CONNECTING IRC

Indian River County | **2045** Long Range Transportation Plan

FINAL PLAN DOCUMENT

MPO Indian River County

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Introduction

CHAPTER 1 - INTRODUCTION

The Indian River County Metropolitan Planning Organization (MPO) is the federally-designated legislative agency responsible for transportation planning in the urbanized area of Indian River County, which is depicted in **Figure 1**. One of the most important functions of the MPO is to update its Long Range Transportation Plan (LRTP) every five years. The 2045 LRTP is known as Connecting IRC 2045 and identifies a multimodal, fiscally-constrained Cost Feasible Plan to enhance the area's transportation network over the next 25 years. Connecting IRC 2045 was coordinated with local, regional, and state partners; considered stakeholder and public input; provides benefits throughout the county without disproportionate adverse impacts; and is consistent with applicable state and federal requirements.

PURPOSE OF THE LRTP

The LRTP is a federally-required short- and long-term plan addressing multimodal transportation needs within the MPO's planning area. Connecting IRC 2045 was prepared to serve as the primary guidance for identifying and prioritizing multi-modal transportation improvements over the next 25 years. The plan is fiscally-constrained and identifies projects to meet the needs of the transportation network within the limits of projected available revenues. These projects are intended to address future mobility needs, enhance travel options, and improve safety, quality of life and economic vitality.

LEGISLATION AND GUIDANCE

The MPO's 2040 LRTP (adopted in 2015) was governed by the Moving Ahead for Progress in the 21st Century Act (MAP-21), which was signed into federal law in 2012. Connecting IRC 2045 is guided by the 2015 legislation, Fixing America's Surface Transportation Act (FAST Act). The FAST Act supports MAP-21 by continuing to create a streamlined, performance-based surface transportation program that builds on many of the multimodal transportation policies first established under the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. Establishing a performance-based and outcome-based program requires investment of financial resources in projects that will collectively make progress toward achieving national multimodal transportation goals.

Through the FAST Act, new federal requirements were incorporated in planning process. These include the following new Federal Planning Factors - (1) improve resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation and (2) enhance travel and tourism. The FAST Act also emphasizes the multimodality of the transportation system and includes additional facilities such as intercity buses and commuter van pools that support intermodal transportation. Under the FAST Act, public ports and additional private transportation service providers were added to the list of interested parties for participation in the planning process. The FAST Act also requires that officials responsible for tourism activities, as well as those responsible for reducing potential risks of natural disasters be added to the coordinating agencies responsible for various planning activities throughout the region.

Chapter 2 includes additional background and details on federal and state requirements related to the LRTP process.

Chapter 2

Goals, Objectives, Performance Targets, and System Performance Report

CHAPTER 2 - GOALS, OBJECTIVES, PERFORMANCE TARGETS, AND SYSTEM PERFORMANCE REPORT

Pursuant to the Moving Ahead for Progress in the 21st Century Act (MAP-21) 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 and Metropolitan Transportation Planning Final Rule (The Planning Rule). 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 Indian River County MPO must include a description of the performance targets that apply to the MPO planning area and a System Performance Report as an element of its 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 MPOs that elect to develop multiple scenarios, the System Performance Report must also 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.

INDIAN RIVER COUNTY MPO GOALS

Goals and objectives for Connecting IRC 2045 were developed at the outset of the planning process. They are consistent with the guidance and requirements of the FAST Act, current federal transportation planning requirements, and the Florida Transportation Plan.

Goal 1 – *Providing an efficient transportation system that is connected, responsive, aesthetically pleasing and meets the needs of all users.*

Goal 2 – *Enhancing mobility for people and freight and provide travel alternatives.*

Goal 3 – *Protecting the natural and social environment.*

Goal 4 – *Maintaining a safe transportation system for all users.*

Goal 5 – *Preserving and maintaining the transportation system and transportation infrastructure.*

Table 2-1 expands on Connecting IRC 2045 Goals by listing related Objectives, Policies, Performance Measures, and Performance Indicators for each respective Goal.

Table 2-1: Connecting IRC 2045 Goals, Objectives, Policies, and Performance Measures

Goal 1: Providing an efficient transportation system that is connected, responsive, aesthetically pleasing and meets the needs of all users.

Objectives	Policies	Performance Measures (PM) and Indicators (PI)
Objective 1.01 - Maintain the adopted level of service standard for all functionally classified roads through the year 2045.	Policy 1.01.1 – Implement roadway improvements identified in the 2045 Cost Feasible Plan, consistent with the Interim Year Roadway Improvement Sets.	PI 1.01.1.1 – Percent of lane miles meeting the adopted level of service standard.
Objective 1.02 - Maintain a 12 hour hurricane evacuation clearance time on roads designated as hurricane evacuation routes through the year 2045.	Policy 1.02.1 – Implement roadway improvements identified in the 2045 Cost Feasible Plan for roadways designated as hurricane evacuation routes.	PI 1.02.1.1 – Hurricane evacuation clearance time measured through actual event. PI 1.02.1.2 – Lane miles of roadway improvements on hurricane evacuation routes.
Objective 1.03 - Enhance the grid roadway network by constructing an average of two centerline miles of new roadway corridors each year from 2020 to 2045.	Policy 1.03.1 – Implement new corridor roadway improvements identified in the 2045 Cost Feasible Plan.	PI 1.03.1.1- Average annual centerline miles of new roadway corridors constructed during the period from 2020 to 2045.
Objective 1.04 - Enhance the FDOT's Strategic Intermodal System (SIS) by constructing one FEC railway flyover by 2045.	Policy 1.04.1 – Implement improvements to the SIS at the FEC Railroad by 2045.	PI 1.041.1 – New Flyover at the FEC Railroad.
Objective 1.05 - Optimize functionality and efficiency of existing infrastructure and ROW through 2045.	Policy 1.05.1 – Incorporate Intelligent Transportation System (ITS) and/or Connected Vehicle architecture into all new roadway projects.	PI 1.05.1.1 Number of new roadways that incorporate ITS and Connected Vehicle Architecture.
Objective 1.06[PM] - Ensure that 50% of Person-Miles (Non-Interstate) and 75% of Person-Miles (Interstate) on the National Highway System are Reliable	Policy 1.06.1 – Implement roadway improvements identified in the 2045 Cost Feasible Plan, consistent with the Interim Year Roadway Improvement Sets.	PM 1.06.1 Percent of Person Trips that are Reliable (50% of Person-Miles (Non-Interstate) and 75% of Person-Miles (Interstate))

PM - *Indicates FAST Act System Performance Report Adopted Performance Measure*

Goal 2: Enhancing mobility for people and freight and provide travel alternatives.

Objectives	Policies	Performance Measures (PM) and Indicators (PI)
Objective 2.01 - Maintain Transit Quality and LOS "A" for reliability.	Policy 2.01.1 – Make Capital and Operational improvements consistent with the adopted Transit Development Plan.	PI 2.01.1.1 – Percentage of buses arriving within 5 minutes of schedule.
Objective 2.02 - Maintain Transit Quality and LOS "B" for Service Coverage.	Policy 2.02.1 – Improve service coverage consistent with the adopted Transit Development Plan.	PI 2.02.1.1 – System compliance with adopted level of service standard
Objective 2.03 - Expand weekday hours of service to 15 hours a day on at least one bus route every two years during the period from 2025 to 2045 so that all weekday bus routes operate at least 15 hours per day by 2045.	Policy 2.03.1 – Expand weekday hours of operation on fixed-route bus network consistent with the adopted Transit Development Plan.	PI 2.03.1.1 – Average number of weekday bus routes with 15 hours of service added during the period from 2025 to 2045.
Objective 2.04 - Maintain Bike/Ped LOS "D" on 80% percent of roadways in Indian River County through 2045.	Policy 2.04.1 – Implement sidewalk improvements consistent with the adopted Bicycle/Pedestrian Plan. Policy 2.04.2 – Implement bicycle facility improvements consistent with the adopted Bicycle/Pedestrian Plan.	PI 2.04.1 – Percentage of roadways meeting adopted level of service standard
Objective 2.05 - Add an average of two miles of bicycle facilities on functionally classified roadways or trails each year during the period from 2020 to 2045.	Policy 2.051 – Implement bicycle facility improvements consistent with the adopted Bicycle/Pedestrian Plan. Policy 2.05.2 – Adapt abandoned railroad corridors, roadway alignments and military trails for bicycle facilities, wherever possible.	PI 2.05.1.1 – Average annual number of new bicycle facilities added during the period from 2025 to 2045.
Objective 2.06[PM] - Enhance freight mobility by ensuring that the Truck Travel Time Reliability (TTTR) index on the Interstate Highways is less than 2.00	Policy 2.06.1 – Implement the freight mobility improvements identified in the 2045 Cost Feasible Plan	PM 2.06.1.1 – TTTR on the Interstate Highway System (Truck Travel Time Reliability (TTTR) index on the Interstate Highways is less than 2.00)
Objective 2.07 - Increase the efficiency and convenience of connecting multiple modes by adding an average of one shelter or transfer facility per year through 2045.	Policy 2.07.1 – Add bus shelters and improve hubs consistent with the Transit Development Plan.	PI 2.07.1.1 – Number of new shelters/improved transit hubs

PM - *Indicates FAST Act System Performance Report Adopted Performance Measure*

Goal 3: Protecting the natural and social environment.

Objectives	Policies	Performance Measures (PM) and Indicators (PI)
Objective 3.01 - Limit average increase in CO, HC, and NO emissions to less than 15 percent from the previous five-year period for each five year period from 2025 to 2045.	Policy 3.01.1 – Implement the transportation improvements identified in the 2045 Cost Feasible Plan.	PI 3.01.1.1 – Percent change in CO, HC, and NO emissions (in kilograms) for each five year period from the base year for the period from 2025 to 2045.
Objective 3.02 - Ensure that all collector roadways are less than six lanes through the year 2045.	Policy 3.02.1 – Implement the transportation improvements identified in the 2045 Cost Feasible Plan.	PI 3.02.1.1 – Centerline miles of collector roadways with six or more lanes.
Objective 3.03 - Increase resiliency of infrastructure for extreme weather and climate trends.	Policy 3.03.1 – Incorporate higher elevations, increased drainage capacity, and more resilient construction materials as appropriate into new projects.	PI 3.03.1.1 – Percentage of new projects incorporating enhanced features.

Goal 4: Maintaining a safe transportation system for all users.

Objectives	Policies	Performance Measures (PM) and Indicators (PI)
Objective 4.01 - Reduce the number and rate of crash Fatalities to 0 by 2045	Policy 4.01.1 – Implement intersection and other improvements related to safety as identified in the Cost Feasible Plan including Congestion Management Process plan.	PI 4.01.1.1 – Annual percent change in the number and rate of Fatalities.
Objective 4.02[PM] - Reduce the number and rate of Serious Injuries to 0 by 2045.	Policy 4.02.1 – Implement intersection and other improvements related to safety as identified in the Cost Feasible Plan including Congestion Management Process plan.	PM 4.02.1.1 – Annual percent change in the number and rate of Serious Injuries.
Objective 4.03[PM] - Reduce the number and rate of Non-Motorized Fatalities and Serious Injuries to 0 by 2045.	Policy 4.03.1 – Implement intersection and other improvements related to safety as identified in the Cost Feasible Plan and Bike/Ped Plan	PM 4.03.1.1 – Annual percent change in the number and rate of Non-Motorized crashes.

PM - *Indicates FAST Act System Performance Report Adopted Performance Measure*

Goal 5: Preserving and maintaining the transportation system and transportation infrastructure.

Objectives	Policies	Performance Measures (PM) and Indicators (PI)
Objective 5.01PM - Ensure that over 60% of the pavement area on the National Highway System (NHS) are rated "Good" by FDOT while less than 5% are rated "Poor" by FDOT.	Policy 5.01.1 – Evaluate the structural integrity of pavement on the major road network and implement rehabilitation projects as appropriate in coordination with FDOT.	PM 5.01.1.1 – FDOT Pavement Condition Rating
Objective 5.02PM - Ensure that over 50% of the bridge deck area on the National Highway System (NHS) are rated "Good" by FDOT while less than 10% are rated "Poor" by FDOT.	Policy 5.02.1 – Evaluate the structural integrity of bridges on the major road network and implement rehabilitation projects as appropriate in coordination with FDOT.	PM 5.02.1.1 – FDOT Bridge Condition Rating.
Objective 5.03 - Provide adequate funding to maintain and operate the non-state highway system and multimodal infrastructure.	Policy 5.03.1 – Program on an annual basis appropriate funding for maintenance and operations.	PI 5.03.1.1 - Funding included for maintenance and operations.

PM - *Indicates FAST Act System Performance Report Adopted Performance Measure*

DEVELOPMENT OF THE GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

The Connecting IRC 2045 Goals, Objectives, and Performance Measures have been updated based on federal, state, and local guidance. This chapter highlights the requirements and guidance used to develop the Goals, Objectives, and Performance Measures for this plan.

Fixing America's Surface Transportation (FAST) Act

Enacted in 2015, the Fixing America's Surface Transportation (FAST) Act (Public Law No. 114-94), provides support and enhancement to the Moving Ahead for Progress in the 21st Century Act (MAP-21). The FAST Act is the first federal law to provide long-term funding to infrastructure planning and investment for surface transportation since the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) became law in 2005.

The FAST Act supports MAP-21 by continuing to create a streamlined, performance-based surface transportation program that builds on many of the multimodal transportation policies first established under the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. Establishing a performance- and outcome-based program requires investment of financial resources in projects that will collectively make progress toward achieving national multimodal transportation goals. Connecting IRC 2045 has been developed to ensure compliance with the requirements of the FAST Act and includes a performance-based approach to the transportation decision-making process.

The FAST Act has established specific planning factors that call for the recognition and address the relationship between transportation, land use, and economic development. The federal planning factors form the cornerstone for the 2045 LRTP and include:

1. Supporting the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
2. Increasing the **safety** of the transportation system for motorized and non-motorized users.
3. Increasing the **security** of the transportation system for motorized and non-motorized users.
4. Increasing **accessibility and mobility** of people and freight.
5. Protecting and enhancing the **environment**, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and local growth and economic development patterns.
6. Enhancing the **integration and connectivity** of the transportation system, across and between modes, for people and freight.
7. Promoting **efficient system management** and operation.
8. Emphasizing the **preservation** of the existing transportation system.
9. Improving the **resiliency and reliability** of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
10. Enhancing **travel and tourism**.

A matrix showing consistency between the LRTP Goals and the ten planning factors from the FAST Act is shown in **Table 2-2**.

Table 2-2: Connecting IRC 2045 Goals and FAST Act Planning Factors Comparison

Relationship between the LRTP Goals and the FAST Act Planning Factors	Economic Vitality	Safety	Security	Movement of People & Freight	Environment and Quality of Life	Integration / Connectivity	System Management & Operation	System Preservation	Resiliency	Tourism
Providing an efficient transportation system that is connected, responsive, aesthetically pleasing and meets the needs of all users.	●	●	●	●	●	●	●		●	●
Enhancing mobility for people and freight and provide travel alternatives.	●	●	●	●	●	●	●	●	●	●
Protecting the natural and social environment.	●	●	●	●	●	●	●		●	●
Maintaining a safe transportation system for all users.	●	●	●	●	●		●		●	●
Preserving and maintaining the transportation system and transportation infrastructure.	●	●	●	●	●	●	●	●	●	

Florida Transportation Plan (FTP)

The Florida Transportation Plan (FTP) is the single overarching statewide plan guiding Florida's transportation future. The plan was created by, and provides direction to, FDOT and all organizations that are involved in planning and managing Florida's transportation system, including statewide, regional, and local partners. This includes the Indian River County MPO. The FTP Policy Element is Florida's long-range transportation plan as required by both state and federal law and this element points toward a future transportation system that embraces all modes of travel, innovation, and change.

MPOs are required to address the goals included in the FTP. These goals include the following:

- Safety and security for residents, visitors, and businesses
- Agile, resilient, and quality infrastructure
- Efficient and reliable mobility for people and freight
- More transportation choices for people and freight
- Transportation solutions that support Florida's global economic competitiveness
- Transportation solutions that support quality places to live, learn, work, and play
- Transportation solutions that enhance Florida's environment and conserve energy

MPOs must also incorporate any performance targets which may be included in the Statewide Freight Plan and Asset Management Plan. Current guidance from FDOT indicates that no additional performance targets will be included in these plans. A matrix showing consistency between the LRTP Goals and the planning factors from the (FTP) is shown in **Table 2-3**.

Local Government Comprehensive Plans

It is important to recognize the close relationship between land use and transportation. Connecting IRC 2045 has been developed in a manner that considered, and to the maximum extent possible, is consistent with, the Comprehensive Plans developed and adopted by local governments listed below:

- Indian River County
- City of Fellsmere
- City of Sebastian
- City of Vero Beach
- Town of Indian River Shores
- Town of Orchid

Table 2-3: Connecting IRC 2045 Goals and Florida Transportation Goals Comparison

Relationship between the LRTP Goals and the Florida Transportation Plan Goals	Safety and Security	Resilience	Efficiency	Transportation Choices	Economic Competitiveness	Quality Places	Environment
Providing an efficient transportation system that is connected, responsive, aesthetically pleasing and meets the needs of all users.	●	●	●	●	●	●	●
Enhancing mobility for people and freight and provide travel alternatives.	●	●	●	●	●	●	●
Protecting the natural and social environment.	●	●	●	●	●	●	●
Maintaining a safe transportation system for all users.	●	●	●	●	●	●	●
Preserving and maintaining the transportation system and transportation infrastructure.	●	●	●	●	●	●	●

SYSTEM PERFORMANCE REPORT

Performance Management is a strategic approach to connect investment and policy decisions to help achieve performance goals. Performance measures are quantitative criteria used to evaluate progress against adopted performance targets.

The Moving Ahead for Progress in the 21st Century Act (MAP-21) requires State DOTs and MPOs to conduct performance-based planning by tracking performance measures and setting data-driven targets to improve those measures. Performance-based planning ensures 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 the national goals:

- 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.

The Fixing America's Surface Transportation (FAST) Act supplements the MAP-21 legislation by establishing timelines for State DOTs and MPOs to comply with the requirements of MAP-21. State DOTs are required to establish statewide targets, and MPOs have the option to support the statewide targets or adopt their own.

The Connecting IRC 2045 System Performance Report provides more details related to Indian River County MPO's performance measures and can be found in **Appendix A**.

Performance Measure 1 - Safety Performance Measures

Safety is the first national goal identified in the FAST Act. In March 2016, the Highway Safety Improvement Program (HSIP) and Safety Performance Management Measures Rule (Safety PM Rule) was finalized and published in the Federal Register. The rule requires MPOs to set targets for the following safety-related performance measures and report progress to the State DOT:

- Fatalities;
- Serious Injuries;
- Nonmotorized Fatalities and Serious Injuries;
- Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT); and
- Rate of Serious Injuries per 100 million VMT.

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 metropolitan planning organizations (MPOs) through Florida's Metropolitan Planning Organization Advisory Council (MPOAC). The SHSP development process included review of safety-related goals, objectives, and strategies in MPO plans. 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 Florida SHSP and the Florida Transportation Plan (FTP) both highlight the commitment to a vision of zero deaths. The FDOT Florida Highway Safety Improvement Program (HSIP) annual report documents the statewide performance measures toward that zero deaths vision. As such, the MPO supports the adoption of the FDOT statewide HSIP safety performance measures and FDOT's target of "0" for each safety performance measure to reflect the FDOT goal of zero deaths.

FDOT, with the understanding that zero fatalities/serious injuries is unable to be achieved within the 2018 Highway safety Plan (HSP), developed statistical data models to forecast the number of fatalities and serious injuries. Based on the forecasts of these statistical models, FDOT established targets and programmed projects that they expect will reduce the number of fatalities and serious injuries. The five federally-mandated Safety Performance Measures targets for 2019 for FDOT and the Indian River County MPO are presented below in **Table 2-4**.

Safety Performance Measure targets are required to be adopted on a yearly basis. In August of the current year, FDOT will report the following year's targets in the HSIP Annual Report to the Federal Highway Administration. After FDOT adopts the targets, the MPO is required to either adopt FDOT's targets or establish its own within six months (or the following February).

Table 2-4: Performance Measure 1 (PM1) - Safety Performance Measure Targets

Safety Performance Measure	FDOT Statewide Targets	Indian River MPO Safety Targets
Number of Fatalities	0	0
Number of Serious Injuries	0	0
Rate of Fatalities per 100 Million Vehicle Miles Traveled (VMT)	0	0
Rate of Serious Injuries per 100 Million Vehicle Miles Traveled (VMT)	0	0
Total Number of Non-motorized Fatalities and Non-motorized Serious Injuries	0	0

Performance Measure 2 - Bridge, Pavement, and System Performance Measures

The second of the performance measures rules issued by Federal Highway Administration (FHWA) became effective on May 20, 2017, establishing measures to assess pavement and bridge condition on the National Highway System (NHS). Requirements involve measuring the condition of these facilities and reporting conditions that are considered "Good" and those considered "Poor." Facilities rated as Good suggest that no major investments are needed. Facilities rated as Poor indicate major investments will be needed in the near term.

FDOT has the capability to collect and maintain data regarding bridge and pavement condition. In October 2018, the MPO adopted pavement and bridge condition performance targets in support of the measures and targets set by FDOT (**Table 2-5**).

Table 2-5: Performance Measure 2 (PM2) - Bridge and Pavement Performance Targets

Bridge and Pavement Performance Measure	Florida 2 year Targets 1/1/2018 to 12/31/2019	Florida 4 year Targets 1/1/2018 to 12/31/2021
Percent of Interstate NHS Pavement in Good Condition	Not Required	≥ 60%
Percent of Interstate NHS Pavement in Poor Condition	Not Required	≤ 5%
Percent of Non-Interstate NHS Pavement in Good Condition	≥ 40%	≥ 40%
Percent of Non-Interstate NHS Pavement in Poor Condition	≤ 5%	≤ 5%
Percent of NHS Bridges by Deck Area in Good Condition	≥ 50%	≥ 50%
Percent of NHS Bridges by Deck Area in Poor Condition	≤ 10%	≤ 10%

Performance Measure 3 - System Performance and Freight

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 MPO 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 Indian River County MPO 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 2-6 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 targets established by FDOT for the state.

Table 2-6: Performance Measure 3 (PM3) - System Performance Targets

System Performance Measure	Statewide Performance (2017 Baseline)	Florida 2 Year Targets 1/1/2018 to 12/31/2019	Florida 4 Year Targets 1/1/2018 to 12/31/2021
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%	Not Required	50.0%
Truck travel time reliability index (TTTR)	1.43	1.75	2.00

The Indian River County MPO agreed to support FDOT's PM3 targets on October 17, 2018. By adopting FDOT's targets, the Indian River County MPO agrees to plan and program projects that help FDOT achieve these targets.

The Indian River County MPO 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 Indian River County MPO 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 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 Indian River County MPO 2045 LRTP seeks to address system reliability and congestion mitigation through various means, including capacity expansion and operational improvements, supported by the stated Goals and Objectives.

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

Transit Asset Management Performance Measures

In addition to identifying the procedures for inventorying and rating the condition of pavement and bridges in the state, the Florida Transportation Asset Management Plan also sets forth the following overarching asset management objectives:

- Achieve and maintain a state of good repair for transportation assets;
- Reduce the vulnerability and increase the resilience of critical infrastructure to the impacts of extreme weather and events; and
- Minimize damage to infrastructure from transportation vehicles.

Table 2-7: Performance Measures for Transit Vehicles and Equipment

Asset Category	Asset Class	Individual Assets	# of Vehicles	Vehicle Age in Years	Useful Life Benchmark (ULB) in Years	% Exceeding ULB (including spare vehicles)		
						FY 21 Target	Current Status (Active Fleet)	Current Status (Active + Spare)
Revenue Vehicles (Fixed Route)	Bus (BU)	2013 Gillig	3	6	12	25%	0%	0%
		2015 Gillig	2	4	12			
		2016 Gillig	1	3	12			
	Cutaway Bus (CU)	2009 Glaval	5	10	5	50%	0%	28%
		2013 Champion	1	6	7			
		2016 Turtle Top	5	3	5			
		2018 Champion	3	1	7			
		2019 Champion	1	0	7			
Revenue Vehicles (Demand Response)	Cutaway Bus (CU)	2005 Turtle Top	1	14	5	67%	40%	61%
		2006 Turtle Top	2	13	5			
		2007 Turtle Top	3	12	5			
		2009 Turtle Top	4	10	5			
		2013 Champion	1	6	5			
		2015 Turtle Top	2	4	5			
		2017 Champion	1	2	5			
		2017 Turtle Top	1	2	5			
		2018 Champion	3	1	5			
		2012 MV1	3	7	4	67%	0%	75%
		2018 Braun Entervan	1	1	4			
Equipment	Truck	2014 Chevrolet	1	5	8	50%	0%	0%

Maintain and preserve the transportation system is one of five major goals of the 2045 LRTP. In addition, the LRTP sets forth numerous objectives and policies that promote infrastructure condition and system reliability.

With the adoption of MAP-21, MPOs are now required to establish performance targets for the management of transit assets. On September 12, 2018, the Indian River County MPO established the transit asset targets shown in **Table 2-7** and **Table 2-8** for the MPO's planning area. Table 7 summarizes the required performance targets for transit vehicles and equipment as well as the current status of each performance measure. Transit vehicles have a useful life benchmark of 4-12 years, based on the vehicle type. The performance measure for vehicles is the percent of vehicles that are within their respective useful life benchmark..

Table 2-8 summarizes the required performance targets for transit facilities as well as the current status of each performance measure. Transit facilities are rated using the Transit Economic Requirements Model (TERM) Scale. The TERM scale has a range of 1 to 5, with 5 representing facilities in the best condition. A TERM rating of 3.0 represents a facility in adequate condition. Each facility is assigned a rating based on its condition.

Table 2-8: Performance Targets for Transit Facilities and Current Status

Asset Category	Asset Class	Individual Assets	Condition Assessment TERM Rating	FY 21 Target (% Under TERM 3.0)	Current Status	Notes
Facilities	Administrative / Maintenance	Transit Administration & Maintenance Facility	5.0	0%	0%	Constructed in 2012
	Passenger	Main Transit Hub	5.0	0%	0%	Constructed in 2017

The Indian River County TIP was developed and is managed in cooperation with Senior Resource Association, which operates Indian River County's public transportation system. It reflects the investment priorities established in the previously adopted 2040 LRTP. Transit asset condition and state of good repair is a consideration in the methodology the MPO uses to select projects for inclusion in the TIP. The TIP includes specific investment priorities that support all of the MPO's goals, including transit state of good repair, using a prioritization and project selection process established in the LRTP. This process evaluates projects that, once implemented, are anticipated to improve transit state of good repair in the MPO's planning area. The MPO's goal of improving transit asset condition is linked to this investment plan, and the process used to prioritize the projects within the TIP is consistent with federal requirements.

Enhance mobility for people and freight and provide travel alternatives is one of 5 Major Goals of the 2045 LRTP. To this end, the LRTP identifies numerous objectives and policies that promote alternative modes of mobility, including that capital and operational improvements be consistent with the MPO's Transit Development Plan (TDP). By October 1, 2018, transit agencies were required to adopt Transit Asset Management (TAM) plans. In Indian River County, the TAM plan is required to include an inventory of assets, a condition assessment of inventoried assets, a description of decision support tools, and a prioritized list of investments. By following the Transit Asset Management plan, agencies can maintain transit systems in a state of good repair. The transit asset performance targets identified previously are consistent with Indian River County's TAM plan.

Transit Safety Performance

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 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 recipients or sub-recipients 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.

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:

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

For Indian River County, Senior Resource Association (SRA) and MPO staff prepared a Public Transportation Agency Safety Plan (PTASP) based on federal guidance as well as SRA's existing Security Program Plan, which has been required by FDOT for many years. Within that PTASP, performance targets were established for five transit safety measures: preventable accident rate, injuries, fatalities, safety events, and system reliability. The Indian River County PTASP was approved by the Board of County Commissioners on August 18, 2020. On January 27, 2021, the MPO Board adopted the transit safety performance targets shown in **Table 2-9**.

