



metroplan orlando  
A REGIONAL TRANSPORTATION PARTNERSHIP

## 2040 Long Range Transportation Plan

# Plan Overview

Final Adopted Plan

January 2016



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# Chapter 1: Introduction

## Organization and Structure

MetroPlan Orlando, the metropolitan planning organization for Central Florida, recently updated the region's Long Range Transportation Plan (LRTP) to the year 2040. The update was conducted in accordance with federal requirements identified in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (i.e. SAFETEA-LU, 23 USC 134), Moving Ahead for Progress in the 21st Century (i.e. MAP-21, 23 USC 134), Florida Statute 339.175(7), and was also developed in cooperation with the Florida Department of Transportation - District 5.

The 2040 Long Range Transportation Plan includes Orange, Osceola, and Seminole counties, along with 23 municipalities, offering a regional approach to future transportation challenges and opportunities.

Following its creation in 1977, MetroPlan Orlando quickly grew into a strong regional enterprise. As the first multi-county metropolitan planning organization in Florida, MetroPlan Orlando provides a forum for local elected officials and transportation experts to work together on regional transportation issues.

As charged by federal law, the MetroPlan Orlando Board formulates a transportation plan every five years, forecasting a 20-year period at minimum. The 25-member board, which includes 20 voting members and five non-voting advisors, is made up of elected officials from three counties and the largest cities in the region, transportation operating agencies, representatives from each advisory committee, and the Florida Department of Transportation. The board gives explicit consideration to advisory committee and public input before adopting any transportation plan.



## MetroPlan Orlando Board

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\* denotes non-voting advisor

## MetroPlan Orlando Advisory Committees

Several advisory committees provide valuable input to the MetroPlan Orlando Board, ensuring diverse points of view are included in the transportation planning process.



### Technical Advisory Committee (TAC)

The Technical Advisory Committee includes technical staff, primarily engineers and planners, from local governments and transportation agencies. The committee evaluates the technical accuracy and viability of proposed plans and provides expert advice to the board.

### Community Advisory Committee (CAC)

While the needs of Central Florida citizens are represented by the local elected officials on the board, an added level of public input is provided by the Community Advisory Committee. The CAC – a group of citizen volunteers – reviews plans and policies from a community perspective.

### Municipal Advisory Committee (MAC)

The Municipal Advisory Committee is composed of elected officials from municipalities that do not have direct voting membership on the board. The MAC ensures that all communities in the region, regardless of size, have a role in the planning process.

### Bicycle & Pedestrian Advisory Committee (BPAC)

The Bicycle and Pedestrian Advisory Committee promotes bicycle and pedestrian projects in the overall transportation system. BPAC members serve as advocates for bicycle and pedestrian issues throughout the region.

### Transportation Systems Management & Operations Advisory Committee (TSMO)

The Transportation Systems Management & Operations Advisory Committee works to improve safety and explores how technology can make the most of the existing transportation system. Members include transportation planning and traffic engineering staff.

### Transportation Disadvantaged Local Coordinating Board (TDLCB)

The Transportation Disadvantaged Local Coordinating Board, an independent board affiliated with MetroPlan Orlando, evaluates paratransit service for people with disabilities and disadvantaged citizens.

The MetroPlan Orlando Board receives input from several other groups, including project steering committees, Community Traffic Safety Teams, and the Freight Advisory Council.

Beyond the internal committees and subcommittees, however, MetroPlan Orlando also partners with the region’s transportation authorities to ensure close coordination of planning efforts. Among these are the Central Florida Regional Transportation Authority, more commonly known as LYNX; the Florida Department of Transportation (FDOT), the Central Florida Expressway Authority (CFX), Osceola County Expressway Authority (OCX), the Greater Orlando Aviation Authority, Kissimmee Gateway Airport, and the Sanford Airport Authority. The plans and programs of each of these agencies played an important role in the development of MetroPlan Orlando’s 2040 Long Range Transportation Plan.

As an example, the Osceola County Expressway Authority completed its 2040 Expressway Master Plan during the development of the MetroPlan Orlando Long Range Plan. The master plan identified the authority’s policies and direction, tolling and revenue, and capital projects through the year 2040 and beyond. This master plan was incorporated into MetroPlan Orlando’s 2040 Long Range Transportation Plan by reference, with the expressway authority’s financially feasible projects being included in MetroPlan Orlando’s transportation networks.

A comprehensive Public Involvement Plan for the 2040 Long Range Transportation Plan guided the organization’s extensive public outreach and involvement. This ensured that citizens, affected public agencies, representatives of public transportation employees and other interested parties had a reasonable opportunity to comment on the transportation plan. Per federal law, additional groups provided a chance to comment were: freight shippers, environmental groups, providers of freight transportation services, private transportation providers, representatives of public transportation users, representatives of pedestrian walkway and bicycle transportation facility users, and representatives of the disabled.

### Vision and Mission

As an element of MetroPlan Orlando’s Strategic Business Plan, the board adopted a vision and mission to support the 2040 Long Range Transportation Plan. This process involved input from the MetroPlan Orlando advisory committees and concluded with ambitious vision and mission statements for Central Florida’s future transportation system.

#### **Vision**

A regional transportation system that safely and efficiently moves people and goods through a variety of options that support the region’s vitality

#### **Mission**

To provide leadership in transportation planning by engaging the public and fostering effective partnerships

## The Road to Plan Adoption

After a three-year planning process, the 2040 Long Range Transportation Plan was adopted by the MetroPlan Orlando Board. Project milestones are listed below.

**FIGURE 1: 2040 LONG RANGE TRANSPORTATION PLAN MILESTONES**





## Process

The federally-required process for development of a Long Range Transportation Plan includes three phases:

- 1) developing technical models to project future travel demand,
- 2) identifying transportation needs and funding options, and
- 3) prioritizing transportation needs with anticipated funding to create a cost feasible plan.



### **Model Development**

Work began immediately after the 2012 board workshop to develop technical models forecasting travel demand for the year 2040. Better understanding Central Florida's future through data-driven transportation forecasting and population projections supported the importance of a new planning approach for the 2040 Plan.

### **Needs Assessment**

The technical team and MetroPlan Orlando staff developed a needs assessment for the three-county area. This analysis used a variety of factors to produce a list of transportation needs supporting adequate mobility and accessibility by identifying network deficiencies and future transportation demand. The needs assessment also considered projects in the organization's five-year Transportation Improvement Program, plus committed projects through the year 2040. This process is coordinated with state and local government partners.

### **Cost Feasible Plan**

Projects included in the 2040 Long Range Transportation Plan must be cost feasible. Declining transportation revenues, increases in construction and right-of-way costs, and limited land for highway expansion continue to widen the gap between transportation needs and available resources.

With an understanding of the transportation financial environment, MetroPlan Orlando coordinated with local government partners to develop an effective and actionable funding approach. For an overview of financial considerations in the 2040 Plan, refer to **Chapter 5: Funding the Plan**.

For more information about modeling efforts, needs assessment and the cost feasible plan, see **Chapter 4: Plan Development and Cost Feasible Projects**.

## Goals, Objectives, and Performance Measures

Consistent with the regional transportation vision, seven overarching goals were established for the 2040 Long Range Transportation Plan. Each includes an associated listing of the evaluation criteria and performance measures to quantify these goals. With incorporation into the travel demand model's transportation networks, a quantifiable objective-driven systems analysis was performed.

### Goal 1: Safety

- a) *Public Safety* - Consider public safety in the development and preservation of the transportation system, including consideration for emergencies and natural disasters.
- b) *Safety Enhancements* - Identify and implement safety enhancements to improve security and reduce the rates of crashes, injuries, and fatalities.
- c) *System Preservation* - Provide appropriate monitoring and maintenance to preserve and enhance system safety and security.

| Evaluation Criteria | Performance Measure                                 |
|---------------------|---|
| Evacuation capacity | Lane miles of evacuation routes per thousand people |
| System safety       | Crash rates (per million vehicle miles traveled)    |

### Goal 2: Balanced Multi-Modal System

- a) *Mobility* - Provide mobility to all citizens, with special consideration for people who are not able to drive an automobile.
- b) *Balanced System* - Provide a balanced system with viable modal options that increase vehicle occupancy, minimize per capita vehicle miles traveled by auto, and promote travel by non-auto modes.
- c) *Local and Regional Transit Service* - Provide effective local and regional transit options (rail and bus) that are safe and convenient.
- d) *Premium Transit Service* - Focus premium transit (rail and bus) to provide travel times comparable to, or shorter than, the automobile for travel to and between designated activity centers.
- e) *Intercity Rail* - Establish the Orlando Urban Area as a major hub for the statewide intercity rail system by providing strong multimodal connections to the region.
- f) *Bicycle System* - Provide an integrated bicycle system that connects major generators and attractors and promotes intermodal travel opportunities.

