



North Florida Transportation Planning Organization 2045 Long-Range Transportation Plan System Performance Report

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APPENDIX A – System Performance Measures Consensus Planning Document

1 - PURPOSE

This document provides language that Florida's metropolitan planning organizations (TPO), referred to herein as transportation planning organizations (TPO), 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.

This document is intended as a resource for Florida's TPOs as they update their LRTPs; the language can be adapted as appropriate for each TPO. In most sections, there are two options for the text, to be used by TPOs supporting statewide targets or TPOs establishing their own targets. Highlighted in yellow are the areas that require TPO input. This may range from simply adding the TPO name and adoption dates to providing TPO-specific background information and relevant strategies and prioritization processes.

The document 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. This document outlines the minimum roles of FDOT, the TPOs, and the public transportation providers in the TPO 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 document 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

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 (TPO) 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).¹ This rule details how state DOTs and TPOs must implement new MAP-21 and FAST Act transportation planning requirements, including the transportation performance management provisions.

In accordance with the Planning Rule, the North Florida Transportation Planning Organization (North Florida TPO) the TPO 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 targets, and reports on progress achieved in meeting the targets in comparison with baseline data and previous reports. For TPOs 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 targets.²

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 North Florida TPO 2045 Long-Range Transportation Plan was adopted November 14, 2019. Per the Planning Rule, the System Performance Report for the North Florida TPO is included for the required

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

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

Highway Safety (PM1), Bridge and Pavement (PM2), System Performance (PM3), Transit Asset Management, Safety and Transit Safety targets.

3 - HIGHWAY SAFETY MEASURES (PM1)

Effective April 14, 2016, the FHWA established five highway safety performance measures³ 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 targets in the HSIP Annual Report that it transmits to FHWA each year. Current safety targets 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 performance measures and FDOT's 2019 safety targets, which set the target at "0" for each performance measure to reflect the Department's vision of zero deaths.

The North Florida TPO adopted/approved safety performance targets on 10 October 2019. Table 3.1 indicates the areas in which the transportation planning organization (TPO) is expressly supporting the statewide target developed by FDOT, as well as those areas in which the TPO has adopted a target specific to the TPO planning area.

Table 3.1. Highway Safety (PM1) Targets

Performance Target	North Florida TPO agrees to plan and program projects so that they contribute toward the accomplishment of the FDOT safety target of zero
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)	✓

³ 23 CFR Part 490, Subpart B

Performance Target	North Florida TPO agrees to plan and program projects so that they contribute toward the accomplishment of the FDOT safety target of zero
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 North Florida TPO 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 targets.

Table 3.2. Highway Safety (PM1) Conditions and Performance

Performance Measures	Florida Statewide Baseline Performance (Five-Year Rolling Average 2012-2016)	Calendar Year 2019 Florida Performance Targets
Number of Fatalities	2,533	0
Rate of Fatalities per 100 Million Vehicle Miles Traveled (VMT)	1.287	0
Number of Serious Injuries	20,552	0
Rate of Serious Injuries per 100 Million Vehicle Miles Traveled	10.452	0
Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries (VMT)	3,173	0

Baseline Conditions

The tables below illustrate a rolling five-year average for safety performance the North Florida TPO and each county therein compared with the same for District 2, Florida Turnpike Enterprise and the State of Florida.

The tables that follow demonstrate performance since 2011. All data is provided by the Florida Department of Transportation

Table 3.3 North Florida TPO FHWA SAFETY Performance Data: Rates

FHWA SAFETY Performance Measures for the North Florida TPO

County Number	County Name	Managing District	Average Annual Fatalities		Avg Fatalities Percentage change	Average Annual Serious Injuries		Avg Serious Injuries Percentage change	Average Annual Fatality Rates		Avg Fatality Rate Percentage change	Average Annual Serious Injury Rates		Avg Serious Injury Rate Percentage change	Average Annual Ped/Bike Fatalities & Serious Injuries		Avg Bicycle & Pedestrian Fatalities & Serious Injuries Percentage change
			2011-15	2012-16		2011-15	2012-16		2011-15	2012-16		2011-15	2012-16		2011-15	2012-16	
71	Clay	02	18.4	20.8	12.0%	103.0	98.2	-4.7%	1.155	1.257	8.8%	6,543	6,118	-6.5%	16.6	16.2	-2.4%
72	Duval	02	119.0	132.2	11.1%	978.8	1,013.0	3.5%	1.151	1.250	8.6%	9,474	9,634	1.7%	140.2	145.8	4.0%
74	Nassau	02	13.0	15.0	15.4%	56.4	64.0	13.5%	1.224	1.367	11.7%	5,305	5,825	9.8%	6.6	6.6	0.0%
78	St Johns	02	33.0	33.6	1.8%	203.2	195.8	-3.6%	1.355	1.334	-1.5%	8,449	7,896	-6.5%	28.4	27.6	-2.8%
North Florida TPO			183.4	201.4	9.8	1,341.4	1,371.0	2.2	4.9	5.2	6.6	29.8	29.5	3.3	191.8	196.2	2.3
District 2			334.2	357.6	7.0%	2,231.6	2,255.6	1.1%	1.323	1.380	4.3%	8,854	8,755	-1.1%	274.4	275.4	0.4%
Turnpike Enterprise			46.2	47.0	1.7%	316.4	283.4	-10.4%	0.592	0.548	-7.4%	4,142	3,368	-18.7%	9.2	10.0	8.7%
Statewide			2,531.6	2,685.6	6.1%	20,503.4	20,830.0	1.6%	1.262	1.313	4.0%	10,236	10,222	-0.1%	3,170.8	3,253.0	2.6%

Source: Traffic counts are from FDOT Transportation Statistics Office document "Summary Since 1990", "DVMT" tab, titled "Daily Vehicle Miles Traveled on Public Roads in Florida", available from <http://www.dot.state.fl.us/planning/statistics/mileage-rpts/public.shtml>. Turnpike figures are estimated from additional information provided by TSO. Fatal and serious injury counts are from FDOT Safety Office's Crash Analysis Reporting (CAR) database as of 10-2-2017.

