Infrastructure Condition Performance Measures Target-Setting

The final rule on pavement and bridge condition performance measures target setting was the second of a series of rules related to target setting, effective May 20, 2017.

Pavement and bridge condition performance measures require State DOTs and MPOs to assess the following on the NHS to carry out the National Highway Performance Program (NHPP):

• Percent of Interstate Pavement in Good Condition: Pavement condition shall be calculated in accordance with the HPMS Field Manual and based on three condition ratings of Good, Fair, and Poor calculated for each pavement section. Good condition suggests no major investment is needed.

• Percent of Interstate Pavement in Poor Condition: Pavement condition shall be calculated in accordance with the HPMS Field Manual and based on three condition ratings of Good, Fair, and Poor calculated for each pavement section. Poor condition suggests major reconstruction investment is needed.

• Percent of Non-Interstate NHS Pavement in Good Condition: Pavement condition shall be calculated in accordance with the HPMS Field Manual and based on three condition ratings of Good, Fair, and Poor calculated for each pavement section. Good condition suggests no major investment is needed.

• The percent of Non-Interstate NHS Pavement in Poor Condition: Pavement condition shall be calculated in accordance with the HPMS Field Manual and based on three condition ratings of Good, Fair, and Poor calculated for each pavement section. Poor condition suggests major reconstruction investment is needed.

• Percent of NHS Bridge by Deck Area in Good Condition: Measures are based on deck area. Deck area is computed using National Bridge Inventory (NBI) data. Classification is based on NBI condition ratings for deck, superstructure, substructure, and culvert. Condition is determined by lowest rating of these. If the lowest rating is greater than or equal to seven the bridge is classified as good.

• Percent of NHS Bridges by Deck Area in Poor Condition: Measures are based on deck area. Deck area is computed using National Bridge Inventory (NBI) data. Classification is based on NBI condition ratings for deck, superstructure, substructure, and culvert. Condition is determined by lowest rating of these. If the lowest rating is less than or equal to four, the bridge is classified as poor.

MPOs may establish targets by either

(1) Agreeing to plan and program projects so they contribute toward the accomplishment of the overall statewide targets or

(2) Committing to quantifiable targets specific to the metropolitan planning area.

On September 25, 2018, the NATS Technical and Policy Committees voted to support the Michigan Department of Transportation's individual four-year pavement condition, bridge condition, and system reliability performance measure targets by planning and programming projects so they contribute to the accomplishment of the statewide targets, thereby fulfilling the requirements related to pavement condition, bridge condition, and system reliability performance measure target setting established under MAP-21 and the FAST Act. These targets can be found in tables below:

Established Statewide Infrastructure Condition Targets

Pavement Condition

Performance Measure	Description	State Target 2021
Percentage of pavement on the Interstate System in good condition.	The percentage of pavement on the Interstate system considered in good condition.	47.8%
Percentage of pavement on the Interstate System in poor condition.	The percentage of pavement on the Interstate system considered in poor condition.	10.0%
Percentage of pavement on the non-Interstate National Highway System in good condition.	The percentage of pavement on the non-Interstate National Highway System considered in good condition.	43.7%
Percentage of pavement on the non-Interstate National Highway System in poor condition.	The percentage of pavement on the non-Interstate National Highway System considered in poor condition.	24.9%

Bridge Condition

Performance Measure	Description	State Target 2021
Percentage of National Highway System (NHS) bridge deck area in good condition.	The percentage of bridges on the NHS that are considered in good condition.	26.2%
Percentage of National Highway System (NHS) bridge deck area in poor condition.	The percentage of bridges on the NHS that are considered in poor condition.	7.0%

While FHWA will determine whether a State DOT has met or made significant progress toward meeting these targets, it will not directly assess progress toward meeting targets at the regional level. The MPO will continue to review these performance measures and will update these targets on a two- or four-year cycle, following updates completed by the state.

System Reliability- Performance Measures Target-Setting

The final rule on system reliability target setting was the third of a series of rules related to target setting, effective May 20, 2017. System Performance measures require State DOTs to assess the following on the NHS to carry out the National Highway Performance Program (NHPP):

- Interstate Travel Time Reliability
- Non-Interstate NHS travel Time Reliability
- Interstate Truck Travel Time Reliability
- Total Emissions Reductions
- Annual Hours of Peak Hour Excessive Delay Per Capita
- Percent of Non-Single Occupancy Vehicle Travel

NATS is only subject to the first three travel time reliability measures listed above. On September 25, 2018, the NATS Technical and Policy Committees voted to support the Michigan Department of Transportation's individual four-year system performance targets by planning and programming projects so they contribute to the accomplishment of the overall statewide targets, thereby fulfilling the requirements related to system performance measure target setting established under MAP-21 and the FAST Act. These targets are below

Established Statewide System Reliability Targets

Performance Measure	Description	State Target 2021
Percentage of the person-miles traveled on the Interstate that are reliable.	The percentage of miles traveled by a person on the Interstate that are reliable.	75%
Percentage of the person-miles traveled on the non-Interstate NHS that are reliable.	The percentage of miles traveled by a person on the non-Interstate NHS that are reliable.	70%
Truck Travel Time Reliability (TTTR) Index	The sum of maximum TTTR for each reporting segment, divided by the total Interstate system miles	1.75

The System Performance Measures Final Rule Reliability measures are:

• Interstate Travel Time Reliability – This is a measurement describing the predictability of travel times for all the Interstates in the planning area. A lower value means there is higher unpredictability. It is not the level of congestion. In cities that are congested people can plan for 'normal' delays, therefore 100% reliability is possible even in congested areas. Travel time reliability only measures the extent of unexpected delay. A formal definition for travel time reliability is the percentage of people (not vehicles) who have travel that have consistent travel times. Using person-miles and not vehicle miles of travel takes into account the travel on buses or by carpooling.

• Non-Interstate NHS travel Time Reliability - This is the same measure as above, except for it includes highways designated as part of the National Highway System that are not Interstates. Again, it is not level of congestion; it is the predictability of travel.

• Interstate Truck Travel Time Reliability (TTTR) – The TTTR is an assessment of for the reliability of freight movement. It is defined as the ratio the time it takes 95 percent of trucks to travel a given segment divided by the 'average' time (50 percent of trucks) it takes to travel the segment.

TIP Impacts

All projects utilizing federal funding in the TIP are subject to a thorough performance-based analysis regarding their contribution to attaining the performance measure targets by utilizing a variety of quantitative measures as well as staff analysis. Criteria related to infrastructure condition and included in project evaluation include: identification of improvements focused on reconstruction, rehabilitation, repair, bridge condition, operations, and average daily traffic volumes. System preservation is a primary category used for evaluating projects for inclusion in the TIP, accounting for 34% of a project's possible score. Additionally, addressing system preservation was a qualitative criteria of project evaluation. Based on this, the NATS program of projects and investment priorities included in the TIP do prioritize the accomplishment of performance measure objectives.

Next Scheduled Update

Under current federal law, the MPO's Transportation Improvement Program must be updated at least once every four years. The FY 2017-2020 TIP will be in effect until the end of FY 2019 when it will be replaced until by the FY 2020-2023 TIP. Major revisions to the adopted TIP will be carried out, as needed, in the form of formal amendments. All amendments are publicly-noticed according to the procedures contained in the Southwest Michigan Planning Commission Public Participation Plan prior to their adoption.