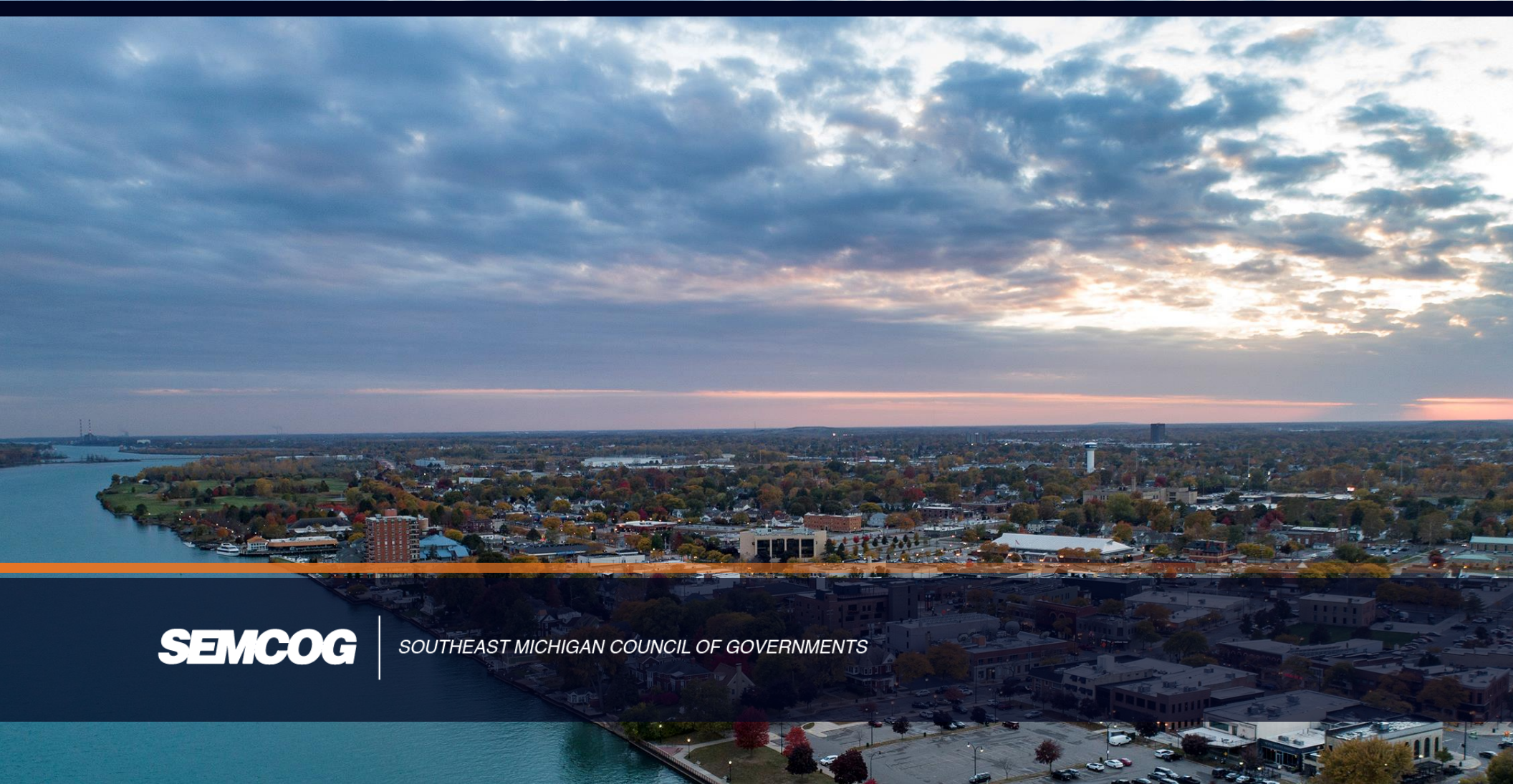


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SEMCOG System Performance Report, 2024

Companion to Vision 2050, the Regional Transportation Plan for Southeast Michigan



SEMCOG

SOUTHEAST MICHIGAN COUNCIL OF GOVERNMENTS

SEMCOG . . . *Developing Regional Solutions*

Mission

SEMCOG, the Southeast Michigan Council of Governments, is the only organization in Southeast Michigan that brings together all governments to develop regional solutions for both now and in the future. SEMCOG:

- Promotes informed decision making to improve Southeast Michigan and its local governments by providing insightful data analysis and direct assistance to member governments;
- Promotes the efficient use of tax dollars for infrastructure investment and governmental effectiveness;
- Develops regional solutions that go beyond the boundaries of individual local governments; and
- Advocates on behalf of Southeast Michigan in Lansing and Washington

SEMCOG System Performance Report, 2024

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Abstract

Vision 2050, the Regional Transportation Plan for Southeast Michigan includes performance-based management elements that connect regional policy and investment priorities to federal performance measures in accordance with federal law, [23 CFR §450.324\(f\)\(4\)](#). The *SEMCOG System Performance Report, 2024* summarizes the performance-based management process, enumerates the federal performance measures and adopted performance targets, and ties the approach to achieving performance targets to policies and investments laid out in the *Vision 2050*. Since performance measures and targets are evaluated and updated on a rolling basis, this *System Performance Report* will only be updated in conjunction with the Regional Transportation Plan for Southeast Michigan. For the most up-to-date information, visit SEMCOG's website (<https://semcog.org/performance-measures>) for direct access to the latest performance measure data and target setting.

