

*Appendix C:*

**System  
Performance  
Report**

# 1 - Purpose

This report provides language that Florida's metropolitan planning organizations (MPO) may incorporate in Long-Range Transportation Plan (LRTP) System Performance Reports to meet the federal transportation performance management rules. Updates or amendments to the LRTP must incorporate a System Performance Report that addresses these measures and related information no later than:

- May 27, 2018 for Highway Safety measures (PM1);
- October 1, 2018 for Transit Asset Management measures;
- May 20, 2019 for Pavement and Bridge Condition measures (PM2);
- May 20, 2019 for System Performance measures (PM3); and
- July 20, 2021 for Transit Safety measures.

The report is consistent with the Transportation Performance Measures Consensus Planning Document developed jointly by the Florida Department of Transportation (FDOT) and the Metropolitan Planning Organization Advisory Council and adopted by the CRTPA on May 19, 2020. This report outlines the minimum roles of FDOT, the MPOs, and the public transportation providers in the MPO planning areas to ensure consistency to the maximum extent practicable in satisfying the transportation performance management requirements promulgated by the United States Department of Transportation in Title 23 Parts 450, 490, 625, and 673 of the Code of Federal Regulations (23 CFR).

The following report is organized as follows:

- Section 2 provides a brief background on transportation performance management;
- Section 3 covers the Highway Safety measures (PM1);
- Section 4 covers the Pavement and Bridge Condition measures (PM2);
- Section 5 covers System Performance measures (PM3);
- Section 6 covers Transit Asset Management (TAM) measures; and
- Section 7 covers Transit Safety measures.

# 2 – Background

The System Performance Report is an important component of the Transportation Performance Management (TPM) approach set forth by FHWA and FTA. Performance-based planning is key in making the most efficient investment of federal transportation funds by increasing accountability, transparency, and providing for better investment decisions that focus on key outcomes related to seven national goals. The FHWA goals include:

- Improving Safety;
- Maintaining Infrastructure Condition;
- Reducing Traffic Congestion;
- Improving the Efficiency of the System;
- Improving Freight Movement;
- Protecting the Environment; and
- Reducing Delays in Project Delivery.

Maintaining a systematic and representative performance management approach allows the CRTPA to evaluate how well its transportation system addresses current needs and prepare itself to meet future opportunities and challenges. Funding for transportation projects is limited: it is important that the right projects and programs are being implemented in order to meet the current and projected needs of the community.

Pursuant to the Moving Ahead for Progress in the 21st Century Act (MAP-21) Act enacted in 2012 and the Fixing America's Surface Transportation Act (FAST Act) enacted in 2015, state departments of transportation (DOT) and metropolitan planning organizations (MPO) must apply a transportation performance management approach in carrying out their federally required transportation planning and programming activities. The process requires the establishment and use of a coordinated, performance-based approach to transportation decision-making to support national goals for the federal-aid highway and public transportation programs.

On May 27, 2016, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) issued the Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning Final Rule (The Planning Rule).<sup>1</sup> This rule details how state DOTs and MPOs must implement new MAP-21 and FAST Act transportation planning requirements, including the transportation performance management provisions.

In accordance with the Planning Rule, the Capital Region Transportation Planning Agency (CRTPA) must include a description of the performance measures and measures that apply to the MPO planning area and a System Performance Report as an element of its Long-Range Transportation Plan (LRTP). The System Performance Report evaluates the condition and performance of the transportation system with respect to required performance measures, and reports on progress achieved in meeting the measures in comparison with baseline data and previous reports. For MPOs that elect to develop multiple scenarios, the System Performance Report also must include an analysis of how the preferred scenario has improved the performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified measures.<sup>2</sup> The CRTPA has not elected to analyze multiple scenarios as part of the 2045 RMP.

There are several milestones related to the required content of the System Performance Report:

- In any LRTP adopted on or after May 27, 2018, the System Performance Report must reflect Highway Safety (PM1) measures;
- In any LRTP adopted on or after October 1, 2018, the System Performance Report must reflect Transit Asset Management measures;
- In any LRTP adopted on or after May 20, 2019, the System Performance Report must reflect Pavement and Bridge Condition (PM2) and System Performance (PM3) measures; and
- In any LRTP adopted on or after July 20, 2021, the System Performance Report must reflect Transit Safety measures.

The CRTPA 2020-2045 Long-Range Transportation Plan was adopted on November 14, 2020. Per the Planning Rule, the System Performance Report for the CRTPA is included for the required Highway Safety (PM1), Bridge and Pavement (PM2), System Performance (PM3), Transit Asset Management, and Transit Safety measures.

## 3 - Highway Safety Measures (PM1)

Effective April 14, 2016, the FHWA established five highway safety performance measures<sup>3</sup> to carry out the Highway Safety Improvement Program (HSIP). These performance measures are:

1. Number of fatalities;
2. Rate of fatalities per 100 million vehicle miles traveled (VMT);
3. Number of serious injuries;
4. Rate of serious injuries per 100 million vehicle miles traveled (VMT); and
5. Number of non-motorized fatalities and non-motorized serious injuries.

