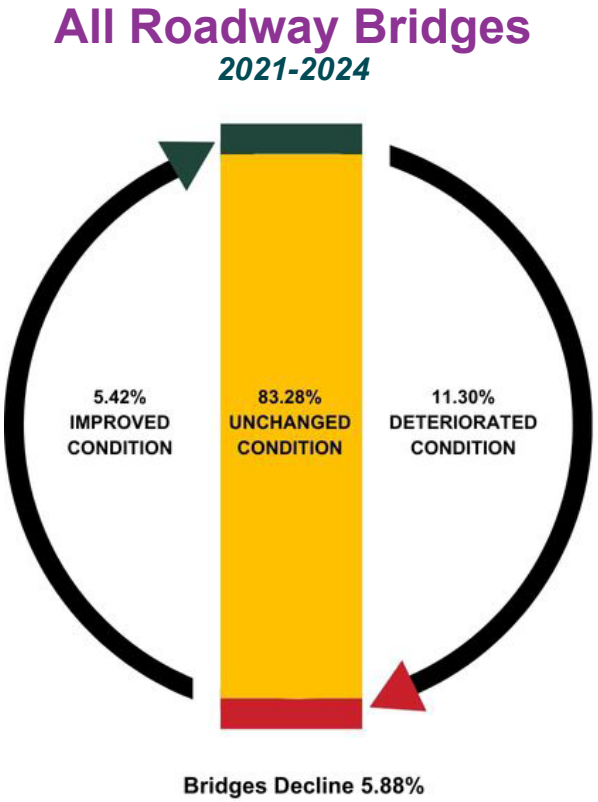


Figure 16: Source – 2024 National Bridge Inventory


Fenton Road, Flint, Michigan

BRIDGE CONDITION FORECAST

Working from current NBI bridge condition information, bridge deterioration rate, project costs, expected inflation, and fixed strategies, the Bridge Condition Forecasting System (BCFS) estimates the future condition of bridges. **Figure 17** indicates that the combined overall bridge condition of all Michigan's bridges is expected to continue to decline.

Comparing historical forecast information, the actual measured condition of bridges closely follows the predicted condition in past years. The measured condition in 2024 varies by 1-2% for all condition categories predicted in prior years. This analysis shows there is confidence in bridge condition forecasts as measured results are comparable with forecasted calculations.

The forecast predicts an increase in the percentage of bridges in poor condition, with 15% of all bridges to be in the poor or severe category by 2036. This indicates that without additional investment in bridge programs, an increased number of bridges will be at high risk for emergency repairs and closures over the next 10 years.

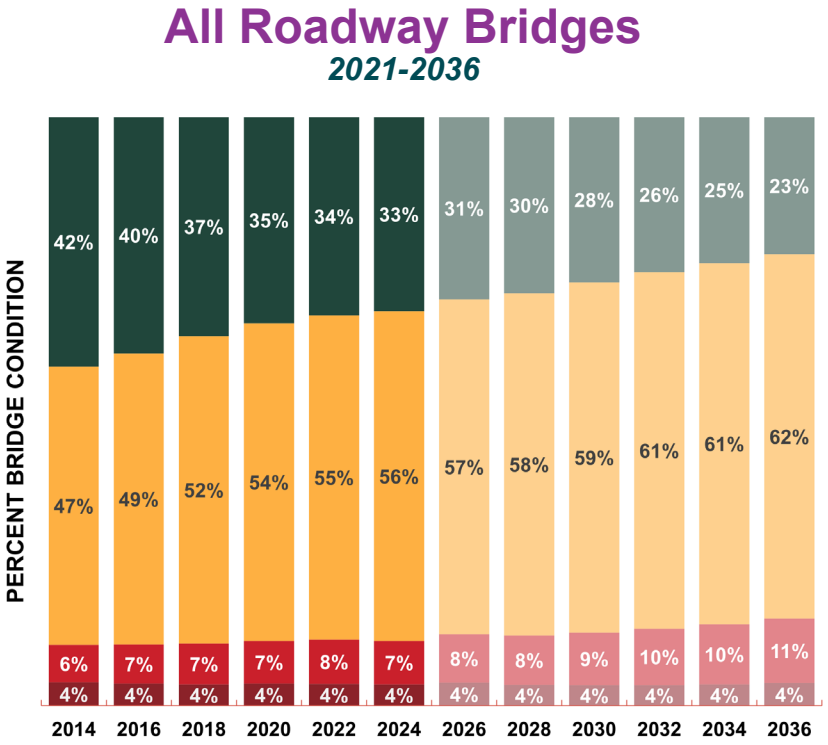


Figure 17: Source – 2024 TAMC

Blue Water Bridge, Port Huron

LOCAL BRIDGE ANALYSIS (NBI ONLY)

The overall system continues to be at risk, as indicated in **Figure 18**. The bridge conditions are projected to decrease if current investment is maintained. Local road agencies are responsible for more severe and poor bridges, 14.4%, than MDOT, with 5.8%.

Currently, there is a dedicated $50 million in funding annually for local road agency bridges. Due to increased costs for transportation infrastructure materials and labor, this amount will not help maintain or improve the condition of local road agency bridges. **Figure 18** illustrates how existing and increased funding could influence the number of bridges in good and fair categories.

With fewer bridges rated good and fair, there is an increase in poor and severe, leading to safety concerns and closures.

Indicated in red is how the percentage of bridges in good and fair condition will decline rapidly if funding remains the same. In 2024, 72 local bridges were closed, at this rate of decline, more bridges will be closed in the future.

To improve the overall bridge condition levels at 85% good and fair, a funding increase of $109.5M annually is needed, indicated in yellow. To improve the overall bridge condition levels at 95% good and fair, a funding increase of $189.5M in annual funding is needed, as indicated in green. An increase in bridge improvement funding is necessary to prevent the deterioration of the system and imminent closures.

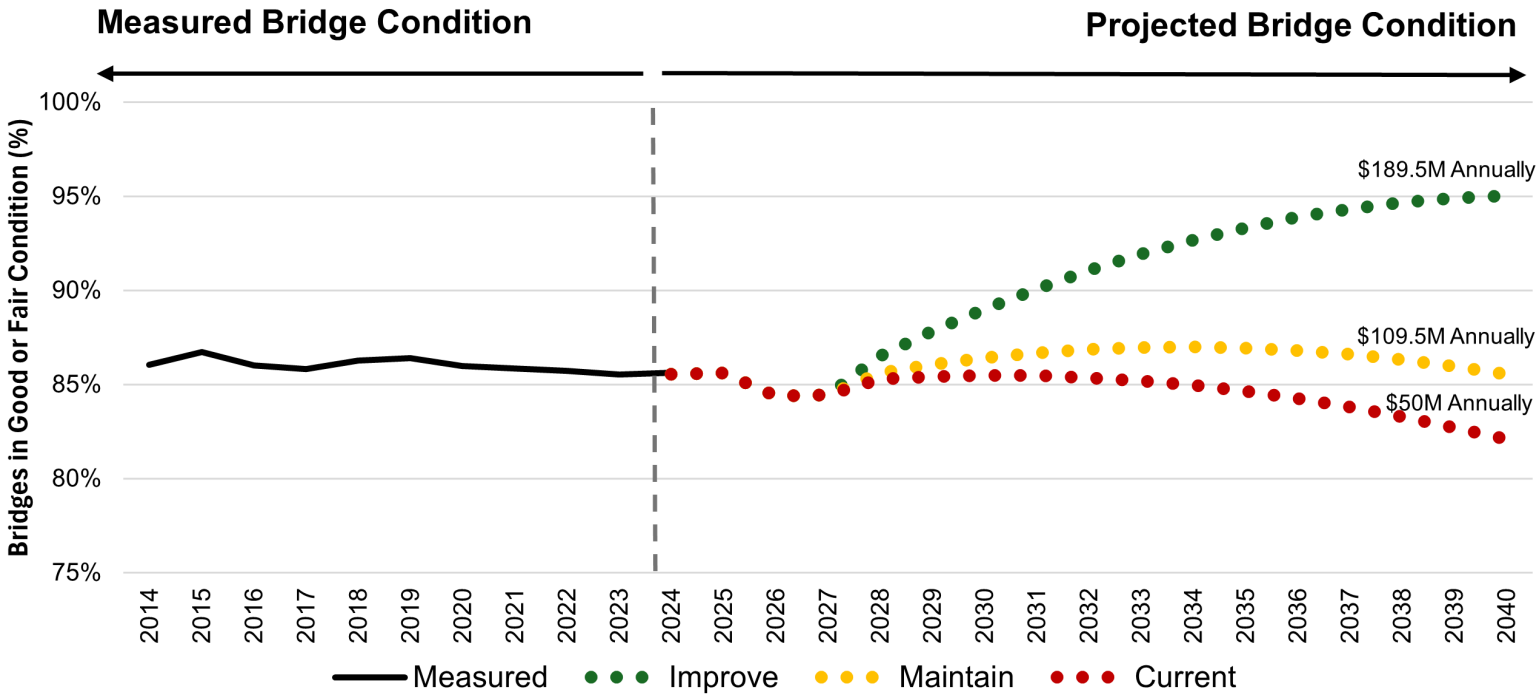
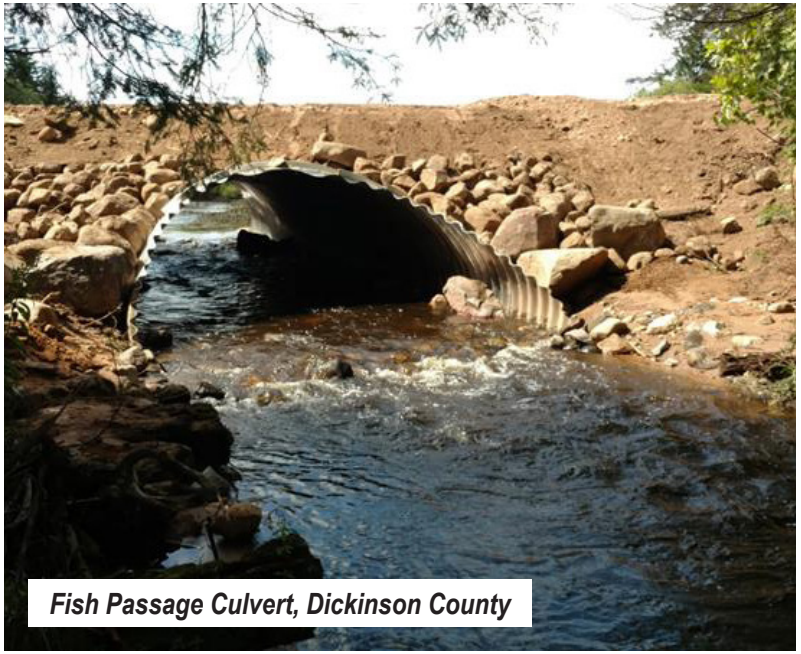


Figure 18: Source – MDOT

CULVERTS

The collection of culvert inventory and condition data provides a foundation for successful asset management planning and practice. A good asset management strategy requires having the location and condition of culverts to prevent failure and avoid injury or loss of life for travelers. Culvert asset management also ensures rivers, streams, and drains remain free-flowing to protect ecosystem health and make smart investments in transportation infrastructure.

