



12

MONITORING IMPLEMENTATION AND PERFORMANCE

MAP-21, a funding and authorization bill to govern U.S. federal surface transportation spending, creates a data-driven, performance-based multimodal program to address the many challenges facing the U.S. transportation system. Performance management will lead to more efficient investment of transportation funds by focusing on national transportation goals, increasing accountability and transparency, and improving decision making. This chapter describes the performance measures and targets to be used in assessing system performance. RTC will develop annual reports to track progress toward achieving these targets and will continue to gather additional community input into the transportation planning process.

The U.S. Secretary of Transportation, in consultation with States and MPOs, will establish national performance measures for several areas: pavement conditions and performance for the Interstate and National Highway System, bridge conditions, injuries and fatalities, traffic congestion, on-road mobile source emissions, and freight movement on the Interstate System.

MAP-21 provides an 18 months period for the U.S. Department of Transportation, in consultation with State DOTs, MPOs, and other stakeholders, to develop rulemaking that establishes performance measures. States, in coordination with MPOs, will then set performance targets in support of those measures, and state and metropolitan plans will describe how program and project selection will help achieve the targets. While USDOT rulemaking may not occur for another year, RTC has collaborated with the FHWA Nevada Division Office, the Nevada Department of Transportation, and other stakeholder jurisdictions and agencies to develop preliminary performance measures. These performance measures and targets will be updated upon release of national and state performance measures. The national performance goals for federal highway programs established in MAP-21 include the following:

- 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 NHS.
- 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 the performance of the transportation system while protecting and enhancing the natural environment.
- Reduced project delivery delays — To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

National transit goals and performance measures will be developed by the Federal Transit Administration. These will include state of good repair (SGR) standards for measuring the condition of transit capital assets:

- Equipment
- Rolling stock
- Infrastructure
- Facilities

MAP-21 provides a framework for linking goals and performance targets with project selection and implementation. Performance plans will track the progress toward achieving these targets and will be used to facilitate a community dialog about the track record of the RTC's transportation program. RTC will develop the following performance plans:

- Metropolitan Transportation Plan, to be updated every four years, which will include a discussion of:
 - o Anticipated effects of the improvement program toward achieving the performance targets,
 - o How investment priorities are linked to performance targets
- Annual Metropolitan System Performance Report, which will include:
 - o Evaluation of the condition and performance of the transportation system
 - o Progress achieved in meeting performance targets
 - o Evaluation of how transportation investments have improved conditions
- Annual Transit Performance Report, which will document progress toward meeting performance targets
- Transit Asset Management Plan
- Public Transportation Safety Plan



Maintenance on roadway



The performance measures build upon existing and planned data collection efforts. Both transit and roadway performance measures are included in table 12-1. Additional description of the performance measures is below.

Safety Performance Measures

- Preventable transit accidents per 100,000 miles of service — RTC tracks the number of preventable crashes that RIDE and ACCESS vehicles experience. While travelling on a bus is generally much safer than riding in other types of vehicles, RTC continuously strives to increase safety of transit travel. This data is currently reported to the RTC Board on a monthly basis.
- Number of crashes and number of crashes per vehicle miles travelled (VMT) — This performance measure addresses private vehicles and utilizes data provided by NDOT. The reduction target of 50 percent by 2020 is consistent with the crash reduction goals in the Strategic Highway Safety Plan (SHSP). RTC will report the number of vehicle crashes involving pedestrians and bicyclists as well.
- Number of serious injuries per VMT — Serious injuries resulting from automobile crashes are also tracked by NDOT. The 50 percent reduction goal is consistent with the SHSP.
- Number of fatalities and fatalities per VMT — NDOT tracks the number of fatal crashes as well, and RTC will report this for crashes involving automobiles, pedestrians, and cyclists. The goal of zero fatalities is consistent with the SHSP.
- Miles of bicycle lanes added and percent of the Bicycle Pedestrian Master Plan completed — Because providing designated space for bicyclists is an important element of multimodal safety, this performance measure tracks implementation of the master plan. RTC tracks the number of bicycle lane miles added each year and will identify the percentage of projects in the plan that have been completed. Implementing between 3 and 7 percent of the plan each year will keep the region on track to complete implementation of the master plan by 2035.
- Miles of sidewalk added or enhanced and percent of the ADA Transition Plan completed — As described previously, making sidewalks more accessible will promote pedestrian safety. RTC will track the implementation of projects in the transition plan.

Infrastructure Conditions/Transit State of Good Repair Performance Measures

- Pavement condition index for all roads — RTC has an established management system to monitor pavement condition and determine resource allocation, as described in Chapter 6. An average condition index rating of 70 will be maintained, and no more than 5% of all pavements will have a condition index rating of less than 50 by the year 2020.
- Preventive maintenance of transit rolling stock and facilities — the Short Range Transit Plan identifies an inspection and maintenance schedule for transit capital resources. This performance measure tracks the timeliness of implementation of inspections and corrective actions.
- Maintain industry standard vehicle life cycle — RTC will maintain vehicles in good repair to the expected life cycle for transit rolling stock. The industry standard will vary by type of vehicle.