Table 3.4 North Florida TPO FHWA SAFETY Performance Data: Fatalities and Serious Injuries

FHWA SAFETY Performance Measures for North Florida TPO

County Number	County Name	Managing District	Fatality Rates per Annual 100 MVMT							Severe Injury Rates per Annual 100 MVMT						
			2011	2012	2013	2014	2015	2016	2017	2011	2012	2013	2014	2015	2016	2017
71	Clay	02	0.9824	0.9868	0.6400	1.1224	2.0437	1.4937	n/a	6,9097	6,6442	7,5518	6,2979	6,1311	3,9640	n/a
72	Duval	02	0.8878	1.1890	1.3001	1.1535	1.2236	1.3826	n/a	7,0337	9,9120	10,9382	10,2377	9,2460	7,8345	n/a
74	Nassau	02	1.1706	1.0543	0.9675	1.5714	1.3564	1.8848	n/a	5,3654	4,6966	4,1603	4,3445	7,9575	7,9678	n/a
78	St Johns	02	1.1788	1.3390	1.3301	1.5311	1.3937	1.0751	n/a	8,0330	11,3597	9,5256	6,3601	6,9684	5,2678	n/a
North Florida TPO			0.9613	1.1823	1.2140	1.2408	1.3441	1.3779	n/a	6,9762	9,4380	9,9097	8,7941	8,4694	7,0251	n/a
District 2			1.2171	1.3408	1.3693	1.2381	1.4495	1.5041	n/a	8,4430	9,7118	9,5328	8,2724	8,3117	7,9449	n/a
Turnpike Enterprise			0.7081	0.5508	0.5364	0.4989	0.6667	0.4895	n/a	6,0899	4,3296	3,7547	3,1358	3,4001	2,2180	n/a
Statewide			1.2000	1.2481	1.2347	1.2261	1.4027	1.4544	n/a	9,9860	10,3217	10,3571	10,2351	10,2796	9,9162	n/a

Table 3.5 North Florida TPO FHWA SAFETY Performance Data: Pedestrian and Bicycle

FHWA SAFETY Performance Measures for the North Florida TPO

County Number	County Name	Managing District	Ped/Bike Combined Fatal and Severe Injuries by Year											
			2011	2012	2013	2014	2015	2016	2017	2011	2012	2013	2014	2015
71	Clay	02	14	21	17	16	15	12	9					
72	Duval	02	100	152	176	133	140	128	65					
74	Nassau	02	6	5	5	10	7	6	5					
78	St Johns	02	32	21	29	30	30	28	12					
North Florida TPO			152	199	227	189	192	174	91					
District 2			242	296	299	261	274	247	152					
Turnpike Enterprise			6	13	10	10	7	10	9					
Statewide			2,820	3,206	3,142	3,304	3,382	3,231	1,968					

Generally, regional fatality and serious injury rates are below those of the state. Nevertheless, the number of fatal and injury crashes, particularly those involving vulnerable road users are of concern to the North Florida TPO. For the 2045 Update of the Long Range Transportation Plan, the North Florida TPO recently updated the Regional System Safety Plan. *Click the image on the right to view the plan.*



Coordination with Statewide Safety Plans and Processes

The North Florida TPO 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 targets. As such, the North Florida TPO 2045 LRTP reflects the goals, objectives, performance measures, and targets 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 (TPOs) through Florida's Metropolitan Planning Organization Advisory Council (MPOAC). The SHSP guides FDOT, TPOs, 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 TPOs 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. TPOs and local governments consider safety data analysis when determining project priorities.

LRTP Safety Priorities

The North Florida TPO 2045 LRTP 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 Florida SHSP and HSIP strategies and goals are reflected in the TPO's Regional System Safety Plan.

The LRTP identifies safety needs within the metropolitan planning area and provides funding for targeted safety improvements. The North Florida TPO has developed a project selection process that scores projects on a number of performance metrics. These metrics are outlined in Technical Report 2 Goals, Objectives and Performance Measures. These measures are consistent with those in the recently updated Congestion Management Process. These include the following:

GOAL 3: ENCOURAGE SAFE AND SECURE TRAVEL

Investing in projects that enhance safety will lead to reduced crashes and lower crash severity.

- **OBJECTIVE 3.1:** Reduce crashes.

Performance Measure		Benchmark
3.1.1	Number of Crashes	Reduce by 0.25% each year
3.1.2	Crash rate per million vehicle miles	Reduce or maintain

- **OBJECTIVE 3.2:** Reduce fatal crashes.

Performance Measure		Benchmark
3.2.1	Number of fatalities	Reduce by 0.25% each year
3.2.2	Fatal crash rate per million vehicle miles	Reduce or maintain.