The Florida Department of Transportation (FDOT) publishes statewide safety performance measures in the HSIP Annual Report that it transmits to FHWA each year. Current safety measures address calendar year 2018 and are based on a five-year rolling average (2011-2015). For the 2018 HSIP annual report, FDOT established statewide HSIP interim safety

<sup>1</sup> The Final Rule modified the Code of Federal Regulations at 23 CFR Part 450 and 49 CFR Part 613.

<sup>2</sup> Guidance from FHWA/FTA for completing the preferred scenario analysis is expected in the future. As of August 2019, no guidance has been issued.

<sup>3</sup> 23 CFR Part 490, Subpart B

performance measures and FDOT's 2019 safety measures, which set the measure at "0" for each performance measure to reflect the Department's vision of zero deaths.

The CRTPA adopted/approved safety performance measures on February 18, 2020. Table 3.1 indicates the areas in which the MPO is expressly supporting the statewide measures developed by FDOT, as well as those areas in which the MPO has adopted a measure specific to the MPO planning area

Table 3.1. Highway Safety (PM1) Measures

Performance Measure	The CRTPA has adopted a measure specific to the MPO Planning Area
Number of fatalities	✓
Rate of fatalities per 100 million vehicle miles traveled (VMT)	✓
Number of serious injuries	✓
Rate of serious injuries per 100 million vehicle miles traveled (VMT)	✓
Number of non-motorized fatalities and non-motorized serious injuries.	✓

Statewide system conditions for each safety performance measure are included in Table 3.2, along with system conditions in the CRTPA metropolitan planning area. System conditions reflect baseline performance, which for this first system performance report is the same as the current reporting period (2011-2015). The latest safety conditions will be updated annually on a rolling 5-year window and reflected within each subsequent system performance report, to track performance over time in relation to baseline conditions and established measures.

Table 3.2. Highway Safety (PM1) Conditions and Performance

Performance Measures	CRTPA Baseline Performance (Five-Year Rolling Average 2014-2018)	Calendar Year 2020 CRTPA Planning Area Performance Measures
Number of Fatalities	58	58
Rate of Fatalities per 100 Million Vehicle Miles Traveled (VMT)	1,273	1,273
Number of Serious Injuries	256	256
Rate of Serious Injuries per 100 Million Vehicle Miles Traveled	5.684	5.684
Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries (VMT)	42.2	42.2

## Coordination with Statewide Safety Plans and Processes

The CRTPA recognizes the importance of linking goals, objectives, and investment priorities to established performance objectives, and that this link is critical to the achievement of national transportation goals and statewide and regional performance measures. As such, the CRTPA *Connections 2045 RMP* reflects the goals, objectives, performance measures, and measures as they are available and described in other state and public transportation plans and processes; specifically the Florida Strategic Highway Safety Plan (SHSP), the Florida Highway Safety Improvement Program (HSIP), and the Florida Transportation Plan (FTP).

- The 2016 Florida Strategic Highway Safety Plan (SHSP) is the statewide plan focusing on how to accomplish the vision of eliminating fatalities and reducing serious injuries on all public roads. The SHSP was developed in coordination with Florida's 27 metropolitan planning organizations (MPOs) through Florida's Metropolitan Planning Organization Advisory Council (MPOAC). The SHSP guides FDOT, MPOs, and other safety partners in addressing safety and defines a framework for implementation activities to be carried out throughout the State.
- The FDOT HSIP process provides for a continuous and systematic process that identifies and reviews traffic safety issues around the state to identify locations with potential for improvement. The ultimate goal of the HSIP process is to reduce the number of crashes, injuries and fatalities by eliminating certain predominant types of crashes through the implementation of engineering solutions.
- Transportation projects are identified and prioritized with the MPOs and non-metropolitan local governments. Data are analyzed for each potential project, using traffic safety data and traffic demand modeling, among other data. The FDOT Project Development and Environment Manual requires the consideration of safety when preparing a proposed project's purpose and need, and defines several factors related to safety, including crash modification factor and safety performance factor, as part of the analysis of alternatives. MPOs and local governments consider safety data analysis when determining project priorities.

### *LRTP Safety Priorities*

The CRTPA *Connections 2045 RMP* increases the safety of the transportation system for motorized and non-motorized users as required. The LRTP aligns with the Florida SHSP and the FDOT HSIP with specific strategies to improve safety performance focused on prioritized safety projects, pedestrian and/or bicycle safety enhancements, and traffic operation improvements to address our goal to reduce fatalities and serious injuries.

