

9: PERFORMANCE MEASURES

INTRODUCTION

Performance management is a strategic approach that uses system information to make investment and policy decisions to achieve goals set for the multimodal transportation systems in the MPO study area. Performance-Based Planning and Programming (PBPP) refers to transportation agencies' application of performance management as standard practice in the planning and programming processes.

The goal of PBPP is to ensure that transportation investment decisions—both long-term planning and short-term programming—are based on the ability to meet established goals.

As a federal requirement, states will invest resources in projects to achieve individual targets that collectively will make progress toward national goals. MPOs are also responsible for developing LRTPs and TIPs “through a performance-driven, outcome-based approach to planning.”



Flow chart describing the process for Performance Management, provided by the National Highway Institute

The MPO is now developing its PBPP process to meet federal requirements—including requirements for tracking specific measures and setting targets—and to meet the unique planning needs of the MPO.

This document is meant to serve as a bridge as the MPO transitions to a more strategic PBPP. This document describes:

- National Goal Areas and Measures;
- Federal Requirements;
- Safety Goal Area and Targets;
- Next steps for the MPO

National Goal Areas

Highway Performance

Through the federal rulemaking process, the Federal Highway Administration (FHWA) is requiring state DOTs and MPOs to monitor the transportation system using specific performance measures. These measures are associated with the national goal areas prescribed in MAP-21 and the FAST Act. The following list describes these national goal areas for highway performance as well as measures of performance. It should be noted that the MPO can take on additional measures beyond what is described.

Safety

- Injuries and Fatalities

Infrastructure Condition

- Pavement Condition
- Bridge Condition

System Reliability

- Performance of National Highway System

Freight Movement and Economic Vitality

- Movement on Interstate System

Congestion Reduction

- Traffic Congestion

Environmental Stability

- On-Road Mobile Source Emissions

Reduced Project Delivery Delay

*For GPATS, targets for these measures will be set based on the targets set by the state, and performance reports will be added once data becomes available.

Transit Performance

Recipients of public transit funds—which can include states, local authorities, and public transportation operators—are required to establish performance targets for safety and state of good repair; to develop transit asset management and transit safety plans; and to report on their progress toward achieving targets. Public transportation operators are directed to share information with MPOs and states so that all plans and performance reports are coordinated. The list below identifies performance measures goals outlined in the National Public Safety Transportation Plan, released by the Federal Transit Administration (FTA), and in the final rule for transit asset management. The MPO will be required to coordinate with public transit providers to set targets for these measures.

Safety

- Fatalities
- Injuries
- Safety Events
- System Reliability

Infrastructure Condition

- Equipment
- Rolling Stock
- Facilities

*For GPATS, targets for these measures will be set based on the targets set by the state, and performance reports will be added once data becomes available.

For more detailed information on any of these performance measures, see the Horizon 2040 Appendix E.

FEDERAL REQUIREMENTS

Targets

- The MPO is required to establish performance targets no later than 180 days after SCDOT or a public transportation operator sets performance targets.
- For each performance measure, the Policy Committee will decide to commit to support a statewide target, or to establish a quantifiable target specific to the planning area.
- SCDOT, MPOs, and public transit operators must coordinate targets for performance measures to ensure consistency to the maximum extent practicable.

Reporting

- The LRTP must describe the performance measures and targets, evaluate the performance of the transportation system, and report on progress made.
- The TIP must link investment priorities to the targets in the LRTPs and describe, to the maximum extent practicable, the anticipated effect of the program toward achieving established targets.
- The MPO must also report baseline roadway transportation system condition, performance data and progress toward the achievement of targets to SCDOT.

Assessments

- FHWA and FTA will not directly evaluate the MPO progress towards meeting targets for required performance measures. The MPOs performance will be assessed as part of regular cyclical transportation planning process reviews, including Transportation Management Area certification reviews, small MPO self-certification reviews, and the Federal Planning Finding associated with approval of the STIP.
- FHWA will determine if SCDOT has met or made significant progress towards attaining the selected targets for the highway system.