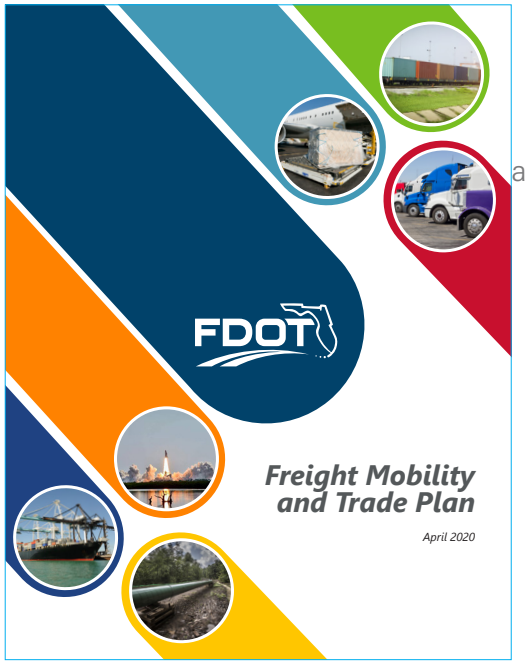
Table 2-9: Transit Safety Performance Targets

Transit Safety Measure	Rate	Goal
Preventable Accident Rate	per 100,00 miles	<0.1
Injuries	per 100,00 miles	<0.1
Fatalities	per 100,00 miles	0
Safety Events	per 100,00 miles	<0.1
System Reliability	Mean distance between Mechanical failure	>42,500 miles

OTHER PERFORMANCE-BASED PLANNING CONSIDERATIONS

Florida Freight Mobility and Trade Plan

There is growing recognition of the importance of freight movement at the national, state and regional level. Most notably, the need to place an increased focus on the nation's freight system is evident in the inclusion of freight provisions and requirements in the last two federal transportation bills. In 2012, MAP-21 established a policy to improve the condition and performance of the national freight network. This included the designation of a national freight network and the development of a national freight strategic plan.



These goals and objectives were further reinforced with the implementation of the FAST Act, implemented in 2015. A key provision contained in the FAST Act is the requirement that State Departments of Transportation such as FDOT develop a state freight plan to comprehensively address the State's short- and long-term freight issues and needs. Development of a state freight plan is a requirement to be eligible to receive funding under the National Highway Freight Program (23 U.S.C. 167).

In 2013 and 2014, FDOT developed the first Florida Freight Mobility and Trade Plan (FMTP) designed to set the stage for freight planning in Florida, raise awareness, and galvanize the freight community. FDOT released an updated FMTP in April 2020. This new document built upon the foundation set by the previous FMTP by using tactical and strategic approaches to implement immediate opportunities while also positioning Florida for future possibilities. One key recommendation from both FMTP efforts was that freight issues and needs shall be given emphasis in all appropriate transportation plans including MPO LRTPs.

The MPO supports the state freight planning process and will work with FDOT to set appropriate performance targets for the measurement of Truck Travel Time Reliability (Truck travel time reliability ratio (TTTR) on the Interstate system).

Table 2-10 illustrates the relationship between Connecting IRC 2045 goals and the new FMTP objectives which were developed in context of the FTP goal areas (also shown for reference).

Table 2-10: Connecting IRC 2045 LRTP Goals and Florida Freight Mobility and Trade Plan Objectives

		Connecting IRC 2045 Goals				
FTP Goal	**FMTP Objective**	**Efficient Transportation System**	**Enhancing Mobility for People and Freight**	**Protecting Natural and Social Environment**	**Maintaining a Safe Transportation System**	**Preserving and Maintaining the Transportation System**
Safety and Security	Leverage multisource data and technology to improve freight system safety and security		●		●	
Resilient Infrastructure	Create a more resilient multimodal freight system		●			●
	Ensure the Florida freight system is in a State of Good Repair	●	●		●	●
Mobility	Drive innovation to reduce congestion, bottlenecks and improve travel time reliability	●	●	●	●	●
Transportation Choices	Remove institutional, policy and funding bottlenecks to improve operational efficiencies and reduce costs in supply chains	●	●	●		
	Improve last-mile connectivity for all freight modes	●	●		●	
Economy	Continue to forge partnerships between the public and private sectors to improve trade and logistics	●	●			●
	Capitalize on emerging freight trends to promote economic development		●			●
Quality Places	Increase freight-related regional and local transportation planning and land use coordination	●	●	●	●	●
Environment	Promote and support the shift to alternatively fueled freight vehicles		●	●		●

Chapter 3

Planning Assumptions

CHAPTER 3 - PLANNING ASSUMPTIONS

The planning process for Connecting IRC 2045 required that identified future transportation needs were balanced with anticipated available funding. This helps to inform the Cost Feasible Plan that funds the highest priority improvements on the County's transportation network. One of the first steps in this process is to develop a forecast of the geographic distribution of the planning area's population and employment growth data, which in turn informs a forecast of travel demand for the year 2045. This is accomplished by using a travel demand forecast model that converts the population and employment data into trips which are subsequently assigned to a roadway and/or transit network.

As noted previously, Connecting IRC 2045 was primarily developed during the COVID-19 pandemic. This unprecedented event resulted in economic disruptions that impacted travel behavior, employment, and changes in commuting patterns. Although these disruptions were substantial, the 2045 forecast assumes that economic "boom" periods will balance out with "bust" periods. The forecast used for long range planning is updated every five years. The MPO will continue to assess and consider how projected travel demand may be affected following the pandemic.

Connecting IRC 2045 has been developed in a manner that considers the link between land use and transportation and is consistent with Comprehensive Plans developed and adopted by local governments in Indian River County. The Future Land Use Element of Comprehensive Plans provide policy direction for land use. A part of the LRTP process is to consider future land use policy and the related development standards of Indian River County, as well as the municipalities in the MPO's planning area. These plans guide where growth will occur and set standards for allowable densities and intensities of development.

POPULATION AND EMPLOYMENT GROWTH

Considerable growth is expected in Indian River County through 2045. This is based on the analysis of local, regional, and national trends, population data, and employment data. Future transportation needs of an area are largely based on the type and amount of growth that is anticipated.

Table 3-1 summarizes the forecasted population and employment growth in Indian River County included in the Treasure Coast Regional Planning Model (TCRPM) v5 data. The assignment of these growth figures was completed using Future Land Use maps, current development activity and input from local government planning staff. Population and employment projections were based on those developed by the University of Florida Bureau of Economic and Business Research (BEBR) and the Woods & Poole Economics state profile respectively.

Table 3-1: Population and Employment Forecast Summary

Year	Population	Employment
2015	143,326	76,386
2045	201,839	94,626
Total Projected Growth	58,513	18,240
Projected 30-year Growth (%)	41%	24%

Figures 3-1 and **3-2** illustrate where these areas of population and employment growth are expected. These maps show where this growth is occurring by Transportation Analysis Zone (TAZ), which are the commonly used geographic units utilized for transportation planning purposes. This "socioeconomic" data documents anticipated population and employment concentrations at the TAZ level and is used to forecast future travel patterns.

The projected increases in population and employment will result in increased demand on the area's transportation network and the continued need for improvements and additional mobility options. The MPO has a continued commitment to recognizing these needs and providing a sustainable transportation network to support residents, visitors, and the economy of Indian River County.

Figure 3-1: Total Population Growth in Indian River County

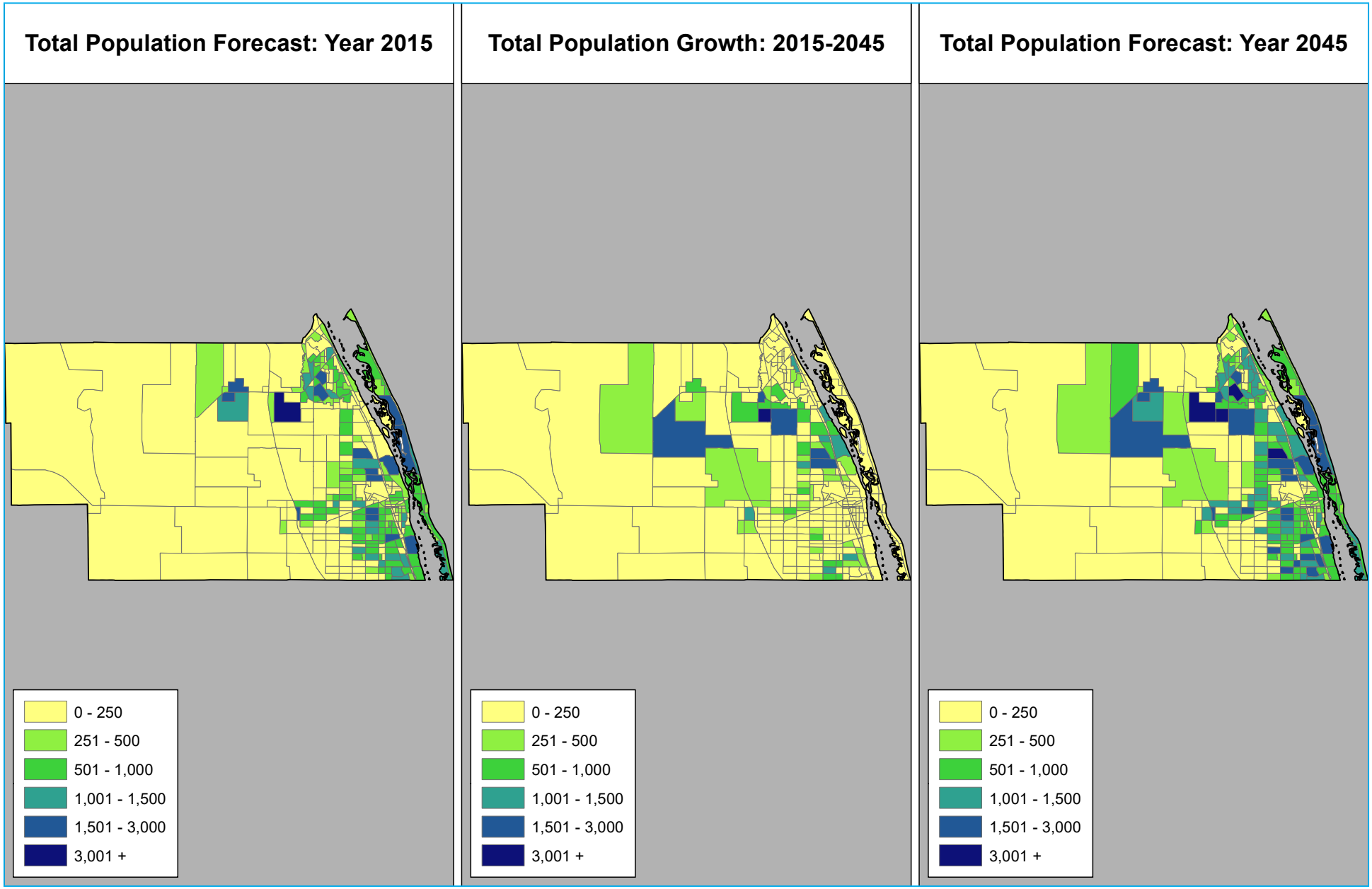
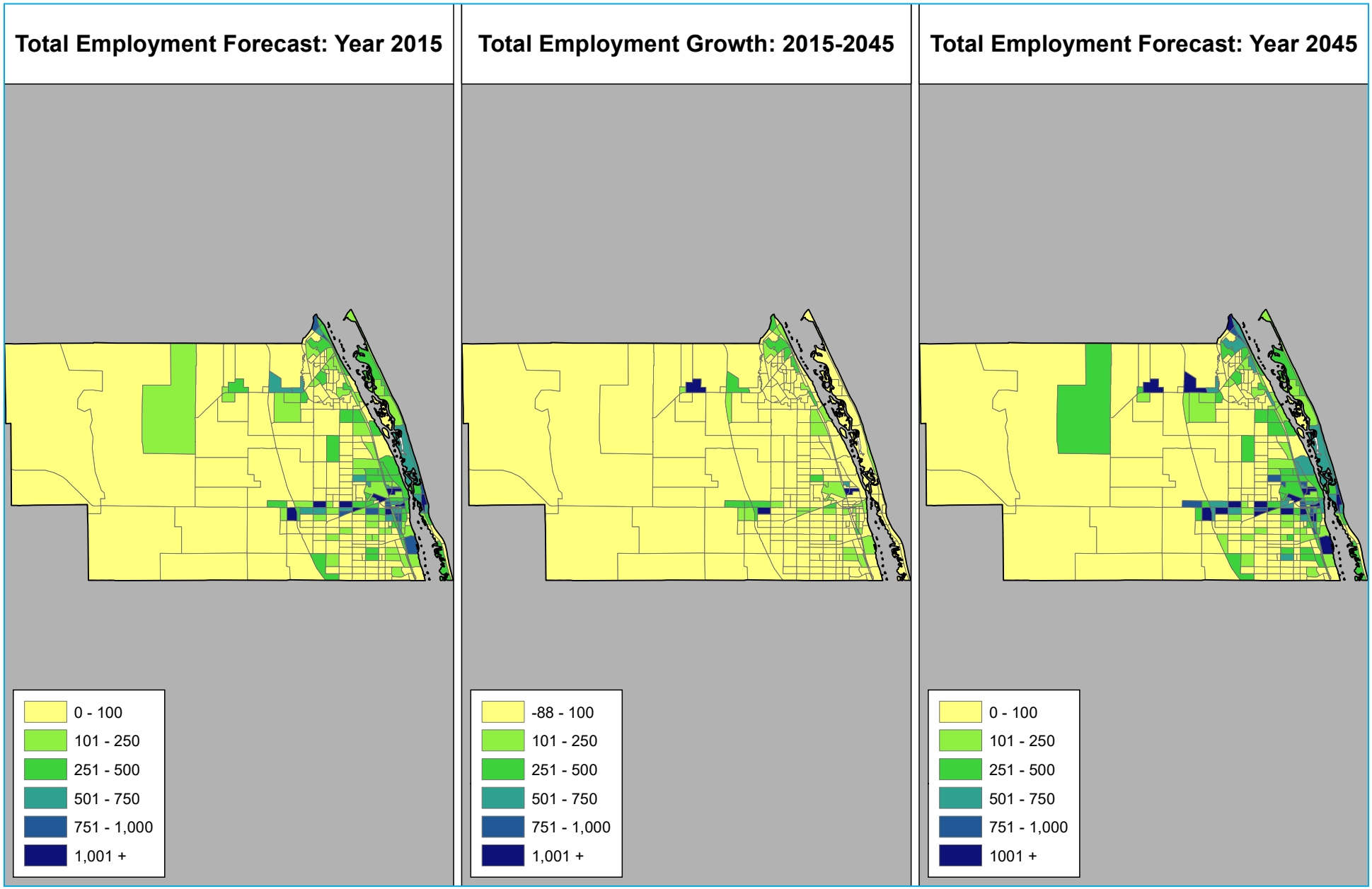


Figure 3-2: Total Employment Growth in Indian River County



Chapter 4

Transportation Plan

CHAPTER 4 - TRANSPORTATION PLAN

This chapter provides an overview of the Connecting IRC 2045 multimodal transportation plan, including the Cost Feasible Plan component. The plan is guided by projected financial resources available to plan for the future transportation network. Guided by a revenue forecast, the Cost Feasible Plan (CFP) includes a fiscally-constrained list of high-priority projects through the planning horizon of 2045.

2045 LRTP REVENUE FORECAST

An important focus of long range transportation planning includes projecting revenues reasonably expected for use in prioritizing the Needs Plan and in developing a Cost Feasible Plan. Projected revenues are a snapshot in time of the current revenue picture and anticipated trends. An important aspect of the revenue forecast is determining transportation revenues spent on capital versus operations and maintenance (O&M). Maintaining transportation infrastructure into the future will be a continuing and central focus.

This memorandum documents the financial resources projected to be available for the Indian River County Metropolitan Planning Organization (MPO) 2045 Long Range Transportation Plan (LRTP). Coordination was conducted with the following agencies and local governments in the preparation of this forecast:

- Florida Department of Transportation;
- Indian River County Staff County staff;
- Indian River County MPO Staff; and,
- MPO Technical Advisory Committee (TAC)

The following outlines the projected financial resources available for transportation improvements in the Indian River County MPO area for the period of 2025 to 2045. Financial resources for the period prior to 2025 are identified in the MPO's current Transportation Improvement Program (TIP). The projected financial resources include funds from the federal and state governments, as well as revenues generated locally, such as local fuel taxes and transportation impact fees. Potential new revenues were discussed during the development of the plan, however during the process it was decided to not include any alternative revenues.

OVERVIEW OF FINANCIAL RESOURCES

The sources of revenues for the long range transportation plan can be categorized into two major categories:

- Federal and state revenues
- Local revenues

Federal and state revenues for roadway were obtained from the 2045 MPO Revenue Forecast provided by FDOT in November 2018. Federal and state revenues for transit were sourced from the most recent Indian River County Transit Development Plan (TDP). Input from Indian River County staff was helpful in developing local revenue projections.

Federal and state revenues for roadway are derived from sources such as State fuel taxes, State tourism driven surcharges, vehicle related taxes, documentary stamp taxes, Turnpike tolls, and federal distributions. The revenue estimates for capacity projects presented in this document considered the following funding programs:

- Strategic Intermodal System (SIS) Highways Construction and Right-of-Way
- Other Roads Construction and Right-of-Way (ROW)
- Transportation Regional Incentive Program (TRIP)
- Transportation Alternatives Program (TAP) funds listed under FDOT codes TALL and TALT
- Federal/State Revenues and Grants for Transit
- Contributions from local revenues

The TRIP and TALT funds are shown as illustrative only and are not used in the development of cost feasible projects. FDOT only estimates TRIP funds at the District level and not at the county level; hence, the actual amount allocated to Indian River County is unknown. The TRIP funds identified in Section 3 are based on the population percentage of Indian River County within FDOT District 4 and represent a reasonable estimate of TRIP funds that may be captured within Indian River County. TRIP funds, given their regional focus, are selected through the Treasure Coast Transportation Council composed of the Martin, St. Lucie, and Indian River MPOs/TPOs.

Local revenue forecasts considered the following sources:

- Fuel taxes
  - 6-Cent Local Option Fuel Tax
  - 9th Cent Fuel Tax (charged on diesel only)
  - Constitutional Fuel Tax
  - County Fuel Tax
- Traffic impact fees
- 1-Cent Local Option Sales Tax

Revenue sources for transit are detailed in **Table 4-3**.

FINANCIAL PROJECTIONS

Revenue Estimates for Roadway Capacity Projects

Table 4-1 provides a summary of the roadway revenue totals by revenue source estimated for capital projects for the 2025-2045 period. The revenues are provided in Year of Expenditure (YOE) dollars, which takes into account inflation on the current estimates. Estimates for the State and Federal revenues plus affiliated inflation factors were guided by both FDOT's 2045 Revenue Forecast for the Indian River County MPO, dated November 2018 (**Technical Appendix C**), and the 2019 FDOT Revenue Forecasting Guidebook (**Technical Appendix D**). The Indian River County MPO will assume that 15% of their estimates for the Other Roads Construction & ROW program can be used for "off-system" roads according to FDOT guidance. The SIS funds are listed separate from the other State funds as SIS funds are programmed specifically for SIS projects.

Table 4-1: Total Revenue for Roadway Capital Projects (2025-2045) (Year of Expenditure)

	Category	Total Projected Revenues 2025-2045
State and Federal	Strategic Intermodal System	$50,382,000
	Other Roads Construction and ROW	$272,450,000
	Other Roads – Product Support	$59,939,000
	TALL	$3,854,000
	TALT	$4,200,000
	TRIP	$8,400,000
Local	Impact Fees	$88,500,000
	6-Cent Local Option Fuel Tax	$36,256,000
	9th Cent Fuel Tax	$1,455,000
	Infrastructure Sales Tax	$211,950,000
	Subtotal (Non-SIS)	$674,404,000
	Total	***$732,993,000***

Revenue Estimates for Roadway Operations and Maintenance Projects

Operations and Maintenance (O&M) includes activities that support and maintain transportation infrastructure once it is constructed. As directed by FDOT policy, the Department places primary emphasis on safety and preservation of the transportation system by providing adequate funding in the Revenue Forecast to meet established maintenance performance standards. As such, funding for O&M on the State Highway System (SHS) are allocated before revenues are subsequently allocated for capacity improvement projects. Indian River County also allocates local resources for ensuring acceptable operating conditions on the county major roadway network. **Table 4-2** provides a summary of the estimated revenues for O&M on the SHS and local roadways.

Table 4-2: Total Revenue for Roadway Operations and Maintenance (2025-2045) (Year of Expenditure)

	Category	Total Projected Revenues 2025-2045
State and Federal	Districtwide SHS	$9,131,600,000
Local	County Fuel Tax	$20,938,000
	Constitutional Fuel Tax	$46,967,000
	First Local Option Fuel Tax	$63,623,000
	9th Cent Fuel Tax	$2,554,000
	General Fund for Transportation	$44,985,000
	Local Subtotal	***$179,067,000***

Revenue Estimates for Transit Projects

The Cost Feasible Plan for transit includes funding existing transit service and operations. **Table 4-3** displays the revenues forecasted to be available for GoLine and Community Coach services from 2021 to 2045 and represent the costs of maintaining existing service through the horizon of this plan. Both state and federal and local transit revenues were forecast using the 10-Year Service and Financial Plan section of the 2019-2028 GoLine Transit Development Plan. Revenues were forecast assuming linear growth based on the values presented in the TDP.

Table 4-3: Forecasted Revenue and Costs for Transit (2021-2045) (Year of Expenditure)

Category	Projected Revenues 2021 2025	Projected Revenues 2026-2028	Projected Revenues 2029 2030	Projected Revenues 2031 2045	Total
Operating Revenues	*$26,680,816*	*$17,130,757*	*$11,870,786*	*$100,695,000*	*$156,377,359*
Capital Revenues	*$4,248,082*	*$2,709,503*	*$3,043,579*	*$25,636,000*	*$35,637,164*
Total Revenues	***$30,928,898***	***$19,840,260***	***$14,914,365***	***$126,331,000***	***$192,014,523***
Operating Costs	*$26,281,561*	*$17,771,583*	*$11,870,786*	*$100,695,000*	***$156,618,930***
Capital Costs	*$5,224,088*	*$2,485,631*	*$3,043,579*	*$25,636,000*	***$36,389,298***
Total Costs	***$31,505,649***	***$20,257,214***	***$14,914,365***	***$126,331,000***	***$193,008,228***
Time Frame Balance	***($576,751)***	***($416,954)***	***$ -***	***$ -***	***($993,705)***

REVENUE SUMMARY

The Indian River County revenue forecast for 2025 to 2045 is summarized in **Table 4-4**. It is estimated that the county will receive a total of $272.5 million in federal and state funding for SHS and off-system roads, as well as $60 million in funds for product support (PD&E and Engineering Design). An additional $3.8 million is projected to be available through the TALL program. SIS projects will receive an estimated $46 million during the plan horizon. Finally, the County is estimated to generate $517.2 million in local revenues during the LRTP period, as well as $169.7 million in transit revenues.

Table 4-4: Summary of Indian River County Revenues (2025-2045) (Year of Expenditure)

Category	Total Projected Revenues 2025-2045
Projected State and Federal Revenues	
Other Roads Construction & ROW	$272,450,000
Other Roads - Product Support	$59,939,000
TALL (TA funds for areas with populations between 5,000 and 200,000)	$3,854,000
Strategic Intermodal System Projects	
SIS Revenues	$50,382,000
Projected Local Revenues	
Indian River County Revenues	$517,228,000
Projected Transit Revenues	
Indian River County Transit Revenues*	$169,721,000
Total	***$1,073,574,000***

COST FEASIBLE PLAN DEVELOPMENT

In long range transportation planning, a Cost Feasible Plan (CFP) identifies financially viable improvements to an area's transportation network. The CFP builds upon the Deficiencies Map, Needs Plan, Financial Resources, and Long Range Transportation Plan (LRTP) Goals and Objectives by prioritizing transportation improvements necessary to maintain satisfactory mobility conditions to the year 2045. The CFP is developed in a fiscally-constrained manner based on transportation revenues anticipated to be available through 2045. The CFP is fiscally constrained; both costs of transportation improvements and revenues expected to be available to fund transportation improvements are taken into consideration. See **Appendix F** for demonstration of fiscal constraint.

Needs Assessment

The identification of the transportation system capacity deficiencies was evaluated and analyzed to identify the initial roadway needs as part of the Indian River County 2045 LRTP. The purpose of a Needs Assessment is to identify the transportation infrastructure that is essential for accommodating future travel demand, addressing safety issues, and meeting community needs for the next 25 years. A Needs Assessment is fiscally unconstrained, meaning funding requirements for improvements are not a limitation. The Needs Assessment serves as the basis for the development of the Cost Feasible Plan, which is impacted by anticipated funds throughout the 25-year planning range. The Needs Assessment also gave consideration to vulnerable facilities.

Methodology

The Treasure Coast Regional Planning Model version 5 (TCRPM5) was used to forecast future transportation conditions with the aid of socioeconomic data, which includes population and employment, and roadway network attributes. The TCRPM5 also provides the demand for freight and goods movement.

Model Refinement

The Treasure Coast Regional Planning Model version 5 (TCRPM5) was used to forecast future transportation conditions with the aid of socioeconomic data, which includes population and employment, and roadway network attributes. The TCRPM5 is a regional travel demand model that includes the three Treasure Coast counties (Martin, St. Lucie, and Indian River counties). This was developed by the Florida Department of Transportation (FDOT) District Four. Similar, to the previous model, the TCRPM5 is an activity-based model (ABM). An activity-based model is primarily influenced by household and individual characteristics and by the performance of the transportation system.

2045 Existing + Committed (E+C) Roadway Deficiencies

The 2045 traffic demand projections used the TCRPM5 E+C network and made the assumption that no capacity-producing roadway improvements would be implemented from 2025-2045. In other words, it assessed the impact of the 25 years of growth on the E+C network. Volume-to-capacity (V/C) ratios were examined to identify roadway deficiencies resulting from the growth in travel demand model over the 25-year period. Deficient roadways are candidates for potential roadway improvements or indicators that parallel network improvements are essential. The level of service (LOS) D standard was utilized when estimating the V/C ratio. This method is consistent with Indian River County's Concurrency Management System.

The results of the analysis demonstrate that a number of roadways will experience congestion by 2045 if additional improvements are not made beyond the improvements for which construction funding has been committed over the next five years.

Roadway Needs Assessment

The 2045 E+C roadway deficiencies serve as the starting point for the development of the roadway improvement project needs. In addition to the 2045 E+C roadway deficiencies, roadways listed in the previously adopted 2040 LRTP were included. It should be noted that adjustments were made to the limits of the needs projects to provide logical termini. The final roadway Needs Assessment is shown in **Figure 2-1** and listed in **Table 4-5**. Aspirational Projects were identified in the initial roadway needs assessment based on prior planning efforts. These projects may be associated with future development opportunities that are not currently quantified or on a projected schedule.

