

**Genesee County Metropolitan Planning Commission  
Technical Advisory Committee (TAC)**

**Genesee County Administration Building  
Harris Auditorium  
1101 Beach Street, 3<sup>rd</sup> Floor  
Flint, Michigan 48502**

**Thursday, April 6, 2023  
1:30 P.M.**

**AGENDA**

- I. Call to Order
- II. Roll Call
- III. Minutes
  - \*\*\*A. Minutes of the March 2, 2023 Regular Meeting (attached)
- IV. Old Business
- V. New Business
  - \*\*\*A. FY 2023 Unified Work Program Amendment #1 (attached)
  - \*\*\*B. FY 2023-2026 Transportation Improvement Program (TIP) Amendment #7 (attached)
  - \*\*\*C. FY 2025 Safety Call for Projects (attached)
    - D. Pavement, Bridge, System Reliability, & CMAQ Performance Targets (attached)
    - E. FY 2024 Unified Work Program (attached)
- VI. Other Business
- VII. Announcements
- VIII. Adjournment

**\*\*\*Action Item**           NEXT MEETING – May 4, 2023 at 1:30 P.M.

**GENESEE COUNTY TECHNICAL ADVISORY COMMITTEE**  
**Thursday, March 2, 2023 1:30 p.m.**

**MINUTES**

The Genesee County Technical Advisory Committee met at 1:30 p.m. on Thursday, March 2, 2023 in the Harris Auditorium of the Genesee County Administration Building, 1101 Beach Street, Flint, Michigan, 48502.

**I. CALL TO ORDER**

Chairperson Ed Benning called the meeting to order at approximately 1:30 p.m.

**II. ROLL CALL**

Mr. Jason Nordberg announced that a sign-in sheet would be used for today's official roll call. No verbal roll call was done.

**Present:** Adam Zettel, Alex Patsy, Amber Abbey, Andrea Schroeder, Brian Ulman, Derek Bradshaw, Ed Benning, Ellen Glass, Eric Johnston, Mark Adas, Max Gierman, Michael Pifer, Shawnice Dorsey, Shirley Kautman-Jones, and Wendy Jean-Buhrer

**Absent/Excused:** Brian Saad, Chad Young, Chris Yeates, Christina Ignasiak, Craig Williams, Curtis Armstrong, Dan Eashoo, Dave Miller, David Dorr, Don Mayle, Emily Alexander, Eric Weiderhold, Frederick Thorsby, James Slezak, Jay Reithel, Jolena Sanders-Sim, Joseph Madore, Joseph Rizk, Karyn Miller, Lynn Markland, Mark Emmendorfer, Mary Ann Price, Michelle King, Neil Rankin, Paul Fortino, Rachel Stanke, Robert Bincsik, Sam Stiff, Scott Bennett, Sheri Wilkerson, Thomas Spillane, Tim Elkins, Tonya Ketzler, Vadice Burgett, Vicki Fishell and Vince Lorraine

**Others Present:** Jason Nordberg, Jacob Maurer, Kris Garris, McKenna Dutkiewicz, Renate Soto and Rod McGaha.

**III. MINUTES**

**\*\*\*A. Minutes of the January 12, 2023 Regular Meeting**

**Motion: Action:** Approve, **Moved by** Andrea Schroeder, **Supported by** Amber Abbey, to approve the minutes of the January 12, 2023 regular meeting as presented.

**Motion carried unanimously.**

**IV. OLD BUSINESS**

NONE

**V. NEW BUSINESS**

**\*\*\*A. FY 2023-2026 Transportation Improvement Program (TIP) Amendment #6**

Mr. Kris Garris stated that TIP Amendment #6 changes 6 projects and abandons 1 project in the FY 2023-2026 TIP. The changed projects include a Genesee Road rehabilitation

project, a Hegel Road resurface project, a River Road widening project, and a GPA project, all with additional funding being added. Next, are two M-15 milling and resurfacing projects that have scope changes. The abandoned project is a M-15 sidewalk improvement with funding that is being moved to the aforementioned Hegel Road project. At this time, staff is recommending the endorsement of attached Amendment #6 to the FY 2023-2026 TIP from the Technical Advisory Committee to the Genesee County Metropolitan Alliance.

**Motion: Action:** Approve. **Moved by** Andrea Schroeder, **Supported by** Eric Johnston, to approve Amendment #6 to the FY 2023-2026 Transportation Improvement Program as presented.

**Motion carried unanimously.**

Discussion ensued.

### **B. 2023 Safe Streets and Roads for All (SS4A) Grant Award**

Mr. Jacob Maurer stated that staff is proud to announce that GCMPC was recently awarded a \$412,000 Safe Streets and Roads for All (SS4A) grant. This grant will fund the development of a Safety Action Plan for Genesee County, which in turn, will open up the opportunity for all road and transportation agencies in the County to apply for future SS4A funding. In the next few months, staff will be forming a Steering Committee that will assist with consultation selection and scope development. Mr. Maurer stated more information will be forthcoming regarding this process. Discussion ensued.

### **C. US-23 Traffic Development Study**

Mr. Maurer stated that staff is in the early planning stages of developing a scope for a US-23 Traffic Development Study. Staff has begun to meet with local officials, community stakeholders and transportation agencies along the US-23 corridor and will continue to meet with them through the month of March, to gather information as to what improvements should be explored and really defining what the scope should look like. The next steps will be to form a Study Steering Committee that will assist with consultation selection and scope development.

### **D. Michigan Infrastructure Office (MIO) Technical Assistance and Project Matching Funding**

Mr. Nordberg stated that the MIO has established a statewide program that will provide technical assistance, planning and matching grants to local units of government and planning organizations. The MIO has identified up to \$240,000 for grant development assistance and \$726,000 for matching funding for Infrastructure Investment and Jobs Act (IIJA) grants in the Region V area which includes Genesee, Lapeer and Shiawassee Counties. Staff has begun to reach out to representatives from the three Counties to gather feedback on how the money would be split between the counties. Mr. Nordberg asked that committee members reach out to him with feedback, especially if they have had experience with hiring a consulting firm to assist with writing grant applications and if they have any suggestions on funding distribution. All cities, villages and townships in the three County region would be eligible for funding along with other agencies, such as transit, highway, broadband, energy efficiency, hazard mitigation, etc. Staff will provide more guidance on this program in the coming weeks. Discussion ensued.

### **E. Urbanized Boundary Changes**

Mr. Nordberg stated the Census Bureau released the Urban Boundaries changes, which use housing density data rather than population density data to identify urban areas and shortened the distance connecting urban areas. The housing density data did not affect the urban areas in Genesee County, however the shortened distance between urban areas disconnected the Fenton area from the Flint Urban Area, which created a new area called the Fenton Urban Area. This change resulted in a population drop of about 38,000 in the Flint urbanized area. Mr. Norberg displayed a map to demonstrate these changes from the 2010 and 2020 Censuses. Staff is working with MDOT and other MPOs in the state to determine how this will affect transportation funding starting the FY 2024. Discussion ensued.

## **VI. OTHER BUSINESS**

### **A. MDOT Annual Project Presentation**

Mr. Brian Ulman from MDOT gave the annual MDOT presentation and gave updates on area construction programming scheduled for FY 2023 and anticipated projects through FY 2026.

## **VII. ANNOUNCEMENTS**

Mr. Nordberg announced the addition of returning staff member, Jacob Maurer and new staff member, McKenna Dutkiewicz. He stated that Ms. Dutkiewicz will be taking over the PASER studies and some of the TIP duties.

## **VIII. ADJOURNMENT**

Chairperson Benning adjourned the meeting at approximately 2:25 p.m.

Respectfully submitted,  
Renate Soto, Secretary  
Genesee County Metropolitan Planning Commission

## MEMORANDUM

**TO:** Members of the Technical Advisory Committee

**FROM:** Jacob Maurer, Community Planner  
Genesee County Metropolitan Planning Commission

**DATE:** April 6, 2023

**SUBJECT: FY 2023 Unified Work Program (UWP) Amendment 1**

Amendment 1 for the FY 2023 Unified Work Program (UWP) is proposing to Increase Transit Planning funds by \$240,000 in federal funding and \$60,000 in local MTA matching funding for a total Increase of \$300,000. This funding will be used for a Regional Transit Authority Study.

Staff has attached pages of the UWP that will be affected by this amendment. Yellow highlighted text indicates the locations where the funding has been adjusted and text has been added. At this time, staff is requesting that the Technical Advisory Committee provide a recommendation of approval for Amendment 1 to the FY 2023 Unified Work Program (UWP) to the Genesee County Metropolitan Alliance.

# FY 2023 Unified Work Program

for the

Flint/Genesee County Metropolitan Area



October 2022

**Draft Amendment April 2023**

*The preparation of this work program was completed by the Genesee County Metropolitan Planning Commission (GCMPC) and funded in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation. The views and opinions of the authors [or agency] expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.*



**GENESEE COUNTY**  
**METROPOLITAN PLANNING**  
**COMMISSION**



<i>Funding Sources</i>	
<b>Agency</b>	<b>Cost</b>
GCMPC	\$111,163
MTA	\$0
FHWA (PL)	\$501,306
MDOT (MTF)	\$30,743
<b>TOTAL</b>	<b>\$643,212</b>

<i>Funding Use by Agency</i>		
<b>Agency</b>	<b>Cost</b>	<b>Hours</b>
GCMPC	\$512,469	9,040
MTA	\$0	0
MDOT	\$30,743	920
Consultant	\$100,000	1,760
<b>TOTAL</b>	<b>\$643,212</b>	<b>11,720</b>

**IVB. TRANSPORTATION SYSTEM MANAGEMENT (TSM) PLANNING:  
TRANSIT PLANNING**

Objective

To enhance and continue the development of an efficient and effective transit service in the Flint-Genesee County area. This activity will provide the avenue to perform in-depth studies of transit-related problems in operations/management, service planning, and energy contingency planning.

Major Work Elements

Staff will be in attendance at MTA meetings including Local Advisory Council (LAC) meetings. Staff will assist the MTA in the determination of new fixed routes, transit related surveys, ITS integration plan, and the development and update of transit related plans such as the coordinated Public Transit-Human Services Transportation Plan. MTA staff will continue to collect information regarding the Your Ride Program and a survey of public and user opinion of the public transit system will be completed. Staff will work with the MTA and MDOT to ensure transit projects in the TIP and LRTP demonstrate fiscal constraint. Metro will also coordinate with the MTA on matters related to land use issues for the region so that access to public transportation will be a consideration as new developments are planned. Better coordination through this work element will help to provide ladders of opportunity by working to address gaps in essential (core) services related to transportation connectivity.

Staff will continue to work with the MTA on implementing recommendations from the recent Transit Asset Management Plan and the I-69, I-75 transit needs studies. Staff will also continue to work with the MTA and consultants on new studies for FY 2023 including an MTA Regional Transit Authority Study.

Staff will perform any unanticipated work including activities resulting from the interpretation and/or implementation of certain IJA requirements by FHWA/FTA and/or MDOT, or any new state or federal transportation legislation that may be put in place. Specifically, this could include activities related to working with MDOT and the MTA in the review and development of performance targets and/or activities resulting from new guidance released from FHWA/FTA or development of specific performance measures by MDOT.

Products

Staff will work with the MTA, MTA consultants, and other planning agencies to develop, update, and implement transit related studies and surveys such as the coordinated Public Transit-Human Services Transportation Plan, transit use and needs survey and study, ridership surveys, fixed route study, **MTA Regional Transit Authority Study**, and ITS Integration Plan as needed.

<i>Funding Sources</i>	
<b>Agency</b>	<b>Cost</b>
GCMPC	\$687
MTA	<b>\$77,484</b>
FHWA (PL)	\$81,945
MDOT (MTF)	\$0
<b>TOTAL</b>	<b>\$160,116</b>

<i>Funding Use by Agency</i>		
<b>Agency</b>	<b>Cost</b>	<b>Hours</b>
GCMPC	\$3,100	40
MTA	\$0	0
MDOT	\$0	0
Consultant	<b>\$397,016</b>	<b>7,000</b>
<b>TOTAL</b>	<b>\$400,116</b>	<b>7,040</b>

**IVC. TRANSPORTATION SYSTEM MANAGEMENT (TSM) PLANNING:  
RIDESHARING**

Objective

To continue implementation of an area-wide ridesharing program involving carpools, vanpools and public transportation information services. Promote and implement ridesharing programs within public and private sector organizations; assist individuals in making ridesharing arrangements; and coordinate ridesharing programs with public transportation, energy conservation, air quality and park-and-ride programs.

**FUNDING SOURCES  
FISCAL YEAR 2023 UNIFIED WORK PROGRAM**

<u>Activities</u>	<u>GCMP</u>	<u>PL</u>	<u>PL Transit</u>	<u>Carry Over--PL</u>	<u>Carry Over PL Transit</u>	<u>CMAQ*</u>	<u>5304</u>	<u>Subtotal (GCMP)</u>	<u>MTF (MDOT)</u>	<u>Total</u>
<b>III. DATA MANAGEMENT</b>										
A. Data Management Systems	\$6,289	\$27,225	\$1,135					\$34,649	\$7,593	\$42,242
B. Data Inventory and Model Maintenance	\$2,697	\$10,345	\$1,819					\$14,861	\$13,324	\$28,186
Subtotal	\$8,986	\$37,570	\$2,954	\$0				\$49,510	\$20,917	\$70,427
<b>IV. TSM PLANNING</b>										
A. TSM Coordination	\$111,163	\$377,426	\$23,880	\$100,000				\$612,469	\$30,743	\$643,212
B. Transit Planning	** \$78,171	\$0	\$81,945				\$240,000	\$400,116	\$0	\$400,116
C. Ridesharing						\$50,000		\$50,000	\$0	\$50,000
D. Pavement Management	\$443	\$2,000						\$2,443	\$0	\$2,443
E. Safety and Complete Streets Planning	\$8,870	\$40,000						\$48,870	\$0	\$48,870
F. Air Quality Awareness	\$12,500					\$50,000		\$62,500	\$0	\$62,500
Subtotal	\$211,148	\$419,426	\$105,825	\$100,000	\$0	\$100,000	\$240,000	\$1,176,399	\$30,743	\$1,207,141
<b>V. LONG-RANGE PLANNING</b>										
A. Update Long Range Transportation Plan	\$4,435	\$20,000						\$24,435	\$3,871	\$28,306
Subtotal	\$4,435	\$20,000	\$0	\$0	\$0			\$24,435	\$3,871	\$28,306
<b>VI. PLANNING SUPPORT</b>										
A. Program Management	\$49,141	\$211,020	\$10,588					\$270,749	\$13,101	\$283,850
B. Develop Unified Work Program	\$1,471	\$5,222	\$1,411					\$8,104	\$1,935	\$10,039
C. Prepare Transportation Improvement Program	\$20,588	\$55,931	\$36,912					\$113,431	\$3,870	\$117,301
Subtotal	\$71,199	\$272,173	\$48,911	\$0	\$0			\$392,283	\$18,906	\$411,189
<b>GRAND TOTAL</b>	<b>\$295,768</b>	<b>\$749,169</b>	<b>\$157,690</b>	<b>\$100,000</b>	<b>\$0</b>	<b>\$100,000</b>	<b>\$240,000</b>	<b>\$1,642,627</b>	<b>\$74,437</b>	<b>\$1,717,064</b>

\*\*\$77,484 of match to be provided by the MTA

\*CMAQ Funds are being requested under a separate application.