Preparation of this document is financed in part through grants from and in cooperation with the Michigan Department of Transportation with the assistance of the U.S. Department of Transportation's Federal Highway Administration, Federal Transit Administration; and other federal and state funding agencies as well as local membership contributions and designated management agency fees.

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Table of Contents

Table of Contents	ii
List of Data Displays	iii
Introduction	1
Transportation Performance Management Framework	3
Federal-Aid Highway Program Performance Goals	5
Public Transportation National Performance Goals	5
Performance Measures Integration in Planning and Project Programming.....	8
Transportation Performance Measures and Targets	9
Safety Performance	9
Pavement and Bridge Asset Management.....	11
System Performance.....	13
Congestion Mitigation and Air Quality	15
Public Transportation	17
Conclusion	21

List of Data Displays

Tables

Table 1	National Performance Goal Areas and Measures	7
Table 2	Safety Performance Measure Targets, Southeast Michigan.....	10
Table 3	Pavement and Bridge Performance Measure Targets, State of Michigan	12
Table 4	System Performance Measure Targets, State of Michigan.....	14
Table 5	Congestion Mitigation and Air Quality Targets, State of Michigan	16
Table 6	Transit Asset Management (TAM) Targets, Southeast Michigan	18
Table 7	Transit Safety Targets, Southeast Michigan	20

Figures

Figure 1	Framework for Performance Based Planning and Programming.....	4
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Introduction

The *SEMCOG System Performance Report, 2024* (SPR) is a companion to *Vision 2050 the Regional Transportation Plan for Southeast Michigan* (RTP) and the Transportation Improvement Program (TIP). It extracts information about the transportation performance management process that is integrated throughout the RTP and TIP, as well as the multiple actions taken by SEMCOG's Transportation Coordinating Council (TCC) and Executive Committee to set targets for all federal Transportation Performance Measures in one standalone document. The SPR contains information about transportation performance management, performance measures, target-setting, and how these measures and targets are considered in the formation of policies and project investments contained in the RTP and TIP.

SEMCOG, in coordination with the Michigan Department of Transportation (MDOT) and Metropolitan Planning Organizations (MPO) across Michigan, developed this performance management process in response to changes in transportation planning expectations articulated in law through the Moving Ahead for Progress in the 21st Century (MAP-21), the Fixing America's Surface Transportation (FAST) Act, and continued through the Bipartisan Infrastructure Law or Infrastructure Investment and Jobs Act (IIJA).

This document contains all federally required performance targets to date for SEMCOG. It is organized into two sections:

- **Transportation Performance Management Framework:** describing the process used to incorporate performance measures into regional planning and project programming; and
- **Transportation Performance Measures and Targets:** listing the baseline measures and targets.

Each of the measurement and target sections include a description of the policies and plans that inform SEMCOG's approach to target attainment and a description of SEMCOG's efforts to integrate the targets into project development and programming for the RTP and TIP.

Transportation performance measures have been discussed at a series of TCC and Executive Committee meetings, as noted below by meeting and topic:

- **July 21, 2022** – Transportation Coordinating Council – 2022 Congestion Mitigation and Air Quality (CMAQ) performance target setting recommendation.
- **September 23, 2022** – Executive Committee – 2022 Congestion Mitigation and Air Quality (CMAQ) performance targets adopted.
- **January 19, 2023** – Transportation Coordinating Council – Performance target recommendations for:
 - 2023 safety performance measures
 - Pavement & bridge condition performance measures
 - System reliability performance measures

- Freight reliability performance measures
- **January 27, 2023** – Executive Committee – 2023 safety performance measure targets adopted.
- **April 28, 2023** – Executive Committee – Performance targets for pavement condition, bridge condition, system reliability, and freight reliability adopted.
- **February 15, 2024** – Transportation Coordinating Council – 2024 regional transit asset management and transit safety target setting recommendation.
- **February 23, 2024** – Executive Committee – 2024 regional transit asset management and transit safety targets adopted.

Since performance measures and targets are evaluated and updated on a rolling basis, this System Performance Report will only be updated in conjunction with SEMCOG's Regional Transportation Plan (RTP). For the most up-to-date information, SEMCOG's website (<https://semcog.org/performance-measures>) provides direct access to the latest performance measure data and target setting.

