RIVER TO SEA
Transportation Planning Organization
VISION - PLAN - IMPLEMENT

TPO

2040 Long Range Transportation Plan

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INTRODUCTION

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1. INTRODUCTION

The River to Sea Metropolitan Planning Area (MPA) is situated on the east coast of Florida and contains over 1,400 square miles. The MPA is shown in Figure 1 and includes Volusia County, Beverly Beach, Flagler Beach, portions of Palm Coast, Bunnell, and as well as unincorporated Flagler County. The region includes a number of popular tourist destinations, and is within an hour of two major metropolitan cities: Orlando and Jacksonville. In addition, the region contains many environmentally sensitive lands due to the high number of saltwater estuaries that flow through the area. In contrast, some of the fastest growing cities in Florida, such as DeLand and Deltona, are found within the region.

The River to Sea Transportation Planning Organization (TPO) is a federally required planning agency created to oversee the local transportation system of the MPA. Its existence is necessary to meet federal requirements for obtaining and expending federal transportation funds. Specifically, the federal government requires that each urbanized area, as a condition to the receipt of federal capital or operating assistance, have in place a continuing, cooperative, and comprehensive transportation (3-C) planning process. This 3-C process must result in plans and programs consistent with the comprehensively planned development of the urbanized area. In order to demonstrate that a 3-C planning process is being implemented, the River to Sea TPO must periodically prepare and adopt a 25-year long range transportation plan (per requirements of 23 CFR 450.306, 316 and 322).

Moving forward, the next 25 years will bring many challenges for local communities, including an aging population, increasing concerns over urban sprawl, and a significantly less predictable energy, environmental and economic picture. By developing a long range transportation plan, the River to Sea TPO and its members strive to identify the mobility needs in the area and work together to develop a strategic approach to planning for the future.

This 2040 Long Range Transportation Plan (LRTP) was developed with the assistance of the TPO Board, standing committees, and other stakeholders. It is a policy document that will guide the TPO in the development, management, and operation of a safe and efficient transportation system for the next 25 years. The 2040 LRTP accomplishes the following:

- Updates the River to Sea TPO's vision, goals and objectives;
- Develops performance measures that align the goals and objectives with national transportation goals;
- Describes the existing transportation system;
- Identifies current and future transportation system needs for the 25-year planning period;
- Forecasts future federal and state transportation revenues;
- Develops a Congestion Management Process (CMP) to identify congestion and prioritize improvements to relieve it; and
- Identifies and prioritizes improvements into a Cost Feasible plan.

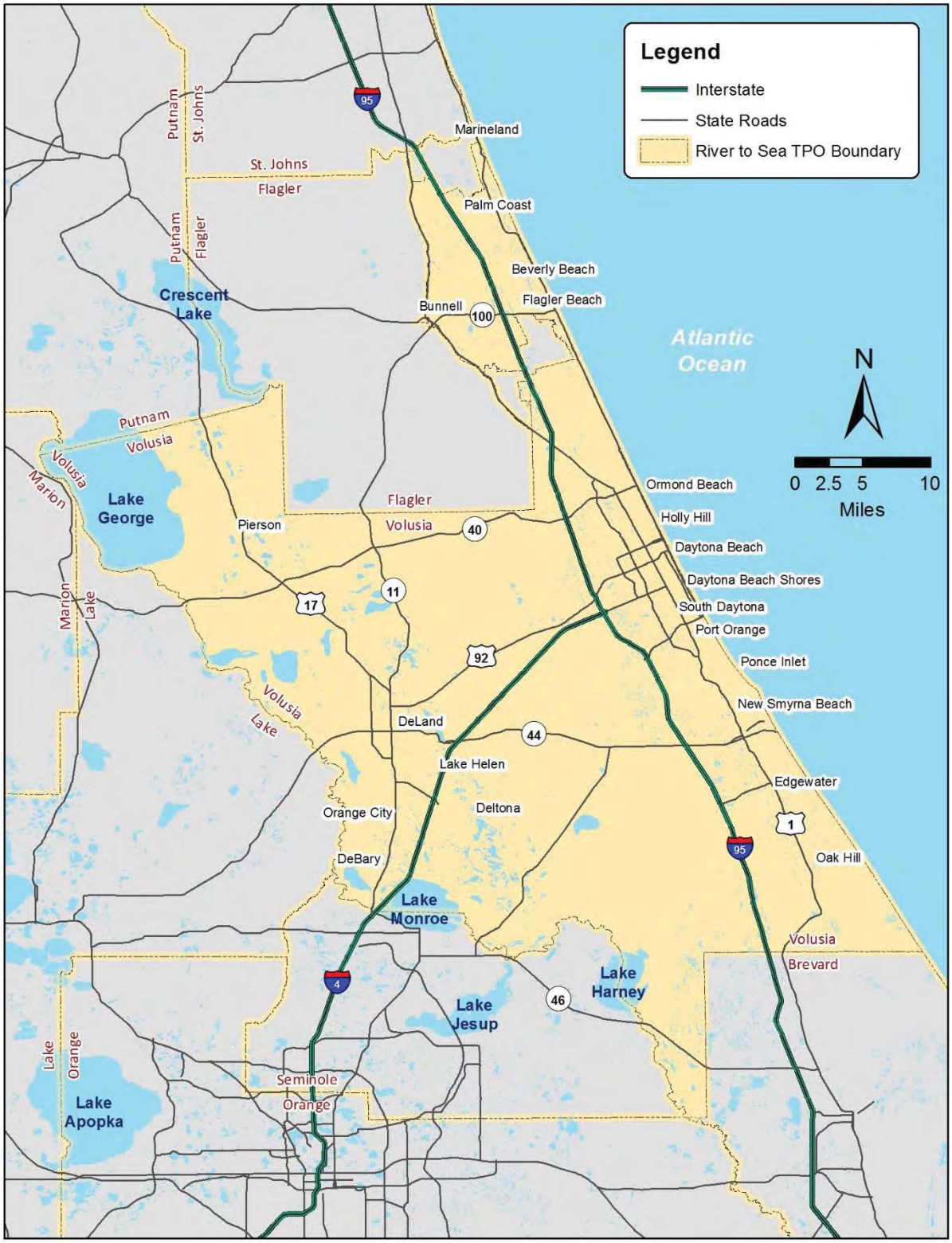

Figure 1 – River to Sea TPO MPA

1.1. Purpose of the LRTP

The creation and update of this 25-year LRTP is the core product from the River to Sea TPO's planning process. The LRTP is a public document that assesses the current state of the infrastructure, community and resources of the region. Using this information, the challenges that face the community are met with a vision of long-term investments that will fit within the context of the region. Some of the information includes population/employment forecasts, transportation capacity analysis, and demographic data. Combining this data with the input of the public, city/county officials, advocacy groups and the business community, these proposed investments are prioritized based on the greatest need and highest benefit. The improvements can then be shaped into a phased implementation plan. The most pressing needs will be adopted into the latest five-year Transportation Improvement Plan (TIP), while the remainder of improvements will be implemented in the years that follow. As the LRTP nears the 5-year age, the process begins again with new information and input, outlining the continuing, cooperative, and comprehensive nature of the planning process.

The LRTP is required to include the projected transportation demand in the planning area, the existing and proposed transportation facilities that function as an integrated system, operational and management strategies, consideration of the results of the Congestion Management Plan, strategies to preserve the existing and projected future transportation infrastructure, pedestrian and bicycle facilities, and transportation and transit enhancement activities.

In addition, because projects in the TIP are required to demonstrate planning consistency with the LRTP, the requirements for project inclusion in a TIP must also be considered when developing the LRTP. This includes all projects using Federal Highway Administration (FHWA) and/or Federal Transit Administration (FTA) funds; all regionally significant projects requiring FHWA or FTA action regardless of funding source; and regionally significant projects to be funded with federal funds other than those administered by FHWA or FTA or regionally significant projects funded with non-federal funds (23 CFR 450.324(d)).

1.2. Report Overview

Development of the LRTP is much more than a federal mandate but rather an opportunity to develop a coordinated, long range approach for planning an effective transportation system. It is a lengthy and complex process that involves a variety of technical analyses and includes significant input from the public and partner governments. The LRTP planning effort has provided an opportunity to:

- Take stock of current resources and system limitations;
- Reach out to partner organizations, the business community and the public to identify future challenges and opportunities in consultation with Federal, State, local, wildlife, environmental land management and regulatory agencies;
- Define the collective plans and desires for the future; and
- Prioritize efforts and to seek opportunities for a cohesive development strategy.

The 2040 LRTP outlines a strategic approach to developing a comprehensive system of transportation options. This report provides a more detailed documentation of the activities pursued in order to develop the transportation financing and projects comprising the River to Sea TPO 2040 Long Range Transportation Plan.

The report is divided into ten chapters and is supported by supplemental information provided in the appendices.

Chapter 1: Introduction – This chapter provides an overview of the LRTP report.

Chapter 2: Vision, Goals, and Objectives – This chapter outlines the vision, goals and objectives of the 2040 Long Range Transportation Plan. It also presents how these items address the LRTP goals that align with MAP-21 national performance goal areas and planning factors.

Chapter 3: Demographic, Socioeconomic and Land Use Data – This chapter describes the demographics within the MPA, Environmental Justice review, and methodology used to develop the two socioeconomic data sets that were used to formulate realistic population and employment projections. This information was used in the transportation model to determine future transportation needs. Several companion reports are included in Technical Appendices A through C.

Chapter 4: Financial Plan – This chapter identifies state and federal transportation funding sources available in the River to Sea TPO planning area throughout the 2040 LRTP and summarizes the 2040 baseline revenue projections. Guidance regarding the development of state and federal estimates are included in Appendix D.

Chapter 5: Public Outreach – This chapter describes the LRTP's public involvement plan, which meets federal participation requirements and encourages public involvement and input in the development of the LRTP. It also summarizes the public and stakeholder participation process and results of the various public outreach activities. The full public involvement plan is included in Appendix E.

Chapter 6: Technical Planning Process – This chapter summarizes various technical inputs to the LRTP, including the existing plus committed network modeling as well as the capacity-enhancing alternatives tested for the 2040 LRTP. Also included is a description of the screening tools utilized, including congestion management and performance measures. Additional criteria reviewed include freight safety and security. Pertinent supporting documents are included in Appendices F through H.

Chapter 7: Cost Feasible Plan – This chapter details the projects comprising the adopted 2040 LRTP. It is divided into two main elements that address the capacity-enhancing transportation system improvements including highway (road and bridge) projects and public transit (bus and rail) projects. The plan includes both a cost-feasible section and a listing of needs that are unfunded within the specified time horizon. The cost-feasible portion of the 2040 LRTP is phased in five-year increments for projected implementation.

Chapter 8: Environmental Considerations – This chapter reviews the environmental screening process for the cost feasible projects.

Chapter 9: Multimodal/Group Projects – This chapter describes the major transportation programs supported by the River to Sea TPO including highways, public transit, bicycle and pedestrian modes of

travel. Information is presented regarding current program activities and existing conditions in the River to Sea TPO planning area, as well as future trends in growth and development and the various programs and strategies being pursued to respond to anticipated transportation needs.

Chapter 10: LRTP Amendment Procedure: This chapter describes the process by which local governments can request an amendment to the 2040 Long Range Transportation Plan.

Technical Appendices

1.3. Federal Planning Requirements

In 2012, the federal surface transportation bill entitled Moving Ahead for Progress in the 21st Century (MAP-21) was enacted into law. MAP-21 requires states to develop a performance-based long range statewide transportation plan. Each state's plan should include performance measures that will assist the state in making progress towards meeting the national performance goal areas identified in the legislation. These goal areas are safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays.

In addition to these eight planning factors, there are additional minimum requirements for the metropolitan long range transportation plan as specified in federal law and regulation. Compliance of the 2040 LRTP with federal statutes is illustrated in Table 1 with a reference to the appropriate chapter that addresses each requirement.

FHWA is currently in the process of issuing rules to guide the development of performance measures. Once established, the State DOTs and MPOs will use the performance measures as they carry out federal-aid highway programs and assess system performance. The 2040 LRTP has addressed MAP-21 requirements and, to the extent possible, subsequent rule making.

Table 1 – Federal Planning Requirements for the 2040 LRTP

Requirement	Plan Reference
Identify transportation facilities (including major roadways, transit, multimodal and intermodal facilities, pedestrian walkways and bicycle facilities, and intermodal connectors) that function as an integrated metropolitan system, giving emphasis to facilities that serve important national, state, and regional transportation functions. [23 U.S.C. 134 (i)(2)(A); 23 C.F.R. 450.322(f)(2)]	Chapter 4 – Financial Plan Chapter 6 – Technical Planning Process
Address at least a 20-year planning horizon [23 C.F.R. 450.322 (a)]	Chapter 3 – Demographic, Socio Economic and Land Use Data Chapter 6 – Technical Planning Process Chapter 4 – Financial Plan Chapter 7 – Cost Feasible Plan
Describe the performance measures and targets used in assessing the performance of the transportation system in accordance with 23 U.S.C. 134(h)(2) and 49 U.S.C. 5303(h)(2). [23 U.S.C. 134(i)(2)(B); 49 U.S.C. 5303(i)(2)(B)]	Chapter 6 – Technical Planning Process
Include a report evaluating the condition and performance of the transportation system with respect to the targets described in 23 U.S.C.134(h)(2) and 49 U.S.C. 5303(h)(2), including progress achieved in meeting the targets in comparison with system performance recorded in previous reports. [23 U.S.C. 134(i)(2)(C); 49 U.S.C. 5303(i)(2)(C)]	Chapter 6 – Technical Planning Process
Include discussion of the 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 plan. This discussion shall be developed in consultation with federal, state, and tribal, wildlife, land management, and regulatory agencies. [23 U.S.C. 134 (i)(2)(B)(i)(ii); 23 C.F.R. 450.322(f)(7)]	Chapter 8 – Environmental Considerations
Include a financial plan that demonstrates how the adopted transportation plan can be implemented and indicates public and private resources reasonably expected to be available to carry out the plan. The financial plan may include, for illustrative purposes, additional projects that would be included in the adopted plan if reasonable additional resources beyond those identified in the financial plan were available. Projects in the financial plan are required to be in expressed in Year of Expenditure costs. [23 U.S.C. 134 (i)(2)(C); 23 C.F.R. 450.322(f)(10)].	Chapter 4 – Financial Plan Chapter 7 – Cost Feasible 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. [23 U.S.C. 134 (i)(2)(D); 23 C.F.R. 450.322(f)(3)]	Chapter 7 – Cost Feasible Plan Appendices

Requirement	Plan Reference
Include capital investment and other strategies to preserve the existing and future system and provide for multimodal capacity increases based on regional priorities and needs. [23 U.S.C. 134 (i)(2)(E); 23 C.F.R. 450.322(f)(5)]	Chapter 7 – Cost Feasible Plan
Include proposed transportation and transit enhancement activities. [23 U.S.C. 134 (i)(2)(F); 23 C.F.R. 450.322(f)(9)]	Chapter 7 – Cost Feasible Plan
Identify the projected transportation demand of persons and goods in the metropolitan planning area over the period of the plan. [23 C.F.R. 450.322(f)(1)]	Chapter 6 – Technical Planning Process
Identify pedestrian walkway and bicycle transportation facilities in accordance with 23 U.S.C. 217(g). [23 C.F.R. 450.322(f)(8)]	Chapter 9 – Multimodal/ Group Projects
Within TMAs, the plan should address congestion management through a metropolitan-wide strategy of new and existing transportation facilities and the use of travel demand reduction and operational management strategies. [23 USC 134 (k)(3); 23 C.F.R. 450.322(f)(4)]	Chapter 6 – Technical Planning Process Appendix J
In formulating the transportation plan, the MPO shall consider subsection (h) as the factors relate to a 20-year forecast period [23 USC 134(i)(2)(A)(ii); 49 USC 5303(i)(2)(A)(ii)]	Chapter 2 – Vision, Goals, and Objectives
Describe proposed improvements in sufficient detail to develop cost estimates, e.g. design concept and design scope descriptions. [23 C.F.R. 450.322(f)(6)]	Chapter 7 – Cost Feasible Plan
Include a safety element incorporating or summarizing the priorities, goals, countermeasures, or projects for the MPA contained in the Strategic Highway Safety Plan required under [23 U.S.C. 148], as well as (as appropriate) emergency relief and disaster preparedness plans and strategies and policies supporting homeland security (as appropriate) and safeguard the personal security of all motorized and non-motorized users. [23 C.F.R. 450.322(h)]	Chapter 6 – Technical Planning Process Chapter 7 – Cost Feasible Plan
When updating the plan, the MPO shall base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity. [23 C.F.R. 450.322(e)]	Chapter 3 – Demographic, Socio Economic and Land Use Data
The plan should include both long-range and short-range strategies and actions that lead to the development of an integrated multimodal transportation system that facilitates the efficient movement of people and goods in addressing current and future transportation demand. [23 C.F.R. 450.322(b)]	Chapter 9 – Multimodal/ Group Projects

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Chapter 2

VISION, GOALS, OBJECTIVES AND PERFORMANCE MEASURES

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2. VISION, GOALS, OBJECTIVES AND PERFORMANCE MEASURES

Transportation has a significant impact on the daily lives of area residents, visitors and businesses. The functioning of the transportation system also affects the economy and commercial interests, the environment and quality of life. With this in mind, the LRTP should reflect the values of the residents and the projects and programs identified should address the concerns most prevalent in the planning area. The vision statement, goals, objectives and performance measures identified in the LRTP provide guidance for the planning process and define the means by which specific projects will be assessed.

The vision, goals, and objectives for the 2040 LRTP were developed through consideration of a range of transportation guidance and documents. Consideration was given to the vision and goals of the planning area and its member governments, the TPO's overall strategic direction, the goals and objectives identified in the Florida Transportation Plan, and Federal MAP-21 requirements.

The Vision Statement for the 2040 LRTP states that: *Our transportation system will provide a safe and accessible range of options that enhances existing communities while providing mobility in a fiscally responsible, energy efficient, and environmentally compatible manner. This integrated system will support economic development, allowing for the effective movement of all people, goods, and services necessary to maintain and enhance our quality of life.*

This vision was slightly refined from the 2035 LRTP vision. Projects selected for inclusion in the 2040 LRTP are intended to reflect the vision and goals.

2.1. What Are Goals and Objectives?

A goal is derived from societal values and is intended to state an aspirational end result or achievement. An objective is derived from a goal and is intended to be more specific. Objectives identify short-term, measurable steps within a designated period of time and help us move towards achieving the long-term goals we have identified.

Goals and objectives should be clear and understandable to everyone involved: policymakers, transportation professionals and citizens. They should be developed independently and goals should not be mode-specific.

The 2040 LRTP goals were developed through a thorough review of those from the 2035 LRTP, River to Sea TPO strategic and modal plans, and federal transportation law (MAP-21). The 2040 LRTP goals reflect MAP-21 goal areas and provide a clear strategic direction to support the efficient movement of people and goods. The goals were reviewed, revised, and accepted following stakeholder and public input.

2.2. Goals of the 2040 LRTP

The Vision for the 2040 LRTP is supported by six goals, as indicated below. Each goal is further supported by objectives to help achieve that goal. As described in more detail in the following chapters, the vision and goals were utilized throughout the planning process, including in the identification of needed improvements and screening of those projects.

Table 2 provides a comparison of the River to Sea TPO 2040 LRTP Goals with MAP 21 Planning Factors and National Performance Goals [23USC §150(b)].

Goal 1: Provide a Balanced and Efficient Multimodal Transportation System

Objective 1.1 – Balanced Multimodal System

Develop a multimodal transportation system that improves the accessibility and mobility to economic centers for all users (vehicle, bicycle and pedestrian) as well as the movement of goods.

Objective 1.2 – Roadway Efficiency

Minimize congestion and delay on roadways and intersections through projects that improve capacity, provide more efficient use and operation of existing transportation facilities, and reduce transportation demand.

Objective 1.3 – Transit Efficiency

Provide public transit systems that deliver efficient and convenient transit service.

Objective 1.4 – Financial Efficiency

Develop a Plan that maximizes use of all available existing and alternative revenue sources and is financially feasible.

Objective 1.5 – Cost Effectiveness

Incorporate measures that give priority to projects that provide high benefit-to-cost considerations.

Goal 2: Support Economic Development

Objective 2.1 - Economic Benefit

Develop a transportation system that supports regional and local economic growth and diversity and improves the economic competitiveness of the region.

Objective 2.2 - Freight Movement

Identify and support safe and efficient truck routes and other facilities that improve freight and goods movement.

Objective 2.3 - Access to Intermodal Facilities

Improve connectivity and access to rail, port and airport facilities.

Objective 2.4 - Transit Access to Employment

Support funding of transit service that improves access to employment centers.

Goal 3: Enhance Connectivity and Transportation Choices

Objective 3.1 - Multimodal Transportation Options

Provide a range of transportation alternatives to improve mobility for all citizens with special consideration for the elderly, people with disabilities, and those unable to drive.

Objective 3.2 - Interconnectivity Between Modes

Maximize the interconnectivity of roadways, sidewalks, bicycle facilities, trails, transit and other transportation system components to provide safe and convenient pedestrian, bicycle, transit and motor vehicle mobility.

Objective 3.3 - Connectivity Between Activity Centers

Enhance regional connectivity to employment, education, health, entertainment and other major activity centers.

Objective 3.4 - Connectivity Between Jurisdictions

Enhance connectivity between local government jurisdictions within the region.

Goal 4: Improve Safety and Security

Objective 4.1 - Roadway System Safety

Identify and prioritize improvements to reduce the frequency and severity of crashes, and minimize injuries and fatalities.

Objective 4.2 - Bicycle and Pedestrian Safety

Identify and implement safety programs and enhancements to improve the safety of pedestrian and bicycle facilities.

Objective 4.3 - Transit System Security and Safety

Enhance security of transit systems through appropriate design, monitoring and enforcement programs.

Objective 4.4 - Emergency Evacuation

Develop a transportation plan that supports emergency evacuation, response and post-disaster recovery; and improves national, state and local security and emergency management functions.

Goal 5: Continue to Provide and Create New Quality Places

Objective 5.1 - Land Use Efficiency

Promote compact, walkable, mixed use development and redevelopment opportunities that encourage a range of transportation options and maximize the effectiveness of the transportation system.

Objective 5.2 - Preserve and Enhance Existing Communities

Develop a transportation plan with components planned and designed to preserve and enhance existing urban areas and communities.

Objective 5.3 - Comprehensive Planning

Support local visioning and planning principles by developing a Plan that is consistent with local government comprehensive plans to the maximum extent feasible.

Objective 5.4 - Natural Resource Protection

Locate and design transportation facilities to avoid or minimize the impact to natural resources including environmentally sensitive areas, and critical lands, waters and habitats.

Objective 5.5 - Air & Water Quality Protection

Develop and support a multimodal transportation system that maintains or reduces vehicle greenhouse gas emissions and pollutants that degrade water quality.

Goal 6: Provide Transportation Equity and Encourage Public Participation

Objective 6.1 - Public Involvement

Provide opportunities for public participation that is open, inclusive and accessible for all citizens; and develop outreach programs to engage citizens of all jurisdictions and the traditionally under-served and under-represented.

Objective 6.2 - Transportation Equity

Include provisions to identify the needs of low income and minority populations and ensure that projects in the Plan do not disproportionally burden low income and minority populations, and include measures to avoid, minimize or mitigate adverse impacts.

Objective 6.3 - Transit Access to Low Income and Transit Dependent Populations

Support transportation investments that improve public transit services for low income and transit dependent populations to gain access to jobs, schools, health services, and other needed services.

Table 2 – Comparison of 2040 LRTP Goals with MAP-21 State Planning Process[1]

2040 LRTP Goal	MAP 21: Planning Factors	MAP 21:National Goals*
Provide a Balanced and Efficient Multimodal Transportation System	Promote efficient system management and operation	Reduced Project Delivery Delays – To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices. System Reliability – To improve the efficiency of the surface transportation system.
Support Economic Development	Support economic vitality of U.S., States, metropolitan, and non-metropolitan areas by enabling global competitiveness, productivity, and efficiency. Promote consistency between transportation improvement and economic development patterns Enhance travel and tourism	Freight Movement and Economic Vitality – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development. System Reliability – To improve the efficiency of the surface transportation system.
Enhance Connectivity and Transportation Choices	Enhance integration and connectivity of systems across modes for people and freight	Congestion Reduction – To achieve a significant reduction in congestion on the NHS.
Improve Safety and Security	Increase Safety and Security of the transportation system for users	Safety – Protect and enhance the environment, promote energy conservation, enhance quality of life.
Continue to Provide and Create New Quality Places	Protect and enhance the environment, promote energy conservation, enhance quality of life. Improve the resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation	Environmental Sustainability – To enhance the performance of the transportation system while protecting and enhancing the natural environment.
Provide Transportation Equity and Encourage Public Participation	Increase accessibility and mobility of people and freight. Emphasize the preservation of the existing transportation system	Infrastructure Condition – To maintain the highway infrastructure asset system in a state of good repair

[1] Source: FHWA, USDOT; [23USC §150(b)]

*Transportation Performance Management (TPM) provides a means to the most efficient investment of Federal transportation funds by focusing on national transportation goals. Measures implemented to support these goals are reflected in Appendix N.