Congestion Reduction

- Transit passengers per service hour — Transit operating efficiency is a priority of the RTC. An RTC RIDE system-wide average of 30 passengers per service hour is the performance target. RTC currently tracks this data and provides regular reports to the RTC Board.
- Change in traffic congestion delay — The travel demand model is used to forecast the average amount of delay caused to motorists by traffic congestion. This performance measure identifies an increase in minutes of daily delay increasing by no more than five minutes per person by 2035.
- Vehicle miles travelled per person — This performance measure uses the regional travel demand model to estimate the number of VMT per person. The performance target is that VMT will grow minimally from 26 to 27 VMT per person by 2035.



System Reliability

- Transit system on-time performance — The goal of the RTC RIDE system is to have 90 percent of all transit stops occur on schedule. This data is currently collected and reported to the RTC Board.

Freight Movement & Economic Vitality

- I-80 and Greg Street level of service (LOS) — I-80 and Greg Street are significant freight corridors that go through the urban core, therefore the level of service on these roadways is used to measure freight mobility. The performance measure of a peak period LOS D will be used and tracked through the regional travel demand model.

Environmental Sustainability

- Auto emissions — RTC, in partnership with the Washoe County Health District Air Quality Management Division, monitors the emissions generated by on-road mobile sources. The performance target is that auto emissions remain under the emissions budget established in the State Implementation Program.
- Transit fleet mix — The long-term performance target is the transition to cost-effective alternative fuels such as electric or compressed natural gas (CNG). This will require development of an alternative fuel maintenance facility.
- Alternative mode share by corridor — This is a new data analysis element for RTC. Beginning in 2013, the agency will initiate a systematic program to document bicycle and pedestrian activity in key transit oriented development (TOD) corridors. Combined with vehicle counts and transit ridership data, this will allow the comparison of mode share changes over time. The target for the Virginia Street and 4th Street/Prater Way TOD corridors is 30 percent by 2035.
- Alternative mode share in the transit service area — This is another new data analysis element for RTC, which will require use of regional data about pedestrian and bicycle activity as well as analysis of transit ridership and VMT within the transit service area. The performance target is 10 percent alternative mode use by 2035.



The table below identifies the national transportation goals that have been identified, how these link to the RTP goals and applicable performance measures. The zero fatalities goal and crash reduction goals are consistent with the Nevada Strategic Highway Safety Plan.

National Goal	RTP Goal	Annual Transit Performance Measures	Performance Target Table 12-1
Safety	Improve Safety	<ul style="list-style-type: none"> Preventable transit accidents per <u>100,000 miles of service</u> Number of crashes (vehicle, bike, pedestrian)/Number of crashes <u>per Vehicle Miles Travelled (VMT)</u> Number of serious injuries per <u>VMT</u> Number of fatalities (vehicle, bike, pedestrian)/Number of fatalities <u>per VMT</u> Miles of bicycle lanes added & percent of Bicycle Pedestrian Master Plan <u>completed</u> Miles of sidewalks added or enhanced & percent of ADA Transition Plan <u>completed</u> 	<ul style="list-style-type: none"> 0 (ongoing) Reduce by 50% by 2020 Reduce by 50% by 2020 0; reduce by 50% by 2020 3-7% of plan implemented per year 3-7% of plan implemented per year
Infrastructure Condition/Transit State of Good Repair	Manage Existing Systems Efficiently	<ul style="list-style-type: none"> Pavement Condition Index for <u>Regional Roads</u> Preventive maintenance of transit rolling stock and facilities Maintain industry standard vehicle life cycle 	<ul style="list-style-type: none"> 70 (ongoing) 100% of transit preventive maintenance performed <u>on time</u> Varies by vehicle type
Congestion Reduction	<ul style="list-style-type: none"> Manage Existing Systems Efficiently Integrate All Types of Transportation 	<ul style="list-style-type: none"> Transit passengers per service hour Traffic congestion delay Vehicle Miles Travelled per person 	<ul style="list-style-type: none"> 30 (ongoing) 25 min of traffic delay per <u>person per day in 2035</u> 27 VMT per person (ongoing)
System Reliability	Manage Existing Systems Efficiently	<ul style="list-style-type: none"> Transit on-time performance 	<ul style="list-style-type: none"> 90% transit on-time performance (ongoing)
Freight Movement & Economic Vitality	<ul style="list-style-type: none"> Integrate Land Use & Economic Development Improve Freight & Goods Movement Focus on Regional Connectivity 	<ul style="list-style-type: none"> I-80 level of service Greg Street level of service 	<ul style="list-style-type: none"> LOS D
Environmental Sustainability	<ul style="list-style-type: none"> Promote Healthy Communities & Sustainability Integrate Land Use & Economic Development Integrate All Types of Transportation 	<ul style="list-style-type: none"> Auto emissions Transit fleet mix — alternative fueling technologies Alternative mode share by corridor Alternative mode share in the transit service area 	<ul style="list-style-type: none"> Maintain emissions under air quality budget 100% electric or CNG fleet by 2035 30% on Virginia Street; 30% on <u>E. 4th Street/Prater Way</u> 10% by 2035

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775-348-RIDE

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