Transportation Performance Management Framework

FHWA defines Transportation Performance Management as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. In short, Transportation Performance Management:

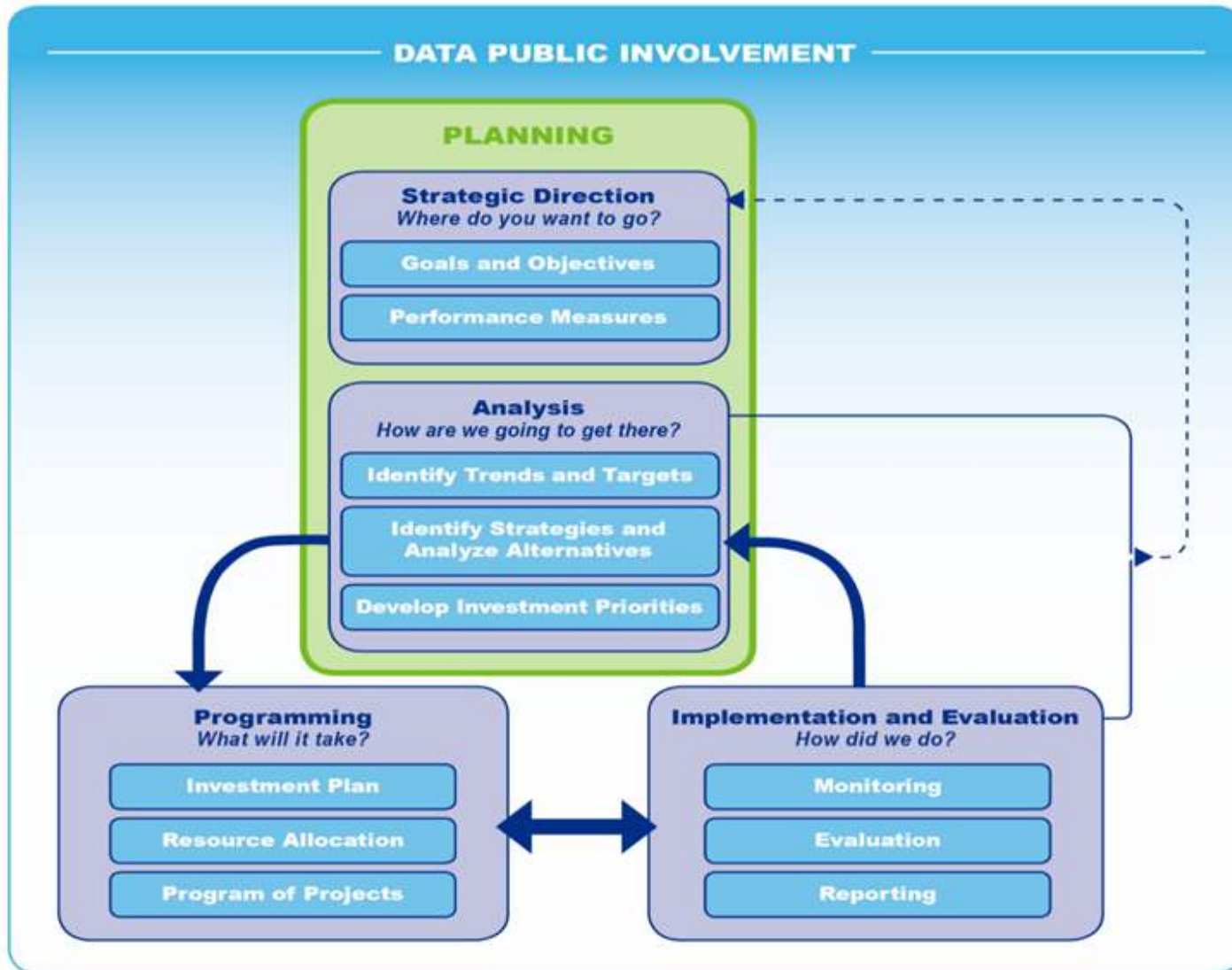
- Is systematically applied and a regular ongoing process
- Provides key information to help decision makers to understand the consequences of investment decisions across transportation assets or modes
- Improving communications between decision makers, stakeholders, and the traveling public
- Ensuring targets and measures are developed in cooperative partnerships and based on data and objective information.

The framework sets up a process in which:

- A strategic direction is set,
- Standard analysis is conducted to identify trends and establish achievable future targets,
- Available funding is programmed to support the achievement of the targets, and
- Performance is monitored to evaluate and adjust future target setting and programming decisions.

Figure 1

Framework for Performance Based Planning and Programming



Source: Federal Highway Administration

Federal-Aid Highway Program Performance Goals

The FAST Act directed the Federal Highway Administration (FHWA) to identify Transportation Performance Measures for six National Performance Goals. In response, SEMCOG adopted a highway performance management process that includes national Transportation Performance Measures. These will be used to inform SEMCOG's planning decisions. The six national performance goals are:

- **Safety** – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- **Infrastructure Condition** – To maintain the highway infrastructure asset system in a state of good repair.
- **Congestion Reduction** – To achieve a significant reduction in congestion on the National Highway System.
- **System Reliability** – To improve the efficiency of the surface transportation system.
- **Freight Movement and Economic Vitality** – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **Environmental Sustainability** – To enhance performance of the transportation system while protecting and enhancing the natural environment.