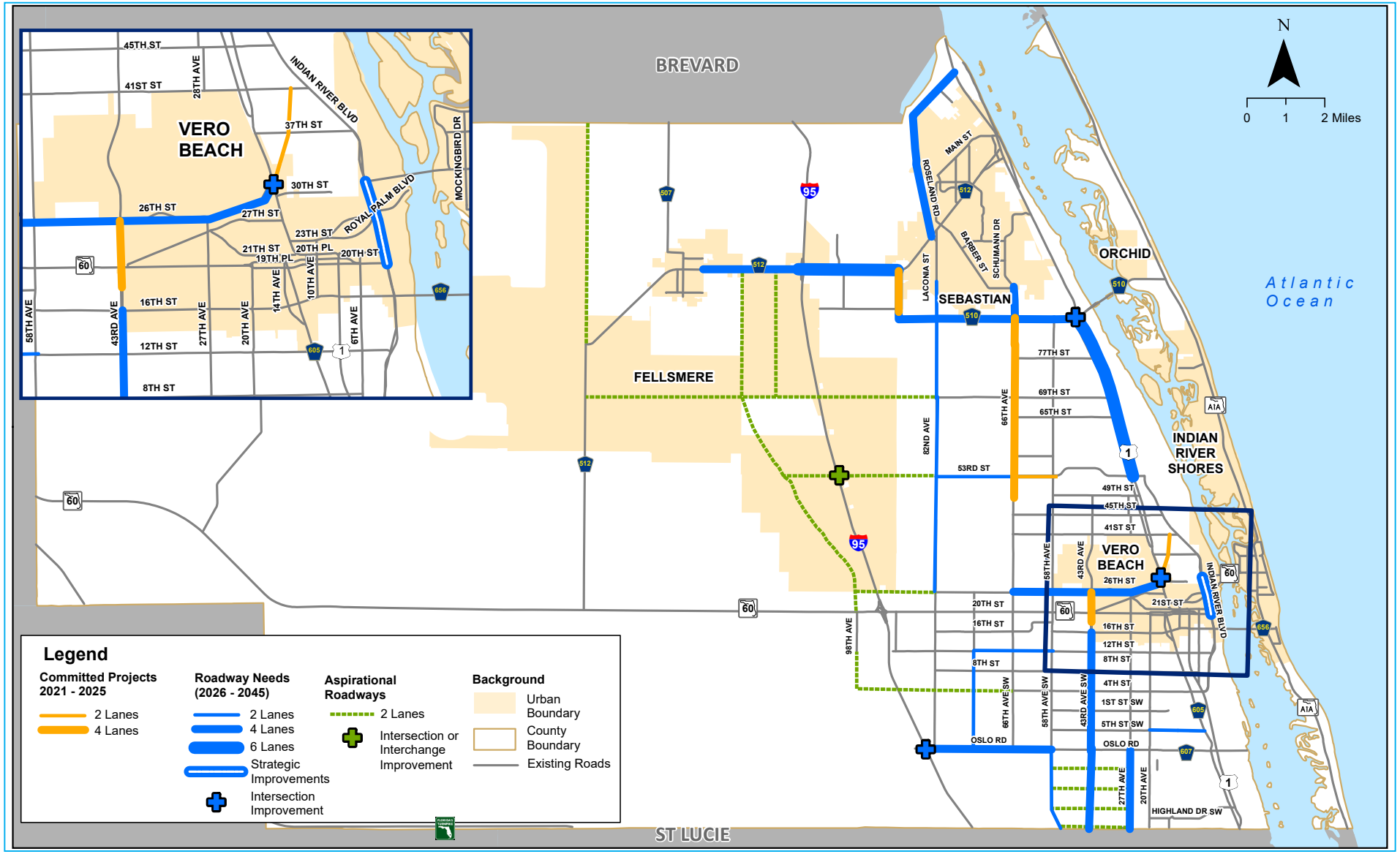
Table 4-5: 2045 Final Roadway Needs Projects

Facility	From	To	Improvement
New Interchange/Modify Intersection			
I-95	@ Oslo Road		New Interchange
I-95	@ 53rd Street		New Interchange
CR 510	@ US 1/SR 5		Intersection Improvement
26th Street/Aviation Blvd	@ US 1/SR 5		New Interchange
Widen from 2 Lane to 4 Lane (or equivalent capacity)*			
CR 512	Willow Street	I-95	Widen from 2 lane to 4 lane
CR 510	CR 512	87th Street	Widen from 2 lane to 4 lane
CR 510	87th Street	82nd Avenue	Widen from 2 lane to 4 lane
CR 510	82nd Avenue	58th Avenue	Widen from 2 lane to 4 lane
CR 510	58th Avenue	US 1	Widen from 2 lane to 4 lane
66th Avenue	49th Street	69th Street	Widen from 2 lane to 4 lane
66th Avenue	69th Street	81st Street	Widen from 2 lane to 4 lane
66th Avenue	81st Street	CR 510	Widen from 2 lane to 4 lane
66th Avenue	CR 510	Barber Street	Widen from 2 lane to 4 lane
26th Street/Aviation Blvd	66th Avenue	43rd Avenue	Widen from 2 lane to 4 lane
26th Street/Aviation Blvd	43rd Avenue	US 1	Widen from 2 lane to 4 lane
43rd Avenue	St. Lucie County Line	Oslo Road	Widen from 2 lane to 4 lane
43rd Avenue	Oslo Road	16th Street	Widen from 2 lane to 4 lane
Roseland Road	CR 512	US 1	Widen from 2 lane to 4 lane
27th Avenue	St. Lucie County Line	Oslo Road	Widen from 2 lane to 4 lane
Oslo Road	I-95	58th Avenue	Widen from 2 lane to 4 lane
SR 60 @ 43rd Avenue Intersection	18th Street	26th Street	Widen from 2 lane to 4 lane

Facility	From	To	Improvement
Widen from 4 to 6 Lane (or equivalent capacity)*			
US 1	53rd Street	CR 510	Widen from 4 lane to 6 lane
CR 512	I-95	CR 510	Widen from 4 lane to 6 lane
New 2 Lane/4 Lane or Substandard to 2 Lane			
Aviation Blvd Extension	US 1/SR 5	41st Street	New 2 lanes
53rd Street	58th Avenue	66th Avenue	New 4 lanes
53rd Street	66th Avenue	82nd Avenue	New 2 lanes
53rd Street	82nd Avenue	Fellsmere N-S Rd 1	New 2 lanes
74th Avenue	Oslo Road	12th Street	New 2 lanes
69th Street	82nd Avenue	CR 512	New 2 lanes
17th Street SW	27th Avenue	58th Avenue	New 2 lanes
21st Street SW	27th Avenue	58th Avenue	New 2 lanes
St. John Heritage Park Extension	CR 512	County Line	New 2 lanes
13th Street SW	27th Avenue	58th Avenue	New 2 lanes
Fellsmere N-S Rd 2	CR 512	69th Street	New 2 lanes
98th Avenue	12th Street	4th Street	New 2 lanes
Fellsmere N-S Rd 1	CR 512	SR 60	New 2 lanes
4th Street	66th Avenue	98th Avenue	New 2 lanes
25th Street SW	27th Avenue	58th Avenue	New 2 lanes
26th Street	82nd Avenue	CR 507	New 2 lanes
58th Avenue	Oslo Road	St. Lucie County Line	New 2 lanes
12th Street	74 Avenue	58th Avenue	Substandard to 2 lanes
82nd Avenue	26th Street	69th Street	Substandard to 2 lanes
82nd Avenue	69th Street	CR 510	Substandard to 2 lanes
82nd Avenue	CR 510	Laconia	Substandard to 2 lanes
5th Street SW	20th Avenue	11th Square SW	Substandard to 2 lanes
5th Street SW	11th Square SW	Old Dixie Highway	Substandard to 2 lanes
Other			
Indian River Boulevard (SR 60)	20th Street	Merrill P. Barber Bridge	Strategic Improvements

** If/when the projects advance to the Project Development and Environment (PD&E) or design phase, determine if alternative strategies such as two-way left-turn lanes, intersection improvements, operational enhancements, or multimodal solutions would effectively address level of service and mobility needs in lieu of the recommended road widening*

Figure 4-1: 2045 Final Roadway Needs Projects



COST FEASIBLE PLAN

Detailed tables of the Cost Feasible Plan projects are included in **Appendix C** and **Appendix D** of this document. Appendix C includes the projects with the Year-of-Expenditure (YOE) costs, while Appendix D includes the projects in terms of Present Day Cost (PDC). All 2045 LRTP-identified projects total $1.06 billion (YOE) of roadway costs. Aspirational project costs are not reflected in these figures, as the uncertain time horizon of these projects makes cost estimation inaccurate. The tables included in Appendices C & D ensure that the proposed projects included in the Cost Feasible Plan are identified sufficiently per 23 C.F.R. **Table 4-8** includes Cost Feasible projects which are illustrated in **Figure 2-2**. The Map ID listed for each project in Table 4-8 are used to label the corresponding projects in Figure 2-2.

The projects in the Cost Feasible plan include new interchanges, intersection improvements, capacity projects, new roadways, and strategic improvements (operational capacity projects). An example of strategic improvements included in the 2045 LRTP are those for Indian River Boulevard from 20th Street to the Merrill P. Barber Bridge in Vero Beach. The City of Vero Beach has engaged in planning for the future use of the 38-acre waterfront parcel known as Three Corners located on Indian River Boulevard at the base of the 17th Street (Alma Lee Loy) bridge. With redevelopment concepts for Three Corners including a potential mix of commercial, residential, and civic uses, appropriate strategic operational improvements will be implemented.

Prioritization Considerations

The selection of projects for the cost feasible plan was consistent with the prioritization criteria identified below.

Fatal Flaw	No projects were selected for inclusion in the plan if they included significant adverse impacts to the environment or communities they pass through.
Pipeline Project	Projects which have already been partially funded (preliminary planning, design, or right-of-way) received a higher priority for selection.
Future Congestion	Projects on corridors forecasted to be congested in the future or to relieve congestion on adjacent corridors.
Regional Freight	Projects on designated primary freight corridors.
Connectivity	Projects that significantly improve connectivity, especially to between major roadways and/or activity centers.
Economic Development	Projects that enhance economic development potential, especially for freight and goods movement.
Public Support	Projects with public support.
High Crashes	Projects on corridors with higher than average crashes.

Transportation Improvement Program (TIP)

The adopted Fiscal Year (FY) 2020/21 – 2024/25 Transportation Improvement Program (TIP) guided the content of the first five years of the long range transportation plan. The TIP is incorporated into the LRTP in order to capture revenues for the entire duration of time from plan adoption (2020) through the plan's horizon year of 2045.

Revenue sources for TIP projects are summarized listed in **Table 4-6**.

Table 4-7 summarizes the roadway capacity projects included in the Indian River County MPO FY 2020/2021 – FY 2024/2025 TIP and includes both SIS and non-SIS projects. Many of these projects identified are included in the Cost Feasible Plan. A detailed version of this table including associated costs and timeframes is located in **Appendix B**.

Table 4-6: TIP FY 2020/21 - 2024/25 Revenues by Type

Project Type	Federal	State	Local
Roadway Capacity Projects	$55,656,408	$28,445,949	$10,272,934
Traffic Operations, Maintenance, and Safety Projects	$14,450,510	$53,505,813	$3,810,941
Transit and Transportation Disadvantaged Projects	$18,519,993	$3,418,846	$3,838,839
Bicycle, Pedestrian, Trails, and Enhancement Projects	$1,471,693	$11,411,368	$321,442
Aviation Projects	-	$11,509,610	$2,940,900
Transportation Planning/Studies	$2,636,215	$52,845	$52,845
Total	**$92,734,819**	**$108,344,431**	**$21,237,901**

Table 4-7: Summary of TIP Roadway (Capacity) Projects for FY 2020/21 - 2024/25

FM #	Project	From Street	To Street	Improvement
SIS				
4130482	I-95/Oslo Rd. (9th Street SW) Interchange	--	--	New interchange
4130485	I-95/Oslo Rd. (9th Street SW) Interchange	--	--	New interchange
Non-SIS				
4363792	66th Ave. Widening*	69th Street	CR 510	Widen to 4 lanes
4056067	CR-510 Widening	CR 512	87th Avenue	Widen to 4 lanes
4317591	SR 60 @ 43rd Avenue Intersection (Right-of-Way)	--	--	Widen/resurface
2308792	82nd Avenue (New Road Construction)	69th Street	CR 510	Construct 2-lane road
4416921	CR 510 Widening	58th Avenue	US 1	Widen to 4 lanes
4056063	CR 510 Widening	82nd Avenue	58th Avenue	Widen to 4 lanes
4056064	CR 510 Widening	CR 512	82nd Avenue	Widen to 4 lanes
4315211	Oslo Road Widening	82nd Avenue	58th Avenue	Widen to 4 lanes
4317243	US 1 Widening	69th Street	CR 510	Widen to 6 lanes
4317241	US 1 Widening	53rd Street	CR 510	Widen to 6 lanes
4416931	US 1/Aviation Blvd. Intersection	--	--	Intersection improvements

Note: Information provided in Table 4-7 is based on the April 13, 2020 version of the Transportation Improvement Program (TIP).

All projects will use a combination of federal and state funding unless noted with an asterisk (*). Projects noted with an asterisk (*) will use local funds only. Additional information on project funding and phases is available in the current Transportation Improvement Program.

Table 4-8: Cost Feasible Plan Projects

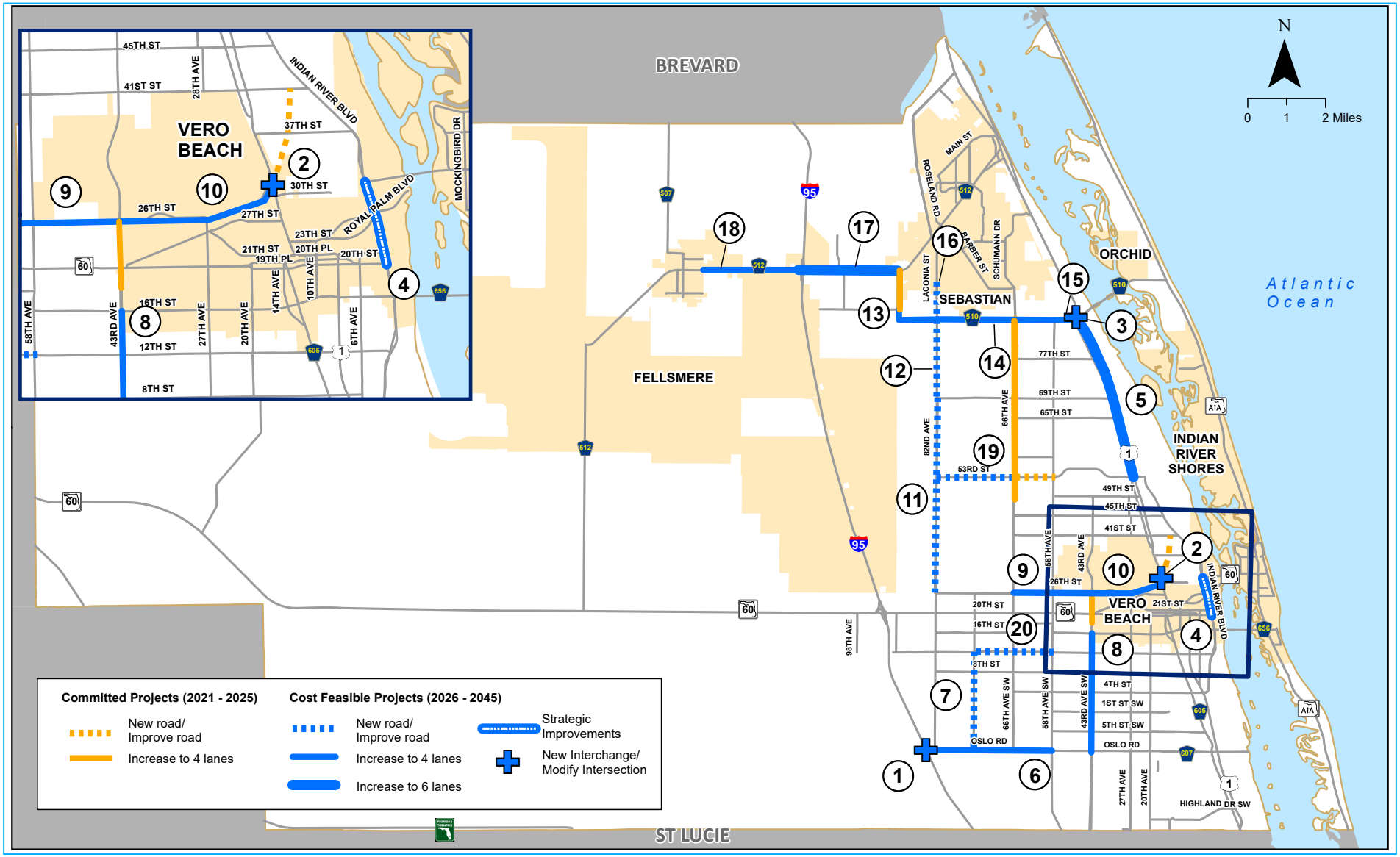
2045 Capacity Projects: Fully Funded					
Map ID	**On Street**	**From Street**	**To Street**	**Improvement**	**Implementation Timeframe**
Strategic Intermodal System (SIS) Projects					
1	SR-9/I-95	@ Oslo Road		New Interchange	2026-2030
State Projects					
2	26th Street/Aviation Blvd	@ US 1/SR 5		New Interchange	2036-2045
3	CR 510	@ US 1/SR 5		Intersection Improvement	2031-2035
4	Indian River Blvd (SR 60)	20th Street	Merrill P. Barber Bridge	Strategic Improvements+	2036-2045
5	US 1	53rd Street	CR 510	Widen from 4 lanes to 6 lanes	2036-2045
--	Intelligent Transportation Systems/Autonomous, Connected, Electric, and Shared Vehicles				N/A
Local Projects					
6	Oslo Road	I-95	58th Avenue	Widen from 2 lanes to 4 lanes	2026-2030
7	74th Avenue*	Oslo Road	12th Street	New 2 lanes	2036-2045
8	43rd Avenue	Oslo Road	16th Street	Widen from 2 lanes to 4 lanes	2036-2045
9	26th Street/Aviation Blvd	66th Avenue	43rd Avenue	Widen from 2 lanes to 4 lanes	2036-2045
10	26th Street/Aviation Blvd	43rd Avenue	US 1	Widen from 2 lanes to 4 lanes	2031-2035
11	82nd Avenue	26th Street	69th Street	Substandard to 2 lanes	2031-2035
12	82nd Avenue	69th Street	CR 510	New 2 lanes	2026-2030
13	CR 510	87th Street	82nd Avenue	Widen from 2 lanes to 4 lanes	2031-2035
14	CR 510	82nd Avenue	58th Avenue	Widen from 2 lanes to 4 lanes	2026-2030
15	CR 510	58th Avenue	US 1	Widen from 2 lanes to 4 lanes	2031-2035
16	82nd Avenue	CR 510	Laconia Street	New 2 lanes	2036-2045
17	CR 512	I-95	CR 510	Widen from 4 lanes to 6 lanes	2036-2045
18	CR 512	Willow Street	I-95	Widen from 2 lanes to 4 lanes	2036-2045

+Operational capacity projects to be determined

2045 Capacity Projects: Partially Funded					
Map ID	**On Street**	**From Street**	**To Street**	**Improvement**	**Implementation Timeframe**
Local Projects					
19	53rd Street	66th Avenue	82nd Avenue	New 2 lanes	Unfunded
20	12th Street*	74 Avenue	58th Avenue	Substandard to 2 lanes	Unfunded

All projects will use a combination of federal and state funding unless noted with an asterisk (*). Projects noted with an asterisk (*) will use local funds only.

Figure 4-2: 2045 Cost Feasible Plan



Projects 19 and 20 are only partially funded

BICYCLE AND PEDESTRIAN FACILITY IMPROVEMENTS

Bicycle and pedestrian facility improvements may be implemented as part of overall roadway improvement projects or as standalone projects. Bicycle and pedestrian facility improvements may be incorporated as "complete streets" elements to overall roadway improvement projects. All cost feasible road projects assume the construction of context-appropriate bicycle and pedestrian facilities and the cost of these improvements are included in the overall project cost. Indian River County allocates a portion of gas tax revenues to construct bicycle and pedestrian facilities as standalone projects. In addition, Transportation Alternatives Program (TAP) funds may also be utilized to implement bicycle and pedestrian facility improvement projects.

Bicycle and pedestrian facility improvements are identified annually through the MPO's ongoing planning process. The Indian River County's Bicycle and Pedestrian Master Plan was developed January 2015. The Bicycle and Pedestrian Master Plan and Greenways Plans will continue to guide bicycle and pedestrian facilities improvements in Indian River County.

Figure 2-3 and **Figure 2-4** depict proposed sidewalk/pedestrian enhancements, bicycle facility projects, and cost feasible road projects, which are expected to implement additional pedestrian and bicycle facilities. Planning level cost estimates for the proposed enhancements not associated with roadway improvements are included in **Table 4-9** and are based on estimates in the 2015 Bicycle and Pedestrian Master Plan.

The assessment of non-motorized enhances the quality of life and addresses long term transportation and environmental goals. The Indian River County MPO has been actively engaged in identifying needs and opportunities for promoting alternative travel modes such as walking, cycling, and transit.

Table 4-9: Proposed Sidewalk/Bicycle Facility Planning Level Cost Estimates

Road Name	Limits	Length	Cost (2015 Bicycle & Pedestrian Master Plan)	Present Day Cost (2020)	Year of Expenditure Cost (2036 2045)
Multi-Purpose Path					
Trans Florida Central Railroad Greenway	St. Sebastian River to Blue Cypress Conservation Area	21.85*	N/A	$6,651,268	$14,765,815
Sidewalk/Pedestrian Facilities					
US 1/SR 5	8th Street to Indian River Boulevard	0.6	$53,760	$63,140	$119,347
41st Street	38th Avenue to Indian River Boulevard	1.8	$258,760	$303,906	$574,447
45th Street	66th Avenue to 43rd Avenue	2.0	$199,920	$234,800	$443,822
10th Avenue	SR 60 to Royal Palm Boulevard	0.3	$25,200	$29,597	$55,944
49th Street	58th Avenue to US 1/SR 5	2.2	$253,200	$297,376	$562,104
8th Street	20th Avenue to US 1/SR 5	1.1	$191,850	$225,322	$425,907
Victory Boulevard	Atlantic Boulevard to 20th Avenue	0.6	$132,900	$156,087	$295,038
26th Street/Aviation Boulevard	43rd Avenue to US 1/SR 5	2.0	$226,800	$266,370	$503,496
Highland Drive	Old Dixie Highway to US 1/SR 5	0.1	$26,400	$31,006	$58,608
CR 507	Broadway Street to Myrtle Street	0.4	$57,400	$67,415	$127,428
Ocean Drive	Riomar Drive to Gayfeather Lane	0.6	$62,400	$73,287	$138,528
1st Street	Old Dixie Highway to US 1/SR 5	0.3	$54,000	$63,421	$119,880
Old Dixie Highway	Oslo Road to 8th Street	2.2	$357,900	$420,343	$794,538
Indian River Boulevard	US 1/4th Street to 12th Street	1.1	$137,340	$161,302	$304,895
1st Street SW	58th Avenue to 20th Avenue	2.5	$339,920	$399,226	$754,622
69th Street	58th Avenue to US 1/SR 5	1.4	$244,200	$286,806	$542,124
77th Street	66th Street to US 1/SR 5	2.0	$651,800	$765,520	$1,446,996
Fleming Street	Easy Street to CR 512	0.7	$90,650	$106,466	$201,243
Schumann Drive	CR 510/66th Avenue to Barber Street	0.9	$119,000	$139,762	$264,180
Atlantic Boulevard	SR 60 to 27th Avenue	1.0	$260,590	$306,056	$578,510
Barber Street	US 1/SR 5 to Schumann Drive	1.3	$117,250	$137,707	$260,295
82nd Avenue	Oslo Road to SR 60	3.5	$614,700	$721,948	$1,364,634

**Length shown does not include the 1.39 mile segment included in the 2020/21 -2024/25 TIP. Planning level cost estimate for the Trans Florida Central Railroad Greenway is based upon FDOT Cost Per Mile Model for a Rails to Trails project.*

Road Name	Limits	Length	Cost (2015 Bicycle & Pedestrian Master Plan)	Present Day Cost (2020)	Year of Expenditure Cost (2036 2045)
Bicycle Facilities					
Oslo Road	20th Avenue to Old Dixie Highway	1.6	$347,600	$408,246	$771,672
US 1/SR 5	SR 60 to 10th Street	1.3	$133,000	$156,205	$295,260
12th Street	Old Dixie Highway to Indian River Boulevard	0.9	$90,000	$105,702	$199,800
Victory Boulevard	Atlantic Boulevard to 20th Avenue	0.6	$132,900	$156,087	$295,038
4th Street	Old Dixie Highway to US 1/SR 5	0.3	$29,000	$34,060	$64,380
58th Avenue	Oslo Road to 16th Street	3.0	$425,600	$499,855	$944,832
20th Avenue	SR 60 to Atlantic Boulevard	0.5	$62,400	$73,287	$138,528
Atlantic Boulevard	27th Avenue to 20th Avenue	0.5	$124,800	$146,574	$277,056
20th Avenue	South Vero Beach City Line to 12th Street	0.3	$30,000	$35,234	$66,600
8th Street	Old Dixie Highway to Indian River Blvd.	0.6	$132,000	$155,030	$293,040
Highland Drive	Old Dixie Highway to US 1/SR 5	0.1	$26,400	$31,006	$58,608
21st Street	US 1/SR 5 to Indian River Boulevard	0.6	$57,000	$66,945	$126,540
Schumann Drive	Barber Street to US 1/SR 5	2.5	$324,040	$380,576	$719,369
Old Dixie Highway	South County Line to SR 60	5.9	$1,349,900	$1,585,419	$2,996,778
77th Street	Old Dixie Highway to US 1/SR 5	0.3	$66,000	$77,515	$146,520
1st Street	Old Dixie Highway to US 1/SR 5	0.3	$54,000	$63,421	$119,880
82nd Avenue	Oslo Road to SR 60	3.5	$614,700	$721,948	$1,364,634
90th Avenue	8th Street to SR 60	1.5	$501,600	$589,115	$1,113,552
US 1/SR 5	Aviation Blvd. to 49th Street	2.7	$286,200	$336,134	$635,364
Barber Street	Schumann Drive to CR 512	2.7	$596,200	$700,220	$1,323,564
SR 60	58th Avenue to 20th Avenue	2.5	$253,000	$297,141	$561,660
SR 60	6th Avenue to Indian River Blvd	0.3	$31,000	$36,409	$68,820
20th Avenue	17th Street SW to Oslo Road	1.0	168,300	$197,664	$373,626

Figure 4-3: Sidewalk/Pedestrian Enhancements

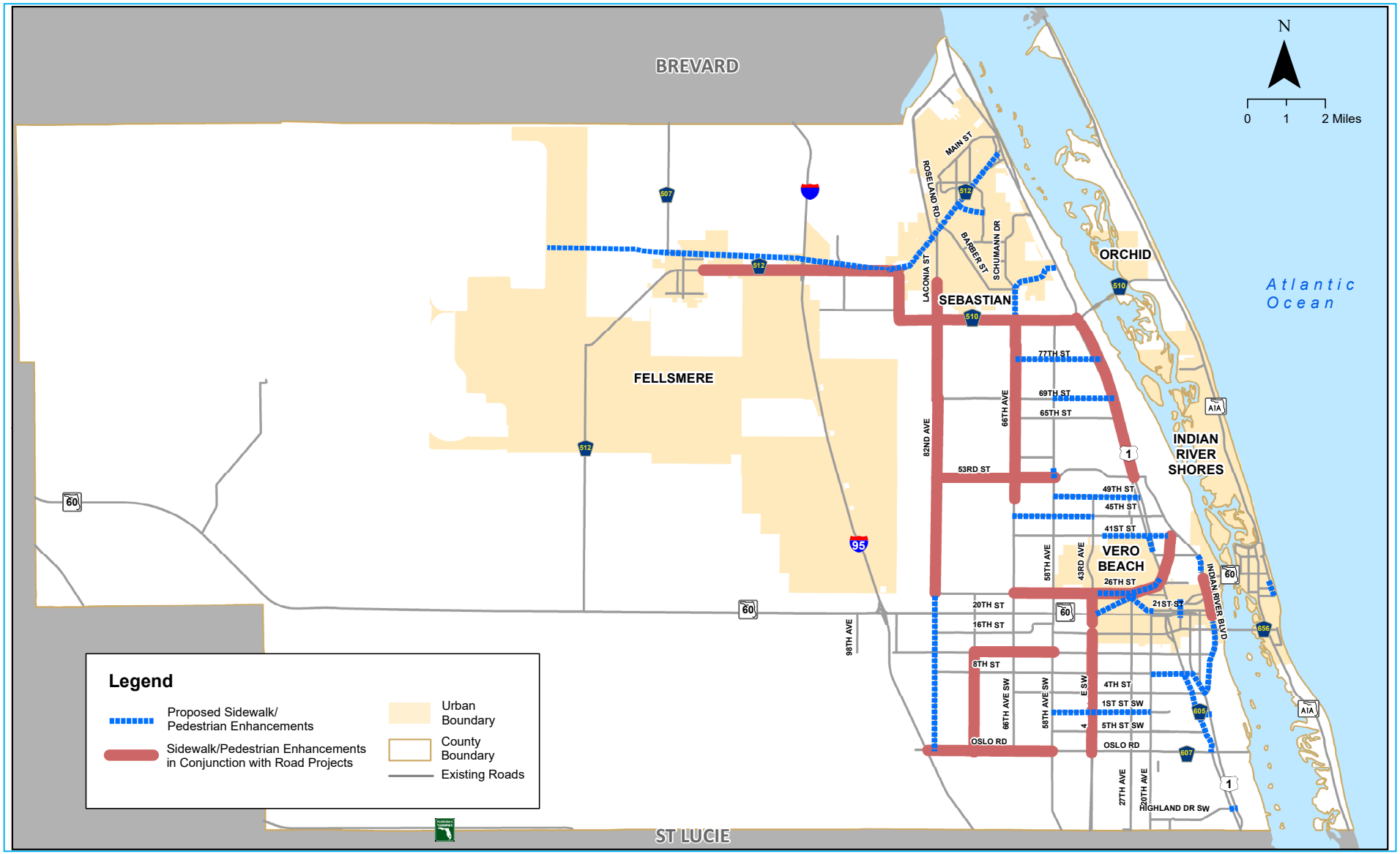
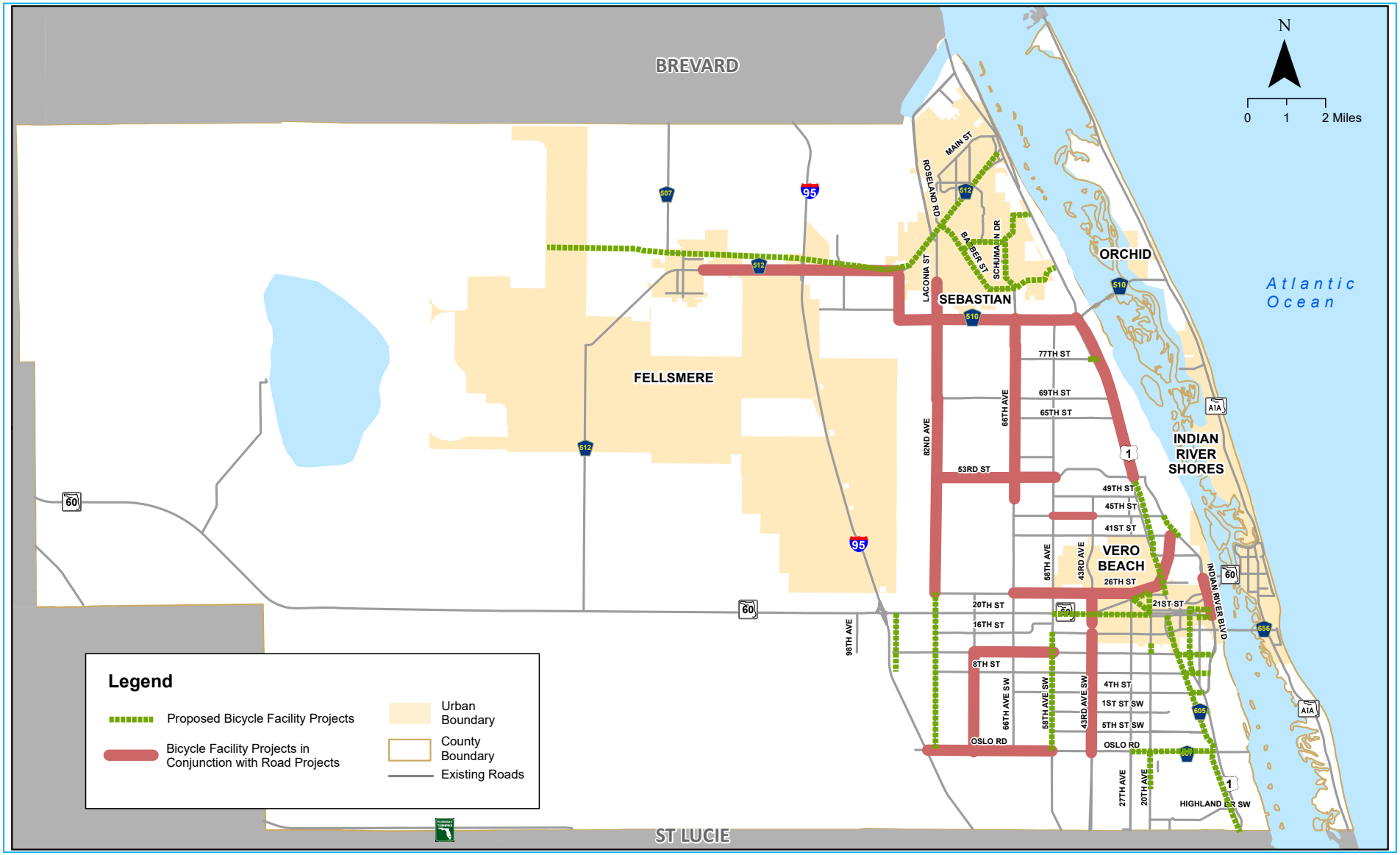


Figure 4-4: Bicycle Facility Projects



TRANSIT IMPROVEMENTS

The Indian River County Transit Development Plan (TDP) identifies needs for transit service and specific improvements to meet those needs over a ten-year period.