The LRTP identifies safety needs within the metropolitan planning area and provides funding for targeted safety improvements. The CRTPA has developed a project selection process that considers projects with the potential for safety improvements and weights this higher than any other prioritization criteria. Additionally, projects that incorporate dedicated infrastructure for bicyclists and pedestrians are considered to help address safety of non-motorized travelers. Many of the projects in the financially constrained plan, once implemented will greatly improve regional safety for vehicles, bicycles, and pedestrians. In addition to the 2045 RMP projects, safety and security of the transportation system remain at the forefront of CRTPA's goals and objectives.

The CRTPA *Connections 2045 RMP* will provide information from the FDOT HSIP annual reports to track the progress made toward the statewide safety performance measures. The CRTPA will document the progress on any safety performance measures established by the agency for its planning area.

## 4 - Pavement and Bridge Condition Measures (PM2)

### *Pavement and Bridge Condition Performance Measures Overview*

In January 2017, USDOT published the Pavement and Bridge Condition Performance Measures Final Rule, which is also referred to as the PM2 rule. This rule establishes the following six performance measures:

- Percent of Interstate pavements in good condition;
- Percent of Interstate pavements in poor condition;
- Percent of non-Interstate National Highway System (NHS) pavements in good condition;
- Percent of non-Interstate NHS pavements in poor condition;
- Percent of NHS bridges (by deck area) classified as in good condition; and
- Percent of NHS bridges (by deck area) classified as in poor condition.

For the pavement measures, five pavement metrics are used to assess condition:

- International Roughness Index (IRI) - an indicator of roughness; applicable to all asphalt and concrete pavements;
- Cracking percent - percentage of the pavement surface exhibiting cracking; applicable to all asphalt and concrete pavements;
- Rutting - extent of surface depressions; applicable to asphalt pavements;
- Faulting - vertical misalignment of pavement joints; applicable to certain types of concrete pavements; and
- Present Serviceability Rating (PSR) – a quality rating applicable only to certain lower speed roads.

For each pavement metric, a threshold is used to establish good, fair, or poor condition. Pavement condition is assessed for each 0.1 mile section of the through travel lanes of mainline highways on the Interstate or the non-Interstate NHS using these metrics and thresholds. A pavement section is rated as good if all three metric ratings are good, and poor if two or more metric ratings are poor. Sections that are not good or poor are considered fair.

The good/poor measures are expressed as a percentage and are determined by summing the total lane-miles of good or poor highway segments and dividing by the total lane-miles of all highway segments on the applicable system. Pavement in good condition suggests that no major investment is needed and should be considered for preservation treatment. Pavement in poor condition suggests major reconstruction investment is needed due to either ride quality or a structural deficiency.

The bridge condition measures refer to the percentage of bridges by deck area on the NHS that are in good condition or poor condition. The measures assess the condition of four bridge components: deck, superstructure, substructure, and culverts. Each component has a metric rating threshold to establish good, fair, or poor condition. Each bridge on the NHS is evaluated using these ratings. If the lowest rating of the four metrics is greater than or equal to seven, the structure is classified as good. If the lowest rating is less than or equal to four, the structure is classified as poor. If the lowest rating is five or six, it is classified as fair.

The bridge measures are expressed as the percent of NHS bridges in good or poor condition. The percent is determined by summing the total deck area of good or poor NHS bridges and dividing by the total deck area of the bridges carrying the NHS. Deck area is computed using structure length and either deck width or approach roadway width.

A bridge in good condition suggests that no major investment is needed. A bridge in poor condition is safe to drive on; however, it is nearing a point where substantial reconstruction or replacement is needed.

Federal rules require state DOTs and MPOs to coordinate when setting pavement and bridge condition performance measures and monitor progress towards achieving the measures. States must establish:

- Four-year statewide measures for the percent of Interstate pavements in good and poor condition;
- Two-year and four-year measures for the percent of non-Interstate NHS pavements in good and poor condition; and
- Two-year and four-year measures for the percent of NHS bridges (by deck area) in good and poor condition.

MPOs must establish four-year measures for all six measures. MPOs can either agree to program projects that will support the statewide measures, or establish their own quantifiable measures for the MPO's planning area. The two-year and four-year measures represent pavement and bridge condition at the end of calendar years 2019 and 2021, respectively. On September 18, 2018 the CRTPA adopted the statewide measures.

## *Pavement and Bridge Condition Baseline Performance and Established Measures*

This System Performance Report discusses the condition and performance of the transportation system for each applicable measure as well as the progress achieved by the MPO in meeting measures in comparison with system performance recorded in previous reports. Because the federal performance measures are new, performance of the system for each measure has only recently been collected and measures have only recently been established. Accordingly, this first CRTPA LRTP System Performance Report highlights performance for the baseline period, which is 2017. FDOT will continue to monitor and report performance on a biennial basis. Future System Performance Reports will discuss progress towards meeting the measures since this initial baseline report.

Table 4.1 presents baseline performance for each PM2 measure for the State and for the MPO planning area as well as the two-year and four-year measures established by FDOT for the State.