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Chapter 3

DEMOGRAPHIC, SOCIOECONOMIC AND LAND USE DATA

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3. DEMOGRAPHIC, SOCIOECONOMIC AND LAND USE DATA

Transportation and land use are closely associated. Changes to land use have transportation implications while every transportation action affects land use. To that end, demographics, socio economics and land use are important building blocks in the foundation of the 2040 LRTP. Understanding the users of the transportation system and their mobility needs can help inform public policy as it relates to the delivery of transportation projects and services.

The communities within the River to Sea TPO MPA are dynamic places, changing and evolving as the 21st century economy unfolds. This chapter identifies and examines demographic, socio economic, and land use trends and implications to inform the transportation planning process in accordance with [23 C.F.R. 450.322(e)], which states that the *MPO shall base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity*.

3.1. Demographics

Based on the U.S. 2010 Census, the population of the River to Sea TPO's Metropolitan Planning Area (MPA) includes:

River to Sea TPO's MPA includes:

Volusia County – 503,851 total population with a median age of 47 years

Race Includes:

- White – 82.5%
- Black or African Alone – 10.5%
- Others – 7%

  Ethnicities include:
  - Hispanic or Latino (of any race) – 11.2%
  - Not Hispanic or Latino – 88.8%

Flagler County – 99,121 total population with a median age of 49.1 years

Race Includes:

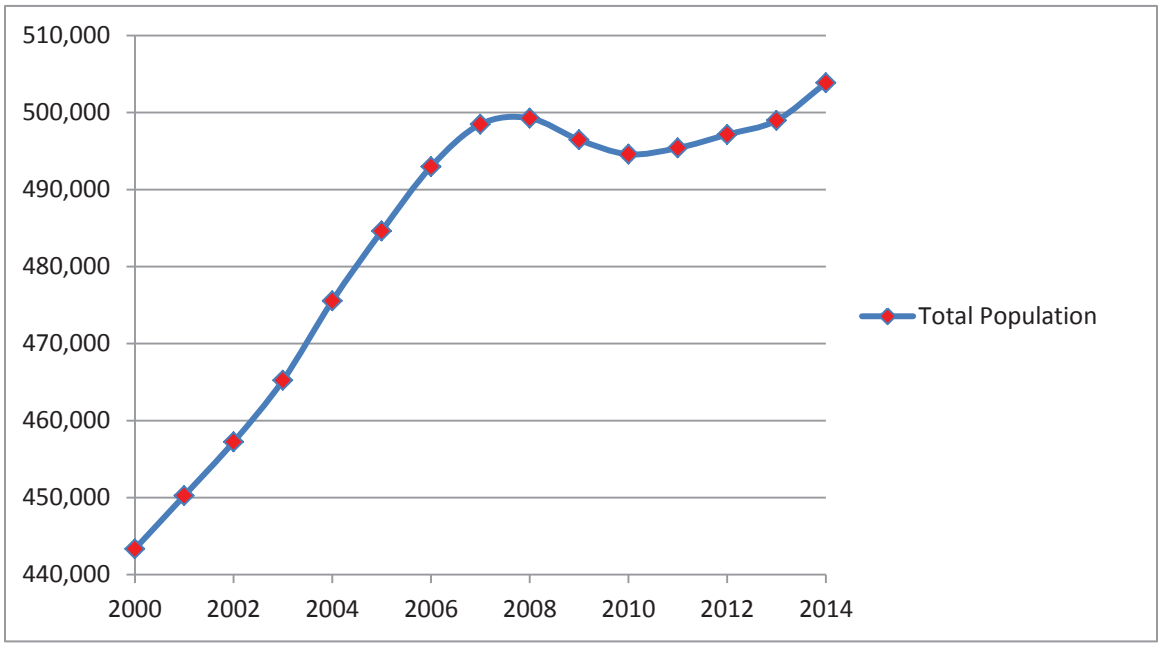
- White – 82.3%
- Black or African Alone – 11.4%
- Others – 6.3%

  Ethnicities include:
  - Hispanic or Latino (of any race) – 8.6%
  - Not Hispanic or Latino – 91.4%

In recent years, population in the planning area held steady or decreased slightly due to economic conditions. However, as the economy recovers and construction and tourism rebound, the populations of Volusia and Flagler Counties are expected to rise steadily in the foreseeable future. This trend is illustrated in Tables 3 and 4.

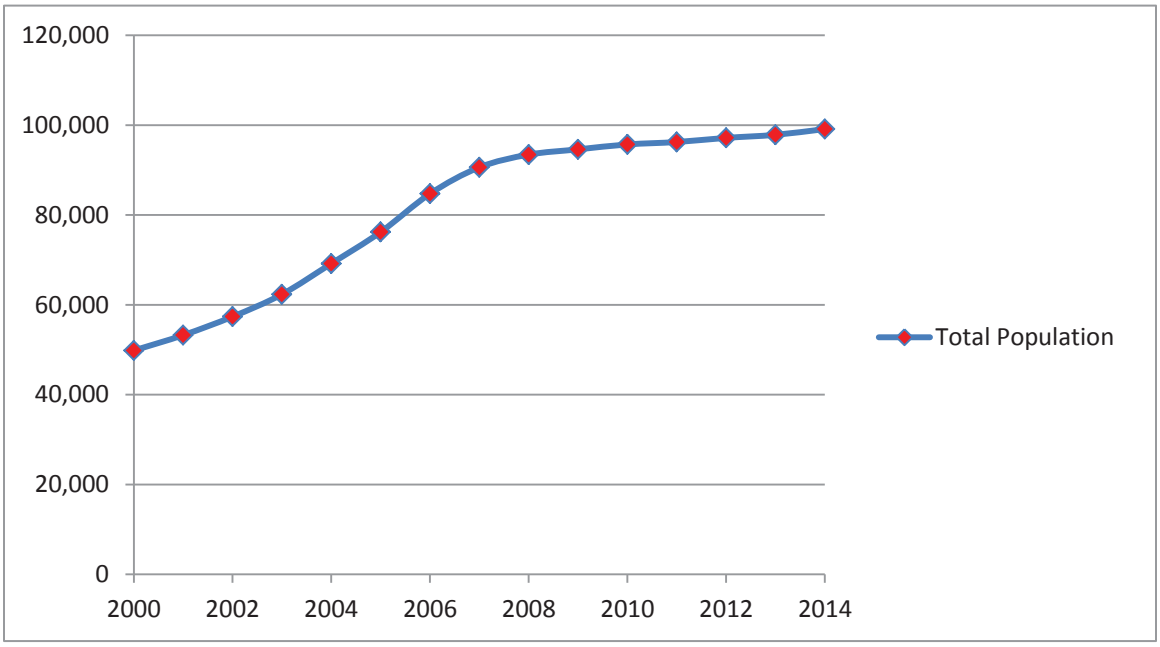
The increase in population is anticipated to result in increased demand for transportation and mobility. It is the main objective of the River to Sea TPO to forecast these needs and provide high quality transportation options for the citizens and visitors of Volusia and Flagler Counties.

Table 3 – Volusia County Total Population



Source: Bureau of Economic and Business Research, University of Florida

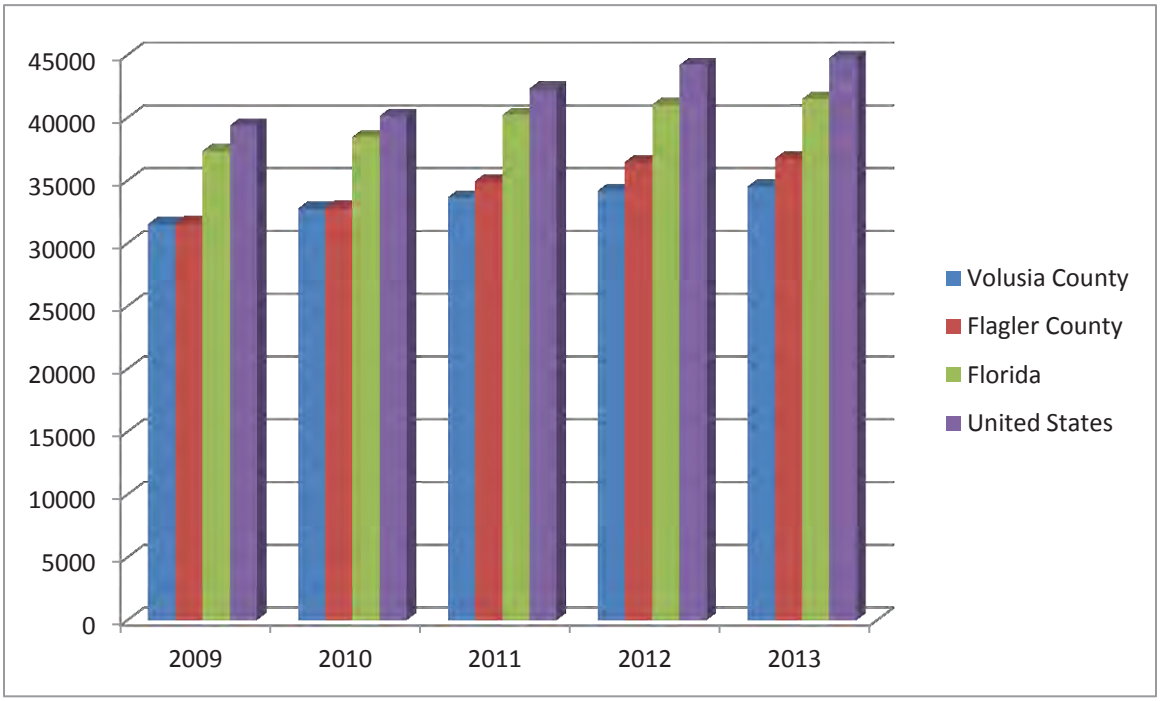
Table 4 – Flagler County Total Population



Source: Bureau of Economic and Business Research, University of Florida

According to data from the U.S. Census Bureau and the Florida Department of Economic Opportunity, both income per capita and employment rates are increasing, which is a promising metric for the future. This is depicted in Table 5. At the same time, the median age of Volusia and Flagler citizens is 47 years and 49 years respectively; as that median is expected to rise in the future (source: 2010 U.S. Census Bureau), the TPO's focus to provide efficient, effective transportation systems for Volusia and Flagler's Counties dynamic population, aging residents and growing economy will continue in importance.

Table 5 – Income Per Capita



Source: Bureau of Economic and Business Research, University of Florida

3.2. Socioeconomic Data

The TPO uses expected population and employment growth to project the road and transit needs for the 25-year planning horizon. This requires production of a Land Use dataset that describes the location of employees and residents in the target year. For this 2040 LRTP, two socioeconomic datasets were developed for the River to Sea TPO, both of which were used to inform the transportation modeling. These alternatives were the Constrained Trend Forecast and Alternative Land Use Forecast.

The level of analysis used by the Florida Standard Urban Transportation Model Structure (FSUTMS) is the Traffic Analysis Zone (TAZ), which can vary widely in size based on the intensity of the land use and transportation network: TAZs can range from several acres to thousands of acres. The level of output for each dataset is the TAZ showing population (ZDATA1) and employment (ZDATA2) data for each TAZ in five-year increments for year's 2015, 2020, 2025, 2030, 2035 and 2040.

3.2.1. Constrained Trend Socioeconomic Forecast

The usual method for forecasting these values is to examine existing trends and local jurisdiction comprehensive plans. For the 2040 LRTP, the Constrained Trend Scenario and Socioeconomic Forecast was used to formulate a realistic population and employment projection for input to the transportation model to determine future transportation needs. The starting dataset was the socioeconomic data for the 2035 Volusia TPO Long Range Transportation Plan, which used a base year of 2005. An updated base year dataset for 2010 was produced as well as a 2040 dataset.

The methodology for this scenario is provided in Technical Appendix A.

3.2.2. Alternative Land Use Socioeconomic Forecasts

For the Alternative Land Use, the Land Use Working Group was tasked to envision a realistic future scenario where jobs and housing were located closer together to better utilize multimodal transportation options, including transit, walking and cycling. They also reviewed other land use techniques to improve efficient use of new and existing road networks. The goal was to organize land uses to improve the efficiency of the transportation networks and mobility options for the public.

With this goal in mind, the Alternative Land Use Forecast formulated a realistic land use projection that demonstrated lower Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT), reduced suburban sprawl, and use of investment in transit to the best advantage. To achieve these goals, the alternative land use emphasized compact development along corridors, infill and redevelopment, mixing land uses, improved jobs to housing balance within compact urban travel sheds, and configurations that support multi-modal transportation.

The scenario emphasized the use of transit and pedestrian-supportive intensities and a mix of uses in new medium or large projects and on key corridors as well as the inclusion of a jobs-to-housing balance. The study assumed the preservation of existing single family neighborhoods and did not attempt to make major changes to the pattern of industrial, light industrial and auto serviced existing land uses.

The methodology for this scenario is provided in Technical Appendix B.

3.3. Environmental Justice Review

Effective transportation decision making depends upon understanding and properly addressing the unique needs of different socioeconomic groups, as these decisions directly and indirectly influence the health of people and the environment. Decision-making and policy implementation affect air and water quality, noise, and inter/intra-neighborhood connections. This element of the 2040 LRTP identified Environmental Justice populations and their locations within the River to Sea TPO's MPA. The River to Sea TPO has adopted and practiced planning strategies that align with the principles of Environmental Justice. These principles are:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.

- To ensure the full and fair participation by all potentially affected communities in the transportation decision making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

An Environmental Justice approach to transportation planning and project development recognizes the fair treatment of all groups within the community. This includes ensuring the involvement of the entire community in public outreach and participation efforts. The Department of Transportation is the lead agency charged with ensuring non-discrimination stemming from Environmental Justice issues, related to transportation planning. The statutory language of DOT Order 5610.2(a) focuses on minority and low-income populations. However, the 2040 LRTP recognized the need to consider all affected populations when making responsible planning decisions, including those who are elderly and those without access to a personal vehicle. Steps shall be taken to provide the public, including members of minority populations and low-income populations, access to public information relevant to human health or environmental impacts stemming from programs, policies, and activities, including information that will address the concerns of minority and low-income populations regarding the health and environmental impacts of the proposed action.

The full Environmental Justice report is included in Technical Appendix C. The following summary of findings highlights critical areas within the River to Sea TPO MPA where Environmental Justice concerns should be considered before undertaking planning efforts and focuses on the two Environmental Justice categories that are covered by Executive Order 12898 and subsequent DOT statutes and regulations: low-income and minority populations.

- An area of concern is the City of Bunnell, at the intersection of SR 100 and US 1, bordered by Hyman Circle in the southeast and South Knight Street in the west. This portion of Flagler County has a median household income of $28,594 and is composed of 65.8% minorities.

- Low-income, minority overlap is also prevalent in and around Daytona Beach. All of the following areas are located east of I-95: south of US 92, north of Beville Road, and west of Clyde Morris Boulevard, residents have a median income of $29,583 and are comprised of 42% minorities.

- Bisected by US 92, areas east of SR 5A, west of US 1, north of Shady Place, and south of 3rd Street have a median household income of approximately $12,000 and average nearly 90% minority populations.

- North of US 92, west of SR 5A, east of Bill France Boulevard, and south of LPGA Boulevard between Jimmy Ann Drive and Derbyshire Road. This selected portion of the TPO MPA is comprised of 73.5% minority populations; with 26% of residents living below the poverty level.

- US 1 (east), Wayne Avenue (north), Milford Place (west), and SR 44 (south) are the borders for an area with low-income populations and which has a high minority percentage. Median income is approximately $20,000 and minority populations average over 55%.

- Northwest of Deltona and southwest of Orange City is another area with an overlap of low-income and minority population. This area, with US 17-92 as the western edge and I-4 on the east, averages greater than 40% minority populations and less than $25,000 in median household income. Saxon

Boulevard in the southern edge of this defined area and East Graves Avenue is the northern border.

- Portions of DeLand also merit attention. US 17-92 bisects an area bordered by South Hill Avenue in the east and SR 15 in the west. Northern edges of this area are West Howry Avenue and East Wisconsin Avenue. Median income figures in this area are approximately $24,000 and minority populations range from 45% to above 90%.

3.3.1. Implementation

The Environmental Justice findings highlight critical areas within the River to Sea TPO MPA where environmental justice concerns should be considered before undertaking planning efforts, conducting public involvement activities, and when screening projects for inclusion in the 2040 LRTP. This allows the TPO to identify any disadvantaged populations that may be negatively impacted.

For the carry over projects from the 2035 LRTP that are also included in the 2040 Cost Feasible Plan (CFP), either a PD&E has been completed and will be updated prior to project design or the project has been screened through the Efficient Transportation Decision Making (ETDM) process. All new projects will be subject to the same process.

The River to Sea TPO exercised the option to use up to 20% of Other Arterial funds for local, off-system projects. The screening process used to rank candidate projects included Environmental Justice concerns as a ranking criteria. This process is further described in Section 6.2.

3.3.2. Additional Activities and Considerations

The TPO sets aside 30% of its XU funding for bicycle and pedestrian projects and another 30% for public transit to support mobility options. Many of these directly improve conditions for the populations identified under environmental justice. The TPO visions, plans, funds, and implements improvements to walking and bicycling networks, including linkages to transit within the service area. Pedestrian and bicycle facilities expand the travel opportunities for residents who, either by choice or by circumstance, do not use an automobile. These groups often include, but are not limited to, disabled individuals, children, the elderly, and the financially disadvantaged.

The TPO also involves the aging, disabled, and disadvantaged populations in the process through the Transportation Disadvantaged Local Coordinating Board (TDLCB), the Center for Visually Impaired (CVI) and the Council on the Aging (COA). The primary purpose of the TDLCB is to assist the designated official planning agency in identifying local service needs and providing information, advice, and direction to the Community Transportation Coordinator on the coordination of services to be provided to the transportation disadvantaged. The TPO has also completed studies, such as the Elder Mobility Study, to ensure understanding of the impacts to certain populations.

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Chapter 4

FINANCIAL PLAN

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4. FINANCIAL PLAN

Federal guidance requires that all long-range transportation plans be "cost-feasible." Therefore, the TPO is required to identify the anticipated federal, state and local financial resources that will support completion of the projects proposed in the LRTP as well as to develop reasonable and reliable transportation project cost estimates.

This chapter summarizes the sources of revenue available for the 2040 LRTP. The financial plan used for the 2040 LRTP update includes state and federal revenue estimates as provided by the Florida Department of Transportation (FDOT). As required, the revenue estimates have been provided in "year-of-expenditure" values, separated into five-year time frames over the planning horizon. The first five years of the plan period are not included in the projections since the revenue for that period is encumbered by projects included in the TPO's Transportation Improvement Program. The total revenue projected to be available between the years 2020 and 2040 for River to Sea's transportation improvements is $1.9billion, in present day dollars, inclusive of Strategic Intermodal System funding, which is allocated by the FDOT.

The full Financial Forecast is available in Technical Appendix D.

4.1. Current Revenue Sources

The public transportation system in Florida has several funding sources for development and maintenance. The major sources of transportation funds are fuel taxes levied at federal, state and local levels. Federal funds are collected and distributed to federal highway, rail and transit programs from which Florida receives funding for eligible programs. State funds are collected from state tax levies and distributed to state funding programs, with the State Transportation Fund receiving the bulk of these funds. These programs fund statewide projects, as well as distribute funds to counties and municipalities. On the local level, funds are collected from local tax levies, as well as state tax levies shared by the state and local entities. Table 6 outlines Florida's transportation tax sources and estimated transportation-related tax distribution for 2013.

4.1.1. State/Federal Funds

The federal government imposes taxes on gasoline, diesel fuel, special fuels, compressed natural gas, gasohol, tires, truck and trailer sales and heavy vehicle use. Revenues from these federal taxes are deposited into either the Highway Account or the Mass Transit Account of the Federal Highway Trust Fund. FHWA and FTA then distribute funds in these accounts to each state through a system of formula grants and discretionary allocations. The State of Florida, in spite of updated legislation, continues to be a "donor" state with regard to the receipt of funds from the Federal Highway Trust Fund. This means that Florida contributes a greater amount of taxes to the Federal Highway Trust than the allocation it receives in return to fund transportation projects. State highway fuel sales taxes are shared between the FDOT and Florida's county governments.

Table 6 – Florida's Transportation Tax Sources

Fund/Tax Source	Description	2013 Distribution ($ in Millions)	2013 Rates & Fees
FEDERAL			
Federal Highway Administration	Highway fuel taxes and other excise and heavy vehicle use & sales taxes	$1,825	Gasoline - 15.44¢/gallon Gasohol - 15.44¢/gallon Diesel - 21.44¢/gallon
Federal Aviation Administration Airport & Airway Trust Fund	Federal taxes on non-commercial aviation fuel, airline tickets, waybills, and international departures	$188	Avgas – 19.3¢/gallon Jet Fuel – 21.8¢/gallon Ticket Tax – 7.5% Waybill Tax - 6.25%
Federal Transit Administration Highway Trust Fund	Federal highway fuel taxes	$365	2.86¢/gal
Federal Rail Administration General Fund	Appropriations	$0	N/A
STATE – FOR STATE USE			
Fuel Sales Tax	Highway and off-highway fuels (excluding alternative fuels)	$1,149 $14	Highway Fuel – 13.1¢/gal Off-Highway Diesel – 6%
SCETS Tax	Highway fuels (including alternative fuels)	$655	Gasoline – 5.8¢ to 6.9¢/gal Diesel - 6.9¢/gal
Aviation Fuel Tax	Aviation fuel	$41	6.9¢/gal
Fuel Use Tax & Fee	ID decals & taxes on highway fuels consumed commercially	$11	Decals - $4.00/year Taxes – Prevailing Rates
Motor Vehicle License Fee	Annual vehicle registrations	$484	Fee based on vehicle weight
Initial Registration Fee	Initial registration surcharge on specified vehicles	$85	One-time Fee - $225.00
Incremental Title Fee	Titles issued for newly registered and transferred vehicles	$286	Fee - $70.00 each
Rental Car Surcharge	Daily surcharge on	$116	Fee - $2.00/day

Fund/Tax Source	Description	2013 Distribution ($ in Millions)	2013 Rates & Fees
	leased/rented vehicles		
STATE – FOR LOCAL USE			
Fuel Excise Taxes – Constitutional, County and Municipal Gas Taxes & Fuel Use Tax	All highway fuels	$359	Constitutional – 2¢/gal County – 1¢/gal Municipal – 1¢/gal
LOCAL			
Ninth-cent Gas Tax	All highway fuels	$78	Gasoline – 0¢-1¢/gal Diesel – 1¢/gal
Local Option Gas Tax	All highway fuels	$691	Gasoline – 1¢-11¢/gal Diesel – 6¢/gal
TOTAL		$6,347	

Source: Florida's Transportation Tax Sources, A Primer, January 2014

4.1.2. Local Funds

Local governments have the ability to raise revenues through levying local taxes (see Table 7). The counties in the River to Sea TPO area generally use a combination of sales taxes, gas taxes and impact fees to pay for transportation projects. The taxes most frequently utilized are the Local Option Gas Tax (LOGT), the Constitutional Gas Tax, and the Local Government Infrastructure Surtax. The state collects and distributes the Constitutional Gas Tax, county and municipal gas taxes and fuel use taxes on behalf of local governments. In the past, a major revenue source for transportation-related projects has been transportation impact fees; however, the recent downturn in the economy has significantly reduced the flow of revenues from transportation impact fees. A more in-depth assessment of local taxes and fees is provided below.

Constitutional Gas Tax – The state Department of Revenue collects the constitutional and county gas taxes and transfers the proceeds on a monthly basis to the State Board of Administration (SBA) for distribution to the counties. The SBA deducts administrative costs from the proceeds and calculates a monthly allocation for each county. The SBA manages, controls and supervises the proceeds. Once the proceeds have been allocated, revenues are distributed to each county's Board of County Commissioners to be used at the county's discretion for the intended purposes.

Local Option Gas Tax – Both Local Option Gas Taxes are levied by individual counties as a result of either a majority vote of the county's governing body or upon approval by referendum. The proceeds are distributed to the county and eligible municipalities based on transportation expenditures. Counties are required to share the proceeds with municipalities. The taxes are collected by retailers and remitted to the Department of Revenue. The Department of Revenue distributes the proceeds monthly to the county in which the tax was collected and then transfers the proceeds to the Local Option Gas Tax Trust Fund.

Voted One-Cent (Ninth-Cent) Gas Tax – The Ninth-Cent Gas Tax is levied according to the same rules as the Local Option Gas Taxes. County governments are not required to share the proceeds of the Ninth-Cent Gas Tax with municipalities, although some counties share revenues through participating in interlocal agreements with municipalities. Retailers collect the tax and then remit the proceeds to the Department of Revenue. The proceeds are transferred to the Ninth-Cent Gas Tax Trust Fund.