The TDP is updated on an annual basis (minor TDP Updates), and a major TDP Update is required every five years. The most recent major update to the TDP was adopted in September 2018. Future TDP updates will continue to guide transit improvements in Indian River County. Potential funding sources for transit improvements may include the Federal Transit Administration (FTA) grants, FDOT Service Development Grants, local funding and partnerships with the private sector. Indian River County has only limited intercity bus travel provided by Greyhound and Tornado.

Figure 2-5 depicts existing routes, needs, and potential future service improvements.

Ten-Year Program

Service Improvements

- Maintain existing weekday and Saturday levels of service

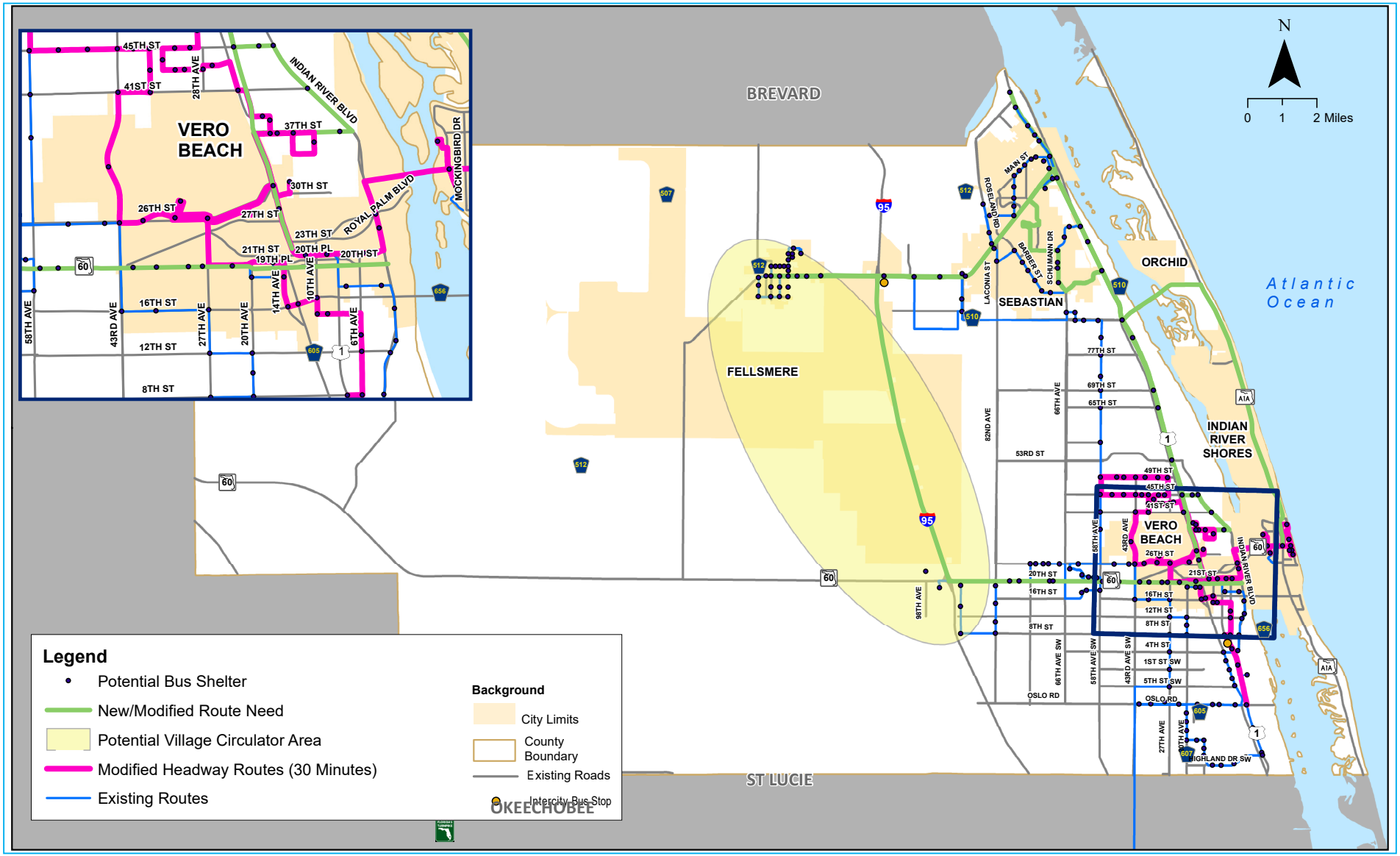
Capital Program

- Vehicle replacement & bus stop infrastructure
- North County Transit Hub

Unfunded Needs

- Extend weekday evening hours to 8-9 pm (now 7 pm)
- Extend Saturday hours to 7 am-7 pm (now 8 am-5 pm)
- Add Sunday service
- Increase frequencies on select routes

Figure 4-5: Transit Needs



TRANSPORTATION OPERATIONS AND MANAGEMENT STRATEGIES

TSM&O

The FDOT developed and manages the Transportation Systems Management and Operations (TSM&O) program. The TSM&O program is used to create and maintain a high level of safety and efficiency on the state's transportation system that also enhances economic prosperity and preserves the quality of our environment and communities. The FDOT focuses on five different areas of operations and management strategies, plus a recent addition of a new Connected Vehicle initiative. The Connected Vehicle initiative and the five standard TSM&O program areas are summarized as follows:

Connected Vehicles	▸ Coordinate with vehicle technology to quickly identify roadway hazards and alert drivers ▸ Use technologies such as wireless communications, Signal Phase and Timing (SPaT), roadside units, on-board units, signal priorities, emergency vehicle preemption, vehicle sensors, GPS navigation
Management/ Deployments	▸ Promote ITS deployments on Florida's roadways, develop standards, maintain the ITS Strategic Plan, and implement a systems engineering process to support procurement and deployment of ITS ▸ Deploy advanced traveler information systems and 511 ▸ Develop and update the ITS standards and specifications ▸ Provide technical support and assistance to FDOT's District Offices and other partners ▸ Promote and coordinate the statewide use of robust, non-proprietary ITS standards.
ITS Communications	▸ Guide deployment of a communications backbone to serve ITS deployments on major corridors ▸ Manage and update the Statewide ITS Communications Network to support ITS deployments ▸ Manage the maintenance program for the Statewide ITS Communications Network to support ITS deployments and various ITS research and development initiatives ▸ Manage the Federal Communications Commission statewide radio license database ▸ Manage the Wireless General Manager Agreement, a resource sharing public/private partnership which places commercial wireless carriers on FDOT rights-of-way, with American Tower Corporation
ITS Software and Architecture	▸ Manage the SunGuide® Software System for freeway and incident management, transportation management center interoperability, and data archiving. ▸ Manage the Statewide ITS Architecture to promote integrated ITS regions, corridors, and projects. ▸ Coordinate ITS training to enhance the quality and quantity of the State's ITS workforce. ▸ Unified traffic information and management system for the State of Florida ITS traffic data.
Statewide Arterial Management Program	▸ A Technical Memorandum on Adaptive Signal Control Technologies ▸ Traffic Signal Maintenance and Compensation Agreement
Managed Lanes	▸ Statewide Policy, Procedures, Manuals, and Guidance for Managed Lanes Which Includes Express Lanes ▸ Statewide Toll and Express Lane Team ▸ Regional Concept of Transportation Operations ▸ Express Lane Concept of Operations ▸ Change Management Process for Statewide Express Lane Software ▸ Statewide Methodology for Determining Ingress/ Egress To/From Express Lanes

FDOT District 4 developed a Treasure Coast TSM&O Master Plan for Martin, St. Lucie, and Indian River Counties Master Plan in March 2019. This TSM&O Master Plan has identified specific strategies and performance measures throughout Indian River County and the Treasure Coast region with the aim of "…'taking back' the capacity lost to congestion, incidents, construction, weather, and traffic control delay."

The TSM&O Master Plan is framed by five questions as follows:

1. Where are TSM&O projects needed?
2. What types of TSM&O projects are needed?
3. When should these TSM&O projects be implemented?
4. How do these TSM&O projects get implemented?
5. Who is involved in seeing projects planned, designed, implemented, operated, and maintained?

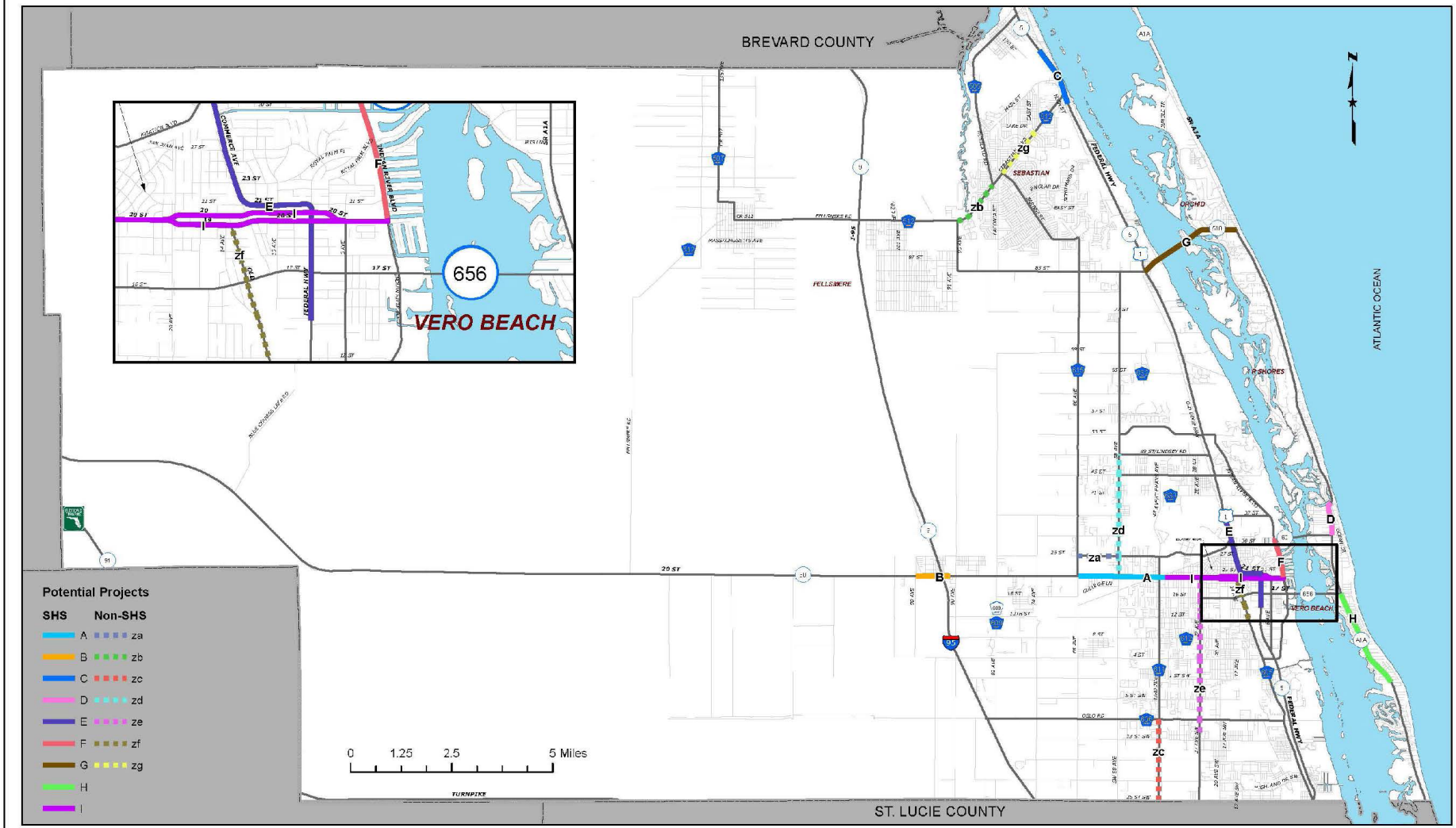
The plan establishes evaluation criteria that identify specific areas and corridors on which TSM&O projects are most likely to provide enhancement of the transportation system based on several factors including, existing technology, traffic, safety, and transit infrastructures. **Table 4-10** lists the of potential projects was developed for both State Highway System (SHS) and non-SHS facilities, which are identified in **Figure 2-6.**

The Master Plan also established guidelines for implementation and performance measures to continually assess the improvements to the system. These potential projects are included as warranted in the Indian River County MPO Connecting IRC 2045 LRTP Needs Assessment.

Table 4-10: TSM&O Potential Project List

Project ID	Road Name	From	To	Mile	Priority Score
State Highway System (SHS) Facilities					
A	20 ST	66 AVE	41 AVE	2.13	6.48
B	20 ST	98 AVE	I-95 NB RAMP	0.84	5.16
C	FEDERAL HWY	SEBASTIAN BLVD	JACKSON ST	1.50	5.00
D	SR A1A	BEACHLAND BLVD	MANGO RD	0.82	5.00
E	COMMERCE AVE	37 ST	14 ST	2.83	4.90
F	INDIAN RIVER BLVD	SR 60	20 ST	0.97	4.75
G	WABASSO BEACH RD	FEDERAL HWY	SR A1A	2.61	4.00
H	SR A1A	OCEAN RIDGE CIR	17 ST	2.55	4.00
I	20 ST	INDIAN RIVER BLVD	42 AVE	4.34	3.81
Non-State Highway System					
za	26 ST	66 AVE	58 AVE	1.02	6.00
zb	SEBASTIAN BLVD	90 AVE	ROSELAND RD	1.27	5.00
zc	43 AVE	25 ST	OSLO RD	2.01	5.00
zd	58 AVE	20 ST	49 ST	3.03	4.66
ze	27 AVE	13 ST	20 ST	3.95	4.62
zf	OLD DIXIE HWY	12 ST	19 PL	1.02	4.57
zg	SEBASTIAN BLVD	BARBER ST	EAST ST	1.34	4.00

Figure 4-6: TSM&O Master Plan Potential Project Locations



Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems (ITS) includes variety of communications and other computer technologies focused on detecting and relieving congestion and improving safety within the transportation system by enabling drivers to make well-informed travel choices. ITS technology enables information to be shared with travelers in real-time regarding traffic issues and can provide alternative routes or modes to aid in the mitigation of congestion. ITS may also alert officials to of the presence of crashes and request assistance in clearing the accident, which helps efficiently restore traffic flow. FDOT's I-95 Master Plan and other various agencies in Indian River County have deployed, or are in the process of developing ITS improvements which include:

- Fiber optic infrastructure
- Dynamic message signs
- Traffic detection stations
- Archived data
- Fiber optic cables
- Incident detection
- Traffic Management Centers (TMC)

The potential for implementing new or extending existing ITS technology to congested corridors will be evaluated as additional corridor studies are completed and prioritized as part of the CMP. ITS projects will be consistent with the regional ITS architecture.

Automated, Connected, Electric, and Shared-Use (ACES)

As technology continues to evolve and transform transportation at an accelerating pace, it is noted that ACES technologies will have significant impact on the MPO's future transportation systems. ACES stands for Automated, Connected, Electric and Shared Mobility:

- **Automated** – vehicles that drive without direct driver input
- **Connected** – vehicles that communicate data to other vehicles and infrastructure
- **Electric** – vehicles that use electric motor(s) instead of a gas-powered engine
- **Shared Mobility** – shared use of a vehicle or other transportation mode, often in lieu of owning or using a personal vehicle

Personal and public vehicles alike are using increased levels of technology, and combined with shared mobility, are integrating into an existing transportation system that must be supportive of the technology. FDOT developed guidance for ACES planning in September 2018, which will be utilized by the MPO in planning for congestion management and the evolution of transportation throughout the community and region.

Congestion Management

Indian River County MPO developed a Congestion Management Process to "address congestion management through a process that provides for safe and effective integrated management and operation of the multi-modal transportation system."

Maintenance of a Congestion Management Process is a requirement for all Metropolitan Planning Organizations (MPO) or TPOs under Florida law. Additionally, a robust congestion management process aids the MPO in identifying local and region transportation needs and potential improvements due to the following:

- Increased emphasis on transportation safety
- Physically or legally constrained roadway corridors
- Limited funding resources

The MPO's congestion management process is based on five steps as follows:

1. Identify Segment Score and Rank
2. Eliminate Segments Controlled by and to be Improved by FDOT
3. Identify Priority Corridors
4. Conduct Strategy Evaluation
5. Prioritize CMP Strategies

The congestion management process is key in the development of Connecting IRC 2045 and continues to increase in importance to long range transportation planning in general, as populations and transportation systems grow. It is a helpful tool supportive of identifying congestion and selecting projects for prioritization implementation.

Identified improvements resulting from the Congestion Management Process can include a full range of activities, including demand management and transit/multimodal improvements that may reduce usage of personal vehicles as well as intersection improvement and roadway expansion projects.

FREIGHT

Freight and goods movement is a top priority for the MPO. Even as the primary generators of freight traffic in the county evolve in Indian River County, it is important that existing trade and future economic development are supported by an effective freight network. A number of the projects included in the Cost Feasible Plan are located on designated truck routes. These include the interchange at I-95 and Oslo Road and improvements to US-1, CR 510, CR 512, 82nd Avenue, 43rd Avenue, and Aviation Boulevard. As part of the planning process, the MPO engaged the FDOT District Four Freight Coordinator and organizations such as the Indian River County Chamber of Commerce that maintain an interest in the future of the freight industry in the area. Connecting IRC 2045 is consistent with the Treasure Coast Regional Long Range Transportation Plan Freight Element and the MPO continues to support the state's freight planning process and the objectives of FDOT's Freight Mobility and Trade Plan.

TRANSPORTATION SAFETY

The proposed multimodal improvements included in this plan are expected to enhance safety for all roadway users. Increased capacity and alternate routes will also help to reduce congestion. Furthermore, these projects will upgrade facilities to meet the latest design standards. The incorporation of sidewalks and bicycle lanes into future roadway projects is another notable safety enhancement. Additionally, the MPO's CMP will continue to identify intersections and roadway segments with safety concerns and program improvements.

Strategic Highway Safety Plan Emphasis Areas

In the development of this plan, the MPO considered federal and state safety documents, including the FDOT State Strategic Highway Safety Plan (SHSP). To ensure consistency with the SHSP, the Indian River County MPO will support the Key Safety Emphasis Areas listed below:

- Lane Departures
- Impaired Driving
- Pedestrians and Bicyclists
- Intersections
- Occupant Protection
- Motorcyclists
- Aging Road Users
- Commercial Motor Vehicles
- Speeding and Aggressive Driving
- Teen Drivers
- Distracted Driving
- Work Zones
- Traffic Records and Information Systems

Vision Zero

Vision Zero is a multi-dimensional effort to eliminate all traffic fatalities and severe injuries while increasing safe, healthy, and equitable mobility for all. It takes a traditional approach to safety and reconsiders some of the most basic assumptions made over the past decades to reduce the number of deaths on American roadways. The FDOT initially established a Vision Zero policy in 2012, and the 2016 update of the SHSP supports the policy. As discussed in Chapter 2, the MPO acknowledges and supports FDOT's statewide safety targets, which set the target at "0" for each performance measure to reflect the Department's goal of zero deaths.

TRANSPORTATION SECURITY AND SYSTEM RESILIENCY

Better planning in transportation security can help reduce the negative impacts to local and regional transportation systems from major natural or man-made events, such as hurricanes, tornadoes, flooding, or terror attacks. Federal requirements for metropolitan planning also include the consideration of security as a factor in the development of LRTPs. The planning process should provide for consideration and implementation of projects, strategies, and services that will increase the security of the transportation system for motorized and non-motorized users. The MPO can play a key role in planning both before and after a disaster. Pre-disaster planning involves efforts to guard against, prepare for, and mitigate a disaster's effects; while post-disaster planning focuses on restoring essential functions, speeding recovery, and rebuilding in the wake of a disaster. Based on its vulnerability to hurricanes and tropical storms, Florida has become a leader in emergency management and disaster mitigation planning. Local governments prepare several types of plans that MPOs should be aware of and, as appropriate, participate in developing:

- Emergency Management Plans: Operational procedures used to prepare for, respond to, recover from, and mitigate emergencies.
- Local Mitigation Strategies: Identify and prioritize hazard mitigation needs and strategies to reduce the vulnerability to natural hazards.
- Post-Disaster Redevelopment Plans: Outlining recovery and reconstruction procedures and policies.

Working with FDOT and other partners, the MPO can assist in strengthening the transportation system and increasing its resiliency to man-made and natural disasters. This often begins by identifying critical assets and key transportation infrastructure; the loss of which would have a severe impact on the public's welfare and local economy. Pre-disaster planning may also involve identifying and assessing a community's vulnerability to specific hazards or threats. This LRTP supports the continued implementation of a parallel network of roadways that will increase the resiliency of the transportation system.

TRAVEL AND TOURISM

Tourism in Indian River County is largely focused on its rich natural resources, especially water-related activities. The beaches in the county are popular attractors of visitors, as is the boating and fishing opportunities in the Intercoastal Waterway and Atlantic Ocean. Snorkeling and diving are also popular activities. Other natural resources focus on inland nature related and agritourism activities. The community also attracts tourists for sporting, cultural, and resort/hospitality attractions. A significant amount of locally collected tourism related revenues has been allocated to beach restoration which also helps to protect roadways providing beach access. The 2045 Long Range Transportation Plan includes extensive investment in roadways improving the access to tourism activities including the Oslo Road Interchange and related improvements on CR 512, CR 510, and US 1.

REGIONAL COORDINATION

Ongoing regional transportation planning will be critical as Indian River County anticipates continued growth through 2045. The MPO maintains strong partnerships in the region and throughout the state through organizations including the Treasure Coast Transportation Council (TCTC), Treasure Coast Regional Planning Council (TCRPC), and the Florida Metropolitan Planning Organization Advisory Council (MPOAC). The specific duties of the TCTC include creation of a Regional Long Range Transportation Plan; a process for prioritization of regional projects; a regional public involvement process; and measures of effectiveness to assess regional performance. The MPO will ensure that the appropriate regional projects contained in this plan are reflected in future regional transportation plans.

ENVIRONMENTAL MITIGATION

Environmental Consultation

Transportation projects can significantly impact many aspects of the environment including wildlife and their habitats, wetlands, and groundwater resources. In situations where impacts cannot be completely avoided, mitigation or conservation efforts are required. Environmental mitigation is the process of addressing damage to the environment caused by transportation projects of programs. The process of mitigation is best accomplished through enhancement, restoration, creation and/or preservation projects that serve to offset unavoidable environmental impacts. This plan addresses these potential activities as required by federal regulations [23 C.F.R. 450.322]. In order to understand the environmental mitigation opportunities and issues within the metropolitan planning area, the MPO conducted direct outreach to appropriate federal, state and local land management, resource, environmental, and historic preservation agencies to obtain comments and consultation on the following:

- Potential environmental impacts from the draft plan of projects
- Environmental factors to consider as part of the plan
- Considerations from applicable conservation plans
- Potential environmental mitigation activities, and areas to carry out these activities, including those with the greatest potential to restore and maintain environmental functions

When addressing mitigation, there is a general rule to avoid all impacts, minimize impacts, and mitigate impacts when impacts are unavoidable. This rule can be applied at the planning level, when MPOs are identifying areas of potential environmental concern due to the development of a transportation project. A typical approach to mitigation that MPOs can follow is to:

- Avoid impacts altogether
- Minimize a proposed activity/project size or its involvement
- Rectify the impact by repairing, rehabilitating, or restoring the affected environment
- Reduce or eliminate the impact over time by preservation and maintenance operation during the life of the action
- Compensate for environmental impacts by providing appropriate or alternate environmental resources of equivalent or greater value, on or off-site

Sections 373.47137 and 373.4139, F.S. require that impacts to habitat be mitigated through a variety of mitigation options, which include mitigation banks and mitigation through the Water Management District(s) and the Florida Department of Environmental Protection. Potential environmental mitigation opportunities that could be considered when addressing environmental impacts from future projects proposed by MPOs may include, but are not limited to, the items presented in **Table 4-11**.

Table 4-11: Potential Environmental Mitigation Opportunities

Resource/Impacts	Potential Mitigation Strategy
Wetlands and Water Resources	▸ Restore degraded wetlands ▸ Create new wetland habitats ▸ Enhance or preserve existing wetlands ▸ Improve storm water management ▸ Purchase credits from a mitigation bank
Forested and other natural areas	▸ Use selective cutting and clearing ▸ Replace or restore forested areas ▸ Preserve existing vegetation
Habitats	▸ Construct underpasses, such as culverts ▸ Other design measures to minimize potential habitat fragmentation
Streams	▸ Stream restoration ▸ Vegetative buffer zones ▸ Strict erosion and sedimentation control measures
Threatened or Endangered Species	▸ Preservation ▸ Enhancement or restoration of degraded habitat ▸ Creation of new habitats ▸ Establish buff areas around existing habitat

Chapter 5

Public Involvement

CHAPTER 5 - PUBLIC INVOLVEMENT

The Connecting IRC 2045 LRTP involved a public involvement process that solicited input from the public and other stakeholders through workshops, MPO meetings, interviews, and surveys. The public was informed on the progress of the plan through a project-specific website (http://www.irmpo.com/LRTP/), newsletters, and other direct outreach from the MPO. Identifying an efficient transportation system can only come from a true understanding of the community's diverse and far-ranging needs. This chapter provides an overview of public involvement activities associated with the development of this plan.

This LRTP was developed in a manner consistent with Indian River County MPO's Public Participation Plan (**Technical Appendix A**), and included the use of the MPO's committee/Board structure and meetings. In addition, ongoing coordination took place between the MPO and adjacent MPOs through out the process. Multiple stakeholders were involved in the development of the plan including environmental and community representatives, as well as organizations that serve the traditionally transportation-disadvantaged.

Notable themes reflected in the public input received included the relationship between transportation and land use, the impacts of emerging transportation technologies, bicycle/pedestrian infrastructure and safety, and the provision of a variety of transportation options for the community. The input received through the MPO's public involvement plan helped to guide the development of the plan and inform the final list of projects adopted in the Cost Feasible Plan.

COVID-19 AND PUBLIC INVOLVEMENT

During the development of an LRTP, there are typically a number of in-person public meetings, forums, and/or workshops. However, In March 2020, the spread of COVID-19 (Coronavirus) in the United States prompted directives from federal, state, and local agencies to limit in-person gatherings and interaction. Due to COVID-19, previously scheduled in-person workshops related to Connecting IRC were replaced with multiple virtual workshops throughout the planning process to engage the public, partner organizations, and other stakeholders.