- g) *Pedestrian System* - Provide a pedestrian system that connects to an intermodal transportation system to support neighborhood and community livability and vitality.

| Evaluation Criteria               | Performance Measure                          |
|-----------------------------------|--|
| Miles of highway facilities       | Lane miles                                   |
|                                   | Lane-miles per thousand people               |
| Vehicle miles traveled per capita | Vehicle miles traveled (VMT) per capita      |
| Vehicle hours traveled per capita | Vehicle hours traveled (VHT) per capita      |
| Miles of transit service          | Transit service miles                        |
|                                   | Transit service miles per thousand people    |
| Transit hours of service          | Revenue hours of service per thousand people |

**Goal 3: Integrated Regional System**

- a) *Integrated Transportation System* - Plan a network of integrated transportation systems to safely and efficiently move people and goods by auto, truck, aviation, rail, bus, bicycle, and pedestrian modes.
- b) *Intermodal System* - Provide effective connections between intermodal stations and terminals.
- c) *Freight & Goods Movement* - Enhance appropriate facilities to support efficient freight and goods movement.
- d) *International Airports* - Provide high-quality transportation service to and between international airports and major economic centers.
- e) *Reliever Airports* - Provide transportation facilities that enable reliever airports to attract growth in passengers, freight, goods, and services that relieve air traffic at the international airports.

| Evaluation Criteria   | Performance Measure  |
|---|--|
| System resources designated for freight, goods, and services movement | Designated system lane miles/total system lane miles                             |
| Transit system access   | Percent of population within ¼ mile of transit service                           |
| Transit access to employment  | Percent of employment within ¼ mile of transit service                           |
| Access to intermodal stations   | Percent of population within five minute commute of intermodal stations          |
| Access to activity centers  | Percent of population within 10-minute travel time of activity centers           |
| Access to international airports                                      | Percent of total employment within 30-minute commute from international airports |

#### Goal 4: Quality of Life

- a) *Intergovernmental Coordination* - Provide a coordinated and balanced regional perspective on transportation, land use, and system investment.
- b) *Comprehensive Planning* - Provide a balanced, compatible, and efficient land use/ transportation system.
- c) *Land Use Efficiency* - Promote the efficiency of land uses to maximize the effectiveness of the transportation system.
- d) *Quality of Life* - Implement a transportation system that supports the adopted regional growth vision and includes context-sensitive, pedestrian scale, and community enhancing design features.
- e) *Regional Activity Centers* - Support designated regional activity centers with high-quality transportation facilities and services.
- f) *Environmental Justice* - Identify the needs of low-income and minority populations, involve these populations in the planning process, and seek to equitably distribute the benefits and burdens of transportation investments among all populations.
- g) *Citizen Involvement* - Provide a planning process that actively engages the public, incorporates citizen input, and garners support for plan implementation. (Note: A separate set of comprehensive goals, objectives and performance measures were developed for the public involvement program. See **Chapter Two: Public Involvement** for more details.)

| Evaluation Criteria                        | Performance Measure                        |
|--|--|
| Jobs-housing balance                       | Seminole (job/house ratio)                 |
|  | Orange (job/house ratio)                   |
|  | Osceola (job/house ratio)                  |
| Average speed during congested times (MPH) | Freeway congested speed                    |
|  | Arterial congested speed                   |
|  | Other roadways congested speed             |
|  | All roadways congested speed (MPH)         |
| Level of delay                             | Total daily hours of delay (vehicle hours) |
|  | Daily delay per capita (min/day)           |
|  | Daily cost of delay per capita (\$/day)    |

### Goal 5: Efficient and Cost Effective

- a) *Cost-Effective* - Provide a cost-effective system to meet the mobility needs of people, freight, services, and goods.
- b) *Mobility Enhancements* - Promote investment in the transportation system that increases the use of transit, bicycle, and pedestrian modes and reduces dependency on single occupant auto travel.
- c) *Intelligent Transportation System* - Apply efficient and cost-effective technology to develop and enhance the regional transportation system.
- d) *System Function and Performance* - Designate, manage, and preserve system function to promote efficiency and cost-effectiveness consistent with adopted standards.
- e) *Investment Coordination* - Coordinate local, regional, state, federal and private transportation investments to maximize opportunities and benefits of joint study, design, and construction of projects that are contained in the region’s Long Range Transportation Plan.

| Evaluation Criteria              | Performance Measure  |
|----------------------------------|--|
| Cost effectiveness               | Annual cost of congestion in billions of dollars (user costs only) |
| Efficiency                       | Seminole (miles of roadways below standard)                        |
|                                  | Orange (miles of roadways below standard)                          |
|                                  | Osceola (miles of roadways below standard)                         |
| Transit passenger miles          | Total transit passenger miles per capita                           |
| Percent single occupancy vehicle | Percent of person trips by single occupancy vehicle                |
| System daily VMT                 | Average VMT per dwelling   |

### Goal 6: Energy and Environmental Stewardship

- a) *Climate Change* - Reduce transportation-related greenhouse gas emissions consistent with state and regional policy goals.
- b) *Air Quality* - Develop strategies and evaluate systems that minimize adverse impacts to air quality.
- c) *Natural System* - Minimize impacts to the natural system, endangered species and habitats in development and maintenance of the transportation system.
- d) *Alternative Fuels* - Promote the use of new technology and alternative fuels to minimize transportation impacts on the environment.

- e) *Open Space* - Develop a Long Range Transportation Plan that implements transportation investments and minimizes the loss of open space.

| Evaluation Criteria | Performance Measure                       |
|---------------------|---|
| Air pollutants      | Total carbon monoxide (CO) emissions (kg) |
|                     | Total hydrocarbon (HC) emissions (kg)     |
|                     | Total nitrogen oxide (NO) emissions (kg)  |
| Fuel use            | Daily gallons of fuel per capita          |
|                     | Percentage increase from base (2009)      |

**Goal 7: Economic Vitality**

- a) *Economic Growth* - Identify and promote transportation projects that expand and enhance economic vitality.
- b) *Funding* - Prepare financially feasible and implementable plans that demonstrate sound fiscal policy.
- c) *Economic Centers* - Promote high quality access to and mobility within designated major economic centers.

| Evaluation Criteria | Performance Measure  |
|---------------------|--|
| Jobs created        | Jobs created as a result of transportation investment  |
| Economic benefit    | Economic activity generated as a result of transportation funding investment (billions of dollars) |
| Cost feasible       | Plan is financially feasible   |

**Approach**

The concept of working beyond traditional local government comprehensive plans is not new to MetroPlan Orlando. During development of the 2025 and 2030 Long Range Transportation Plans, the organization commissioned research on an experimental land use concept, which focused on four areas: increased internal trip capture, multimodal travel, reverse commuting, and community-oriented design. Applying the experimental land use concept to the traffic model showed improvement in each of the 22 above listed performance measures. As a follow-up to this effort, and in response to the outcomes of *How Shall We Grow?* and the 2030 Plan, the MetroPlan Orlando Board focused its planning efforts around one adopted land use/socioeconomic scenario for the 2040 Plan - the sustainable approach.

The traditional land use approach in a long range plan involves determining future population and employment increases to project road and transit needs for a 20-year horizon. A land use dataset identifying the location of employees and residents in the target year is based on a forecast of existing trends and local government comprehensive plans. This is known as a constrained trend study.

For the 2040 Plan, MetroPlan Orlando developed the Sustainable Land Use Forecast focusing on smart growth principles. The goal of this approach was to formulate a realistic land use forecast to generate less time spent in vehicles, reduced suburban sprawl, and advantageous use of commuter rail.