Amounts shown below represent Federal Funds equaling 81.85% of total. Studies and other contracted services

US- 23 Traffic Development Study - \$311,422 (\$380,479 total)  
MTA Transit Planning - Transit Surveys \$25,000

MTA Transit Studies - \$53,845

MTA Regional Transit Authority Study - \$240,000 (\$300,000 Total)

Studies and other contracted services Obligated in FY 2022

MTA Transit Studies - \$231,966

GCMP-CGenesee County Metropolitan Planning Commission Local Match  
PL-Federal Funds for Planning Activities from the Federal Highway Administration  
PL Transit-Federal funds for Transit Planning from Federal Transit Administration  
CMAQ - Congestion Mitigation and Air Quality funds (Ridesharing/Air Quality Awareness)  
MTF-Michigan Transportation Fund  
5304-Transit Planning

<b>Funding Sources - Transportation Planning Funds and GCMPC Match</b>			
<b>Activities</b>	<b>GCMPC</b>	<b>PL</b>	<b>Total</b>
<b>A. DATA MANAGEMENT</b>			
1. Data Management Systems	\$6,289	\$28,360	\$34,649
2. Data Inventory and Model Maintenance	\$2,697	\$12,164	\$14,861
Subtotal	\$8,986	\$40,524	\$49,510
<b>II. TSM Planning</b>			
1. TSM Coordination	\$111,163	\$501,306	\$612,469
2. Transit Planning	\$78,171.07	\$81,945	\$160,116
3. Ridesharing	\$0	\$0	\$0
4. Pavement Management	\$443	\$2,000	\$2,443
5. Safety and Complete Streets Planning	\$8,870	\$40,000	\$48,870
6. Air Quality Awareness	\$12,500	\$0	\$12,500
Subtotal	\$211,148	\$625,251	\$836,399
<b>C. LONG-RANGE PLANNING</b>			
1. Update Long Range Transportation Plan	\$4,435	\$20,000	\$24,435
Subtotal	\$4,435	\$20,000	\$24,435
<b>D. PLANNING SUPPORT</b>			
1. Program Management	\$49,141	\$221,608	\$270,749
2. Develop Unified Work Program	\$1,471	\$6,633	\$8,104
3. Prepare Transportation Improvement Program	\$20,588	\$92,843	\$113,431
Subtotal	\$71,199	\$321,084	\$392,283
<b>GRAND TOTAL</b>	<b>\$295,768</b>	<b>\$1,006,859</b>	<b>\$1,302,627</b>

<b>RESPONSIBLE AGENCIES</b>					
<b>UNIFIED WORK PROGRAM</b>					
<u>Activities</u>	<u>GCMPC</u>	<u>MDOT</u>	<u>MTA</u>	<u>CONSULTANT</u>	<u>TOTAL</u>
<b>I. DATA MANAGEMENT</b>					
A. Data Management Systems	\$34,649	\$7,593	\$0	\$0	\$42,242
B. Data Inventory and Model Maintenance	\$14,861	\$13,324	\$0	\$0	\$28,186
Subtotal	\$49,510	\$20,917		\$0	\$70,427
<b>II. TSM PLANNING</b>					
A. TSM Coordination	\$512,469	\$30,743	\$0	\$100,000	\$643,212
B. Transit Planning	\$3,100	\$0	\$0	\$397,016	\$400,116
C. Ridesharing	\$50,000	\$0	\$0	\$0	\$50,000
D. Pavement Management	\$2,443	\$0	\$0	\$0	\$2,443
E. Safety and Complete Streets Planning	\$48,870	\$0	\$0	\$0	\$48,870
F. Air Quality Awareness	\$62,500	\$0	\$0	\$0	\$62,500
Subtotal	\$679,383	\$30,743	\$0	\$497,016	\$1,207,141
<b>III. LONG-RANGE PLANNING</b>					
A. Update Long Range Transportation Plan	\$24,435	\$3,871	\$0	\$0	\$28,306
<b>IV. PLANNING SUPPORT</b>					
A. Program Management	\$270,749	\$13,101	\$0	\$0	\$283,850
B. Develop Unified Work Program	\$8,104	\$1,935	\$0	\$0	\$10,039
C. Prepare Transportation Improvement Program	\$113,431	\$3,870	\$0	\$0	\$117,301
Subtotal	\$392,283	\$18,906			\$411,189
<b>GRAND TOTAL</b>	<b>\$1,145,611</b>	<b>\$74,437</b>	<b>\$0</b>	<b>\$497,016</b>	<b>\$1,717,064</b>

<b>LABOR ESTIMATES UNIFIED WORK PROGRAM</b>					
<u>Activities</u>	<u>GCMPC HOURS</u>	<u>MDOT HOURS</u>	<u>MTA HOURS</u>	<u>CONSULTANTS HOURS</u>	<u>TOTAL HOURS</u>
<b>I. DATA MANAGEMENT</b>					
A. Data Management Systems	600	240	0	0	840
B. Data Inventory and Model Maintenance	280	400	0	0	680
Subtotal	880	640	0	0	1520
<b>II. TSM PLANNING</b>					
A. TSM Coordination	9040	920	0	1,760	11720
B. Transit Planning	40	0	0	7,000	7040
C. Ridesharing	880	0	0	0	880
D. Pavement Management	40	0	0	0	40
E. Safety and Complete Streets Planning	880	0	0	0	880
F. Air Quality Awareness	1120	0	0	0	1120
Subtotal	10880	920	0.0	8760	20560
<b>III. LONG-RANGE PLANNING</b>					
A. Update Long Range Transportation Plan	440	120	0	0	560
Subtotal	440	120	0	0	560
<b>IV. PLANNING SUPPORT</b>					
A. Program Management	4760	400	0	0	5160
B. Develop Unified Work Program	160	40	0	0	200
C. Prepare Transportation Improvement Program	2000	120	0	0	2120
Subtotal	6920	560	0	0	7480
<b>GRAND TOTAL</b>	<b>19120</b>	<b>2240</b>	<b>0</b>	<b>8760</b>	<b>30120</b>

## MEMORANDUM

**TO:** Members of the Technical Advisory Committee

**FROM:** Jacob Maurer, Community Planner  
Genesee County Metropolitan Planning Commission

**DATE:** March 2, 2023

**SUBJECT: FY 2023-2026 Transportation Improvement Program (TIP)  
Amendment # 7**

Attached is the description of proposed projects in the FY 2023-2026 TIP Amendment # 7. This amendment changes three (3) projects, deletes one (1) project, and adds seven (7) projects in the FY 2023-2026 TIP.

This amendment meets the financial constraints of the TIP and will have no disproportionately high or adverse impacts on any of the identified Environmental Justice (EJ) populations in Genesee County. The projects being amended are eligible for the funding programmed and meet the intended state (including State TEDF Category C) and federal goals and objectives identified for the funding.

The assumptions asserted in the conformity document for the FY 2023-2026 TIP, for which this amendment is being made, are maintained for transportation control measures (TCM), fiscal constraint, and public involvement. Thus, this amendment also meets the Clean Air Act and Transportation Conformity rules required for the 1997 ozone National Ambient Air Quality Standards (NAAQS).

At this time, staff is recommending the endorsement of attached Amendment #7 to the FY 2023-2026 Transportation Improvement Program from the Technical Advisory Committee to the Genesee County Metropolitan Alliance.

*AN EQUAL OPPORTUNITY ORGANIZATION*

**VB**

**FY 2023-2026 Transportation Improvement Program  
Proposed Amendment # 7**

**Project Proposed to be Changed with a TIP Amendment**

Year	MDOT Job Number	Agency	Project	Length	Limits	Description	Phase	Fund Type	Federal	State	Local	Total Cost	Comments
2023	207374	MDOT	Regionwide	3.19	All trunkline routes of GCMPC MPO	Pavement marking retroreflectivity readings on trunklines in Bay Region	CON	HSIP	<del>\$10,013</del> -\$29,275	<del>\$1,113</del> -\$3,253	\$0	<del>\$11,125</del> -\$32,528	Additional local funding for a drain crossing extension was added.

**Project Proposed to be Deleted with a TIP Amendment**

Year	MDOT Job Number	Agency	Project	Length	Limits	Description	Phase	Fund Type	Federal	State	Local	Total Cost	Comments
2023	207357	MDOT	Regionwide	na	All trunkline routes in Bay Region	Special pavement marking application on trunklines in Bay Region	CON	HSIP	\$801,315	\$89,035	\$0	\$890,350	Abandoned

**Projects Proposed to be Added with a TIP Amendment**

Year	MDOT Job Number	Agency	Project	Length	Limits	Description	Phase	Fund Type	Federal	State	Local	Total Cost	Comments
2025	218158	GCRC	W Baldwin Rd	na	W. Baldwin Road, Str #2704, over Swartz Creek, Genesee County	Bridge Replacement	CON	BRT	\$1,329,600	\$249,300	\$83,100	\$1,662,000	This project was awarded bridge funding and is being added to the TIP
2025	218159	GCRC	Center Rd	na	Center Road, Str #2747, over Thread Creek, Genesee County	Bridge Replacement	CON	BRT	\$1,329,600	\$249,300	\$83,100	\$1,662,000	This project was awarded bridge funding and is being added to the TIP
2025	218161	GCRC	North Rd	na	North Road, Str #2781, over the Shiawassee River, Genesee County	Bridge Replacement	CON	BRT	\$1,232,000	\$231,000	\$77,000	\$1,540,000	This project was awarded bridge funding and is being added to the TIP

**GPA's Being Added With a TIP Amendment**

Year	GPA Type	Agency	Project	Length	Limits	Description	Phase	Federal	State	Local	Total Cost	Comments
2024	Local Livability and Sustainability GPA	Local Agencies		0	Genesee County	Local Livability and Sustainability GPA	n/a	\$401,665	\$0	\$0	\$401,665	This is a new GPA representing projects that have been awarded funding.
2025	Local Bridge GPA	Local Agencies		0	Genesee County	Local Bridge GPA	n/a	\$275,200	\$51,600	\$17,200	\$344,000	This is a new GPA representing projects that have been awarded bridge funding.
2025	Trunkline Bridge GPA	MDOT		0	Genesee County	Trunkline Bridge GPA	n/a	\$3,624,901	\$402,768	\$0	\$4,027,668	This is a new GPA for trunkline project awarded bridge funding.
2025	Trunkline Traffic Operations and Safety GPA	MDOT		0	Genesee County	Trunkline Traffic Operations and Safety GPA	n/a	\$170,082	\$0	\$0	\$170,082	This is a new GPA for trunkline project awarded funding.

**GPA's Being Changed With a TIP Amendment**

Year	GPA Type	Agency	Project	Length	Limits	Description	Phase	Federal	State	Local	Total Cost	Comments
2023	Transit Capital	MTA		0	Genesee County	Transit Capital GPA	n/a	<del>\$9,024,315</del> \$13,101,498	<del>\$2,256,079</del> \$3,275,374	\$0	<del>\$11,280,394</del> \$16,376,872	Cost changes to projects within the GPA to reflect funding awarded.
2023	5307 Transit Capital	MTA	JN 207837	0	Genesee County	5307 Transit Capital Project with multiple Phases	n/a	<del>\$6,527,298</del> \$8,892,010	<del>\$1,631,824</del> \$2,223,002	\$0	<del>\$8,159,122</del> \$11,115,012	Cost changes to projects within the GPA to reflect funding awarded.

Bridge Replacement - Surface Transportation Program (STP)  
HSIP - Highway Safety Improvement

**FY 2023-2026 Transportation Improvement Program (TIP)  
General Program Account (GPA) Breakdown**

**2024 Local Livability and Sustainability GPA--Projects Proposed to be Added**

Year	MDOT Job Number	Agency	Project	Limits	Length	Description	Phase	Fund Type	Federal	State	Local	Total Cost	Comments
2024	218661	Linden	Stan Eaton Dr	Hyatt Lane and Bridge Street, City of Linden, Genesee County	0.58	Pedestrian safety improvements	CON	TA	\$401,665	\$0	\$0	\$401,665	This is a new project awarded funding. Toll credits will be used to satisfy fed match requirement.

**2025 Local Bridge GPA--Projects Proposed to be Added**

Year	MDOT Job Number	Agency	Project	Limits	Length	Description	Phase	Fund Type	Federal	State	Local	Total Cost	Comments
2025	218083	Burton	S Term St	Term Street, Str. #2820, over Thread Creek, City of Burton, Genesee County	na	Bridge Capital Preventative Maintenance	CON	BO	\$22,400	\$4,200	\$1,400	\$28,000	This is a new project awarded funding.
2025	218084	Burton	Citywide	Various Locations - City of Burton, Genesee County	na	Bridge Capital Preventative Maintenance	CON	BHT	\$80,000	\$15,000	\$5,000	\$100,000	This is a new project awarded funding.
2025	218084	Burton	Citywide	Various Locations - City of Burton, Genesee County	na	Bridge Capital Preventative Maintenance	CON	BHT	\$37,600	\$7,050	\$2,350	\$47,000	This is a new project awarded funding.
2025	218084	Burton	Citywide	Various Locations - City of Burton, Genesee County	na	Bridge Capital Preventative Maintenance	CON	BHT	\$48,000	\$9,000	\$3,000	\$60,000	This is a new project awarded funding.
2025	218084	Burton	Citywide	Various Locations - City of Burton, Genesee County	na	Bridge Capital Preventative Maintenance	CON	BHT	\$24,800	\$4,650	\$1,550	\$31,000	This is a new project awarded funding.
2025	218084	Burton	Citywide	Various Locations - City of Burton, Genesee County	na	Bridge Capital Preventative Maintenance	CON	BHT	\$62,400	\$11,700	\$3,900	\$78,000	This is a new project awarded funding.