PUBLIC INVOLVEMENT ACTIVITIES

A series of workshops was conducted to obtain public input to the plan during the development of the Needs Assessment and the Cost Feasible Plan (CFP). Throughout the plan development process, interim results were presented to the MPO's Governing Board, Technical Advisory Committee (TAC), and Citizens Advisory Committee (CAC). Information was provided in advance of the MPO meetings and the typical format of the meetings included a presentation followed by an opportunity to provide feedback and ask questions. The MPO meetings were publicly advertised, thus sharing opportunities for the public to provide input. A summary of public involvement events, surveys, and information dissemination methods is provided on the following pages.

Workshops

Two virtual public workshops related to the LRTP were held in June and September 2020. The purpose of these workshops was to present the draft Cost Feasible Plan and solicit input and comments from the public and community stakeholders. The input received from these workshops was used to refine the draft Cost Feasible Plan. Please see **Technical Appendix B** for copies of the presentations and for a summary of public input obtained from these workshops.

Survey

A follow-up survey was provided to all individuals that registered for the virtual workshops to gather further insight on transportation issues in Indian River County. Please see **Technical Appendix B** for complete results of the survey, which were utilized to also inform development of the LRTP.

LRTP Website

Information on the planning process was provided to the public through the dedicated LRTP website (http://www.irmpo.com/LRTP/), which included the project schedule, meeting information, and presentations. Additionally, project-specific documents were posted to this website throughout the development of the plan for public access.

Agency Outreach and Coordination

The development of the LRTP included coordination with local agencies, adjacent MPOs (Space Coast TPO and St. Lucie TPO), and FDOT. Also, in order to understand the environmental mitigation opportunities and issues within the planning area, the MPO also conducted direct outreach to appropriate federal, state and local land management, resource, environmental, and historic preservation agencies. Consultative comments from responding agencies are included in **Technical Appendix B**. It should be noted there are no designated Tribal lands within the boundaries of the MPO's planning area This direct outreach included the following:

- Indian River County
- Florida Department of Environmental Protection
- St. Johns River Water Management District
- Florida Fish and Wildlife Conservation Commission
- Florida Department of Historical Resources

MPO BOARD AND COMMITTEE COORDINATION

Connecting IRC 2045 included significant review as part of the regular meetings of the Indian River County MPO Board and standing committees. These groups include citizen representatives, elected officials, local government staff and special interest advocates representing all portions of the planning area. Advance public notice was provided for each board/committee meeting in accordance with Florida Statutes and the adopted bylaws of the MPO. In addition to the MPO Board, input and guidance on the development of the LRTP was provided by the Technical Advisory Committee (TAC), Citizens Advisory Committee (CAC), Bicycle Advisory Committee (BAC), and Transportation Disadvantaged Local Coordinating Board (TDLCB) It is important to note that advisory input and the perspectives of non-transportation professionals was also provided throughout the process by citizen representatives on the BAC and CAC.

FREIGHT COORDINATION

As discussed in Chapter 4, part of the planning process involved identifying potential freight transportation needs. The MPO engaged the freight community including, the FDOT District Four Freight Coordinator as the key agency planning for regional and statewide freight transportation. Additional outreach also included economic development and chamber organizations that represent private freight industry interests.

ENVIRONMENTAL JUSTICE

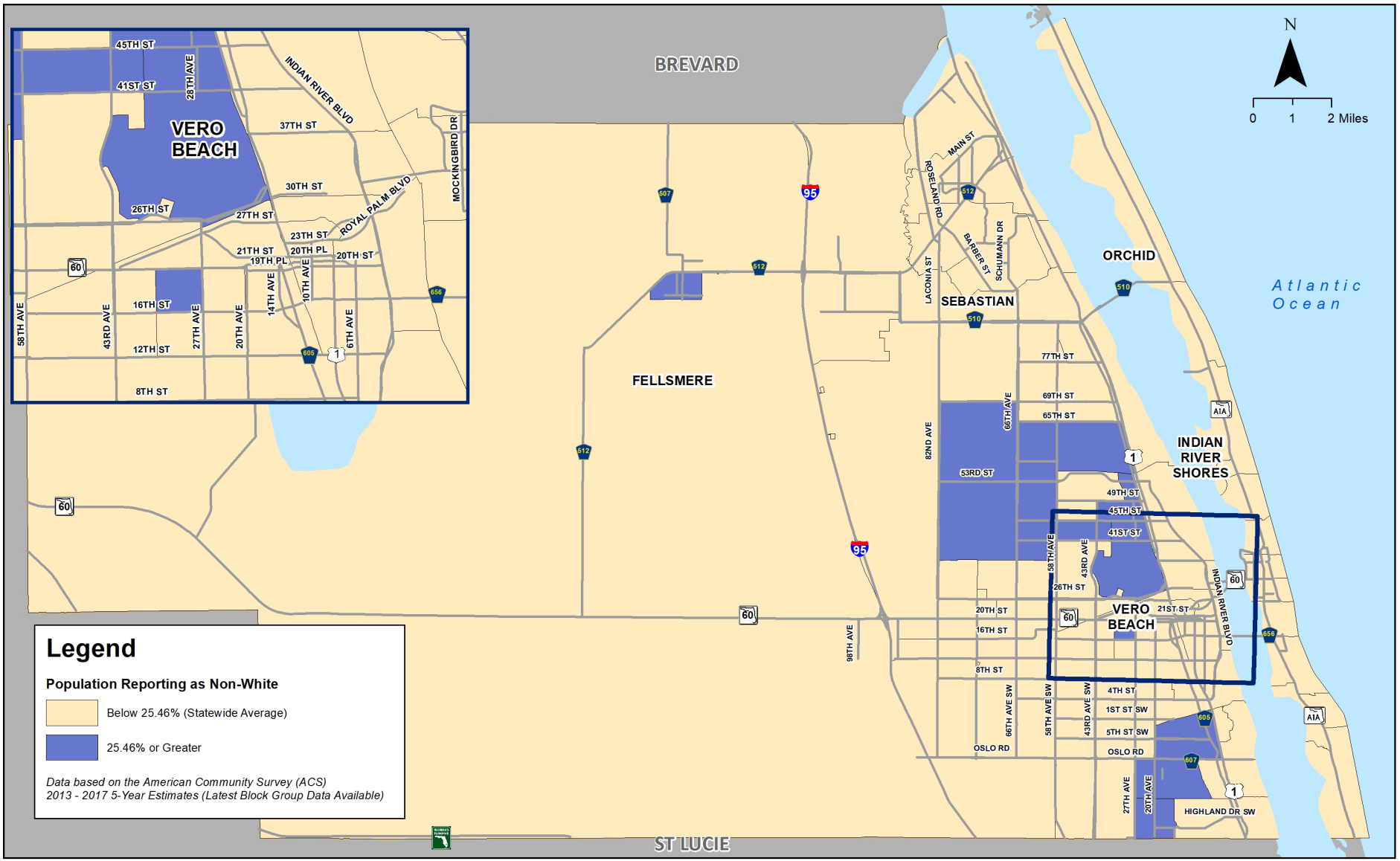
Environmental Justice (EJ) is the fair treatment of all groups within the community. Per Presidential Executive Order 12898, efforts must be made throughout the development of plans and projects to avoid disproportionate adverse effects on minority and low-income populations. This attention to protecting all communities is critical, and Connecting IRC 2045 included efforts to evaluate sociocultural effects and EJ. The two driving characteristics of EJ areas in the MPO planning area are percentage of households at or below poverty level and percentage of minority population. Percentages of population meeting the criteria were compared to the statewide average. Those Census Block Groups that were estimated to have levels of EJ populations that were equal to or exceeded the statewide average were highlighted and considered to be potential areas for Environmental Justice considerations throughout the planning process. **Table 5-1** shows the ACS data used for the plan's EJ analysis.

Table 5-1: Environmental Justice Populations Summary

	Indian River County	Statewide
Estimate; Population for whom poverty status is determined	*146,550*	*19,858,469*
Population Below Poverty Level	18,617	3,070,972
Percent Below Poverty Level	12.7%	15.5%
Estimate; Population for whom race is determined	*147,981*	*20,278,447*
Minority Population	20,686	4,934,450
Percent Minority Population	14%	24.3%

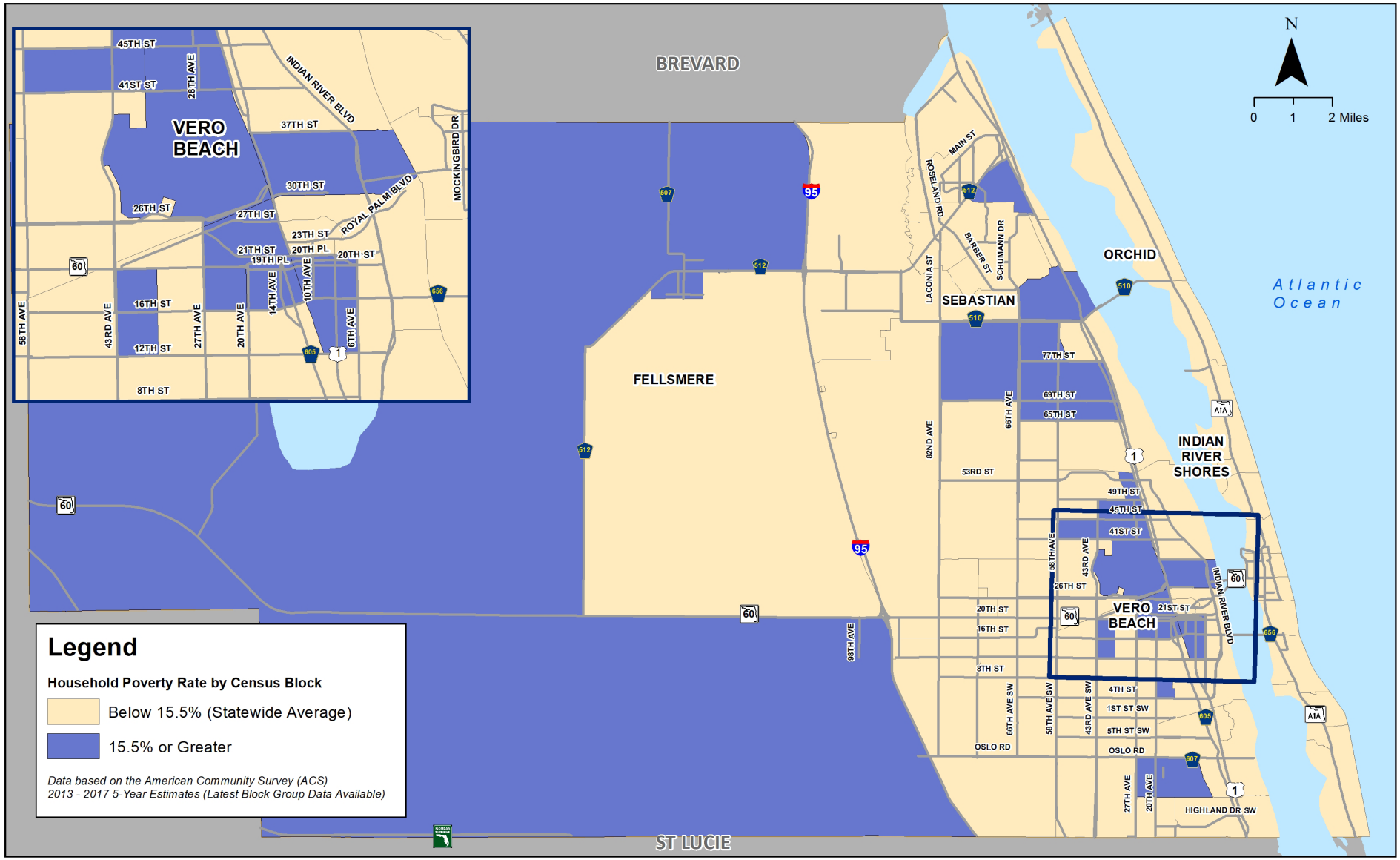
Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Figure 5-1: Minority Population



Indian River County **Environmental Justice - Population Reporting as Non-White**

Figure 5-2: Households in Poverty Status



Indian River County **Environmental Justice - Household Poverty Rate**

Chapter 6

Performance Evaluation

CHAPTER 6 - PERFORMANCE EVALUATION

Incorporating performance targets early in the planning process helps to determine success in meeting future goals. Chapter 2 and the federally-required System Performance Report (**Appendix A**) provide an in-depth description of ongoing performance measurement. System performance measures provide objective indications of how well the transportation network meets demand, guide the planning efforts of the MPO, and inform decision making processes as it relates to the funding and prioritization of projects and programs. Chapter 2 includes the performance-based policy foundation of Connecting IRC 2045. However, the intent of this chapter is to provide what may be considered a "report card" on the performance of the plan. The tables on the following pages include an evaluation and forecast of the performance of this plan.

Performance Measures

Performance Measures established through the Federal Highway Administration (FHWA) address each of the national planning goal areas. MPOs are required to conduct performance-based planning by setting data-driven performance targets for the performance measures and programmed transportation investments that are expected to contribute to achieving those targets. **Tables 6-1** through **6-3** present the adopted targets and thresholds as identified in Chapter 2 and includes a forecast for 2045 relative to each Performance Measure.

Performance Indicators

Performance Indicators have been established by the Indian River County MPO in order to evaluate the effectiveness of the Connecting IRC in relation to the Goals, Objectives, and Policies of the plan. It should be noted that the Performance Indicators are not intended to be reviewed annually and that the evaluation in these tables represent an analysis performed at the conclusion of the long-range transportation plan.

Table 6-1: FAST Act Performance Measures
Performance Measure 1 (PM1) - Safety

Connecting IRC Goal	Performance Measure	Target	2045 Forecast	Comments
Goal 4: Maintaining a safe transportation system for all users.	Number of fatalities	0	Improved	N/A
	Rate of Fatalities	0	Improved	
	Number of Serious Injuries	0	Improved	
	Rate of Serious Injuries	0	Improved	
	Number of nonmotorized fatalities and non-motorized serious injuries	0	Improved	

Table 6-2: FAST Act Performance Measures
Performance Measure 2 (PM2) - Pavement and Bridge

Connecting IRC Goal	Performance Measure	Target	2045 Forecast	Comments
Goal 5: Preserving and maintaining the transportation system and transportation infrastructure	Percent of Interstate pavements in good condition	≥ 60%	Maintained or Improved	The 2045 Revenue Forecast for the Indian River County MPO developed by FDOT includes a commitment to non-capacity programs designed to support, operate, and maintain the state transportation system. The MPO supports and has adopted FDOT's statewide targets/thresholds for pavement and bridge conditions.
	Percent of Interstate pavements in poor condition	≤ 5%	Maintained or Improved	
	Percent of non-Interstate NHS pavements in good condition	≥ 40%	Maintained or Improved	
	Percent of non-Interstate NHS pavements in poor condition	≤ 5%	Maintained or Improved	
	Percent of NHS bridges by deck area in good condition	≥ 50%	Maintained or Improved	
	Percent of NHS bridges by deck area in poor condition	≤ 10%	Maintained or Improved	

Table 6-3: FAST Act Performance Measures
Performance Measure 3 (PM3) - System Performance and Freight

Connecting IRC Goals	Performance Measure	Target	2045 Forecast	Comments
Goal 1: Providing an efficient transportation system that is connected, responsive, aesthetically pleasing and meets the needs of all users. Goal 2: Enhancing mobility for people and freight and provide travel alternatives.	Percent of person-miles on the Interstate system that are reliable — Level of Travel Time Reliability (Interstate LOTTR)	≥ 70%	Maintained or Improved	N/A
	Percent of person-miles on the non-Interstate NHS that are reliable (Non-Interstate NHS LOTTR)	≥ 50%	Maintained or Improved	
	Freight travel time reliability	2.00	Maintained or Improved	

Table 6-4: Connecting IRC Performance Evaluation - Goal 1

Goal 1: Providing an efficient transportation system that is connected, responsive, aesthetically pleasing and meets the needs of all users.				
Objectives	**Policies**	**Performance Measures (PM) and Indicators (PI)**	**2045 Forecast**	**Comments**
Objective 1.01 - Maintain the adopted level of service standard for all functionally classified roads through the year 2045.	Policy 1.01.1 – Implement roadway improvements identified in the 2045 Cost Feasible Plan, consistent with the Interim Year Roadway Improvement Sets.	PI 1.01.1.1 – Percent of lane miles meeting the adopted level of service standard.	0.43 V/C Ratio at LOS D and 0.40 V/C Ratio at LOS E	N/A
Objective 1.02 - Maintain a 12 hour hurricane evacuation clearance time on roads designated as hurricane evacuation routes through the year 2045.	Policy 1.02.1 – Implement roadway improvements identified in the 2045 Cost Feasible Plan for roadways designated as hurricane evacuation routes.	PI 1.02.1.1 – Hurricane evacuation clearance time measured through actual event. PI 1.02.1.2 – Lane miles of roadway improvements on hurricane evacuation routes.	0.40 V/C Ratio at LOS E	The prioritization of projects did consider inclusion of a project on a Hurricane Evacuation Route as a criteria.
Objective 1.03 - Enhance the grid roadway network by constructing an average of two centerline miles of new roadway corridors each year from 2020 to 2045.	Policy 1.03.1 – Implement new corridor roadway improvements identified in the 2045 Cost Feasible Plan.	PI 1.03.1.1- Average annual centerline miles of new roadway corridors constructed during the period from 2020 to 2045.	Improved	The Connecting IRC Cost Feasible Plan includes multiple new roadway corridors to be implemented through 2045.
Objective 1.04 - Enhance the FDOT's Strategic Intermodal System (SIS) by constructing one FEC railway flyover by 2045.	Policy 1.04.1 – Implement improvements to the SIS at the FEC Railroad by 2045.	PI 1.041.1 – New Flyover at the FEC Railroad.	Improved	The 2045 Cost Feasible Plan includes a new flyover at the intersection of Aviation Blvd. and US 1.
Objective 1.05 - Optimize functionality and efficiency of existing infrastructure and ROW through 2045.	Policy 1.05.1 – Incorporate Intelligent Transportation System (ITS) and/or Connected Vehicle architecture into all new roadway projects.	PI 1.05.1.1 Number of new roadways that incorporate ITS and Connected Vehicle Architecture.	Improved	Connecting IRC allocates specific funding to ITS and ACES-related improvements through 2045.

Goal 1: Providing an efficient transportation system that is connected, responsive, aesthetically pleasing and meets the needs of all users.				
Objectives	**Policies**	**Performance Measures (PM) and Indicators (PI)**	**2045 Forecast**	**Comments**
Objective 1.06[PM] - Ensure that 50% of Person-Miles (Non-Interstate) and 75% of Person-Miles (Interstate) on the National Highway System are Reliable	Policy 1.06.1 – Implement roadway improvements identified in the 2045 Cost Feasible Plan, consistent with the Interim Year Roadway Improvement Sets.	PM 1.06.1 Percent of Person Trips that are Reliable (50% of Person-Miles (Non-Interstate) and 75% of Person-Miles (Interstate))	Maintained or Improved	N/A

PM - *Indicates FAST Act System Performance Report Adopted Performance Measure*

Table 6-5: Connecting IRC Performance Evaluation - Goal 2

Goal 2: Enhancing mobility for people and freight and provide travel alternatives.				
Objectives	**Policies**	**Performance Measures (PM) and Indicators (PI)**	**2045 Forecast**	**Comments**
Objective 2.01 - Maintain Transit Quality and LOS "A" for reliability.	Policy 2.01.1 – Make Capital and Operational improvements consistent with the adopted Transit Development Plan.	PI 2.01.1.1 – Percentage of buses arriving within 5 minutes of schedule.	Maintained	Improvements to transit service will be implemented consistent with the TDP.
Objective 2.02 - Maintain Transit Quality and LOS "B" for Service Coverage.	Policy 2.02.1 – Improve service coverage consistent with the adopted Transit Development Plan.	PI 2.02.1.1 – System compliance with adopted level of service standard	Maintained	
Objective 2.03 - Expand weekday hours of service to 15 hours a day on at least one bus route every two years during the period from 2025 to 2045 so that all weekday bus routes operate at least 15 hours per day by 2045.	Policy 2.03.1 – Expand weekday hours of operation on fixed-route bus network consistent with the adopted Transit Development Plan.	PI 2.03.1.1 – Average number of weekday bus routes with 15 hours of service added during the period from 2025 to 2045.	Improved	

Goal 2: Enhancing mobility for people and freight and provide travel alternatives.				
Objectives	**Policies**	**Performance Measures (PM) and Indicators (PI)**	**2045 Forecast**	**Comments**
Objective 2.04 - Maintain Bike/Ped LOS "D" on 80% percent of roadways in Indian River County through 2045.	Policy 2.04.1 – Implement sidewalk improvements consistent with the adopted Bicycle/Pedestrian Plan. Policy 2.04.2 – Implement bicycle facility improvements consistent with the adopted Bicycle/ Pedestrian Plan.	PI 2.04.1 – Percentage of roadways meeting adopted level of service standard	Improved	The MPO will continue to implement the adopted Bicycle/Pedestrian Plan. Additionally, It is anticipated that cost feasible roadway projects will include context-appropriate bicycle and pedestrian facilities.
Objective 2.05 - Add an average of two miles of bicycle facilities on functionally classified roadways or trails each year during the period from 2020 to 2045.	Policy 2.051 – Implement bicycle facility improvements consistent with the adopted Bicycle/ Pedestrian Plan. Policy 2.05.2 – Adapt abandoned railroad corridors, roadway alignments and military trails for bicycle facilities, wherever possible.	PI 2.05.1.1 – Average annual number of new bicycle facilities added during the period from 2025 to 2045.	Improved	
Objective 2.06PM - Enhance freight mobility by ensuring that the Truck Travel Time Reliability (TTTR) index on the Interstate Highways is less than 2.00	Policy 2.06.1 – Implement the freight mobility improvements identified in the 2045 Cost Feasible Plan	PM 2.06.1.1 – TTTR on the Interstate Highway System (Truck Travel Time Reliability (TTTR) index on the Interstate Highways is less than 2.00)	For Trucks 0.31 V/C Ratio at LOS E	N/A
Objective 2.07 - Increase the efficiency and convenience of connecting multiple modes by adding an average of one shelter or transfer facility per year through 2045.	Policy 2.07.1 – Add bus shelters and improve hubs consistent with the Transit Development Plan.	PI 2.07.1.1 – Number of new shelters/improved transit hubs	Improved	It is anticipated that additional bus shelters and improvements to transit hubs will be implemented consistent with the TDP.

PM - *Indicates FAST Act System Performance Report Adopted Performance Measure*

Table 6-6: Connecting IRC Performance Evaluation - Goal 3

Goal 3: Protecting the natural and social environment.				
Objectives	**Policies**	**Performance Measures (PM) and Indicators (PI)**	**2045 Forecast**	**Comments**
Objective 3.01 - Limit average increase in CO, HC, and NO emissions to less than 15 percent from the previous five-year period for each five year period from 2025 to 2045.	Policy 3.01.1 – Implement the transportation improvements identified in the 2045 Cost Feasible Plan.	PI 3.01.1.1 – Percent change in CO, HC, and NO emissions (in kilograms) for each five year period from the base year for the period from 2025 to 2045.	Improved	Environmental mitigation was considered during the development of Connecting IRC.
Objective 3.02 - Ensure that all collector roadways are less than six lanes through the year 2045.	Policy 3.02.1 – Implement the transportation improvements identified in the 2045 Cost Feasible Plan.	PI 3.02.1.1 – Centerline miles of collector roadways with six or more lanes.	Maintained	N/A
Objective 3.03 - Increase resiliency of infrastructure for extreme weather and climate trends.	Policy 3.03.1 – Incorporate higher elevations, increased drainage capacity, and more resilient construction materials as appropriate into new projects.	PI 3.03.1.1 – Percentage of new projects incorporating enhanced features.	Improved	The plan has considered facilities that are potentially vulnerable to flooding.

Table 6-7: Connecting IRC Performance Evaluation - Goal 4

Goal 4: Maintaining a safe transportation system for all users.				
Objectives	**Policies**	**Performance Measures (PM) and Indicators (PI)**	**2045 Forecast**	**Comments**
Objective 4.01 - Reduce the number and rate of crash Fatalities to "0" by 2045	Policy 4.01.1 – Implement intersection and other improvements related to safety as identified in the Cost Feasible Plan including Congestion Management Process plan.	PM 4.01.1.1 – Annual percent change in the number and rate of Fatalities.	Improved	The MPO supports and has adopted FDOT's goal of zero fatalities.
Objective 4.02PM - Reduce the number and rate of Serious Injuries to "0" by 2045.	Policy 4.02.1 – Implement intersection and other improvements related to safety as identified in the Cost Feasible Plan including Congestion Management Process plan.	PM 4.02.1.1 – Annual percent change in the number and rate of Serious Injuries.	Improved	The MPO supports and has adopted FDOT's goal of zero serious injuries.
Objective 4.03PM - Reduce the number and rate of Non-Motorized Fatalities and Serious Injuries to "0" by 2045.	Policy 4.03.1 – Implement intersection and other improvements related to safety as identified in the Cost Feasible Plan and Bike/Ped Plan	PM 4.03.1.1 – Annual percent change in the number and rate of Non-Motorized serious injury and fatal crashes.	Improved	The MPO supports and has adopted FDOT's goal of zero non-motorized fatalities and non-motorized serious injuries.

PM - *Indicates FAST Act System Performance Report Adopted Performance Measure*

Table 6-8: Connecting IRC Performance Evaluation - Goal 5

Goal 5: Preserving and maintaining the transportation system and transportation infrastructure.				
Objectives	**Policies**	**Performance Measures (PM) and Indicators (PI)**	**2045 Forecast**	**Comments**
Objective 5.01[PM] - Ensure that over 60% of the pavement area on the National Highway System (NHS) are rated "Good" by FDOT while less than 5% are rated "Poor" by FDOT	Policy 5.01.1 – Evaluate the structural integrity of pavement on the major road network and implement rehabilitation projects as appropriate in coordination with FDOT.	PM 5.01.1.1 – FDOT Pavement Condition Rating	Maintained or Improved	The 2045 Revenue Forecast for the Indian River County MPO developed by FDOT includes a commitment to non-capacity programs designed to support, operate, and maintain the state transportation system. The MPO supports and has adopted FDOT's statewide targets/ thresholds for pavement and bridge conditions.
Objective 5.02[PM] - Ensure that over 50% of the bridge deck area on the National Highway System (NHS) are rated "Good" by FDOT while less than 10% are rated "Poor" by FDOT	Policy 5.02.1 – Evaluate the structural integrity of bridges on the major road network and implement rehabilitation projects as appropriate in coordination with FDOT.	PM 5.02.1.1 – FDOT Bridge Condition Rating.	Maintained or Improved	
Objective 5.03 - Provide adequate funding to maintain and operate the non-state highway system and multimodal infrastructure.	Policy 5.03.1 – Program on an annual basis appropriate funding for maintenance and operations.	PI 5.03.1.1 - Funding included for maintenance and operations.	Maintained or Improved	

PM - *Indicates FAST Act System Performance Report Adopted Performance Measure*

Network Performance

Travel Demand Model Results

As previously discussed, the TCRPM was utilized to identify the current and projected transportation demand of persons and goods in the planning area. The model was also used to evaluate the performance of Connecting IRC against identified performance targets and indicators, as well as the forecasted performance of the roadway network. The travel demand model provides an indication of how effective the Cost Feasible Plan network is in managing congestion and travel delay. An overall analysis of volume/capacity (V/C) ratios for the roadway network was conducted to demonstrate the level of congestion expected in 2045. Maps depicting the 2045 roadway network are included on the following pages, including the number of directional lanes (**Figure 6-1**), V/C ratios (**Figure 6-2**), and annual average daily traffic (**Figure 6-3**).