Infrastructure Surtax – The Local Government Infrastructure Surtax is enacted by a majority vote and approval by voters in a countywide referendum. The Department of Revenue is charged with the responsibility of collecting, administering and enforcing the infrastructure surtax. The proceeds of the tax are transferred to the Discretionary Sales Tax Trust Fund.

Impact Fees – Transportation impact fees (TIF) are imposed by local governments directly. An impact analysis is performed and the level of fees determined before the development occurs. Local governments collect, administer and control the fees.

Table 7 – Local Government Revenue Sources

Fund/Tax Source	Description	Uses	Maximum Allowable Tax
State – For Local Use			
Constitutional Gas Tax	State revenue shared source for counties only, funds are allocated to debt service managed by the State Board of Administration then surplus is distributed to County.	The acquisition, construction and maintenance of roads. Can be used as matching funds for state/federal funding for the above purposes	2¢/gallon
County Gas Tax	A gas tax levied on motor fuel at the wholesale level. Tax is administered by the State and redistributed to counties on a monthly basis.	Transportation-related expenses including the acquisition of rights of-way, development and maintenance of transportation facilities, roads and bridges.	1¢/gallon
Local			
Local Option Gas (1)	This tax is imposed on every gallon of motor or special fuel sold at retail in a county.	The proceeds are to fund only transportation expenditures.	6¢/gallon
Local Option Gas (2)	This tax is imposed on every gallon of motor fuel sold at retail in a county.	Fund transportation expenditures needed to meet the requirements of the local government comprehensive plan.	5¢/gallon
9th Cent Gas Tax	This tax is imposed on motor and special fuels sold within the county.	Expenses associated with the establishment, operation and maintenance of a transportation system and its facilities	1¢/gallon
Local Government Infrastructure Surtax	Applies to all transactions subject to the state tax imposed on sales, use, services, rentals, admissions and other transactions.	Financing, planning and construction of infrastructure. County may acquire land for public recreation or preservation.	1%
Charter County and Regional Transportation System Surtax	Applies to all transactions subject to the state tax imposed on sales, use, services, rentals, admissions and other transactions.	The development, construction, operation, and transit systems, roads and maintenance of bridges.	1%
Transportation Impact Fees	These fees are imposed on a project by project basis before development takes place.	Must be used to finance road and transportation-related projects within the collector district. Funds must be spent within six years of collection.	Varies with type of project

Source: 2012 Local Government Financial Information Handbook.

4.2. Financial Projections

There are several current funding sources available to the River to Sea TPO for use in the 2040 LRTP. FDOT provided funding projections for state and federal funds. Volusia County, Flagler County and the City of Palm Coast provided projections for future funding levels from their current funding sources and further analysis of these projections was developed by the TPO. This information on local revenue is provided for informational purposes only as local projects are not included in the 2040 LRTP Cost Feasible Plan.

Summaries of the projections have been identified beginning with the year 2019 (FY 2018/2019) and ending at year 2040 (FY 2039/2040). Revenues through 2018 are earmarked to fund committed projects and are not included in this analysis. The intent of this section is to identify only those sources not currently dedicated or obligated to other uses. In some cases, portions of the revenues have already been committed to either fund operations and maintenance, or complete projects already initiated but not fully funded using revenues through 2018. Where appropriate, commitments have been identified and subtracted from the total revenues to identify those revenues available for improvements in the Transportation Plan.

4.2.1. Short-Range Revenue

The River to Sea TPO works closely with local partners and with the FDOT to coordinate a five-year plan of transportation projects. The TPO's plan is known as the Transportation Improvement Program (TIP) and the FDOT plan is called the Work Program. When transportation projects are included (or programmed) in these documents, the various phases of development (i.e. acquiring equipment, right-of-way, or completing the project design) are expected to be pursued until the project is complete. A continued commitment to projects in the near term reduces wasteful spending and creates stability in the development of our transportation systems.

When the TPO began developing the 2040 LRTP, a project schedule was established to ensure key activities such as modeling and revenue forecasting could be accomplished without overlap or gaps. Transportation projects and associated financial information for the period were established through the adopted TIP and Work Program. The TIP is subject to public review and is required by law to be fiscally balanced; therefore, a review of the financial resources identified to support these short-range projects was not completed as part of the long-range planning effort.

4.2.2. State/Federal Funds

The FDOT developed revenue forecasts of state and federal transportation funds for River to Sea TPO through the year 2040. These forecasts are based on a statewide estimate of revenues that fund the state transportation program and are consistent with "Financial Guidelines for MPO 2040 Long Range Plans," adopted by the Metropolitan Planning Organization Advisory Council (MPOAC) in January 2013. All estimates are based in year of expenditure (YOE) dollars.

Table 8 summarizes the projected state and federal revenues through 2040. Over the 22-year period from 2019 to 2040, $1.9 billion in state and federal funds are projected for the River to Sea TPO.

Table 8 - Projected State & Federal Revenues for River to Sea TPO ($ Millions)

Capacity Programs	2019-2020	2021-2025	2026-2030	2031-2040	Total (2040)
SIS Highway Construction & ROW	$200.7	-	557.4	$428.7	$1,186.7
Arterial Construction & ROW	$45.6	$101.9	96.3	$210.8	$454.6
Transit	$22.2	$57.3	60.2	$126.2	$265.9
Total Capacity Program	$268.4	$159.2	713.9	$765.7	$1,907.2
TMA Funds	$9.4	$23.6	$23.6	$47.2	$103.7

Source: FDOT 2040 Forecast of State and Federal Revenues for Statewide and Metropolitan Plans; March 2014

4.2.3. Volusia County

Volusia County receives revenues from the local option fuel taxes, the Constitutional, County and municipal Fuel Taxes and collects transportation impact fees to fund its transportation needs. The projected revenues from these sources are identified in Table 9. Additional year-by-year detail regarding these projections is provided in the full technical report in Appendix D. Over the 22-year period from 2019 to 2040, over $447.0 million in gas taxes, and $48.1 million in impact fees are projected for transportation projects in Volusia County.

In addition to the revenues identified in Table 9, Volusia County levies the first Local Option Gas Tax (6¢ per gallon), the second Local Option Gas Tax (5¢ per gallon) and the Ninth Cent Voted Gas Tax. These revenue sources are used to fund operations, maintenance and new road capacity. The County also receives funds from the Constitutional Gas Tax, the County Gas Tax and the Municipal Gas Tax – all of which are used for operations/maintenance/debt service for the county roadway system.

Table 9 – Projected Volusia County Revenues

Fuel Taxes for O&M	**2019-2020**	**2021-2025**	**2026-2030**	**2031-2035**	**2036-2040**	**Total**
Constitutional (O&M)	$8,744,090	$21,086,647	$20,026,115	$19,018,922	$18,062,384	$86,938,159
County (O&M)	$3,729,641	$8,809,142	$8,119,732	$7,484,275	$6,898,550	$35,041,340
Municipal (O&M)	$596,707	$1,486,555	$1,479,137	$1,471,757	$1,464,412	$6,498,569
6-Cent Local Option (50% O&M)	$7,241,055	$18,135,670	$18,182,957	$18,230,368	$18,277,902	$80,067,953
1-Cent Local Option (50% O&M)	$2,057,436	$4,869,708	$4,502,167	$4,162,366	$3,848,212	$19,439,888
Fuel Taxes for CIP	**2019-2020**	**2021-2025**	**2026-2030**	**2031-2035**	**2036-2040**	**Total**
6-Cent Local Option (50% CIP)	$7,241,055	$18,135,670	$18,182,957	$18,230,368	$18,277,902	$80,067,953
5-Cent Local Option (CIP)	$10,802,737	$27,062,868	$27,143,093	$27,223,556	$27,304,258	$119,536,513
1-Cent Local Option (50% CIP)	$2,057,436	$4,869,708	$4,502,167	$4,162,366	$3,848,212	$19,439,888
Total Fuel Taxes for CIP	**$20,101,228**	**$50,068,246**	**$49,828,218**	**$49,616,291**	**$49,430,372**	**$219,044,354**
Transportation Impact Fees	**$4,777,507**	**$12,973,604**	**$11,360,641**	**$9,979,689**	**$9,050,040**	**$48,141,480**

4.2.4. Flagler County

Flagler County currently uses transportation impact fees and approximately 80 percent of the Constitutional Gas tax revenue to fund new transportation needs. The local option fuel taxes, County fuel tax and remainder of the Constitutional fuel taxes are used to fund operations and maintenance. The projected revenues from these sources are identified in Table 10 with additional detail provided in the full technical report in Appendix D. Over the 22-year period from 2019 to 2040, $28.8 billion is projected for transportation in Flagler County.

Table 10 – Projected Flagler County Revenues

Fuel Taxes for O&M	2019-2020	2021-2025	2026-2030	2031-2035	2036-2040	Total
Constitutional (20%)	$464,727	$1,224,202	$1,318,813	$1,420,736	$15,305,362	$19,733,839
County	$1,024,214	$2,698,026	$2,906,541	$3,131,170	$3,373,159	$13,133,110
6-Cent Local Option	$968,008	$2,549,965	$2,747,036	$2,959,338	$3,188,048	$12,412,394
1-Cent Local Option	$889,358	$2,342,782	$2,523,842	$2,718,894	$2,929,021	$11,403,898
Fuel Taxes for CIP	**2019-2020**	**2021-2025**	**2026-2030**	**2031-2035**	**2036-2040**	**Total**
Constitutional (80%)	$1,858,907	$4,896,807	$5,275,252	$5,682,944	$6,122,145	$23,836,054
Transportation Impact Fees	$353,211	$988,552	$1,091,441	$1,205,039	$1,330,461	$4,968,704

In addition to fuel taxes, Flagler County also has a ½ Cent Small County Sales Tax that expires in 2032. As detailed in Table 11, almost $36.6 million in infrastructure sales taxes is projected for collection by 2040. Currently the revenue generated from this tax is to be used for a new jail but there is potential that some of this revenue may be available in later years for road improvements.

Table 11 – Projected Local Option Sales Tax Revenue

Sales Taxes	2019-2020	2021-2025	2026-2030	2031-2035	2036-2040	Total
½-Cent Local Option	$4,554,467	$11,848,502	$12,452,895	$7,774,606	$0	$36,630,470

4.2.5. City of Palm Coast

Palm Coast receives a portion of the Local Option Gas Tax and also collects transportation impact fees to fund transportation needs. As detailed in Table 12, Over the 22-year period from 2019 to 2040, $31.0 million in gas tax revenue and $26.5 million in impact fee revenue is projected for transportation in the City of Palm Coast. Additional detail regarding these projections is provided in the full technical report in Appendix D.

Table 12 – Projected City of Palm Coast Revenues

Fuel Tax	2019-2020	2021-2025	2026-2030	2031-2035	2036-2040	Total
6-Cent Local Option (CIP)	$3,113,113	$7,514,441	$7,146,166	$6,795,937	$6,462,869	$31,032,527
Transportation Impact Fees	$1,762,171	$4,889,340	$5,668,085	$6,570,864	$7,617,432	$26,507,893
TOTAL	**$4,875,284**	**$12,403,781**	**$12,814,251**	**$13,366,802**	**$14,080,301**	**$57,540,420**

In addition to fuel taxes, Palm Coast also receives a portion of the County's ½ Cent Small County Sales Tax. Table 13 provides the projected revenue available to the County: approximately $43 million in Small County sales taxes will be collected by 2040, some of which can be used for road improvements although it is not currently. This tax is set to expire in 2032.

Table 13 – Projected Local Option Sales Tax Revenue

Sales Taxes	2019-2020	2021-2025	2026-2030	2031-2035	2036-2040	Total
½-Cent Local Option	$5,328,187	$13,943,826	$14,655,101	$9,149,490	$0	$43,076,604

4.2.6. Votran

The Volusia County Council created Volusia County's public transportation system, called Votran, in 1975. Votran operates as a service of Volusia County Government, providing transportation to all urban areas of the county with a fleet of 56 revenue-producing fixed route buses, four trackless trolleys, 29 van pools and 44 paratransit vehicles. Additional paratransit service is provided through contracts with private sector vendors.

Votran services are supported by FDOT agreements that do not have a planned replacement match from Volusia County at this time. These funds provide for SunRail feeder bus routes and Route 3/4 corridor funds providing half hour frequency.

The revenue projections in Table 14 represent a virtual status quo level with increments linked to inflation and the financial agreement structure for SunRail. This results in an operating policy of indefinite deferral of any service expansion.

Table 14 – Projected Votran Revenues

Type	2019-2020	2021-2025	2026-2030	2031-2035	2036-2040	Total
Farebox	$20,045,309	$55,617,955	$64,476,456	$74,745,884	$86,650,966	$301,536,570
Local Government	$0	$0	$0	$0	$0	$0
From State	$8,150,283	$17,084,456	$15,122,111	$17,530,671	$20,322,853	$78,210,374
Total	$28,195,592	$72,702,411	$79,598,567	$92,276,555	$106,973,818	$379,746,944

Source: Votran

4.3. SunRail

SunRail provides commuter rail service in Orange, Seminole, Volusia and Osceola Counties in Central Florida. The first phase of service began in May 2014, including 12 stations and spanning 32 miles from DeBary to Sand Lake Road south of Orlando. During this fiscal year, Phase II South received grant funding to extend the service an additional 29 miles from Sand Lake Road to Kissimmee and Poinciana in Osceola County.

Boarding data from May 1, 2014 to April 30, 2015 shows that the Winter Park station has the highest number of total riders, with 145,570 people boarding. The DeBary station has the second highest number of riders with 140,961 people boarding. From an economic perspective, this is a positive sign for Volusia County since many commuters are residents of Volusia County even as they travel for work to adjoining counties.

The annual operating cost of SunRail was reported at $34.4 million in the first year of service which includes $30.1 million for SunRail operations and maintenance, dispatch and maintenance of the corridor and $4.4 million for insurance, Wi-Fi, banking services, oversight, feeder bus support etc. The first year revenues for SunRail were $7.2 million. The Florida Department of Transportation provided additional operating assistance of $27.2 million.

A $35 million TIGER grant application was submitted for Phase II North, extending service from DeBary to the DeLand Amtrak station in Volusia County. This 13-mile extension is anticipated to cost $70 million, with Volusia County and the state expected to pick up the remainder of the expense. However, this grant application was denied and the status of this expansion is unknown.

4.4. Summary

The River to Sea TPO 2040 Long Range Transportation Plan is funded using a mixture of state, federal and local revenues. Table 15 summarizes the projected funding by system, agency and local government as well as the source of the funds (i.e., state/federal or local). Projected funds are identified by source for the period from 2019 through 2040. Revenues to fund the years prior to 2019 will be committed through the Transportation Improvement Program (TIP). Estimates of local funds are provided for informational purposes only.

Table 15 – Projected Revenues for the 2040 Long Range Transportation Plan (2019 – 2040)

System, Agency, Local Government	State/Federal Funds	Local Revenues	Total
River to Sea TPO (TMA)	$103,700,000	n/a	$103,700,000
SunRail	$993,8980	$896,088	$1,091,107
Transit	$265,900,000	$301,536,570	$567,436,570
Volusia County	$1,641,300,000	$267,185,834	$1,908,485,834
Flagler County		$85,488,000	$85,488,000
City of Palm Coast		$57,540,420	$57,540,420

4.5. Potential Revenue Sources Under Consideration

There are several revenue sources available to counties and cities within the River to Sea MPA that have not yet been implemented. These are discussed in the following sections although this potential revenue is not included in the overall financial forecast.

4.5.1. Local Option Sales Tax

The local option sales tax is normally implemented by a county for specific purpose and for a specific time period. This tax is often implemented in ½ cent increments, with a 1-cent limit for infrastructure.

Volusia County has not levied the local option sale tax at any level. Table 16 provides a projection of potential revenues if the sales tax was to be implemented at either the ½ cent or 1 cent rate. If implemented at the higher rate, the sales tax could generate nearly $919 million in infrastructure funds by 2040.

Table 16 – Projected Local Option Sales Tax Revenue (Volusia County)

Sales Taxes	2019-2020	2021-2025	2026-2030	2031-2035	2036-2040	Total
½-Cent Local Option	$33,992,401	$91,111,134	$100,594,054	$111,063,964	$122,623,590	$459,385,143
1-Cent Local Option	$67,984,802	$182,222,268	$201,188,108	$222127,928	$245,247,181	$918,770,286

Flagler County has levied the Small County Local Option sale tax at a ½ cent rate, as described previously in Section 3.4. Table 17 provides a projection of potential revenues if the sales tax was doubled to the 1 cent rate. This increased rate would provide the County with $111.4 million in infrastructure funds by 2040.

Table 17 – Projected Local Option Sales Tax Revenue (Flagler County)

Sales Taxes	2019-2020	2021-2025	2026-2030	2031-2035	2036-2040	Total
½-Cent Local Option	$4,554,467	$11,848,502	$12,452,895	$7,774,606	$0	$36,630,470
1-Cent Local Option	$9,108,933	$23,697,004	$24,905,790	$26,176,235	$27,511,486	$111,399,449

The City of Palm Coast shares in the County's local option sales tax, as described previously in Section 3.4. Table 18 provides a projection of potential revenues if the sales tax was doubled to the 1 cent rate. This increased rate would provide the City with $131 million in revenue by 2040, half of which could be used for infrastructure improvements.

Table 18– Projected Local Option Sales Tax Revenue (Palm Coast)

Sales Taxes	2019-2020	2021-2025	2026-2030	2031-2035	2036-2040	Total
½-Cent Local Option	$5,328,187	$13,943,826	$14,655,101	$15,402,659	$16,188,349	$65,518,122
1-Cent Local Option	$10,656,373	$27,887,652	$29,310,203	$30,805,317	$32,376,698	$131,036,244

4.5.2. Mobility Fee

Another potential revenue source for transportation infrastructure is the mobility fee. A mobility fee is a charge on all new development to equitably provide mitigation for its impact on the transportation system. However, a mobility fee is not a substitute for site related improvements for safety, access and internal circulation, which may still be required under local land development regulations. As a charge on new development, the mobility fee has characteristics of an impact fee. Implementation of a mobility fee may involve adherence to the dual rational nexus test established in Florida case law, unless otherwise provided by the legislature.

Although a mobility fee is similar to an impact fee in that it is a charge on new development for its impacts on transportation facilities, the mobility fee as proposed in this report differs from an impact fee in significant ways, including:

- A mobility fee would be sensitive to vehicle or person miles traveled, encouraging shorter trips and reduction of total travel thereby promoting compact and mixed-use development;
- A mobility fee would fund multi-modal transportation improvements for roadways, transit, bikeway, and pedestrian walkways. This includes capital projects, system efficiency and congestion management improvements/strategies and transit capital and operating costs;
- A mobility fee could provide a charge for recouping a new development's share of transit operating costs for a short term period; and
- A mobility fee would be distributed among all the governmental entities responsible for maintaining impacted transportation facilities.

4.5.3. Miles Driven Fee

A new concept for paying for transportation impacts is a fee based upon the number of miles driven. This is part of the concept behind the mobility fee discussed above. The federal and state government currently levy fuel taxes on a cents-per-gallon basis, so real revenues will inevitably decline unless the per-gallon tax rates are periodically increased to offset the effects of both inflation and improved fuel economy. As a result, fuel tax rates at the federal and state levels have stagnated, resulting in growing shortfalls in funding for surface transportation programs. Transportation funding shortfalls will grow even more acute in the coming years as improved vehicle fuel economy and the adoption of alternative-fuel vehicles reduce federal and state fuel tax revenues by billions of dollars per year. The miles-driven fee is designed to overcome these problems. Some key benefits of a miles-driven fee are:

- Key mileage fees to the amount of vehicle travel rather than to fuel consumption. This change should provide a more stable revenue stream in future decades;
- Improve driver experience through technology-based innovations;
- Collect detailed and anonymous travel data to support better planning and operations;
- Reduce traffic congestion by varying the per-mile charge based on time of day and travel location. Mileage fees could facilitate congestion pricing across all crowded segments of the road network;
- Reduce road wear. Heavy commercial trucks cause significantly more road damage than lighter passenger vehicles. To help reduce excessive road wear, mileage fees for trucks could vary based on axle weight (higher for trucks with fewer axles) and type of route (higher for travel on lightly engineered routes); and
- Reduce harmful emissions. Mileage fees could be set higher for more-polluting vehicles and lower for less-polluting vehicles.

Numerous studies have been completed regarding a Vehicle Miles Travelled (VMT) fee and several pilot projects have been undertaken. However, there are still many questions that would need to be resolved before implementation of a VMT fee could occur.

4.5.4. Rental Car Surtax

Florida Statutes state that the lease or rental in Florida of a for hire passenger motor vehicle is subject to a surcharge of $2.00 per day, or any part of a day, regardless whether the vehicle is licensed in Florida. The revenues generated by this surtax would not be a significant revenue source in Volusia or Flagler Counties for transportation infrastructure funding.

Chapter 5

PUBLIC OUTREACH

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5. PUBLIC OUTREACH

5.1. Introduction

The importance of public outreach as a means to inform, educate, and involve citizens in the transportation decision-making processes that impact their daily lives cannot be underestimated. The River to Sea TPO planning area includes a diverse population of almost 600,000 residents and the outreach program included efforts to reach and involve representatives from all walks of the community. With five institutions of higher education, there is an engaged and youthful population as well as a significant number of senior citizens and an active group of disabled advocates that seek to maintain independence for persons with disabilities. The TPO planning area covers rural communities and urbanized areas and includes an employment base consisting of agriculture, tourism and manufacturing.

During the development of the 2040 LRTP, a multi-level public involvement strategy was utilized to enhance public involvement in the decision-making process and maximize public input. This participation started at the beginning of the LRTP process when the plan goals were developed and continued through the end as needs were assessed and the cost feasible plan developed. This focus on engaging the public allowed for ample opportunities for input on the planning solutions being considered.

5.2. Outreach Methods

A Public Involvement Plan (PIP) was developed early in the LRTP process to outline the protocols and activities to be undertaken. The PIP is included in Technical Appendix E.

The PIP outlines the strategies to involve the general public in the development of the 2040 LRTP, including outreach and involvement of traditionally under-represented populations. In addition, the involvement of community stakeholders, agency representatives, planners, engineers, and other knowledgeable professionals in both the private and public sectors, ensured that input was obtained, key issues identified, and solutions generated, with the ultimate goal of achieving community consensus for the adopted LRTP.

Public outreach efforts included a need to both educate and solicit input from various members of the public. Throughout the development of the plan, public comments were solicited and utilized to further inform the LRTP subcommittee, land use working group, TPO standing committees and Board. Since these efforts targeted people with various levels of education, interest, background, goals and desires, socioeconomic status and available time, multiple public involvement outreach tools were utilized. Diverse representation helped to ensure that each aspect of the plan was developed with regard for a broad cross-section of the community. These efforts are further detailed in the following sections.

5.2.1. Long Range Transportation Plan (LRTP) Website

The Internet is a major forum for the dissemination and exchange of information. The advantages of creating a project website are plentiful: it is relatively inexpensive to set up and maintain; it is simple to keep the information current; it can be entertaining to use; it can be accessed at any time; it provides an

opportunity for people to offer input as well as become informed and stay involved throughout the development process.

The primary limitation of a project website is that the internet serves only those with access to it. This means that groups with lower utilization rates such as the elderly or low income may be less likely to access the planning process using this resource.

A website domain name, www.R2CMobility2040.org, was chosen by the LRTP Subcommittee. Information on scheduled and planned activities was provided to the public through this website, including the "Make Your Mark" sessions; the dates, times, and locations of the LRTP Subcommittee and Land Use Working Group meetings; and the dates and times of the public hearings. Project documents were also posted for public access.

5.2.2. Make Your Mark in 2040 Interactive Planning Sessions

Make Your Mark in 2040 was an interactive planning activity that reinforced the concepts of long range planning, limited financial resources, compromising and building consensus. Preparation for the game involved limited education about transportation funding, project costs, transportation networks and planning strategies and impacted populations.

The *Make Your Mark in 2040* exercise offered several advantages over more traditional public involvement. First, participants made a conscious decision as to which types of transportation are most important to receive funding. Second, each participant in the game experienced the constraints of budgeting as they began to realize there are more needs than available funding. Third, participants were confronted with the reality of dealing with population growth and land use development. Fourth, there were no specific skills, education or experience needed for participants to convey their opinions about transportation options and planning in their community. The small groupings and interactive nature of the exercise also encouraged and empowered individuals to have a voice and offer ideas and opinions that would not typically occur in a traditional public forum. The activity also produced outcomes that served as an influential driver of the plan's direction and project development.

Challenges associated with the activity included the required time commitment which may not appeal to some people; significant personnel resources required; and the limited number of participants that can be accommodated in each event.

Participants were gathered into groups of six to eight members and provided with a map of their county and a limited amount of funding for projects. The group must select projects that can be built with the available funding. The Make Your Mark activity required participants to reach consensus regarding transportation projects and enlightened them on funding decisions that elected officials are faced with every budget cycle. Make Your Mark acts to break down social and economic barriers and encourages cooperation and collaboration among its participants.