**2023 Transit Capital GPA--Projects Proposed to be Changed**

Year	MDOT Job Number	Agency	Project	Limits	Length	Description	Phase	Fund Type	Federal	State	Local	Total Cost	Comments
2023	207844	MTA	SP1112-sedan/car (revenue) expansion	Areawide	na	FY 2023 Transit Capital Improvements 5339	NI	5339	<del>\$766,103</del>	<del>\$191,526</del>	\$0	<del>\$957,629</del>	Funding was updated to match funds received.
									\$812,317	\$203,079		\$1,015,396	
2023	216008	MTA	<del>SP1113-bus-rehab</del> SP1107- bus purchase	Areawide	na	FY 2023 Section 5307 Vehicles	NI	5307	<del>\$80,000</del>	<del>\$20,000</del>	\$0	<del>\$100,000</del>	Funding was updated to match funds received. Change in work type.
									\$960,000	\$240,000		\$1,200,000	
2023	216011	MTA	<del>SP1206-Bus-terminal-facility-improvements</del> SP1203-facility improvements	Areawide	na	FY 2023 Section 5307 Facility	NI	5307	<del>\$370,400</del>	<del>\$92,600</del>	\$0	<del>\$463,000</del>	Funding was updated to match funds received. Change in work type.
									\$1,508,000	\$377,000		\$1,885,000	
2023	216013	MTA	SP1401-bus equipment (spare, tires, windshields, lifts, bus wraps, bike rack, ADA)	Areawide	na	FY 2023 Section 5307 Equipment	NI	5307	<del>\$824,000</del>	<del>\$206,000</del>	\$0	<del>\$1,030,000</del>	Funding was updated to match funds received.
									\$800,000	\$200,000		\$1,000,000	
2023	216024	MTA	<del>SP1404-computers (hardware and software)</del> SP1404-computers (hardware)	Areawide	na	FY 2023 Section 5307 Equipment	NI	5307	<del>\$136,845</del>	<del>\$34,211</del>	\$0	<del>\$171,056</del>	Funding was updated to match funds received.
									\$656,000	\$164,000		\$820,000	
2023	216026	MTA	<del>SP1404-computers (hardware and software)</del> SP1404-computers (software)	Areawide	na	FY 2023 Section 5307 Equipment	NI	5307	<del>\$556,165</del>	<del>\$139,041</del>	\$0	<del>\$695,206</del>	Funding was updated to match funds received.
									\$2,212,000	\$553,000		\$2,765,000	
2023	216027	MTA	SP1301-bus shelter construction	Areawide	na	FY 2023 Section 5307 Facility	NI	5307	<del>\$66,000</del>	<del>\$16,500</del>	\$0	<del>\$82,500</del>	Funding was updated to match funds received.
									\$100,049	\$25,012		\$125,061	
2023	216029	MTA	SP1406-security equipment - facilities	Areawide	na	FY 2023 Section 5307 Facility	NI	5307	<del>\$66,000</del>	<del>\$16,500</del>	\$0	<del>\$82,500</del>	Funding was updated to match funds received.
									\$60,000	\$15,000		\$75,000	
2023	216045	MTA	<del>SP1107-30-34-foot-expansion-bus-with-or-without-lift</del> SP1210 - facility improvements	Areawide	na	<del>FY 2023 Section 5339 Vehicles</del> FY 2023 Section 5339 Facility Improvements	NI	5339	<del>\$766,103</del>	<del>\$191,526</del>	\$0	<del>\$957,629</del>	Funding was updated to match funds received. Change in Work Type
									\$812,317	\$203,079		\$1,015,396	
2023	216307	MTA	SP1110-van expansion, any size with or without lift	Areawide	na	FY 2023 Carbon Reduction Program - Van Purchase	NI	CRU	<del>\$454,360</del>	<del>\$113,590</del>	\$0	<del>\$567,950</del>	Funding was updated to match funds received.
									\$459,260	\$114,815		\$574,075	

**2023 5307 Transit Capital GPA--Projects Proposed to be Changed**

Year	MDOT Job Number	Agency	Project	Limits	Length	Description	Phase	Fund Type	Federal	State	Local	Total Cost	Comments
2023	207837	MTA	SP1401-bus equipment (spare, tires, windshields, lifts, bus wraps, bike rack, ADA)	Areawide	na	FY 2023 Transit Capital Improvements 5307	NI	5307	<del>\$824,000</del>	<del>\$206,000</del>	\$0	<del>\$1,030,000</del>	Funding was updated to match funds received.
									\$800,000	\$200,000		\$1,000,000	
2023	207837	MTA	<del>SP1112-sedan/ear (revenue)-expansion</del> SP1107-30-34ft expansion bus	Areawide	na	FY 2023 Transit Capital Improvements 5307	NI	5307	<del>\$1,806,290</del>	<del>\$451,572</del>	\$0	<del>\$2,257,862</del>	Funding was updated to match funds received. Change in work type.
									\$960,000	\$240,000		\$1,200,000	
2023	207837	MTA	SP1409-administrative vehicle	Areawide	na	FY 2023 Transit Capital Improvements 5307	NI	5307	<del>\$60,000</del>	<del>\$15,000</del>	\$0	<del>\$75,000</del>	Funding was updated to match funds received.
									\$136,000	\$34,000		\$170,000	
2023	207837	MTA	SP1801-preventative maintenance	Areawide	na	FY 2023 Transit Capital Improvements 5307	NI	5307	<del>\$2,484,000</del>	<del>\$621,000</del>	\$0	<del>\$3,105,000</del>	Funding was updated to match funds received.
									\$2,400,000	\$600,000		\$3,000,000	
2023	207837	MTA	SP1407-security equipment - vehicles	Areawide	na	FY 2023 Transit Capital Improvements 5307	NI	5307	<del>\$66,000</del>	<del>\$16,500</del>	\$0	<del>\$82,500</del>	Funding was updated to match funds received.
									\$60,000	\$15,000		\$75,000	
2023	207837	MTA	SP1203-admin/main tenance facility improvements	Areawide	na	FY 2023 Transit Capital Improvements 5307	NI	5307	<del>\$290,000</del>	<del>\$70,000</del>	\$0	<del>\$350,000</del>	Funding was updated to match funds received.
									\$1,508,000	\$377,000		\$1,885,000	
2023	207837	MTA	SP1404-computers (hardware and software)	Areawide	na	FY 2023 Transit Capital Improvements 5307	NI	5307	<del>\$693,008</del>	<del>\$173,252</del>	\$0	<del>\$866,260</del>	Funding was updated to match funds received.
									\$2,868,000	\$717,000		\$3,585,000	
2023	207837	MTA	SP1302-bus shelter improvements	Areawide	na	FY 2023 Transit Capital Improvements 5307	NI	5307	<del>\$66,000</del>	<del>\$16,500</del>	\$0	<del>\$82,500</del>	Funding was updated to match funds received.
									\$100,010	\$25,002		\$125,012	
2023	207837	MTA	SP1408-maintenance equipment (hoists, tools, etc.)	Areawide	na	FY 2023 Transit Capital Improvements 5307	NI	5307	<del>\$168,000</del>	<del>\$42,000</del>	\$0	<del>\$210,000</del>	Funding was updated to match funds received.
									\$60,000	\$15,000		\$75,000	
2023	207837	MTA	<del>SP1113-bus rehab</del>	Areawide	na	<del>FY 2023 Transit Capital Improvements 5307</del>	NI	5307	<del>\$80,000</del>	<del>\$20,000</del>	\$0	<del>\$100,000</del>	Project was abandoned.

**2025 Trunkline Bridge GPA--Project Proposed to be Added**

Year	MDOT Job Number	Agency	Project	Limits	Length	Description	Phase	Fund Type	Federal	State	Local	Total Cost	Comments
2025	204779	MDOT	I-475	5 Structures on I-475	na	Deep Overlay and Epoxy Overlays	CON	IM	\$3,624,901	\$402,768	\$0	\$4,027,668	This is a new project.

**2025 Trunkline Traffic Operations and Safety GPA--Project Proposed to be Added**

Year	MDOT Job Number	Agency	Project	Limits	Length	Description	Phase	Fund Type	Federal	State	Local	Total Cost	Comments
2025	218513	MDOT	TSC-wide	3 Locations in Davison TSC area	na	Modernize signalized intersections	PE	STG	\$170,082	\$0	\$0	\$170,082	This is a new project.

5307 -- Urbanized Area Formula Program  
 CRU -- Carbon Reduction  
 5339 -- Bus and Bus Facilities  
 STP - Safety - 100% Federal for ST  
 IM -- Interstate Maintenance  
 BO -- Bridge Not Classified Off System  
 BHT -- Bridge Funding  
 TA -- Transportation Alternatives Program Flex

## MEMORANDUM

**TO:** Members of the Technical Advisory Committee

**FROM:** Kristofor Garris, Planner  
Genesee County Metropolitan Planning Commission

**DATE:** April 6, 2023

**SUBJECT: FY 2025 MDOT Call for Safety Projects**

The Michigan Department of Transportation (MDOT) has released a call for Highway Safety Improvement Safety Program (HSIP) projects, Highway Safety Improvement Program Streamlined Systemic Safety Projects, and High-Risk Rural Road (HRRR) projects to all local road agencies for the 2025 fiscal year. A letter detailing the qualifications for these funds and the criteria by which applications will be judged is enclosed.

MDOT is requesting that project applications be submitted to their office by **Monday, May 1<sup>st</sup>, 2023**.

In order to have time to review and endorse the applications we are asking that you submit a copy of your application to our office by **Monday, April 24<sup>th</sup>, 2023**. Projects will be ranked using Time-of-Return Analysis, and prioritized list will be sent to MDOT. A resolution endorsing the submitted projects will be sent to MDOT in May.

In anticipation of the shortened call for projects window and upcoming deadline, staff is requesting that the Technical Advisory Committee recommend to the Metropolitan Alliance that the FY 2025 Call for Safety Projects be reviewed and prioritized by staff.

Additional safety resources can be found on our website at the following link: <http://www.gcmpc.org/safety/> . If you need any assistance with selecting safety projects or have questions about the application process, feel free to contact me at (810) 766-6564 or [kgarris@geneseecountymi.gov](mailto:kgarris@geneseecountymi.gov) .



STATE OF MICHIGAN  
**DEPARTMENT OF TRANSPORTATION**  
LANSING

GRETCHEN WHITMER  
GOVERNOR

BRADLEY C. WIEFERICH, P.E.  
ACTING DIRECTOR

February 1, 2023

Denise Donohue, Director  
County Road Association of Michigan  
101 S. Washington Sq., Ste. 200  
Lansing, MI 48933

Dear Denise Donohue:

**Subject: Call for Projects - Fiscal Year 2025 Federal Local Safety Program: Highway Safety Improvement, Highway Safety Improvement Systemic, and High-Risk Rural Road Program**

The Michigan Department of Transportation (MDOT) is pleased to announce the solicitation of applications for the Fiscal Year (FY) 2025 Local Safety Program encompassing the Highway Safety Improvement (HSIP), Highway Safety Improvement (HSIP) Systemic, and High-Risk Rural Road (HRRR) programs. The FY 2025 federal budget apportioned for this program is estimated to be \$20,684,000:

- \$12,684,000 for general HSIP
- \$2,000,000 for streamlined systemic HSIP
- \$6,000,000 for HRRR

These amounts may be subject to revisions.

We are asking the County Road Association of Michigan to distribute this notice to members.

Local agencies may submit up to three Streamlined Systemic Application Forms for consideration. There is no limit to the number of HSIP and/or HRRR Application Forms that an agency may submit. An agency wishing to submit a systemic horizontal curve delineation, rumble strips, edge line pavement markings, signal backplates, countdown pedestrian signals, or stop controlled intersection sign upgrade project is encouraged to use the HSIP Streamlined Systemic Application Form.

In FY 2024, the State of Michigan is subject to a new Vulnerable Road User (VRU) Rule. It is likely the State will also be subject to the rule for the foreseeable future. Therefore, a new VRU financial goal of \$3,000,000 has been added in Exhibit 2. For more information regarding VRU projects, please refer to the information provided in Exhibits 2 and 5.

Federal safety funds shall not exceed \$1,500,000 per Local Agency for the fiscal year. Any non-selected HRRR projects will be automatically considered for general FY 2025 HSIP safety funds. Selected projects are to be obligated in FY 2025.

**All applications must be submitted electronically by 11:59pm on Monday, May 1, 2023.**

Applications must be sent to [MDOT-DesignLAP-Safety@Michigan.gov](mailto:MDOT-DesignLAP-Safety@Michigan.gov). Please note that this is a **new submittal email address** than in prior years.

Refer to the enclosed Exhibits for information regarding eligibility and submitting candidate Safety Project Applications.

A list of all submitted projects will be posted on the MDOT Local Agency Program (LAP) Safety website by Monday, May 22, 2023. Local Agencies are responsible to verify that their projects have been received and are on the list and must notify MDOT of any discrepancies no later than Monday, June 5, 2023.

Our goal is to maintain a fiscally-constrained program while maximizing the use of available federal funds. If you have any questions, please contact Heidi Spangler, Local Agency Programs Safety Engineer, at 517-230-4605 or at [SpanglerH@Michigan.gov](mailto:SpanglerH@Michigan.gov).

Sincerely,

Larry T. Doyle, P.E.  
Division Administrator  
Development Services Division

Attachments

cc: K. Zachary, FHWA	B. Kadzban, MDOT	MDOT, Transportation Service Managers
M. Dionise, FHWA	M. Bach, MML	MDOT, Region Engineers
J. LaMacchia, MML	D. Parker, MDOT	Metropolitan Planning Organizations
E. Mullen, MDOT	K. Schwiderson, MDOT	Rural Task Forces
R. Doyle, MDOT	A. Matisoff, MDOT	MDOT, LAP Listserv Members
C. Robinson, MDOT		

BOD:DSD:PB:kks

## MEMORANDUM

**TO:** Members of the Technical Advisory Committee

**FROM:** McKenna Dutkiewicz, Planner  
Genesee County Metropolitan Planning Commission

**DATE:** April 6th, 2023

**SUBJECT: Pavement, Bridge, System Reliability, & CMAQ Performance Targets**

In December, the Michigan Department of Transportation (MDOT) established statewide targets for the performance areas of Bridge, Pavement, System Reliability, and Congestion Mitigation and Air Quality improvement (CMAQ). The Genesee County Metropolitan Alliance has until June 14<sup>th</sup>, 2023 (180 days after State targets are set) to either adopt the statewide targets or set our own local targets. The statewide targets are listed on the following page.

MDOT has provided supplementary factsheets to assist MPOs in making decisions on targets. These include a description of the measures, recent trends, and the methodology used to establish these targets. Please see attached. Between now and our next meeting in May, staff will be gathering localized data to help us make an informed decision.

Summaries and full rules can be viewed at the FHWA website: <https://www.fhwa.dot.gov/tpm/rule.cfm>. If you have any questions, please feel free to contact me at (810) 766-6562 or [mdutkiewicz@geneseecountymi.gov](mailto:mdutkiewicz@geneseecountymi.gov).