The Sustainable Land Use Forecast envisions a future land use scenario with jobs and housing closer together to make the most of multimodal transportation options, including transit, walking and cycling. The alternative also incorporates land use techniques such as increasing densities to improve efficiency of new and existing roads. The approach sought to arrange land uses to improve the efficiency of the transportation network and mobility options for the public.

Subsequent data and analysis of the Sustainable Land Use approach show significant improvements, including fewer vehicle miles traveled, fewer vehicle hours traveled and significant air quality benefits. This approach also supports a stronger commitment to transit by concentrating growth along key corridors. Recent research shows public support for a wider variety of transportation choices in the region. A study conducted by MetroPlan Orlando and the University of Central Florida found 61.5% of respondents agreed that investing in public transportation is the only realistic solution to transportation and congestion issues in the region.

When the MetroPlan Orlando Board adopted the 2040 Long Range Transportation Plan, it acknowledged land use as an essential element of the plan. As a result, the plan provides significant future transit projects, including an expanded bus system, bus rapid transit, and passenger rail. Additional elements, including a congestion management process, freight movement strategies, and bicycle and pedestrian components, are included to further support a balanced system.

For additional information about various elements of the plan, see these chapters:

- **Chapter 3: Sustainable Land Use**
- **Chapter 6: Congestion Management Process**
- **Chapter 7: Transit Element**
- **Chapter 8: Active Transportation - Bicycle & Pedestrian**
- **Chapter 9: Freight Mobility**
- **Chapter 10: Safety Focus**

## Chapter 2: Public Involvement

The community involvement process for the 2040 Long Range Transportation Plan was guided by a **Public Involvement Plan**, adopted by the MetroPlan Orlando Board in January 2013. Before approving the plan, the board saw a presentation on the philosophy behind the plan and considered input from advisory committees and members of the public. As required by federal law, the plan was available for a 45-day review and comment period before it was approved.

The Public Involvement Plan included targeted objectives, a variety of strategies and associated performance measures to ensure effectiveness.

The original outreach schedule in the Public Involvement Plan called for efforts to end in August 2013 with a public hearing. However, the community outreach schedule was extended to better align with technical work on the plan, allowing more time to gather public input and engage the community in creating the 2040 Plan. This resulted in the best use of resources while meeting the public's needs.



### Objectives

These **objectives** were established for outreach efforts in the Public Involvement Plan. Each objective included a description of how performance would be measured:

1. Sustain a vigorous outreach effort, and show participants how to become involved.
2. Make a special effort to reach out to traditionally underserved populations, including young people.
3. Update decision-makers on the board and committees regularly about public involvement activities.
4. Get media coverage for the 2040 Long Range Transportation Plan and projects.
5. Communicate MetroPlan Orlando's messages in an easy-to-understand and visually appealing way.





6. Maintain a high profile for 2040 Plan information on MetroPlanOrlando.com, and attract visitors to the website.
7. Provide a robust presence for the 2040 Plan through MetroPlan Orlando's social media channels, increasing community engagement on Twitter, Facebook and YouTube.
8. Use a new type of electronic outreach to present an interactive town hall event that attracts participants from across the region.
9. Get citizen input through video interviews that represent residents from all three counties.
10. Get significant citizen participation at a public hearing before 2040 Plan adoption.

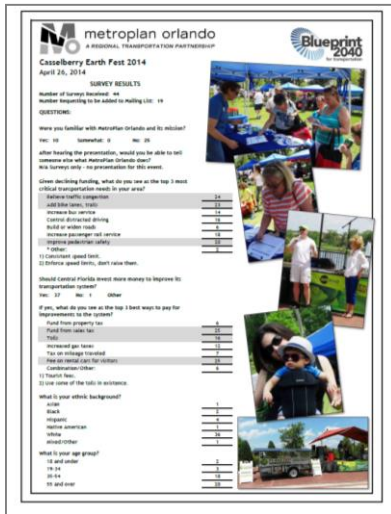


## Results

Measurement and analysis of outreach efforts yielded this summary of how MetroPlan Orlando met the objectives set forth in the Public Involvement Plan.

1. Staff reached 2,406 Central Floridians at 48 events during the intensive outreach period from January 2013-April 2014, averaging three per month and **meeting the goal**. In surveys distributed after presentations, 93.8% of attendees rated the presentations good or excellent. **This exceeded the goal**. Also, 712 citizens joined the organization's electronic mailing list -- indicating they want to stay involved in the transportation planning process.
2. Of the 48 outreach events MetroPlan Orlando participated in, 42% (20 events) were with groups that represented underserved populations. **This exceeded the objective**. One part of the effort, a Transportation Superhero contest, targeted elementary and middle school students and concentrated on low-income communities. This effort yielded more than 100 creative entries, resulting in **significant engagement with this segment** of the region's residents - our future leaders.





3. Written event reports were provided to decision-makers monthly throughout the public involvement period (see example at left). Staff made eight community outreach presentations to MetroPlan Orlando’s Board and committees over a 19-month period, which equated to roughly one presentation each quarter, **meeting the objective.**

4. More than 30 stories ran in local news outlets about MetroPlan Orlando’s long range planning process or about projects in the 2040 Plan. These stories reached approximately 2 million people, **surpassing the objective.**

5. Surveys distributed after presentations showed 84.9% of participants found the presentation and materials visually appealing, and 91.1% thought the presentation was easy to understand. This indicated the **objective was met.**

6. Visits to the MetroPlanOrlando.com website totaled more than 1,600 per month, which was **greater than the stated objective.**

7. At the end of June 2014, MetroPlan Orlando had 1,718 followers on Twitter, and achieved 1,207 interactions between January 2013 and June 2014. This far **exceeded the Twitter portion of the objective.** The organization had 550 likes on Facebook at the end of June and achieved 2,561 Facebook interactions - **exceeding the Facebook objective.** There were 10 videos up on YouTube at the end of June, with 448 views. This fell short of the upload portion of the objective, but came close to reaching the targeted number of views.

8. The interactive town hall on April 1, 2014 - MetroPlan LIVE! - drew participants from throughout the region by telephone and webcast. More than 400 people were involved at the program’s peak, with an average audience of 75 throughout the event. This new outreach method successfully engaged the community, with 59 questions and comments submitted during the hour-long event, **meeting the objective.**



9. By the end of the outreach period, 40 residents from across the three-county area had been interviewed on video. This fell short of the goal, although it garnered some valuable citizen input.

10. The public hearing for the 2040 Long Range Transportation Plan was held June 4, 2014. A total of 76 people signed in, and staff estimated an attendance of nearly 100 people. Nine spoken comments were made during the public hearing, and 11 residents submitted written comments at the event. Additionally, several comments were received via email and at an information table set up at LYNX Central Station. **This exceeded the goal.**



## Conclusions

MetroPlan Orlando staff analyzed input received throughout the public involvement process and kept track of residents' feedback, regularly relaying the input to the board, committees and to staff working on the technical portions of the 2040 Plan.

Several themes emerged from the public input. Central Floridians are clearly frustrated by traffic congestion and think it has a negative effect on the region. The community wants more transportation options and recognizes the importance of connectivity between modes. Many also wanted to see safety improved. The majority of citizens who filled out surveys (87%) said the region should invest more in transportation. However, there are a wide variety of opinions on specific funding sources and there remains a need to continue informing the public on how transportation is funded.

In 2013, MetroPlan Orlando conducted market research in partnership with the University of Central Florida to measure opinions on transportation issues through a phone survey. The same themes from outreach efforts were found in this research, providing confidence there was a good understanding of public wants and needs for a long-term transportation vision.

The community engagement process for the re-adoption of the 2040 Plan was also guided by a Public Involvement Plan, which was adopted by the MetroPlan Orlando Board on September 9, 2015 after considering input from advisory committees and members of the public. The plan met all public involvement requirements in federal law and was available for a minimum 45-day review and comment period. Because an extensive outreach process was used in the creation of the original 2040 Long Range Transportation Plan and the updates during the re-adoption process were administrative in nature, the Public Involvement Plan for the re-adoption was scaled down.