The TPO completed nine *Make Your Mark in 2040* planning sessions and the results were compiled and used in the development of the 2040 LRTP. A summary listing of the planning sessions is shown in Table 19. There was participation by over 170 individuals.

Table 19 – Make Your Mark Participation Summary

Location	Participants	Tables	Tables Passing Sales Tax	Date	Location
Daytona Beach	17	3	3	2/17/15	Conklin Center for the Blind
Orange City	18	4	3	2/23/15	Lecture Hall - University High School
New Smyrna Beach	19	3	2	2/25/15	Brannon Center
DeLand	34	5	5	2/26/15	Sanborn Center
Deltona	31	4	3	2/27/15	Daytona State College - Deltona Campus
Daytona Beach	5	1	1	3/2/15	Graduate Seminar Room – Bethune-Cookman University
Ormond Beach	3	1	1	3/2/15	Ormond Beach Senior Center
Palm Coast	32	5	5	3/3/15	Hilton Garden Inn
South Daytona	13	3	3	3/11/15	Votran's Mobility Management Center
Totals	**172**	**29**	**26**		

5.2.3. One-on-One Stakeholder Meetings

Representatives for the River to Sea TPO held meetings with local area government officials and business leaders to discuss their future transportation needs and the 2040 LRTP. Ten such meetings occurred in March and April 2015.

5.2.4. Civic Presentations

Representatives for the River to Sea TPO attended meetings at eight civic organizations in Volusia and Flagler Counties to deliver a presentation on the 2040 LRTP and to encourage participation in the process. Overall, nearly 500 persons were part of this outreach. These meetings occurred in February, March and April 2015.

5.2.5. LRTP Workshops

Two public workshops were held for the benefit of TPO advisory committee members and the TPO Board. The focus of these meetings was to review the purpose and approach for developing the LRTP and to provide input on various policy decisions that impact development of the plan.

5.2.6. Tell the TPO Survey

The *Tell the TPO* survey was an independent work effort, completed in advance of the LRTP, to ascertain the transportation wants, needs, problems, preferences and suggestions from residents, business community, elected officials and other stakeholders. The survey was available as a hard copy and online, in both English and Spanish versions. The results were used to inform the LRTP work effort. There were 1,263 responses. Almost a third expressed interest in learning more about transportation issues by opting into one or more of the contact lists maintained by the TPO and partner agencies.

5.2.7. River to Sea TPO Board and Committee Coordination

A significant amount of public notice, representation and review for the development of the 2040 LRTP occurred as part of the regular meetings of the River to Sea TPO Board, standing committees and the LRTP Subcommittee. These groups include citizen representatives, elected officials, local government staff and special interest advocates representing all portions of the planning area. In addition, public notice is provided for each of the meetings in accordance with Florida Statutes and the adopted by laws of the organization.

In addition to the River to Sea TPO Board, committee input included the following:

- Technical Coordinating Committee (TCC)
- Citizens Advisory Committee (CAC)
- Bicycle and Pedestrian Advisory Committee (BPAC)
- Transportation Disadvantaged Local Coordinating Board (TDLCB)
- LRTP-Specific Committees (Oversight Committee, LRTP Subcommittee, Land Use Working Group)

In particular, the CAC and BPAC are specifically intended to be mechanisms for public involvement in the TPO. More than 50 presentations on the long range plan were provided over the course of the project.

5.2.8. Public Meetings

Three public meetings were held throughout the MPA to present information and gather input from the public.

- July 22, 2015 at Daytona State College in Daytona Beach, FL with 32 attendees
- July 23, 2015 at the Sanborn Center in DeLand, FL with 25 attendees
- July 27, 2015 at the Hilton Garden Inn in Palm Coast, FL with 25 attendees

The public meeting information was posted on the LRTP website and on the River to Sea TPO's Facebook page. The Facebook posting reached 128 people.

The meetings were also advertised in the Daytona Beach News-Journal and the Palm Coast Tribune. The Flagler County Chamber of Commerce and the DeLand Area Chamber of Commerce both posted information about the public meetings to their websites.

In addition, a public hearing was held as part of the River to Sea TPO Board meeting on Tuesday, September 23, 2015. At this meeting, the TPO Board voted to adopt the 2040 Long Range Transportation Plan.

5.2.9. Miscellaneous

The Executive Director of the River to Sea TPO was a guest on 93.5 FM/1150 AM WNDB on July 23, 2015 to discuss the public meetings and the LRTP as well as on the Big John radio show.

In addition, there were a number of newspaper articles, discussing the long range plan, Make Your Mark sessions, and other public involvement opportunities.

The River to Sea TPO also maintains a Facebook page, to which LRTP updates were posted.

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Chapter 6

TECHNICAL PLANNING PROCESS

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6. TECHNICAL PLANNING PROCESS

6.1. Travel Demand Modeling

As indicated in Table 1 – Federal Planning Requirements for the 2040 LRTP, LRTPs must consider the federal requirement to "Identify the projected transportation demand of persons and goods in the metropolitan planning area over the period of the plan." [23 C.F.R. 450.322(f)(1)]. This requirement is addressed through use of the Central Florida Regional Planning Model (CFRPM), which is maintained by the FDOT District Five and recently validated to Year 2010 conditions. The model has both a Daily and Time-of-Day (TOD) travel demand component, and the Daily Model is used in the development of the year 2040 Long Range Transportation Plans for area Metropolitan Planning Organizations (MPOs) and Transportation Planning Organizations (TPOs) within FDOT District Five.

The CFRPM Model is a distinct model in that it encompasses a large area comprised of eleven (11) counties with varying densities and travel characteristics. The model includes the nine counties represented by FDOT's District Five as follows: Brevard, Flagler, Lake, Marion, Orange, Osceola, Seminole, Sumter, and Volusia Counties. In addition, the CFRPM v6.0 Model contains all of Polk County and part of Indian River County for purposes of interactions with these areas. Figure 2 depicts the CFRPM 6.0 study area. Orange, Seminole, and Osceola are part of the Orlando Urban Area and are distinctly urbanized in both their population and their employment character. Volusia and Lake County are nearby counties with many of their residents traveling to the Orlando area for work. The other counties are more rural in character and thus have more inter-county travel patterns.

The new CFRPM v6.0 added several features to the CFRPM Version 5.0 model (e.g. Household Income, Lifestyle Trip Generation for all counties, a Truck model, incorporating all of Polk County, and Time-of day assignments) to obtain a calibrated model to year 2010 conditions. This model was validated by FDOT to accurately represent observed conditions in the year 2010, specifically traffic counts and transit ridership, as well as other more nuanced network performance metrics. The calibration report is provided in Technical Appendix F.

Network deficiencies in the horizon year (2040) are forecast through simulation of an Existing Plus-Committed (E+C) network. The E+C scenario includes the existing network augmented by financially committed improvements (those that are fully funded in the Five-Year Work Program). The E+C model represents a minimum investment scenario that, when simulated against 2040 demand, highlights network deficiencies.

6.1.1. Development of the Existing Plus-Committed (E+C) Network

The 2018 existing plus committed (E+C) roadway network was developed to provide a listing of all the roadway capacity projects that have been constructed since 2010 and projects that are scheduled to be constructed by the year 2018. As described in the previous section, the E+C projects were added to the CFRPM model and used as the basis for forecasting the year 2040 roadway deficiencies. The 2018 E+C roadway network for the Flagler County portions of the TPO's planning area was developed by FDOT District 5 in cooperation with Flagler County and Palm Coast staff. A list of these projects is included in Appendix M.

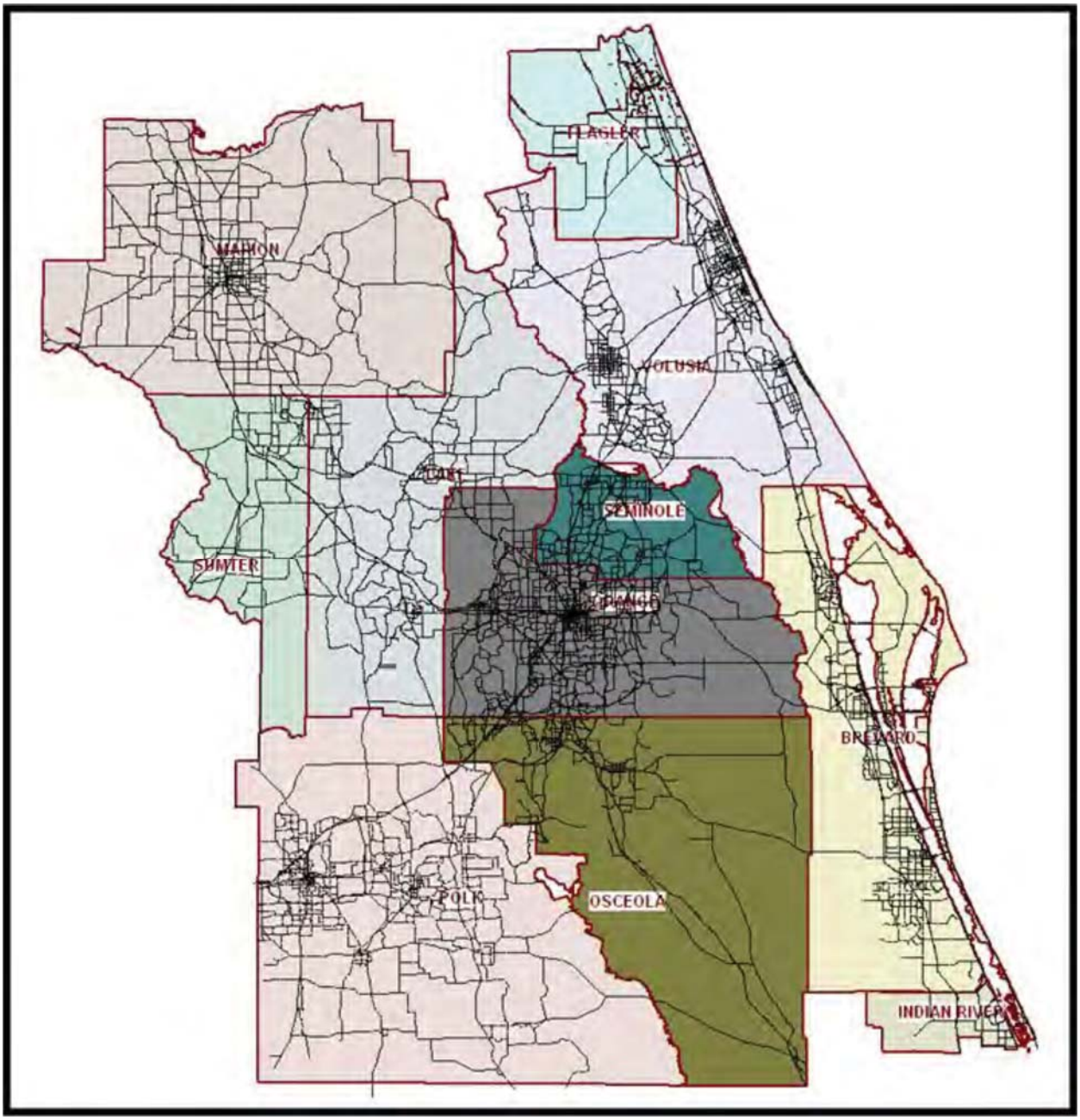


Figure 2 – Geographic Area Covered by CFRPM Model Version 6.0

The 2018 E+C summary is a key piece in identifying future roadway network deficiencies for the 2040 LRTP. It is also noted that, due to economic variability and changing project needs, some of these projects may be defunded or postponed before 2018. As such, this E+C network list should be considered the most accurate snapshot of what was scheduled for construction at the time of the 2040 LRTP development.

The 2018 E+C network developed for the 2040 LRTP update consisted of three main components:

- Projects completed since the base year of 2010 for the CFRPM.
- Projects scheduled for construction before 2018 in the TPO's FY 2012/2013 and 2013/2014 Transportation Improvement Program (TIP); and
- Projects scheduled for construction before 2018 in TPO member local government's Capital Improvement Programs (CIPs) and the FDOT Five-Year Work Program.

The development of the 2018 E+C network required coordination with TPO partners to identify projects that met the criteria listed above. The list of projects was reviewed by Volusia County and the FDOT and any necessary adjustments were made accordingly.

Only projects where a change in capacity was made to a roadway were considered for inclusion in the E+C network. This was defined as projects that included additional through lanes or other projects that created additional operational efficiency such as interchange improvements and draw bridge conversions.

6.1.1.1. Recently Completed Projects

The first step in the development of the 2018 E+C network was to identify those transportation projects which were completed between the base year of the travel demand model (2010) and the first year of the TIP. Since the travel demand model was validated to a base year of 2010, it was necessary to identify all completed capacity projects between 2010 and 2014. In order to complete this effort, an initial listing of roadway projects was developed. This list was compiled and refined based on the 2010 E+C list of projects, FDOT CFLRoads website, and the Volusia County vTIMAS Roadway Section Changes list which provided further guidance on compiling a comprehensive list of capacity adding projects throughout the study area.

6.1.1.2. Committed Projects

In addition to the projects that had already been completed, the 2018 E+C network includes all projects that are committed to be constructed by the year 2018. The FY 2012/2013 and 2013/2014 Transportation Improvement Program (TIP) within the study area were reviewed to determine which, if any, projects should be included in the 2018 E+C roadway network. Table 20 presents a list of the projects that make up the 2018 E+C roadway network. A map of the 2018 E+C network for the 2040 LRTP update, provided by the TPO, is shown in Figure 3.

The FDOT Five-Year Work Program and Volusia County's vTIMAS Roadway Section Changes list were also referenced for capacity projects meeting the prescribed criteria for inclusion in the E+C network. In addition, TPO staff coordinated directly with Volusia County staff to include County-funded projects that are not in the TIP or FDOT Work Program.

The 2018 E+C roadway network was created before the reapportionment of Flagler County into the TPO planning area. As such, the 2018 E+C network within Flagler County was developed by FDOT, with coordination with staff. Table 20 includes all E+C roadway improvements modeled for the River to Sea TPO TMA of Volusia and Flagler County projects.

Table 20 – 2018 E+C Roadway Network List

Improvement No.	Roadway Project	From	To	Improvement	Existing or Committed
A	DeBary Ave.	I-4	Providence Blvd	Realign/Widen to 4 lanes	E
B	LPGA Blvd.	Old Kings Rd	Nova Rd	Widen to 4 lanes	E
C	Rhode Island Ext.	Westside Pkwy	US 17/92	New 2 lane road	E
D	Yorktown Blvd Ext.	Dunlawton Ave	Taylor Rd	New 4 lane road	E
E	SR 472	Howland Blvd	I-4	Widen to 4 lanes	E
F	Taylor Rd.	Summer Trees Blvd	Williamson Blvd	Widen to 4 lanes	E
G	Williamson Blvd.	Dunn Ave	N of LPGA	Widen to 4 lanes	E
H	Dunn Ave	CR 4150	Williamson Blvd	New 2 lane road	E
I	Normandy Blvd	Saxon Blvd	Firwood Dr	Widen to 4 lanes	E
J	LPGA Blvd.	Jimmy Ann Rd	Derbyshire Rd	Widen to 4 lanes	C
K	I-95	North of SR 44	South of I-4	Widen to 6 lanes	C
L	Indian River Extension	Current terminus of SR 442	One mile west of current terminus	New 4 lane road	C
M	Orange Camp Rd/ Frontage Stub Out	I-4 Frontage Rd	Martin Luther King Blvd	Widen to 4 lanes	C
N	Colony Park Rd Ext.	SR 44	Pioneer Trail	New 2 lane road	C
O	Coraci Blvd Ext.	Carmody Lake Dr	SR 44	New 2 lane road	C
P	Yorktown Blvd Ext. (north)	South of B-19 Tributary #1	Willow Run Blvd	New 4 lane road	C
Q	Willow Run Blvd	Williamson Blvd	Yorktowne Blvd Extension	Widen to 4 lanes	C
R	Howland Blvd	Courtland Blvd	SR 415	Widen to 4 lanes	C
S	I-4	SR 44	East of I-95	Widen to 6 lanes	C
T	I-95	SR 406	North of SR 44	Widen to 6 lanes	C
U	SR 415	Seminole Cty Line	Reed Ellis Rd	Widen to 4 lanes	C
V	SR 415	Reed Ellis Rd	Acorn Lake Rd.	Widen to 4 lanes	C
W	I-4/I-95 System Interchange Widening/ Reconfiguration	North of SR 44	1.6 miles north of US 92	See I-4/I-95/US 92 Systems Interchange Concept Design for Ramp Widenings and Reconfigurations	C
X	Tymber Creek Rd	Peruvian Le	SR 40	Widen to 4 lanes	C
Y	Saxon Blvd	Enterprise Rd	I-4	Widen to 6 lanes	C
Z	Orange Ave/ Veterans Memorial Bridge	City Island Pkwy	SR 441	Bridge conversion from draw bridge to fixed span	C
AA	S Williamson	Airport Blvd	Pioneer Trail	New 4 lane road	C

Improvement No.	Roadway Project	From	To	Improvement	Existing or Committed
	Blvd				
BB	10th Street (NSB/ Edgewater)	Myrtle Ave	US 1	Widen to 4 lanes	C
CC	Mason Ave	From terminus	Dunn Ave	New 2 lane road	C
DD	Palm Harbor Parkway Ext.	Fernmill Dr	Matanzas Woods Pkwy	New 2 lane road	C
EE	I-95 @ Matanzas Woods Pkwy	Interchange (Diamond)	1 Lane ramps	New Interchange	C
FF	Old Kings Rd Extension	Forest Grove Dr	Matanzas Woods Pkwy	New 4 lane road	C
GG	Palm Coast Parkway	Boulder Rock Dr	Florida Park Dr	Widen to 6 Lanes	C

Source: FDOT District 5 – 2018 E+C Project List Development

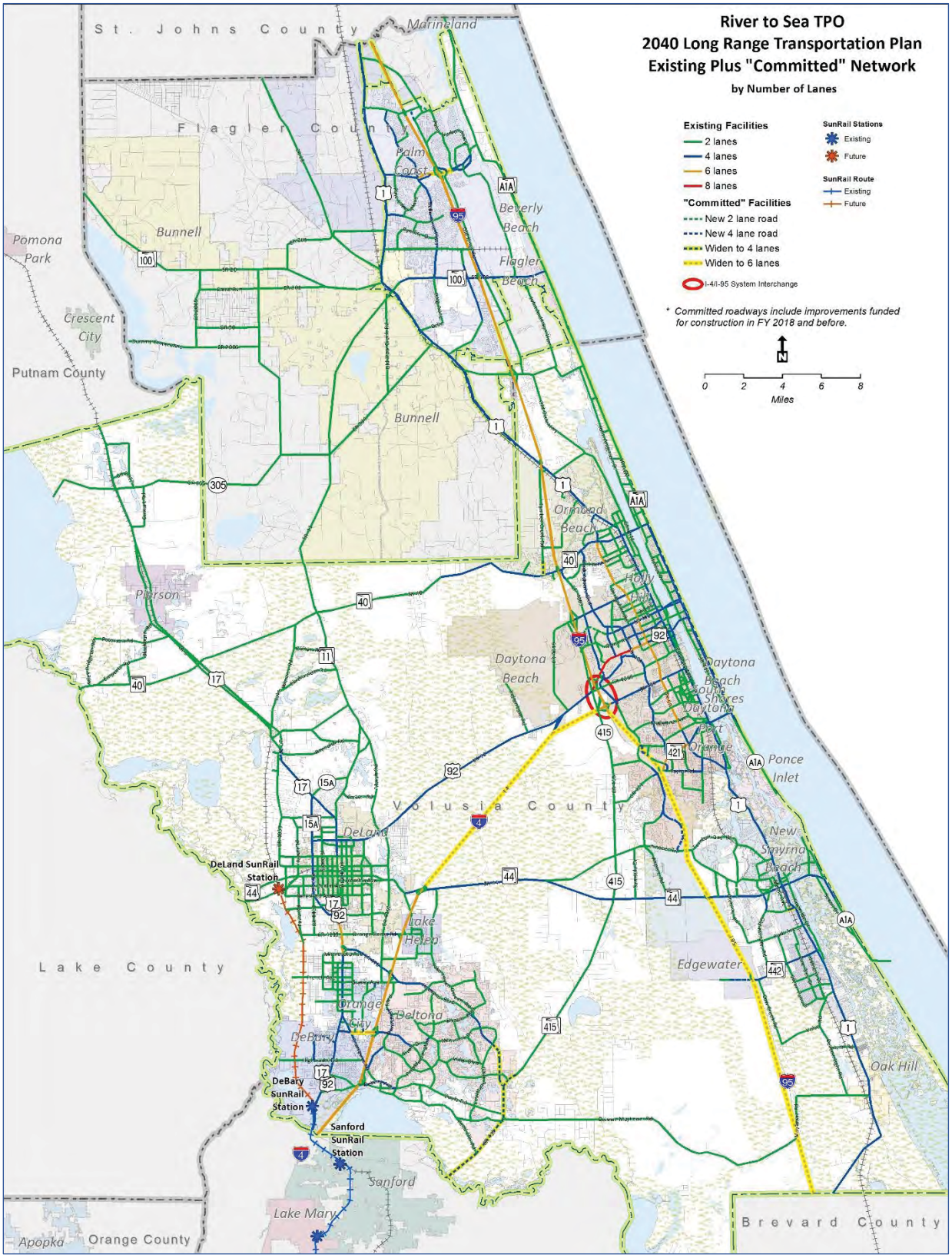


Figure 3 – E+C Network

6.1.2. Needs Plan Assessment

The year 2040 needs plan assessment was accomplished by reviewing the FDOT District Five's Year 2018 E+C model network assigned with year 2040 socioeconomic data. The premise behind the need assessment was to establish the "what-if" scenario of "if" there are no more transportation improvements, beyond those financially committed in currently adopted five-year improvement plans, and traffic continues to grow through the year 2040; "what" impacts and deficiencies will exist on facilities and modes within the metropolitan planning area. The development of the referenced year 2040 socioeconomic data is documented in the report titled *R2CTPO 2040 LRTP Constrained Trend Socioeconomic Data Forecast,* detailed in Chapter 3 and included in Technical Appendix A, and the committed transportation projects are presented in Table 20.

With the completion of the travel demand forecast for the Year 2040 E+C needs assessment, a detailed evaluation of growth model volumes was prepared relative to reasonably anticipated percent growth rates within the individual travel corridors. Specifically, the following sets of projections were analyzed:

- Adjusted year 2040 model volumes (based on review of base year model validation assignments and corresponding base year observed traffic counts)
- Required percent annual growth needed to exceed adopted level of service capacity by year 2040
- Regression percent annual observed traffic growth from 2010 through 2013
- Projected year 2040 traffic based on 1 percent annual growth
- Projected year 2040 traffic based on 2 percent annual growth (only if regression growth > 1.5%)
- Review of 2035 LRTP Cost Feasible Plan roadway projects

Roadway corridors were next defined as being deficient due to model volume projections and/or percent growth projections. The results of the initial analysis were presented for review to the Land Use Working Group and additional input was also received from local stakeholders, including Flagler and Volusia Counties and several cities. The results of the needs assessment served as one of the inputs for preparing the subsequent Year 2040 Cost Feasible Plan alternatives.

6.1.3. Cost Feasible Plan Development

Two alternative scenarios were modeled for the Year 2040 River to Sea LRTP. Both build on the E+C transportation system, which included both highway and transit improvements adopted as being financially feasible through the year 2019. The model documentation report is available in Technical Appendix G.

The Trends (a.k.a. Highway Only) Alternative was composed of additional new roadway widenings and roadway extensions. The following resources were consulted in its development:

- Strategic Intermodal System (SIS), Other Arterial Projects and projects per stakeholders input
- Volusia County's Public Works Strategic Roadway Plan (unfunded priority corridor improvements) projects list
- Farmton DRI developer funded project list

The Alternative Land Use Scenario (a.k.a. Transit Alternative) was comprised of all the roadway improvements from the Trends Alternative and existing route service enhancements and new transit routes. The transit enhancements included:

- Adopted Year 2035 LRTP mass transit project list
- Votran's adopted Transit Development Plan (TDP) project list
- Sustainable Development Corridors as identified in the adopted Alternative Land Use Scenario (Characterization Framework Map)
- Transit service added along SR A1A and US 1 to provide connections between Flagler and Volusia Counties

The two alternative scenarios were identified through input from the LRTP Subcommittee, the Technical Coordinating Committee (TCC), the Citizens Advisory Committee (CAC), and the TPO Board as part of their April 2015 meetings. Results from the travel demand forecasts are included in Technical Appendix G. The volume-to-capacity results serve as input for ranking and prioritizing the Trends Alternative projects which ultimately lead to the development of the Year 2040 Cost Feasible Plan.