SAFETY

The State of South Carolina has the highest fatality rate in the nation. It is 67% higher than the national rate and 40% higher than the states in the southeast. Reducing the number of transportation-related collisions, injuries, and fatalities is the SCDOT's highest priority and makes safety everyone's business. In 2011, the Director of the SC Department of Public Safety (SCDPS), who also serves as the Governor's Representative for Highway Safety in South Carolina, announced the Agency's goal of zero traffic-related deaths for the State. This goal, also strongly supported by the South Carolina Department of Transportation (SCDOT) and the South Carolina Department of Motor Vehicles, became the starting point for the State's update of the Strategic Highway Safety Plan (SHSP), entitled Target Zero. Target zero is an aspirational target for South Carolina based on the philosophy that no fatalities are acceptable for any household. The state will set targets advancing towards this goal over the next 20 years. For more information on statewide efforts to reach this goal, see the Horizon 2040 Appendix E (see <http://www.gpats.org/plans/horizon2040>).

Safety Needs within the MPO

SCDOT provided a safety workshop for the MPO with data specific to the MPO's study area boundary. The workshop further examined the crash data just within the MPO area to provide some perspective on what safety problems the MPO is experiencing within the study area boundary. Potential focus areas for our MPO are:

- Roadway Departure
- Intersections
- Access Management
- Non-Motorized Roadway Users

These areas could be influenced by MPO policy as a project moves through the planning, programming, and delivery process.

More detail on these problem areas and traditional engineering countermeasure techniques can be found in the Horizon 2040 Appendix E (see <http://www.gpats.org/plans/horizon2040>).

Safety Strategies

The safety of the regional transportation system is a top priority for GPATS. Therefore, additional guideshare funding has been allocated in the Horizon 2040 financial plan for safety and intersection improvements. Making these types of projects a priority should help move the baseline and improve overall safety in the coming years.

Safety Targets

SCDOT was required to evaluate and report on safety targets for the five required measures on August 31, 2017. This action started the 180 day clock for the MPO to take action to evaluate and set regionally specific targets or to accept and support the state's targets.

When setting safety performance targets for the state, statisticians performed extensive analysis of the data related to each measure (traffic fatalities and severe injuries and vehicle miles traveled). South Carolina utilized a seven-data-point graphical analysis with a five-year rolling average. After the data points were plotted and graphical representations of the data were created, a trend line was added that could be used to predict future values. The trend lines were based on linear and non-linear equations with R-squared (best fit measure) values.

Using the statistical models, statisticians were able to predict the values for the current year. Examining current and planned education and engineering safety initiatives, expected reductions in the number of fatalities and severe injuries were estimated, resulting in the calculation of the safety performance targets for the state. Staff from the SCDOT Traffic Engineering Office also met with representatives from the MPOs/COGs, delivering a presentation on target setting and how the state's targets were established. The following table shows the baseline information for the MPO, the State of South Carolina, and the National baseline. The table also include the targets for the State of South Carolina.

SAFETY TARGETS BASELINE (2012-2016 AVERAGE)

	Traffic Fatalities	Fatality Rate*	Severe Injuries	Severe Injury Rate*	Non-motorized
SC Baseline	890.2	1.75	3194.4	6.3	376.4
SC Targets	970.4	1.81	3067.0	5.71	371.3
MPO Baseline	92.2	1.77	325.4	6.33	42.2

For the 2018 performance period, the MPO has elected to accept and support the State of South Carolina's safety targets for all five safety performance measures. This means the MPO will:

- Address areas of concern for fatalities or serious injuries within the metropolitan planning area through coordination with SCDOT and incorporation of safety considerations on all projects;
- Integrate safety goals, objectives, performance measures, and targets into the planning process; and
- Include the anticipated effect toward achieving the targets noted above within the TIP, effectively linking investment priorities to safety target achievement.

Next steps

Additional Measures Coming soon

In the future, the MPO will need to decide whether it will support state targets or set its own targets for other federally required performance measures related to infrastructure condition, system reliability, congestion reduction, freight movement and economic vitality, and environmental sustainability. MPO staff will provide updated information as timelines for these other federally required performance measures are established. The MPO will also choose whether to establish other (non-federally required) performance measures for other goal areas, and whether to develop targets for these measures.

As the MPO makes this action, the performance measures will be added to this document until the MPO undertakes its next LRTP update. At that point, the MPO would fully integrate to a performance based LRTP, where this discussion is integrated within the elements of the LRTP and associated decision making processes.