The TAMC, with guiding support from the Bridge Committee, continues to promote and develop direction for culvert inventory and condition data collection. In March 2024, the Policy for Collection of Culvert Inventory and Condition Data was updated to include further guidance on frequency of condition data collection. It is recommended to collect the physical inventory and condition data on culverts for at least 20% of the network until 100% is inventoried. The Non-NBI Culvert Inspection Guide recommends culverts should be inspected at a minimum every five years for good rated structures, every four years for fair, every two years for poor, and every year for severe rated culvert structures.



Fish Passage Culvert, Dickinson County

As of 2023, submitting culvert data through Roadsoft became an option for local agencies. Once submitted, the data is added to the TAMC dashboards and Interactive Map. The TAMC is developing alternatives for culvert data submission that can crosswalk culvert data recorded in formats outside of Roadsoft. This will then assist with the collection of a full data set in the future. Presently, the TAMC has data on approximately 54,000 culverts, and there is no firm estimate of the total number of culverts in the state.

In 2025, the TAMC will allocate limited funding to some agencies that have indicated their interest in collecting culvert inventory and condition data within their jurisdiction. Results will be evaluated to determine if future funding allocations will be effective in the effort to complete a statewide data set.

NATIONAL BRIDGE INSPECTION STANDARDS (NBIS)

The final rule for the National Bridge Inspection Standards (NBIS) was published on May 6, 2022, and as part of the rule, the *Specifications for the National Bridge Inventory* (SNBI), 2022, was incorporated by reference, replacing the *Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges, 1995*. The SNBI includes a new item ID coding system and among the many other changes, it adds dozens of new inventory items to be populated for each NBI structure. Several of the existing items can be transitioned using a data crosswalk tool, but the new items will require manual entry to populate and in some cases calculations to be performed. This is a requirement for all bridges in the National Bridge Inventory (NBI) and will be the responsibility of the bridge owner.

Even though the final rule has been in place for several years, the implementation of the SNBI follows a phased implementation timeline, as seen in **Figure 19**. The final NBI data submittal using the 1995 coding guide took place on March 15, 2025, and the data submitted on March 15, of 2026 will be a transitioned/hybrid dataset using the available transition tool. Collection of SNBI-based data begins on January 1, 2026 for a March 15, 2027 data submittal. By March 15, 2028, the NBI data submittal will result in a complete SNBI-based dataset with collected and verified SNBI-based data for all bridges. In order to accommodate the updated inventory fields, MDOT is transitioning its MiBridge bridge management application to AASHTOWare BrM, and is targeting a December 2025 release. Even though the program will not be available until the end of the year, bridge owners are encouraged to begin collecting the data in advance and temporarily storing the data into a database such as the FHWA Data Crosswalk. The Data Crosswalk tool can be found on the FHWA website. SNBI training for local agency bridge owners has been conducted and training on AASHTOWare BrM is currently being developed. If you have any questions about the SNBI implementation or BrM, please contact the MDOT resource email at MDOT-Bridge-Data Request@Michigan.Gov.

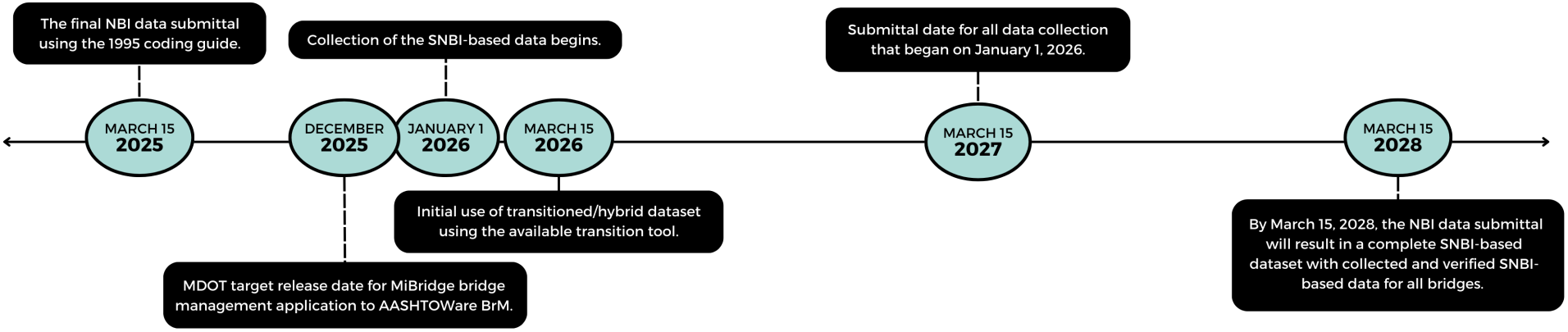


Figure 19: Source – MDOT

INVESTMENT REPORTING

Burcham Drive, East Lansing, Michigan

INVESTMENT REPORTING TOOL (IRT)

All Michigan road owning agencies are required by Act 51 to report road and bridge projects they have completed and projects that are planned to be completed in the next three years. The IRT is a free tool designed by TAMC to allow agencies to meet this requirement. IRT integrates with other software programs such as Roadsoft, Act 51 Distribution and Reporting System (ADARS), and JobNet. New enhancements that started in 2024 will continue into 2025. Enhancements include both technological upgrades and process changes that will improve data quality and assist users in saving time when reporting projects. This reporting is essential in telling the story of current investments and future needs of the transportation systems statewide.

A road agency can also use the IRT as a tool to manage its road and bridge assets with customized maps, data exports, and a variety of summary reports ,as displayed in **Figures 20** and **21**. The interactive map in the IRT can be used to display project information or provide visuals for presentations and public outreach.

Other IRT features include:

- Free training with online webinars, Help Desk, and YouTube videos.
- Submission and review status of TAMPs.
- Project reporting integration with Roadsoft software.
- PASER submission and review for planning agencies.
- Entering Traffic Signal Inventory information.
- Agency contact information to assist collaboration efforts.
- Submission of local agency pavement warranties.

What follows in this section are more details on road and bridge project summaries and traffic signal assets. As part of the IRT upgrades, statewide projects have been added to more accurately reflect overall investments. This data is used when forecasting road and bridge conditions, developing statewide investment strategies, and more.

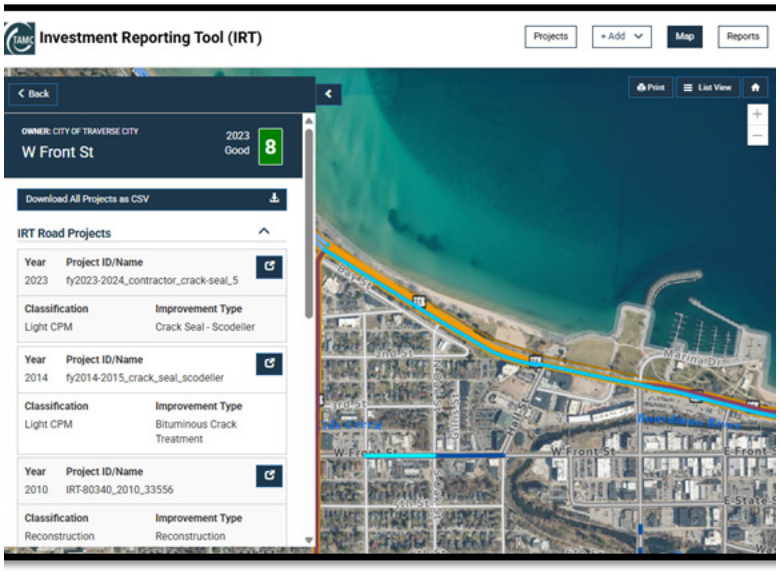


Figure 20: Source – IRT

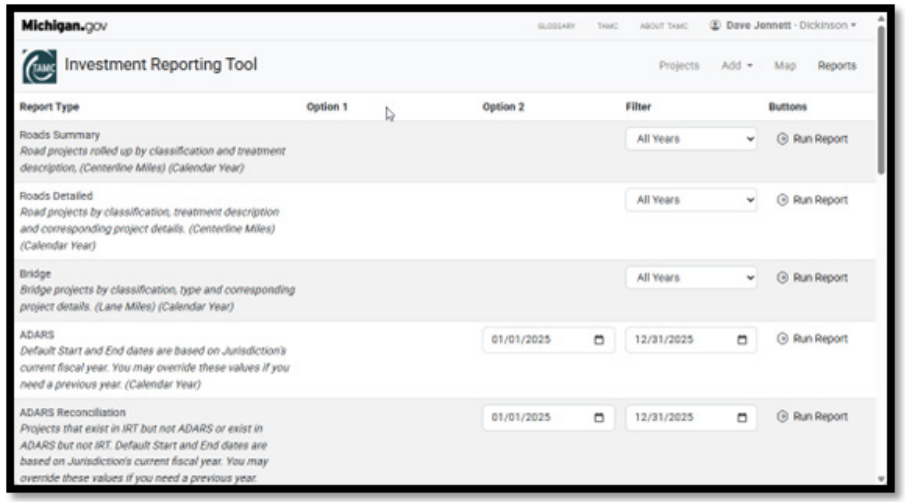


Figure 21: Source – IRT

ROAD PROJECT DETAILS

Michigan has over 253,000 lane miles of public roads. These roads are owned collectively by 617 agencies consisting of 83 counties, 533 cities/villages, and MDOT.