6.2. Project Screening Process

A key aspect of the LRTP is its inclusion of transportation projects to address current and future needs. To ensure that projects that change or enhance the transportation system are included in the LRTP, the TPO requested input for projects as to provide a full picture of transportation needs anticipated within the planning horizon in the TPO's metropolitan planning area. This request went out to local member governments in March 2015. Candidate projects were submitted using the form provided in Technical Appendix H and, at a minimum, included projects that were in or supported by local government comprehensive plans.

Projects were ranked based upon criteria approved by the LRTP subcommittee. This criteria was based on the Goals and Objectives of the LRTP (see Chapter 2) and is depicted on the prioritization matrix included in Table 21. After full funding was identified for on-system roadways project needs, the TPO was able to flex up to 20% of Other Arterial (federal and state) projected revenues. This allowed for funding for off-system projects. The local needs project ranking matrix as approved by the LRTP Subcommittee on June 12, 2015 is included in Table 22. The highest local project ranked was the widening of LPGA Boulevard from SR 5A/Nova Road to US 1. The second highest ranked project was the widening of Howland Blvd, from Providence Boulevard to Elkcam Drive. Due to the limited amount of revenue available after funding was allocated to those projects, the LRTP Subcommittee recommended funding the DeLand Airport Road (ranked #4) since there was just enough money left to fund that project. These projects are included in the cost feasible projects list as identified on Table 29.

6.3. Freight

The R2CTPO is focused on providing effective supporting infrastructure for trade and industry. This includes supporting existing activity including Boston Whaler, Sea Ray Boats, etc., as well as new freight dependent commercial interests such as the Trader Joe's Distribution Center. The TPO works with the FDOT Freight Coordinator and local organizations such as TEAM Volusia to identify possible needs in the planning area. Freight transport is supported primarily by the Strategic Intermodal System (SIS) which

consists of highways, railways, airports, and seaports. The major SIS highways in the planning area are I-95, SR 40, US 17, and I-4. These form a network to support freight traffic in our area, serving to strengthen our economy.

Currently, Volusia County's top importer is Lake County, bringing in 860,857 truck tons, and top export receiver is Duval County, which receives 326,142 truck tons. Flagler County's top importer and export receiver is Duval County, sending 86,661 truck tons and receiving 97,981 truck tons (Source: IHS Global Inc.'s Transearch, 2011 and Volusia and Flagler County, Freight & Logistics Overview, Florida Department of Transportation, January 2013).

Table 21 –Roadway Project Prioritization Matrix

No.	Priority Evaluation Category		Perf Measure Coordination	Evaluation Definition	Priority Scoring System		Notes
	Category	Description			Scoring Criteria	Points Awarded	
1	v/C	Efficient movement of people and goods	1.2	Roadway does not provide for sufficient capacity to accommodate future movement of people and goods without an improvement	v/C ratio > 1.09	10	V/C ratios are based on the 2040 E+C Network; new parallel facilities use v/C ratio of the road they are leaving
					v/C ratio 0.9-1.09	5	
					v/C ratio <0.9	0	
2	Facility	Facility Type	3.4	Roadway serves as a primary local transportation route	Designated SIS roadway or Principal Arterials	10	
					Urban/Rural Minor Arterial	8	
					Urban/Rural Major Collector	4	
					Non-SIS Minor Collector	0	
3	Safety	High Crash Roadway	4.1	Roadway currently experiences a significant number of crash incidents	Existing Roadway Segment Crash Rate > 2.0 CPVM	10	
					Existing Roadway Segment Crash Rate 1.0-1.99 CPVM	8	
					Existing Roadway Segment Crash Rate < 1.0 CPVM	0	
4	Emergency	Emergency Evacuation Route	4.4	Roadway is a key emergency evacuation route	Roadway is an emergency evacuation route	10	
					Roadway is not an emergency evacuation route	0	
5	Intermodal	Designated Intermodal Terminal access route	2.3, 3.3	Roadway serves as a route for access to intermodal terminal (e.g. rail, port, airport)	Intermodal terminal access route	10	
					Not an intermodal terminal access route	0	
6	Truck	Designated or Key Truck Route	1.1, 2.1, 2.2	Roadway serves as a route for freight movement	Designated or key truck route	10	
					Not a significant truck route	0	
7	Transit	Existing or Future Bus Route	1.1, 1.3, 2.4, 3.1	Roadway contains existing and/or future bus route(s)	Contains 1 or more express/non-express bus routes	10	
					Contains no bus routes	0	
8	Ped	Existing Sidewalks	1.1, 3.1, 4.2, 5.1	Roadway improvement will provide for new sidewalks or multiuse trail	New roadway; or currently no sidewalk/path in place	10	
					Currently, pedestrian facility in place on one side; project adds pedestrian facility to other side	5	
					Complete pedestrian facility currently in place	0	

No.	Priority Evaluation Category		Perf Measure	Evaluation Definition	Priority Scoring System		Notes
9	Bike	Existing Bicycle Lanes	1.1, 3.1, 4.2, 5.1	Roadway improvement will provide for new bicycle lanes or multiuse trail	Project provides a new multiuse trail	10	
					Currently no bike lane in place; project adds paved shoulder or bike lane at least 5' wide on both sides	8	
					Currently bike lane in place on one side; project adds paved shoulder or bike lane at least 5' wide to other side	5	
					New roadway does not add a paved shoulder or bike lane	0	
10	Land Use	Quality Places	5.1	Roadway serves nearby development with Transit Oriented Development (TOD) or Smart Growth principles, incl Complete Streets, and/or walkable mixed use and/or redevelopment areas	Adjacent to TOD/Smart Growth/redevelopment/infill land use	10	
					Not adjacent to planned land use	0	
11	Activity Center	Activity Center	3.3	Roadway provides multimodal access to connect designated activity centers	Roadway provides access to a major activity center	10	
					Roadway does not provides access to a major activity center	0	
12	Social	Low Income and/or Traditionally Underserved	6.2, 6.3	Roadway improvement will provide for multi-modal access for low income or traditionally underserved populations in the surrounding community	Roadway located in socially significant area	10	
					Roadway not located in socially significant area	0	
13	Regional	Regional Connectivity Between Jurisdictions	3.4	Roadway provides regional connectivity for highway and/or bus trips	Roadway project would provide for equal # lanes as adjacent county	10	
					Roadway project would not provide for equal # lanes as adjacent county	0	
Total Points Available						**130**	

Table 22 – Candidate Project Needs Scoring Matrix (As Approved by LRTP Subcommittee Meeting (6-12-15))

Project	Limits	2040 V/C Ratio	Facility	Safety	Emergency	Intermodal	Truck	Transit	Pedestrian	Bike	Land Use	Activity Center	Social	Regional	Total	Ranking
LPGA - widen to 3 lanes	Nova Road to US 1	5	8	10	10	0	10	10	5	8	0	0	10	0	**76**	1
Howland Blvd - widen to 4 lanes	Providence Blvd to Elkcam Dr	10	8	10	0	0	10	10	5	8	0	0	10	0	**71**	2
Providence Blvd widen to 4 lanes	Debary/Doyle Rd to Elkcam Rd	5	8	8	0	0	10	10	0	8	0	0	10	0	**59**	3
North Entrance DeLand Airport - Industrial Park	Industrial Dr to SR 11	0	0	0	0	10	10	0	10	8	0	10	10	0	**58**	4
Old Kings Rd - widen to 4 lanes	Town Center Blvd to Palm Coast Pkwy	0	8	10	0	0	0	0	10	8	10	10	0	0	**56**	5
Beresford Ave Extension	Blue Lake Rd to SR 44	5	4	8	0	0	10	0	10	8	0	10	0	0	**55**	6
Palm Coast Pkwy - widen to 6 lanes	SR 5 (US 1) to Belle Terre Pkwy	5	8	8	10	0	0	0	5	8	0	0	10	0	**54**	7
Fort Smith Blvd widen to 3 lanes	Elkcam Dr to Providence Blvd	0	4	10	0	0	0	10	10	8	0	0	10	0	**52**	8
Saxon Blvd - widen to 4 lanes	Tivoli Dr to Providence Blvd	5	8	10	0	0	10	0	0	8	0	0	10	0	**51**	9
Normandy - widen to 4 lanes	Firwood Dr to Howland Blvd	5	4	0	0	0	0	0	10	0	10	10	10	0	**49**	10
Tivoli Dr widen to 3 lanes	Saxon Blvd to Providence Blvd	0	4	10	0	0	0	10	5	8	0	0	10	0	**47**	11
Old Kings Rd South - widen to 4 lanes	SR 100 to Old Dixie Hwy	0	8	0	0	0	10	0	10	8	0	10	0	0	**46**	12
Hand Ave Extension	Williamson Blvd to Tymber Creek Rd ext	5	4	8	0	0	10	0	10	8	0	0	0	0	**45**	13
Elkcam Blvd - widen to 3 lanes	Normandy Blvd to Fort Smith Blvd	0	4	8	0	0	0	10	5	8	0	0	10	0	**45**	13
Park Ave Extension	To Restoration Development (1.84 mi)	0	4	0	0	0	10	0	10	8	0	10	0	0	**42**	15
Hand Ave - widen to 4 lanes	Williamson Blvd to Nova Rd	5	4	0	0	0	10	10	10	0	0	0	0	0	**39**	16
Deltona Blvd - widen to 4 lanes	Doyle Rd to Enterprise Rd	5	4	10	0	0	0	0	0	8	0	0	10	0	**37**	17
Matanzas Woods Pkwy (east) - widen to 4 lanes	NB I-95 ramps to Old Kings Rd extension	5	8	0	0	0	0	0	5	8	0	0	10	0	**36**	18
Old Mission Road - widen to 3 lanes	Park Ave to Josephine St	0	4	0	0	0	10	0	10	8	0	0	0	0	**32**	19
Courtland Blvd widen to 3 lanes	Fort Smith Blvd to Howland Blvd	0	4	8	0	0	0	0	0	8	0	0	10	0	**30**	20
Tymber Creek Rd - widen to 4 lanes	Peruvian Lane to Airport Rd	0	4	0	0	0	10	0	5	8	0	0	0	0	**27**	21

6.4. Safety

Safety is a top priority for the River to Sea TPO, which works diligently to provide transportation projects that are both safe and efficient, while also targeting awareness by conducting workshops and educating students, law enforcement, and citizens about safety practices. Increasing safety awareness and promoting safe driving, biking, and walking helps prevent injuries and fatalities in our community.

Analysis of the safety data was instrumental in the prioritization process of needs projects for inclusion in the cost feasible plan. The project prioritization matrix addressed safety concerns by including high crash roadways in the ranking criteria. In addition, facilities in need of multimodal infrastructure improvements were recognized in the ranking process as crucial to the improved safety of vulnerable road users, including pedestrians and bicyclists.

In addition, analysis of intersection and segment crash data consistent with the safety emphasis areas outlined in the Florida Strategic Highway Safety Plan will enable a comprehensive and measureable methodology to prioritize needed safety improvements.

Efforts to decrease bicycle and pedestrian injuries and fatalities include the following safety programs that were undertaken by the River to Sea TPO:

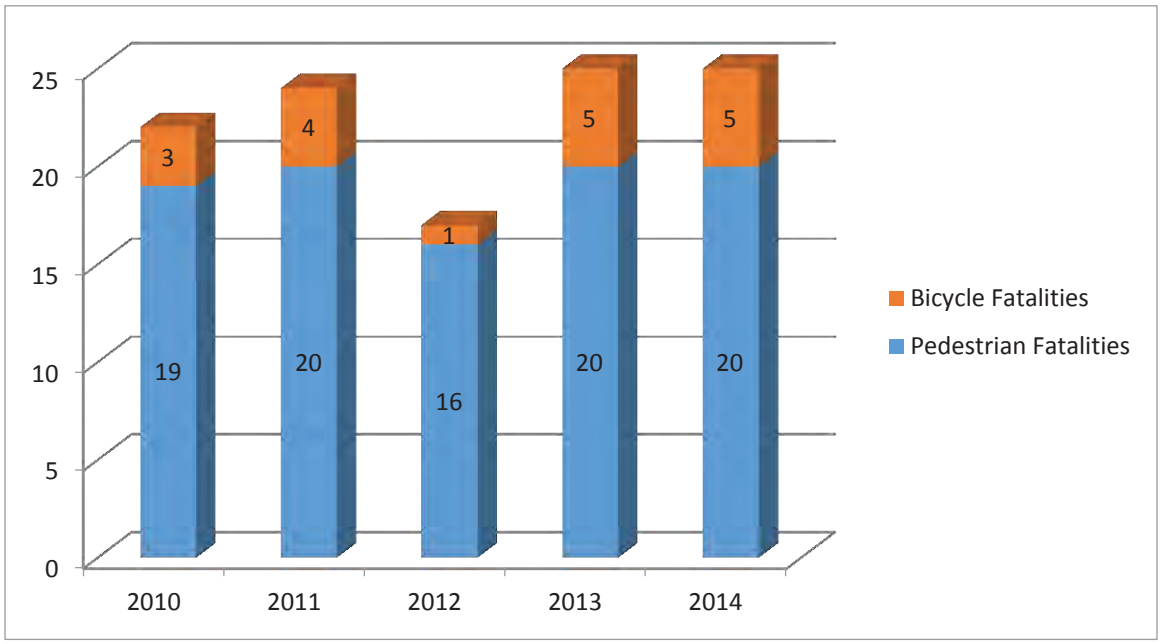
- Implementation of the Pedestrian Crosswalk Law Enforcement Program
- Use of Public Service Announcements promoting pedestrian safety
- Conducted bicycle helmet fitting and distribution events
- Distribution of Flagler County Bicycle Safety Flyers
- Completion of the Daytona Beach Shores Pedestrian Safety Study
- Funding programmed for pedestrian safety improvements on US 92
- Produced and distributed the Volusia County Bicycling Map for the Experienced Cyclist
- Participation in community safety organizations such as the Community Traffic Safety Teams, the Volusia Schools Safety Initiative and the Safe Kids Coalition
- Distribution of bicycle safety decals
- Distribution of Walk and Ride DVDs

6.4.1. Volusia County

Bicycle and pedestrian fatalities are reported in Table 24. The data appears to show a slight trend of increased bicycle fatalities in recent years. Pedestrian fatalities reported in Volusia County appear to be relatively steady over the same period.

Vehicular injuries and fatalities are reported in Table 25. Vehicular fatalities reported in Volusia County indicate some variation in recent years, but are without a trend in either direction. Vehicular injuries, however, indicate a steady increase in recent years.

Table 23 – Volusia County Bicycle and Pedestrian Fatalities



Source: Signal Four Analytics

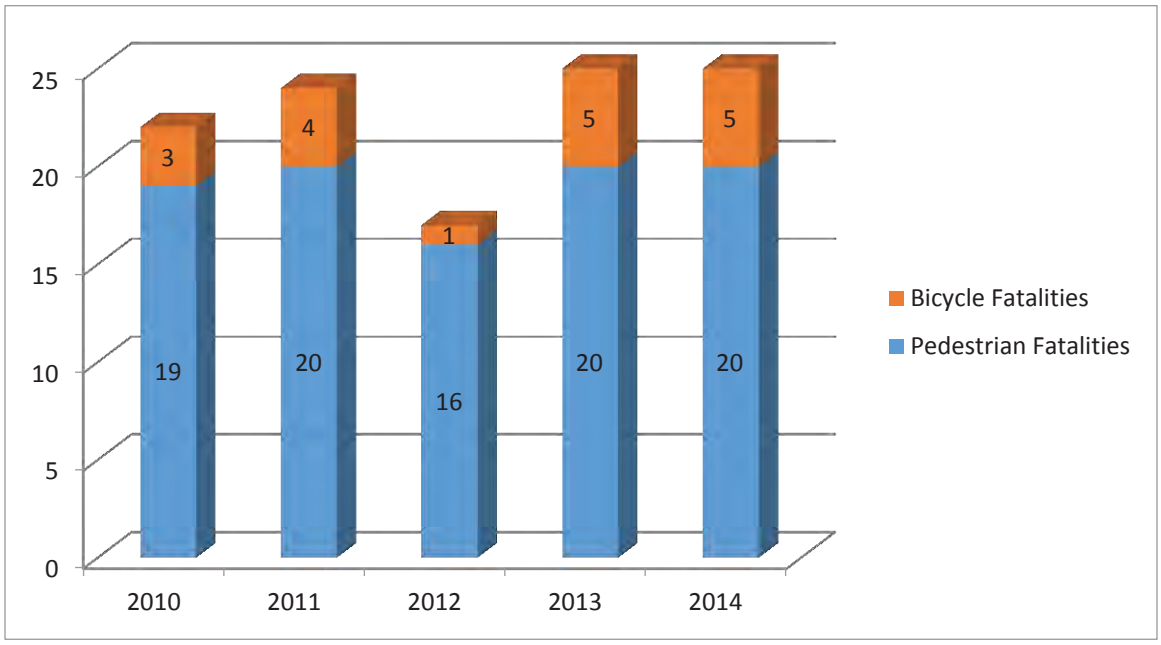


Table 24 – Volusia County Vehicular Injuries and Fatalities

Source: Signal Four Analytics

6.4.2. Flagler County

Bicycle fatalities are reported in Table 26. With the exception of a spike in pedestrian incidents in 2011, the reports indicate the trend is relatively steady over time.

Vehicular injuries and fatalities are reported in Table 27. Vehicular fatalities and injuries reported in Flagler County indicate a slightly increasing trend over the five-year period with an increase in fatalities reported in 2014.

6.5. Security

Security is an issue that must be proactively addressed, whether in anticipation of terrorist attacks, natural disasters, or the potential for other system failures. As with most challenges, providing appropriate security on the transportation system requires teamwork and coordination between local governments, agencies and critical assets, such as military bases, ports, airports, universities public transit facilities, and other buildings, sites and events within the MPA. The security objectives related to transportation should:

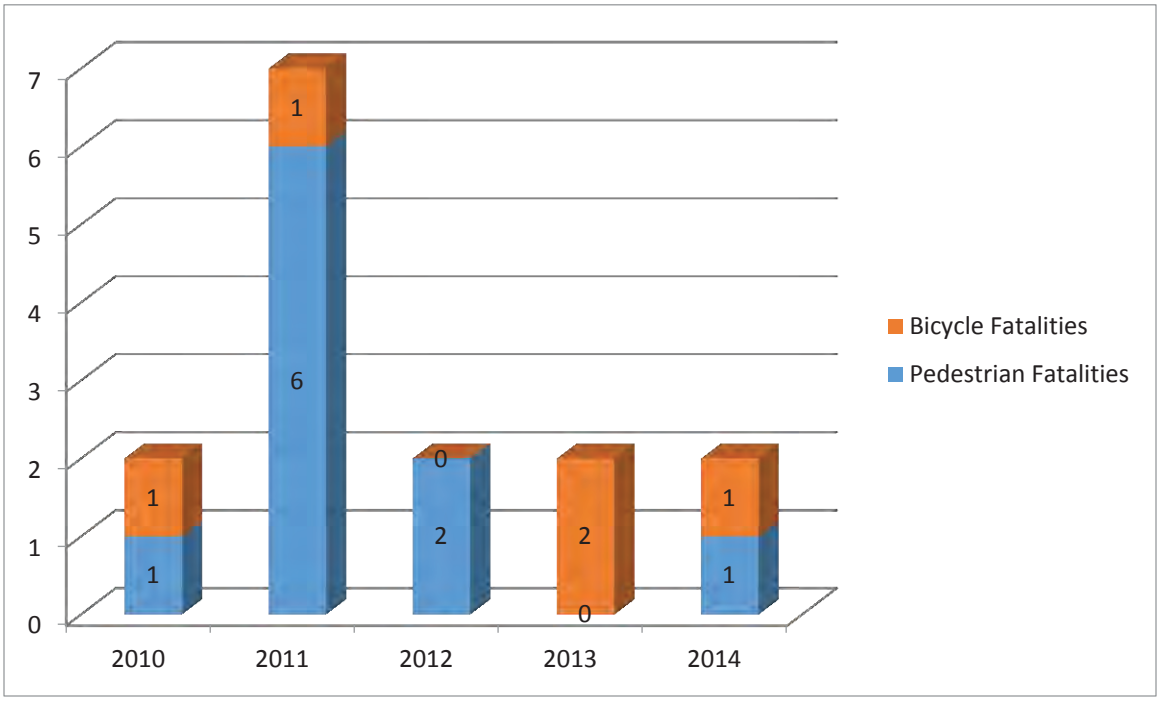
- Provide for a safer and reliable system for modes of travel;
- Improve the security of the entire transportation system; and
- Improve the ability of the transportation system to support emergency management response and recovery.

These security issues can be mitigated in transportation infrastructure improvements by focusing on evacuation needs. Ensuring the capacity necessary for large scale evacuation is in place in the event of a disaster is crucial to the mitigation of potential security threats. Effective and efficient operation of the transportation system is also a key mitigation strategy.

Additionally, the Intelligent Transportation System (ITS) plays a vital component of managing emergencies and major incidents. ITS equipment plays a critical role in supporting safety and security during man-made and natural disasters. During a crisis, accurate information is invaluable and can help protect the public and minimize inconvenience to travelers. When a security incident occurs, the ITS capabilities should be used to the maximum extent possible to inform the public of traveling options for all modes.

The project prioritization screening process included criteria for improvements to evacuation routes. Maps of these routes are included in Appendix I.

Table 25 - Flagler County Bicycle and Pedestrian Fatalities



Source: Signal Four Analytics

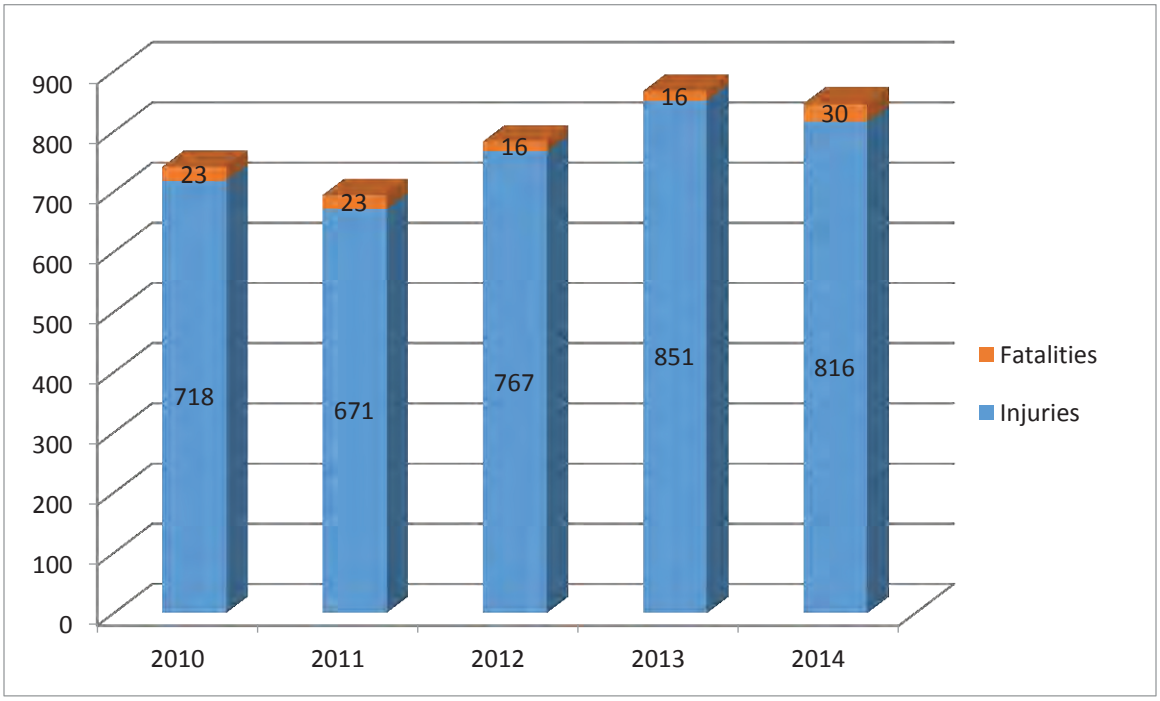


Table 26 - Flagler County Vehicular Injuries and Fatalities

Source: Signal Four Analytics

6.6. Performance Measures

Performance management describes a wide framework in which measureable results are used to inform decision-making and provide accountability. Performance measures use quantitative data to gauge the River to Sea TPO's effectiveness in fulfilling one or more major elements of its overall mission. This includes focusing on the 2040 LRTP goals described in Chapter 2.

Measuring performance will be consistent with MAP-21 requirements, the goals and objectives developed as part of the 2040 LRTP, and the state's performance management framework. There are different types of performance measures, categorized by FDOT in the *Florida Multimodal Mobility Performance Measures Source Book*, in terms of Quantity, Quality, Accessibility, and Utilization.

Quantity measures refer to those measures that quantify travel, or use of the transportation system. VMT is one example of a quantity measure.

Quality measures are oriented to the performance of the system and include measures such as hours of delay or levels of congestion.

Accessibility measures refer to how well the transportation system serves travel needs in terms of modal choices or connectivity and typically are oriented to non-automobile measures, like sidewalk coverage.

Utilization relates the quality measures to the overall system performance and can include the proportion of lane miles that are congested, for example.