Figure 6-1: Number of Lanes (2045 Network)

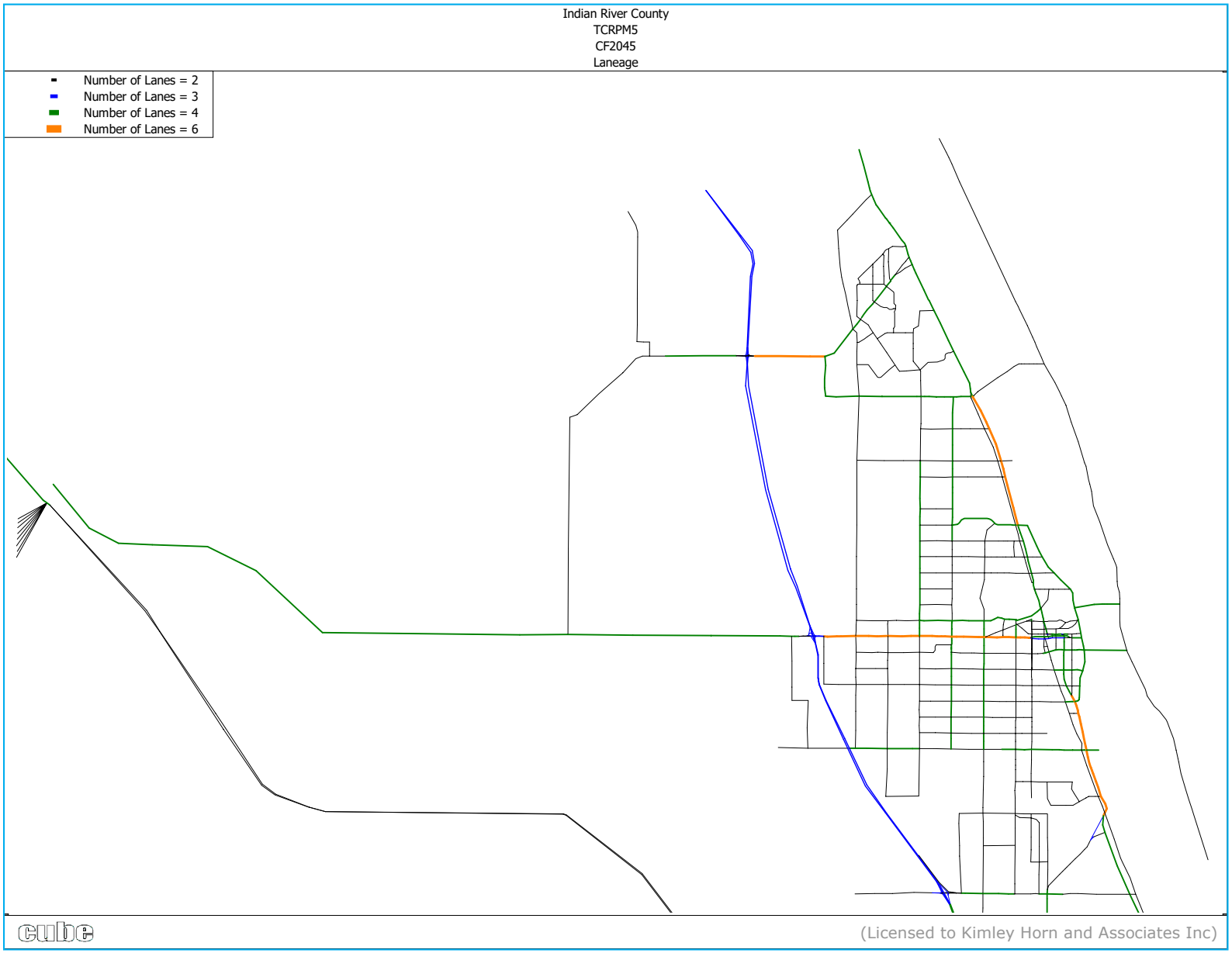


Figure 6-2: Volume-to-Capacity (2045 Network)

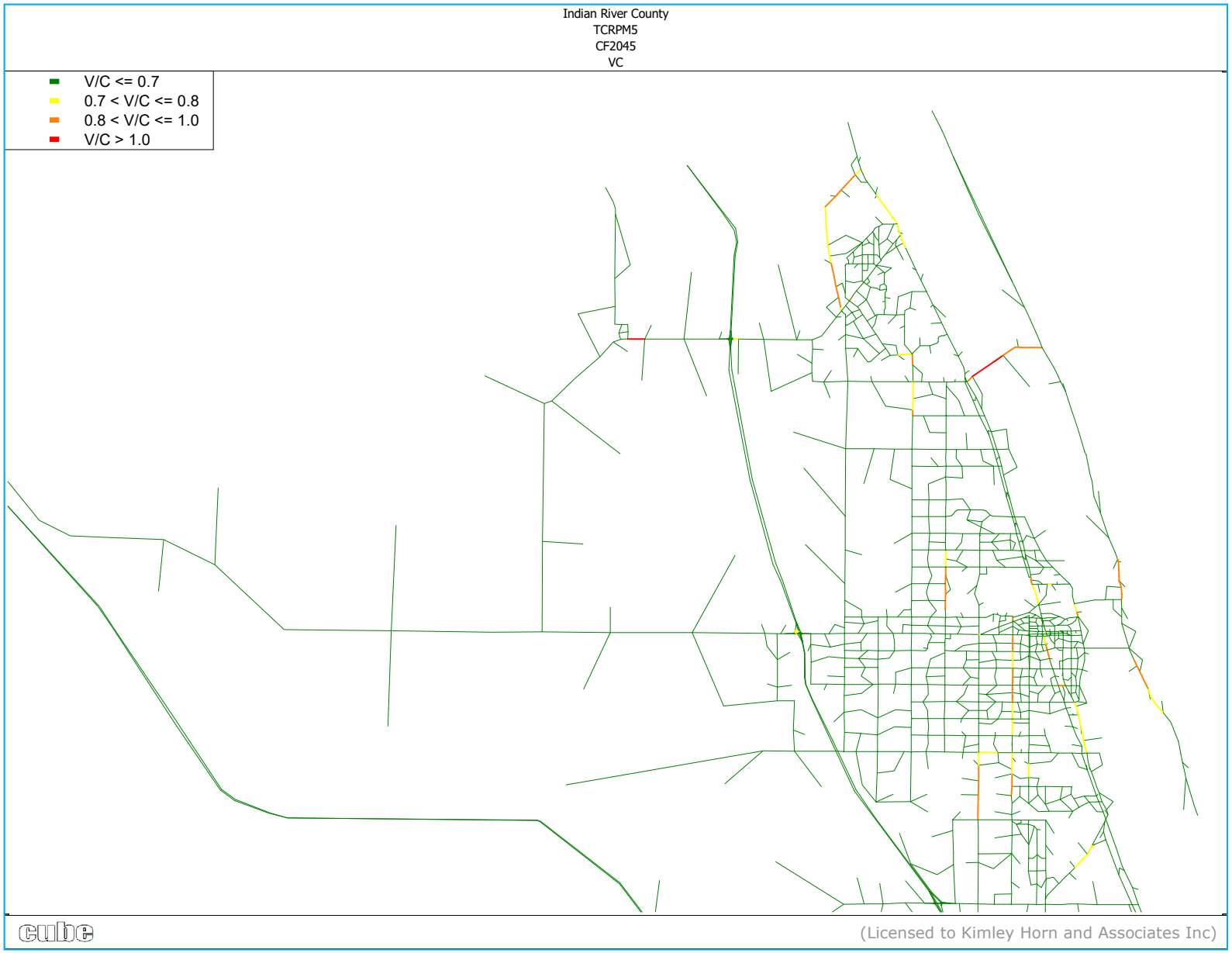
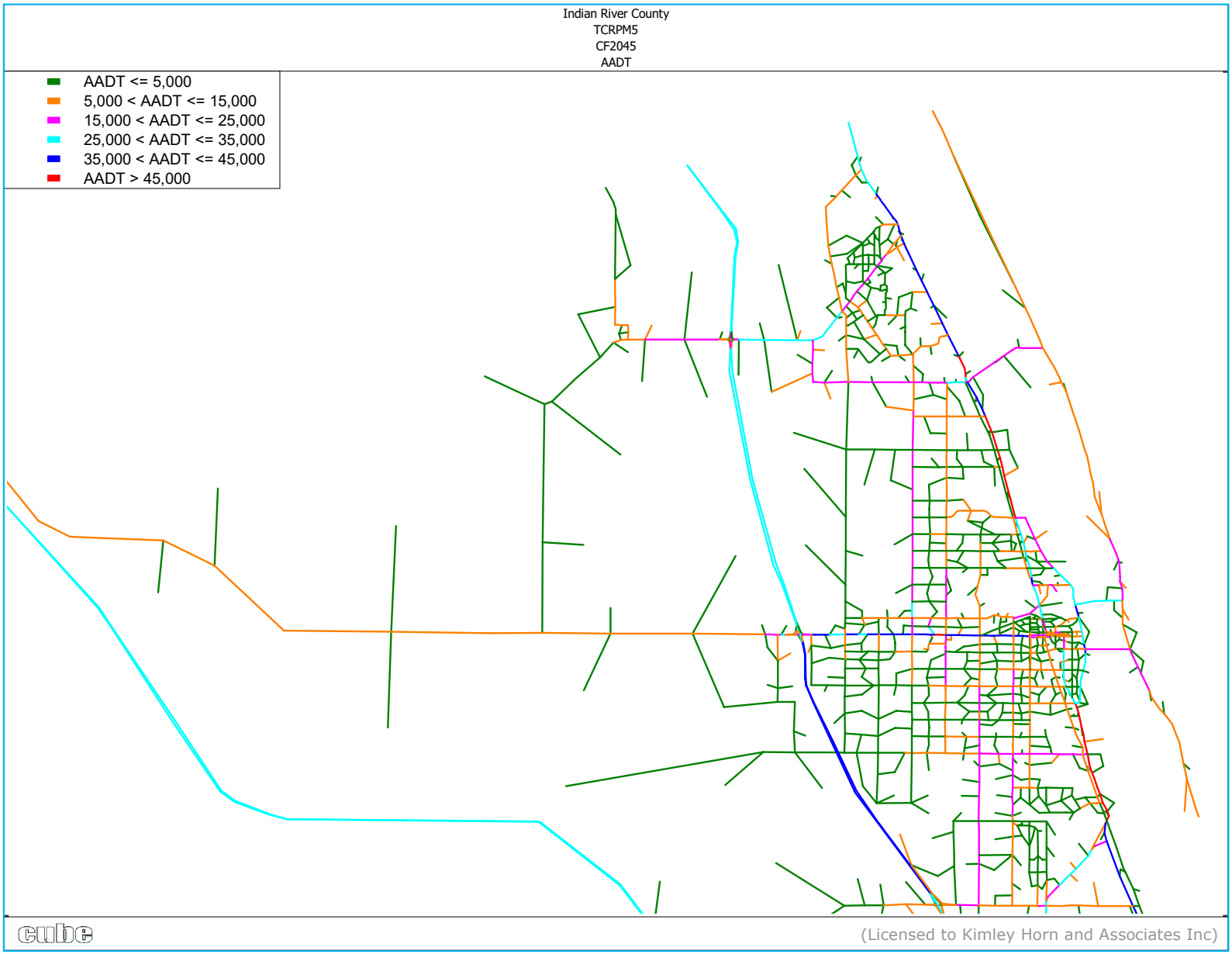


Figure 6-3: Annual Average Daily Traffic (2045 Network)



Chapter 7

Plan Implementation

CHAPTER 7 - PLAN IMPLEMENTATION

Connecting IRC 2045 LRTP will guide the MPO for the next five years by providing a vision and plan for the implementation of transportation improvements. In order to successfully implement this plan, the MPO will rely upon the support and cooperation of a number of partners, including Indian River County, local municipalities, FDOT District Four, transit service providers, neighboring jurisdictions, other TPO/MPOs, and the community at-large. The MPO will continue to collaborate with these partners to secure funding for the projects necessary to meet the needs of the community.

This plan is a key component in the planning framework of the MPO and in the process for programming projects. The LRTP's Cost Feasible Plan provides the list of projects that will support the development of the annual Priority Projects Report (PPR). The PPR subsequently determines the projects will advance into the Transportation Improvement Program (TIP) and FDOT's Five-Year Work Program.

PLAN ADOPTION

At the October 14, 2020 meeting of the MPO Board, the draft Connecting IRC 2045 LRTP Cost Feasible Plan was approved for public outreach and the public comment period was initiated. The Connecting IRC 2045 LRTP was formally adopted by the MPO Board on December 9, 2020.

COMPLIANCE WITH THE FAST ACT

Connecting IRC 2045 is governed by the Fixing America's Surface Transportation Act (FAST Act), which was signed into law on December 4, 2015. The FAST Act enacted changes to the MAP-21 planning processes for the development of long range transportation plans, including the incorporation of Transportation Performance Management and the addition of new planning factors. The MPO has been proactive in addressing FAST Act requirements and incorporating them into the development of this LRTP and other core planning activities.

LRTP AMENDMENT PROCESS

This Long Range Transportation Plan is not a static document. LRTP changes can occur due to shifts in availability of funding or updated project priorities, among other reasons. The FDOT provides guidance to MPOs guidance to implement amendments to the LRTP. The MPO may need to revise the LRTP outside of the standard 5-year update cycle. The Code of Federal Regulations defines two types of revisions—administrative modifications and amendments.

Administrative Modification

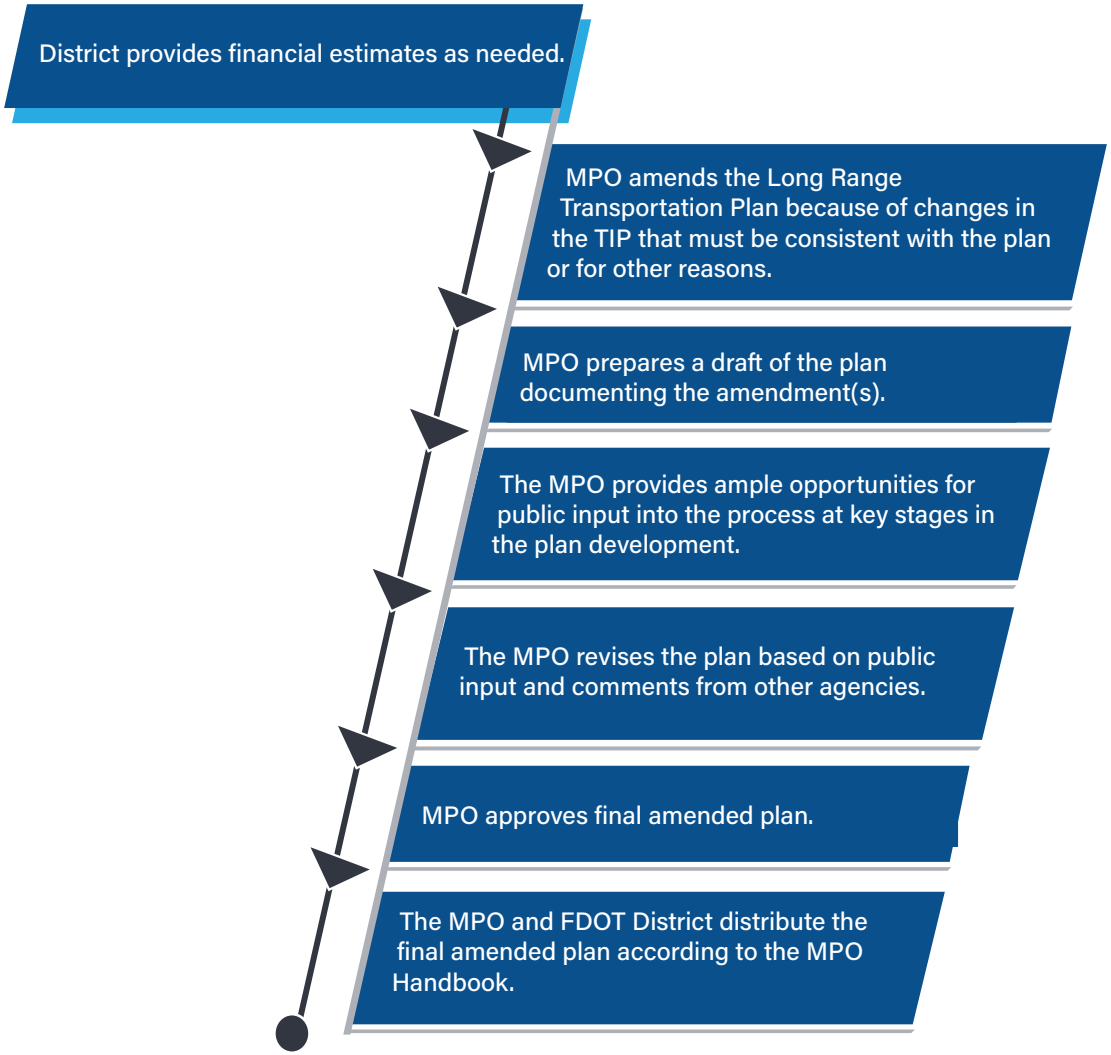
An administrative modification is a minor revision to the LRTP (or TIP) that includes minor changes to project/project phase costs, minor changes to funding sources of previously included projects, and minor changes to project/project phase initiation dates. An administrative modification is a revision that does not require public review and comment, a re-demonstration of fiscal constraint, or a conformity determination (in nonattainment and maintenance areas).

Plan Amendment

An amendment means a revision to a long-range statewide or metropolitan transportation plan, TIP, or STIP, that involves a major change to a project included in a LRTP, TIP, or STIP, including the addition or deletion of a project or a major change in project cost, project/project phase initiation dates, or a major change in design concept or design scope (e.g. changing project termini or the number of through traffic lanes or changing the number of stations in the case of fixed guideway transit projects). Changes to projects that are included only for illustrative purposes do not require an amendment. An amendment is a revision that requires public review and comment and a re-demonstration of fiscal constraint.

The LRTP can be revised at any time. It is important to note that the MPO does not have to extend the planning horizon of the LRTP for administrative modifications or for amendments. Florida Statute requires that the MPO Board adopt amendments to the LRTP by a recorded roll call vote or hand-counted vote of the majority of the membership present. The amended LRTP is to be distributed in accordance with the FDOT MPO Handbook requirements. **Figure 7-1**, summarizes the LRTP amendment process.

Figure 7-1: LRTP Amendment Process



Appendix A

System Performance Report

Indian River County
Metropolitan Planning Organization

2045 Long-Range Transportation Plan
System Performance Report

September 2020

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1 - PURPOSE 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 (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).[1] 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 Indian River County MPO must include a description of the performance measures and targets 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 targets, and reports on progress achieved in meeting the targets in comparison with baseline data and previous reports.

The Indian River County MPO 2040 Long-Range Transportation Plan was adopted on December 9, 2015. This plan will be superseded by the 2045 LRTP in December 2020. Per the Planning Rule, the System Performance Report for the Indian River is included for the required Highway Safety (PM1), Bridge and Pavement (PM2), System Performance (PM3), Transit Asset Management.

This document 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).

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

2 - HIGHWAY SAFETY MEASURES (PM1)

Effective April 14, 2016, the FHWA established five highway safety performance measures[2] 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 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 2020. For the 2020 HSIP annual report, FDOT established statewide at "0" for each performance measure to reflect Florida's vision of zero deaths.

The Indian River County MPO agreed to support FDOT's statewide safety performance targets on February 12, 2020.

Statewide system conditions for each safety performance measure are included in Table 2.1, along with system conditions in the Indian River County metropolitan planning area. System conditions reflect baseline performance (2013-2017). The latest safety conditions will be updated annually on a rolling five-year window and reflected within each subsequent system performance report, to track performance over time in relation to baseline conditions and established targets.

Table 2.1. Highway Safety (PM1) Conditions and Performance

	Florida Statewide Baseline Performance (Five-Year Rolling Average)			Calendar Year 2020 Florida Performance Targets
Performance Measures	**2012-2016**	**2013-2017**	**2014-2018**	
Number of Fatalities	2,688.2	2,825.4	2,972.0	0
Rate of Fatalities per 100 Million VMT	1.33	1.36	1.39	0
Number of Serious Injuries	20,844.2	20,929.2	20,738.4	0
Rate of Serious Injuries per 100 Million VMT	10.36	10.13	9.77	0
Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	3,294.4	3,304.2	3,339.6	0

[2] 23 CFR Part 490, Subpart B

Baseline Conditions

After FDOT set its Safety Performance Measures targets in 2018, both FDOT and the Indian River County MPO established 2017 Baseline Safety Performance Measures. To evaluate baseline Safety Performance Measures, the most recent five-year rolling average (2013-2017) of crash data and VMT were utilized. Table 2.2 presents the Baseline Safety Performance Measures for Florida and the Indian River County MPO.

Table 2.2. Baseline Safety Performance Measures

Performance Measure	*Florida*	*Indian River County MPO*
Number of Fatalities	2,825.4	*24.4*
Rate of Fatalities per 100 Million VMT	1.36	*1.538*
Number of Serious Injuries	20,929.2	*129.9*
Rate of Serious Injuries per 100 Million VMT	10.13	*8.15*
Number of Non-Motorized Fatalities and NonMotorized Serious Injuries	3,304.2	*20.0*

Trends Analysis

The process used to develop the MPO's Long-Range Transportation Plan includes analysis of safety data trends, including the location and factors associated with crashes with emphasis on fatalities and serious injuries. These data are used to help identify regional safety issues and potential safety strategies for the LRTP and TIP.

Coordination with Statewide Safety Plans and Processes

The Indian River County MPO 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 Indian River County 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 (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 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 Indian River County 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 LRTP identifies safety needs within the metropolitan planning area and provides funding for targeted safety improvements. One of the LRTP's goals is "Maintaining a safe transportation system for all users.", which includes the following objectives and policies:

- Reduce the number and rate of crash Fatalities to 0 by 2045
    - Policy 4.01.1 – Implement intersection and other improvements related to safety as identified in the Cost Affordable Plan including Congestion Management Process plan.
- Reduce the number and rate of Serious Injuries to 0 by 2045.
    - Policy 4.02.1 – Implement intersection and other improvements related to safety as identified in the Cost Affordable Plan including Congestion Management Process plan.
- Reduce the number and rate of Non-Motorized Fatalities and Serious Injuries to 0 by 2045.
    - Policy 4.03.1 – Implement intersection and other improvements related to safety as identified in the Cost Affordable Plan and Bike/Ped Plan.

The Indian River County 2045 LRTP will provide information from the FDOT HSIP annual reports to track the progress made toward the statewide safety performance targets. The MPO will document the progress on any safety performance targets established by the MPO for its planning area.

3 - 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.

The four pavement condition measures represent the percentage of lane-miles on the Interstate and non-Interstate NHS that are in good condition or poor condition. The PM2 rule defines NHS pavement types as asphalt, jointed concrete, or continuous concrete. Five metrics are used to assess pavement condition:

- International Roughness Index (IRI) - an indicator of roughness; applicable to asphalt, jointed concrete, and continuous concrete pavements;
- Cracking percent - percentage of the pavement surface exhibiting cracking; applicable to asphalt, jointed concrete, and continuous concrete pavements;
- Rutting - extent of surface depressions; applicable to asphalt pavements only;
- Faulting - vertical misalignment of pavement joints; applicable to jointed concrete pavements only; and
- Present Serviceability Rating (PSR) – a quality rating applicable only to NHS roads with posted speed limits of less than 40 miles per hour (e.g., toll plazas, border crossings). States may choose to collect and report PSR for applicable segments as an alternative to the other four metrics.

For each pavement metric, a threshold is used to establish good, fair, or poor condition. Using these metrics and thresholds, 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. Asphalt pavement is assessed using the IRI, cracking, and rutting metrics, while jointed concrete is assessed using IRI, cracking, and faulting. For these two pavement types, a pavement section is rated good if the rating for all three metrics are good, and poor if the ratings for two or more metrics are poor.

Continuous concrete pavement is assessed using the IRI and cracking metrics. For this pavement type, a pavement section is rated good if both metrics are rated good, and poor if both metrics are rated poor.

If a state collects and reports PSR for any applicable segments, those segments are rated according to the PSR scale. For all three pavement types, sections that are not good or poor are rated 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 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.

MPOs must establish four-year targets for all six measures. MPOs can either agree to program projects that will support the statewide targets or establish their own quantifiable targets for the MPO'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 MPO 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 Indian River County MPO 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 3.1 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 targets established by FDOT for the State.

Table 3.1. Pavement and Bridge Condition (PM2) Performance and Targets

Performance Measures	Statewide (2017 Baseline)	Statewide 2019 Actual	Statewide 2-year Target (2019)	Statewide 4-year Target (2021)	Indian River County MPO (2017 Baseline)	Indian River County MPO 2019 Actual
Percent of Interstate pavements in good condition	66.0%	68.5%	n/a	≥60%	98.4%	84.3%
Percent of Interstate pavements in poor condition	0.1%	0.2%	n/a	<5%	0.0%	0.0%
Percent of non-Interstate NHS pavements in good condition	76.4%	41.0%	≥40%	≥40%	51.5%	53.9%
Percent of non-Interstate NHS pavements in poor condition	3.6%	0.2%	<5%	<5%	1.0%	0.2%
Percent of NHS bridges (by deck area) in good condition	67.7%	74.19%	≥50%	≥50%	TBD	TBD
Percent of NHS bridges (by deck area) in poor condition	1.2%	0.40%	<10%	<10%	TBD	TBD

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. 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 and the final TAMP was approved on June 28, 2019.

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 Indian River County MPO agreed to support FDOT's pavement and bridge condition performance targets in October 2018. By adopting FDOT's targets, the Indian River County MPPO agrees to plan and program projects that help FDOT achieve these targets.

The Indian River County MPO 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 Indian River County MPO 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 Indian River County 2045 LRTP seeks to address system preservation, identifies infrastructure needs within the metropolitan planning area, and provides funding for targeted improvements. Goal 5 of the 2045 LRTP is "Preserving and maintaining the transportation system and transportation infrastructure", which includes the following objectives and policies:

- Ensure that over 60% of the pavement area on the National Highway System (NHS) are rated "Good" by FDOT while less than 5% are rated "Poor" by FDOT
    - Policy 5.01.1 – Evaluate the structural integrity of bridges on the major road network and implement rehabilitation projects as appropriate in coordination with FDOT.
- Ensure that over 50% of the bridge deck area on the National Highway System (NHS) are rated "Good" by FDOT while less than 10% are rated "Poor" by FDOT
    - Policy 5.02.1 – Evaluate the structural integrity of bridges on the major road network and implement rehabilitation projects as appropriate in coordination with FDOT.

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

4 - 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 MPOs 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 measures 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 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 consider 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^{th} percentile) to a normal travel time (50^{th} 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 MPOs 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 reliable[3]; and
- Two-year and four-year targets for truck travel time reliability

MPOs must establish four-year performance targets for all three measures within 180 days of FDOT establishing statewide targets. MPOs establish targets by either agreeing to program projects that will support the statewide targets or setting quantifiable targets for the MPO'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 MPO 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 Indian River County MPO 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 PM3 measure for the state and for the MPO planning area as well as the two-year and four-year targets established by FDOT for the state.

[3] 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 4.1. System Performance and Freight (PM3) - Performance and Targets

Performance Measures	Statewide (2017 Baseline)	Statewide 2019 Actual	Statewide 2-year Target (2019)	Statewide 4-year Target (2021)	Indian River County MPO (2017 Baseline)	Indian River County MPO 2019 Actual
Percent of person-miles on the Interstate system that are reliable	82.2%	83%	≥75.0%	≥70.0%	100%	100%
Percent of person-miles on the non-Interstate NHS that are reliable	84.0%	87%	n/a	≥50.0%	94%	94%
Truck travel time reliability index (TTTR)	1.43	1.45	≤1.75	≤2.00	1.08	1.06

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 Indian River County MPO agreed to support FDOT's PM3 targets on October 17, 2018. By adopting FDOT's targets, the Indian River County MPO agrees to plan and program projects that help FDOT achieve these targets.

The Indian River County MPO 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 Indian River County MPO 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 Indian River County MPO 2045 LRTP seeks to address system reliability and congestion mitigation through various means, including capacity expansion and operational improvements. Goal 1 of the 2045

LRTP is "Providing an efficient transportation system that is connected, responsive, aesthetically pleasing and meets the needs of all users.", which includes the following objectives and policies:

- Ensure that over 60% of the pavement area on the National Highway System (NHS) are rated "Good" by FDOT while less than 5% are rated "Poor" by FDOT
    - Policy 1.05.1 – Incorporate Intelligent Transportation System (ITS) and/or Connected Vehicle architecture into all new roadway projects.
- Ensure that 50% of Person-Miles (Non-Interstate) and 75% of Person-Miles (Interstate) on the National Highway System are Reliable
    - Policy 1.06.1 – Implement roadway improvements identified in the 2045 Cost Feasible Plan, consistent with the Interim Year Roadway Improvement Sets.

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

5 - 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: equipment, rolling stock, infrastructure, and facilities. The rule became effective on October 1, 2018.

Table 5.1 below identifies performance measures outlined in the final rule for transit asset management.

Table 5.1. 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.

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

When establishing transit asset management targets, the MPO 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 MPO planning area. In cases where two or more providers operate in an MPO planning area and establish different targets for a given measure, the MPO has the option of coordinating with the providers to establish a single target for the MPO planning area, or establishing a set of targets for the MPO planning area that reflects the differing transit provider targets.

To the maximum extent practicable, transit providers, states, and MPOs 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 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 20 transit providers participated in the FDOT Group TAM Plan and continue to coordinate with FDOT on establishing and reporting group targets to FTA through the National Transit Database (NTD) (Table 5.2). 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. Updated targets were submitted to NTD in 2019.

Table 5.2. 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 Transit Nassau County Transit	 Ride Solutions Levy County Transit Suwannee River Economic Council
3	Tri-County Community Council Big Bend Transit Gulf County ARC	Calhoun Transit Liberty County Transit JTRANS Wakulla Transit
4	*No participating providers*	
5	Sumter Transit Marion Transit	
6	Key West Transit	
7	*No participating providers*	

The Indian River County MPO is served by GoLine, a Tier II provider. There are no Tier I providers within the MPO's planning area.

On September 12, 2018, the Indian River County MPO agreed to support GoLine's transit asset management targets, 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 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 summarizes both existing conditions for the most recent year available, and the targets.