## Statewide Targets

Performance Area	Measure	Desired Trend	2022-2025 Baseline Condition	2-Year Target	4-Year Target
Bridge	Percent National Highway System (NHS) Deck Area in Good Condition	↑	22.1%	15.2%	12.8%
	Percent NHS Deck Area in Poor Condition	↓	7.0%	6.8%	5.8%
Pavement	Percent of Interstate Pavement in Good Condition	↑	70.4%	59.2%	56.7%
	Percent of Interstate Pavement in Poor Condition	↓	1.8%	5.0%	5.0%
	Percent of Non-Interstate NHS in Good Condition	↑	41.6%	33.1%	33.1%
	Percent of Non-Interstate NHS in Poor Condition	↓	8.9%	10.0%	10.0%
System Reliability	Level of Travel Time Reliability of the Interstate	↑	97.1%	80.0%	80.0%
	Level of Travel Time Reliability of the Non-Interstate NHS	↑	94.4%	75.0%	75.0%
	Freight Travel Time Reliability Measure on the Interstate	↓	1.31	1.60	1.60
CMAQ (Flint Urbanized Area)	Annual Hours of Peak Hour of Excessive Delay Per Capita	↓	5.7 hours	10.0 hours	10.0 hours
	Percent of Non-Single Occupancy Vehicle (Non-Sov) Travel	↑	18.5%	15.5%	15.5%

# BRIDGE PERFORMANCE MANAGEMENT NEWSLETTER

## 2022-2025 PERFORMANCE PERIOD – BASELINE REPORT

### BRIDGE CONDITION

Title 23 CFR §650, Subpart C - National Bridge Inspection Standards (NBIS), defines a bridge as a structure carrying traffic with a span greater than 20 feet and requires that all bridges be inspected every two years to monitor and report condition ratings. The FHWA requires that for each applicable bridge, the performance measures for determining condition be based on the minimum values for substructure, superstructure, deck, and culverts. The FHWA further requires counting this condition by the respective deck area of each bridge and express condition totals as a percentage of the total deck area of bridges in a state.

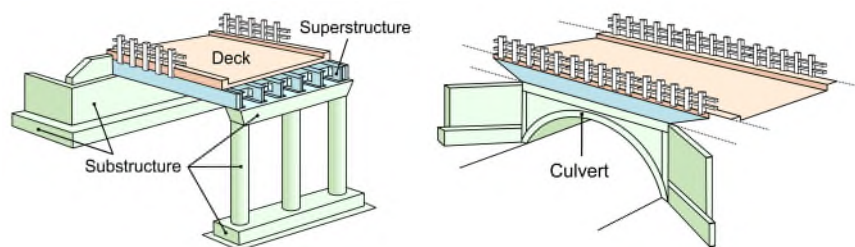
Condition ratings are based on a 0-9 scale and assigned for each culvert, or the deck, superstructure and substructure of each bridge. These ratings are recorded in the National Bridge Inventory (NBI) database. Condition ratings are an important tool for transportation asset management, as they are used to identify preventative maintenance needs, and to determine rehabilitation and replacement projects that require funding.

### REPORTING ON BRIDGE CONDITION

Title 23 CFR §490, National Performance Management Measures, Subpart D, designates recurring four-year performance periods for which MDOT is required to develop, in coordination with MPOs, two-year and four-year State targets for bridge condition on the National Highway System (NHS). The two performance measures for assessing bridge condition are:

- % of NHS bridges in Good Condition; and
- % of NHS bridges in Poor Condition.

In accordance with regulation and FHWA guidance, targets are data-informed, analysis driven, realistic predictions of future performance constrained to projected program funding. These short-term predictions are intended to evaluate and support the most effective investment strategies for achieving long-term performance goals and expectations in State and MPO planning documents. The bridge measures are limited to the National Highway System (NHS), regardless of ownership, and the NHS represents a subset of the entire bridge network managed by MDOT, MPOs and local governments.



ANATOMY OF A BRIDGE OR CULVERT

NBI Condition Ratings		
7-9	Good Condition	Routine maintenance candidate.
5-6	Fair Condition	Preventative maintenance and minor rehabilitation candidate.
4	Poor Condition	Poor Major rehabilitation or replacement candidate.
2-3		Serious or Critical Emergency repair or high priority major rehabilitation or replacement candidate. Unless closely monitored it may be necessary to close until corrective action can be taken.
0-1		Imminent Failure or Failed Major rehabilitation or replacement candidate. <b>Bridge is closed to traffic.</b>

## REPORTING ON BRIDGE CONDITION, CONTINUED

By June 14, 2023 (180 days following establishment of State targets), MPOs are required to develop 2- year and 4-year targets for each bridge measure in coordination with MDOT. MPOs have two options for target development: (1) agree to plan and program projects that support State targets, or (2) develop to a quantifiable target for the respective metropolitan planning area. MPO target elections can be made on a per measure basis. For example, an MPO can elect to support the State 2-year good condition target, and develop an MPO boundary 2-year poor condition target.

While FHWA does not make a significant progress determination of MPO targets, whether the MPO elects to support the State target or develop an MPO boundary target, the MPO is required to report progress in a system performance report. Also note, an MPO is not subject to any regulatory consequence or penalty if significant progress is not achieved regardless of whether the election was to support a State target or develop an MPO boundary target.

Baseline NHS Bridge Condition by Deck Area - Statewide								
Owner	Good		Fair		Poor		Total (sft)	
Trunkline	7,290,726	22%	23,690,343	71%	2,242,167	7%	33,223,236	88%
Bridge Authority	320,575	16%	1,676,900	83%	11,944	1%	2,009,419	5%
Local	717,498	29%	1,354,360	55%	381,037	16%	2,452,895	7%
Total	8,328,799	22%	26,721,604	71%	2,635,147	7%	37,685,550	

Baseline NHS Bridge Condition by Count – Statewide (for reference only)								
Owner	Good		Fair		Poor		Total	
Trunkline	663	24%	1910	70%	170	6%	2743	92%
Bridge Authority	4	44%	4	44%	1	11%	9	<1%
Local	83	37%	101	45%	40	18%	224	8%
Total	750	25%	2015	68%	211	7%	2976	

## BASELINE NHS BRIDGE CONDITION

Structures that meet the definition of a bridge according to the NBIS are recorded in the Michigan Bridge Inventory database through a web-based system called MiBRIDGE. MDOT's Bureau of Bridges and Structures (BOBS) in turn submits this information to the National Bridge Inventory (NBI). Using this database, BOBS compiles the number of bridges and deck area for each of the categories required by the Performance Management requirements.

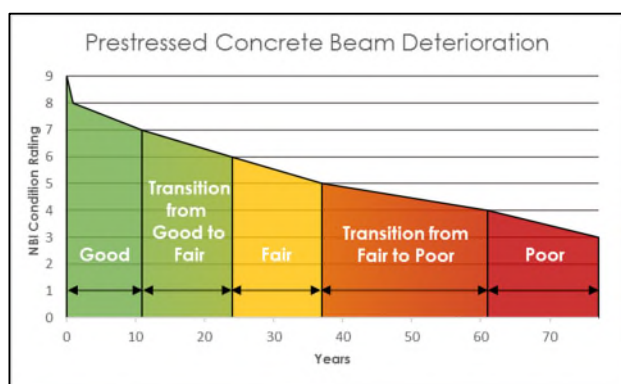
While the National Bridge Inspection Standards applies to all publicly owned highway bridges, the TPM Targets are only applied to those bridges carrying routes on the NHS including bridge on- and off-ramps connected to the NHS. The NHS consists of roadways important to the nation's economy, defense, and mobility. The NHS includes the following subsystems of roadways: interstate, other principal arterials, strategic highway network, major strategic highway network connectors, and intermodal connectors. condition totals as a percentage of the total deck area of bridges in a state.

The FHWA requires calculating the NHS condition by the respective deck area of each bridge and express condition totals as a percentage of the total deck area of bridges in a state. The area is computed using the NBI Structure Length and Deck Width or Approach Roadway Width (for some culverts). Tables above represent the data submitted to the FHWA on March 13, 2022.

Local agencies own 7 percent of the NHS bridge deck area in Michigan, while MDOT and the Bridge Authorities maintain ownership of approximately 93 percent of bridge deck area. MDOT and MPO targets must cover the entire NHS, regardless of ownership. To account for this, the rule requires MDOT and MPOs to coordinate target setting, planning, and programming, ensuring targets are feasible, and projects are geared toward achieving them.

## BRIDGE DETERIORATION MODELS

As a bridge ages, its condition declines and an increasing amount of work is required to restore condition or extend the usable life of the bridge. By tracking the rate at which bridges have declined in the past, MDOT is able to predict the rate at which a bridge will decline in the future. MDOT has an established process through which trends in bridge deterioration rates can be evaluated at regular intervals. These periodic reviews will show whether preventive maintenance and other small actions taken on bridges are effective over time. This process is documented in the report “A Process for Systematic Review of Bridge Deterioration Rates” which is available on the MDOT website at: [http://www.michigan.gov/documents/mdot/A\\_Process\\_for\\_Systematic\\_Review\\_of\\_Bridge\\_Deterioration\\_Rates\\_522422\\_7.pdf](http://www.michigan.gov/documents/mdot/A_Process_for_Systematic_Review_of_Bridge_Deterioration_Rates_522422_7.pdf).



As shown in the image above, the minimum NBI condition rating is the y axis, and the number of years in each condition state is the x axis. As the Target setting periods are two and four years, the key transition times for this analysis are the Transition from Good to Fair (the time it takes to drop from 7 to 6) and the Transition from Fair to Poor (the time it takes to drop from 5 to 4). Outside of the initial drop for 9 (Excellent) to 8 (Very Good), a bridge would not be *predicted* to fall multiple condition ratings over a span of four years as it is based on statewide averages. This can sometimes occur in practice and is part of the error involved in predictions.

## PROJECT IMPACTS

**MDOT PROJECT SELECTION** - As the product of ongoing asset management by MDOT and our local agencies, projects are programmed each year to extend life or improve condition throughout the bridge network. MDOT analyzes the candidates for each of the major work types – preventive maintenance, rehabilitation and replacement – and identifies a strategy that is the most cost-effective means to achieve

and sustain a state of good repair within financial constraints. Starting from this initial strategy, the regions then perform more detailed analysis and scopes, coordinating with other programs such as road, and selecting projects through the annual Call for Projects process.

A small number of MDOT bridges are managed centrally within the Big Bridge Program. The Big Bridge Population is a unique subset of MDOT’s trunkline bridge population that includes sixteen large deck bridges (deck area in excess of 100,000 sq ft), nineteen complex bridges, and twelve moveable bridges. These fifty-one bridges are unique not only from an engineering standpoint, but they also represent large capital investments in terms of their initial construction costs and in terms of their long-term preservation and rehabilitation costs. Because of the significant investment these bridges represent, MDOT’s goal is to preserve and maintain the Big Bridge inventory in a continuously good or fair condition state. This population is also of unique importance to the Performance Management Target Settings as the 39 structures that carry NHS comprise 14% of the trunkline NHS deck area.

**LOCAL AGENCY PROJECT SELECTION** - As the product of ongoing asset management by MDOT and our local agencies, projects are programmed within JobNet, and local agency bridge projects included in this analysis are those that have been selected through the local bridge program. Legislation enacted October 1, 2004 created a local bridge fund, a local bridge advisory board (LBAB) and seven regional bridge councils (RBC). The legislation places control of the funding allocations of the local bridge fund in the hands of the local agencies of Michigan through the LBAB and RBCs. A call for applications is sent to all local agencies on an annual basis. The submitted applications are reviewed by the staff of MDOT local agency program’s bridge unit for completeness and funding eligibility. Formula rating points are computed and each region’s applications are submitted to their respective RBC for addition of discretionary points. A 3-year bridge program is maintained by each RBC.

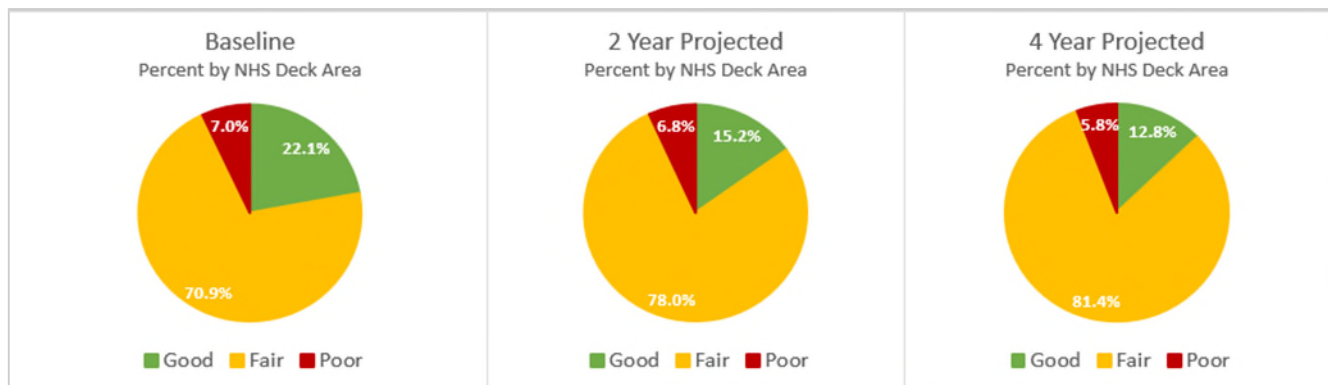
Local Agencies may also identify bridge projects through their Metropolitan Planning Organization or Rural Task Force, although because of the dollar amounts available these projects are rare. Many local agencies do projects on their bridges with their Act 51 fund distributions. These projects, however, do not have to be entered as a programmed project within JobNet and would not be reflected in the results. Due to the relatively small amount of local agency deck area, this is considered an acceptable omission at this time, but is an area identified for future improvement.

## DEVELOPING TARGETS

Starting from the condition reported with the NBI submittal on March 13, 2022, the expected improved condition from projects and reduced condition from deterioration was summarized into projected 2-Year and 4-year condition. The deck areas in good, fair and poor conditions at each year was summarized. To account for uncertainty, the amount of deck area in good condition was conservatively reduced by 1%, and the amount of deck area in poor condition was increased by 1%. A 1% reduction for uncertainties reflects about 30 average size structures that either deteriorated faster than predicted or that did not see as much of an improvement as predicted.