Table 4.1. Pavement and Bridge Condition (PM2) Performance and Measures

Performance Measures	Statewide Performance (2017 Baseline)	Statewide 2-year Target (2019)	Statewide 4-year Target (2021)
Percent of Interstate pavements in good condition	66%	n/a	60%
Percent of Interstate pavements in poor condition	0.1%	n/a	5%
Percent of non-Interstate NHS pavements in good condition	76.4%	40%	40%
Percent of non-Interstate NHS pavements in poor condition	3.6%	5%	5%
Percent of NHS bridges (by deck area) in good condition	67.7%	50%	50%
Percent of NHS bridges (by deck area) in poor condition	1.2%	10%	10%

FDOT established the statewide PM2 measures on May 18, 2018. In determining its approach to establishing performance measures for the federal pavement and bridge condition performance measures, FDOT considered many factors. To begin with, FDOT is mandated by Florida Statute 334.046 to preserve the state's pavement and bridges to specific standards. To adhere to the statutory guidelines, FDOT prioritizes funding allocations to ensure the current transportation system is adequately preserved and maintained before funding is allocated for capacity improvements. These statutory guidelines envelope the statewide federal measures that have been established for pavements and bridges.

In addition, MAP-21 requires FDOT to develop a Transportation Asset Management Plan (TAMP) for all NHS pavements and bridges within the state. The TAMP must include investment strategies leading to a program of projects that would

make progress toward achievement of the state DOT measures for asset condition and performance of the NHS. FDOT's TAMP was updated to reflect MAP-21 requirements in 2018.

Further, the federal pavement condition measures require a new methodology that is a departure from the methods currently used by FDOT and uses different ratings and pavement segment lengths. For bridge condition, the performance is measured in deck area under the federal measure, while the FDOT programs its bridge repair or replacement work on a bridge by bridge basis. As such, the federal measures are not directly comparable to the methods that are most familiar to FDOT.

In consideration of these differences, as well as the unfamiliarity associated with the new required processes, FDOT took a conservative approach when setting its initial pavement and bridge condition measures.

As noted above, the CRTPA agreed to support FDOT's pavement and bridge condition performance measures on September 18, 2018. By adopting FDOT's measures, the CRTPA agrees to plan and program projects that help FDOT achieve these measures.

The CRTPA recognizes the importance of linking goals, objectives, and investment priorities to established performance objectives, and that this link is critical to the achievement of national transportation goals and statewide and regional performance measures. As such, the CRTPA *Connections 2045 RMP* reflects the goals, objectives, performance measures, and measures as they are described in other state and public transportation plans and processes, including the Florida Transportation Plan (FTP) and the Florida Transportation Asset Management Plan.

- The FTP is the single overarching statewide plan guiding Florida's transportation future. It defines the state's long-range transportation vision, goals, and objectives and establishes the policy framework for the expenditure of state and federal funds flowing through FDOT's work program. One of the seven goals defined in the FTP is Agile, Resilient, and Quality infrastructure.
- The Florida Transportation Asset Management Plan (TAMP) explains the processes and policies affecting pavement and bridge condition and performance in the state. It presents a strategic and systematic process of operating, maintaining, and improving these assets effectively throughout their life cycle.

The CRTPA *Connections 2045 RMP* seeks to address system preservation, identifies infrastructure needs within the metropolitan planning area, and provides funding for targeted improvements. The 2045 RMP considers the resilience of the existing system a priority and is reflected in the plan goals. The 2045 RMP reflects the FDOT provided maintenance revenues, and maintenance priorities are revisited with each update of the TIP. The current TIP includes a multitude of resurfacing, bridge replacement, and modernization projects totaling great than \$135 million over the next 5 years.

On or before October 1, 2020, FDOT will provide FHWA and the CRTPA a detailed report of pavement and bridge condition performance covering the period of January 1, 2018 to December 31, 2019. FDOT and the CRTPA also will have the opportunity at that time to revisit the four-year PM2 measures.



# 5 - System Performance, Freight, and Congestion Mitigation & Air Quality Improvement Program Measures (PM3)

## *System Performance/Freight/CMAQ Performance Measures Overview*

In January 2017, USDOT published the System Performance/Freight/CMAQ Performance Measures Final Rule to establish measures to assess passenger and freight performance on the Interstate and non-Interstate National Highway System (NHS), and traffic congestion and on-road mobile source emissions in areas that do not meet federal National Ambient Air Quality Standards (NAAQS). The rule, which is referred to as the PM3 rule, requires MPOs to set measures for the following six performance measures:

### National Highway Performance Program (NHPP)

1. Percent of person-miles on the Interstate system that are reliable, also referred to as Level of Travel Time Reliability (LOTTR);
2. Percent of person-miles on the non-Interstate NHS that are reliable (LOTTR);

### National Highway Freight Program (NHFP)

3. Truck Travel Time Reliability index (TTTR);

### Congestion Mitigation and Air Quality Improvement Program (CMAQ)

4. Annual hours of peak hour excessive delay per capita (PHED);
5. Percent of non-single occupant vehicle travel (Non-SOV); and
6. Cumulative 2-year and 4-year reduction of on-road mobile source emissions (NO<sub>x</sub>, VOC, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>) for CMAQ funded projects.