Although Michigan has one of the most complex road networks, it also offers opportunities for collaboration and cost-saving through partnerships, open communication, and comprehensive asset management planning. The “dig once” motto is the underlying theme in trying to balance multiple infrastructure efforts in each project location.

The IRT Road Projects are reported as these four classifications that assist in analysis and forecasting efforts:

- Reconstruction
- Rehabilitation
- Heavy Capital Preventive Maintenance
- Light Capital Preventive Maintenance

As displayed in **Figure 22**, 2020-2024 road projects submitted to the IRT cover over 91,053 lane miles of roads and roughly $9.73B* of total investment over the last five years. Less than 8% of the road network is under construction in a single year; it would take an estimated 12-13 years to improve all roads.

YEAR	PROJECTS REPORTED	TOTAL COST	TOTAL LANE MILES	% OF NETWORK (ESTIMATED)
2020	5,564	$1.68 Billion	20,081	7.9%
2021	5,571	$1.82 Billion	19,607	7.7%
2022	5,365	$1.70 Billion	18,433	7.3%
2023	5,007	$2.47 Billion	18,774	7.4%
2024*	4,291*	$2.06 Billion*	14,158*	5.6%*
TOTAL	**25,798***	**$9.73 Billion***	**$91,053***	**36%***

Figure 22: Source – 2020-2024 TAMC

* IRT reporting is based on each agency’s Fiscal Year to sync with Act 51 financial reporting. This correlation is significant as many counties and cities have an annual 2024 reporting deadline of May or June, which is after this report is released. A more complete 2024 IRT data set will be available in the fall of 2025.

Note: IRT summaries are updated with the addition of statewide projects unavailable in previous reports. Also, newly developed roads are not reported in the IRT.

BRIDGE PROJECT DETAILS

Of Michigan's 617 road agencies, 352 own and maintain bridges. Approximately half of Michigan's 11,000 bridges are owned by local road agencies and the other half by MDOT. Bridge asset management considerations for individual road owning agencies can greatly impact planning and project considerations.

Bridges can vary substantially in their length, deck area, and other factors. Replacing a bridge can often significantly impact the local economy as well as emergency services, regardless of agency size.

As displayed in **Figure 23**, investment in completed bridge projects ranged from $263M to $319M with roughly $1.45B reported from 2020-2024. If an average of 4% of bridges in the state are improved per year, it would take 25 years to improve all bridges. Reminder: IRT reporting is based on when projects are completed versus started or obligated per year.

Note: The Rouge River Bridge, Zilwaukee Bridge, and other complex or large bridges are not included in statewide totals since the high cost of this type of project would significantly shift totals and averages.

YEAR	PROJECTS REPORTED	TOTAL COST	% OF NETWORK (ESTIMATED)
2020	362	$263 Million	3.2%
2021	527	$318 Million	4.7%
2022	428	$265 Million	3.8%
2023	484	$319 Million	4.3%
2024*	465*	$282 Million*	4.1%*

Figure 23: Source – 2020-2024 TAMC

** Reference note on page 27.*

Burroughs Road, Kent County

ROAD CONDITIONS AND INVESTMENT

A Look at PASER Data and MTF Distributions Over Time

As displayed in **Figure 24**, 18 years of PASER data is displayed in a timeline to tell the story of how asset management strategy and investment can impact the condition of the network.

Between 2006 and 2015, there was a steady decline in the condition of the federal-aid road network. During this time funding remained stagnant, and the TAMC was working to develop asset inventory and condition assessment processes and share effective asset management strategies.

The development of a Transportation Asset Management Plan (TAMP) requires agencies to inventory and conduct condition assessments on pavement, bridges, culverts, and signals. Agencies assess their revenues and compare historic spending to condition data. From this, goals and strategies are developed to improve or maintain the transportation network.

With the introduction of additional funding in 2017, many agencies were able to move from the "worst first" fix approach to a "mix of fixes" approach targeting the right fix, at the right time, in the right location. This strategy has changed the way transportation agencies prioritize projects and systemically maintain and improve their network. With additional investment and new asset management strategies, agencies are reporting improvements to the condition of their transportation network.

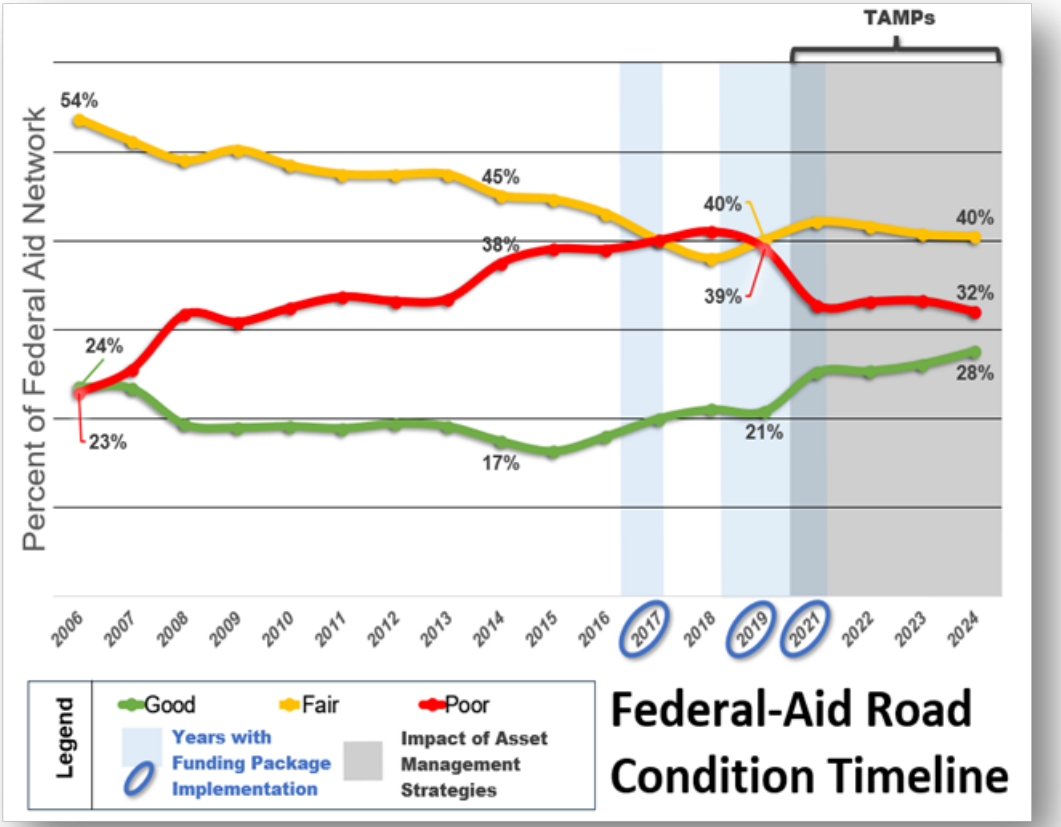


Figure 24: Source – TAMC

ROAD CONDITIONS AND INVESTMENT (CONT.)

A Look at PASER Data and MTF Distributions Over Time

As displayed in **Figure 25**, beginning in 2017, funding has increased even when levels are adjusted for inflation. The increase in funding starting in 2017, directly correlates with the system condition improvements beginning the same year, as displayed in **Figure 24**. Furthermore, a steep incline of good/fair and corresponding decline in poor, may indicate funding and asset management strategies when paired together are successful in improving overall system condition.

Between 2006 and 2015, state legislators were aware of the steady decline in road conditions and worked to find a solution to the ever-increasing cost of maintaining the network. In 2015, a new road funding package was passed that would first begin in 2017 with the increase of taxes at the pump and on vehicle registrations. This phase of the package was anticipated to bring $600 million in extra investment annually and the funds would follow the Michigan Transportation Fund (MTF) distribution formula. Then, starting in 2019, a phased approach of general fund allocations would provide an additional $600 million a year by 2021. These funds would also follow MTF formula distribution.

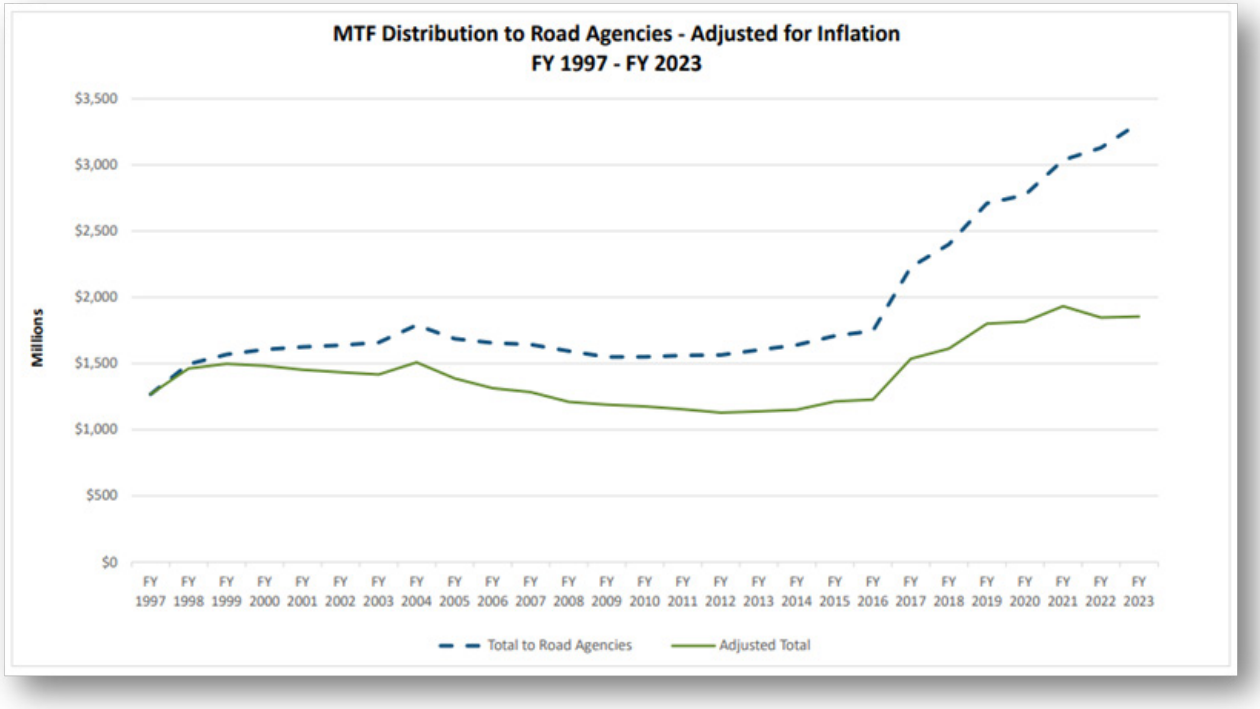


Figure 25: Source – The Michigan House Fiscal Agency. Fiscal Brief: MTF Distribution Formula to Local Road Agencies – February 21, 2025

FURTHER ANALYSIS ON INVESTMENT

Another way to visualize these changes is displayed in **Figure 26**, with a five-year (2019), 10-year (2014), and 18-year (2006) snapshot of federal-aid road condition data (PASER).