### Want to Learn More?

For more details on public involvement for the 2040 Plan, see the **Public Involvement Report**. A discussion of public involvement for re-adoption of the plan is found in Appendix B.

## Chapter 3: Sustainable Land Use

For the 2040 Long Range Transportation Plan, the MetroPlan Orlando Board directed that a Sustainable Land Use Forecast be developed. The purpose of the land use forecast is to create data that serve as a base for traffic and transit forecasts in the Long Range Transportation Plan.

The 2040 Sustainable Land Use Forecast continues the principles and direction of the Alternative Land Use Forecast developed for the 2030 Long Range Transportation Plan, emphasizing multimodal transportation and smart growth land use principles, to explore ways land use can improve the efficiency of the transportation system. This process followed the convergence of several initiatives and resolutions in the region and at MetroPlan Orlando.

### 2025 Experimental Land Use Concept

In the 2025 Long Range Transportation Plan, MetroPlan Orlando developed what was referred to as the Experimental Land Use Concept as part of its research. The Experimental Land Use Concept identified four concepts that were tested: increased internal trip capture, multimodal travel, reverse commuting, and community-oriented design. When applied to the traffic model, this scenario showed improvement in all performance measures.

### 'How Shall We Grow?'

From 2006 to 2007, Central Florida residents, government officials, the business community, and independent sector participated in creating the Central Florida Regional Growth Vision known as “How Shall We Grow?” led by myregion.org. The project identified and illustrated ways the region could accommodate the 3.7 million new residents expected by 2050. The overwhelming conclusion of this study was that the trend, i.e. continuing current growth patterns, was not a preferred choice. In polling of more than 8,000 people, conducted during the televised portion of the project, fewer than 4% of respondents chose the trend as their preferred scenario. Scenarios that generated positive interest as ways of organizing land use patterns in the future were centers, corridors, and green areas. While they were mapped as distinct scenarios in the project, these three concepts can be considered mutually reinforcing. A combination of the scenarios was incorporated into the final report of “How Shall We Grow?” and was used in the 2030 Alternative Land Use Scenario.



### Want to Learn More?

For more detailed technical information on 2040 Plan land use planning and other topics covered in this chapter, refer to **Technical Report 1: Sustainable Land Use Forecast**.

## **2030 Long Range Transportation Plan**

With the MetroPlan Orlando Board’s direction to use the “How Shall We Grow?” study, the Alternative Land Use Forecast was developed for the 2030 Long Range Transportation Plan alongside a Trend Land Use Forecast. The two forecasts were modeled and compared on a variety of performance measures. The Alternative outperformed the Trend in every category: reduced congestion, improved air quality, reduced energy dependence, improved safety, improved accessibility, and improved operating efficiency.

## **2040 Land Use Goals and Approach**

The goal of the 2040 Sustainable Land Use Forecast is to formulate a realistic land use projection that will demonstrate: lower Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT), reduced suburban sprawl, and use of the regional investment in commuter rail to the best advantage. The forecast emphasizes compact development along corridors, infill and redevelopment, mixing land uses, improved jobs-to-housing balance within compact urban travel sheds, and configurations that support multimodal transportation.

The LRTP incorporates the principles of the “How Shall We Grow?” regional visioning project with its focus on centers, corridors, conservation, and countryside. The study emphasizes the transit and pedestrian-supportive environments and a mix of uses in new projects on key corridors as well as a jobs-to-housing balance.

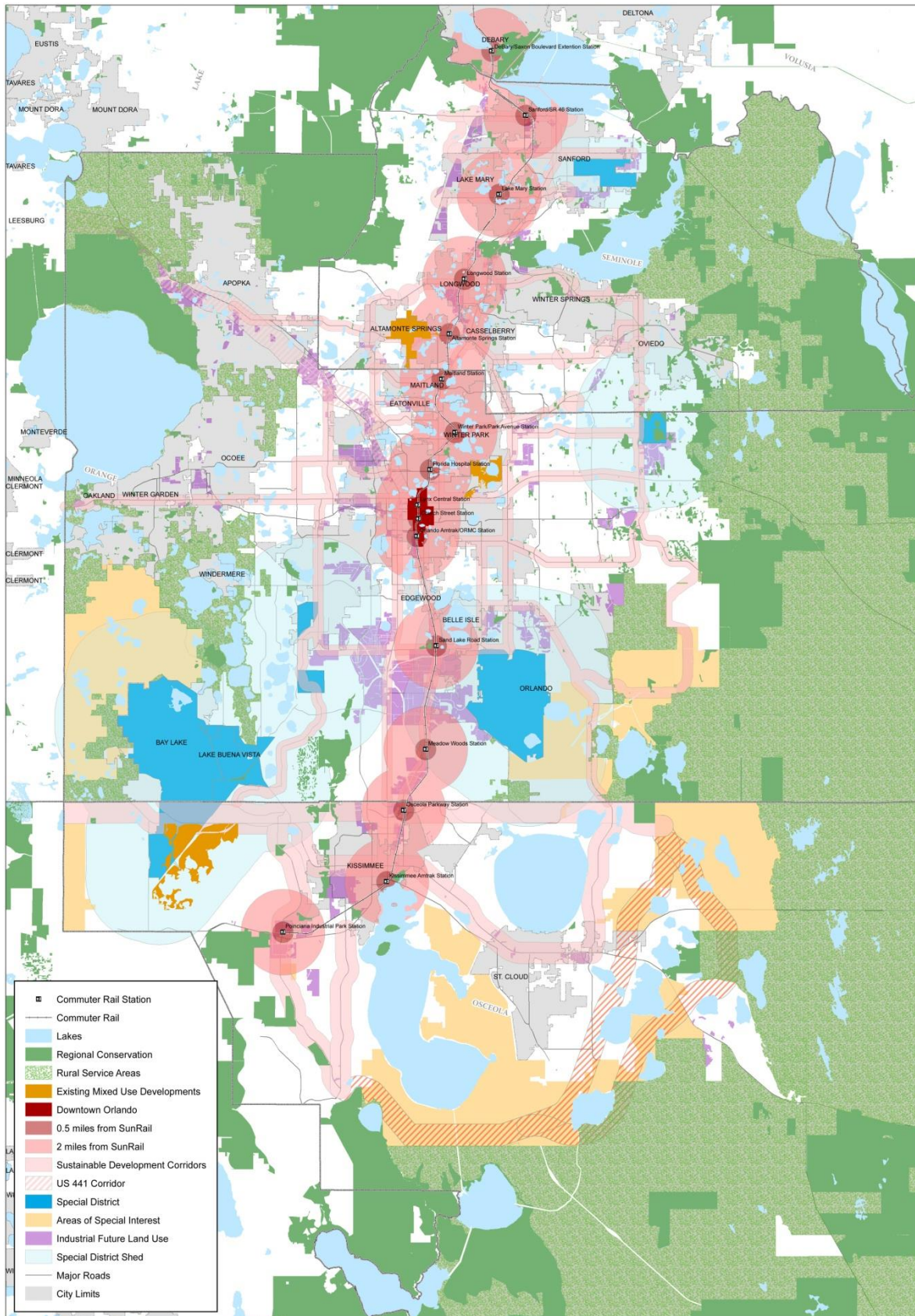
In this report, sustainable land use refers to the approach of MetroPlan Orlando and its member jurisdictions to implement the regional vision by identifying and encouraging best practices in smart growth, transit-oriented development, redevelopment, infill, walkable urban spaces, and mixed-use neighborhood development.

### **Characterization Framework**

As an initial step in production of the LRTP’s Sustainable Land Use, MetroPlan Orlando began with the development of the 2040 Characterization Framework. One purpose of the Characterization Framework is to show efforts to pursue sustainable land use by member jurisdictions visually. Another is to help develop the land use data forecast by gathering information from member jurisdictions indicating where different land use approaches are appropriate. Regionally significant areas are noted that may be appropriate for a sustainable land use approach or that are already planned for sustainable land use by local jurisdictions. Figure 2 illustrates the detailed 2040 Characterization Framework.