In Florida, only the two LOTTR performance measures and the TTTR performance measure apply. Because all areas in Florida meet current NAAQS, the last three measures listed measures above pertaining to the CMAQ Program do not currently apply.

LOTTR is defined as the ratio of longer travel times (80th percentile) to a normal travel time (50th percentile) over all applicable roads during four time periods (AM peak, Mid-day, PM peak, and weekends) that cover the hours of 6 a.m. to 8 p.m. each day. The LOTTR ratio is calculated for each roadway segment, essentially comparing the segment with itself. Segments with LOTTR  $\geq 1.50$  during any of the above time periods are considered unreliable. The two LOTTR measures are expressed as the percent of person-miles traveled on the Interstate or non-Interstate NHS system that are reliable. Person-miles take into account the number of people traveling in buses, cars, and trucks over these roadway segments. To obtain person miles traveled, the vehicle miles traveled (VMT) for each segment are multiplied by the average vehicle occupancy for each type of vehicle on the roadway. To calculate the percent of person miles traveled that are reliable, the sum of the number of reliable person miles traveled is divide by the sum of total person miles traveled.

TTTR is defined as the ratio of longer truck travel times (95<sup>th</sup> percentile) to a normal travel time (50<sup>th</sup> percentile) over the Interstate during five time periods (AM peak, Mid-day, PM peak, weekend, and overnight) that cover all hours of the day. TTTR is quantified by taking a weighted average of the maximum TTTR from the five time periods for each Interstate segment. The maximum TTTR is weighted by segment length, then the sum of the weighted values are divided by the total Interstate length to calculate the Travel Time Reliability Index.

The data used to calculate these PM3 measures are provided by FHWA via the National Performance Management Research Data Set (NPMRDS). This dataset contains travel times, segment lengths, and Annual Average Daily Travel (AADT) for Interstate and non-Interstate NHS roads.

The PM3 rule requires state DOTs and MPOs to coordinate when establishing performance measures for these measures and to monitor progress towards achieving the measures. FDOT must establish:

- Two-year and four-year statewide measures for percent of person-miles on the Interstate system that are reliable;
- Four-year measures for the percent of person-miles on the non-Interstate NHS that are reliable<sup>4</sup>; and
- Two-year and four-year measures for truck travel time reliability

MPOs must establish four-year performance measures for all three measures within 180 days of FDOT establishing statewide measures. MPOs establish measures by either agreeing to program projects that will support the statewide measures or setting quantifiable measures for the MPO's planning area.

The two-year and four-year measures represent system performance at the end of calendar years 2019 and 2021, respectively.

## PM3 Baseline Performance and Established Measures

The System Performance Report discusses the condition and performance of the transportation system for each applicable PM3 measure as well as the progress achieved by the MPO in meeting measures in comparison with system performance recorded in previous reports. Because the federal performance measures are new, performance of the system for each measure has only recently been collected and measures have only recently been established. Accordingly, this first CRTPA LRTP System Performance Report highlights performance for the baseline period, which is 2017. FDOT will continue to monitor and report performance on a biennial basis. Future System Performance Reports will discuss progress towards meeting the measures since this initial baseline report.

Table 5.1 presents baseline performance for each PM3 measure for the state and for the MPO planning area as well as the two-year and four-year measures established by FDOT for the state.

Table 5.1. System Performance and Freight (PM3) - Performance and Measures

Performance Measures	Statewide Performance (2017 Baseline)	Statewide 2-year Target (2019)	Statewide 4-year Target (2021)
Percent of person-miles on the Interstate system that are reliable (Interstate LOTTR)	82.2%	75.0%	70.0%
Percent of person-miles on the non-Interstate NHS that are reliable (Non-Interstate NHS LOTTR)	84.0%	n/a	50.0%
Truck travel time reliability index (TTTR)	1.43%	1.75	2.00%

FDOT established the statewide PM3 measures on May 18, 2018. In setting the statewide measures, FDOT reviewed external and internal factors that may affect reliability, conducted a trend analysis for the performance measures, and developed a sensitivity analysis indicating the level of risk for road segments to become unreliable within the time period for setting measures. One key conclusion from this effort is that there is a lack of availability of extended historical data with which to analyze past trends and a degree of uncertainty about future reliability performance. Accordingly, FDOT took a conservative approach when setting its initial PM3 measures.

The CRTPA agreed to support FDOT's PM3 measures on September 18, 2018. By adopting FDOT's measures, the CRTPA agrees to plan and program projects that help FDOT achieve these measures.