- 2024 marks the fifth year in a row of steady overall system improvements, and the fourth year where the percentage of good is greater than in 2006.
- Comparing the five and 10-year snapshots to the 18th year, a significant decline in pavement condition occurred between 2006 and 2014 with a 15% increase in poor condition and 14% decrease in fair condition.
- From 2014 to 2019, the federal-aid network condition worsened by an additional 1%. Between 2006 and 2019, approximately 14,000 lane miles fell into poor condition.
- When comparing the five-year (2019) snapshot with the most recent data in 2024, there was a 7% increase in good and a 6% decrease in poor. Throughout this five-year time frame, the percentage of the network in fair condition remained steady.

The decline in pavement condition between 2006 and 2019, as well as the improvement between 2019 and 2024, is attributed to many factors. However, state transportation funding and local asset management strategies may play a significant part in telling the story behind the data.

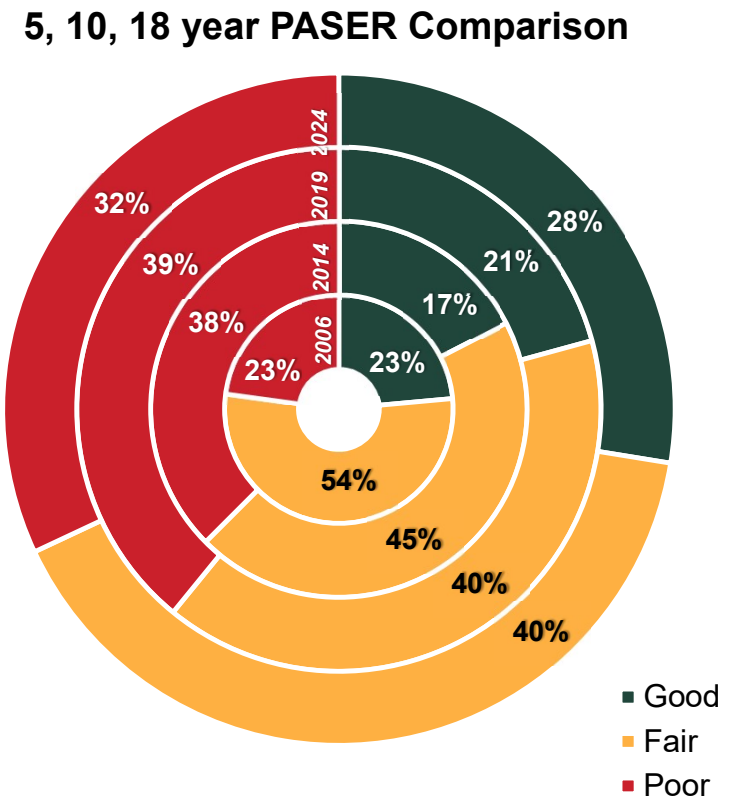


Figure 26: Source – TAMC

With good local asset management practices and the implementation of state funding programs, road agencies throughout Michigan are successfully investing in the right fix, at the right time, at the right place.

The TAMC will continue to promote and advise on successful asset management strategies and inform on progress made. As discussed in the forecasting section of this report, additional investment will be needed to keep up with inflation and the consistent utilization of our roadways and persistent deterioration.

TRAFFIC SIGNAL INVENTORY

Since 2018, TAMC's charge expanded from roads and bridges to include both culverts and traffic signals as key transportation assets.

Traffic signals are different from other assets in how they are owned and maintained. Due often to specialized equipment or available work crews, many road agencies or utilities help maintain signals for their neighbors or statewide partnerships with MDOT.

A county may maintain the signals for several cities and villages in its nearby area. In some situations, a consulting firm may maintain signals for one or more agencies. Some cities and villages may not own any signals, with the primary traffic light being owned and maintained by a county or MDOT.

In December of 2023, a survey of signalized intersections was initiated using the IRT. Some key findings from 435 agency survey responses can be found in **Figures 27** and **28**.

- There have been 435 responses from the 617 road-owning agencies statewide.
- The reported 7,175 signalized intersections statewide have an annual operation and maintenance cost of approximately $24,621,476. (This amount does not include planned upgrades or new investments.)
- Three agencies own over 600 traffic signalized intersections while 266 agencies do not own any.

TYPE OF ROAD-OWNING AGENCY (NUMBER OF RESPONSES)	NUMBER OF ROAD AGENCIES OWNING SIGNALIZED INTERSECTIONS		TOTAL NUMBER OF SIGNALIZED INTERSECTIONS ASSETS OWNED	% TOTAL OF NUMBER OWNED	TOTAL ANNUAL MAINTENANCE COST
	OWN	DON'T OWN			
Village (173)	133	40	81	1%	$106,070
City (210)	104	106	1,996	28%	$8,565,673
County (51)	29	22	1,948	27%	$8,149,733
MDOT (1)	N/A	1	3,150	44%	$7,800,000
TOTAL BASED ON 435 AGENCY RESPONSES	**266**	**169**	**7,175**	**100%**	**$24,621,476**

Figure 27: Traffic Signal Summaries Statewide – Source: IRT Traffic Survey Responses

BREAKDOWN OF AGENCY SIGNAL OWNERSHIP	NUMBER OF SIGNALS
Own no signals	266
Own 1-5 signals	100
Own 6-20 signals	35
Own 21-100 signals	25
Own 101-600 signals	6
Agencies that own 601+ signals	3

Figure 28: Breakdown of Agency Signal Ownership – Source: IRT Traffic Survey Responses

2024 YEAR IN REVIEW

Grand Rapids, Michigan

TAMC HIGHLIGHTS AND ACCOMPLISHMENTS

- **Hosted the first-ever Joint Integrated Infrastructure Conference** with the Michigan Infrastructure Council (MIC) and Water Asset Management Council (WAMC).
- **Provided additional funding** to support Non-Federal-Aid PASER data collection efforts.
- **Increased annual budget** and developed a new allocation formula to distribute annual reimbursements to MPOs and RPAs.
- **Used Investment Reporting Tool** (IRT) for road and bridge projects in the pavement and bridge condition forecasts.
- **Developed a new Culvert Data Collection** policy and culvert award program.
- **Over 300 road agencies collected road condition data** on 90% of their federal-aid lane miles.
- **Upgraded many tools to latest technology** standards. (IRT, Dashboards, and Interactive Map.)
- **Enhanced IRT reporting** by road agencies to include more statewide projects from 2020-2024.
- **Over 28,000 road and bridge improvement projects** covering 91,000 lane miles and $10.4B investment from 2020-2024.
- **The highest percentage good rated** federal-aid roads since the beginning of PASER data collection.

Waldon Road, Oakland County

To learn more on TAMC policies, dashboards, and interactive map, visit: TAMC Policies, TAMC Dashboards, TAMC Interactive Map (IMAP)

INTEGRATED INFRASTRUCTURE CONFERENCE

In 2024, TAMC, in a joint effort with the MIC and WAMC, held the first Integrated Infrastructure Conference (IIC). Spanning over a day and half, the conference covered topics ranging from “A Statewide Culture of Asset Management” to “Asset Management Plans” to “Reimagining Utility Infrastructure for Closed-Loop Sustainability.” Many panel sessions provided a diverse range of perspectives on various asset management topics. Many sessions included panelists from TAMC, and some sessions were transportation focused, including:

- Keynote: Brad Wieferich, Director of Michigan Department of Transportation
- 2023 Pavement Surface and Evaluation Rating (PASER) Data Analysis and Update
- Updates on Asset Management Plans and What is Next
- What is Eligible for Reimbursement Through TAMC
- Transportation Asset Management Plans From Different States

Attendees included representatives from the state, local, regional, private, and non-profit sectors in Transportation, Finance, Water, Utilities, Communities, and Media. Due to the success of the first Integrated Infrastructure Conference, the MIC, TAMC, and WAMC will continue to host this conference biennially. More to come in 2026!

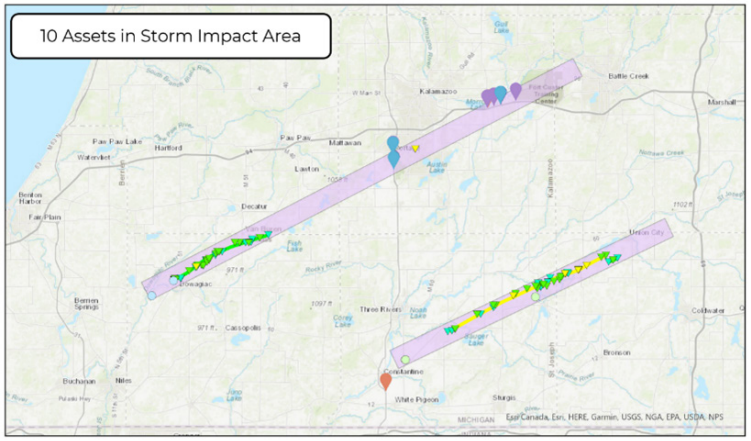
TAMC AWARD WINNERS

MDOT Ancillary Structures Program – Organizational Achievement Award

The TAMC has established the Organizational Achievement Award to acknowledge those agencies that have incorporated the principles of asset management and adopted an asset management plan to help guide their investment decisions. All Public Act 51 road agencies are eligible to be nominated for this award. In 2024, the MDOT Ancillary Structures Program received the award for its achievements.