There is a primary difference in how evaluation criteria and performance measures are applied because the evaluation criteria strive to isolate measures to specific improvements, while performance measures are system-based. There should also be consistency between the level of service (LOS) system of measurement and the FDOT Multimodal Performance Measures Source Book. The FDOT's continuing work on the refinement of its mobility performance measures and the development of statewide performance targets will be tracked by the TPO and used to make appropriate modifications to the performance measures and adopt targets to maintain a level of consistency.

6.7. Congestion Management Process

Traffic congestion is a nationwide issue that results in high quantities of wasted fuel, time and money. It is addressed within the Congestion Management Process (CMP), which is a process conducted by TPOs, such as the River to Sea TPO, to provide a systematic, transparent and continuous method to improve traffic operations and safety. A CMP employs strategies that assist in reducing travel demand, encourage multi-modal transportation, and help identify operational improvements. Therefore, it is imperative that the CMP is considered as part of the overall transportation management system.

Development and maintenance of a CMP is a requirement for all MPOs under Florida law and for all MPOs in TMAs under federal law. Consistent with federal guidance, the intent of the CMP is to "address congestion management through a process that provides for safe and effective integrated management and operation of the multi-modal transportation system."

The River to Sea TPO developed its CMP in concert with the 2040 Long Range Transportation Plan. It was adopted by the TPO Board on August 26, 2015 by Resolution 2015-16 and is included by reference in the 2040 LRTP. The full CMP can be seen in Technical Appendix J.

The CMP and the LRTP share the same goals and objectives but the CMP provides performance measures where applicable to measure the success of the CMP over time. Performance measures include elements that address safety, roadway improvements, public transit, bicycle/pedestrian/multi-use trail facilities, travel demand management (TDM) and movement of goods (freight).

The River to Sea TPO has designed the CMP to be an integral part of the current planning process that develops the LRTP and TIP transportation plans. The process incorporates the following important highlights:

- Data collection, system assessment, and the establishment of a baseline state of the system based on performance measures. Identification of deficient network and congestion mitigation strategies.
- Creation of a CMP Review Team with knowledge in the areas of traffic engineering and ITS, intersection analysis, access management, roadway design standards, transit planning, land use planning, concurrency, transportation planning, bicycle and Congestion Management Process (as adopted by R2CTPO Board on August 26, 2015), pedestrian planning, and roadway construction costs to evaluate potential projects and strategies.
- Coordination with the LRTP Subcommittee and the CMP Review Team, technical staff and the public in order to determine and prioritize potential improvements.
- Consideration of long range planning/evaluation tools (such as the Florida ITS Evaluation (FITSEVAL) tool and Transportation Systems Management & Operations (TSM&O)) to support the CMP.
- A process to move recommended strategies into the appropriate plans for implementation.
- A consistent analysis of data collected over time to assess the effectiveness of the CMP.

The CMP is intended to be a dynamic tool that continually researches, updates, and moves strategies forward to implementation. Since congestion mitigation strategies cannot be implemented for all of the congested facilities simultaneously, and congestion management strategies are not one size fits all, the projects and strategies must be evaluated logically. The congested roadways or intersections must be examined carefully to determine which management strategy will best address the particular problems. Strategies can be selected and evaluated by a CMP Review Team.

The review team will be set up and guided by River to Sea TPO staff and include technically qualified staff members from local governments with knowledge in the areas of traffic engineering and ITS, intersection analysis, access management, roadway design standards, transit planning, land use planning, concurrency, transportation planning, bicycle and pedestrian planning, and roadway construction costs. The review team will evaluate congested roadways and intersections as requested by the R2CTPO and its advisory committees. The review team will evaluate projects and strategies using a systematic method for determining which congested facilities should be evaluated for inclusion in plan updates. A process to evaluate and prioritize projects for evaluation and inclusion in the TIP, LRTP and other plans is detailed in Figure 4.

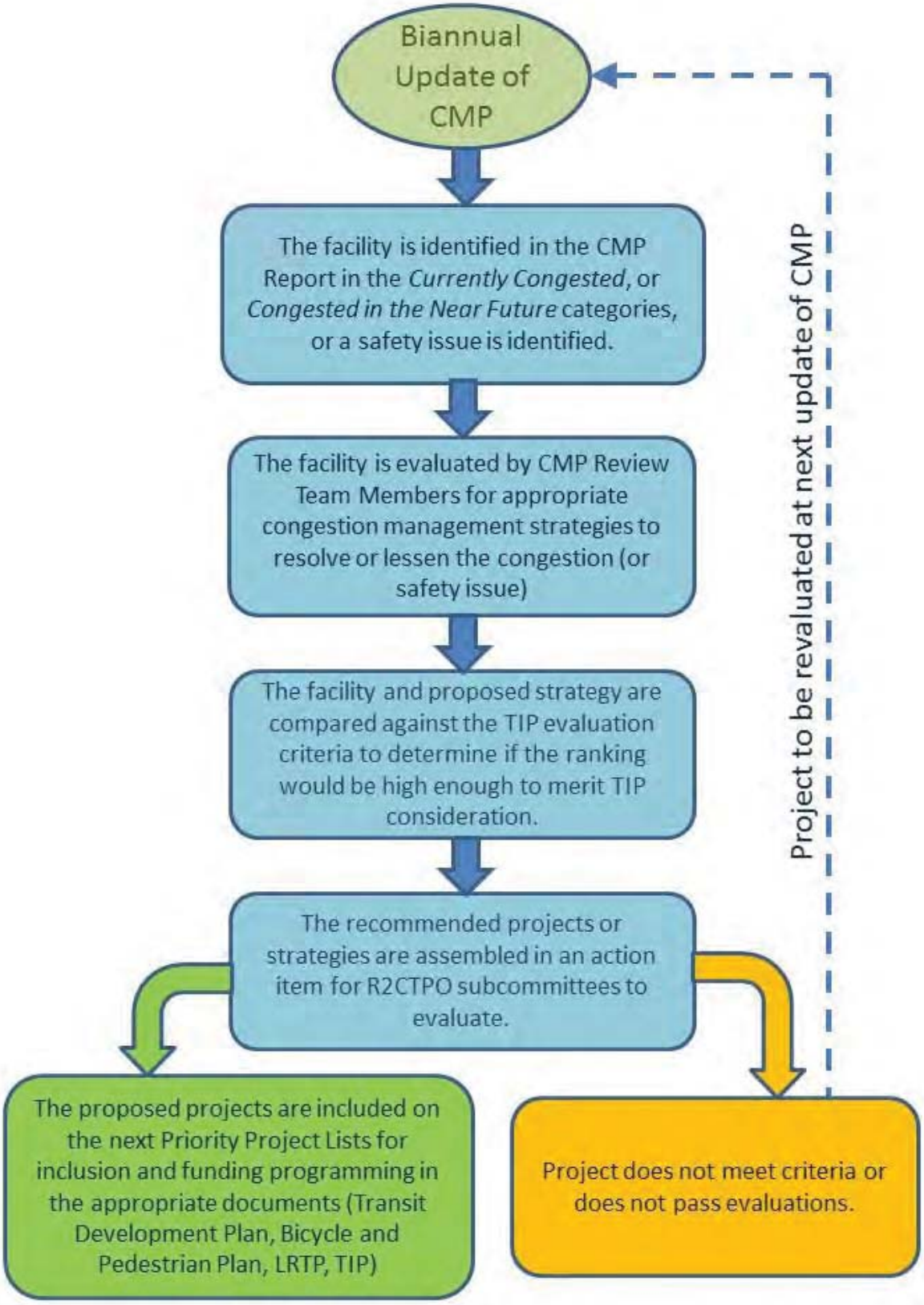


Figure 4 – CMP Project Evaluation Process

Chapter 7

COST FEASIBLE PLAN

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7. COST FEASIBLE PLAN

Requirements for a long range plan include identifying the ***major capacity enhancing projects*** and ***projects of regional significance*** within the planning area. Projects in the cost-feasible plan were identified through a combined process of coordination and review with transportation professionals, technical modeling of transportation alternatives, local government coordination, project screening, and public input and review. This process was conducted in consultation with Federal, State, environmental, land management and regulatory agencies to select projects which support the vision and goals of the long range plan, and include factors such as future trip demand, economic development, safety, land use, connectivity and importance to freight movement.

The TPO also recognizes the importance of non-capacity programs required for preservation of the existing system including activities such as safety, project support, and systems operations and maintenance. Other activities including roadway resurfacing and restriping, bridge rehabilitation and maintenance, landscape maintenance, drainage maintenance, lighting improvements, and signal retiming are among the various types of activities necessary to maintain the physical and operational integrity of the transportation system. In accordance with FDOT's "2040 Revenue Forecast Handbook", the revenue estimates provided by FDOT to the TPO for use in long range planning are for capacity and non-capacity transportation improvements. Funds needed for the operation and maintenance of the State Highway System and other system preservation activities have been provided by FDOT in an "Appendix for the Long Range Metropolitan Plan." This information includes forecasts that demonstrate revenue estimates sufficient for meeting the program objectives throughout the TPO area.

In the State of Florida, all federal and state transportation funding is channeled through the FDOT. Annually, FDOT requests lists of prioritized projects and required phases to be funded. Major capacity projects included on the lists must be identified in the adopted long-range transportation plan and in the appropriate local government comprehensive plan(s). Other projects – those that are referenced in the Cost Feasible Plan only by general project type or program – are identified and ranked through the TPO's “call for projects.”

The starting point for developing the 2040 cost feasible transportation network involves identifying transportation projects that are scheduled to be completed as part of the TPO's adopted Transportation Improvement Program (TIP). The TIP is a five-year, fiscally constrained program of projects that is supported by the most current revenue estimates with funding that has been committed by FDOT. The TIP includes project costs by phase and fund source.

During the development of the 2040 LRTP, the adopted TIP spanned Fiscal Years (FY) 2014 to 2018. In relation to the 20-year planning horizon of the LRTP, projects included in the adopted TIP comprise the first three years of the long range plan. This includes Fiscal Years 2016, 2017 and 2018. Funding available in the TIP totaled $928,271,979. This total includes federal, state and local funds available for capacity enhancing projects and projects of regional significance (non-SIS). Much of this funding was used for system preservation, operations and maintenance, and non-capacity projects. The total program cost for capacity projects as outlined in the TIP and included in this plan was $334,364,632. Projects funded in Fiscal Years 2016, 2017 and 2018 are listed by phase of development in Appendix M (Existing + Committeed (E+C) Projects). It should be noted that many of these construction projects are currently underway and substantial portions of the project costs are currently under contract.

State and federal revenue resources are described in Table 27. As indicated in the table, capacity projects are divided into three categories based on their funding source: Strategic Intermodal System (SIS) projects, Other Arterial projects and Local projects. The projects outlined in this section of the LRTP for each of these categories are only those included in the period beyond the adopted TIP (2019 through 2040). The funding required to complete these projects has been provided by FDOT as part of the Revenue Forecasting Handbook developed for Florida Metropolitan Planning Organizations in support of long range planning.

Table 28 illustrates the SIS cost feasible project list. Table 29 illustrates the Other Arterial cost feasible project list, which includes projects both on and off the state road system. These projects are depicted in Figure 5. The funding source for both of these project lists is state and federal revenues.

Local roadway projects were submitted by Volusia County for inclusion in the 2040 LRTP. Every year, the county coordinates with the municipalities in each of its impact fee zone areas to identify and prioritize the projects included in the five-year plan. Table 30 and Figure 6 illustrate the Local projects as provided by Volusia County (see Appendix L for letter as provided by Volusia County staff). No locally funded project list for Flagler County was provided for inclusion in the long range plan.

Transit plans and projects, as well as unmet transit needs, are identified in the individual Transit Development Plans (TDP) for both Votran and Flagler County. The TDP is required by the Florida DOT for transit agencies that receive block grant funding. Much like this LRTP, the TDP identifies transit system needs and estimates the future revenue streams available. Within Volusia County, operational funding is primarily provided by the County using ad valorem tax proceeds. System improvements are determined by the Volusia County Council. Flagler County recently adopted a TDP in August 2015 to expand their current demand-response system. This TDP will serve as the basis for defining public transit needs and is intended to serve as a 10-year strategic planning document.

Although capacity enhancing projects are important, a comprehensive solution to our future needs requires a variety of actions. These include multimodal transportation operations and safety options, such as sidewalks, bike lanes, trails and transit, as well as the use of technology to maximize the existing transportation system. Examples of improvements include turn lanes, sidewalks, bike lanes, trails and transit service enhancements as well as the use of advanced traffic signal control systems, motorist advisory systems and other technology to maximize the efficiency and safety of the existing transportation system. These projects are not specifically identified in the Cost Feasible Plan but are included as general project types or programs. Table 31, 2040 LRTP Program Projects List, identifies these programs and their funding sources. The River to Sea TPO 2040 Cost Feasible Plan was adopted on September 23, 2015 by Resolution 2015-18. The Resolution is included in Appendix K.

Each year, the River to Sea TPO issues a “Call for Projects,” inviting member governments to submit requests to fund projects that fit any of the project programs. These include projects other than capacity projects that advance the TPO's objectives to improve mobility, accessibility and safety for the users across all transportation modes. The TPO convenes a Transportation Improvement Program (TIP) Subcommittee and a BPAC Project Review Subcommittee to oversee the call for projects and to develop and recommend the ranked priority lists to the TPO advisory committees and Board. Once complete, FDOT uses the priority lists to allocate available funding to projects and they program these expenditures in the FDOT Five-Year Work Program.

Table 27 – State and Federal Revenue Resources

Funding Types	Source	Uses
SIS	State/Federal	SIS Facilities (corridors, connectors and hubs)
Other Arterial	State/Federal	Non-SIS/FIHS state highway system roadways
Transit	State/Federal	Technical, operating or capital assistance for transit, paratransit, or rideshare
TMA	Federal	Federal, state and local roadways, transit, sidewalk and bike infrastructure, and enhancements
Transportation Alternatives	Federal	Non-capacity improvements
TRIP	State/Local (Matches)	Regionally significant facilities

Source: FDOT 2040 Revenue Forecast Handbook, Forecast of State Transportation Revenues and Program Levels

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Table 28 – 2040 LRTP SIS Cost Feasible Projects List (State/Federal Funding)

Map No.	Facility	From	To	Source	ROW Cost[1] (PDC)	CST Cost[1] (PDC)	Project Cost[1] (PDC)	2019-2020[2] ROW	2019-2020[2] CST	2021-2025[2] ROW	2021-2025[2] CST	2026-2030[2] ROW	2026-2030[2] CST	2031-2040[2] ROW	2031-2040[2] CST	Y.O.E. Project Cost Total[2]
1	I-4 widen to 10 Lanes (I-4 Beyond the Ultimate)[3]	Seminole County	SR 472	SIS	$46.36	$372.07	$418.43					$71.39	$572.99			$644.38
2	SR 472 widen from 4 to 6 lanes[3]	Graves Ave	Kentucky/MLK Blvd	SIS		$40.48[4]	$40.48						$62.34			$62.34
3	Saxon Blvd Ramp/Roadway[3]	I-4	Normandy Blvd	SIS		$35.38[4]	$35.38						$54.49			$54.49
4	Rhode Island Extension[3]	Veterans Memorial	Normandy Blvd	SIS		$34.87[4]	$34.87						$53.70			$53.70
5	SR 15 (US 17) widen to 4 lanes	Ponce De Leon Blvd	SR 40	SIS		$39.40	$39.40								$77.62	$77.62
6	SR 40 - widen to 6 lanes	Williamson Blvd	Breakaway Trails	SIS	$7.43	$22.99	$30.42							$14.64	$45.29	$59.93
7	SR 40 - widen to 4 lanes	Cone Rd	SR 11	SIS	$2.30	$41.50	$43.80			$2.00			$84.70			$ 86.70
8	SR 40 - widen to 4 lanes	SR 11	SR 15 (US 17)	SIS	$7.50	$30.40	$37.90			$2.85			$72.90			$ 75.75
9	SR 100 - widen to 6 lanes	Old Kings Rd	Belle Terre Parkway	SIS	$3.17	$31.70	$34.87							$6.05	$60.55	$66.60
10	I-95 Interchange (Farmton Interchange)[5]	At Maytown Rd		SIS												
11	I-95/LPGA Blvd Interchange Modifications	Williamson Blvd	Tymber Creek Ext.	SIS		$20.00	$20.00								$32.50	$32.50
12	I-95/Pioneer Trail New Interchange	At Pioneer Trail		SIS		$18.50	$18.50								$30.06	$30.06
13	I-95/US 1 Interchange Modifications	At US 1		SIS		$32.20									$59.20	$59.20
							$754.05	$0.00	$0.00	$0.00	$0.00	$71.39	$743.51	$39.41	$383.35	
							Total By Period	$0.00		$0.00		$814.91		$422.76		$1,303.27

Notes:

[1] In millions; shown in present day costs (PDC)/"constant" 2013, 2014 or 2015 dollars (Added projects 11 & 12 are in 2017 dollars)
[2] In millions; inflated to year of expenditure (YOE) dollars per Revenue Forecast Handbook
[3] Part of the I-4 Beyond the Ultimate Project
[4] Cost estimates were sourced from the FDOT SR 400 (I-4) PD&E Study, Preliminary Engineering Report for I-4 Beyond the Ultimate, Segment 4 (December 2014)
[5] Developer Funded - $12.9 million (informational purposes)

Amendment 1: Per Resolution 2019-01, the 2040 LRTP was amended by the River to Sea TPO Board on January 23, 2019, moving two projects, # 11 and 12, from the Unfunded Needs List (Table 32) to the SIS Cost-Feasible Projects List (above)

Amendment 2: Per Resolution 2019-18, the 2040 LRTP was amended by the River to Sea TPO Board on October 23, 2019, for two projects, #7 and 8, advancing ROW funding from years 2031-40 to years 2021-25 and advancing CST funding from years 2031-40 to years 2026-30; and moving project #13 from the Unfunded Needs List (Table 32) to the SIS Cost-Feasible Projects List (above)

Table 29 – 2040 LRTP Other Arterial Cost Feasible Projects List (State/Federal Funding)

MAP No.	Facility	From	To	Source	PD&E/PE Cost[1] (PDC)	ROW Cost[1] (PDC)	CST Cost[1] (PDC)	Project Cost[1] (PDC)	2019-2020[2]			2021-2025[2]			2026-2030[2]			2031-2040[2]			Y.O.E. Project Cost Total[2]
									PE/PDE	ROW	CST	PE/PDE	ROW	CST	PE/PDE	ROW	CST	PE/PDE	ROW	CST	
11	**SR 483 – Clyde Morris Blvd – widening to 6 lane**	Beville Road	US 92	Other Arterial			$30.60	$30.60						$38.86							**$38.86**
12	**Old Kings Rd – widen from 2 to 4 lanes**	Palm Coast Parkway	Forest Grove Dr	Other Arterial			$14.85	$14.85			$17.37										**$17.37**
13	**SR 44 – Miscellaneous upgrades to improve access to DeLand SunRail**	SR 15A	DeLand SunRail Station	Other Arterial		$1.74	$17.36	$19.10		$1.98				$22.05							**$24.03**
14	**US 92 – widen from 4 to 6 lanes**	I-4 EB Ramps	CR 415 (Tomoka Farms Rd)	Other Arterial			$25.43	$25.43									$40.43				**$40.43**
15	**Old Kings Rd – extension roadway (Phase II)**	Matanzas Woods Pkwy	Old Kings Rd	Other Arterial			$5.00	$5.00						$6.35							**$6.35**
16	**Commerce Pkwy Connector Road – new 2 lane roadway**	SR 100	SR 5 (US 1)	Other Arterial			$4.07	$4.07						$4.48							**$4.48**
17	**Matanzas Woods Pkwy (west) – widen to 4 lanes**	SR 5 (US 1)	Southbound I-95 ramps	Other Arterial		$0.18	$13.95	$14.13		$0.21				$18.27							**$18.48**
18	**SR 600/SR 15 (US 17/92) - emerging SIS**	SR 472	SR 15A (Taylor Rd)	Other Arterial		$3.00	$27.00	$30.00								$4.50				$51.57	**$56.07**
19	**LPGA Blvd – widen to 3 lanes**	Nova Rd	SR 5 (US 1)	Other Arterial		$3.50	$9.00	$12.50								$5.25	$13.50				**$18.75**
20	**Howland Blvd – widen to 4 lanes**	Providence Blvd	Elkcam Blvd	Other Arterial		$2.50	$11.82	$14.32								$3.75	$17.73				**$21.48**
21	**North Entrance DeLand Airport (Industrial Park)**	Industrial Dr	SR 11	Other Arterial			$0.97	$0.97									$1.46				**$1.46**
6	**SR 40 – widen to 6 lanes**	Williamson Blvd	Breakaway Trails	Other Arterial		$7.43	$22.99	$30.42											$14.64	$45.29	**$59.93**
9	**SR 100 – widen to 6 lanes**	Old Kings Rd	Belle Terre Parkway	Other Arterial		$3.17	$31.70	$34.87											$6.05	$60.55	**$66.60**
22	**SR 442 – extend roadway (Edgewater or Deltona)**	SR 442	SR 415 (alignment not set)	Other Arterial	$10.00			$10.00										$19.10			**$19.10**
								$246.26	$0.00	$2.19	$17.37	$0.00	$0.00	$90.01	$0.00	$13.50	$73.11	$19.10	$20.69	$157.41	
								Total By Period	**$19.56**			**$90.01**			**$86.61**			**$197.20**			**$393.38**
								2040 Revenue Forecast	$22.80			$101.90			$96.30			$210.80			**$431.80**
								Local Corridor Initiatives	*$3.24*			*$11.89*			*$9.69*			*$13.60*			***$38.42***

On System Projects

Off System Projects

[1] In millions; shown in present day costs (PDC)/"constant" 2013, 2014 or 2015 dollars

[2] In millions; inflated to year of expenditure (YOE) dollars per Revenue Forecast Handbook

Note: Project costs do not includes phases previously completed

Note: The first three (3) years of the Cost Feasible Plan includes FY 2016, 2017 & 2018. Projects in these years are already programmed in the adopted Transportation Improvement Program (TIP) and are represented by the Existing Plus Committed set of projects shown in Appendix M.