- **OBJECTIVE 3.3:** Promote the implementation of safety and security improvements in the design or retrofit of the transportation systems.

Performance Measure		Benchmark
3.3.1	Implemented safety measures on high crash corridors identified in the Regional Strategic Safety Plan.	Reported in the Regional Strategic Safety Plan.

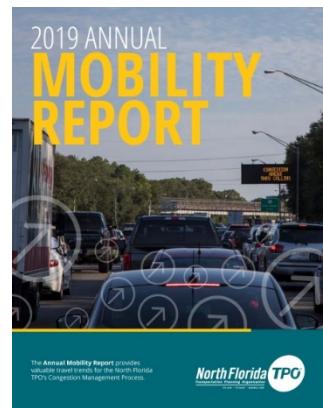
- **OBJECTIVE 3.4:** Enhance security for all modes through the appropriate use of authorized access, surveillance systems and Intelligent Transportation Systems (ITS).

Performance Measure	
3.4.1	All transit projects are required to have a Threat Vulnerability Assessment.

The 2020 Annual List of Priority Projects has been expanded to include three safety categories: High-Priority Crash Corridors, Pedestrian and Bicycle Priority Corridors and Priority Intersections.

The North Florida TPO 2045 LRTP will provide information from the FDOT HSIP annual reports to track the progress made toward the statewide safety performance targets. The North Florida TPO documents progress made in safety performance in the **Annual Mobility Report**. *Click on the image at the right to view a summary of the 2019 Annual Mobility Report.*

The North Florida TPO concerned alternative scenarios for illustrative purposes only. Business as usual was the preferred alternative.



4 - PAVEMENT AND BRIDGE CONDITION MEASURES (PM2)

Pavement and Bridge Condition Performance Measures and Targets 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:

1. Percent of Interstate pavements in good condition;
2. Percent of Interstate pavements in poor condition;
3. Percent of non-Interstate National Highway System (NHS) pavements in good condition;
4. Percent of non-Interstate NHS pavements in poor condition;
5. Percent of NHS bridges (by deck area) classified as in good condition; and
6. 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 TPOs to coordinate when setting pavement and bridge condition performance targets and monitor progress towards achieving the targets. States must establish:

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

TPOs must establish four-year targets for all six measures. TPOs can either agree to program projects that will support the statewide targets, or establish their own quantifiable targets for the TPO's planning area.

The two-year and four-year targets represent pavement and bridge condition at the end of calendar years 2019 and 2021, respectively.

Pavement and Bridge Condition Baseline Performance and Established Targets

This System Performance Report discusses the condition and performance of the transportation system for each applicable target as well as the progress achieved by the TPO in meeting targets 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 targets have only recently been established. Accordingly, this first North Florida TPO 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 targets since this initial baseline report.

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

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

Performance Measures	Statewide	Statewide	Statewide
	Performance (2017 Baseline)	2-year Target (2019)	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 targets on May 18, 2018. In determining its approach to establishing performance targets 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 targets 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 targets 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 targets.

The North Florida TPO agreed to support FDOT's pavement and bridge condition performance targets on 11 October 2018. By adopting FDOT's targets, the North Florida TPO agrees to plan and program projects that help FDOT achieve these targets.

The North Florida TPO 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 targets. As such, the North Florida TPO 2045 LRTP reflects the goals, objectives, performance measures, and targets 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 North Florida TPO 2045 LRTP seeks to address system preservation, identifies infrastructure needs within the metropolitan planning area, and provides funding for targeted improvements. The 2045 Long Range Transportation includes the following goal related to system preservation.

GOAL 6: PRESERVE AND MAINTAIN OUR EXISTING SYSTEM

Preserving and maintaining the existing system is integral to the optimization of mobility. The FHWA and FDOT established formal goals and objectives for systems preservation that are proposed for adoption as part of this LRTP. They include:

1. Have 95 percent of the Strategic Intermodal System in good or better condition.
2. Have 85 percent of other arterials in good or better condition.
3. Strengthen bridges that are either (1) structurally deficient or (2) posted for weight restriction within six years on FDOT facilities.
4. Replace bridges that require structural repair and are more cost effective to replace within nine years on FDOT facilities.
5. Satisfy FDOT's off system bridge replacement goals.
6. Maintain signing and pavement markings to accommodate all users including automated vehicles.
7. Maintain technology/infrastructure introduced to accommodate connected vehicles.

In addition, the objective of the systems preservation and maintenance goal is to provide a transit fleet that meets FTA's requirements for system preservation, vehicle age and maintenance.

FDOT will provide the benchmarks and performance measures associated with the following performance measures.

The objectives for preserving and maintaining the existing system are listed below.

- **OBJECTIVE 6.1:** Maintain and update roadways to current standards.