Organization Achievement Award Michigan Department of Transportation

Left to Right: Mike Halloran, Structure Program Division Administrator, Bureau of Bridges and Structures, MDOT. Terry Johnson, HNTB



As a first-of-its-kind initiative for the state, the Ancillary Structures Program is revolutionizing the DOT's funding strategies for public roadway stewardship and enhancing road users' safety and quality of life. As structures, like culverts and signs, are inspected and inventoried by program inspectors, MDOT staff can now quickly obtain and share real-time information on asset conditions, inspection progress, requests for action (RFA), and more. With the program's process improvements, MDOT has reduced the closeout times of RFAs and can more efficiently plan and prepare for repairs, thus reducing travel times and funding resources. In turn, the Ancillary Structures Program provides an efficient, predictable, and reliable digital infrastructure solution that allows the department to proactively prepare and identify areas of need while crafting programmatic approaches to address asset safety issues compared to reactive and more expensive fixes.

Following the May 7, 2024 tornadoes that swept through Kalamazoo County, HNTB was able to support MDOT by extracting wind speed information from public databases to create storm impact areas in purple as indicated in the map. By overlaying the impact area with the program's asset inventory database (pinpoint symbols), a detailed and sortable impact map was created that showed potentially affected assets that high winds may have damaged. Affected assets consisted mostly of poles and retaining walls and are identified in the map as blue, purple, and orange pinpoints. The Ancillary Structures Program assisted MDOT by quickly mobilizing crews to assets within the storm impact area, which efficiently prioritized post-event inspection efforts.

For more program updates and information, visit: the MDOT Ancillary Structures website.

TAMC AWARD WINNERS (CONT.)

Rick DeVries – Carmine Palombo Individual Achievement Award

Additionally, TAMC also wants to recognize individuals providing outstanding support for Asset Management. Nominees for the Carmine Palombo Individual Achievement Award can include elected officials, support staff from state agencies, regional/metropolitan planning organizations, county road commissions, local units of government, the education community, or other individuals involved in promoting Michigan's TAMC programs.

As a result of his dedicated service and education for asset management principles in all of his hard work, Rick DeVries is the recipient of the Carmine Palombo Individual Achievement Award for 2024. Rick has demonstrated substantial knowledge of transportation asset management, beginning in 2002 when he provided staff support to the City of Grand Rapids 21st Century Infrastructure Task Force. As a result of his research and advocacy, the committee incorporated into recommendations "That an Asset Management system be developed to guide investments in street infrastructure" and "That an evolving 'mix of fixes' be utilized to upgrade and maintain the street system and that the mix be based upon objective condition assessment." As staff support to the City's Sustainable Streets Task Force in 2012 – 2014, Rick utilized these asset management principles and RoadSoft analysis to help the task force develop a 15-year investment strategy that is governed by asset management.

The Vital Streets plan and guidelines, as well as the City's Fiscal plans beginning in FY2015, have instituted asset management in the City's investment strategies. In 2012, the City's 600 miles of streets were in 40% good and fair condition. Currently, the City's streets are in 56% good and fair condition, with a goal of 70% good and fair condition by FY2030. **Figure 29** illustrates how the City of Grand Rapids has improved the condition of its road network overall through efforts made by Rick and his colleagues.

Vital Streets Program: Improving Transportation

Left to Right: Rick DeVries, PE, Assistant City Engineer, City of Grand Rapids. Joanna I. Johnson, TAMC Chair

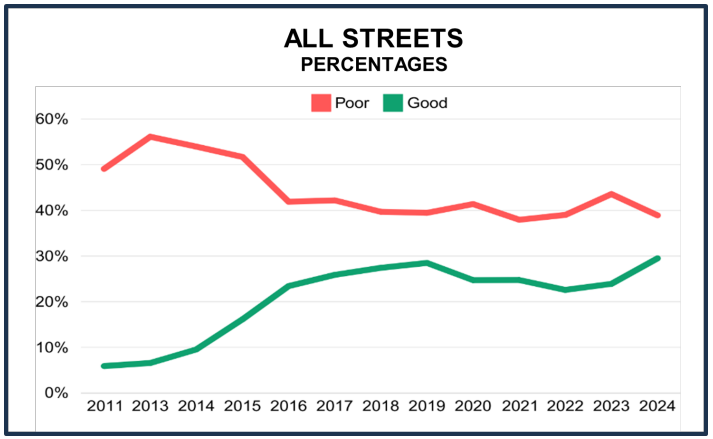


Figure 29: Source – City of Grand Rapids

TRAINING, WORK PROGRAM, AND BUDGET OVERVIEW

TAMC training in 2024 included both onsite sessions and continued virtual format training for greater access. **Figure 31** shows the numerous trainings and outreach efforts that are defined in the TAMC strategic work program. Trainings held by MTU/CTT and DTMB/CSS continue to show significant attendance and prove to be valuable to the transportation sector. The TAMC FY2024 budget is shown in **Figure 32**, with a breakdown of all area expenses.

Tim Colling, PE, PhD, MTU and Mark Holmes, GISP, DTMB

Figure 30: Source – TAMC 2024

MTT/CTT – TRAINING PROGRAMS	NUMBER OF TRAINING EVENTS	NUMBER OF PARTICIPANTS
TAMC Conference	1	217
PASER Training	8	378
Transportation Asset Management and Gravel Road Basics for Local Officials	7	236
Briand AM Training Series Workshop	1	6
IBR System Training	3	183
Pavement AMP Workshop	1	15
Culvert AM Webinar	2	153
Compliance Plan Training Web	3	34
Figures Provided by MTU's Training Report – Total:	**26**	**1,222**
DTMB/CSS – TRAINING PROGRAMS	**NUMBER OF TRAINING EVENTS**	**NUMBER OF PARTICIPANTS**
IRT Training	6 Webinars	195

Figure 31: Source – TAMC 2024

FY2024 BUDGET OVERVIEW	
Regional Program and Data Collection	$1,116,400
Central Data Agency and Technology	$380,000
Training and Education Facilities	$350,000
Council Express	$30,000
TOTAL	**$1,876,400**

Figure 32: Source – TAMC 2024

Note: Administrative staff is provided by MDOT and not included in the TAMC budget.

TRANSPORTATION ASSET MANAGEMENT PLANS (TAMP)

Legislation from PA 325 of 2018 requires local road agencies with 100 or more miles of certified roads to submit a TAMP. These comprehensive plans provide local road agencies greater insight into their inventory of assets and future needs. TAMP required elements include:

1. Asset Inventory (roads, bridges, culverts, and signals)
2. Performance Goals
3. Risk of Failure Analysis
4. Anticipated Revenue and Expenditures
5. Performance Outcomes
6. Coordination Clause
7. Proof of Adoption by Governing Body

TAMC has created resources and training opportunities to assist local road agencies, including a template that utilizes the agencies' previous data collection efforts and dashboard summaries.

There are over 123 road agencies that are striving to meet these state legislative requirements. MDOT is mandated by the Moving Ahead for Progress in the 21st Century (MAP-21) legislation to develop a TAMP.

To learn more on TAMPs, PA 325, and training opportunities, visit: Public Act 325, TAMP Resources and FAQs, Training, Asset Management Plan Templates Michigan Largest 123 Road Agencies

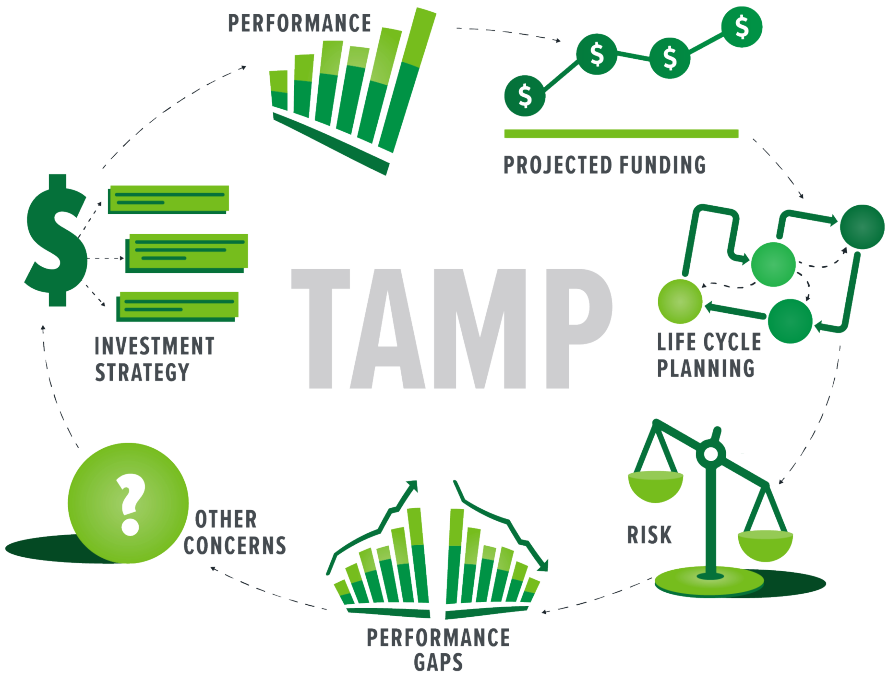


Figure 33: Source – Applied Pavement Technology www.appliedpavement.com

TRANSPORTATION ASSET MANAGEMENT PLANS (TAMP) (CONT.)