Public Transportation National Performance Goals

Transit Asset Management

The FAST Act also directed the Federal Transit Administration (FTA) to develop a rule establishing a strategic process for operating, maintaining, and improving public capital assets effectively through their entire lifecycle. The FTA established a Transit Asset Management (TAM) rule that identifies four performance areas for transit providers to track asset conditions and create plans for systemically managing operations, maintenance, and capital investments. The four performance areas are:

- **Rolling Stock** – Revenue vehicles used in providing public transportation.
- **Equipment** – Articles of non-expendable, tangible property has a useful life of at least one year.
- **Facilities** – Buildings or structures that are used in providing public transportation.
- **Infrastructure** – The underlying framework or structures that support a public transportation system.

Transit providers in Southeast Michigan vary widely with the type and scale of assets. To account for the diversity of rolling stock, equipment, facilities, and infrastructure owned and operated by transit providers, FTA instructs the providers to individually create Transit Asset Management Plans that identify assets and a condition evaluation approach that best fits their asset profile. Transit providers with more resources to dedicate to data and analysis, are encouraged to conduct evaluations of transit assets that match the scale and complexity of their asset profile.

Transit Safety

In addition to asset management, all public transportation providers are required to establish safety performance targets to address the safety performance measures identified in their [Public Transit Agency Safety Plans](#) (PTASP). Transit Agency Safety Plans must include performance measures that track fatalities, injuries, safety events, and system reliability. Southeast Michigan transit agencies must certify a PTASP and report targets for the transit safety performance measures to the State of Michigan and SEMCOG within a year of the final rule publication. SEMCOG is not required to set new transit safety targets each year but can choose to revisit the MPO's safety performance targets based on the schedule for preparation of its system performance report that is part of the Regional Transportation Plan (RTP).

A full list of national performance measure goal areas and measures can be found in Table 1.

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Table 1

National Performance Goal Areas and Measures

Performance Area	Performance Measures
Roadway Safety	<ul style="list-style-type: none"> • Number of fatalities • Rate of fatalities • Number of serious injuries • Rate of serious injuries • Number of nonmotorized fatalities and nonmotorized serious injuries
Pavement & Bridge Condition	<ul style="list-style-type: none"> • Percent National Highway System (NHS) bridge deck area in good and poor condition • Percent Interstate pavement in good and poor condition • Percent Non-Interstate NHS pavement in good and poor condition
Congestion Mitigation and Air Quality	<ul style="list-style-type: none"> • On-Road Mobile Source Emissions for Carbon Monoxide (CO) and Particulate Matter (PM2.5) • Peak Hour Excessive Delay • Non-Single Occupancy Vehicle (SOV) Travel
System Performance	<ul style="list-style-type: none"> • Interstate travel time reliability • Non-Interstate travel time reliability • Truck travel time reliability
Public Transportation	<p>Transit Asset Management</p> <ul style="list-style-type: none"> • Percent of Revenue Vehicles and Equipment that have met or exceeded their useful life benchmark • Percent of Facilities below FTA requirements model scale • Percent of infrastructure condition relating to track segments
	<p>Transit Safety</p> <ul style="list-style-type: none"> • Fatalities • Injuries • Safety Events • System Reliability



Performance Measure Integration in Project Planning and Programming

Performance management is integrated throughout SEMCOG's planning and programming process. The RTP incorporates policies and actions detailed in subject matter plans and processes such as:

- Southeast Michigan Transportation Safety Plan;
- Bicycle and Pedestrian Mobility Plan for Southeast Michigan;
- SEMCOG Region Congestion Management Process;
- SEMCOG Region ITS Regional Architecture Plan;
- Asset Management Guide for Local Agencies in Michigan; and
- Administration of the Congestion Mitigation and Air Quality Program.

The *Vision 2050* infrastructure investments are programmed through the four-year TIP, which lists projects by year, and includes the primary federal performance area to which each project contributes. This process will evolve over time as additional data are collected and trends become clear.

Transportation Performance Measures and Targets

Federal transportation legislation establishes a performance-based planning framework and target setting requirements for States and Metropolitan Planning Organizations (MPOs). These are designed to focus the federal-aid program on national goals. The goal areas include safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays.

The process of establishing and tracking performance measures is referred to as Transportation Performance Management (TPM). As the dedicated MPO for Southeast Michigan, SEMCOG is tasked with setting performance targets for the following areas: Roadway Safety, Pavement & Bridge Condition, National Highway System (NHS) Reliability, Interstate Freight Reliability, Congestion Mitigation and Air Quality (CMAQ), Transit Performance (transit asset & transit safety).

The following is a snapshot of the SEMCOG Transportation Performance Measure baseline conditions and adopted targets. Evaluation of trends and targets takes place throughout the year. To view the most current adopted targets and trends, visit SEMCOG's website (<https://semcog.org/performance-measures>).