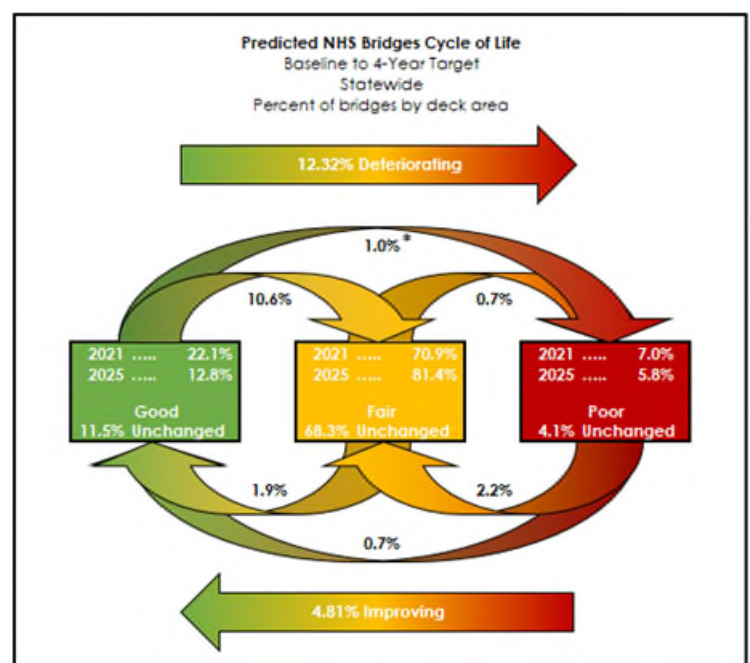
## ANALYZING TARGETS

Overall, the number of good bridges is expected to decline significantly as preservation efforts tend to extend life in fair condition. While the amount of bridges in good condition is predicted to decrease, the amount of deck area in poor condition is also predicted to decrease. While the decrease in poor deck area is important towards achieving/maintaining a state of good repair, the amount of fair deck area will require a sustained commitment to preservation in order to prevent an unsustainable number of fair bridges from falling into poor condition.



## EVALUATING GOOD CONDITION

The target for Good condition was set as a combination of estimating the deck area that is expected to deteriorate and the deck area that is expected to be improved. This is demonstrated in Cycle of Life, which shows that 10.6% of the NHS deck area is predicted to leave Good condition and 1.9% is expected to enter Good condition during the time period.



## MPO COORDINATION

Shown below is the 2021 NHS bridge deck area estimated condition for each MPO's population of bridges. As discussed earlier, the method used to predict bridge deterioration for State targets applies statewide average deterioration rates to all bridges. Some bridges will deteriorate faster while others will deteriorate slower. At the network level, these differences tend to balance. When looking at smaller populations, such as at an MPO boundary level, the difference between specific bridge deterioration and statewide averages can lead to large differences between predictions and measured values. When the performance values are measured in terms of deck area rather than count, large bridges can exacerbate this discrepancy.

MDOT also created a Transportation Performance Measures Dashboard for MPOs and bridge owners to aid in reviewing

State bridge targets. The 2022 baseline data (bridge inspection data collected between March 2021 and March 2022) can be found via [the NHS Bridge Inventory](#). This page represents a snapshot of data of the NHS bridges in the NBI submittal to FHWA, and is what will be used by FHWA to evaluate the respective 2-year and 4-year State target achievement for the performance period. For more current information, all NBI bridge data is updated monthly at the [NBIS website](#).

MPO	Good		Fair		Poor		Total	
	Deck Area	Percentage	Deck Area	Percentage	Deck Area	Percentage	Deck Area	Percentage
Battle Creek Area Transportation Study	3,429	1%	420,443	92%	31,720	7%	455,593	100%
Bay City Area Transportation Study	104,804	17%	465,703	76%	45,655	7%	616,162	100%
Genesee County Metropolitan Planning Commission	138,432	7%	1,561,627	81%	233,080	12%	1,933,138	100%
Grand Valley Metropolitan Council	1,034,362	26%	2,663,907	68%	244,662	6%	3,942,932	100%
Jackson Area Comprehensive Transportation Study / Region 2 Planning Commission	15,419	5%	277,594	82%	44,780	13%	337,793	100%
Kalamazoo Area Transportation Study	199,736	37%	271,815	51%	65,117	12%	536,668	100%
Macatawa Area Coordinating Council	44,805	15%	255,007	84%	4,149	1%	303,960	100%
Midland Area Transportation Study	41,127	21%	154,374	79%	-	0%	195,501	100%
Niles Area Transportation Study	8,757	3%	254,883	97%	-	0%	263,640	100%
Saginaw Area Transportation Agency	186,425	8%	1,995,579	90%	31,484	1%	2,213,489	100%
Southeast Michigan Council of Governments	5,274,541	32%	10,086,998	61%	1,290,294	8%	16,651,833	100%
Tri-County Regional Planning Commission	41,937	2%	1,990,461	86%	287,576	12%	2,319,974	100%
Twin Cities Area Transportation Study	23,312	3%	747,123	96%	6,655	1%	777,089	100%
West Michigan Metropolitan Planning Program	36,164	5%	617,306	92%	15,841	2%	669,311	100%
Outside MPO Boundaries	1,175,550	18%	4,958,783	77%	334,134	5%	6,468,467	100%
All NHS	8,328,799	22%	26,721,604	71%	2,635,147	7%	37,685,550	100%

### For More Information

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# PAVEMENT PERFORMANCE MANAGEMENT NEWSLETTER

## 2022-2025 PERFORMANCE PERIOD - BASELINE REPORT

Title 23 CFR §490 – National Performance Management Program (NPMP), Subpart C, directs MDOT and Michigan MPOs coordinate development of 2-year and 4-year predicted performance pavement targets within a defined four-year performance period in support of the national goals established by Congress in MAP-21 of 2012. In accordance with regulation and Federal Highway Administration (FHWA) guidance, targets are data-informed, analysis driven, realistic predictions of future performance constrained to projected program funding. These short-term predictions are intended to evaluate and support the most effective investment strategies for achieving long-term performance goals and expectations in State and MPO planning documents. The NPMP pavement measures are limited to the National Highway System (NHS), regardless of ownership, and the NHS represents a subset of the entire pavement network managed by MDOT, MPOs and local governments.

The four-year performance period baseline is actual pavement performance calculated from data collected the year prior to the first year of a performance period, and reported to the HPMS in the first year of the performance period. Pavement performance is calculated using the Pavement Condition Measure (PCM) which requires evaluation of pavement condition thresholds using International Roughness Index (IRI), Cracking Percent, Rutting (asphalt) and Faulting (jointed concrete) metrics (Figure 1), or Pavement Serviceability Rating (PSR) for segments where the posted speed limit is less than 40 miles per hour (mph).

Within each four-year performance period, FHWA will determine whether the State DOT has made significant progress toward respective State 2- and 4-year target achievement. Regulation defines significant progress as (1) actual performance is better than baseline or (2) actual performance is better than the respective target.

Pavement Condition Thresholds		Metric Value Range		
Metric	Surface Type	Good	Fair	Poor
International Roughness Index [IRI] (inches/mile)	Asphalt Pavement, Jointed Concrete Pavement, CRCP <sup>1</sup>	<95	95 - 170	>170
Cracking Percent (% of total area)	Asphalt Pavement	<5%	5 - 20%	>20%
	Jointed Concrete Pavement	<5%	5 - 15%	>15%
	CRCP <sup>1</sup>	<5%	5 - 10%	>10%
Rutting (inches)	Asphalt Pavement	<0.20	0.20 - 0.40	>0.40
Faulting (inches)	Jointed Concrete Pavement	<0.10	0.10 - 0.15	>0.15

Figure 1

### 2018-2021 “Phase-In” Comparison to 2022-2025

The 2018-2021 performance period was the first under the national program and several requirements of Title 23 CFR §490 were “phased-in.” For pavement performance, there are two fundamental changes that apply to the 2022-2025 performance period, and all future performance periods.

First, State DOTs and MPOs are required to develop two-year and four-year targets for Interstate good and poor measures, where the 2018-2021 period only required four-year targets. Second, the 2022-2025 Non-Interstate NHS baseline and targets will be calculated using the PCM or PSR compared to the 2018-2021 performance period that required targets based on IRI or PSR.

## Baseline Condition

In the first year of a new four-year performance period, a baseline for each pavement measure is calculated using prior year actual performance data and in accordance with Section 490, Subpart C.

NHS pavement data collected in 2021 and certified by FHWA in the 2021 HPMS Pavement Data Quality Summary (Figure 2, published 2022), serves as the performance period baseline condition for both Interstate and Non-Interstate NHS measures.

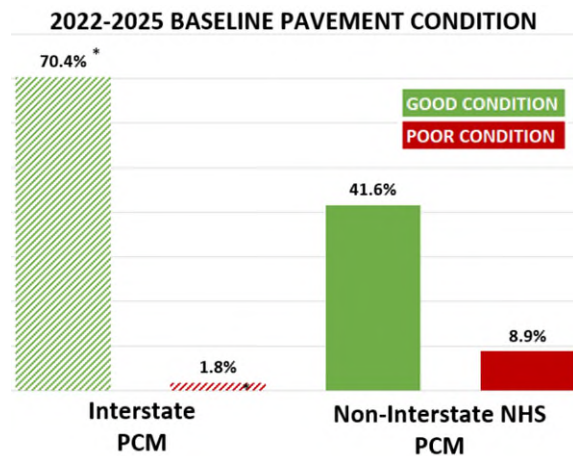


Figure 2 – Reflects condition reported by FHWA in the 2021 HPMS Pavement Data Quality Summary

In 2020, the Rebuilding Michigan Bond Program (RBMP) was announced. The RBMP focuses on rebuilding state highways and bridges critical to the state’s economy and that carry the most traffic. The bond financing is aimed at long-term asset performance. In 2021, the data collection vendor was not able capture 5.1 percent of the Interstate pavement segment due to construction-related traffic controls that prevented collection in compliance with 23 CFR 490.309.

Through regulation, FHWA established a 5.0 Missing, Invalid, or Unresolved (MIU) threshold. If a categorical dataset exceeds 5.0 MIU, FHWA considers the data set to be invalid for use in the national performance program. FHWA has unofficially signaled MDOT’s 2021 Interstate dataset at 5.1 MIU will be insufficient to determine significant progress for (1) the 2018-2021 Interstate performance and (2) the 2022-2025

performance period baseline - although regulation on the latter is more ambiguous.

This was something Michigan and peer State DOTs raised as a concern during the rule-making process. Michigan is encouraging FHWA evaluate the regulatory threshold impact and consider exceptions where the MIU is the direct verified result of program investment. FHWA will provide their formal written assessment by mid-year 2023.

## Target Setting Process

As directed by Section 490 and FHWA guidance, national predicted performance targets are to reflect data-informed, analysis driven, realistic predictions of future performance constrained to available program funding for the four-year performance period. FHWA strongly discourages establishing aspirational targets for this program.

It is also important to distinguish the difference between performance goals, such as those established by the State Transportation Commission (STC) for MDOT or by a board for an MPO, and the federally required predicted performance targets. For example, the STC pavement goals for MDOT are for State trunkline measured by Remaining Service Life (RSL), wherein the national predicted performance targets are for the NHS (State and local owned), measured by PCM. These are not equivalent or appropriate for comparison. The NHS represents a portion of the pavement system managed by MDOT and local governments.

For the **2022-2025 performance period**, the analysis and methods used by the TPM Pavement Team to develop the national predicted performance targets considered inputs and influences not limited to the following: historical trends (outcome of prior investments), current condition (baseline), improvements from investment strategies (5-year program/projects), anticipated natural deterioration based on life-cycle analysis (assets), anticipated changes in use (system performance), and other exogenous factors. Grant and other competitive funding opportunities being pursued but not officially

awarded at the time of analysis were not considered in the target setting process

As part of the current/forecasted condition analysis, the TPM pavement team examined the segments currently rated in fair condition and determined it necessary to further subdivided fair rated segments into three categories: “near good”, “fair”, and “near poor.” As shown in Figure 4, 7.8 percent of the network currently rated in “Fair” condition is nearing poor condition. The team then examined the 5-year investment program to determine the extent to which investments planned for the 4-year period would offset/manage the decline.

PCM Rating	Composite Metric		Interstate % of	
	Combinations	Breakdown	Lanemiles	Interstate
Fair	Poor, Fair, Fair	Near Poor	77	1.3%
	Poor, Fair, Good	Near Poor	393	6.5%
	Poor, Good, Good	Fair	299	4.9%
	Fair, Fair Fair,	Fair	21	0.3%
	Good, Fair, Fair	Fair	197	3.2%
	Good, Good, Fair	Near Good	704	11.6%

Figure 3 – Further analysis of “Fair” PCM rated Interstate segments

On a related matter, when FHWA published the final HPMS PDQS there were notable differences from the preliminary condition used for the MDOT- MPO pavement target-setting coordination session held in July 2022 as shown in Figure 4. While not uncommon for preliminary condition estimates and the final performance reported in the HPMS PDQS to have minor differences, this year the differences were more significant. Of interest in 2022, FHWA had to delay the biennial performance reporting process due to ongoing issues with their HPMS 9.0 system upgrade. This complicated the data verification and reconciliation process.

Performance Measure	Baseline Performance
<b>NHPP: NHS Pavement Condition (§490, Subpart C)</b>	
<b>Pavement Condition Metric (PCM) is IRI, Cracking, and Rutting (asphalt)</b>	
Percentage of Pavements of the <u>Interstate</u> in Good Condition (PCM)	70.4% <del>65.0%</del>
Percentage of Pavements of the <u>Interstate</u> (NHS) in Poor Condition (PCM)	1.8% <del>2.3%</del>
Percentage of Pavements of the <u>Non-Interstate</u> NHS in Good Condition (PCM)	41.6% <del>42.1%</del>
Percentage of Pavements of the <u>Non-Interstate</u> NHS in Poor Condition (PCM)	8.9% <del>6.2%</del>

Figure 4 – 2022-2025 baseline changes between MDOT-MPO coordination session and final HPMS PDQS.