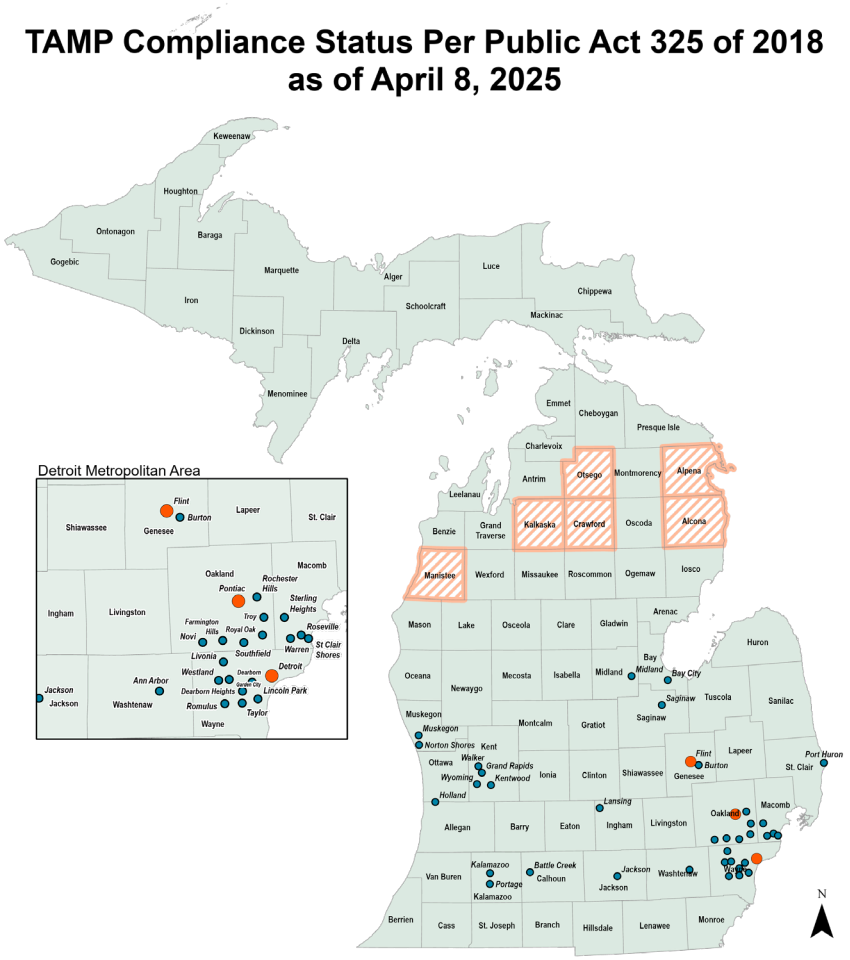


Figure 34: TAMP Compliance Status: Source – TAMC 2024

In October 2024, all required agencies that had not submitted a TAMP were notified of their non-compliance per **Public Act 325 of 2018**. Each agency was notified of their non-compliance and given 120 days to submit their TAMP to avoid any potential withholding of funds. During the 120-day time frame, TAMC worked with several agencies to answer questions and assist in finalizing their TAMP.

As of February 2025, 93% of the local road agency TAMPs covering 2024-2026 have been submitted to the TAMC. This was a tremendous undertaking, and the TAMC appreciates the effort agencies took to practice Asset Management and ensure compliance.

Updates to TAMPs are due every three years on the schedule prescribed by the TAMC Policy for the Submittal and Review of Asset Management Plans. **Figure 34** displays all agencies required to submit a TAMP on the prescribed schedule. Agencies in green are compliant with Public Act 325 of 2018, agencies in orange are not compliant as of April 8, 2025.

Starting in 2025, the TAMC will incorporate a form in the IRT that provides agencies an opportunity to address if progress is being made towards their goals. This will ensure all agencies submitting a TAMP moving forward are in compliance with the October 1, 2025 rule in **PA 325 of 2018**.

SPOTLIGHT ON MDOT: TAM DATA ASSESSMENT

In 2024, MDOT completed a one-year process to evaluate MDOT's asset management data needs utilizing the TAM Data Assistant Tool, within the TAM Data Guide: https://www.tamdataguide.com/. The assessment process, as shown in **Figure 35**, helps transportation agencies evaluate and improve their data management practices for asset management, identifying asset data needs and asset data uses. It ensures transportation agencies combine their data capabilities with asset management goals and federal requirements, which in turn helps in making data-driven decisions, improving the allocation of resources, and ensuring compliance.

MDOT evaluated their data, performing 17 assessments of 25+ asset programs. The assessment helped MDOT prioritize actionable recommendations for improving data governance, department integration, and overall efficiency. The assets evaluated as part of this assessment included pavement, bridge, ancillary structures, ITS, signals, signs, freeway lighting, underground electrical conduits, pavement markings, other roadway delineation, rest areas, roadside parks and welcome centers, carpool parking lots, pump stations, catch basins, curb and gutter, stormwater control measures, and cable barriers/ guard rails.

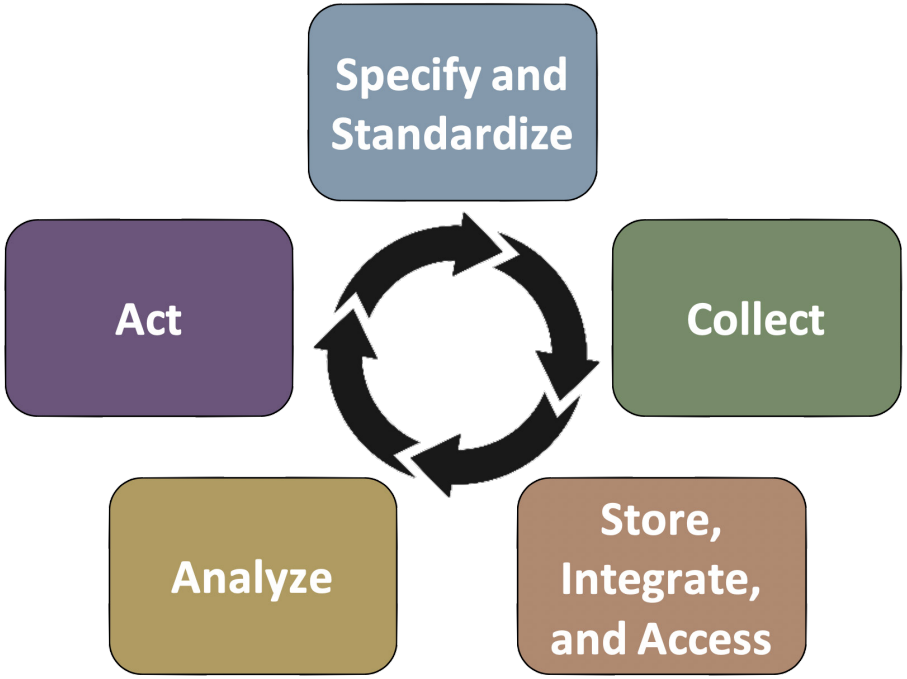


Figure 35: MDOT

By using the TAM Data Assessment, MDOT is enhancing its long-term asset performance tracking, improving data transparency, and strengthening infrastructure investment planning. The framework created by AASHTO ultimately enables transportation agencies to maximize the value of their asset management programs through better data management.

In **Figure 35**, results of the assessment show that out of the 17 asset assessments, six assets exceeded basic system and database needs, three assets were well organized but seeking more advanced tools; four assets had a formalized approach but also had significant gaps; and four assets were informal programs and most likely managed on a project-by-project basis. MDOT is now taking these results and developing action plans for each of the asset areas, using this information to develop a department-wide plan for enterprise asset management.

REGIONAL AGENCIES

Regional Planning Agencies (RPA) and Metropolitan Planning Organizations (MPO) throughout the state are responsible for managing and coordinating inventory data collection and asset management efforts in their regions. TAMC provides guidance to assist with their asset management activities and collaborates with the following agencies:

Battle Creek Area Transportation Study
https://www.bcatsmpo.org

Bay County Area Transportation Study
https://www.baycountymi.gov/Transportation

Central Upper Peninsula Planning and Development
https://cuppad.org

East Michigan Council of Governments
https://www.emcog.org

Eastern Upper Peninsula Regional Planning & Development
https://www.eup-planning.org

Genesee Lapeer Shiawassee Region V Planning
https://www.geneseecountymi.gov/government/board_of_commissioners/gls_region_v_committee.php

Grand Valley Management Council
https://www.gvmc.org

Kalamazoo Area Transportation Study
https://www.katsmpo.org

Macatawa Area Coordinating Council
https://www.the-macc.org

Midland Area Transportation Study
https://midlandmpo.org

Networks Northwest
https://www.networksnorthwest.org/

Northeast Michigan Council of Governments
https://www.discovernortheastmichigan.org/

Region 2 Planning Commission
https://www.co.jackson.mi.us/922/Region-2-Planning-Commission

Saginaw County Metropolitan Planning Commission
https://www.saginawcounty.com/departments/planning/

Southcentral Michigan Planning Council
https://smpcregion3.org/

Southeast Michigan Council of Governments
https://www.semcog.org

Southwest Michigan Planning Commission
https://www.swmpc.org

Tri-County Regional Planning Commission
https://www.mitcrpc.org

West Michigan Regional Planning Commission
https://wmrpc.org/

West Michigan Shoreline Regional Development Commission
https://wmsrdc.org/

Western Upper Peninsula Planning & Development
https://www.wuppdr.org

AGENCY SHOWCASE: MACATAWA AREA COORDINATING COUNCIL

Pathway Pavement Condition Rating Program

The Macatawa Area Coordinating Council (MACC) covers cities and townships in Allegan and Ottawa counties. In 2024, they started creating their 2025 Active Transportation Plan. As part of the process, they developed and implemented a Pathway Pavement Condition Rating Program. In September 2024, the MACC successfully completed its ratings - a significant achievement for the region's active transportation network. As the first planning agency in Michigan to conduct such a large-scale program, MACC staff rated over 190 miles of shared-use paths, equaling 950 path segments. The MACC has decided to rate the paths every other year.

With funding assistance from the Community Enhancement Program (CEP), electric bikes were purchased and used by staff to rate the pathways. The Ottawa County Department of Strategic Impact helped design the application for field data collection.