Safety Performance

The Highway Safety Improvement Program (HSIP) final rule (23 CFR Part 490) requires States and MPOs to establish targets annually for five safety performance measures based on five-year rolling averages for:

- **Number of Fatalities:** The total number of persons suffering fatal injuries in a motor vehicle crash during a calendar year.
- **Fatality Rate:** The ratio of total number of fatalities to the number of vehicle miles traveled (VMT, in 100 Million VMT) in a calendar year.
- **Number of Serious Injuries:** The total number of persons suffering at least one serious injury in a motor vehicle crash during a calendar year.
- **Serious Injury Rate:** The ratio of total number of serious injuries to the number of VMT (in 100 Million VMT) in a calendar year.
- **Number of Non-motorized Fatalities and Serious Injuries:** The combined total number of non-motorized fatalities and non-motorized serious injuries involving a motor vehicle during a calendar year.

The Michigan Department of Transportation (MDOT) establishes annual statewide safety targets after consultation and coordination with regional planning organizations throughout the State. In the past, SEMCOG's elected leadership has adopted the State's annual targets while also encouraging MDOT to establish more aspirational targets. In January 2023, SEMCOG's Executive Committee adopted regional safety targets for the first time, which were developed in coordination with SEMCOG's Transportation Safety Task Force, Transportation Safety Action Committee, Transportation Coordinating Council, and other regional stakeholders. SEMCOG's desire is to set regional

safety targets that are both data driven and aspirational, with the long-term goal of zero deaths and serious injuries by 2050. Details regarding the establishment of the safety targets can be found in the Southeast Michigan Transportation Safety Plan. MDOT is supportive of SEMCOG’s methodology to set regional safety targets. Table 2 shows the statewide baseline measures and targets supported by SEMCOG.

Table 2

Safety Performance Measure Targets, Southeast Michigan

Safety Performance Measures (5 year rolling average)	Baseline (2018-2022)	Target (2020-2024)
Fatalities	410.4	406.4
Fatality Rate Per 100 Million VMT	0.976	0.956
Serious Injuries	2,126.8	2,108.8
Serious Injury Rate Per 100 Million VMT	5.029	5.009
Non-Motorized Fatalities and Serious Injuries	376.0	366.0

SEMCOG will contribute to achieving these targets through the following actions adopted in the Vision 2050:

- Implement the Southeast Michigan Transportation Safety Action Plan, using the Safe System Approach to prioritize actions that help eliminate traffic fatalities and serious injuries.
- Design roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users.
- Increase communication and collaboration among transportation agencies and communities to identify funding opportunities for safety projects, encourage consistency in design across jurisdictions, and coordinate safe detour routes for all modes during construction projects.

- Promote safer speeds in all roadway environments through a combination of thoughtful, context-appropriate roadway design, targeted education and outreach campaigns, and enforcement.
- Ensure ADA access to walking, biking, and transit facilities and where possible promote universal design standards.
- Target engineering, education, and enforcement efforts in priority locations identified in the Southeast Michigan Transportation Safety Plan.
- Adopt and enforce safety and security measures across all transportation modes, and encourage mode shifts to reduce vehicle crashes, emissions, and address equity, safety, and climate goals.
- Complete the ongoing effort to establish TIP prioritization processes for each FAC, including a safety prioritization component.

Pavement and Bridge Asset Management

Federal rules on performance management measures requires that Metropolitan Planning Organizations (MPOs) support State DOT pavement and bridge condition performance targets or establish their own targets every 2 and 4 years, respectively. Specific performance measure targets are set for:

Pavement

- Percentage of pavements on the Interstate System in Good condition
- Percentage of pavements on the Interstate System in Poor condition
- Percentage of the non-interstate National Highway System in Good condition
- Percentage of the non-interstate National Highway System in Poor condition

Bridge

- Percent National Highway System (NHS) Deck Area in Good Condition
- Percent NHS Deck Area in Poor Condition

The SEMCOG pavement and bridge two- and four-year targets were established in coordination with MDOT, other state MPOs, the FHWA, and the FTA. SEMCOG will continue coordination with federal, state, and local road agencies to plan and implement projects that contribute to meeting the targets. Table 3 shows the statewide baseline measures and targets supported by SEMCOG.