Neither the Characterization Framework nor the Sustainable Land Use Forecast has any regulatory authority. The Characterization Framework communicates the methodology used in producing the data, as well as similar approaches by different jurisdictions. To be used for land use forecasting, the characterization must be overlaid on a developable land analysis, identifying areas that are vacant or likely to redevelop. In general, redevelopment is focused on low-density commercial properties.

**FIGURE 2: 2040 CHARACTERIZATION FRAMEWORK**



## **Density Survey**

A survey of Land Use Subcommittee members evaluated densities and intensities different jurisdictions use to permit sustainable land development. Also of interest, was whether the way densities are calculated results in significant variation between jurisdictions with the same nominal density limits. The purpose of this exercise was to inform the Land Use Forecast methodology, to benchmark progress in implementing "How Shall We Grow?" and to share best practices among jurisdictions.

As expected, the survey found significant variation among jurisdictions in how density and mixed-use density/intensity were calculated, as well as wide variation in what densities were considered to be smart growth. This makes one-to-one comparison practically impossible.

## **Land Use Forecasting**

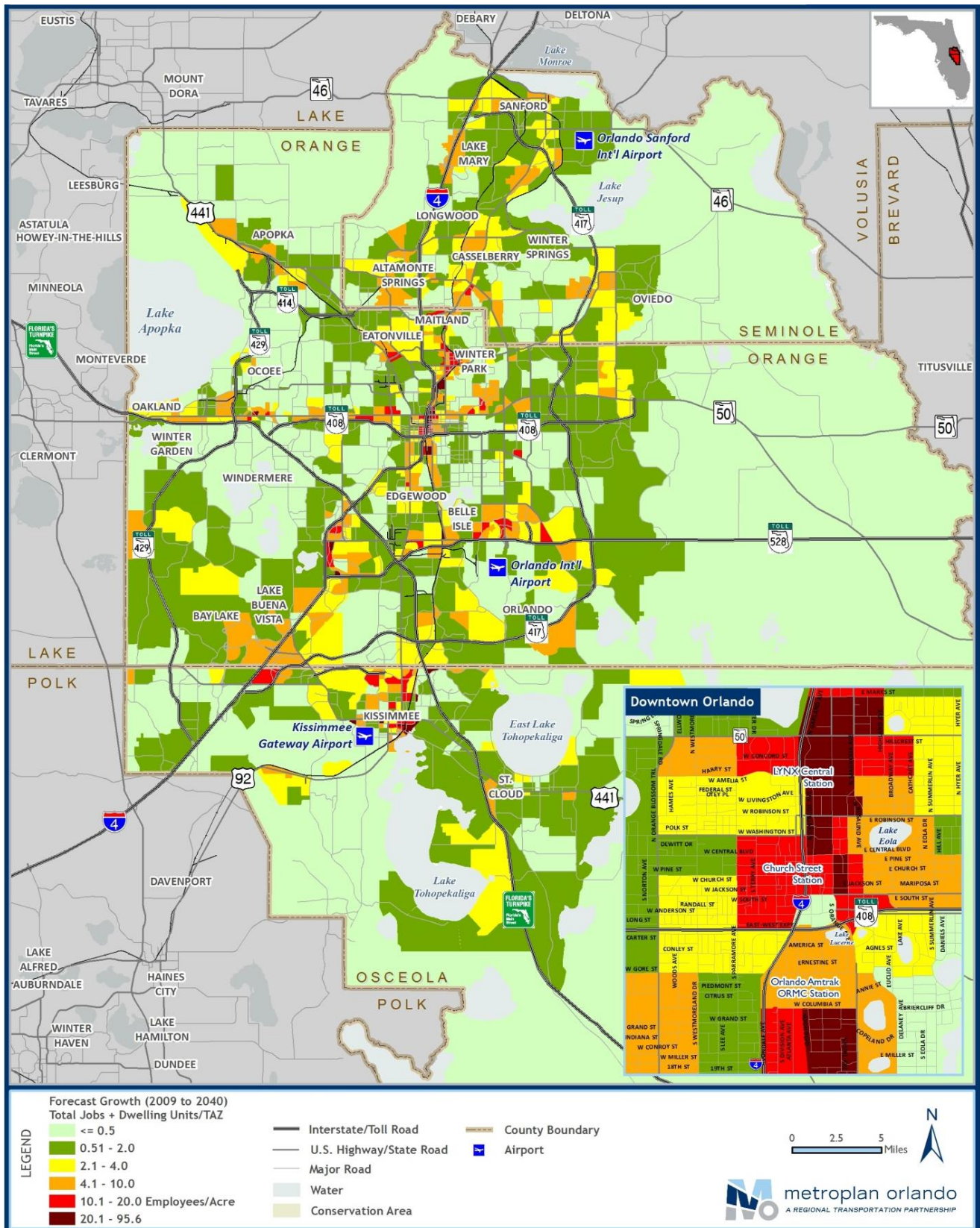
For the 2040 Long Range Transportation Plan, the forecast for each county was performed independently, then checked for quality and consistency. The land use forecast was performed in four phases: land inventory analysis, characterization, capacity assignment, and scaling.

## **Forecast Results and Conclusions**

The primary data visualizations are created using a combined measure of "units + jobs" to represent mixed-use density. Areas with the highest densities are also projected to be mixed-use areas. The mixed-use measure was the most useful method of representing the total built density and intensity of activity within a given Traffic Analysis Zone (TAZ). The focus of the majority of new development in identified corridors in Orange, Osceola, and Seminole counties is evident in the map depicting growth (Figure 3). As shown in the forecast maps, darker TAZs indicate a higher concentration of mixed-use development. There is also some focus on development around job centers.

These results reflect the goals of sustainable land use and policy direction of the MetroPlan Orlando Board and member jurisdictions in continuing the "How Shall We Grow?" regional vision to support mixed-use development and effective new transit investments, including SunRail.

FIGURE 3: 2040 FORECAST GROWTH IN UNITS AND JOBS





## Chapter 4: Plan Development & Cost Feasible Projects

This chapter shows how the adopted 2040 Long Range Transportation Plan for MetroPlan Orlando was developed, including: an overview of the travel demand forecasting model, the analyses that developed a Needs Plan, and final process to determine a Cost Feasible Plan based on projected revenues.

A technical analysis followed to determine if implementing the key transportation projects would meet the region’s vision and to quantify the benefits of different mobility strategies throughout the region. A projection of financial resources determined the region’s ability to fund the most critical transportation needs. Strategies were developed to bridge the gap between projected revenue and anticipated costs.

### Forecasting Travel Demand: Model Development

The first step in development of the 2040 Long Range Transportation Plan, was an update and enhancement of the Orlando Urban Area Transportation Study travel demand forecasting model. The previous base year (2004) model validation for the 2030 Long Range Transportation Plan served as the starting point for the year 2009 base year model validation effort.

The Orlando Urban Area Transportation Study year 2009 model includes the Orange, Osceola and Seminole counties as well as a western portion of the Volusia County network, the Lake County network, and a northeastern portion of the Polk County network.

The 2009 model is based on the Florida Standard Urban Transportation Model Structure (FSUTMS) procedures using the CUBE/Voyager software (licensed by Citilabs) that the State of Florida has adopted as the travel demand models “engine” across the state. Both highway and transit networks were coordinated with Geographic Information System (GIS) data using the CUBE/Voyager software.



### Want to Learn More?

For more detailed technical information on 2040 Long Range Transportation Plan, refer to:

- **Technical Report 1: Sustainable Land Use Forecast**
- **Technical Report 2: Financial Resources**
- **Technical Report 3: Plan Development & Project Lists**
- **Technical Report 4: Congestion Management Process**
- **Technical Report 5: Transit Element**
- **Technical Report 6: Bicycle and Pedestrian Plan**
- **Technical Report 7: Freight Mobility**
- **Technical Report 8: Model Validation and Application Guidelines**
- **Public Involvement Report**

The Orlando Urban Area Transportation Study model has evolved over the last 30 years to include trip purposes for special attractions (such as Walt Disney World, Universal Studios, Sea World, Orlando International Airport, the Orange County Convention Center, etc.). Additionally, for purposes of home-base/work trips, generating productions and attractions is based on three income level groups (low, medium, and high), determined by property values.