The Capital Region Transportation Planning Agency recognizes the importance of linking goals, objectives, and investment priorities to established performance objectives, and that this link is critical to the achievement of national transportation goals and statewide and regional performance measures. As such, the CRTPA *Connections 2045 RMP* reflects the goals, objectives, performance measures, and measures as they are described in other state and public

<sup>4</sup> Beginning with the second performance period covering January 1, 2022 to December 31, 2025, two year targets will be required in addition to four-year targets for the percent of person-miles on the non-Interstate NHS that are reliable measure.

transportation plans and processes, including the Florida Transportation Plan (FTP) and the Florida Freight Mobility and Trade Plan.

- The FTP is the single overarching statewide plan guiding Florida's transportation future. It defines the state's long-range transportation vision, goals, and objectives and establishes the policy framework for the expenditure of state and federal funds flowing through FDOT's work program. One of the seven goals of the FTP is Efficient and Reliable Mobility for People and Freight.
- The Florida Freight Mobility and Trade Plan presents a comprehensive overview of the conditions of the freight system in the state, identifies key challenges and goals, provides project needs, and identifies funding sources. Truck reliability is specifically called forth in this plan, both as a need as well as a goal.

The CRTPA *Connections 2045 RMP* seeks to address system reliability and congestion mitigation through various means, including capacity expansion and operational improvements. The 2045 RMP included a prioritization process that included existing and future congestion reduction, as well as support for the transportation technology. Additionally, the CRTPA CMP recommendations and the Tallahassee-Leon County ITS Master Plan were incorporated into the needs plan, and projects that performed well were included in the financially constrained plan. Additionally, for the first time, the 2045 RMP sets aside \$100 million for intersection and ITS project implementation. This will help CRTPA and its member jurisdictions address congestion and reliability with more modern operational strategies instead of full-scale widening projects.

On or before October 1, 2020, FDOT will provide FHWA and the Capital Region Transportation Planning Agency a detailed report of performance for the PM3 measures covering the period of January 1, 2018 to December 31, 2019. FDOT and the Capital Region Transportation Planning Agency also will have the opportunity at that time to revisit the four-year PM3 measures.

## 6 - Transit Asset Management Measures

### *Transit Asset Performance*

On July 26, 2016, FTA published the final Transit Asset Management rule. This rule applies to all recipients and subrecipients of Federal transit funding that own, operate, or manage public transportation capital assets. The rule defines the term "state of good repair," requires that public transportation providers develop and implement transit asset management (TAM) plans and establishes state of good repair standards and performance measures for four asset categories: transit equipment, rolling stock, transit infrastructure, and facilities. The rule became effective on October 1, 2018.

Table 6.1 below identifies performance measures outlined in the final rule for transit asset management.

Table 6.1. FTA TAM Performance Measures

Asset Category	Performance Measure and Asset Class
Equipment	Percentage of non-revenue, support-service and maintenance vehicles that have met or exceeded their useful life benchmark
Rolling Stock	Percentage of revenue vehicles within a particular asset class that have either met or exceeded their useful life benchmark
Infrastructure	Percentage of track segments with performance restrictions
Facilities	Percentage of facilities within an asset class rated below condition 3 on the TERM scale

For equipment and rolling stock classes, useful life benchmark (ULB) is defined as the expected lifecycle of a capital asset, or the acceptable period of use in service, for a particular transit provider's operating environment. ULB considers a provider's unique operating environment such as geography and service frequency and is not the same as an asset's useful life.

Public transportation agencies are required to establish and report transit asset management measures annually for the following fiscal year. Each public transit provider or its sponsors must share its measures, TAM, and asset condition information with each MPO in which the transit provider's projects and services are programmed in the MPO's TIP.

MPOs are required to establish initial transit asset management measures within 180 days of the date that public transportation providers establish initial measures. However, MPOs are not required to establish transit asset management measures annually each time the transit provider establishes measures. Instead, subsequent MPO measures must be established when the MPO updates the TIP or LRTP.

When establishing transit asset management measures, the MPO can either agree to program projects that will support the transit provider measures or establish its own separate regional transit asset management measures for the MPO planning area. In cases where two or more providers operate in an MPO planning area and establish different measures for a given measure, the MPO has the option of coordinating with the providers to establish a single measure for the MPO planning area, or establishing a set of measures for the MPO planning area that reflects the differing transit provider measures.

To the maximum extent practicable, transit providers, states, and MPOs must coordinate with each other in the selection of performance measures.

The TAM rule defines two tiers of public transportation providers based on size parameters. Tier I providers are those that operate rail service or more than 100 vehicles in all fixed route modes, or more than 100 vehicles or more in one non-fixed route mode. Tier II providers are those that are a subrecipient of FTA 5311 funds, or an American Indian Tribe, or have 100 or less vehicles across all fixed route modes, or have 100 vehicles or less in one non-fixed route mode. A Tier I provider must establish its own transit asset management measures, as well as report performance and other data to FTA. A Tier II provider has the option to establish its own measures or to participate in a group plan with other Tier II providers whereby measures are established by a plan sponsor, typically a state DOT, for the entire group.