Performance Measure	
6.1.1	Percent of Interstate Pavement in Good Condition
6.1.2	Percent of Interstate Pavement in Fair Condition
6.1.3	Percent of Interstate Pavement in Poor Condition
6.1.4	Percent of Non-Interstate Pavement in Good Condition
6.1.5	Percent of Non-Interstate Pavement in Fair Condition
6.1.6	Percent of Non-Interstate Pavement in Poor Condition

- **OBJECTIVE 6.2:** Maintain and update bridges to current standards

Performance Measure	
6.2.1	Percent of National Highway System Bridges in Good Condition
6.2.2	Percent of National Highway System Bridges in Fair Condition
6.2.3	Percent of National Highway System Bridges in Poor Condition
6.2.4	Percent of National Highway System Deck Area of Bridges in Good Condition
6.2.5	Percent of National Highway System Deck Area of Bridges in Fair Condition
6.2.6	Percent of National Highway System Deck Area of Bridges in Poor Condition
6.2.7	Percent of State Highway Bridges in Good Condition
6.2.8	Percent of State Highway Bridges in Fair Condition
6.2.9	Percent of State Highway Bridges in Poor Condition
6.2.10	Percent of State Highway Deck Area of Bridges in Good Condition
6.2.11	Percent of State Highway Deck Area of Bridges in Fair Condition
6.2.12	Percent of State Highway Deck Area of Bridges in Poor Condition
6.2.13	Percent of Non-State Highway Bridges in Good Condition
6.2.14	Percent of Non-State Highway Bridges in Fair Condition
6.2.15	Percent of Non-State Highway Bridges in Poor Condition
6.2.16	Percent of Non-State Highway Deck Area of Bridges in Good Condition
6.2.17	Percent of Non-State Highway Deck Area of Bridges in Fair Condition
6.2.18	Percent of Non-State Highway Deck Area of Bridges in Poor Condition

- **OBJECTIVE 6.3:** Maintain and update transit systems to current standards

Performance Measure	
6.3.1	Average Age of Vehicles

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

The TPO reports bridge and pavement condition in the **Annual Mobility Report**.

The 2045 Long Range Transportation Plan included alternative scenarios for illustrative purposes only. These scenarios were not considered in project prioritization and selection.

5 - SYSTEM PERFORMANCE, FREIGHT, AND CONGESTION MITIGATION & AIR QUALITY IMPROVEMENT PROGRAM MEASURES (PM3)

System Performance/Freight/CMAQ Performance Measures and Targets 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 TPOs to set targets 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 (NOx, VOC, CO, PM10, and PM2.5) 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 above pertaining to the CMAQ Program do not currently apply in Florida.

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 $\text{LOTTR} \geq 1.50$ 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 (95th percentile) to a normal travel time (50th 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 is 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 TPOs to coordinate when establishing performance targets for these measures and to monitor progress towards achieving the targets. FDOT must establish:

- Two-year and four-year statewide targets for percent of person-miles on the Interstate system that are reliable;
- Four-year targets for the percent of person-miles on the non-Interstate NHS that are reliable⁴; and
- Two-year and four-year targets for truck travel time reliability

TPOs are required to establish four-year performance targets for all three measures within 180 days of FDOT establishing statewide targets. TPOs establish targets by either agreeing to program projects that will support the statewide targets, or setting quantifiable targets for the TPO's planning area.

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

PM3 Baseline Performance and Established Targets

The System Performance Report discusses the condition and performance of the transportation system for each applicable PM3 target as well as the progress achieved by the TPO in meeting targets 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 targets have only recently been established. Accordingly, this first North Florida TPO 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 targets since this initial baseline report.

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

⁴ 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.

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

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 targets on May 18, 2018. In setting the statewide targets, 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 targets. 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 targets.

The North Florida TPO agreed to support FDOT's PM3 targets on 11 October 2018. By adopting FDOT's targets, the North Florida TPO agrees to plan and program projects that help FDOT achieve these targets.

The North Florida TPO 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 targets. As such, the North Florida TPO 2045 LRTP reflects the goals, objectives, performance measures, and targets as they are described in other state and public 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 North Florida TPO 2045 LRTP seeks to address system reliability and congestion mitigation through various means, including capacity expansion and operational improvements.

The 2045 Long Range Transportation Plan includes the following goal:

GOAL 4: ENHANCE MOBILITY AND ACCESSIBILITY

Enhancing mobility includes addressing the four dimensions of mobility – quantity of travel, quality of travel, system accessibility and system utilization. Several of these measures also support other goals and objectives (such as livability and sustainability).

Mobility is about more than increasing the volume of persons served and managing congestion. Users want a less stressful commute, but they also want improved reliability of their travel, more choices including transit, walking, and bicycling and to ensure we optimize system operations before we invest in new infrastructure. Understanding the trade-offs of these goals in the context of each corridor being considered is an essential element to identifying the right mobility solution for any project.

- **OBJECTIVE 4.1:** Optimize the quantity of travel.

Performance Measure		Benchmark
4.1.1	Person-miles traveled	Generally, increases in the quantity traveled (throughout) are preferred. However, consistent with livability and sustainability goals, one objective is to reduce the amount of travel needed. Therefore, no benchmarks are proposed, but monitoring is recommended.
4.1.2	Truck-miles traveled	
4.1.3	Vehicle-miles traveled	
4.1.4	Person trips	
4.1.5	Transit ridership	Increase transit ridership

- **OBJECTIVE 4.2:** Optimize the quality of travel.

Performance Measure		Benchmark
4.2.1	Average Travel Speed	Maintain or improve the average travel speed
4.2.2	Average Vehicle Delay	Maintain or reduce the average vehicle delay
4.2.3	Average Trip Time	Maintain or reduce the average trip time
4.2.4	Travel Time Reliability	Maintain or improve the reliability Achieve 95% reliability (on time arrival) on Strategic Intermodal System facilities.
4.2.5	Level of service on rural facilities	Maintain the level of service standard (FDOT standard for Strategic Intermodal System facilities and local government standards for other facilities)

- **OBJECTIVE 4.3:** Improve the accessibility to mode choices.