Table 3

Pavement and Bridge Performance Measure Targets, State of Michigan

Performance Area	Measure	Baseline 2022	2-Year Target 2023	4-Year Target 2025
Bridge	Percent National Highway System (NHS) Deck Area in Good Condition	21.8%	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%

SEMCOG will contribute to achieving these statewide targets through the following actions adopted in the Vision 2050:

- Advocate for increase funding and broaden local options to ensure adequate resources and coordination for meeting regional transportation needs to achieve fiscal sustainability.
- Establish a comprehensive asset management program to assess, manage, and monitor the condition and performance of infrastructure assets including roads, bridges, and transit systems, employing data collection systems such as sensors for informed maintenance and rehabilitation prioritization.
- Foster coordination among utility providers, road commissions, and agencies to establish and adhere to standardized practices for contractors. Prioritize maintenance and infrastructure longevity planning, considering environmental factors such as freeze/thaw cycles to ensure a durable and efficiently managed transportation infrastructure.
- Implement maintenance and rehabilitation strategies, aligned with asset management goals, to prolong infrastructure lifespan, ensure cost-effectiveness, and focus on preventive measures for sustainable asset preservation.
- Facilitate adopting emerging technologies and explore innovative construction techniques to enhance infrastructure durability, longevity, and efficiency, while preparing communities for modern infrastructure development without adding undue capacity

- Increase communication and collaboration among transportation agencies and communities to identify funding opportunities for safety projects, encourage consistency in design across jurisdictions, and coordinate safe detour routes for all modes during construction projects.

System Performance

System Performance seeks to evaluate the effectiveness of the Interstate and non-Interstate National Highway System (NHS) for the purpose of carrying out the National Highway Performance Program (NHPP). The federal rules on TMP measures for system performance require establishment of targets every 2 and 4 years, respectively. Since targets were first established in 2018, SEMCOG, in cooperation with MDOT, has updated the targets as required. Targets must be established on the National Highway System (NHS) throughout the state ([FHWA](#)). The NHS includes 7,381 lane miles of road in the SEMCOG region. MDOT owns 62.4% of those lane miles. Federal regulation requires that MPOs establish targets for the performance of three areas:

- National Highway System (NHS) Travel Time Reliability
- Freight Reliability
- Congestion Mitigation and Air Quality Improvement (CMAQ)

National Highway System (NHS) Travel Time Reliability

The level of travel time reliability for both the NHS interstate and non-interstate NHS measure the percentage of person-miles traveled considered to be reliable. These measures attempt to instruct travelers how often they can expect to travel in reliable conditions. A road is considered reliable when the difference between normal travel times (50th percentile) and congested travel times (80th percentile) is below 50 percent. In other words, a road segment that takes one minute to travel under normal conditions would be considered reliable if the time it takes to travel under congested conditions is less than one and a half minutes.

Baseline data from 2022 reveals Michigan's interstate highways and non-interstate highways have been around 85 percent reliable, meaning 85 percent of person-miles traveled are meeting the federally established thresholds. The freight reliability measure measures the same reliability. However, the longer travel time is calculated using the 95th percentile travel time.

Freight Reliability

Freight reliability is assessed by a Truck Travel Time Reliability (TTTR) Index. This is used to determine the consistency or predictability in travel times for trucks on specific routes of road segments (FHWA). Reporting is divided into five peak hour travel time periods which include peak daytime periods, an overnight period, and weekend periods. The TTTR ratio is measured by the ratio of congested peak period travel time (95th percentile) and the normal peak period (50th percentile) for each segment on the interstate system. The highest TTTR value is used to determine the reliability of the Interstate system for truck traffic or freight reliability. SEMCOG establishes two- and four-year targets for:

- The ratio of the congested period travel time to the normal period travel time, weighted by the length of the Interstate segment, for the entire Interstate system in the state.

The SEMCOG reliability two- and four-year targets were established in coordination with MDOT, other regions, the FHWA, and the FTA. SEMCOG will continue coordination with state, federal, and local road agencies to plan and implement projects that contribute to meeting the targets. Table 4 shows the statewide baseline measures and targets supported by SEMCOG.

Table 4

System Performance Measure Targets, State of Michigan

Measure	Baseline Statewide Condition, 2022	2-Year Statewide Target, 2023	4-Year Statewide Target, 2025
Level of Travel Time Reliability on Interstates	97.1%	85.0%	85.0%
Level of Travel Time Reliability on Non-Interstate NHS	94.4%	80.0%	80.0%
Truck Travel Time Reliability Index	1.31	1.60	1.60

SEMCOG will contribute to achieving these statewide targets through the following actions adopted in Vision 2050:

- Facilitate adopting emerging technologies and explore innovative construction techniques to enhance infrastructure durability, longevity, and efficiency, while preparing communities for modern infrastructure development without adding undue capacity.
- Improve domestic and international freight mobility and efficiency through technology, coordination, and infrastructure enhancements.
- Support enhancing energy infrastructure to successfully accommodate emerging technology sectors in the region.
- Improve domestic and international freight mobility and efficiency through technology, coordination, and infrastructure enhancements.
- Maintain a balance between freight movement and community needs, while mitigating conflicts between all modes of transportation.

Congestion Mitigation and Air Quality

The federal rules on performance management measures for CMAQ require establishment of performance targets every 2 and 4 years, respectively. As these targets were first established in 2018, SEMCOG, in cooperation with MDOT, has updated the 4-year targets as required. Targets must be established for urbanized areas with populations greater than 200,000 with any part of a designated nonattainment or maintenance area for criteria pollutants. For the SEMCOG region, this includes the urbanized areas of Detroit, Ann Arbor, and, Toledo, OH.