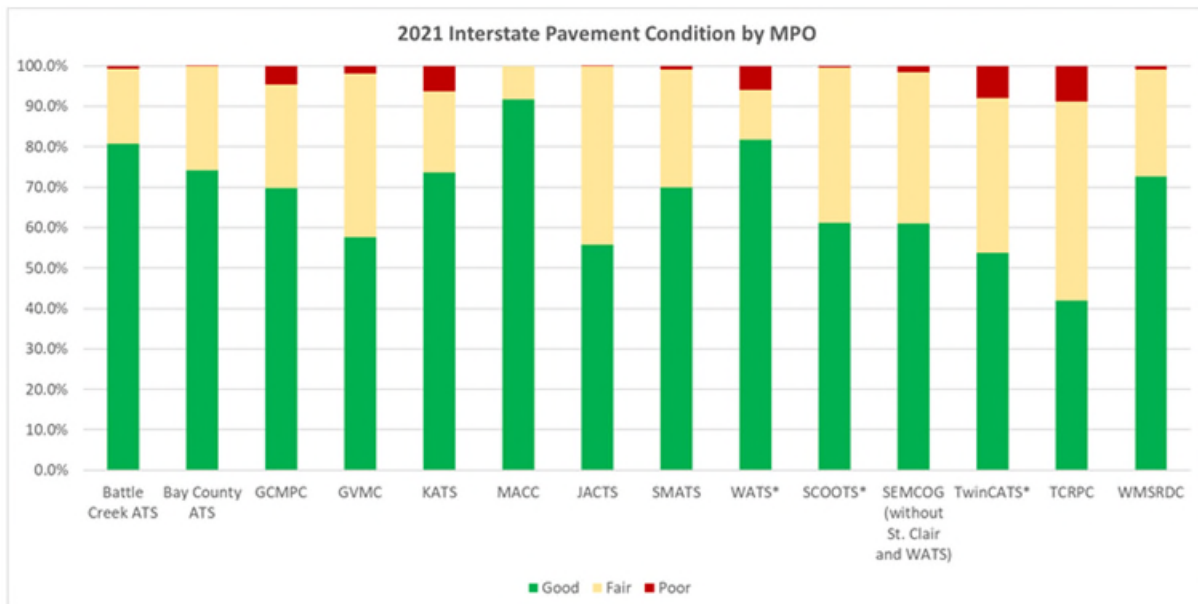
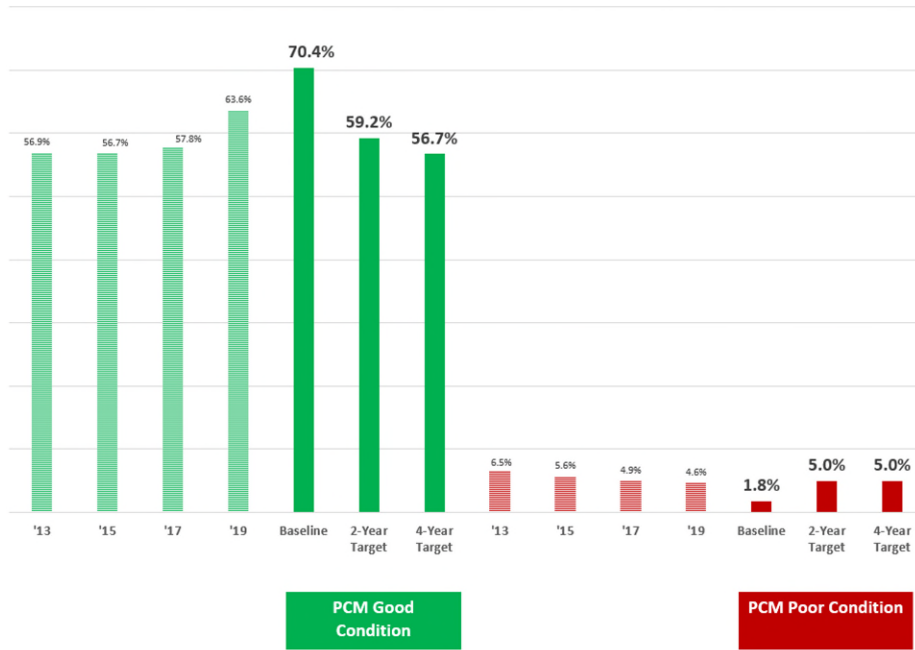
Considering the baseline changes, the TPM Pavement Team conservatively improved the State Interstate good condition 2-year target from 56.7 percent to 59.2 percent from the draft targets discussed by MDOT-MPOs at the target setting coordination meeting in July 2022. The 2.5-point improvement represents about half of the difference between the preliminary calculated baseline and the final 2021 HPMS PDQS reported by FHWA. This change was presented to MTPA in November 2022 with no noted concerns. The pavement team recommended no changes to the remaining pavement targets. Actual performance will be evaluated over the next two years and if supported by data, there will be an opportunity to discuss adjusting one or more 4-year State pavement targets within the mid-performance period report of 2024.

*By June 14, 2023 (180 days following establishment of State targets), MPOs are required to develop 2- year and 4-year targets for all four pavement measures. MPOs have two options for target development: (1) agree to plan and program projects that supports a State target(s) or (2) develop a quantifiable target(s) for the metropolitan planning area. MPOs target elections can be made on a per measure basis. For example, an MPO can elect to support the State 2-year target for Interstate Good and develop an MPO boundary 2-year target for Interstate Poor.*

*Also note, FHWA does not make a significant progress determination of MPO targets whether the MPO elects to support the State target or develop an MPO boundary target. Further, an MPO is not subject the consequence or penalty imposed upon the State DOT for not achieving State targets regardless of whether the MPO elected to support the State target or develop an MPO boundary target.*

# Interstate State Targets and MPO 2021 Performance

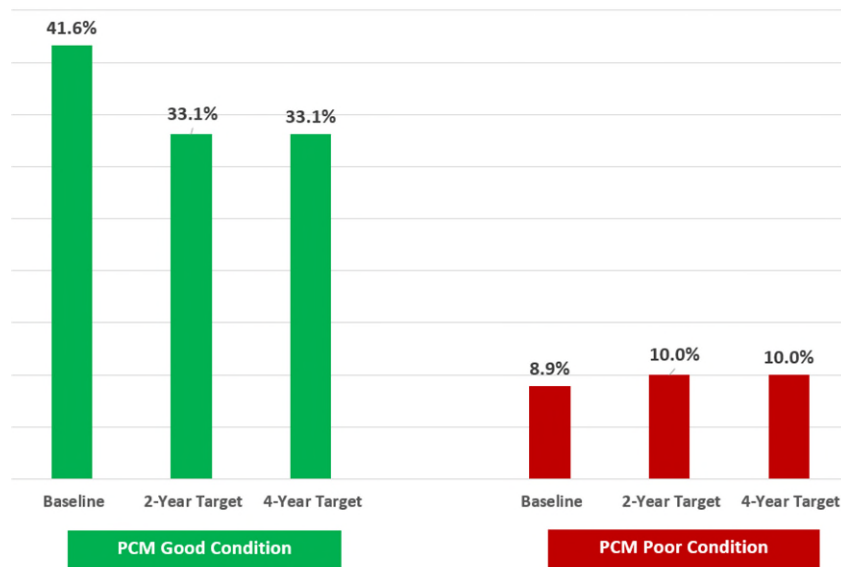
### 2022-2025 State Interstate Pavement Targets



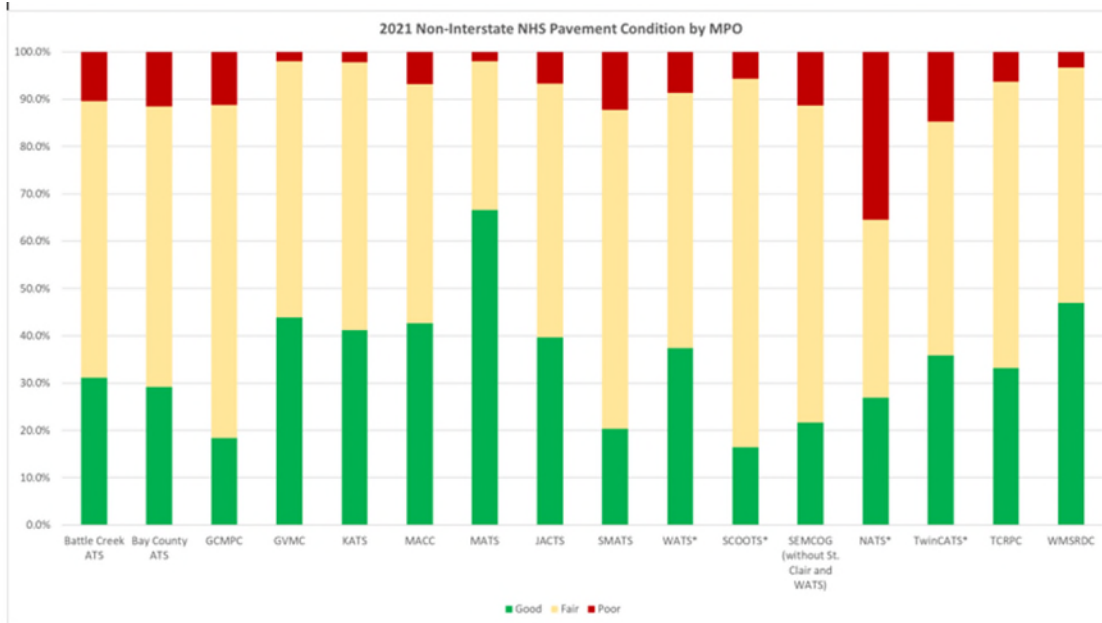
2021 Interstate Pavement Condition Measure by MPO				
MPO	Good	Fair	Poor	Interstate Thru Miles **
Battle Creek Area Transportation Study	80.7%	18.6%	0.7%	66.5
Bay County Area Transportation Study	74.1%	25.8%	0.1%	92.2
Genesee County Metropolitan Planning Commission	69.7%	25.6%	4.6%	390.4
Grand Valley Metropolitan Council	57.6%	40.6%	1.8%	253.6
Kalamazoo Area Transportation Study	73.6%	20.1%	6.4%	161.1
Macatawa Area Coordinating Council	91.7%	8.3%	0.0%	76.3
Region 2 Planning Commission	55.8%	44.1%	0.0%	124.3
Saginaw Metropolitan Area Transportation Study	69.9%	29.2%	0.9%	198.8
Southeast Michigan Council of Governments	63.0%	35.1%	1.9%	2,291.8
Washtenaw Area Transportation Study *	81.8%	12.3%	5.9%	211.1
St. Clair County Transportation Study *	61.2%	38.4%	0.3%	158.5
SEMCOG (without St. Clair and WATS)	61.1%	37.3%	1.6%	1,922.2
Southwest Michigan Planning Commission	53.8%	38.3%	7.9%	169.7
Twin Cities Area Transportation Study *	53.8%	38.3%	7.9%	169.7
Tri-County Regional Planning Commission	41.9%	49.3%	8.7%	432.4
West Michigan Shoreline Regional Development Commission	72.7%	26.5%	0.8%	48.4

### Non-Interstate NHS State Targets and MPO 2021 Performance

2022-2025 State Non-Interstate NHS Pavement Targets



The 2022-2025 performance period introduces PCM as the Non-Interstate NHS pavement measure for the national program.

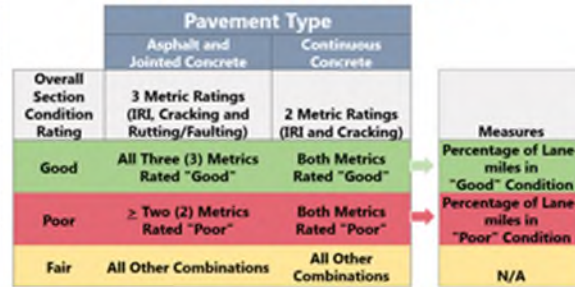


2021 Non-Interstate NHS Pavement Condition by MPO				
MPO	Good	Fair	Poor	Non-Interstate Thru Miles **
Battle Creek Area Transportation Study	31.1%	58.5%	10.4%	101.7
Bay County Area Transportation Study	29.1%	59.3%	11.6%	147.7
Genesee County Metropolitan Planning Commission	18.4%	70.4%	11.2%	488.0
Grand Valley Metropolitan Council	43.9%	54.2%	2.0%	831.0
Kalamazoo Area Transportation Study	41.2%	56.6%	2.2%	308.0
Macatawa Area Coordinating Council	42.7%	50.5%	6.8%	134.9
Midland Area Transportation Study	66.6%	31.4%	2.0%	296.4
Region 2 Planning Commission	39.6%	53.7%	6.7%	199.3
Saginaw Metropolitan Area Transportation Study	20.3%	67.4%	12.3%	280.9
Southeast Michigan Council of Governments	22.7%	66.2%	11.1%	5,825.9
Washtenaw Area Transportation Study *	37.4%	53.9%	8.7%	428.7
St. Clair County Transportation Study *	16.4%	77.8%	5.7%	83.3
SEMCOG (without St. Clair and WATS)	21.6%	67.0%	11.4%	5,313.9
Southwest Michigan Planning Commission	32.3%	44.7%	23.0%	235.1
Niles-Buchanan-Cass Area Transportation Study	26.9%	37.6%	35.5%	94.4
Twin Cities Area Transportation Study *	35.9%	49.4%	14.7%	140.7
Tri-County Regional Planning Commission	33.2%	60.5%	6.3%	554.8
West Michigan Shoreline Regional Development Commission	47.0%	49.7%	3.4%	356.4

### Pavement Condition Thresholds

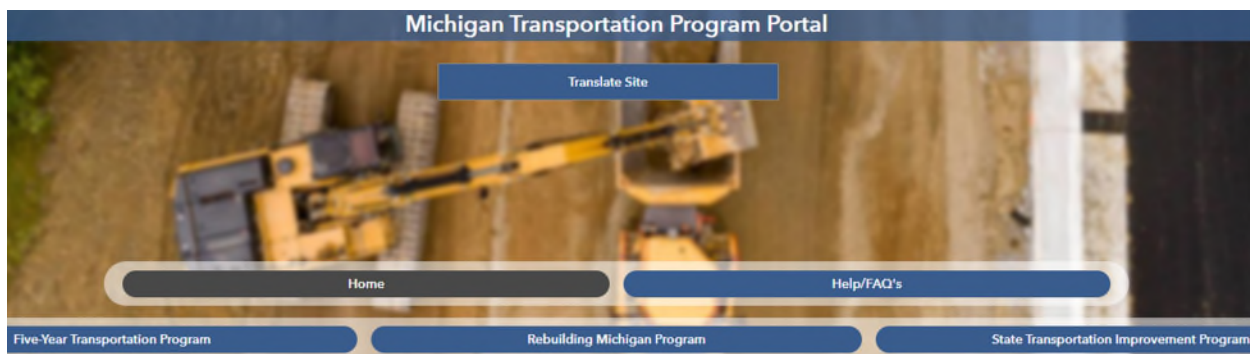
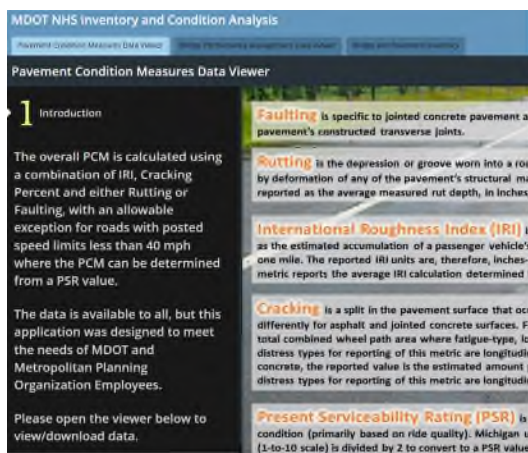
	Good	Fair	Poor
IRI (inches/mile)	<95	95-170	>170
Rutting (inches)	<0.20	0.20-0.40	>0.40
Faulting (inches)	<0.10	0.10-0.15	>0.15
Cracking (%)	<5	5-20 (asphalt) 5-15 (JCP) 5-10 (CRCP)	>20 (asphalt) >15 (JCP) >10 (CRCP)

### Calculation of Pavement Condition Measures for Interstate



### Available Data

The [MDOT NHS Inventory and Condition Analysis](#) data viewer is available online, which provides pavement condition and inventory information for Interstate PCM and non-Interstate IRI data, and information on bridges as well. In addition, MDOT developed the [Michigan Transportation Program Portal](#) providing links and maps to the 5-Year Transportation Plan, State Transportation Improvement Program, and the Rebuilding Michigan Program.