Performance Measure		Benchmark
4.3.1	Percent of system miles with bicycle accommodations	These performance measures will not change significantly from year to year but will be evaluated in each major update to the LRTP to establish benchmark and monitor performance.
4.3.2	Percent of system miles with pedestrian accommodations	
4.3.3	Transit coverage	Increase the % of population served with 1/4 mile

- **OBJECTIVE 4.4:** Optimize the utilization of the system.

Performance Measure		Benchmark
4.4.1	Percent of system heavily congested	Maintain or reduce the % of system heavily congested
4.4.2	Percent of travel heavily congested	Maintain or reduce the % of travel heavily congested
4.4.3	Vehicles per lane mile	Optimize the vehicles per lane mile for a desired LOS
4.4.4	Duration of congestion	Maintain or reduce the duration of congestion
4.4.5	Transit average load (Passengers per transit vehicle)	Optimize the transit average load for a desired quality of service

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

The 2045 Long Range Transportation Plan included alternative scenarios for illustrative purposes only. These scenarios were not considered in project prioritization and selection.

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
1. Equipment	Percentage of non-revenue, support-service and maintenance vehicles that have met or exceeded their useful life benchmark
2. Rolling Stock	Percentage of revenue vehicles within a particular asset class that have either met or exceeded their useful life benchmark
3. Infrastructure	Percentage of track segments with performance restrictions
4. 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 targets annually for the following fiscal year. Each public transit provider or its sponsors must share its targets, TAM, and asset condition information with each TPO/TPO in which the transit provider’s projects and services are programmed in the TPO’s TIP.

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

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

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

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 targets, as well as report performance and other data to FTA. A Tier II provider has the option to establish its own targets or to participate in a group plan with other Tier II providers whereby targets 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	DeSoto County Transportation
2	Suwannee Valley Transit Big Bend Transit Baker County Council on Aging Nassau County Transit	Clay Transit Ride Solutions Levy County Transit Ride Solutions Suwannee River Economic Council (SREC)
3	Tri-County Community Council Big Bend District 3 Santa Rosa Transit Gulf County ARC	Calhoun Senior Citizen Center Liberty County Transit JTRANS Wakulla Transit
4	<i>No participating providers</i>	
5	Sumter Transit Marion Transit	Flagler County Public Transportation
6	Key West Transit	
7	Neighborly Care Network Mid-Florida Community Service ARC Tampa Bay	ARC Nature Coast PARC

The TPO has the following Tier I and Tier II providers operating in the region:

- Jacksonville Transportation Authority, Duval County, Tier I
- Sunshine Bus, St. Augustine/St. Johns County
- Clay Transit (service now provided by Jacksonville Transportation Authority)
- Nassau Transit

On 8 November 2019, the North Florida TPO agreed to support Clay and Nassau County Transit Systems Transit asset management targets established in the Florida Department of Transportation Group Transit Asset Management Plan, thus agreeing to plan and program projects in the TIP that once implemented, are anticipated to make progress toward achieving the transit provider targets.

The Jacksonville Transportation Authority and Sunshine Bus established the transit asset targets identified in Table 6.3 on 2 February 2018:

Table 6.3 Jacksonville Transportation Authority Targets and Measures

Performance Targets & Measures

Asset Category - Performance Measure	Asset Class	2019 Target	2020 Target	2021 Target	2022 Target	2023 Target
REVENUE VEHICLES						
Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	AB - Articulated Bus	N/A				
	AO - Automobile	N/A				
	BR - Over-the-road Bus	N/A				
	BU - Bus	N/A				
	CU - Cutaway Bus	38%	32%	27%	22%	16%
	DB - Double Decked Bus	N/A				
	FB - Ferryboat	N/A				
	MB - Mini-bus	N/A				
	MV - Mini-van	20%	20%	20%	20%	20%
	RT - Rubber-tire Vintage Trolley	N/A				
	SB - School Bus	N/A				
	SV - Sport Utility Vehicle	N/A				
	TB - Trolleybus	N/A				
	VN - Van	N/A				
	O	N/A				
	O	N/A				
	O	N/A				
EQUIPMENT						
Age - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	Non Revenue/Service Automobile	100%	50%	50%	50%	
	Steel Wheel Vehicles	N/A				
	Trucks and other Rubber Tire Vehicles	N/A				
	Tire Machine	N/A				
	Tire Balancer	N/A				
	Column Lifts	N/A				
FACILITIES						
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Administration	N/A				
	Maintenance	N/A				
	Parking Structures	N/A				
	Passenger Facilities	N/A				
	Transit Center (Adm & Maint)	None 0%	None 0%	None 0%	None 0%	
	Custom 2	N/A				
	Custom 3	N/A				