The FDOT standards for calibration of highway assignment were met within the model. All highway assignment and evaluation model components were deemed validated, calibrated and ready for use as a travel demand forecasting tool.

In addition to the highway evaluation, the transit system was evaluated to identify how the model projected ridership on the existing bus system when matched with the observed ridership data collected by LYNX. The results of the transit evaluation were extremely favorable. The total daily average transit ridership predicted by the Orlando Urban Area Transportation Study transit assignment model is within 2% ( $75,781/74,099 = 1.02$ ) of the observed ridership. Results are within the transit guideline of 3% for area-wide transit trips.

## 2040 Transportation System Needs Assessment

An assessment of the transportation system needs through the year 2040 followed, using the computerized travel demand forecasting model to identify system needs. These transportation system needs were compared to improvements currently committed for funding (through the year 2015) and the total transportation demand anticipated by the year 2040, using factors such as population and employment projections.

Forecasted deficiencies were then translated into transportation projects to meet the desired demand, regardless of funding availability or constraints (i.e. physical, environmental, political, etc.). To determine highway deficiencies through the year 2040, a hypothetical analysis was performed, reviewing 2040 roadway travel conditions under a scenario that only currently committed transportation projects through the year 2015 would be completed (committed system). This scenario was achieved by running the 2015 Existing-Plus-Committed (E+C) model network with the addition of 2040 socio-economic model data.

This analysis identified roadway deficiencies by comparing the travel demand volume to the roadway capacity, commonly referred to as the volume-to-capacity (V/C) ratio. Once calculated, the V/C ratios exceeding 1.1 were assumed to constitute a travel demand need, or deficiency.

Close coordination with staff from various operating agencies and strong public outreach ensured all highway and transit needs were included. The 2040 Needs Plan was presented to the MetroPlan Orlando Board and advisory committees, and refinements were based on input received during the process. The following summary includes an overview of these Needs Plan components: highway, transit, bicycle, and pedestrian.

## Highway System Component of Needs Plan

The highway component of the Needs Plan includes all roadway projects committed for construction in each county's five-year road program, the MetroPlan Orlando Transportation Improvement Program (TIP), and FDOT District 5's Work Program (i.e. the 2015 E+C network). Also, all the Strategic Intermodal System (SIS)/Florida Intrastate Highway System (FIHS) Long Range Capacity Plan cost feasible projects (Fiscal Years 2019-2040) prepared by the Florida Department of Transportation are represented. Toll road projects are also included in the Needs Plan, the result of coordination with Florida's Turnpike Enterprise, the Central Florida Expressway Authority (CFX), and the Osceola County Expressway Authority (OCX).

Of particular importance is the 27-mile Wekiva Parkway, the last segment of a beltway around the region that provides traffic relief to the heavily-congested Interstate-4. The project runs through environmentally sensitive areas in Orange, Lake, and Seminole counties.

Other factors considered during development of the highway component of the Needs Plan, included: constrained roadways that cannot be expanded, roadways within a Transportation Concurrence Exception Area (TCEA) and/or a Multimodal Transportation District (MMTD), and roadways that have not gone through (or have failed) the FDOT Efficient Transportation Decision Making (ETDM) process for state maintained facilities. Here is how roads were treated in the needs assessment process as the Highway Needs Plan was developed:

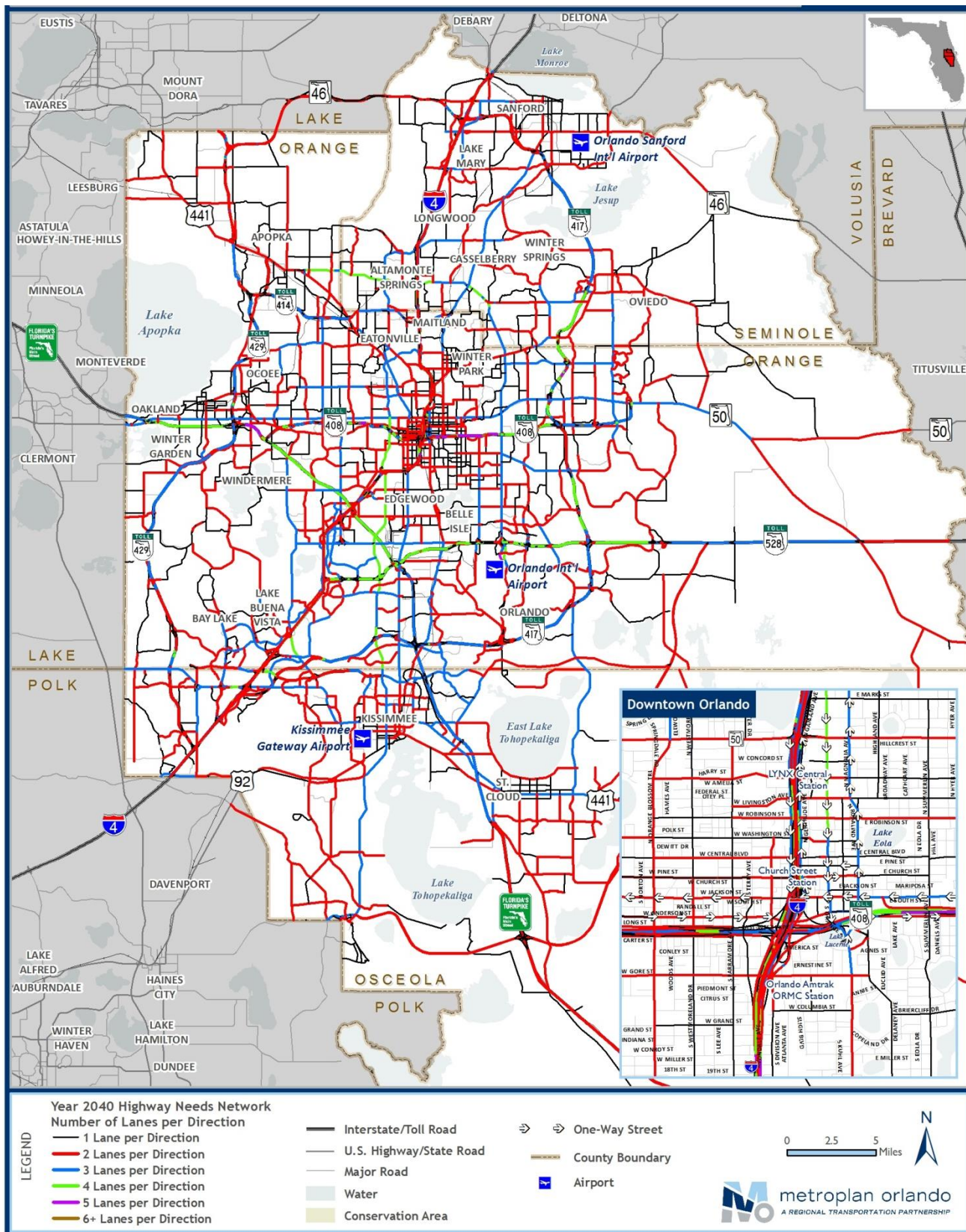
### *Constrained Roadway Facilities*

Roads deemed constrained due to public policy, environmental implications, and/or physical situations were identified by each county and major city. Some facilities, regardless of need, cannot be expanded beyond the number of lanes identified. Those constrained by public policy could be improved, with policy changes by the applicable local government or agency. If the current facility was below the constrained number of lanes, the roadway was included on the needs network (provided that a demonstrated need existed) up to the constrained number of lanes. Otherwise, the road was not included in the Needs Plan.

### *Environmental Mitigation and Efficient Transportation Decision Making*

The 2040 LRTP prioritizes energy and environmental stewardship as one of its primary goals. Several strategies are available to MetroPlan Orlando to mitigate the environmental impacts of transportation projects in the region - see technical report #3, section 3.2 for details. MetroPlan Orlando also utilizes Florida's Efficient Transportation Decision Making process during the LRTP planning process. The Environmental Screening Tool is used to ensure interaction between resource agencies and project planners. MetroPlan Orlando worked with FDOT District 5 to identify new state facilities that required screening through this ETDM tool. Following coordination with multiple agencies, input from the MetroPlan Orlando Board and committees, the highway Needs Plan network was finalized. The network is shown in Figure 4, with the number of lanes required by the year 2040 to meet anticipated traffic needs at an acceptable level of service.