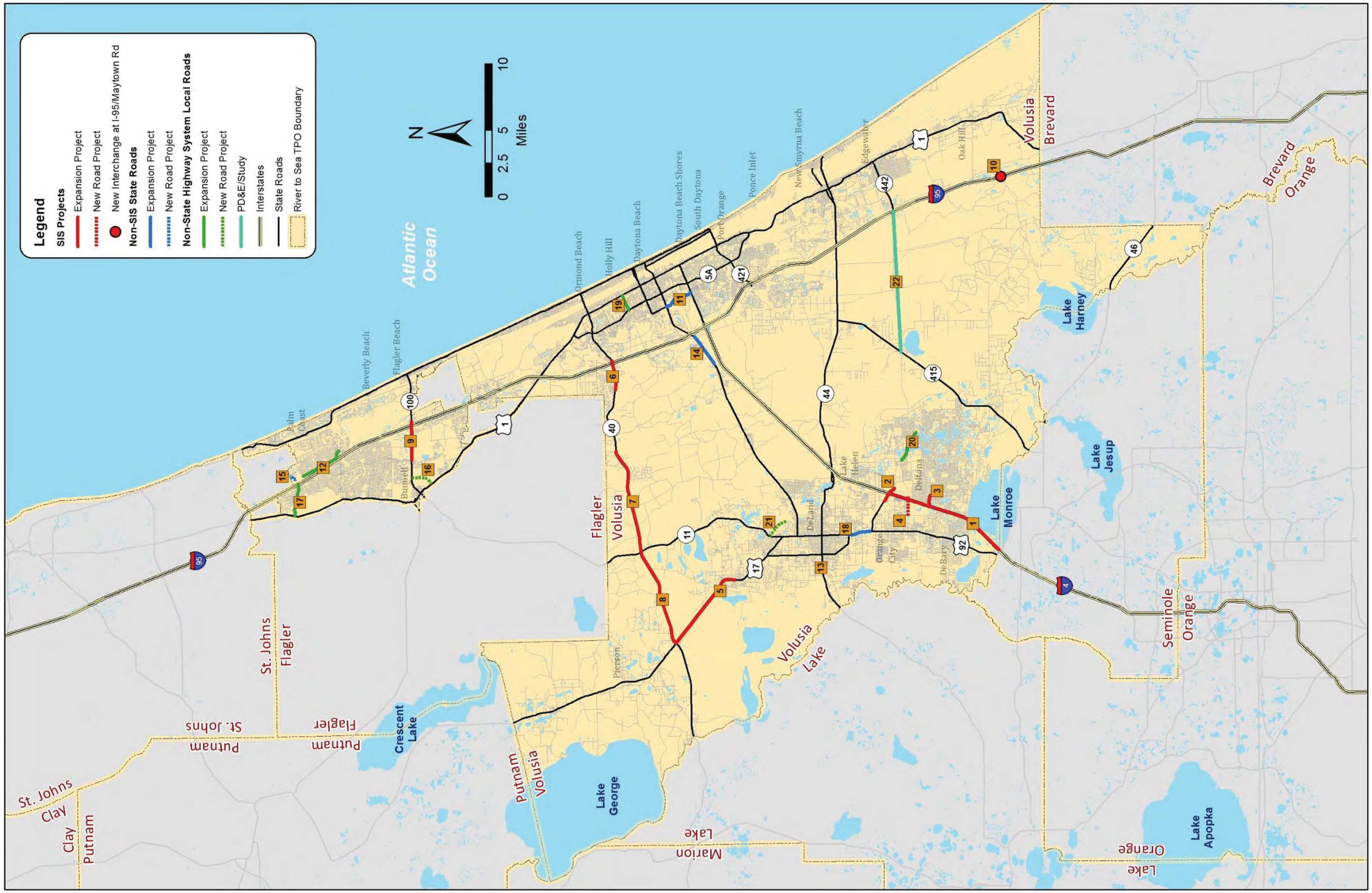

Figure 5 – Major Capacity Enhancing Projects

Table 30 – Local (Volusia County) Projects[1]

Map Number	Project	Limits	Capital Cost (in millions)
1	Tymber Creek Rd - widening to 4 lanes	Peruvian Ln to Airport Rd	$8.0
2	Tymber Creek Rd - extend as 2 lane road	South of SR 40 to LPGA Blvd	$15.5
3	Dunn Ave - widening to 4 lanes	Williamson Blvd to Clyde Morris Blvd	$15.0
4	Williamson Blvd - widening to 4 lanes	LPGA Blvd to Hand Ave	$13.5
5	Williamson Blvd - widening to 4 lanes	SR 400/Beville Rd to Summertree Rd	$30.6
6	Josephine St - widening to 4 lanes	Old Mission Rd to Tatum St	$4.5
7	Pioneer Trail - widening to 4 lanes	Airport Rd to I-95	$12.5
8	I-95 & Pioneer Trail Interchange	Williamson Blvd to Turnbull Bay Rd	$22.0
9	Park Ave - adding bi-directional turn lanes & paved shoulder	Old Mission Rd to Massey Ranch Rd	$3.9
10	W. Volusia Beltway (Kentucky Ave) - widening to 4 lanes and realign facility	SR 472 to Harley Strickland	$24.2
11	Doyle Rd - widening to 4 lanes	Providence Blvd to Saxon Blvd	$11.1
12	Westside Pkwy - extend road	French Ave to Rhode Island Ave	$7.8
13	Howland Blvd - widening to 4 lanes	Providence Blvd to Elkcam Blvd	$13.0
14	Rhode Island Extension with I-4 overpass - extend as 2 lane road	Veterans Memorial Pkwy to Normandy Blvd	$15.5
15	W. Volusia Beltway (Kepler Rd) - widening to 4 lanes	US 92 to Beresford Ave Extension	$21.1
16	W. Volusia Beltway (Dr. MLK Jr) - widening to 4 lanes	Taylor Rd to Orange Camp Rd	$6.2
17	Beresford Ave - extend road	Blue Lake Ave to SR 44	$10.8
18	Old New York Ave - safety & paved shoulders	SR 44 to DeLand SunRail Station	$4.0

[1] List provided by Volusia County staff

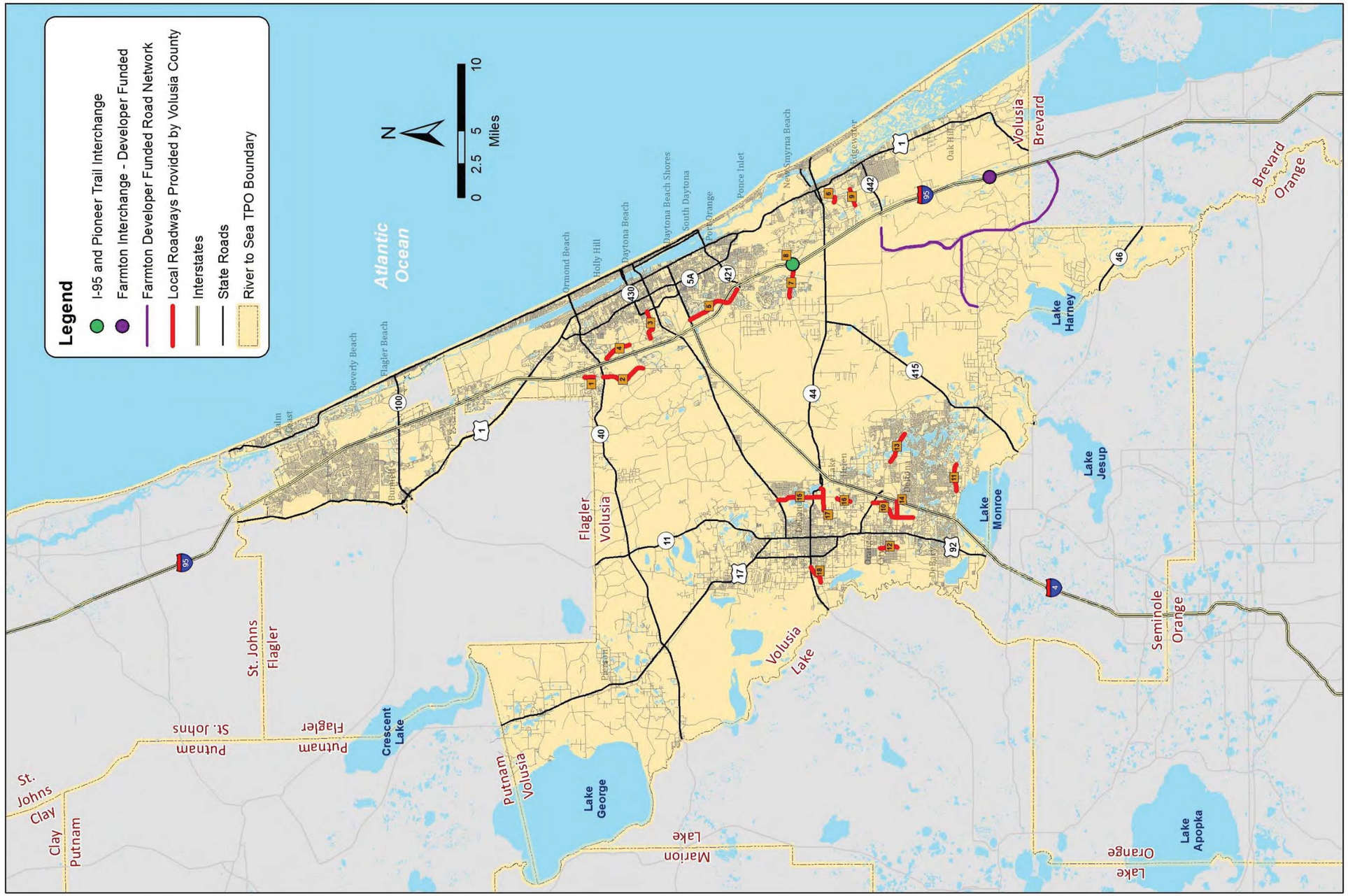

Figure 6 – Volusia County Local Road Projects

Table 31 – 2040 LRTP Program Projects List (Boxed Funds)

Program (Project Type)	From	To	Source	2019-2020[1]			2021-2025[1]			2026-2030[1]			2031-2040[1]			Y.O.E. Project Cost Total[1]
				PE/PDE	ROW	CST	PE/PDE	ROW	CST	PE/PDE	ROW	CST	PE/PDE	ROW	CST	
Traffic Operations, Safety & Local Initiatives (Traffic Operations related)			TMA (SU) Set-Aside (40%), TALU	$0.83		$2.93	$2.08		$7.36	$2.08		$7.36	$4.15		$14.73	$41.52
Bicycle, Pedestrian, Trails, Transportation Alternative Projects & Local Initiatives (Bicycle and pedestrian related)			TMA (SU) Set-Aside (30%), TALU	$0.62		$2.20	$1.56		$5.52	$1.56		$5.52	$3.12		$11.05	31.15
Transit Planning			TMA (SU) Set-Aside (30%)	$2.82			$7.08			$7.08			$14.17			31.15
Total By Phase and Period				$4.27	$0	$5.13	$10.72	$0	$12.88	$10.72	$0	$12.88	$21.44	$0	$25.78	$103.82
Total By Period				$9.40			$23.60			$23.60			$47.22			$103.82

[1] In millions; inflated to year of expenditure (YOE) dollars per Revenue Forecast Handbook

7.1. Unfunded Transportation Needs

Chapter 4 of the *Metropolitan Planning Organization Program Management Handbook* provides guidance for developing long-range transportation plans. This handbook states that MPOs and the FDOT have agreed that all plans will include information regarding "unmet regional and statewide needs." Like many areas around the nation, transportation demands within the River to Sea TPO planning area continue to outpace the funding available for transportation project construction and maintenance. Given the limited availability of funds, allocating financial resources necessary to upgrade and maintain the transportation system continues to present a challenge to planning officials.

The challenge faced by planning organizations, however, is how to define a transportation system "need." The River to Sea TPO agreed to the following definition: *A project and/or system enhancement, currently unfunded, that addresses an unmet trip destination or transportation system provision that cannot reasonably be met within current plans and/or construction schedules and would improve the ability of the TPO and member local governments to meet or exceed the stated goals of the LRTP*.

Additionally, the following criteria were utilized to evaluate projects to be included in the 2040 LRTP and identified as a need:

- Provides a Balanced and Efficient Multimodal Transportation System
- Supports Economic Development
- Enhances Connectivity and Transportation Choices
- Improves Safety and Security
- Continues to Provide and Create New Quality Places
- Provides Transportation Equity and Encourage Public Participation

Table 32 lists the SIS Needs projects, which are not mapped. The non-SIS candidate needs projects are listed in Table 22. These projects are important to the MPA, and meet the above stated criteria, but there is no funding currently available for their implementation.

Table 32 – SIS Needs Projects[1]

Project	Limits	Est. Present Day Cost (in millions)	Notes
SR 15 (US 17) Preliminary Design and Engineering (PD&E)	SR 40 to Putnam Co. Line	$2.00	Safety Study
~~I-95/US 1 Interchange Modifications~~	~~At I-95 & SR 5 (US 1)~~	~~$28.00~~	~~Interchange Improvements/Safety & Capacity~~
I-95/SR 44 Interchange Modifications	At I-95 & SR 44	$15.00	Interchange Improvements/Safety & Capacity

[1] Unfunded

Amendment 1: Per Resolution 2019-01, the 2040 LRTP was amended by the River to Sea TPO Board on January 23, 2019, moving two projects, I-95 Interchange at LPGA and I-95 interchange @ Pioneer Trail, from the Unfunded Needs List (above) to the SIS Cost-Feasible Projects List (Table 28).

Amendment 2: Per Resolution 2019-18, the 2040 LRTP was amended by the River to Sea TPO Board on October 23, 2019, moving the I-95/US 1 Interchange modifications project from the Unfunded Needs List (above) to the SIS Cost-Feasible Projects List (Table 28)

Chapter 8

ENVIRONMENTAL CONSIDERATIONS

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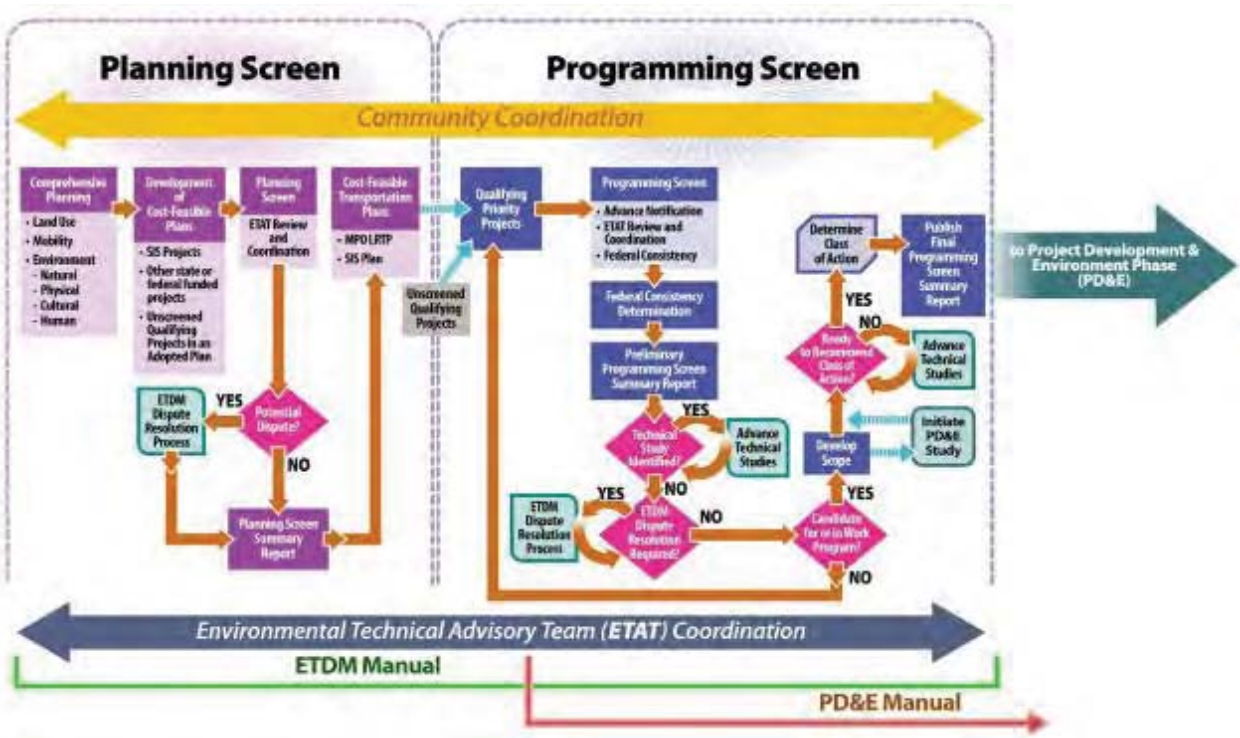
8. ENVIRONMENTAL CONSIDERATIONS

8.1. Efficient Transportation Decision Making (Etdm)

The Efficient Transportation Decision Making (ETDM) process is a process to review transportation projects to consider potential environmental effects in the planning phase. ETDM is a two tiered process that involves both the Planning Screen (short term) and the Programming Screen (long term) phases of the transportation improvement process as seen in Figure 7. During the Planning Screen, comments received from an Environmental Technical Advisory Team (ETAT) and the public help FDOT and TPOs to identify environmental considerations that assist in assessing projects for inclusion or advancement in LRTPs and further into the cost feasible plan. During the Programming Screen, qualifying projects are reviewed when being considered for funding in the FDOT Five-Year Work Program or the Transportation Improvement Program (TIP).



Source: FDOT ETDM Manual

Figure 7 – ETDM Process

As per the *Metropolitan Planning Organization Program Management Handbook*, all major transportation improvement projects in the LRTP should be screened under the ETDM process (Planning Screen), including major Local Agency Program (LAP) projects. Figure 8 depicts the recommended guidance for the Planning/Programming Screen.

Matrix for ETDM Programming Screen for Major Transportation Projects Including Capacity Additions and Bridge Replacements*

Responsible Agency/ETDM Involvement/Environmental Documentation

	Federal Dollars (FHWA or FTA transportation funds or required FHWA approval)			State Dollars (TRIP, Transit/Intermodal System Grants, etc)			Local Dollars Only		
	Responsible Agency (1)	ETDM Screening	Type of Environmental Document	Responsible Agency (1)	ETDM Screening	Type of Environmental Document	Responsible Agency (1)	ETDM Screening	Type of Environmental Document
System									
State Highway System (SHS) on the Strategic Intermodal System (SIS)	FDOT	YES	NEPA	FDOT	YES	SEIR	FDOT	YES	SEIR
							Local (2)	YES (3)	SEIR
State Highway System (SHS) not on the Strategic Intermodal System (SIS)	FDOT	YES	NEPA	FDOT	YES	SEIR	FDOT	YES	SEIR
				Local (2)	YES	SEIR	Local (2)	YES (3)	SEIR
Highways not on State Highway System (SHS) but on the Strategic Intermodal System (SIS)	FDOT	YES	NEPA	FDOT	YES	SEIR	FDOT	YES	SEIR
	Local (2)	YES	NEPA	Local (2)	Local Option	Fed/State/ Local Regulations (5)	Local (2)	N/A (4)	Fed/State/ Local Regulations
Highways not on state Highway system (SHS) and not on the Strategic Intermodal System (SIS)	FDOT	YES	NEPA	FDOT	YES	SEIR	Local (2)	N/A (4)	Fed/State/ Local Regulations
	Local (2)	YES	NEPA	Local (2)	Local Option	Fed/State/ Local Regulations (5)			
Major Public Transit Projects (intermodal center, passenger rail, etc.) on or off the Strategic Intermodal System (SIS)	FDOT	YES	NEPA	FDOT	YES	SEIR	Local (2)	N/A (4)	Fed/State/ Local Regulations
	Local (2)	Local Option	NEPA	Local (2)	Local Option	Fed/State/ Local Regulations (5)			
Non-Passenger Rail Projects and non-highway Port and Airport Projects on the Strategic Intermodal System (SIS)	Local (7)	N/A (4)	NEPA	Local (7)	N/A (4)	Fed/State/ Local Regulations (5)	Local (7)	N/A (4)	Fed/State/ Local Regulations

(1) The Responsible Agency is the agency that develops project concepts and preliminary engineering and evaluates and documents compliance with federal, state, and local environmental requirements.
- FDOT will be responsible agency on all projects funded with federal-aid highway funds (FHWA). FDOT is viewed as the responsible agency on FHWA funded LAP projects.
- A local agency may be the responsible agency on a Federal Transit Administration funded project.
- FDOT will be the responsible agency for all state funded projects located on the State Highway System
- An agency other than FDOT will usually be the responsible agency for any locally funded project, however, there may be circumstances that could be worked out on a project-by-project basis where FDOT agrees to serve as the responsible agency.

(2) Local applies to any local government agency, other state agency, expressway authority, bridge authority or private entity

(3) Expressway authorities have the option of using the ETDM process based on consultation with FDOT

(4) The formal ETDM Programming screening process (including agency review) is not applicable; however, the environmental screening tool may be used at the local agency option to evaluate the project.

(5) Federal, State and local regulations apply unless JPA specifies otherwise

* All bridge replacement projects that do not qualify as a Programmatic Categorical Exclusion should be screened.

Exceptions must be approved by the Assistant Secretary for Intermodal Systems Development

Source: FDOT ETDM Manual

Figure 8 – ETDM Planning/Programming Screen

All of the projects included in the 2040 Cost Feasible Plan have been vetted through the ETDM. For the carry over projects from the 2035 LRTP that are also included in the 2040 LRTP, either a PD&E has been completed and will be updated prior to project design or the project has been screened through the ETDM. All new projects will be subject to the same process.

The River to Sea TPO exercised the option to use up to 20% of Other Arterial funds for local, off-system projects. The screening process used to rank candidate projects included Environmental Justice concerns as a ranking criteria. This process is further described in Section 6.2.

8.2. Smart Growth Initiative

The Smart Growth Initiative was established to ensure that Volusia County retains an interconnected core network of environmentally important lands to help preserve the County's ecosystems into the future. The goal was to protect and enhance environmentally sensitive corridors, wildlife habitat, connected wetlands, and natural hydrologic functions throughout Volusia County, The County adopted the Environmental Core Overlay or "ECO" Map as a component of the Future Land Use Map series. This map is included as Figure 9.

A map of the wetlands and mitigation banks within the River to Sea TPO MPA is included as Figure 10.

8.3. Volusia ECHO

The Volusia ECHO program provides grant funds to finance acquisition, restoration, construction or improvement of facilities to be used for environmental, cultural, historical and outdoor recreational purposes. The Volusia ECHO program works to improve the quality of life for Volusia County residents by:

- Providing environmental facilities, cultural facilities, historical facilities, and outdoor facilities
- Preserving significant archaeological resources, and developing tourism opportunities
- Providing user oriented recreational opportunities, such as access to the Atlantic Ocean through the establishment of ocean front parks and off beach parking
- Improving citizens' access to the cultural arts, increasing cultural based tourism and encouraging the redevelopment and revitalization of downtown and other urban areas through the establishment of cultural arts facilities.

8.4. Public Outreach/Environmental Review

On December 16, 2015, the TPO sent out an email blast went to 19 environmental organizations. That email informed the recipients that the 2040 LRTP was available online on the LRTP website and comments were welcomed from all interested parties. The legal advertisement was attached as well.

The following is the list of those organizations:

Audubon Eagle Watch, 1000 Friends of Florida, Florida Audubon Society, Florida Native Plant Society--Lyonia Chapter, Florida Native Plant Society--Paw Paw Chapter, Florida Trail Association, Friends of St. Johns River, Halifax River Audubon Society, Southeast Volusia Audubon Society, The Nature Conservancy--Florida Chapter, West Volusia Audubon Society, Ponce De Leon Lighthouse Preservation Association, Inc., Florida Trail Association--Halifax/St. Johns Chapter, The Happy Wanderers Walking

Club, The Farmworkers Association of Florida, Department of Environmental Protection, Fla. State Clearinghouse; DEP Tallahassee, Florida Turnpike Enterprise, St. John's WMD and the Office of Greenways & Trails.

The TPO did not receive any feedback on the 2040 LRTP from any of those groups.