A total of 28 transit providers participated in the FDOT Group TAM Plan (Table 6.2). The participants in the FDOT Group TAM Plan are comprised of the Section 5311 Rural Program and open-door Section 5310 Enhanced Mobility of Seniors & Individuals with Disabilities FDOT subrecipients. The Group TAM Plan was adopted in October 2018 and covers fiscal years 2018-2019 through 2021-2022.

Table 6.2. Florida Group TAM Plan Participants

District	Participating Transit Providers
1	Good Wheels, Inc
	Central Florida Regional Planning Council
2	Suwannee Valley Transit
	Big Bend Transit
	Baker County Council on Aging
	Nassau County Transit
3	Tri-County Community Council
	Big Bend District 3
	Santa Rosa Transit
4	Gulf County ARC
	No participating providers
5	Sumter Transit
	Marion Transit
6	Key West Transit
7	Neighborly Care Network
	Mid-Florida Community Service
	ARC Tampa Bay
	DeSoto County Transportation
	Clay Transit
	Ride Solutions
	Levy County Transit Ride Solutions
	Suwannee River Economic Council (SREC)
	Calhoun Senior Citizen Center
	Liberty County Transit
	JTRANS
	Wakulla Transit
	Flagler County Public Transportation
	ARC Nature Coast
	PARC

The CRTPA region is served by one (1) Tier I transit service provider: StarMetro (City of Tallahassee) and two (2) Tier II providers: Big Bend Transit, Inc. and Wakulla Senior Citizens Council, Inc. The CRTPA's Tier II providers participate in the group TAM plan developed by the FDOT Public Transit Office in Tallahassee.

On September 18, 2018, the CRTPA agreed to support StarMetro's transit asset management measures, thus agreeing to plan and program projects in the TIP that once implemented, are anticipated to make progress toward achieving the transit provider measures.

The transit asset management measures are based on the condition of existing transit assets and planned investments in equipment, rolling stock, infrastructure, and facilities. The measures reflect the most recent data available on the number, age, and condition of transit assets, and expectations and capital investment plans for improving these assets. The table summarizes both existing conditions for the most recent year available, and the measures.

Table 6.3. FTA TAM Measures for Star Metro

Asset Category – Performance Measure	Asset Class	% At or Past ULB (Current)	2019 Target	2020 Target	2021 Target	2022 Target	2023 Target
	BU1- Bus, Diesel, 30'	0	0	0	0	0	0
	BU2 – Bus, Diesel, 35'	0	0	0	4	18	14
	BU3 – Bus, Diesel, 40'	0	0	0	0	0	0
	BU4 – Bus, CNG, 30'	0	0	0	0	0	
	BU5 – Bus, CNG, 35'	0	0	0	0	0	0
	BU6 – Bus, Electric, 35'	0	0	0	0	0	0
	CU1 – Cutaway Bus, Gasoline	0	0	0	0	0	0
	CU2 – Cutaway Bus, CNG	0	0	0	0	0	0
	CU3 – Cutaway Bus, CNG, Low Floor	0	0	0	0	0	0
	TB – Trolleybus	0	0	0	0	0	100
	VN1 – Van, ADA	0	0	0	0	0	30
	VN2 – Van, Non-ADA	0	0	0	0	0	0
	Non-Revenue/Service Automobile	0	0	0	0	0	0
	Trucks and other Rubber Tire Vehicles	0	0	0	0	0	0
	Computer Software/Equipment	0	0	0	0	0	0
	Maintenance Equipment	50	0	0	0	0	0
	Electric Bus Chargers, Fast Charge	0	0	0	0	0	0
	Electric Bus Chargers	0	0	0	0	0	0
	Administration and Maintenance Facility	0	0	0	0	0	0
	Passenger Facilities	0	0	0	0	0	0
	Lifts	0	33	0	0	0	0
	Fueling Facility	0	0	0	0	0	0

Big Bend Transit, Inc. and Wakulla Senior Citizens Council, Inc. (the CRTPA region Tier II providers) are part of the Group TAM Plan for Fiscal Years 2018/2019-2022/2023 developed by FDOT for Tier II providers in Florida. The FY 2019 asset conditions and 2020 measures for the Tier II providers are shown in Table 6.4.

The statewide group TAM measures are based on the condition of existing transit assets and planned investments in equipment, rolling stock, infrastructure, and facilities over the next year. The measures reflect the most recent data available on the number, age, and condition of transit assets, and expectations and capital investment plans for improving these assets during the next fiscal year, using the asset inventory and investment prioritization process incorporated in the Group TAM Plan.