On September 12, 2018, the Indian River County MPO established transit asset targets for the MPO planning area, as summarized in Table 5.5:

Table 5.5. Indian River County MPO Transit Asset Management Targets

Asset Category - Performance Measure	Asset Class	Current Asset Condition (Active Fleet)	Current Asset Condition (Active + Spares)	FY2021 Target
Revenue Vehicles (Fixed Route)				
Age - % of revenue vehicles within a particular asset class that have met or exceeded their ULB	Bus	0%	0%	25%
	Cutaway Bus	0%	28%	50%
Revenue Vehicles (Demand Response)				
Age - % of revenue vehicles within a particular asset class that have met or exceeded their ULB	Cutaway Bus	40%	61%	67%
	Van	0%	75%	67%
Equipment				
Age - % of non-revenue vehicles within a particular asset class that have met or exceeded their ULB	Truck	0%	0%	50%

Asset Category - Performance Measure	Asset Class	Current Asset Condition	FY2021 Target
Facilities			
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Administration/ Maintenance	0%	0%
	Passenger Facilities	0%	0%

These targets for the MPO planning area reflect the targets established by GoLine through their Transit Asset Management Plans, as well as the statewide targets established by FDOT for those providers participating in the Group Transit Asset Management Plan.

TAM Performance

The Indian River County MPO 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 GoLine Transit Development Plan, and the current Indian River County MPO 2045 LRTP.

To support progress towards TAM performance targets, transit investment and maintenance funding in the 2045 LRTP totals $169.7 million (YOE), approximately 16% of total LRTP funding. Improving the State of Good Repair (SGR) of capital assets is an overarching goal of this process.

6 - 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.

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.

Each provider of public transportation that is subject to the rule must certify it has a PTASP, including transit safety targets for the above measures, in place no later than July 20, 2020. However, on April 22, 2020, FTA issued a Notice of Enforcement Discretion that extends the PTASP deadline to December 31, 2020 due to the extraordinary operational challenges presented by the COVID-19 public health emergency.

Once the public transportation provider establishes targets, it must make the targets available to MPOs to aid in the planning process. MPOs have 180 days after receipt of the PTASP targets to establish transit safety targets for the MPO planning area. In addition, the Indian River County MPO must reflect those targets in any LRTP and TIP updated on or after July 20, 2021.

In Florida, each Section 5307 and 5311 transit provider must develop a System Safety Program Plan (SSPP) under Chapter 14-90, Florida Administrative Code. FDOT technical guidance recommends that Florida's transit agencies revise their existing SSPPs to be compliant with the new FTA PTASP requirements.

Transit Provider Coordination with States and MPOs

Key considerations for MPOs and transit agencies:

- Transit operators are required to review, update, and certify their PTASP annually.
- A transit agency must make its safety performance targets available to states and MPOs to aid in the planning process, along with its safety plans.
- To the maximum extent practicable, a transit agency must coordinate with states and MPOs in the selection of state and MPO safety performance targets.
- MPOs are required to establish initial transit safety targets within 180 days of the date that public transportation providers establish initial targets. MPOs are not required to establish transit safety targets annually each time the transit provider establishes targets. Instead, subsequent MPO targets must be established when the MPO updates the TIP or LRTP. When establishing transit safety targets, the MPO can either agree to program projects that will support the transit provider targets or establish its own regional transit targets for the MPO planning area. In cases where two or more providers operate in an MPO planning area and establish different targets for a given measure, the MPO has the option of coordinating with the providers to establish a single target for the MPO planning area, or establishing a set of targets for the MPO planning area that reflects the differing transit provider targets.
- MPOs and states must reference those targets in their long-range transportation plans. States and MPOs must each describe the anticipated effect of their respective transportation improvement programs toward achieving their targets.

Over the course of 2020-2021, the Indian River County MPO will coordinate with public transportation providers in the planning area on the development and establishment of transit safety targets. LRTP amendments or updates after July 20, 2021 will include the required details about transit safety performance data and targets.

Appendix B

Summary of TIP Roadway (Capacity) Projects for FY 2020/21 - 2024/25

Summary of TIP Roadway (Capacity) Projects for FY 2020/21 - 2024/25

Indian River County

FM #	Project	From Street	To Street	Mi.	Improv Type	PD&E Time	PD&E Cost (YOE)	PD&E Source	PE Time	PE Cost (YOE)	PE Source	ROW Time	ROW Cost (YOE)	ROW Source	CST Time	CST Cost (YOE)	CST Source	Total Cost (YOE)	Funded Level	2025-2045 Project ID**
Non-SIS																				
4363792	66th Ave. Widening*	69th Street	CR 510	2.02	Widen to 4 lanes	< 2020/21	N/A	N/A	< 2020/21	N/A	N/A	< 2020/21	N/A	N/A	2020/21-2021/22	$ 13,194,307	TRIP, LF, TRWR	$ 13,194,307	FULL	N/A
4056067	CR-510 Widening	CR 512	87th Avenue	1.00	Widen to 4 lanes	< 2020/21	N/A	N/A	< 2020/21	N/A	N/A	< 2020/21	N/A	N/A	2024/25	$ 16,407,905	SL, SN, SA	$ 16,407,905	FULL	N/A
4317591	SR 60 @ 43rd Avenue Intersection (Right-of-Way)	--	--	--	Widen/resurface	< 2020/21	N/A	N/A	< 2020/21	N/A	N/A	2020/21	$ 464,024	LF, CIGP	TBD	TBD	TBD	$ 464,024	FULL	N/A
2308792	82nd Avenue (New Road Construction)	69th Street	CR 510	2.05	Construct 2-lane road	< 2020/21	N/A	N/A	< 2020/21	N/A	N/A	2020/21-2021/22	$ 1,251,438	TALT, SN, CM	TBD	TBD	TBD	$ 1,251,438	PARTIAL	12
4416921	CR 510 Widening	58th Avenue	US 1	0.60	Widen to 4 lanes	2021/22-2022/23	$ 2,005,000	CM, SA, SN	2023/24	$ 1,910,000	SA, SL	TBD	TBD	TBD	TBD	TBD	TBD	$ 3,915,000	PARTIAL	15
4056063	CR 510 Widening	82nd Avenue	58th Avenue	3.26	Widen to 4 lanes	< 2020/21	N/A	N/A	< 2020/21	N/A	N/A	2020/21-2022/23	$ 11,521,800	GFSA, SN, SL, TALN, TALL, CM, SA	TBD	TBD	TBD	$ 11,521,800	PARTIAL	14
4056064	CR 510 Widening	CR 512	82nd Avenue	2.20	Widen to 4 lanes	< 2020/21	N/A	N/A	< 2020/21	N/A	N/A	2020/21-2022/23	$ 3,307,760	SL, CM	TBD	TBD	TBD	$ 3,307,760	PARTIAL	13
4315211	Oslo Road Widening	82nd Avenue	58th Avenue	3.01	Widen to 4 lanes	< 2020/21	N/A	N/A	< 2020/21	N/A	N/A	2020/21-2021/22	$ 5,632,798	SA	TBD	TBD	TBD	$ 5,632,798	PARTIAL	6
4317243	US 1 Widening	69th Street	CR 510	2.40	Widen to 6 lanes	< 2020/21	N/A	N/A	< 2020/21	N/A	N/A	2022/23-2024/25	$ 21,199,748	DIH, DDR, DS, CM	TBD	TBD	TBD	$ 21,199,748	PARTIAL	5
4317241	US 1 Widening	53rd Street	CR 510	4.80	Widen to 6 lanes	2020/21	$ 40,000	DDR	2020/21	$ 410,000	DS	TBD	TBD	TBD	TBD	TBD	TBD	$ 450,000	PARTIAL	5
4416931	US 1/Aviation Blvd. Intersection	--	--	--	Intersection improvements	2020/21-2021/22	$ 2,505,000	DDR, DIH	2023/24-2024/25	$ 1,260,000	DIH, DDR	TBD	TBD	TBD	TBD	TBD	TBD	$ 3,765,000	PARTIAL	2
SIS																				
4130482	I-95/Oslo Rd. (9th Street SW) Interchange	--	--	--	New interchange	< 2020/21	N/A	N/A	< 2020/21	N/A	N/A	2020/21-2023/24	$ 13,225,595	ACFP, ACNP	TBD	TBD	TBD	$ 13,225,595	PARTIAL	1
4130485	I-95/Oslo Rd. (9th Street SW) Interchange	--	--	--	New interchange	< 2020/21	N/A	N/A	2022/23-2023/24	$ 39,916	DIH	TBD	TBD	TBD	TBD	TBD	TBD	$ 39,916	PARTIAL	1

Note: Information provided is based on the April 13, 2020 version of the TIP

All projects will use a combination of federal and state funding unless noted with an asterisk (*). Projects noted with an asterisk (*) will use local funds only. Additional information on project funding and phases is available in the current Transportation Improvement Program.

**Please refer to the "ID" column in the Appendix C and Appendix D tables.

Appendix C

Cost Feasible Capacity Projects Year of Expenditure (YOE)

2045 LRTP Cost Feasible Capacity Projects (YOE)

Indian River County

2045 Capacity Projects: Fully Funded

ID	On Street	From Street	To Street	Mi.	Improv Type	PD&E Time	PD&E Cost (YOE)	PD&E Source	PE Time	PE Cost (YOE)	PE Source	ROW Time	ROW Cost (YOE)	ROW Source	CST Time	CST Cost (YOE)	CST Source	Funded Level
Strategic Intermodal System (SIS) Projects																		
1	SR-9/I-95	@Oslo Rd	--	N/A	Int. Imp.	COMPLETE	N/A	SIS	COMPLETE	N/A	SIS	COMPLETE	N/A	SIS	2026-2030	$ 50,382,000	SIS	Fully Funded
State Projects																		
2	26th Street/Aviation Blvd	@US 1/SR 5	--	N/A	Int. Imp.	COMPLETE	$ 1,250,000	Prod. Sup.	2020-2024	$ 2,500,000	Prod. Sup.	2031-2035	$ 31,000,000	OR	2036-2045	$ 51,250,000	OR	Fully Funded
3	CR 510	@US 1/SR 5	--	N/A	Int. Imp.	2026-2030	$ 594,000	Prod. Sup.	2026-2030	$ 1,188,000	Prod. Sup.	2026-2030	$ 6,600,000	OR	2031-2035	$ 13,950,000	OR	Fully Funded
4	Indian River Blvd (SR 60)	20th Street	Merrill P. Barber Brg	1.00	4D-4D+	2025	$ 292,000	Prod. Sup.	2026-2030	$ 649,000	Prod. Sup.	2031-2035	$ 6,096,000	OR	2036-2045	$ 10,077,000	OR	Fully Funded
5	US 1	53rd Street	CR 510	4.80	4D-6D	2020-2024	$ 450,000	Prod. Sup.	2026-2030	$ 3,115,000	Prod. Sup.	2026-2030	$ 27,984,000	OR	2036-2045	$ 48,381,000	OR	Fully Funded
++	Intelligent Transportation Systems/Autonomous, Connected, Electric, and Shared Vehicles					2025	$ 143,000	Prod. Sup.	2025	$ 29,000	Prod. Sup.	N/A			2025	$ 2,850,000	OR	Fully Funded
++	Intelligent Transportation Systems/Autonomous, Connected, Electric, and Shared Vehicles					2026-2030	$ 510,000	Prod. Sup.	2026-2030	$ 102,000	Prod. Sup.	N/A			2026-2030	$ 10,199,000	OR	Fully Funded
++	Intelligent Transportation Systems/Autonomous, Connected, Electric, and Shared Vehicles					2031-2035	$ 205,000	Prod. Sup.	2031-2035	$ 41,000	Prod. Sup.	N/A			2031-2035	$ 4,109,000	OR	Fully Funded
++	Intelligent Transportation Systems/Autonomous, Connected, Electric, and Shared Vehicles					2036-2045	$ 1,328,000	Prod. Sup.	2036-2045	$ 266,000	Prod. Sup.	N/A			2036-2045	$ 26,562,000	OR	Fully Funded
Local Projects																		
6	Oslo Road	I-95	58th Avenue	3.30	2U-4D	COMPLETE	$ 884,000	County	COMPLETE	$ 1,768,000	County	2020-2024	$ 5,633,000	County	2026-2030	$ 23,339,000	County	Fully Funded
7	74th Avenue*	Oslo Road	12th Street	2.57	00-2U	2026-2030	$ 830,000	County	2026-2030	$ 1,661,000	County	2036-2045	$ 12,896,000	County	2036-2045	$ 25,792,000	County	Fully Funded
8	43rd Avenue	Oslo Road	16th Street	3.00	2U-4D	2026-2030	$ 1,061,000	County	2026-2030	$ 2,122,000	County	2036-2045	$ 16,475,000	County	2036-2045	$ 32,950,000	County	Fully Funded
9	26th Street/Aviation Blvd	66th Avenue	43rd Avenue	1.95	2U-4D	2026-2030	$ 690,000	County	2026-2030	$ 1,379,000	County	2036-2045	$ 8,567,000	County	2036-2045	$ 21,418,000	County	Fully Funded
10	26th Street/Aviation Blvd	43rd Avenue	US 1	1.95	2U-4D	2026-2030	$ 690,000	County	2026-2030	$ 1,379,000	County	2031-2035	$ 6,478,000	County	2031-2035	$ 16,194,000	County	Fully Funded
11	82nd Avenue	26th Street	69th Street	5.02	2S-2U	2026-2030	$ 1,623,000	County	2026-2030	$ 3,246,000	County	COMPLETE	$ 12,294,000	County	2031-2035	$ 38,112,000	County	Fully Funded
12	82nd Avenue	69th Street	CR 510	2.05	2S-2U	COMPLETE	$ 501,000	County	COMPLETE	$ 1,002,000	County	2020-2024	$ 1,251,000	County	2025	$ 11,926,000	County	Fully Funded
13	CR 510	87th Street	82nd Avenue	1.24	2U-4D	COMPLETE	$ 333,000	OR	COMPLETE	$ 667,000	OR	2020-2024	$ 4,667,000	OR	2031-2035	$ 10,335,000	OR	Fully Funded
14	CR 510	82nd Avenue	58th Avenue	3.26	2U-4D	COMPLETE	$ 873,000	OR	COMPLETE	$ 1,747,000	OR	2020-2024	$ 11,522,000	OR	2026-2030	$ 23,056,000	OR	Fully Funded
15	CR 510	58th Avenue	US 1	0.60	2U-4D	2020-2024	$ 3,915,000	County	2026-2030	$ 424,000	County	2026-2030	$ 2,970,000	County	2031-2035	$ 4,983,000	County	Fully Funded
16	82nd Avenue	CR 510	Laconia	0.55	2S-2U	2025	$ 160,000	County	2026-2030	$ 356,000	County	2026-2030	$ 1,778,000	County	2036-2045	$ 5,523,000	County	Fully Funded
17	CR 512	I-95	CR 510	2.56	4D-6D	2026-2030	$ 829,000	County	2026-2030	$ 1,659,000	County	2026-2030	$ 8,293,000	County	2036-2045	$ 25,758,000	County	Fully Funded
18	CR 512	Willow Street	I-95	2.45	2U-4D	2026-2030	$ 866,000	County	2026-2030	$ 1,733,000	County	2031-2035	$ 10,102,000	County	2036-2045	$ 26,912,000	County	Fully Funded

2045 Capacity Projects: Partially Funded

ID	On Street	From Street	To Street	Mi.	Improv Type	PD&E Time	PD&E Cost (YOE)	PD&E Source	PE Time	PE Cost (YOE)	PE Source	ROW Time	ROW Cost (YOE)	ROW Source	CST Time	CST Cost (YOE)	CST Source	Funded Level
Local Projects																		
19	53rd Street	66th Avenue	82nd Avenue	2.00	00-2U	2026-2030	$ 647,000	County	2026-2030	$ 1,293,000	County	2026-2030	$ 6,465,000	County	Unfunded	$ 20,082,000	OR	Partially Funded
20	12th Street*	74 Avenue	58th Avenue	2.00	2S-2U	2026-2030	$ 647,000	County	2026-2030	$ 1,293,000	County	COMPLETE	$ 4,898,000	County	Unfunded	$ 20,082,000	County	Partially Funded

2045 Capacity Projects: Unfunded Needs

ID	On Street	From Street	To Street	Mi.	Improv Type	PD&E Time	PD&E Cost (YOE)	PD&E Source	PE Time	PE Cost (YOE)	PE Source	ROW Time	ROW Cost (YOE)	ROW Source	CST Time	CST Cost (YOE)	CST Source	Funded Level
Local Projects																		
21	66th Avenue	CR 510	Barber Street	0.80	2U-4D	Unfunded	$ 440,000	N/A	Unfunded	$ 880,000	N/A	Unfunded	$ 4,401,000	N/A	Unfunded	$ 8,801,000	N/A	Unfunded
22	Roseland Road	CR 512	US 1	4.70	2U-4D	Unfunded	$ 2,583,000	N/A	Unfunded	$ 5,167,000	N/A	Unfunded	$ 25,834,000	N/A	Unfunded	$ 51,668,000	N/A	Unfunded
23	5th Street SW	20th Avenue	11th Square SW	0.73	2S-2U	Unfunded	$ 366,000	N/A	Unfunded	$ 733,000	N/A	Unfunded	$ 3,665,000	N/A	Unfunded	$ 7,330,000	N/A	Unfunded
24	43rd Avenue	Oslo Road	St. Lucie County Line	2.08	2U-4D	Unfunded	$ 1,142,000	N/A	Unfunded	$ 2,284,000	N/A	Unfunded	$ 11,422,000	N/A	Unfunded	$ 22,845,000	N/A	Unfunded
25	27th Avenue	Oslo Road	St. Lucie County Line	2.03	2U-4D	Unfunded	$ 1,117,000	N/A	Unfunded	$ 2,235,000	N/A	Unfunded	$ 11,175,000	N/A	Unfunded	$ 22,349,000	N/A	Unfunded
26	58th Avenue	Oslo Road	St. Lucie County Line	2.09	00-2U	Unfunded	$ 1,051,000	N/A	Unfunded	$ 2,101,000	N/A	Unfunded	$ 10,506,000	N/A	Unfunded	$ 21,011,000	N/A	Unfunded
27	5th Street SW	11th Square SW	Old Dixie Highway	0.69	2S-2U	Unfunded	$ 348,000	N/A	Unfunded	$ 696,000	N/A	Unfunded	$ 3,479,000	N/A	Unfunded	$ 6,958,000	N/A	Unfunded

+ Operational capacity improvements to be determined

++ Systemwide Improvements

Note: YOE costs were developed using inflation factors provided in FDOT Revenue Forecasting Guidebook

All projects will use a combination of federal and state funding unless noted with an asterik (*). Projects noted with an asterik (*) will use local funds only.

Appendix D

Cost Feasible Capacity Projects Present Day Cost (PDC)

2045 LRTP Cost Feasible Capacity Projects (PDC)

Indian River County

2045 Capacity Projects: Fully Funded

ID	On Street	From Street	To Street	Mi.	Improv Type	PD&E Time	PD&E Cost (PDC)	PD&E Source	PE Time	PE Cost (PDC)	PE Source	ROW Time	ROW Cost (PDC)	ROW Source	CST Time	CST Cost (PDC)	CST Source	Funded Level
Strategic Intermodal System (SIS) Projects																		
1	SR-9/I-95	@Oslo Rd	--	N/A	Int. Imp.	COMPLETE	N/A	SIS	COMPLETE	N/A	SIS	COMPLETE	N/A	SIS	2026-2030	$ 38,168,182	SIS	Fully Funded
State Projects																		
2	26th Street/Aviation Blvd	@US 1/SR 5	--	N/A	Int. Imp.	COMPLETE	$ 1,250,000	Prod. Sup.	2020-2024	$ 2,500,000	Prod. Sup.	2031-2035	$ 20,000,000	OR	2036-2045	$ 25,000,000	OR	Fully Funded
3	CR 510	@US 1/SR 5	--	N/A	Int. Imp.	2026-2030	$ 450,000	Prod. Sup.	2026-2030	$ 900,000	Prod. Sup.	2026-2030	$ 5,000,000	OR	2031-2035	$ 9,000,000	OR	Fully Funded
4	Indian River Blvd (SR 60)	20th Street	Merrill P. Barber Brg	1.00	4D-4D+	2025	$ 246,000	Prod. Sup.	2026-2030	$ 492,000	Prod. Sup.	2031-2035	$ 3,933,000	OR	2036-2045	$ 4,916,000	OR	Fully Funded
5	US 1	53rd Street	CR 510	4.80	4D-6D	2020-2024	$ 450,000	Prod. Sup.	2026-2030	$ 2,360,000	Prod. Sup.	2026-2030	$ 21,200,000	OR	2036-2045	$ 23,601,000	OR	Fully Funded
++	Intelligent Transportation Systems/Autonomous, Connected, Electric, and Shared Vehicles					2025	$ 120,000	Prod. Sup.	2025	$ 24,000	Prod. Sup.	N/A			2025	$ 2,395,000	OR	Fully Funded
++	Intelligent Transportation Systems/Autonomous, Connected, Electric, and Shared Vehicles					2026-2030	$ 386,000	Prod. Sup.	2026-2030	$ 77,000	Prod. Sup.	N/A			2026-2030	$ 7,726,000	OR	Fully Funded
++	Intelligent Transportation Systems/Autonomous, Connected, Electric, and Shared Vehicles					2031-2035	$ 133,000	Prod. Sup.	2031-2035	$ 27,000	Prod. Sup.	N/A			2031-2035	$ 2,651,000	OR	Fully Funded
++	Intelligent Transportation Systems/Autonomous, Connected, Electric, and Shared Vehicles					2036-2045	$ 648,000	Prod. Sup.	2036-2045	$ 130,000	Prod. Sup.	N/A			2036-2045	$ 12,957,000	OR	Fully Funded
Local Projects																		
6	Oslo Road	I-95	58th Avenue	3.30	2U-4D	COMPLETE	$ 884,000	County	COMPLETE	$ 1,768,000	County	2020-2024	$ 5,633,000	County	2026-2030	$ 17,681,000	County	Fully Funded
7	74th Avenue*	Oslo Road	12th Street	2.57	00-2U	2026-2030	$ 629,000	County	2026-2030	$ 1,258,000	County	2036-2045	$ 6,291,000	County	2036-2045	$ 12,582,000	County	Fully Funded
8	43rd Avenue	Oslo Road	16th Street	3.00	2U-4D	2026-2030	$ 804,000	County	2026-2030	$ 1,607,000	County	2036-2045	$ 8,037,000	County	2036-2045	$ 16,073,000	County	Fully Funded
9	26th Street/Aviation Blvd	66th Avenue	43rd Avenue	1.95	2U-4D	2026-2030	$ 522,000	County	2026-2030	$ 1,045,000	County	2036-2045	$ 4,179,000	County	2036-2045	$ 10,448,000	County	Fully Funded
10	26th Street/Aviation Blvd	43rd Avenue	US 1	1.95	2U-4D	2026-2030	$ 522,000	County	2026-2030	$ 1,045,000	County	2031-2035	$ 4,179,000	County	2031-2035	$ 10,448,000	County	Fully Funded
11	82nd Avenue	26th Street	69th Street	5.02	2S-2U	2026-2030	$ 1,229,000	County	2026-2030	$ 2,459,000	County	COMPLETE	$ 12,294,000	County	2031-2035	$ 24,588,000	County	Fully Funded
12	82nd Avenue	69th Street	CR 510	2.05	2S-2U	COMPLETE	$ 501,000	County	COMPLETE	$ 1,002,000	County	2020-2024	$ 1,251,000	County	2025	$ 10,022,000	County	Fully Funded
13	CR 510	87th Street	82nd Avenue	1.24	2U-4D	COMPLETE	$ 333,000	OR	COMPLETE	$ 667,000	OR	2020-2024	$ 4,667,000	OR	2031-2035	$ 6,668,000	OR	Fully Funded
14	CR 510	82nd Avenue	58th Avenue	3.26	2U-4D	COMPLETE	$ 873,000	OR	COMPLETE	$ 1,747,000	OR	2020-2024	$ 11,522,000	OR	2026-2030	$ 17,466,000	OR	Fully Funded
15	CR 510	58th Avenue	US 1	0.60	2U-4D	2020-2024	$ 3,915,000	County	2026-2030	$ 321,000	County	2026-2030	$ 2,250,000	County	2031-2035	$ 3,215,000	County	Fully Funded
16	82nd Avenue	CR 510	Laconia	0.55	2S-2U	2025	$ 135,000	County	2026-2030	$ 269,000	County	2026-2030	$ 1,347,000	County	2036-2045	$ 2,694,000	County	Fully Funded
17	CR 512	I-95	CR 510	2.56	4D-6D	2026-2030	$ 628,000	County	2026-2030	$ 1,256,000	County	2026-2030	$ 6,282,000	County	2036-2045	$ 12,565,000	County	Fully Funded
18	CR 512	Willow Street	I-95	2.45	2U-4D	2026-2030	$ 656,000	County	2026-2030	$ 1,313,000	County	2031-2035	$ 6,517,000	County	2036-2045	$ 13,128,000	County	Fully Funded

2045 Capacity Projects: Partially Funded

ID	On Street	From Street	To Street	Mi.	Improv Type	PD&E Time	PD&E Cost (PDC)	PD&E Source	PE Time	PE Cost (PDC)	PE Source	ROW Time	ROW Cost (PDC)	ROW Source	CST Time	CST Cost (PDC)	CST Source	Funded Level
Local Projects																		
19	53rd Street	66th Avenue	82nd Avenue	2.00	00-2U	2026-2030	$ 490,000	County	2026-2030	$ 980,000	County	2026-2030	$ 4,898,000	County	Unfunded	$ 9,796,000	OR	Partially Funded
20	12th Street*	74 Avenue	58th Avenue	2.00	2S-2U	2026-2030	$ 490,000	County	2026-2030	$ 980,000	County	COMPLETE	$ 4,898,000	County	Unfunded	$ 9,796,000	County	Partially Funded

2045 Capacity Projects: Unfunded Needs

ID	On Street	From Street	To Street	Mi.	Improv Type	PD&E Time	PD&E Cost (PDC)	PD&E Source	PE Time	PE Cost (PDC)	PE Source	ROW Time	ROW Cost (PDC)	ROW Source	CST Time	CST Cost (PDC)	CST Source	Funded Level
Local Projects																		
21	66th Avenue	CR 510	Barber Street	0.80	2U-4D	Unfunded	$ 215,000	N/A	Unfunded	$ 429,000	N/A	Unfunded	$ 2,147,000	N/A	Unfunded	$ 4,293,000	N/A	Unfunded
22	Roseland Road	CR 512	US 1	4.70	2U-4D	Unfunded	$ 1,260,000	N/A	Unfunded	$ 2,520,000	N/A	Unfunded	$ 12,602,000	N/A	Unfunded	$ 25,204,000	N/A	Unfunded
23	5th Street SW	20th Avenue	11th Square SW	0.73	2S-2U	Unfunded	$ 179,000	N/A	Unfunded	$ 358,000	N/A	Unfunded	$ 1,788,000	N/A	Unfunded	$ 3,576,000	N/A	Unfunded
24	43rd Avenue	Oslo Road	St. Lucie County Line	2.08	2U-4D	Unfunded	$ 557,000	N/A	Unfunded	$ 1,114,000	N/A	Unfunded	$ 5,572,000	N/A	Unfunded	$ 11,144,000	N/A	Unfunded
25	27th Avenue	Oslo Road	St. Lucie County Line	2.03	2U-4D	Unfunded	$ 545,000	N/A	Unfunded	$ 1,090,000	N/A	Unfunded	$ 5,451,000	N/A	Unfunded	$ 10,902,000	N/A	Unfunded
26	58th Avenue	Oslo Road	St. Lucie County Line	2.09	00-2U	Unfunded	$ 512,000	N/A	Unfunded	$ 1,025,000	N/A	Unfunded	$ 5,125,000	N/A	Unfunded	$ 10,249,000	N/A	Unfunded
27	5th Street SW	11th Square SW	Old Dixie Highway	0.69	2S-2U	Unfunded	$ 170,000	N/A	Unfunded	$ 339,000	N/A	Unfunded	$ 1,697,000	N/A	Unfunded	$ 3,394,000	N/A	Unfunded

+ Operational capacity improvements to be determined

++ Systemwide Improvements

All projects will use a combination of federal and state funding unless noted with an asterik (*). Projects noted with an asterik (*) will use local funds only.