Figure 4: 2040 HIGHWAY NEEDS (NUMBER OF LANES)



### **Transit System Component of Needs Plan**

The transit component of the 2040 Needs Plan is based on the region's 2040 Transit Blueprint, originally adopted as part of the 2030 Long Range Transportation Plan as the Transit Vision Concept Plan. MetroPlan Orlando updated the Transit Vision Concept Plan during the development of the 2040 Long Range Transportation Plan. **Chapter 6: Transit Element** includes an overview of the 2040 Transit Element, a brief background of the previous iteration from the 2030 Long Range Transportation Plan, details of the update and the updated Transit Blueprint.

### **Bicycle and Pedestrian Components**

Bicycle and pedestrian facilities like dedicated bicycle ways and sidewalks augment the range of transportation choices in the region. Additionally, the use of alternative transportation promotes social benefits, such as improved air quality, public health, and overall mobility. As the focus of the region's transportation planning shifts to a more multimodal approach, the need for facilities to enhance these options requires more emphasis. The purpose of the bicycle and pedestrian portion of the 2040 Long Range Transportation Plan is to develop a list of recommended bicycle projects, pedestrian projects, and trails through data collection, systems analysis, cost estimates, and public input.

## **2040 Cost Feasible Plan Development**

Recognizing that not all the described transportation needs can be funded with current revenue forecasts, a financially feasible plan was developed by considering available resources and funding strategies acceptable and actionable by MetroPlan Orlando's local government partners. **Chapter 5: Funding the Plan** provides an overview of the financial resources forecast for transportation projects through the year 2040. Revenue forecasts are provided for federal, state, and county resources for roadway and transit components.

### **Highway System Component of Cost Feasible Plan**

The starting point for the cost feasible highway network was the needs network. The highway component of the Cost Feasible Plan includes all road projects committed for construction within the Transportation Improvement Program and each county's Five Year Road Program, as previously described. All the Strategic Intermodal System (SIS)/Florida Intrastate Highway System (FIHS) Long Range Capacity Plan (Fiscal Years 2019-2040) projects prepared by the Florida Department of Transportation are also included. Federal, state, county, and local road projects were also defined for the Cost Feasible Plan, based on prioritization coordinated through local government staff from Orange, Osceola, and Seminole counties.

All project needs (after removal of those deemed constrained and/or projects in TCEA/MMTD areas) were then prioritized. Different methodologies were used by each county (i.e. based on total volumes, volume/capacity ratios, previously included in the 2030 plan, etc.) to complete the ranking. Projects were then separated into three categories based on the funding source eligibility: SIS projects, priority projects, and county projects. The SIS projects were based on the Cost Feasible Plan from FDOT. The MetroPlan Orlando priority projects

include those deemed affordable, based on the available revenues by plan year. Likewise, the county project list was pared down until anticipated revenues were exhausted.

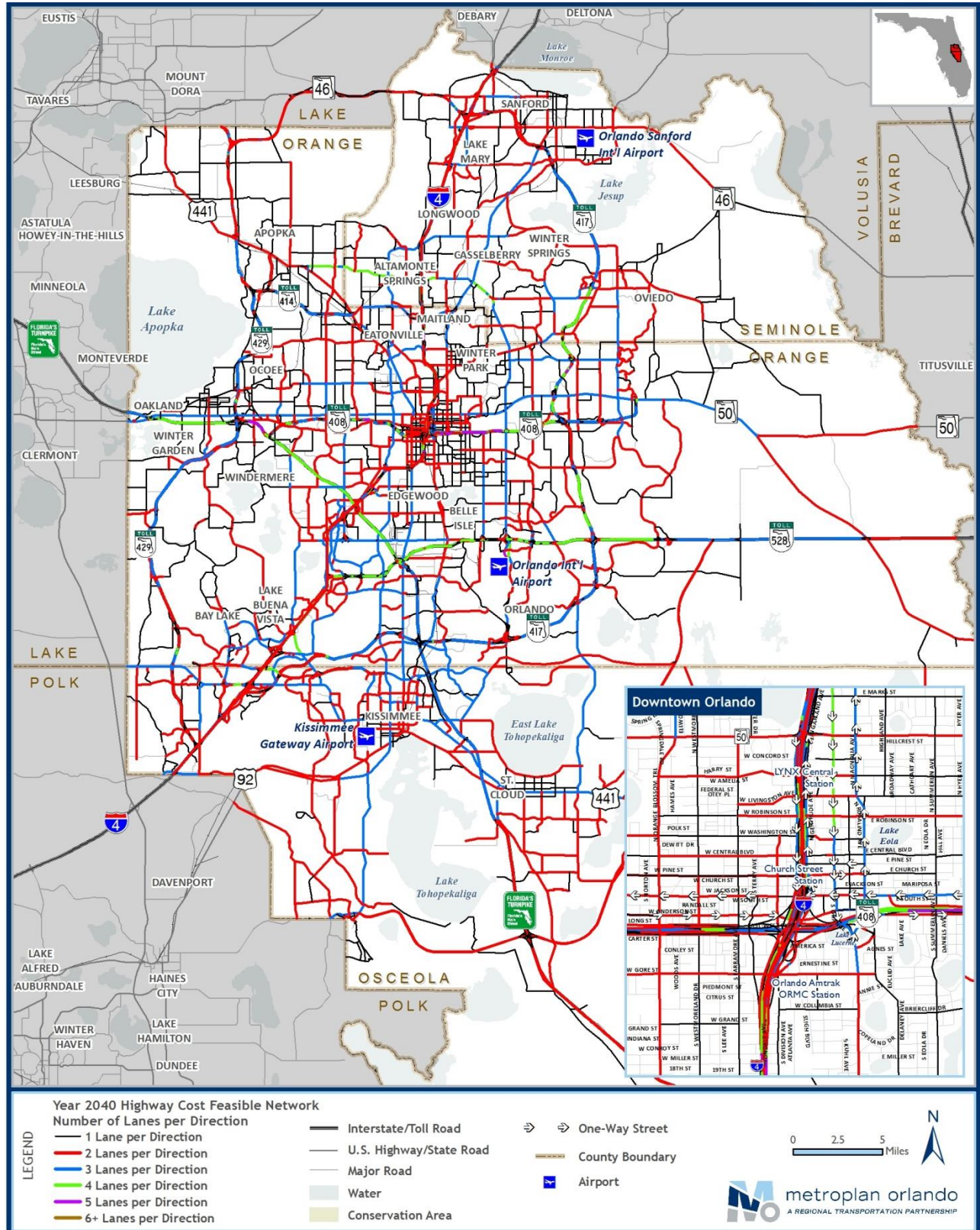
Based on projected funding, Orange County was able to fund 37 of its 155 county project needs. Osceola County was able to fund all 116 county project needs, plus 15 federal/state projects. Seminole County was able to include 22 of its 23 highway project needs. Figure 5 provides the highway system component of the 2040 Cost Feasible Plan.

### **Transit System Component of Cost Feasible Plan**

It should be noted that the transit revenue presented in Chapter 5 depends on existing transit funding commitments to LYNX. Actual transit revenue varies, according to the transit service provided, including such things as farebox recovery and federal/state funding match. As part of its services, LYNX also coordinates ACCESS LYNX, a shared ride, door-to-door paratransit service using special vehicles.

The Transit Cost Feasible Plan, discussed in **Chapter 6: Transit Element**, was developed somewhat differently than the highway plan. Transit projects were added to the committed system until projected revenues were exhausted, while adhering to the Transit Blueprint.

Figure 5: COST FEASIBLE ROADWAY NETWORK (NUMBER OF LANES)



## Supplemental and Supporting Programs

Several supporting programs are maintained and updated by MetroPlan Orlando, FDOT, and/or member agencies that feed into the Long Range Transportation Plan process, including:

- **Congestion Management Process** - Outlined in **Chapter 8** of this overview
- **Freight, Goods, and Intensive Land Uses** - Outlined in **Chapter 9** of this overview
- **Hurricane Evacuation Routes** - Hurricanes can create serious impacts to the MetroPlan Orlando region. It is critical to plan scenarios and associated evacuation clearance times. Designated hurricane evacuation routes are key to preparedness. Local emergency management agencies regularly update hurricane evacuation plans.