Key findings of the Group TAM Plan include the following:

- Approximately 27 percent of all inventoried assets have met or exceeded their ULB.
- The asset inventory includes a total of 752 revenue vehicles with an average age of 5.5 years, of which 271 (or 35 percent) have met or exceeded their ULB.
- Based on the investment prioritization, vehicles that are rated poor or marginal in the cutaway class and the van class will be prioritized for replacement.

As required by FTA, FDOT will update this TAM Plan at least once every four years. FDOT will update the statewide performance measures for the participating agencies on an annual basis, and will notify the participating transit agencies and the MPOs in which they operate when the measures are updated.

Table 6.4. Group Transit Asset Management Measures for Tier II Providers

Asset Category - Performance Measure	Asset Class	FY 2019 Asset Conditions	FY 2020 Performance Target
<b>Revenue Vehicles</b>			
Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	Automobile	55%	45%
	Bus	15%	13%
	Cutaway Bus	28%	28%
	Mini-Bus	31%	28%
	Mini-Van	13%	11%
	SUV	0%	0%
	Van	47%	34%
<b>Equipment</b>			
Age - % of equipment or non-revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	Non Revenue/Service Automobile	67%	67%
	Trucks and other Rubber Tire Vehicles	50%	40%
	Maintenance Equipment	50%	50%
	Routing and Scheduling Software	100%	100%
<b>Facilities</b>			
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Administration	0%	9%
	Maintenance	6%	12%

These measures for the MPO planning area reflect the measures established by StarMetro through their Transit Asset Management Plans, as well as the statewide measures established by FDOT for those providers participating in the Group Transit Asset Management Plan, which includes the following provider(s) in the MPO planning area: Big Bend Transit, Inc. and Wakulla Senior Citizens Council, Inc.

## TAM Performance

The Capital Region Transportation Planning Agency recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance measures. As such, the RMP directly reflects the goals, objectives, performance measures, and measures as they are described in other public transportation plans and processes, including the StarMetro TDP, and the current CRTPA *Connections 2045 RMP*.

To support progress towards TAM performance measures, transit investment and maintenance funding in the *Connections 2045 RMP* totals \$251 million, approximately 12 percent of total LRTP funding. Improving the State of Good Repair (SGR) of capital assets is an overarching goal of this process.

## 7 - Transit Safety Performance

The Federal Transit Administration (FTA) published a final Public Transportation Agency Safety Plan (PTASP) rule and related performance measures as authorized by Section 20021 of the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21). The PTASP rule requires operators of public transportation systems that receive federal financial assistance under 49 U.S.C. Chapter 53 to develop and implement a PTASP based on a safety management systems approach. Development and implementation of PTASPs is anticipated to help ensure that public transportation systems are safe nationwide.

The rule applies to all operators of public transportation that are a recipient or sub-recipient of FTA Urbanized Area Formula Grant Program funds under 49 U.S.C. Section 5307, or that operate a rail transit system that is subject to FTA's State Safety Oversight Program. The rule does not apply to certain modes of transit service that are subject to the safety jurisdiction of another Federal agency, including passenger ferry operations that are regulated by the United States Coast Guard, and commuter rail operations that are regulated by the Federal Railroad Administration.

Rail operators subject to the rule, and operators of large bus systems (more than 100 vehicles in peak revenue service), must draft and implement their own PTASP. For small operators (defined as those operating 100 or fewer vehicles in peak revenue service) subject to the rule, states must draft and certify PTASPs on their behalf, unless a small provider opts to draft and certify its own safety plan and notifies the State that they will do so. FTA allows the state and small providers within the state to decide whether the state will develop a single statewide PTASP for all small providers, or whether it will draft and certify multiple individualized safety plans for each provider. FTA recommends as best practice that the state develop individualized PTASPs for each small provider. If a state drafts a single statewide PTASP, the state must ensure that the plan clearly identifies the specific safety information for each provider, including the safety performance measures. Regardless of whether the state or small transit provider drafts and certifies a safety plan, each transit provider is required to implement its own safety plan.

The PTASP rule was published on July 19, 2018 with an effective date of July 19, 2019. Due to continued impacts from COVID-19, FTA has extended the deadline for transit agencies to certify their Public Transit Agency Safety Plan (PTASP) from December 31, 2020 to July 21, 2021. MPOs have 180 days from the adoption of the PTASP by the transit agency to either adopt the PTASP Safety Measures or develop their own independent measures.

### Transit Safety Performance Measures

The transit agency sets measures in the PTASP based on the safety performance measures established in the National Public Transportation Safety Plan (NPTSP). The required transit safety performance measures are:

- Total number of reportable fatalities.
- Rate of reportable fatalities per total vehicle revenue miles by mode.
- Total number of reportable injuries.
- Rate of reportable injuries per total vehicle revenue miles by mode.
- Total number of reportable safety events.
- Rate of reportable events per total vehicle revenue miles by mode.
- System reliability - Mean distance between major mechanical failures by mode.