Appendix E

Aspirational Capacity Projects

2045 LRTP Cost Feasible Capacity Projects

Indian River County

2045 Capacity Projects: Aspirational

ID	On Street	From Street	To Street	Mi.	Improv Type	PD&E Time	PE Time	ROW Time	CST Time	Funded Level
Local Projects										
28	I-95	@53rd Street	--	N/A	Int. Imp.	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational
29	13th Street SW	27th Avenue	58th Avenue	2.03	00-2U	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational
30	17th Street SW	27th Avenue	58th Avenue	2.03	00-2U	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational
31	21st Street SW	27th Avenue	58th Avenue	2.03	00-2U	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational
32	25th Street SW	27th Avenue	58th Avenue	1.78	00-2U	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational
33	26th Street	82nd Avenue	CR 507	2.10	00-2U	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational
34	4th Street	66th Avenue	98th Avenue	2.00	00-2U	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational
35	53rd Street	82nd Avenue	Fellsmere N-S Rd 1	3.94	00-2U	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational
36	69th Street	82nd Avenue	CR 512	9.02	00-2U	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational
37	98th Avenue	12th Street	4th Street	2.97	00-2U	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational
38	Fellsmere N-S Rd 1	CR 512	SR 60	9.74	00-2U	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational
39	Fellsmere N-S Rd 2	CR 512	69th Street	3.29	00-2U	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational
40	St. John Hertiage Park Extension	CR 512	County Line	5.71	00-2U	Unfunded	Unfunded	Unfunded	Unfunded	Aspirational

Appendix F

Cost Feasible Plan Financial Summary/ Demonstration of Fiscal Constraint

2045 LRTP Cost Feasible Plan - Financial Summary

Indian River County

TIP FY 2020/21 - 2024/25 Revenues by Source for Capacity and Non-Capacity Projects

Revenue Type	Revenue	Cost
Federal	$92,734,819	$92,734,819
State	$108,344,431	$108,344,431
Local	$21,327,901	$21,327,901
Product Support	$2,635,000	$2,635,000
Total	$225,042,151	$225,042,151

Source	Total Forecast Revenues (PDC)	2025 (PDC)				2026-2030 (PDC)				2031-2035 (PDC)				2036-2045 (PDC)			
		Revenues	*Costs*	*Contingency*	*Balance*	*Revenues*	*Costs*	*Contingency*	*Balance*	*Revenues*	*Costs*	*Contingency*	*Balance*	*Revenues*	*Costs*	*Contingency*	*Balance*
SIS	$ 38,168,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 38,168,000	$ 38,168,000	$ -	$ -
OR	$ 162,512,000	$ 2,395,000	$ 2,395,000	$ -	$ -	$ 51,393,000	$ 51,393,000	$ -	$ -	$ 42,252,000	$ 42,252,000	$ -	$ -	$ 66,473,000	$ 66,473,000	$ -	$ -
County	$ 199,491,000	$ 10,478,000	$ 10,156,000	$ 322,000	$ -	$ 50,980,000	$ 50,963,000	$ 17,000	$ -	$ 49,139,000	$ 48,947,000	$ 191,000	$ -	$ 88,894,000	$ 85,996,000	$ 2,898,000	$ -
Product Support	$ 35,753,000	$ 527,000	$ 389,000	$ -	$ 137,000	$ 11,306,000	$ 4,665,000	$ -	$ 6,641,000	$ 9,295,000	$ 159,000	$ -	$ 9,136,000	$ 14,624,000	$ 777,000	$ -	$ 13,847,000

Source	Total Forecast Revenues (YOE)	2025 (YOE)				2026-2030 (YOE)				2031-2035 (YOE)				2036-2045 (YOE)			
		Revenues	*Costs*	*Contingency*	*Balance*	*Revenues*	*Costs*	*Contingency*	*Balance*	*Revenues*	*Costs*	*Contingency*	*Balance*	*Revenues*	*Costs*	*Contingency*	*Balance*
SIS	$ 50,382,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 50,382,000	$ 50,382,000	$ -	$ -
OR	$ 272,448,000	$ 2,850,000	$ 2,850,000	$ -	$ -	$ 67,838,000	$ 67,838,000	$ -	$ -	$ 65,490,000	$ 65,490,000	$ -	$ -	$ 136,270,000	$ 136,270,000	$ -	$ -
County	$ 338,160,000	$ 12,469,000	$ 12,086,000	$ 383,000	$ -	$ 67,294,000	$ 67,271,000	$ 23,000	$ -	$ 76,165,000	$ 75,868,000	$ 297,000	$ -	$ 182,232,000	$ 176,291,000	$ 5,941,000	$ -
Product Support	$ 59,939,000	$ 627,000	$ 463,000	$ -	$ 164,000	$ 14,924,000	$ 6,158,000	$ -	$ 8,766,000	$ 14,408,000	$ 247,000	$ -	$ 14,161,000	$ 29,979,000	$ 1,594,000	$ -	$ 28,386,000

Note: Product Support is provided at the FDOT District level and MPOs are directed to not exceed a given amount based on a percentage of Construction and ROW funding. Product Support includes non-capacity programs that are prioritized and programmed annually for inclusion in the FDOT Work Program.

CONNECTING IRC

Appendix G

Federal and State Requirements Checklist

Federal and State Requirements Checklist

	Section A Federal Requirements	Where and How Addressed
	23 C.F.R. Part 450 – Planning Assistance and Standards	
A-1	Does the plan cover a 20-year horizon from the date of adoption? Please see the "Administrative Topics" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(a)	Yes. Chapter 1 – Introduction Chapter 3 – Planning Assumptions Chapter 4 – Transportation Plan Chapter 6 – Performance Measurement
A-2	Does the plan address the planning factors described in 23 C.F.R. 450.306(b)? Please see the "Fiscal Constraint" section of the 2018 FHWA LRTP Expectations Letter for guidance. Please see the "New Requirements" section of the 2018 FHWA LRTP Expectations Letter for guidance. Risk and Resiliency Does the plan improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation? Travel and Tourism Does that plan enhance travel and tourism? Please see the "Proactive Improvements" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(a)	Yes. Chapter 1 – Introduction (p. 1-2) [new planning factors] Chapter 2 – Goals, Objectives, and Performance Measures (pp. 2-7 – 2-8) Fiscal Constraint Chapter 4 – Transportation Plan Appendix C - Cost Feasible Capacity Projects Year of Expenditure (YOE) Appendix D - Cost Feasible Capacity Projects Present Day Cost (PDC) Appendix F – Financial Summary / Demonstration of Fiscal Constraint Risk and Resiliency Chapter 2 – Goals, Objectives, and Performance Measures (Goal 3) Chapter 4 – Transportation Plan (p. 4-30) Travel and Tourism Chapter 4 – Transportation Plan (p. 4-30)
A-3	Does the plan include both long-range and short-range strategies/actions that provide for the development of an integrated multimodal transportation system (including accessible pedestrian walkways and bicycle transportation facilities) to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand? Please see the "Technical Topics" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(b)	Yes. Chapter 2 – Goals, Objectives, and Performance Measures Chapter 3 – Planning Assumptions Chapter 4 – Transportation Plan Appendix A – System Performance Report

Federal and State Requirements Checklist

Section A Federal Requirements		Where and How Addressed
A-4	Was the requirement to update the plan at least every five years met? Please see the "Administrative Topics" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(c)	Yes. The Indian River County MPO 2040 LRTP was adopted on December 9, 2015. The 2045 LRTP was adopted on December 9, 2020 (Resolution 2020-08).
A-5	Did the MPO coordinate the development of the metropolitan transportation plan with the process for developing transportation control measures (TCMs) in a State Implementation Plan (SIP)? 23 C.F.R. 450.324(d)	N/A -The Indian River County MPO Planning Area is not within a non-attainment area.
A-6	Was the plan updated based on the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity? Please see the "Proactive Improvements" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(e)	Yes. Chapter 3 – Planning Assumptions Chapter 4 – Transportation Plan
A-7	Does the plan include the current and projected transportation demand of persons and goods in the metropolitan planning area over the period of the plan? Please see the "Technical Topics" section of the 2018 FHWA LRTP Expectations Letter for guidance. Please see the "Administrative Topics" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(f)(1)	Yes. Chapter 3 – Planning Assumptions Chapter 4 – Transportation Plan Chapter 5 – Public Involvement Chapter 6 – Performance Evaluation
A-8	Does the plan include existing and proposed transportation facilities (including major roadways, public transportation facilities, intercity bus facilities, multimodal and intermodal facilities, nonmotorized transportation facilities, and intermodal connectors that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan? 23 C.F.R. 450.324(f)(2)	Yes. Chapter 4 – Transportation Plan

Federal and State Requirements Checklist

Section A Federal Requirements		Where and How Addressed
A-9	Does the plan include a description of the performance measures and performance targets used in assessing the performance of the transportation system in accordance with §450.306(d)? Please see the "New Requirements" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(f)(3)	Yes. Chapter 2 – Goals, Objectives, and Performance Measures (PM1, PM2, PM3, and Transit) Chapter 6 – Performance Evaluation Appendix A – System Performance Report
A-10	Does the plan include a system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in §450.306(d), including progress achieved by the metropolitan planning organization in meeting the performance targets in comparison with system performance recorded in previous reports, including baseline data? Please see the "New Requirements" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(f)(4)(i)	Yes. Chapter 2 – Goals, Objectives, and Performance Measures (PM1, PM2, PM3, and Transit) Chapter 6 – Performance Evaluation Appendix A – System Performance Report

Federal and State Requirements Checklist

A-11	Did the MPO integrate in the metropolitan transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described in other State transportation plans and transportation processes, as well as any plans developed under 49 U.S.C. chapter 53 by providers of public transportation, required as part of a performance-based program including:	Yes. Chapter 2 – Goals, Objectives, and Performance Measures
	(i) The State asset management plan for the NHS, as defined in 23 U.S.C. 119(e) and the Transit Asset Management Plan, as discussed in 49 U.S.C. 5326;	(i) Chapter 2 – Goals, Objectives, and Performance Measures (PM1, PM2, PM3, and Transit) Chapter 6 – Performance Evaluation Appendix A – System Performance Report
	(ii) Applicable portions of the HSIP, including the SHSP, as specified in 23 U.S.C. 148;	(ii) Chapter 2 – Goals, Objectives, and Performance Measures (PM 1) Chapter 4 – Transportation Plan (pg. 4-29) Appendix A – System Performance Report
	(iii) The Public Transportation Agency Safety Plan in 49 U.S.C. 5329(d);	(iii) Chapter 2 – Goals, Objectives, and Performance Measures (pg. 2-16) Appendix A – System Performance Report
	(iv) Other safety and security planning and review processes, plans, and programs, as appropriate;	
	(v) The Congestion Mitigation and Air Quality Improvement Program performance plan in 23 U.S.C. 149(l), as applicable;	(iv) Chapter 2 – Goals, Objectives, and Performance Measures (PM 1) Chapter 4 – Transportation Plan (pp. 4-29 – 4-30) Chapter 6 – Performance Evaluation Appendix A – System Performance Report
	(vi) Appropriate (metropolitan) portions of the State Freight Plan (MAP-21 section 1118);	
	(vii) The congestion management process, as defined in 23 CFR 450.322, if applicable; and	(v) -N/A - Measures pertaining to the CMAQ Program currently do not apply in Florida.
	(viii) Other State transportation plans and transportation processes required as part of a performance-based program.	(vi) Chapter 2 – Goals, Objectives, and Performance Measures (pp. 2-17 – 2-18) Appendix A – System Performance Report
	Please see the "New Requirements" section of the 2018 FHWA LRTP Expectations Letter for guidance.	(vii) Chapter 2 – Goals, Objectives, and Performance Measures Chapter 4 – Transportation Plan Chapter 6 – Performance Evaluation
	23 C.F.R. 450.306 (d)(4)	(viii) Chapter 2 – Goals, Objectives, and Performance Measures

Federal and State Requirements Checklist

Section A Federal Requirements		Where and How Addressed
A-12	Does the plan include operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods? Please see the "Technical Topics" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(f)(5)	Yes. Chapter 4 – Transportation Plan (pp. 4-24 – 4-28)
A-13	Does the plan include consideration of the results of the congestion management process in TMAs, including the identification of SOV projects that result from a congestion management process in TMAs that are nonattainment for ozone or carbon monoxide? Please see the "Technical Topics" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(f)(6)	N/A -The Indian River County MPO Planning Area is not within a non-attainment area.
A-14	Does the plan include assessment of capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure, provide for multimodal capacity increases based on regional priorities and needs, and reduce the vulnerability of the existing transportation infrastructure to natural disasters? 23 C.F.R. 450.324(f)(7)	Yes. Chapter 4 – Transportation Plan
A-15	Does the plan include transportation and transit enhancement activities, including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner and strategies and investments that preserve and enhance intercity bus systems, including systems that are privately owned and operated, and including transportation alternatives, as defined in 23 U.S.C. 101(a), and associated transit improvements, as described in 49 U.S.C. 5302(a)? 23 C.F.R. 450.324(f)(8)	Yes. Chapter 2 – Goals, Objectives, and Performance Measures Chapter 4 – Transportation Plan (pp. 4-22 – 4-23)

Federal and State Requirements Checklist

Section A Federal Requirements		Where and How Addressed
A-16	Does the plan describe all proposed improvements in sufficient detail to develop cost estimates? Please see the "Fiscal Constraint" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(f)(9)	Yes. Chapter 4 – Transportation Plan Appendix C - Cost Feasible Capacity Projects Year of Expenditure (YOE) Appendix D - Cost Feasible Capacity Projects Present Day Cost (PDC)
A-17	Does the plan include a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan? Please see the "Technical Topics" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(f)(10)	Yes. Chapter 4 – Transportation Plan (pp. 4-31 – 4-32) Technical Appendix B – Public Involvement/Agency Coordination Summary
A-18	Does the plan include a financial plan that demonstrates how the adopted transportation plan can be implemented? Please see the "Fiscal Constraint" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(f)(11)	Yes. Chapter 4 – Transportation Plan Appendix C - Cost Feasible Capacity Projects Year of Expenditure (YOE) Appendix D - Cost Feasible Capacity Projects Present Day Cost (PDC)
A-19	Does the plan include system-level estimates of costs and revenue sources to adequately operate and maintain Federal-aid highways and public transportation? 23 C.F.R. 450.324(f)(11)(i)	Yes. Chapter 4 – Transportation Plan Appendix C - Cost Feasible Capacity Projects Year of Expenditure (YOE) Appendix D - Cost Feasible Capacity Projects Present Day Cost (PDC) Technical Appendix C – 2045 Indian River County MPO Revenue Forecast Technical Appendix D - 2019 FDOT Revenue Forecasting Guidebook

Federal and State Requirements Checklist

Section A Federal Requirements		Where and How Addressed
A-20	Did the MPO, public transportation operator(s), and State cooperatively develop estimates of funds that will be available to support metropolitan transportation plan implementation, as required under §450.314(a)? Please see the "Proactive Improvements" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(f)(11)(ii)	Yes. Chapter 4 – Transportation Plan (pp. 4-2 – 4-7) Technical Appendix C – 2045 Indian River County MPO Revenue Forecast Technical Appendix D - 2019 FDOT Revenue Forecasting Guidebook
A-21	Does the financial plan include recommendations on additional financing strategies to fund projects and programs included in the plan, and, in the case of new funding sources, identify strategies for ensuring their availability? 23 C.F.R. 450.324(f)(11)(iii)	Yes. Chapter 4 – Transportation Plan (pp. 4-2)
A-22	Does the plan's revenue and cost estimates use inflation rates that reflect year of expenditure dollars, based on reasonable financial principles and information, developed cooperatively by the MPO, State(s), and public transportation operator(s)? 23 C.F.R. 450.324(f)(11)(iv)	Yes. Chapter 4 – Transportation Plan (4-2 – 4-7) Appendix C - Cost Feasible Capacity Projects Year of Expenditure (YOE) Appendix D - Cost Feasible Capacity Projects Present Day Cost (PDC) Technical Appendix C – 2045 Indian River County MPO Revenue Forecast Technical Appendix D - 2019 FDOT Revenue Forecasting Guidebook
A-23	Does the financial plan address the specific financial strategies required to ensure the implementation of TCMs in the applicable SIP? 23 C.F.R. 450.324(f)(11)(vi)	N/A -The Indian River County MPO Planning Area is not within a non-attainment area.
A-24	Does the plan include pedestrian walkway and bicycle transportation facilities in accordance with 23 U.S.C. 217(g)? 23 C.F.R. 450.324(f)(12)	Yes. Chapter 4 – Transportation Plan (4-17 – 4-21)

Federal and State Requirements Checklist

Section A Federal Requirements		Where and How Addressed
A-25	Does the plan integrate the priorities, goals, countermeasures, strategies, or projects for the metropolitan planning area contained in the HSIP, including the SHSP, the Public Transportation Agency Safety Plan, or an Interim Agency Safety Plan? Please see the "Technical Topics" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(h)	Yes. Chapter 2 – Goals, Objectives, and Performance Measures (PM 1 - pp. 2-11 – 2-12) Chapter 4 – Transportation Plan (pp. 4-29 – 4-30) Chapter 6 – Performance Evaluation Appendix A – System Performance Report
A-26	Does the plan identify the current and projected transportation demand of persons and goods in the metropolitan planning area over the period of the plan? 23 C.F.R. 450.324(g)(1)	Yes. Chapter 3 – Planning Assumptions Chapter 4 – Transportation Plan Chapter 6 – Performance Evaluation
A-27	Did the MPO provide individuals, affected public agencies, representatives of public transportation employees, public ports, freight shippers, providers of freight transportation services, private providers of transportation (including intercity bus operators, employer-based commuting programs, such as carpool program, vanpool program, transit benefit program, parking cashout program, shuttle program, or telework program), representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan using the participation plan developed under §450.316(a)? 23 C.F.R. 450.324(j)	Yes. Chapter 4 – Transportation Plan (p. 4-17 – 4-23) Chapter 5 – Public Involvement (p. 5-4 – 5-6) Technical Appendix A – Indian River County MPO Public Participation Plan Technical Appendix B – Public Involvement/Agency Coordination Summary
A-28	Did the MPO publish or otherwise make readily available the metropolitan transportation plan for public review, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web? Please see the "Stakeholder and Coordination Input" section of the 2018 FHWA LRTP Expectations Letter for guidance. Please see the "Administrative Topics" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.324(k), 23 C.F.R. 450.316(a)(1)(iv)	Yes. Chapter 5 – Public Involvement (p. 5-4 – 5-6) Technical Appendix A – Indian River County MPO Public Participation Plan Technical Appendix B – Public Involvement/Agency Coordination Summary

Federal and State Requirements Checklist

Section A Federal Requirements		Where and How Addressed
A-29	Did the MPO provide adequate public notice of public participation activities and time for public review and comment at key decision points, including a reasonable opportunity to comment on the proposed metropolitan transportation plan? Please see the "Stakeholder and Coordination Input" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R 450.316(a)(1)(i)	Yes. Chapter 5 – Public Involvement Chapter 7 – Plan Implementation (pg. 7-2) Technical Appendix A – Indian River County MPO Public Participation Plan Technical Appendix B – Public Involvement/Agency Coordination Summary
A-30	In developing the plan, did the MPO seek out and consider the needs of those traditionally underserved by existing transportation systems such as low-income and minority households? Please see the "Stakeholder and Coordination Input" section of the 2018 FHWA LRTP Expectations Letter for guidance. Please see the "Proactive Improvements" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R 450.316(a)(1)(vii)	Yes. Chapter 5 – Public Involvement (p. 5-4 – 5-6) Technical Appendix A – Indian River County MPO Public Participation Plan Technical Appendix B – Public Involvement/Agency Coordination Summary
A-31	Has the MPO demonstrated explicit consideration of and response to public input received during development of the plan? If significant written and oral comments were received on the draft plan, is a summary, analysis, and report on the disposition of the comments part of the final plan? Please see the "Stakeholder and Coordination Input" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.316(a)(1)(vi) & 23 C.F.R. 450.316(a)(2)	Yes. Chapter 5 – Public Involvement Technical Appendix A – Indian River County MPO Public Participation Plan Technical Appendix B – Public Involvement/Agency Coordination Summary

Federal and State Requirements Checklist

Section A Federal Requirements		Where and How Addressed
A-32	Did the MPO provide an additional opportunity for public comment if the final plan differs significantly from the version that was made available for public comment and raises new material issues which interested parties could not reasonably have foreseen from the public involvement efforts? Please see the "Stakeholder and Coordination Input" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R 450.316(a)(1)(viii)	N/A – The final plan did not differ significantly from the version that was made available for public comment and did not raise new material issues.
A-33	Did the MPO consult with agencies and officials responsible for other planning activities within the MPO planning area that are affected by transportation, or coordinate its planning process (to the maximum extent practicable) with such planning activities? Please see the "Proactive Improvements" section of the 2018 FHWA LRTP Expectations Letter for guidance. 23 C.F.R. 450.316(b)	Yes. Chapter 2 – Goals, Objectives, and Performance Measures Chapter 4 – Transportation Plan Chapter 5 – Public Involvement (pg. 5-3) Technical Appendix B – Public Involvement/Agency Coordination Summary
A-34	If the MPO planning area includes Indian Tribal lands, did the MPO appropriately involve the Indian Tribal government(s) in the development of the plan? 23 C.F.R 450.316(c)	N/A – There are no designated tribal lands located within the boundaries of the MPO Planning Area.
A-35	If the MPO planning area includes Federal public lands, did the MPO appropriately involve Federal land management agencies in the development of the plan? 23 C.F.R 450.316(d)	Yes. Chapter 5 – Public Involvement (pg. 5-3) Technical Appendix B – Public Involvement/Agency Coordination Summary
A-36	In urbanized areas that are served by more than one MPO, is there written agreement among the MPOs, the State, and public transportation operator(s) describing how the metropolitan transportation planning processes will be coordinated to assure the development of consistent plans across the planning area boundaries, particularly in cases in which a proposed transportation investment extends across those boundaries? 23 C.F.R. 450.314(e)	N/A – Urbanized area not served by multiple MPOs

Federal and State Requirements Checklist

Section B State Requirements		Where and How Addressed
Florida Statutes: Title XXVI – Public Transportation, Chapter 339, Section 175		
B-1	Are the prevailing principles in s. 334.046(1), F.S. – preserving the existing transportation infrastructure, enhancing Florida's economic competitiveness, and improving travel choices to ensure mobility – reflected in the plan? ss.339.175(1), (5) and (7), F.S.	Yes. Chapter 2 – Goals, Objectives, and Performance Measures (pp. 2-2 – 2-6) Chapter 4 – Transportation Plan (pp. 4-17 – 4-23, 4-30)
B-2	Does the plan give emphasis to facilities that serve important national, state, and regional transportation functions, including SIS and TRIP facilities? ss.339.175(1) and (7)(a), F.S.	Yes. Chapter 4 – Transportation Plan Appendix C - Cost Feasible Capacity Projects Year of Expenditure (YOE) Appendix D - Cost Feasible Capacity Projects Present Day Cost (PDC)
B-3	Is the plan consistent, to the maximum extent feasible, with future land use elements and the goals, objectives, and policies of the approved comprehensive plans for local governments in the MPO's metropolitan planning area? ss.339.175(5) and (7), F.S.	Yes. Chapter 2 - Goals, Objectives, a Performance Measures (pp. 2-9) Chapter 3 – Planning Assumptions
B-4	Did the MPO consider strategies that integrate transportation and land use planning to provide for sustainable development and reduce greenhouse gas emissions? ss.339.175(1) and (7) F.S.	Yes. Chapter 2 – Goals, Objectives, and Performance Measures (Goal 3) Chapter 6 – Performance Evaluation
B-5	Were the goals and objectives identified in the Florida Transportation Plan considered? s.339.175(7)(a), F.S.	Yes. Chapter 2 – Goals, Objectives, and Performance Measures (pp. 2-9 – 2-10)
B-6	Does the plan assess capital investment and other measures necessary to 1) ensure the preservation of the existing metropolitan transportation system, including requirements for the operation, resurfacing, restoration, and rehabilitation of major roadways and requirements for the operation, maintenance, modernization, and rehabilitation of public transportation facilities; and 2) make the most efficient use of existing transportation facilities to relieve vehicular congestion and maximize the mobility of people and goods? s.339.175(7)(c), F.S.	Yes. Chapter 2 – Goals, Objectives, and Performance Measures - (Goal 1, Goal 2, Goal 5); (pp. 2-12 – 2-13) Chapter 4 – Transportation Plan Chapter 6 – Performance Evaluation Appendix A – System Performance Report

Federal and State Requirements Checklist

Section B State Requirements		Where and How Addressed
B-7	Does the plan indicate, as appropriate, proposed transportation enhancement activities, including, but not limited to, pedestrian and bicycle facilities, scenic easements, landscaping, historic preservation, mitigation of water pollution due to highway runoff, and control of outdoor advertising? s.339.175(7)(d), F.S.	Yes. Chapter 2 – Goals, Objectives, a Performance Measures (Goal 3) Chapter 4 – Transportation Plan (pp. 4-17 – 4-21, 4-31 – 4-32) Chapter 5 – Public Involvement Chapter 6 – Performance Evaluation
B-8	Was the plan approved on a recorded roll call vote or hand-counted vote of the majority of the membership present? s.339.175(13) F.S.	Yes. Resolution 2020-08

Federal and State Requirements Checklist

Section C Proactive Recommendations		Where and How Addressed
C-1	Does the plan attempt to improve the resilience and reliability of the transportation system or mitigate the impacts of stormwater on surface transportation? 23 C.F.R 450.306(b)(9)	Yes. Chapter 2 – Goals, Objectives, a Performance Measures (Goal 3) Chapter 6 – Performance Evaluation
C-2	Does the plan proactively identify climate adaptation strategies including—but not limited to—assessing specific areas of vulnerability, identifying strategies to reduce emissions by promoting alternative modes of transportation, or devising specific climate adaptation policies to reduce vulnerability?	Yes. Chapter 2 – Goals, Objectives, a Performance Measures (Goal 3) Chapter 4 – Transportation Plan (p. 4-8, 4-30 – 4-31)
C-3	Do the plan consider the transportation system's accessibility, mobility, and availability to better serve an aging population?	Yes. Chapter 2 – Goals, Objectives, and Performance Measures (Goal 2) Chapter 5 – Public Involvement (p. 5-4) Chapter 6 – Performance Evaluation
C-4	Does the plan consider strategies to promote inter-regional connectivity to accommodate both current and future mobility needs?	Yes. Chapter 2 – Goals, Objectives, and Performance Measures (Goal 1, Goal 2) Chapter 3 – Planning Assumptions Chapter 4 – Transportation Plan (pp. 4-24 - 4-30) Chapter 6 – Performance Evaluation
C-5	Is the MPO considering the short- and long-term effects of population growth and or shifts on the transportation network?	Yes. Chapter 3 – Planning Assumptions

Appendix H

List of Acronyms

List of Acronyms

Acronym	Definition
AADT	Annual Average Daily Traffic
ACES	Automated, Connected, Electric, and Shared Use Vehicles
ACS	American Community Survey
BAC	Bicycle Advisory Committee
BEBR	University of Florida Bureau of Economic and Business Research
CFR	Code of Federal Regulations
CAC	Citizens Advisory Committee
CFP	Cost Feasible Plan
CMP	Congestion Management Process
CR	County Road
CST	Construction
DOT	Department of Transportation
E+C	Existing Plus Committed
EJ	Environmental Justice
FS	Florida Statute
FAST Act	Fixing America's Surface Transportation Act
FEC	Florida East Coast Railroad
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
FLU	Future Land Use
FMTP	Freight Mobility and Trade Plan
FTA	Federal Transit Administration
FTP	Florida Transportation Plan
FY	Fiscal Year
HSIP	Highway Safety Improvement Program
IRC	Indian River County
IRI	International Roughness Index
ISTEA	Intermodal Surface Transportation Efficiency Act
ITS	Intelligent Transportation System
LOS	Level of Service
LOTTR	Level of Travel Time Reliability
LRTP	Long-Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21st Century Act
MPO	Metropolitan Planning Organization
MPOAC	Metropolitan Planning Organization Advisory Council
NHS	National Highway System
O&M	Operations and Maintenance
OA	Other Arterials
PDC	Present Day Cost

List of Acronyms

Acronym	Definition
PDE or PD&E	Project Development and Environment
PE	Preliminary Engineering
PI	Performance Indicator
PM	Performance Measure
PPP	Public Participation Plan
PPR	Priority Projects Report
PTASP	Public Transportation Agency Safety Plan
ROW	Right-of-Way
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SHS	State Highway System
SHSP	Florida Strategic Highway Safety Plan
SIS	Strategic Intermodal System
SJRWMD	St. Johns River Water Management District
SR	State Road
STIP	State Transportation Improvement Program
TAC	Technical Advisory Committee
TAM	Transit Asset Management
TAMP	Transportation Asset Management Plan
TAP	Transportation Alternatives Program
TAZ	Transportation Analysis Zone
TIP	Transportation Improvement Program
TCTC	Treasure Coast Transportation Council
TCRPC	Treasure Coast Regional Planning Council
TCRPM	Treasure Coast Regional Planning Model
TDLCB	Transportation Disadvantaged Local Coordinating Board
TDP	Transit Development Plan
TIP	Transportation Improvement Program
TPO	Transportation Planning Organization
TRIP	Transportation Regional Incentive Program
TSM&O	Transportation Systems Management and Operations
TTTR	Truck Travel Time Reliability index
USC	United States Code
ULB	Useful Life Benchmark
V/C	Volume-to-Capacity
VMT	Vehicle Miles Traveled
YOE	Year of Expenditure