Three measures are established to assess performance of the federal Congestion Mitigation and Air Quality (CMAQ) program.

- On-Road Mobile Source Emissions: Total Emission Reductions
- Traffic Congestion Annual Hours of Peak Hour Excessive Delay Per Capita
- Traffic Congestion: Percent of Non-Single Occupancy Vehicle (SOV) Travel

On-Road Mobile Source Emissions is an assessment of the effectiveness of the Congestion Mitigation and Air Quality (CMAQ) program in reducing emissions from on-road motor vehicles. These measures are required for each criteria pollutant that is designated as nonattainment or maintenance, which for Southeast Michigan includes carbon monoxide (CO) and fine particulate matter (PM 2.5).

The Peak Hour Excessive Delay (PHED) measures the duration of severe congestion on freeways and arterials in Southeast Michigan. Data for this measure uses probe speed data from personal and vehicular connected devices. PHED is the cumulative time roadway segments are operating either below 20 miles per hour or below 60 percent of the posted speed limit. To have the measure be closer to the impact on an individual peak-hour traveler's life, the total cumulative delay for a road segment is divided by the number of vehicles traveling on that segment. PHED factors in both highway travel speeds and travel volumes.

Percent Non-Single Occupancy Vehicle (SOV) Travel measures the proportion of trips that use travel options that reduce vehicular trips through carpooling, vanpooling, transit, walking, biking, or telecommuting. Increasing the number of people choosing non-SOV travel helps reduce congestion and air pollution. Increasing non-SOV travel reduces the number of vehicles running in the region while providing travel alternatives to people who want to reduce solo travel and people without access to a private vehicle.

SEMCOG and MDOT established separate targets for each of these criteria pollutants and applicable precursors. SEMCOG is designated as nonattainment or maintenance for carbon monoxide (CO) and particulate matter (PM2.5). Targets reflect the anticipated cumulative emissions reduction to be reported in the CMAQ Public Access System. Table 5 shows the statewide baseline measures and targets supported by SEMCOG.

Table 5

Congestion Mitigation and Air Quality Targets, State of Michigan

Detroit		
Measure	2-Year Statewide Target, 2023	4-Year Statewide Target, 2025
Peak Hour Excessive Delay (Hours)	n/a	18
Non-SOV Travel (percent)	n/a	15.5
Particulate Matter 2.5 (kg/day)	595	1,191
Nitrogen Oxide /NOx (kg/day)	5,227	10,455
Ann Arbor		
Peak Hour Excessive Delay (Hours)	n/a	16
Non-SOV Travel (percent)	n/a	29.7
Toledo		
Peak Hour Excessive Delay (Hours)	n/a	7
Non-SOV Travel (percent)	n/a	7

SEMCOG will achieve these targets through the following actions adopted in Vision 2050:

- Adopt and enforce safety and security measures across all transportation modes, and encourage mode shifts to reduce vehicle crashes, emissions, and address equity, safety, and climate goals.
- Prioritize investments in stormwater infrastructure and greenways to mitigate flooding, reduce transportation-related greenhouse gas emissions, and improve air quality to promote public health.

Public Transportation

Transit Asset Management

As required by the FTA, transit agencies must develop a Transit Asset Management (TAM) plan if it owns, operates, or manages capital assets. The transit asset management rule identifies areas for transit providers to track asset conditions and create plans for systemically managing operations, maintenance, and capital investments. The performance targets are based on the following asset types:

- **Rolling Stock** – Revenue vehicles used in providing public transportation, e.g., buses.
- **Equipment** – Articles of non-expendable, tangible property that have a useful life of at least one year, e.g., non-revenue vehicles and maintenance equipment.
- **Facilities** – Buildings or structures that are used in providing public transportation, including administrative, maintenance, passenger, and parking facilities.
- **Infrastructure** – Track segments (by rail mode) applying to rail fixed guideway systems.

Methodology

The FTA default Useful Life Benchmarks (ULB) was used in conjunction with the asset inventory data submitted to SEMCOG by each of the transit providers. The data from the transit agency on each of the four categories of capital assets (revenue vehicles, equipment, facilities, and infrastructure) was used to approximate the State of Good Repair (SGR). For each asset category, the performance measure is a characterization of the percentage of the total number of assets that are at or past their ULB based on the targets that have been set. The target setting process for the SEMCOG region involved taking the total number of targeted assets and dividing by the total number of assets in each respective category.

Table 6 shows the regional targets for Transit Asset Management aggregated by SEMCOG. The targets in this performance measure are expressed as a percentage of the rolling stock, equipment, facilities, or infrastructure that have met or exceeded their useful life. The transit agency has identified these assets as needing refurbishing or replacement. The SEMCOG transit asset management targets for 2024 were established in coordination with MDOT, regional transit providers, the RTA, and the FTA. SEMCOG will continue coordination with the RTA, State, federal, and local agencies to plan and implement projects that contribute to meeting the targets. SEMCOG will continue to coordinate with transit providers to implement TAM plans and update TAM targets, incorporating capital expenditures leveraging federal funding into the Transportation Improvement Program (TIP).