Table 6.4 Sunshine Bus Targets and Measures

Performance Targets & Measures

Asset Category - Performance Measure	Asset Class	2019 Target	2020 Target	2021 Target	2022 Target	2023 Target
REVENUE VEHICLES						
	AB - Articulated Bus	N/A				
	AO - Automobile	N/A				
	BR - Over-the-road Bus	N/A				
	BU - Bus	N/A				
	CU - Cutaway Bus	38%	32%	27%	22%	16%
	DB - Double Decked Bus	N/A				
	FB - Ferryboat	N/A				
	MB - Mini-bus	N/A				
	MV - Mini-van	20%	20%	20%	20%	20%
	RT - Rubber-tire Vintage Trolley	N/A				
	SB - School Bus	N/A				
Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	SV - Sport Utility Vehicle	N/A				
	TB - Trolleybus	N/A				
	VN - Van	N/A				
	O	N/A				
	O	N/A				
	O	N/A				
EQUIPMENT						
	Non Revenue/Service Automobile	100%	50%	50%	50%	50%
	Steel Wheel Vehicles	N/A				
	Trucks and other Rubber Tire Vehicles	N/A				
	Tire Machine	N/A				
	Tire Balancer	N/A				
	Column Lifts	N/A				
FACILITIES						
	Administration	N/A				
	Maintenance	N/A				
	Parking Structures	N/A				
	Passenger Facilities	N/A				
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Transit Center (Adm & Maint)	None 0%				
	Custom 2	N/A				
	Custom 3	N/A				

The transit asset management targets are based on the condition of existing transit assets and planned investments in equipment, rolling stock, infrastructure, and facilities. The targets 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 6.5 summarizes asset condition for Jacksonville Transportation Authority rolling stock. Table 6.6 summarizes the same for the Sunshine Bus.

Table 6.5 Jacksonville Transportation Authority Asset Condition Summary

Asset Condition Summary

Asset Category	Total Number	Avg Age	Avg Mileage	Avg TERM Condition	Avg Value	% At or Past ULB
Revenue Vehicles	43	5.2	131,147	N/A	\$92,627.91	47%
<i>AB - Articulated Bus</i>	0	-	-	N/A	-	-
<i>AO - Automobile</i>	0	-	-	N/A	-	-
<i>BR - Over-the-road Bus</i>	0	-	-	N/A	-	-
<i>BU - Bus</i>	0	-	-	N/A	-	-
<i>CU - Cutaway Bus</i>	38	5.5	143,083	N/A	\$95,473.68	50%
<i>DB - Double Decked Bus</i>	0	-	-	N/A	-	-
<i>FB - Ferryboat</i>	0	-	-	N/A	-	-
<i>MB - Mini-bus</i>	0	-	-	N/A	-	-
<i>MV - Mini-van</i>	5	2.8	40,433	N/A	\$71,000.00	20%
<i>RT - Rubber-tire Vintage Trolley</i>	0	-	-	N/A	-	-
<i>SB - School Bus</i>	0	-	-	N/A	-	-
<i>SV - Sport Utility Vehicle</i>	0	-	-	N/A	-	-
<i>TB - Trolleybus</i>	0	-	-	N/A	-	-
<i>VN - Van</i>	0	-	-	N/A	-	-
	0	-	-	N/A	-	-
	0	-	-	N/A	-	-
	0	-	-	N/A	-	-
Equipment	2	16.5	191,463	N/A	\$35,000.00	100%
<i>Non Revenue/Service Automobile</i>	2	16.5	191,463	N/A	\$35,000.00	100%
<i>Steel Wheel Vehicles</i>	0	-	-	N/A	-	-
<i>Trucks and other Rubber Tire Vehicles</i>	0	-	-	N/A	-	-
<i>Tire Machine</i>	0	-	-	N/A	-	-
<i>Tire Balancer</i>	0	-	-	N/A	-	-
<i>Column Lifts</i>	0	-	-	N/A	-	-
Facilities	1	11.0	N/A	4.0	\$1,369,000.00	N/A
<i>Administration</i>	0	-	N/A	-	-	N/A
<i>Maintenance</i>	0	-	N/A	-	-	N/A
<i>Parking Structures</i>	0	-	N/A	-	-	N/A
<i>Passenger Facilities</i>	0	-	N/A	-	-	N/A
<i>Transit Center (Adm & Maint)</i>	1	11.0	N/A	4.0	\$1,369,000.00	N/A
<i>Custom 2</i>	0	-	N/A	-	-	N/A
<i>Custom 3</i>	0	-	N/A	-	-	N/A

Table 6.6 Sunshine Bus Asset Condition Summary

Asset Inventory Summary

Asset Category	Total Number	Avg Age	Avg Mileage	Avg Value
Revenue Vehicles	43	5.2	131,147	\$92,627.91
<i>AB - Articulated Bus</i>	0	-	-	-
<i>AO - Automobile</i>	0	-	-	-
<i>BR - Over-the-road Bus</i>	0	-	-	-
<i>BU - Bus</i>	0	-	-	-
<i>CU - Cutaway Bus</i>	38	5.5	143,083	\$95,473.68
<i>DB - Double Decked Bus</i>	0	-	-	-
<i>FB - Ferryboat</i>	0	-	-	-
<i>MB - Mini-bus</i>	0	-	-	-
<i>MV - Mini-van</i>	5	2.8	40,433	\$71,000.00
<i>RT - Rubber-tire Vintage Trolley</i>	0	-	-	-
<i>SB - School Bus</i>	0	-	-	-
<i>SV - Sport Utility Vehicle</i>	0	-	-	-
<i>TB - Trolleybus</i>	0	-	-	-
<i>VN - Van</i>	0	-	-	-
	0	-	-	-
	0	-	-	-
	0	-	-	-
Equipment	2	16.5	191,463	\$35,000.00
<i>Non Revenue/Service Automobile</i>	2	16.5	191,463	\$35,000.00
<i>Steel Wheel Vehicles</i>	0	-	-	-
<i>Trucks and other Rubber Tire Vehicles</i>	0	-	-	-
<i>Tire Machine</i>	0	-	-	-
<i>Tire Balancer</i>	0	-	-	-
<i>Column Lifts</i>	0	-	-	-
Facilities	1	11.0	N/A	\$1,369,000.00
<i>Administration</i>	0	-	N/A	-
<i>Maintenance</i>	0	-	N/A	-
<i>Parking Structures</i>	0	-	N/A	-
<i>Passenger Facilities</i>	0	-	N/A	-
<i>Transit Center (Adm & Maint)</i>	1	11.0	N/A	\$1,369,000.00
<i>Custom 2</i>	0	-	N/A	-
<i>Custom 3</i>	0	-	N/A	-