### For More Information

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# RELIABILITY PERFORMANCE MANAGEMENT NEWSLETTER

## 2022-2025 PERFORMANCE PERIOD - BASELINE REPORT

Title 23 CFR §490 – National Performance Measures, Subpart E, directs MDOT and Michigan Metropolitan Planning Organizations (MPOs) to coordinate development of 2-year and 4-year predicted performance reliability targets within a defined four-year performance period in support of the national goals established by Congress in MAP-21 of 2012.

In accordance with regulation and Federal Highway Administration (FHWA) guidance, targets are data-informed, analysis driven, realistic predictions of future performance constrained to projected program funding. These short-term predictions are intended to evaluate and support the most effective investment strategies for achieving long-term performance goals and expectations in State and MPO planning documents.

The reliability measures are limited to directional mainline highways on the National Highway System (NHS), regardless of ownership, and the NHS represents a subset of the entire network managed by MDOT, MPOs and local governments.

Section 490 directs State DOTs and MPOs to use three performance measures (*Figure 1*) for assessing travel time reliability. The National Performance Management Research Data Set (NPMRDS) is vehicle probe-based travel time data used to calculate the national reliability measures. The NPMRDS is provided by the Federal Highway Administration (FHWA) for use by states and MPOs. The NPMRDS is processed through an analytical software tool known as Regional Integrated Transportation Information System (RITIS).

### Level of Travel-Time Reliability (LOTR)

**Percentage of person-miles traveled on the [Interstate/Non-Interstate NHS] that are reliable**

- (1) Interstate **and** (2) Non-Interstate NHS
- 2-Year and 4-Year Targets
- **Four (4)** Time Periods
- Fifteen (15) Minute Travel Intervals
- Longer Travel Time: **80<sup>th</sup>** Percentile
- Normal Travel Time: 50<sup>th</sup> Percentile
- Threshold: **Reliability <1.50**
- Factors Applied: Vehicle volumes (HPMS) and Vehicle Occupancy Factor (provided by FHWA)

### Truck Travel-Time Reliability (TTTR)

**Interstate freight reliability, truck travel time Index**

- Interstate **(only)**
- 2-Year and 4-Year Targets
- **Five (5)** Time Periods
- Fifteen (15) Minute Travel Intervals
- Longer Travel Time: **95<sup>th</sup>** Percentile
- Normal Travel Time: 50<sup>th</sup> Percentile
- Threshold: **None**
- Factors Applied: No additional factors are applied

Figure 1: Reliability metrics/measures

### Travel Time Reliability Overview

Travel time reliability measures how consistent travel between X and Y is from one day to the next. To determine reliability, data is analyzed to see how it varies over time. As directed by Section 490, travel time for each discrete segment of the National Highway System (NHS) is placed in order from the shortest time (fastest speed), which is the 1st percentile speed, to the longest time (slowest speed), which is the 100th percentile speed. Three performance measures are examined to compare the “normal” travel time, (which is defined as the 50th percentile travel time) on a segment, with either the 80th percentile or the 95th percentile travel time to determine the overall reliability. If the difference between the normal travel time and the longer travel time (80th for person-miles or 95th percentile for freight) is greater than 50 percent, then the segment is classified as unreliable.

To help explain travel time reliability, consider the following simplified hypothetical example. Suppose an individual person’s normal travel time from home to work is 20 minutes. The 80th percentile is defined as one out of every five days, or approximately one time in a traditional commuter work week. If in a typical week, it takes an individual 30 minutes or longer to travel to work one or more times, then the route driven would be designated as unreliable (exceeds the 1.50 threshold). See page five for more a detailed example of the metrics/ measures.

**Travel Time Reliability is not the same as Congestion.** Reliability is important because travelers prefer a consistent travel time to their destination. If people understand that a route is routinely congested, they can plan accordingly. However, if a route is unreliable, they really have no consistent reference of how long it will take to get to their destination, which creates frustration. In addition, segments of roads can be both congested, and reliable (e.g., reliably congested).

### 50<sup>th</sup> Percentile (Average or Normal Travel Time)



### 80<sup>th</sup> Percentile (Longer Travel Time)



### Baseline Condition

As a result of the global pandemic, Michigan (and the United States more broadly) experienced an unprecedented reduction in traffic volumes starting in early 2020. While traffic volumes have increased, through the end of 2022 reliability performance remains notably improved from pre-pandemic levels. That said, it is difficult to predict future performance with a higher-than-normal level of uncertainty. For this reason, MDOT is hesitant the 2022 baseline (2021 actual performance) will accurately reflect a sustainable expectation of future performance.

**LOTTR: Reliable Person Miles****Desired Trend** ↑

Data Year/ Reporting Year	Interstate	Non- Interstate NHS
2017/2018	85.2%	84.0%
2019/2020	88.6%	88.5%
<b>2021/2022</b> <b>2022 Baseline</b>	<b>97.1%</b>	<b>94.4%</b>

**Truck Travel Time Index****Desired Trend** ↓

Data Year/ Reporting Year	Interstate
2017/2018	1.38
2019/2020	1.44
<b>2021/2022</b> <b>2022 Baseline</b>	<b>1.31</b>

*Note: It is important to note the NPMRDS data set continues to evolve and MDOT has found prior year reported data changes in the RITIS system. MDOT has also observed the baseline/actual performance reported by FHWA is frequently different than the RITIS system, although typically by +/- 1 point. MDOT does not have the authority to override the performance data reported by FHWA in the biennial reports. Therefore, baseline/actual performance data for MDOT required biennial reporting should be considered a snapshot of what was reported by FHWA in the respective reporting year which may be different than what RITIS reports for that year now/in the future.*

**Target Setting Process**

These short-term predicted performance targets are intended to evaluate and support the most effective investment strategies for achieving long-term performance goals and expectations in State and MPO planning documents. Policies and investment strategies included in Michigan Mobility 2045 (state long-range transportation plan) contribute to Michigan's ability to meet the national transportation performance management goals established by Congress. In alignment with MM2045, MDOT created a new operations template program to fund projects that will improve safety and reliability while also

addressing congestion. The level of travel time reliability is a key factor in prioritizing projects and measuring anticipated investment outcomes.

For the **2022-2025 performance period**, the analysis and methods used to develop the national predicted performance reliability targets considered inputs and influences not limited to the following:

- Historical trends and current baseline. As previously noted, the 2022 baseline (2021 actual performance) is unlikely sustainable as post-pandemic traffic volumes have increased, while also acknowledging reliability remains notably improved from pre-pandemic historical trends.
- Expected outcomes from projects programmed to improve reliability (5-year program/projects).
- The next two to three years will see more RMBP construction projects on the NHS.
- Anticipated changes in use (long-term adoption of telecommuting/hybrid work, for example).
- Potential competitive funding opportunities that are not appropriate to quantify and consider in target-setting until an award has been made.
- Other factors of influence:
  - Inclement weather, especially winter weather, has a major impact on reliability.
  - The Interstate has a small percentage of segments nearing unreliable while Non-Interstate NHS has shown to be more volatile and has a higher percentage of segments nearing unreliable.
  - Freight performance as measured is more volatile due to using 95<sup>th</sup> percentile speeds.

### 2022-2025 Predicted Performance State Targets

Measure	2-Year	4-Year
LOTTR: Interstate	80.0%	80.0%
LOTTR: Non-Interstate NHS	75.0%	75.0%
Freight Travel Time Index	1.60	1.60

The State LOTTR predicted performance targets are improved by five percentage-points from those established for the 2018-2021 performance period. The freight Index target is also improved by .15 (from 1.75 to 1.60).

#### MPO Target Setting

In accordance with Section 490, MPOs have 180 days following the recording of State national performance program targets to develop and report MPO targets to MDOT. For 2022, FHWA delayed the biennial report from October 1 to December 16 therefore MPO target reporting to MDOT has respectively changed to June 14, 2023.

MPOs can satisfy the Section 490 target setting requirements by either electing to plan and program projects that support State targets, or develop a quantifiable target for the respective metropolitan planning area. MPO target elections can be made on a per measure basis. For example, an MPO can elect to support the State 2-year LOTTR Interstate target, and develop a quantifiable MPO boundary 4-year LOTTR Interstate target. That said, once target elections have been made (i.e., support State or develop MPO specific), the MPO must retain each election for the duration of the four-year performance period.

Also note, FHWA does not make a significant progress determination of MPO targets whether the MPO elects to support the State target(s) or develop MPO boundary target(s). Further, an MPO is not subject to any consequence or penalty imposed by FHWA on MDOT should a

target not be achieved regardless of which target development option the MPO selected. For reference, significant progress is defined by regulation as achieving performance that is equal to or better than the target, or better than the baseline performance.

**Level of Travel Time Reliability (LOTTR) Example**

**Segment:** Longer Travel Time (80<sup>th</sup>) ÷ Normal Travel Time (50<sup>th</sup>) = # seconds ÷ # seconds = LOTTR

Monday – Friday	6am - 10am	LOTTR = 44 sec ÷ 35 sec = 1.26
	10am - 4pm	LOTTR = 1.39
	4pm – 8pm	LOTTR = <b>1.54</b>
Weekends	6am – 8pm	LOTTR = 1.31
Reliability Threshold: LOTTR below 1.50 during ALL of the time periods		<b>Segment is NOT reliable</b>

**Measure:** Percent of person-miles traveled on the [Interstate/Non-Interstate NHS] that are reliable

1. Length x Volume (AADTx365) x Occupancy = person miles
2.  $\frac{\sum (\text{Reliable Person-Miles})}{\sum (\text{Total Person-Miles})} = \text{Reliability}$

**Truck Travel Time Reliability (TTTR (This is an index, not a reliability threshold) Example**

**Segment:** Longer Travel Time (95<sup>th</sup>) ÷ Normal Travel Time (50<sup>th</sup>) = # seconds ÷ # seconds = TTTR

Monday – Friday	6am - 10am	TTTR = 72 sec ÷ 50 sec = 1.44
	10am - 4pm	TTTR = 1.39
	4pm – 8pm	TTTR = 1.49
Weekends	6am – 8pm	TTTR = 1.31
Overnight	8pm – 6am	TTTR = 1.20
Maximum TTTR		1.49

**Measure:** Truck Travel Time Reliability (TTTR) Index

1. Length x MaxTTTR = Length-weighted TTTR
2.  $\frac{\sum (\text{All segment length weighted TTTR})}{\sum (\text{All segment lengths})}$

**Michigan**

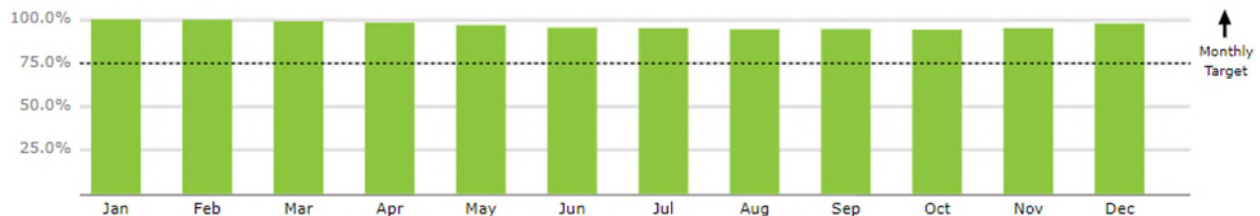
MAP-21 Percent of the Person-Miles Traveled on the Interstate That Are Reliable (the Interstate Travel Time Reliability measure)

2021 Target  
at least  
**75.0%**

**97.1%**

Year-to-Date  
2021

**Target: At least 75% of the system should have a LOTTR less than 1.50**



[Show map...](#)

Calculated using 99.77% of miles in Michigan

Data source: NPMRDS INRIX

### Michigan

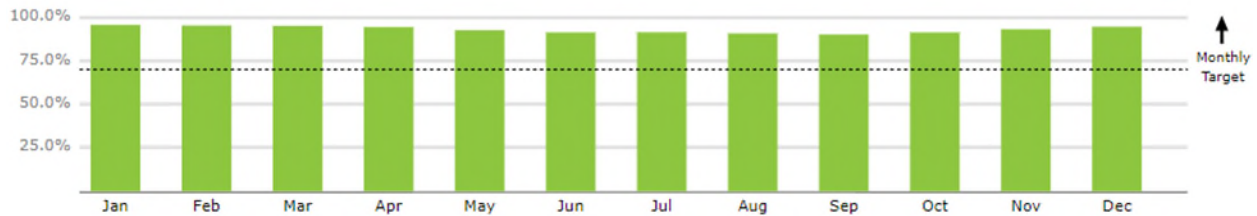
MAP-21 Percent of the Person-Miles Traveled on the Non-Interstate NHS That Are Reliable (the Non-Interstate NHS Travel Time Reliability measure)

2021 Target  
at least  
**70.0%**

**94.4%**

Year-to-Date  
**2021**

Target: At least 70% of the system should have a LOTTR less than 1.50



[Show map...](#)

Calculated using 98.95% of miles in Michigan

Data source: NPMRDS INRIX

### Michigan

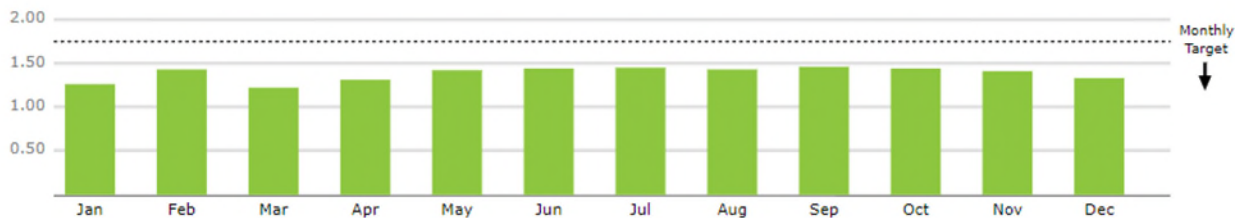
MAP-21 Truck Travel Time Reliability Index (for interstate roads only)

2021 Target  
less than  
**1.75**

**1.31**

Year-to-Date  
**2021**

Target: The system should have a TTTR less than 1.75



[Show map...](#)

Calculated using 99.77% of miles in Michigan

Data source: NPMRDS INRIX

## 2021 MPO System Performance

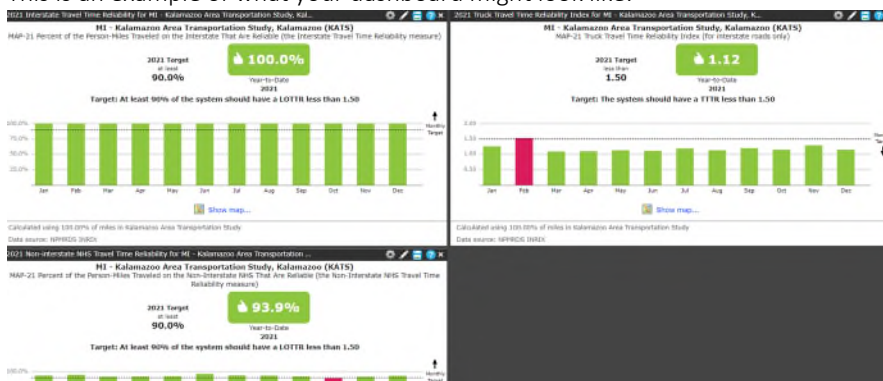
MPOs can access a wealth of system performance information, including the below reliability performance, through the RITIS [NPMRDS Analytics](#) tool. At this time there is no cost to Michigan MPOs to use this valuable tool and available data can greatly benefit decision-making.