Table 6

Transit Asset Management (TAM) Targets, Southeast Michigan

Asset Category	Performance Measures	2024 Regional Target
Revenue Vehicle	Age – percentage of revenue vehicles that have met or exceeded their Useful Life Benchmark (ULB)	25%
Equipment	Age – <i>percentage</i> of equipment that has met or exceeded their Useful Life Benchmark (ULB)	50%
Facilities	Condition – percentage of facilities with a condition rating adequate or below on the FTA Transit Economic Requirements Model Scale	3%
Infrastructure	The percentage of track segments (by mode) that have performance restrictions. Track segments are measured to the nearest 0.01 of a mile.	0%

SEMCOG will achieve these targets through the following actions adopted in Vision 2050:

- Commit to continuous improvement through regular accessibility audits of transit infrastructure, ensuring reliability, efficiency, and universal accessibility, particularly for individuals with physical or cognitive disabilities.
- Support the RTA Regional Transit Master Plan and other regional transit provider plans
- Establish a comprehensive asset management program to assess, manage, and monitor the condition and performance of infrastructure assets including roads, bridges, and transit systems, employing data collection systems such as sensors for informed maintenance and rehabilitation prioritization.

Transit Safety

Transit Provider Requirement

As required by the FTA, all public transportation providers are required to establish safety performance targets to address the safety performance measures identified in their [Public Transit Agency Safety Plans](#) (PTASP). Transit Agency Safety Plans must include performance targets based on the safety performance measures and set targets for each mode that represent its goals for the upcoming National Transit Database (NTD) reporting year.

SEMCOG Requirement

Each transit provider is required to review and update its Agency Safety Plan annually, including the safety performance targets, as necessary. The MPO is not required to set new transit safety targets each year but can choose to revisit the MPO's safety performance targets based on the schedule for preparation of its system performance report that is part of the Regional Transportation Plan (RTP).

Methodology

Due to the variation in methodologies used by individual transit agencies for creating their targets, SEMCOG established a methodology at the regional level, to account for the nuances in the variety of modes and services provided by each agency. The performance targets are based on the following four (4) safety categories:

- **Fatalities:** total number (major and non-major) of reportable fatalities and rate per total vehicle revenue miles (VRM) by mode
- **Injuries:** total number (major and non-major) of reportable injuries and rate per total VRM by mode
- **Safety Events:** total number (major and non-major) of reportable events and rate per total VRM by mode
- **System Reliability:** mean distance between major (major only) mechanical failures (MDBF) by mode

NTD Data was used to identify the baseline using 5-year average data (2018-2022) for Commuter Bus, Demand Response, Monorail/Guideway, Motor Bus, Streetcar Rail, and Van Pool. The total annual average VRM per mode was used to determine the rate parameters. Targets for modes with VRM >1,000,000 used a rate of 100,000 VRM. Targets for modes with VRM <1,000,000 used a rate of 10,000 VRM.

To set the targets, a number and rate reduction was applied to the baseline. The number of fatalities, injuries, safety events, and system failures were reduced by 10 percent, based on goals from the *Southeast Michigan Traffic Safety Plan*. The numbers were then rounded down to the nearest multiple of five for fatalities, injuries, and safety events. The mean distance between major mechanical failures (MDBF), which were in thousands for all modes, was rounded up to nearest multiple of 50. Table 7 below shows the Southeast Michigan Transit Safety Targets for Calendar Year 2024.

Table 7

Transit Safety Targets, 2024 Southeast Michigan

Mode	Fatalities		Injuries		Safety Events		Reliability
	Number	Rate	Number	Rate	Number	Rate	MDBF
Commuter Bus	0	-	0	-	0	-	390,950
Demand Response	0	-	15	0.17	25	0.29	51,850
Monorail/Guideway	0	-	0	-	0	-	6,000
Motor Bus	0	-	210	.88	165	0.69	8,700
Streetcar Rail	0	-	0	-	5	0.43	4,700
Vanpool (VP)	0	-	0	-	0	-	1,408,100

SEMCOG will achieve these targets through the following actions adopted in Vision 2050:

- Ensure ADA access to walking, biking, and transit facilities and where possible promote universal design standards.
- Build safe, comfortable, and complete networks for all modes, including pedestrians, cyclists, and transit riders.

Conclusion

The emphasis on performance management including setting performance targets, orienting policies and programs to achieve these targets, and evaluating policy and program effectiveness is a major change in federal transportation law. The required MPO targets are a chance for SEMCOG to connect short-term performance measurement to long-term regional priorities. Target setting helps guide the balance of high-level resource allocation – whether more attention or funding should be directed to improving certain measures or asset classes. The target setting requirements also give the region another path to call attention to the large investment and funding needed to improve critical elements of the regional transportation system. SEMCOG will continue tracking and updating measures and targets. All updates can be found at <https://semcog.org/performance-measures>.

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2023-2024**

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