Clay Transit and Nassau Transit 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 targets for the Tier II providers are shown in Table 6.7. Table 6.8 is the Group TAM Asset Summary by Class.

Table 6.7 Group TAM Targets and Measures (Clay Transit and Nassau Transit)

Asset Category - Performance Measure Table 6.7 – Group TAM Targets & Measures	Asset Class	FY 2019 Asset Conditions	FY 2020 Performance Target
Revenue Vehicles			
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%
Equipment			
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%
Facilities			
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%

Table 6.8 Group TAM Asset Summary by Class

Asset Category Class	Total Number	Average Age	Average Miles	Average Value	Number Exceeding ULB
Rolling Stock					
Automobile	26	7	88,450	\$20,664	16
Bus	40	8	129,434	\$288,108	7
Cutaway Bus	401	5	136,977	\$75,152	121
Minibus	33	5	70,556	\$84,507	10
Minivan	108	4	97,799	\$52,370	14
Sport Utility Vehicle	16	4	104,850	\$28,023	0
Van	128	7	94,648	\$34,894	55
Equipment	13	7	74,642	\$55,219	12
Facility	48	21		\$918,867	0

The statewide group TAM targets are based on the condition of existing transit assets and planned investments in equipment, rolling stock, infrastructure, and facilities over the next year. The targets 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 targets for the participating agencies on an annual basis, and will notify the participating transit agencies and the TPOs in which they operate when the targets are updated.

TAM Performance

The North Florida TPO 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 targets. As such, the LRTP directly reflects the goals, objectives, performance measures, and targets as they are described in other public transportation plans and processes, including the Jacksonville Transportation Authority and Sunshine Bus Transit Development Plans, and the current North Florida TPO 2045 Long Range Transportation Plan. The latter includes the following goal.

GOAL 2: INVEST IN LIVABLE AND SUSTAINABLE COMMUNITIES

There is no single definition of what constitutes a “livable” or “sustainable” transportation system. However, the North Florida TPO has adopted the following definition of a sustainable transportation system endorsed by the Transportation Research Board Sustainable Transportation Indicators Subcommittee:

*Allows the **basic access** and development needs of individuals, companies, and society to be met **safely** and in a manner consistent with **human and ecosystem health** and **promotes equity** within and between successive generations.*

*Is **affordable**, operates fairly and **efficiently**, offers a **choice of transportation modes**, and supports a **competitive economy**, as well as **balanced regional development**.*

Limits air, water, noise emissions, waste and resource use. Limits emissions and waste within the planet’s ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes, while minimizing the impact on the use of land and the generation of noise.

The goals associated with livability and sustainability are listed below.

- **OBJECTIVE 2.1:** Enhance transit accessibility.

Performance Measure	Benchmark
2.1.1 Percent of Population within a quarter mile walk of a transit stop	Maintain or improve the percent of population within a quarter mile walk of a transit stop. Existing value is reported in the Congestion Management Process.
2.1.2 Population within 5 miles of park and ride lots	Maintain or improve the population within 5 miles of park and ride lots. Existing value is reported in the Congestion Management Process.

- **OBJECTIVE 2.2:** Enhance transit ridership.

Performance Measure	Benchmark
2.2.1 Passengers per vehicle revenue mile	Maintain or improve passengers per revenue mile. Existing value is reported in the Congestion Management Process.
2.2.2 Passengers per vehicle revenue hour	Maintain or improve passengers per revenue hour. Existing value is reported in the Congestion Management Process.

Other measures under this goal address bicycle and pedestrian facilities and access thereto. Below please find links to the Transit Development Plans of the Jacksonville Transportation Authority and Sunshine Bus.

- Sunshine Bus <http://www.co.st-johns.fl.us/Transportation/media/Trans/TDP/TDPcomplete.pdf>

The Jacksonville Transportation Authority updated the TDP and oversaw the update of the Northeast Florida Coordinated Mobility Plan concurrent with the 2045 Long Range Transportation Plan update.

- http://northfloridatpo.com/images/uploads/JTA_TransitDevelopmentPlan_November2019.pdf
- http://northfloridatpo.com/images/uploads/Northeast-Florida-Coordinated-Mobility-Plan-Final_January_2020.pdf

Jacksonville Transportation

To support progress towards TAM performance targets, transit investment and maintenance funding in the 2045 totals \$471 million (not including SIS funds programmed by FDOT), approximately 15.5 percent of total LRTP funding (not including SIS funding) and 35 percent of requested Jacksonville Transportation Authority funding for transit preservation. 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 (PTSAP) rule and related performance measures as authorized by Section 20021 of the Moving Ahead for Progress in the 21st 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 PTSAPs 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 targets. 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. Transit operators subject to the rule must have a PTASP and safety targets in place by July 20, 2020. TPOs must then establish transit safety targets no later than 180 days after the transit operators establishes its targets.