MPO/Study Area	Interstate Reliability	Non-Interstate NHS Reliability	Freight Reliability
Battle Creek Area Transportation Study	100.0%	93.6%	1.15
Bay City Area Transportation Study	100.0%	95.3%	1.56
Genesee County Metropolitan Planning Commission	100.0%	88.0%	1.20
Grand Valley Metropolitan Council	97.8%	93.4%	1.42
Kalamazoo Area Transportation Study	100.0%	93.9%	1.12
Macatawa Area Coordinating Council	100.0%	91.1%	1.35
Midland Area Transportation Study	Not Avail	99.7%	Not Avail
Region 2 Planning Commission	100.0%	92.5%	1.13
Saginaw Metropolitan Area Transportation Study	100.0%	89.1%	1.21
Southeast Michigan Council of Governments	94.8%	93.5%	1.44
Southwest Michigan Planning Commission	100.0%	95.9%	1.12
Tri-County Regional Planning Commission	99.5%	97.1%	1.30
West Michigan Shoreline Regional Dev Commission	100.0%	93.9%	1.22

The steps to access the reliability performance information is as follows:

- From the opening screen scroll down and select the “MAP-21” dashboard widget.
- Select your respective MPO from the drop-down menu titled “MPA.”
- Select the measure(s) you want to include on your dashboard. Optional: The default target is 90% for LOTTR and 1.5 for TTTR. You can change these to reflect your target value or just leave the targets as-is.
- Select the year(s) you want to review; you can select multiple years for longer historical trends. [Note, you need to actually click the “Add time period” green button for each year you select, this is less intuitive.]
- Select whether you want to see the data in graph or map format.
- Select the “Add Widget” blue button.
- You can save this to your dashboard for future reference.

This is an example of what your dashboard might look like.



For Travel Time Reliability Technical Information, contact Lee Nederveld at (517) 202-0322 or [NederveldL@michigan.gov](mailto:NederveldL@michigan.gov)

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# TRANSPORTATION PERFORMANCE MANAGEMENT

## CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT (CMAQ)

THIS NEWSLETTER COVERS THE THREE SYSTEM PERFORMANCE MEASURES RELATED TO THE CMAQ PROGRAM:

1. ON-ROAD MOBILE SOURCE EMISSIONS: TOTAL EMISSION REDUCTIONS (TOTAL EMISSION REDUCTION)
2. TRAFFIC CONGESTION: ANNUAL HOURS OF PEAK HOUR EXCESSIVE DELAY PER CAPITA (PHED MEASURE)
3. TRAFFIC CONGESTION: PERCENT OF NON-SINGLE OCCUPANCY VEHICLE (SOV) TRAVEL (NON-SOV TRAVEL)

## CMAQ PROGRAM PURPOSE

Since 1992, the purpose of the Congestion Mitigation and Air Quality (CMAQ) program has been to provide a flexible federal funding source for state and local governments to implement surface transportation projects and other related efforts that help meet the air quality standard and emission reduction requirements of the Clean Air Act (CAA). State and local governments with regions that currently do not or previously did not meet National Ambient Air Quality Standards (NAAQS) can use CMAQ to help fund transportation programs and projects that reduce mobile source emissions for ozone (NO<sub>x</sub> and VOC), carbon monoxide (CO), and/or particulate matter (PM 2.5).

A series of federal rules that focus the federal surface transportation program on achieving performance outcomes was initiated under the Moving Ahead for Progress in the 21st Century (MAP-21) Act and continued under the Fixing America's Surface Transportation (FAST) Act. In total, 12 performance measures have been identified for highway systems, including a set of three (3) measures to assess progress toward achieving the goals of the CMAQ Program. The requirements and targets of these measures and tools to calculate them are summarized below.

## SUMMARY OF CMAQ PERFORMANCE MEASURES

The TOTAL EMISSION REDUCTION Measure requires significant progress toward reducing mobile source emissions in areas designated as non-attainment or maintenance for ozone (O<sub>3</sub>), carbon monoxide (CO), or particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). Accordingly, MDOT established 2-year and 4-year targets for the total annual reduction of these emissions and uses data collected from project submittals to identify which projects are most cost-effective in meeting them. MDOT, with coordination from state and local stakeholders, may recommend that these projects take a higher priority in determining which projects will move forward.

The PHED Measure requires significant progress toward reducing delay in travel time caused by traffic congestion on the National Highway System (NHS). MDOT has established targets for the reduction in annual peak hours of excessive delay. MDOT and SEMCOG agreed to use 3:00 p.m. to 7:00 p.m. as Peak Hours for this Measure. Annual hours of delay are calculated by determining the difference between the actual time it takes to get through a travel segment and the baseline time expected to get through the segment.

The NON-SOV TRAVEL Measure requires significant progress toward increasing the percentage of non-single occupancy vehicle (Non-SOV) travel on the National Highway System (NHS). MDOT has established 2-year and 4-year targets of 14.4% for this Measure. These targets reflect a conservative approach and factors in a ten percent decline for unknown factors that could produce volatility in Non-SOV travel. MDOT and SEMCOG selected the U.S. Census Bureau American Community Survey (ACS) Journey to Work data method based on data availability and integrity, as well as meeting the needs of both agencies.

## ON-ROAD MOBILE SOURCE EMISSIONS: TOTAL EMISSION REDUCTIONS

A primary focus of the CMAQ program is to fund transportation projects that reduce mobile-source emissions. Each project submitted for CMAQ funding must include an estimated reduction in emissions of primary pollutants.

**Description:** Measures are intended to assess the CMAQ program by measuring 2- and 4-year cumulative reported emissions reductions for all projects financed by CMAQ program funds. The regulation applies to any DOT and MPO with CMAQ funded projects in areas designated as nonattainment or maintenance for ozone (O<sub>3</sub>), carbon monoxide (CO), or particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) National Ambient Air Quality Standards (NAAQS). For the first performance period, the measure only applies to the seven counties that are within the SEMCOG boundaries. These counties have been designated nonattainment or maintenance for particulate matter (PM<sub>2.5</sub>).

**Tool Used to Calculate Measure:** The baseline information was pulled from the [CMAQ Public Access System](#) for years 2014 through 2017. The emissions benefit information is one of the items reported in the tracking system, and this information was used to develop the cumulative 2- and 4-year mobile emissions targets. A yearly average emissions benefit for PM<sub>2.5</sub> was calculated based on 2016 and 2017 figures, and then reduced by 10% for unforeseen variables.

Baseline On-Road Mobile Emissions Information	
Year	Particulate Matter (PM <sub>2.5</sub> kg/day)
2017	190.373
2016	273.416
2015	177.086
2014	12.481
<b>Totals</b>	<b>653.357</b>

### Target Calculation Steps:

Particulate Matter	
Calculate average using years 2016 & 2017	$190.373 + 273.416 = 463.789$
Divide by 2 to get yearly average	$463.789 / 2 = 231.894$
Reduce by 10% for unforeseen variables	$231.894 \times .90 = 208.705$
Multiply by two for 2-year target	$208.705 \times 2 = 417.410$
Multiply by four for 4-year target	$208.705 \times 4 = 834.820$

### Target Summary:

Measure	Baseline Condition	2-Year Targets FYE 2019	4-Year Targets FYE 2021
<b>On-Road Mobile Source Emissions for Particulate Matter</b>	<b>653.357</b>	<b>417.410</b>	<b>834.820</b>

# TRAFFIC CONGESTION: ANNUAL HOURS OF PEAK HOUR EXCESSIVE DELAY (PHED) PER CAPITA

**Description:** Tracks traffic congestion by measuring the annual hours of peak hour excessive delay per capita on the National Highway System (NHS). This measure applies to Nonattainment or Maintenance Urbanized Areas with NHS mileage, and a population greater than 200,000. However, this regulation has phase-in criteria for the first performance period (2018-2022) and is only applicable for an urbanized area with a population exceeding one million and meeting all other criteria. In Michigan, only the Detroit Urbanized Area meets all criteria for the first performance period.

Excessive delay is calculated for segments of the NHS where travel times show speed at twenty miles per hour or less, or sixty percent of the posted speed limit or less; whichever is greater, during fifteen-minute intervals per vehicle. The regulation applies to weekdays and prescribes a specific time for morning peak travel hours, and two options for the afternoon to provide flexibility to state DOTs and MPOs (3:00 p.m. to 7:00 p.m. or 4:00 p.m. to 8:00 p.m.). MDOT and SEMCOG agreed to use the 3:00 p.m. to 7:00 p.m. option as the data demonstrated had higher levels of delay per capita between 2014 and 2017.

**Tool Used to Calculate Measure:** The data for the measure comes from the National Performance Measure Research Data Set (NPMRDS), Highway Performance Monitoring System (HPMS), Annual Average Daily Traffic (AADT), Annual Vehicle Occupancy rates (provided by FHWA), and may utilize U.S. decennial census in lieu of HPMS for urbanized area boundaries. The analysis tool is RITIS.

Please note that in late April there were changes made by FHWA that impacted the data outputs in RITIS for the PHED measure. The official average vehicle occupancy values to be used in the PHED per capita metric were released by FHWA and this was updated in RITIS. Also, FHWA provided new guidance on how to address segments that are not entirely on the NHS. A third change was HPMS facility type 6 in addition to facility types 1 and 2 are now included when calculating metrics. The combination of these changes impacted the PHED per capita measure. The target was developed prior to these changes being made in RITIS. The target was set conservatively with a 20% factor for unforeseen variables such as the above.

## Target Calculation Steps:

- In RITIS, select the 'MAP-21' widget
- In the MAP-21 widget, under geography select 'UZA' and type 'Detroit'
- Under Select measures choose 'Annual Hours of Peak Hour Excessive Delay Per Capita'
  - Set target to less than desired hours (for this target 22 hours was selected)
  - Choose evening peak period (for this target 3pm-7pm was used)
- Years 2014 through 2018 were selected to help set the target
- Select 'Save Widget'
- The table below is the RITIS output from mid-March when data was collected to set the target

Calculate average using years 2014 – 2017	$19.21 + 18.28 + 21.23 + 14 = 72.72$
Calculate the yearly average	$72.72 / 4 = 18.18$
Increase the yearly average by 20% for unforeseen variables	$18.18 \times 1.2 = 21.81$ *Target was rounded up to 22 hours

## Target Summary:

Measure	Baseline Condition (2014 to 2017)	2-Year Targets CYE 12/31/2019	4-Year Targets CYE 12/31/2021
Peak Hour Excessive Delay	18 hours, 30 min	N/A	22 hours

## TRAFFIC CONGESTION: PERCENT OF NON-SINGLE OCCUPANCY VEHICLE (SOV) TRAVEL

**Description:** Measurement of non-SOV travel in specific urbanized areas, including travel via carpool, van, public transportation, commuter rail, walking or bicycling as well as telecommuting. This measure applies to Nonattainment or Maintenance Urbanized Areas with NHS mileage, and a population greater than 200,000. However, this regulation has phase-in criteria for the first performance period (2018-2022) and is only applicable for an urbanized area with a population exceeding one million and meeting all other criteria. In Michigan, only the Detroit Urbanized Area meets all criteria for the first performance period.

**Tool Used to Calculate Measure:** American Community Survey (ACS) Commuting (Journey to Work) data from the U.S. Census Bureau.

### Target Calculation Steps:

- <https://data.census.gov/cedsci/>
- Search: 'S0801: COMMUTING CHARACTERISTICS BY SEX'
- Select '\*Desired Year\*: ACS 5-Year Estimates Subject Tables' from the Product drop down menu
- Select 'Urban Area' and under Geographies
- Select subset 'Detroit, MI Urbanized Area (2010)' under Geographies

	Total	
	Estimate	Margin of Error
Workers 16 years and over	1,637,063	+/-4,835
▼ MEANS OF TRANSPORT...		
▼ Car, truck, or van	92.5%	+/-0.1
Drove alone	84.0%	+/-0.2

- % SOV Travel = Workers who drove alone / Total Workers
- % SOV Travel = 84.0%
- % Non-SOV Travel = 100% - 84% = 16%
- A conservative approach to setting the target was taken and a 10% decline for unanticipated factors was used. Therefore the Non-SOV Travel Measure target was calculated as follows:
  - 16% of Non-SOV travel – 10% = 14.4%
- 14.4% Non-SOV travel was used as the 2- and 4-year target based on the historic trend of non-SOV travel remaining consistent per the 2012 through 2016 data.

### Target Summary:

Measure	Baseline Condition	2-Year Targets CYE 12/31/2019	4-Year Targets CYE 12/31/2021
Non-Single Occupancy Vehicle (SOV) Travel	16.0%	14.4%	14.4%

## MEMORANDUM

**TO:** Members of the Technical Advisory Committee

**FROM:** Jacob Maurer, Community Planner  
Genesee County Metropolitan Planning Commission

**DATE:** April 6, 2023

**SUBJECT: FY 2024 Unified Work Program**

The Unified Work Program (UWP) describes all transportation planning activities for the upcoming fiscal year and identifies funding sources and agencies involved in these activities. The primary activities for the 2024 fiscal year (FY) will focus on the development of the 2050 Long Range Transportation Plan (LRTP), implementation of the 2023-2026 Transportation Improvement Program (TIP), development of a Safety Action Plan, and continuation of the US-23 Corridor Study. Other activities include performance measure monitoring and updates, transportation related data collection, building permit collection, transit planning, non-motorized planning, safety data analysis, and pavement data analysis to name a few.

Staff is beginning to develop the FY 2024 work program, and this is an opportunity for the committee to provide suggestions for work activities for the upcoming fiscal year. Please feel free to contact me by Thursday, April 13, 2023 at [jmaurer@geneosecountymi.gov](mailto:jmaurer@geneosecountymi.gov) or (810) 766-6545 with any suggestions for the FY 2024 UWP.