In order to be rated, the pathways needed to be made of concrete or asphalt, located in a legal right-of-way, and wider than six feet. The program covered pathways in Holland, Zeeland, Holland Charter Township, Laketown Township, Park Township, Port Sheldon Township, and Zeeland Charter Township.

Using a 1-6 scale, pathways were categorized as Good (5-6), Fair (3-4), and Poor (1-2). Staff members also identified and inventoried 170 retaining walls, 91 bridges, and various other issues such as overgrown vegetation, erosion, ponding water, and tree root intrusions.

This data played a key role in developing the 2025 Active Transportation Plan. It will also assist municipalities in making decisions about non-motorized pathways and help secure future grants for improvements. The program's success provides a replicable model for other communities interested in conducting similar pathway assessments. Any organization that would like to learn more can reach out to Eric Dykstra, Transportation Planner at the MACC, at edykstra@the-macc.org.

Photo courtesy of the Macatawa Area Coordinating Council

AGENCY SHOWCASE: GRAND VALLEY METROPOLITAN COUNCIL

GVMC Pavement Condition Collection Vehicle

Accurate asset management collection and analysis are crucial for the planning and allocation of resources for road agencies. In 2005, the GVMC initiated a comprehensive review of their Pavement Management System to improve efficiency, ensure consistent data across jurisdictions, enhance safety during data collection, and maintain current systems. The solution was to purchase a semi-automated vehicle, which GVMC took possession of in 2006. This vehicle allowed for the efficient assessment of road pavement conditions, significantly reducing the time and staff required for traditional windshield surveys.

In 2010, GVMC began streamlining the survey process, integrating the vehicle's technical capabilities to enable data collection by staff from various road agencies, cutting overall staff time by 50%. By 2022, GVMC upgraded to a new vehicle costing $202,895, which collects data annually on approximately 1,600 federal-aid and 800 non-federal-aid network miles using the PASER system.

In addition to using PASER, the vehicle captures data on the International Roughness Index (IRI), rutting, and road conditions while also recording forward and rear-facing imagery every 40 feet. This data, tied to GPS points, helps agencies identify problem areas without onsite visits. Additionally, it provides insight into how commercial truck traffic impacts pavement conditions. The vehicle's technical capabilities allow for accurate road condition data collection, which is critical for planning road improvements and securing state and federal funding for future projects.

PARTNERSHIP WITH THE MICHIGAN INFRASTRUCTURE COUNCIL

In 2024, the annual TAMC conference was a joint event titled “Integrated Infrastructure Conference” with the Michigan Infrastructure Council (MIC) and the Water Asset Management Council (WAMC) at Grand Valley State University.

The MIC presented its 30-Year Integrated Infrastructure Strategy (“Strategy”). The Strategy encourages community input, collaboration, and coordination, and minimizes citizen inconvenience regarding infrastructure needs and opportunities. It also prioritizes investment for more impactful and sustainable solutions while promoting sound sustainable investments for long-term benefits and environmental impacts. The Strategy’s goal is to enhance infrastructure performance and improve the quality of life for Michigan residents.

The TAMC is a sister council of the MIC and provides expert guidance on the unique challenges and opportunities with Michigan’s transportation system. As part of the Strategy, the TAMC fits within several of MIC’s objectives:

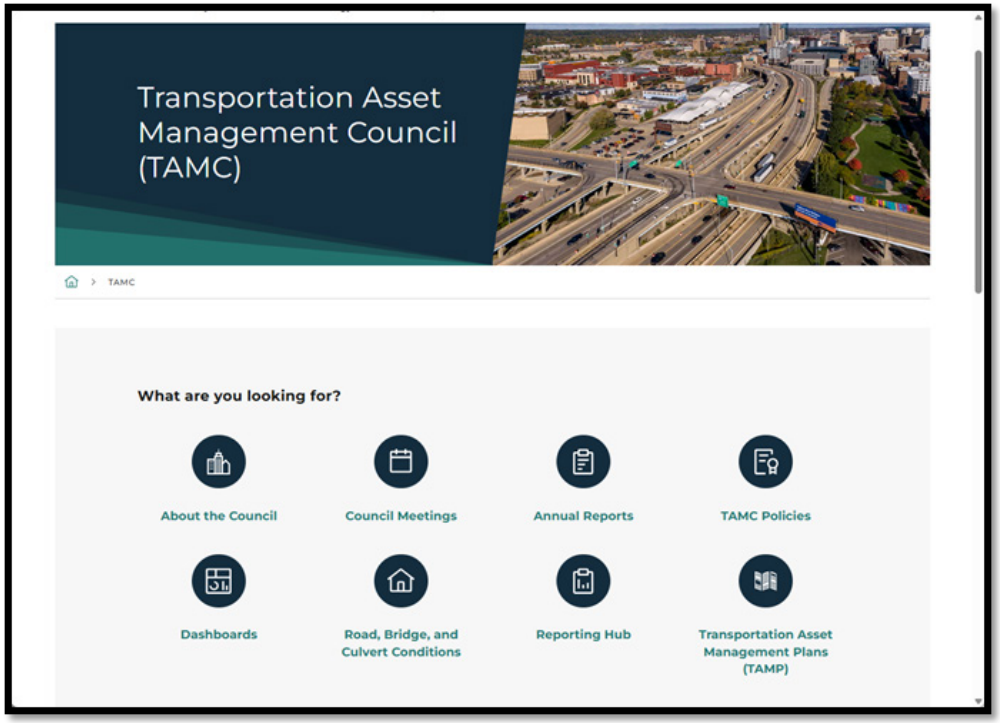
- Incorporating Transportation Plans in MIC’s new MiDig Project Portal by integrating TAMC’s Investment Reporting Tool (IRT), eliminating redundancy.
- Leveraging collective expertise through cross-council collaboration by including representation from the TAMC on their committees
- Collaborating with the MIC and WAMC to host a biannual Integrated Infrastructure Council to build awareness and support future efforts.

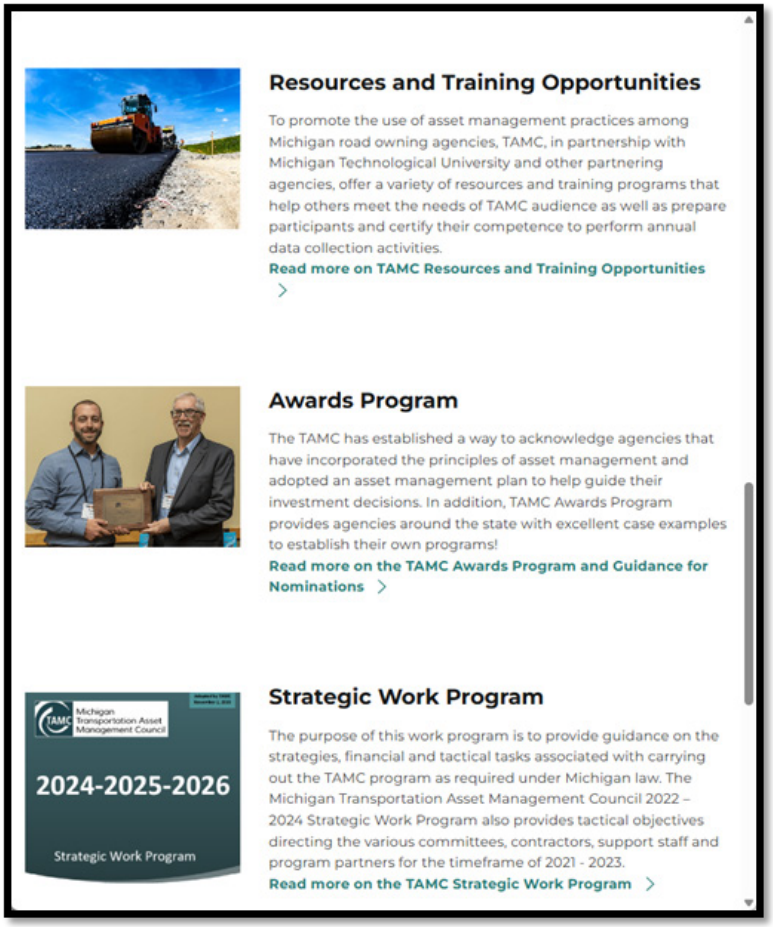
In addition, the TAMC has provided the MIC with a blueprint for developing a comprehensive infrastructure database. TAMC transportation dashboards serve as an effective public facing tool for measuring our statewide transportation goals in a user-friendly interface. By building upon this model, MIC can bring useful insights about infrastructure needs and performance across all asset classes to state and local decision makers.

WEBSITE, INTERACTIVE MAP, DASHBOARDS, AND OTHER DATA EFFORTS

The TAMC website provides information on meetings, policies, conferences, data efforts, and training. In addition to asset condition rating training, other learning opportunities assist with creating road, bridge, or culvert asset management plans and using the different reporting tools such as the IRT and Roadsoft.

The website also provides access to tools to assist decision-makers in telling an accurate story of the conditions of their transportation assets with interactive maps and performance metrics dashboards.





- To view the website, Interactive Map, and Dashboards, visit the TAMC website: www.Michigan.Gov/TAMC
- Sign up for TAMC email notifications: TAMC sign up for notifications (Gov. Delivery Email List Serve)

WEBSITE, INTERACTIVE MAP, DASHBOARDS, AND OTHER DATA EFFORTS (CONT.)

The TAMC Interactive Map and Dashboards display data for Roads, Bridges, and Culverts conditions along with Finance, Traffic, Maintenance, and Safety data.

- These data sets can be displayed statewide and regionally by city, village, county, and legislative districts.
- Counties and cities can also link to the Finance Dashboards to meet reporting requirements versus having to create and maintain their own.
- Dashboards can also show data trends over time, and the different impacts funding packages may have on road and bridge conditions and other assets.
- The interactive map has an intuitive redesigned interface to show road, bridge, and culvert information. Legislative district and regional organization boundaries can be overlayed on the condition data.
- Customized maps for legislative districts and road conditions are available and have been used in past outreach efforts.

Michigan continues to be one of the nation's leaders in transparency efforts to assist in education and data-driven decision-making.