Transit Safety Performance Measures

The transit agency sets targets 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:

1. Total number of reportable fatalities.
2. Rate of reportable fatalities per total vehicle revenue miles by mode.
3. Total number of reportable injuries.
4. Rate of reportable injuries per total vehicle revenue miles by mode.
5. Total number of reportable safety events.
6. Rate of reportable events per total vehicle revenue miles by mode.
7. System reliability - Mean distance between major mechanical failures by mode.

The North Florida TPO will coordinate with the Jacksonville Transportation Authority, Sunshine Bus, and FDOT on behalf of Clay and Nassau Transit to adopt transit safety performance targets within 90 days of their adoption by each transit agency.

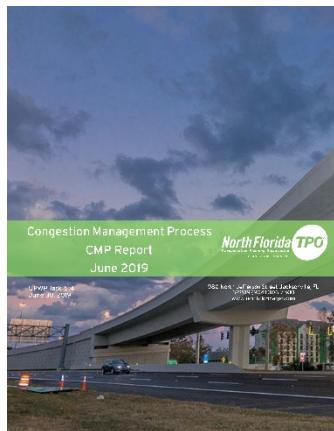
8 - INTEGRATION OF PERFORMANCE MANAGEMENT IN THE 2045 LONG RANGE TRANSPORTATION PLAN.

On 20 June 2019 the North Florida TPO formally endorsed the Transportation Planning Performance Measures Consensus Planning Document developed by the Florida Metropolitan Planning Organization Advisory Committee and Florida Department of Transportation. This document is attached as Appendix A.

The purpose of the document is to outline the minimum roles of FDOT, the TPOs, and the providers of public transportation in the TPO 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). Specifically:

- 23 CFR 450.314(h)(1) requires that “The TPO(s), State(s), and providers of public transportation shall jointly agree upon and develop specific written procedures for cooperatively developing and sharing information related to transportation performance data, the selection of performance targets, the reporting of performance targets, the reporting of performance to be used in tracking progress toward achievement of critical outcomes for the region of the TPO, and the collection of data for the State asset management plan for the National Highway System (NHS).”
- 23 CFR 450.314(h)(2) allows for these provisions to be “Documented in some other means outside the metropolitan planning agreements as determined cooperatively by the TPO(s), State(s), and providers of public transportation.”

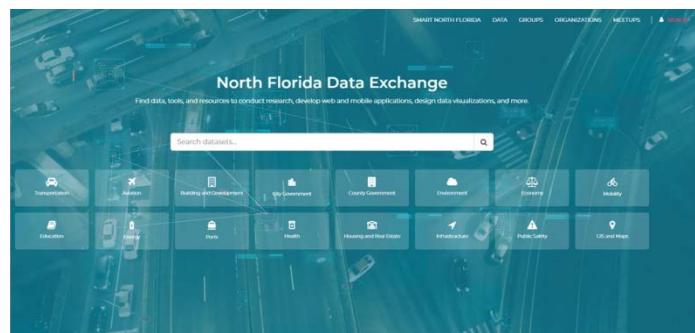
As was the 2040 Long Range Transportation Plan adopted in November 2014, the 2045 Long Range Transportation Plan adopted November 14, 2019 is performance based.



To insure consistency with this agreement and in all TPO plans, programs and activities, in 2019 the North Florida TPO updated both the **Congestion Management Process (CMP)** ([click the image at right to view the CMP](#)) and **Regional System Safety Plan** in incorporate federal performance measures and targets. Historically, the North Florida TPO reports progress in attain these measures in the **Annual Mobility Report**. The current Annual Mobility Report and all prior reports documented progress in achieving performance measures adopted in the previous Congestion Management Process (CMP). As noted, the CMP was updated to include all federal performance measures and targets all of which were incorporated in Path Forward 2045,

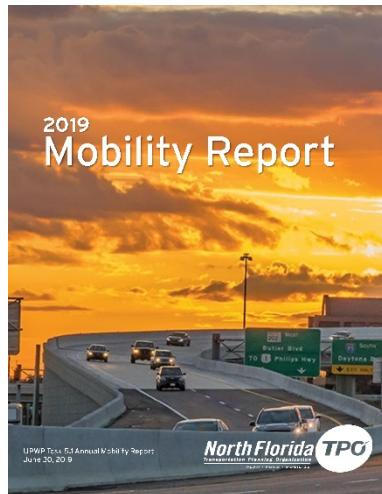
the recently updated Long Range Transportation Plan. These measures were utilized in project evaluation and prioritization.

The **2020 Annual Mobility Report** will be linked to both the measures utilized in the updated CMP, 2045 Long Range Transportation Plan and Regional System Safety Plan.



The 2019 CMP update included developing an Integrated Data Exchange (IDE) with a real-time system performance dashboard. *Click the image on bottom of the previous page to view the IDE.*

Click the images that follow are links to the Regional System Safety Plan and 2019 Annual Mobility Report and summary.



The LRTP update include four illustrative scenarios intended only to test the potential impact of vehicle automation and shared mobility on vehicle miles traveled and mode choice.