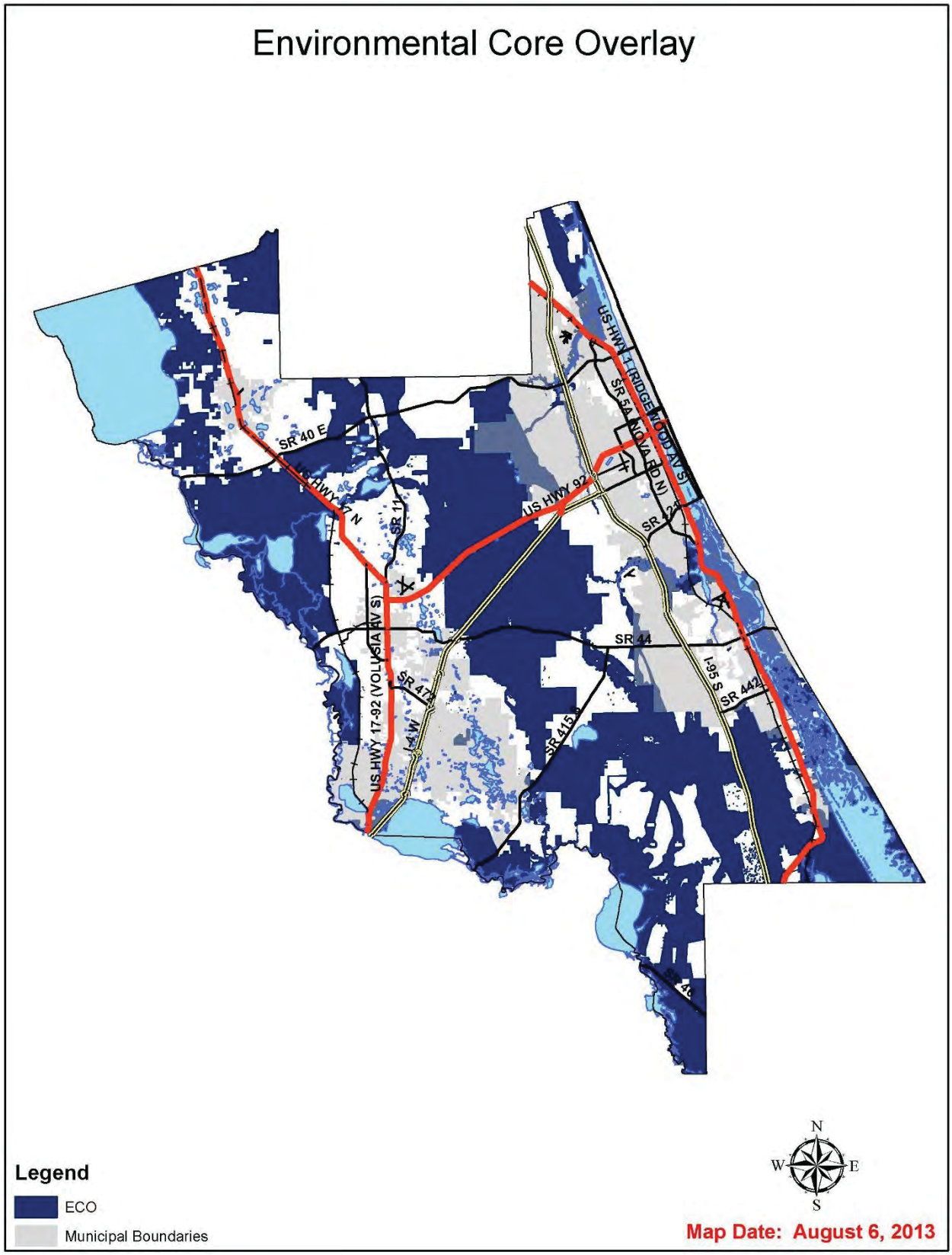


Figure 9 – Volusia County Environmental Core Overlay

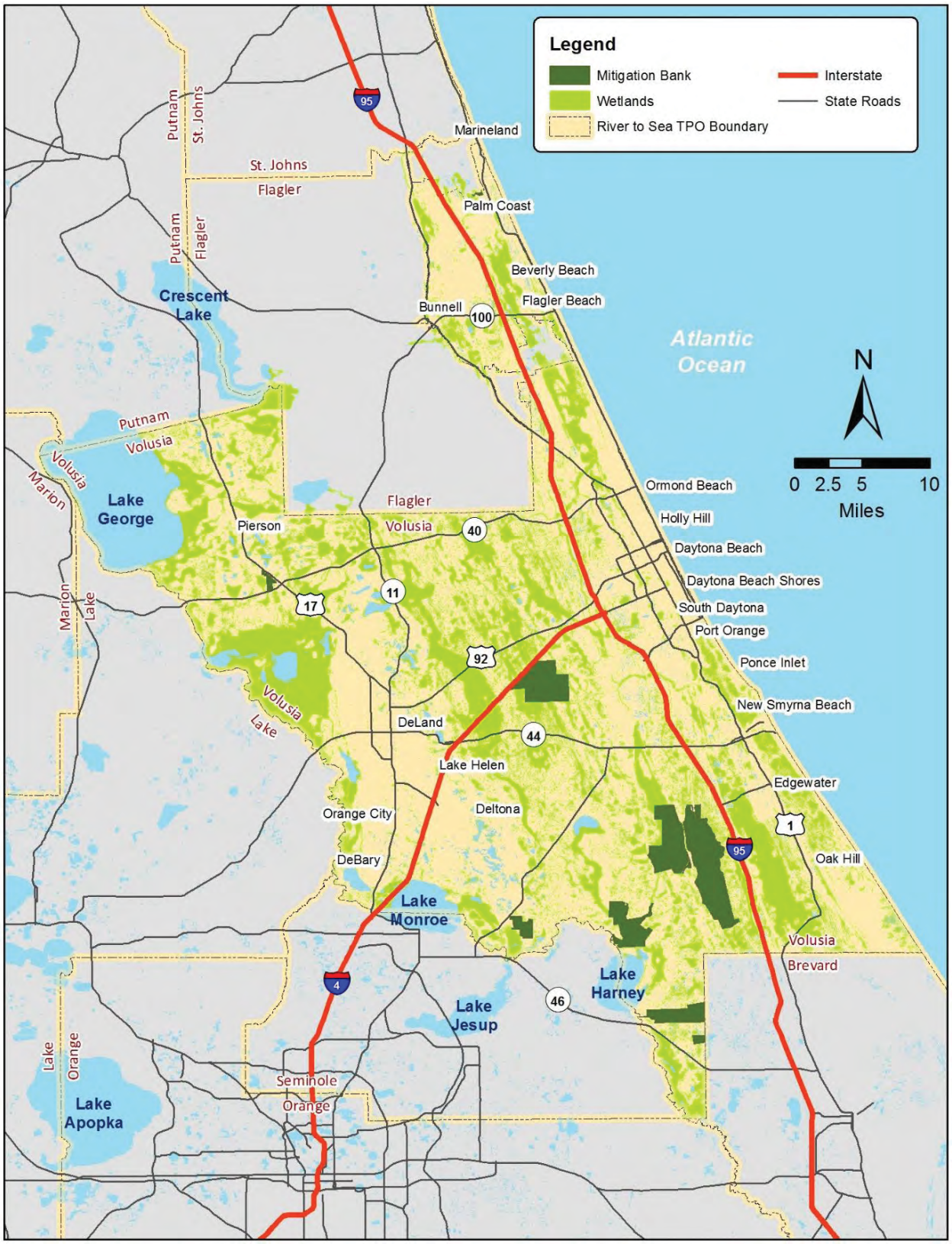


Figure 10 – Wetlands and Mitigation Banks Within the River to Sea MPA

Chapter 9

MULTIMODAL/GROUP PROJECTS

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9. MULTIMODAL/GROUP PROJECTS

9.1. Bicycle and Pedestrian Planning

The River to Sea TPO has a long standing commitment to bicycle and pedestrian planning and project implementation and works closely with local, regional and state stakeholders. Over the last several years, the River to Sea TPO has completed numerous bicycle and pedestrian feasibility studies and plans focused on school safety, as well as regional and local comprehensive and multimodal transportation plans.

The River to Sea TPO has recently completed a Regional Trails Corridor Assessment (RTCA) to identify the regional trail projects needed to complete the interconnected regional trails within the planning area. The completion of the RTCA, the continued allocation of TMA set-aside funding for bicycle/pedestrian projects (roughly $31 million between 2019 and 2040) and the use of Transportation Alternatives Program (TAP) funding reaffirms the River to Sea TPO's commitment to the development of bicycle and pedestrian facilities and regional trail facilities that provide vital connections within the state and national trail and greenway network. The RTCA map is included as Figure 11.

9.2. Public Transit Planning

The River to Sea TPO LRTP continues to provide support for local public transit service by reserving a portion of the TMA set-aside to provide funding of roughly $31 million between 2019 and 2040. Recognizing that this funding is limited to supporting only the continuation of existing service, the River to Sea TPO will continue to seek additional transportation funding strategies that will support the expanded transit needs of this planning area.

The long range planning efforts of the TPO also recognize the need to continue the implementation of SunRail service. Phase II, north from the DeBary station to the DeLand Amtrak station, is anticipated to be funded within the initial five-year period. Although other studies have been completed and are underway to consider future transit expansion, the results of these efforts are not yet ready to be included in the cost feasible transportation plan. The R2CTPO has continued its commitment to future rail alignments by protecting a rail envelope in the I-4 corridor within Volusia County.

9.3. Commuter Rail

In August 2006, Florida Governor Jeb Bush announced an agreement in principle with CSX Transportation to buy 61.5 miles of freight track through Central Florida to use in the development of a commuter rail service (Central Florida Commuter Rail). The project, later named SunRail, was planned to include twelve stations and provide a transportation alternative to congested roads in Central Florida, as well as enhance freight mobility throughout the state as its population grows. The project is currently being managed by FDOT, with input from the Central Florida Commuter Rail Commission Governing Board. This commission was established to assist FDOT with policy direction through the first seven years of operation and will subsequently take control of the operations and maintenance of SunRail.

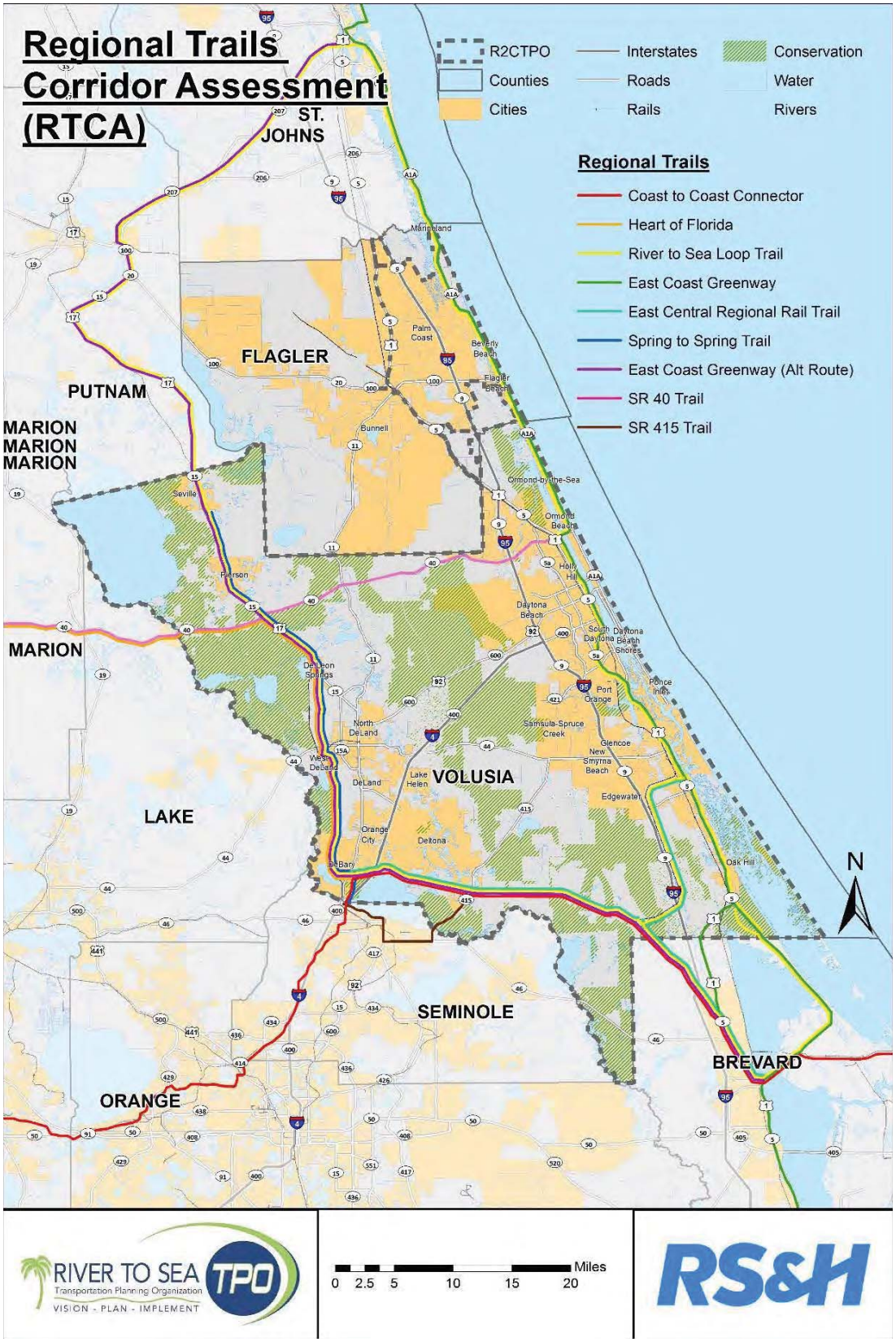

Figure 11 – Regional Trails Corridor Assessment

9.4. Transporation Efficiency and System Safety Planning

This Long Range Transportation Plan also reflects the River to Sea TPO's commitment to preserving and enhancing the existing transportation infrastructure by allocating funds to improve traffic operations and safety and to utilize new technology to improve the efficiency of our existing system. This plan sets aside roughly $41 million between 2019 and 2040 for projects that improve safety and efficiency.

The 2040 LRTP also helps to create high quality transportation facilities by allocating approximately $38 million in funding between 2019 and 2040 for Local Initiative projects. These include projects that address complete streets retrofits, roundabouts, major technology improvements, climate change adaptation aesthetics and other qualified improvements that support the goals of the plan.

The TPO supports local governments by conducting feasibility studies for projects early in the development stage to provide assistance in accessing federal and state funding programs. The studies take a planning level approach and consider the purpose and need for the project, phases that need to be funded, project issues impacting constructability and preliminary cost estimates. The TPO sets aside $200,000 per year in SU funds to conduct feasibility studies.

9.5. Regional Coordination

For over a decade, the River to Sea TPO has been a participating member of the Central Florida MPO Alliance (CFMPOA). The group is comprised of six Central Florida MPO/TPOs that meet on a quarterly basis to collaborate on the transportation needs of the region. The CFMPOA continues to develop a regional list of priority projects for the mutual benefit of the region and to improve the communication of regional priorities to the FDOT. Projects are grouped into three main categories: 1) Strategic Intermodal System (SIS) projects that connect the MPOs to transportation and freight trade; 2) Regional Trail projects, which involve the statewide interconnected system identified by the Office of Greenways and Trails; and 3) Regional Transit projects that increase mobility across MPO and county boundaries. This level of regional cooperation is on the leading edge of regional planning in Florida.

Examples of regional coordination include the following:

Transit Corridor Feasibility Analysis Study – In March 2009, FDOT, in collaboration with the Volusia TPO (now known as the River to Sea TPO), completed a study that assessed the feasibility of potential transit corridors within Volusia County. The study provided sufficient technical documentation to apply for Federal Transit Administration (FTA) funding for a more detailed alternatives analysis.

Corridor Improvement Program – In an effort to maximize the effectiveness of existing corridors and recognize changing local conditions, the TPO conducted a series of corridor improvement studies that provided an assessment of several primary transportation corridors. The corridor improvement plan was intended to utilize readily accessible information as a means to identify projects that may be potentially pursued within the next few years. The studies considered all modes of travel and included the review and documentation of existing conditions and issues that impact mobility and livability along the corridors.

The River to Sea TPO takes its role seriously in supporting local and regional economic growth and diversity and improving the economic competitiveness of the region through improvements to the

transportation system. High quality transportation projects have the potential to improve property values, support economic development and redevelopment and expand the tourism market. The River to Sea TPO seeks to support community priorities by developing transportation systems that are efficient, safe and supportive of the surrounding community. This includes transportation systems that provide access to markets and suppliers, which is critically important for the success of area businesses. Notable among planned improvements and improvements currently underway are the widening of I-4, from SR 44 to I-95; the widening of I-95, from the Brevard County line to US 92; and the reconstruction of the I-4/I-95/US 92 systems interchange. These improvements will complete the six-laning of the interstate highway system throughout Volusia and Flagler Counties and provide a needed upgrade to the interchange connecting these two highways. These projects will improve traffic flow and safety on critical highways that serve the planning area.

A notable example of the TPO's support for transportation improvements that promote economic growth is the recently completed extension of SR 430/Mason Avenue. This project was needed to provide safe and efficient access from the state highway system to a new distribution center (Trader Joe's) which created 450 new jobs.

Recent transportation infrastructure improvements along US 92/SR 600/International Speedway Boulevard, which included advanced traffic signal improvements, wider sidewalks, a pedestrian overpass, lighting, landscaping and safety and drainage improvements, support significant private sector development throughout the corridor. The International Speedway Corporation is investing approximately $400 million in the expanded Daytona International Speedway.

SunRail, which began operation of a commuter rail service over a 31-mile corridor from DeBary through Orlando, has sparked considerable new development. According to a March 28, 2014 article in the Orlando Business Journal, 14 projects with a total value of $785 million are under construction within a ten-minute walk of SunRail stations. Together, those projects total 3.4 million gross square feet and 1,150 residential units and are slated to create 6,280 jobs; 2,780 of those are temporary construction jobs.

Chapter 10

LRTP AMENDMENT PROCEDURE

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10. LRTP AMENDMENT PROCEDURE

10.1. Introduction

From time to time, the River to Sea TPO may find it necessary to revise the LRTP other than at the 5-year update cycle. Should this need occur, the TPO will follow the procedure laid out in Chapter 4 of the Metropolitan Planning Organization Program Management Handbook (May 7, 2012) as well as the guidance provided by FDOT and FHWA Florida Division and the Code of Federal Regulations. This chapter outlines the procedure for amending the 2040 LRTP.

It should be noted that the River to Sea TPO Board retains the authority to bypass this procedure and amend the long range transportation plan as necessary to comply with the administrative requirements of either the federal or state governments.

10.2. Lrtp Amendment Procedure

The LRTP can be revised at any time based on need. When making changes to a long range transportation plan, there are two types of revisions that need to be considered: 1) an administrative modification and; 2) a plan amendment (23 C.F.R. 450.104).

10.2.1. Administrative Modification

An administrative modification is a minor revision to the LRTP (or TIP). It includes minor changes to project/phase costs, funding sources, or project/phase initiation dates. It does not require public review and comment or re-demonstrating fiscal constraint. [23 C.F.R. 450.104] Examples of these include:

A. Design Concept or Scope Changes: A minor change in the project termini equal to or less than 10% of the total project, i.e., adjusting length for turn lane tapers.

B. Identification of planned use of federal funds for the existing cost feasible plan projects if federal funds are added to a project funded with only state or local funds in the adopted LRTP.

C. Project or Project Phase Initiation Date:

1) Advancing a project from a 5 or 10-year band to an adjacent 5-year band beyond the TIP/STIP years/1st 5-year band.

2) Adding a new phase to an existing cost feasible plan project (e.g. if ROW is funded, adding CST phase) where the new phase is funded beyond the TIP/STIP years/1st 5-year band of the LRTP.

3) Adding a new phase to an existing cost feasible plan project (e.g. if ROW is funded, adding CST phase) from a Needs or Illustrative list to the cost feasible plan where the new phase is funded beyond the TIP/STIP years/1st 5-year band of the LRTP.

4) Adding a new phase to an existing cost feasible plan project (e.g. if ROW is funded, adding CST phase) from a Needs or Illustrative list to the CFP where (1) the new phase is funded in the TIP/STIP years/1st 5-year band of the LRTP and (2) the added phases use new funds not contained in the LRTP Revenue Forecast to the cost feasible plan.

Should it be determined that an administrative modification is needed, information regarding the need for modification should be presented to the River to Sea TPO Executive Director for review and determination. If the change satisfies the definition of an administrative modification, the Director will notify FHWA and FDOT representatives and direct TPO staff to process the change. If it is above the thresholds for a modification, the change should follow procedures for a plan amendment.

10.2.2. Plan Amendment

An amendment is a major revision to the LRTP (or TIP) and includes adding or deleting projects from the plan and/or major changes to project costs, initiation dates, or design concepts and scopes for existing projects. An amendment requires public review and comment in accordance with the LRTP amendment and Public Involvement processes and re-demonstrating fiscal constraint. Changes to projects, included only for illustrative purposes, do not require an amendment. [23 C.F.R. 450.104]

Should an amendment be requested, information regarding the proposed change should be presented to the River to Sea TPO Executive Director for initial review. The Director, along with TPO staff, will review supporting documentation and convene a technical review committee to evaluate the impact of the change and supporting documentation. The committee will provide their findings to the TPO standing committees and board.

The Director will follow the plan amendment process depicted in Figure 12. In addition, plan amendments will:

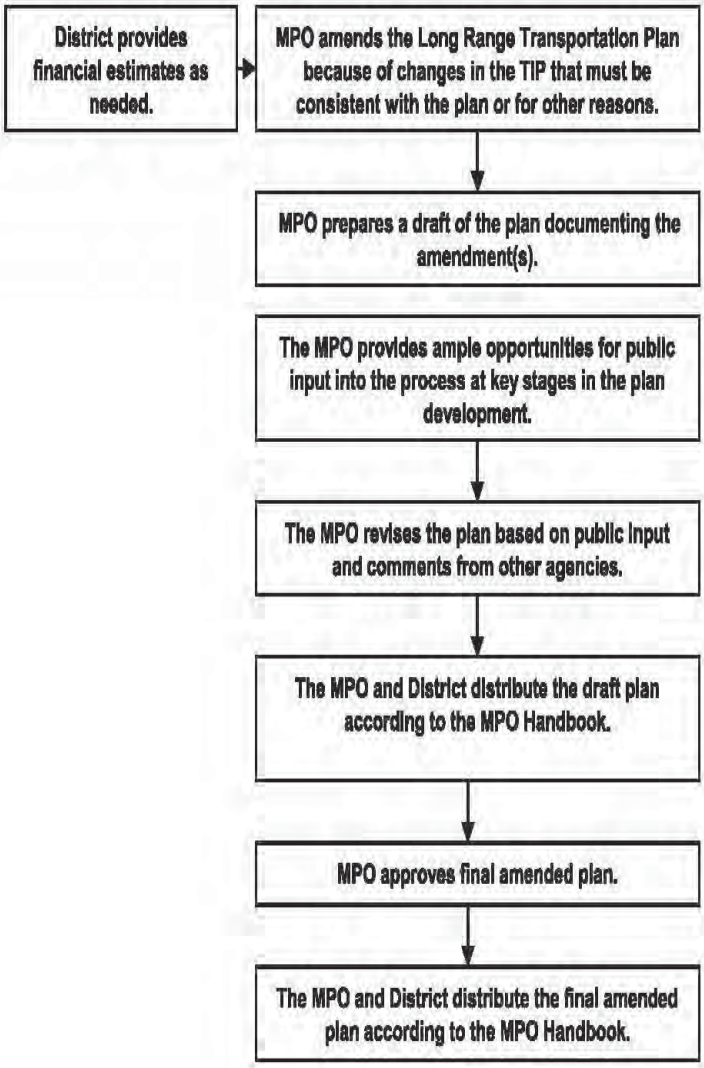
- Require an update to the revenue and cost estimates supporting the plan to use an inflation rate(s) to reflect year of expenditure dollars, based on reasonable financial principles and information. [23 C.F.R. 450.322(f)(10)(iv)] These estimates must demonstrate that the change preserves the financial feasibility of the plan.
- Provide a purpose and need for the change. This may include supporting data and analysis.
- Follow a public involvement period consistent with adoption of the original plan. This includes review of the full draft proposal, followed by a 30-day public input period, and then adoption of the amendment by a recorded roll call vote or hand-counted vote of the majority of the membership present. [339.175(13), F.S.].

Copies of the amended long range plan should be distributed in accordance with the Metropolitan Planning Organization Program Management Handbook. Although the LRTP does not require approval by the FHWA or the FTA, these agencies are involved in the development of the plan and should be provided an opportunity to comment on amendments to the plan.

Guidance has also been provided by FDOT and the FHWA Florida Division regarding plan amendments. This guidance states that an LRTP amendment will be required for LRTP cost increases that exceed 50% of project cost and $50 million. When assessing project cost changes (including project costs documented in NEPA documents), the cost of the project includes the phases after the PD&E which, for purposes of this document, are Design/PE, ROW and Construction phases.

Other changes that require an LRTP Amendment include:

A. Design concept or scope changes: A major change in the project termini (e.g. expansion) or a change in a project concept(s) such as adding a bridge, addition of lanes, addition of an interchange, etc.
B. Deleting a full project from the CFP.
C. Adding a new project where no phases are currently listed in the CFP.
D. Projects or Project Phase Initiation Date for projects in the CFP:
   1) Advancing a project phase from the 3rd 5 years and the last 10-year band of the LRTP to the TIP/STIP years; advancing a project more than one 5-year band.
   2) Adding a phase to an existing CFP project (e.g. if ROW is funded, adding CST phase) where (1) the new phase is funded in the TIP/STIP years/1st 5-year band of the LRTP and (2) one or more phases of a different project must be deferred to a later band or to the Needs/Illustrative List in order to demonstrate fiscal constraint.
   3) For advancing phases of minor projects, please see the Section 10.2.1 of this chapter.
E. Projects or Project Phase Initiation Date for projects beyond the CFP:
   1) Moving a new project from a Needs or Illustrative List to the CFP where no phases are currently listed in the CFP.
   2) Moving new phases from a Needs or Illustrative List to an existing CFP project where (1) the new phase is funded in the TIP/STIP years/1st 5-year band of the LRTP and (2) one or more phases of a different project must be deferred to a later band or to the Needs/Illustrative List in order to demonstrate fiscal constraint.



Source: *Metropolitan Planning Organization Program Management Handbook, Figure 4C* (May 7, 2012)

Figure 12 – Plan Amendment Process

LIST OF REVISIONS

Revision Date	Type of Revision	Resolution	Description
4/8/16	Modification	n/a	Added a paragraph in Section 7, Cost Feasible Plan, clarifying the TPO's support for activities necessary for preservation of the existing transportation system, including roadway resurfacing and restriping, bridge rehabilitation and maintenance, landscape maintenance, drainage maintenance, lighting improvements, and signal retiming.
5/12/16	Modification	n/a	Added section 8.4, Public Outreach/Environmental Review, documenting the TPO's efforts to engage the environmental interest groups in the development of the LRTP. (Addressing Corrective Action #1, Linking Planning and NEPA – Environmental Mitigation, of the 2015 FHWA/FTA TMA Certification Review Report, November 2015.)
5/12/16	Modification	n/a	Added a paragraph in Section 7, Cost Feasible Plan, providing evidence of fiscal constraint. (Addressing Corrective Action # 2– Long Range Transportation Plan – Financial Plan/Fiscal Constraint, of the 2015 FHWA/FTA TMA Certification Review Report, November 2015.)
5/31/18	Modification	n/a	Replaced tables 28 & 29 with updated tables that include clarifying footnotes identifying TIP projects as the first three years of the CFP and where those specific projects are included in the LRTP (Appendix M); replaced the E+C table in Appendix M with a table and the addition of footnotes; and modification made to the text in Chapter 7 to add language explaining the role of the TIP in providing the basis for the first several years of the LRTP Planning horizon
1/23/19	Amendment	2019-01	Revises Tables 28 & 32 to move two project 1) the I-95/LPGA Blvd Interchange Modifications and 2) the I-95/Pioneer Trail New Interchange from the Unfunded Needs List (Table 32) to the SIS Cost-Feasible Projects List (Table 28); and incorporates Fast Act Requirements into the LRTP (Appendix N)

RIVER TO SEA TPO
Transportation Planning Organization
VISION - PLAN - IMPLEMENT

2040 Long Range Transportation Plan

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