TRANSPORTATION ASSET MANAGEMENT COUNCIL (TAMC)

TAMC members for 2024 and the organizations they represent (from left to right):

Joanna I. Johnson (TAMC Chair), County Road Association of Michigan (retired)
Ryan Buck, (TAMC Chair – 2025) Michigan Transportation Planning Association
William McEntee (TAMC Vice Chair), County Road Association of Michigan
Arthur J. Green, PE, Michigan Department of Transportation
Eric Mullen, Michigan Department of Transportation
Jim Snell, Michigan Association of Regions
James Hurt, Michigan Municipal League (retired)
Kelly R. Jones, PE, Michigan Association of Counties
Robert Slattery Jr., Michigan Municipal League (retired)
Rob Surber, Michigan Department of Technology, Management and Budget (Non-Voting)
Jennifer Tubbs, Michigan Townships Association
Sarah Plumer, TAMC Coordinator

For added background on TAMC, its members, and its related legislation, please visit the "About Us" section on the TAMC website at www.Michigan.Gov/MIC/TAMC.

To develop and support excellence in managing Michigan's transportation assets by:

- Advising the Legislature, the Michigan Infrastructure Council (MIC), State Transportation Commission, and transportation committees
- Promoting asset management principles
- Providing tools and practices for road agencies
- Collaborating and coordinating with the Water Asset Management Council (WAMC)

A special thanks:

To Joanna I. Johnson for her long-term dedication and guidance to the TAMC. She served on the TAMC representing the County Road Association starting in 2013 and served as TAMC Chair from 2016-2024. Her knowledge and commitment to asset management has made a long-lasting impression in the State of Michigan.

A special thanks to all MDOT Support Staff, CSS, MTU, Regional Partners, and the MIC for their continued dedicated support to and partnership with the TAMC.

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The TAMC is supported by many staff and support agencies across the state and is thankful for the efforts made by everyone involved.

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Kristen Myers
Sarah Plumer
Jessa Sherrill

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Brian Vilmont

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Mark Holmes
Jeri Kaminski
Timothy Lauxmann
Courtney Peterson
Thomas Ro

MTU

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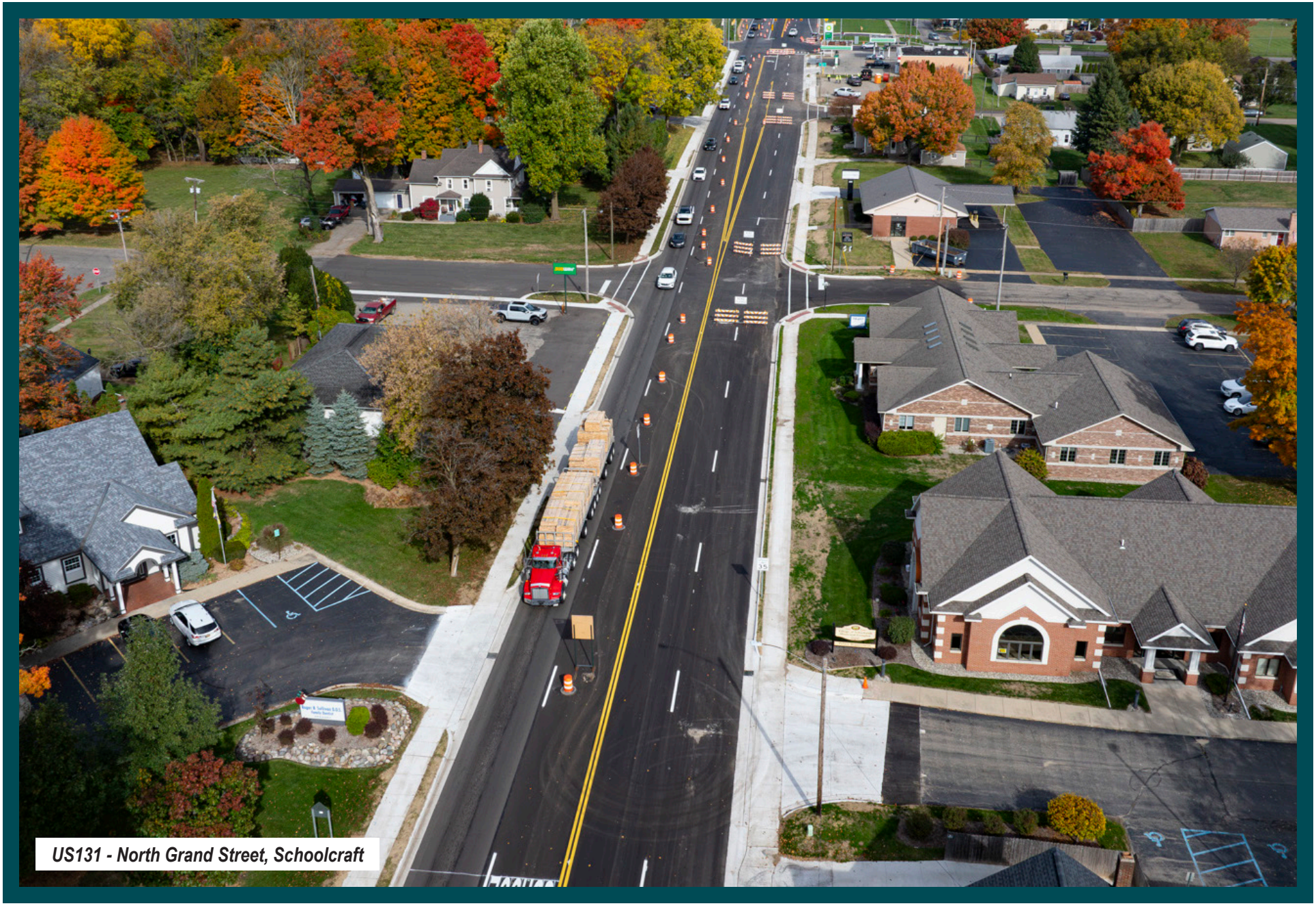
Tim Colling
Cynthia Elder
Chris Gilbertson
Lori Krings
Vicki Kaplewski
Alex Radke
Pete Torola

LOOKING INTO 2025



US131 - North Grand Street, Schoolcraft

LOOKING INTO 2025 (CONT.)

Council News

Ryan Buck, representative for the Michigan Transportation Planning Association (MTPA), will begin his term as TAMC Chair in 2025. TAMC will also be congratulating a few members on their retirement and welcoming new members to the Council.

The TAMC will host their next Strategic Planning Session in summer 2025. The annual budget in 2025 increased to support the growing efforts of data collection and asset management strategies throughout Michigan. The strategic planning session provides the Council with an opportunity to reflect on past years and develop goals and strategies for the future.

Improving Act 51 - Investment Reporting

To avoid double entry of data, efforts to integrate existing project systems started back in 2009 and completion will be achieved in fall 2025. This will be a significant time savings for local agencies and will improve the consistency of the data sets. Another effort to assist agencies will be allowing project costs to be entered in the IRT rather than split between both ADARS and the IRT tools. This will allow users to enter final costs in the IRT or include them in their Roadsoft uploads.

TAMC wishes to thank all the agencies and extended teams that helped to improve the IRT data and save time for all involved in the Act 51- IRT Reporting Process. Communications and training information will be sent out as these efforts near completion later this year.

Expanding Culvert Inventory Options

The 2018 culvert inventory pilot initiated the first statewide effort using Roadsoft. This process has been streamlined to work with the IRT, so once uploaded, condition and location information can be viewed on the TAMC dashboards and interactive map. However, many agencies have larger data sets existing in other GIS related tools. TAMC has a subcommittee working toward adding these types of culvert data sets through an open data portal later in 2025 and into 2026. This effort will assist in developing consistency with data and invite data from DNR, USFS, universities, and other stakeholders to build the full statewide picture of this key asset.

Culvert Asset Management

The TAMC is making strides in promoting and assisting with culvert asset management. In summer 2025, a new award for Culvert Data Collection and Asset Management Excellence will be announced to recognize agencies that are committed to data collection and successful asset management strategies. A new Culvert Asset Management Plan template will also be announced that will guide agencies when completing the culvert section of their Transportation Asset Management Plan.

ACRONYMS AND ABBREVIATIONS

All references to Act 51 in this document refer to Public Act 51 of 1951, as amended.

ADARS: Act 51 Distribution and Reporting System
APWA: American Public Works Association
BCFS: Bridge Condition Forecasting System
CPM: Capital Preventive Maintenance
CRA: County Road Association (of Michigan)
CSS: Center for Shared Solutions (DTMB)
CTT: Center for Training and Technology (MTU)
DTMB: Department of Technology, Management and Budget
EGLE: Department of Environment, Great Lakes, and Energy
FHWA: Federal Highway Administration
FA: Federal-Aid
FAST: Fixing America's Surface Transportation Act
IBR: Inventory Based Rating (Gravel Roads)
IIJA: Infrastructure Investment and Jobs Act
IRT: Investment Reporting Tool
MAC: Michigan Association of Counties
MAR: Michigan Association of Regions
MDNR: Michigan Department of Natural Resources
MDOT: Michigan Department of Transportation
MIC: Michigan Infrastructure Council
MML: Michigan Municipal League
MPO: Metropolitan Planning Organization
MTA: Michigan Townships Association
MTPA: Michigan Transportation Planning Association
MTU: Michigan Technological University
NBI: National Bridge Inventory
NBIS: National Bridge Inspection Standards
NFA: Non-Federal-Aid
NFC: National Functional Classification
NHS: National Highway System
PASER: Pavement Surface Evaluation and Rating
RPA: Regional Planning Agency
STIP: State Transportation Improvement Program
TAMC: Transportation Asset Management Council
TAMP: Transportation Asset Management Plan
WAMC: Water Asset Management Council

TAMC was created by Public Act (PA) 499 of 2002 to serve as a resource for independent objective data on the condition of Michigan's roads and bridges and as a resource for implementing the concepts of asset management.

“All public roads in Michigan will be managed using the principles of asset management.”

– Public Act (PA) 499 of 2002 created the Michigan TAMC

Transportation Asset Management Council (TAMC) (Michigan.gov)

Michigan Transportation Asset Management Council