Hurricane evacuation analysis is critical when considering the movement of traffic during a hurricane scenario and the safety of the evacuees. Orange, Osceola, and Seminole counties have several primary hurricane evacuation routes. For Orange County, SR 50, SR 528, and SR 520 represent the major east-west evacuation routes. All three facilities are four-lane divided roadways. In Osceola County, US 192, SR 60, and Florida's Turnpike represent the hurricane evacuation routes. Again, all three roads are four-lane. SR 46 in Seminole County is the connection into Volusia and Brevard counties. The 2040 Plan includes improvements on SR 46 from SR 415 to the Volusia County line, creating a four-lane roadway.

- **Intermodal Access Routes** - The Strategic Intermodal System (SIS) has been defined by the Florida Department of Transportation. The latest map prepared by FDOT has been consulted for identifying the intermodal access routes applicable to Orange, Osceola, and Seminole counties, in particular connections to the major airports in each county (e.g. Orlando International Airport, Kissimmee Gateway Airport, and Orlando Sanford International Airport).
- **Safety** - Safety is a vital piece of the 2040 Long Range Transportation Plan and is further discussed in **Chapter 10**. Safety is addressed in several elements of the plan, directly and indirectly. Projects referenced in the Existing-Plus-Committed (E+C) five-year section of the plan have been prioritized based on various factors, including safety considerations. Safety is also incorporated when selecting Needs Plan and Cost Feasible Plan projects. Safety is considered in many of LYNX's transit efforts, such as locating and providing amenities at local bus stops and for general route operations. Bicycle and pedestrian safety is coordinated through MetroPlan Orlando's Bicycle & Pedestrian Advisory Committee, which uses safety as a key consideration when prioritizing funds. The committee meets regularly and discusses safety for the region as a whole, as well as specific roadway and intersection locations.



### **Cost Feasible Plan Adoption**

Following analysis, input and changes made in coordination with the MetroPlan Orlando Board and committees, the proposed 2040 Long Range Transportation Plan was originally presented at a public hearing on June 4, 2014. The hearing took place at the LYNX Central Station in downtown Orlando, providing transit (SunRail, LYMMO, fixed-route) access for the three-county area.

At the public hearing, the Cost Feasible Plan list of projects and associated maps were presented during an informal question and answer period. A formal presentation by the MetroPlan Orlando staff followed with a chronological review of the process, milestones achieved, a review of the large public involvement effort, and key elements of the proposed 2040 Long Range Transportation Plan. Members of the public provided comments and suggestions, recorded for use by the MetroPlan Orlando Board. The 2040 Long Range Transportation Plan, including interim years, was presented to the MetroPlan Orlando Board on June 11, 2014 and adopted unanimously. Based on comments received from federal planning partners and to align planning schedules with neighboring planning organizations, the 2040 Long Range Transportation Plan was updated on December 9, 2015 and again adopted unanimously.

### **Transportation Plan Strategies and Future Direction**

The 2040 Plan represents the latest effort to anticipate the region's transportation needs. It follows the recommendations made under the 2030 Plan of increasing transportation funding, controlling development, reducing demand, providing a multimodal system, and developing new technologies. The 2040 Long Range Transportation Plan is based on projected revenue streams, which assume certain new funding mechanisms are in place. Even with the large monetary investment in the transportation system, it will not keep up with the anticipated growth in the region. Additional strategies must be developed to reach a level of funding that can keep up with the needs of the region.

The 2040 Plan also continues the shift in concentrated land use patterns. Resulting benefits of this approach were consistent across the board: increased mobility, decreased congestion, reduction of vehicle miles and hours of travel, reduction in ozone generating compounds, and even reduction of greenhouse gases. The adopted land use provides a goal for land use policy and local comprehensive plans for each local government covered by MetroPlan Orlando.

Continued emphasis on improving the region's transit systems is a focal point for the 2040 Plan. Now, more than ever before, the transit component in the Cost Feasible Plan represents a sizeable portion of the overall plan for the Central Florida region. The region needs to continue this collaboration by focusing on shared goals and objectives for innovative funding mechanisms to ensure the effectiveness and viability of Central Florida's future transportation system.

## Chapter 5: Funding the Plan

The process of matching financial resources and identified transportation needs, which created the 2040 Cost Feasible Plan adopted by the MetroPlan Orlando Board, adhered to the metropolitan planning rule, published by the U.S. Department of Transportation. The metropolitan planning rule states:

*The Plan shall include a financial plan that demonstrates the consistency of proposed transportation investments with already available and projected sources of revenue.*

### Available Sources

The MetroPlan Orlando 2040 Long Range Transportation Plan will be funded with state, federal, local, and toll revenues. This chapter identifies the projected funds by source for the period from 2019 through 2040 and presents the financial resources currently used, the sustainability of those sources and opportunities for new funding strategies. Revenues to fund years prior to 2019 are committed through the Transportation Improvement Program (TIP).

Central Florida uses various funding sources to develop and maintain its transportation system. The majority of non-toll transportation funds are from fuel taxes levied at federal, state, and local levels. Table 1 outlines Florida's transportation tax sources and estimated proceeds for 2012.



### Want to Learn More?

For more detailed information on funding for the 2040 Long Range Transportation Plan, refer to **Technical Report 2: Financial Resources**.

**Table 1: FLORIDA'S TRANSPORTATION TAX SOURCES**

| Fund / Tax Source   | Description  | 2012 Distribution (\$ in Millions) | 2013 Rates / Fees   |
|---|--|------------------------------------|---|
| <b>FEDERAL</b>  |  |                                    |   |
| Federal Highway Administration  | Highway fuel taxes and other excise and heavy vehicle use & sales taxes                                | \$1,835                            | Gasoline - 15.44¢/gallon<br>Gasohol - 15.44¢/gallon<br>Diesel - 21.44¢/gallon               |
| Federal Aviation Administration Airport & Airway Trust Fund                       | Federal taxes on non-commercial aviation fuel, airline tickets, waybills, and international departures | \$148                              | Avgas - 19.3¢/gallon<br>Jet Fuel - 21.8¢/gallon<br>Ticket Tax - 7.5%<br>Waybill Tax - 6.25% |
| Federal Transit Administration Highway Trust Fund                                 | Federal highway fuel taxes   | \$422                              | 2.86¢/gallon  |
| Federal Rail Administration General Fund  | Appropriations   | \$0                                | N/A   |
| <b>STATE - FOR STATE USE</b>  |  |                                    |   |
| Fuel Sales Tax  | Highway and off-highway fuels (excluding alternative fuels)  | \$1,121                            | Highway Fuel - 12.9¢/ gallon<br>Off-Highway Diesel - 6%                                     |
| SCETS Tax   | Highway fuels (including alternative fuels)  | \$631                              | Gasoline - 5.8¢ to 6.9¢/gallon<br>Diesel - 6.9¢/gallon                                      |
| Aviation Fuel Tax   | Aviation fuel  | \$13                               | 6.9¢/gallon   |
| Fuel Use Tax & Fee  | ID decals & taxes on highway fuels consumed commercially   | \$10                               | Decals - \$4.00/year<br>Taxes - Prevailing Rates  |
| Motor Vehicle License Fee   | Annual vehicle registrations   | \$461                              | Fee based on vehicle weight   |
| Initial Registration Fee  | Initial registration surcharge on specified vehicles   | \$81                               | One-time Fee - \$225.00   |
| Incremental Title Fee   | Titles issued for newly registered and transferred vehicles  | \$87                               | Fee - \$70.00 each  |
| Rental Car Surcharge  | Daily surcharge on leased/rented vehicles  | \$109                              | Fee - \$2.00/day  |
| <b>STATE - FOR LOCAL USE</b>  |  |                                    |   |
| Fuel Excise Taxes - Constitutional, County and Municipal Gas Taxes & Fuel Use Tax | All highway fuels  | \$358                              | Constitutional- 2¢/gallon<br>County - 1¢/gallon<br>Municipal - 1¢/gallon                    |
| <b>LOCAL</b>  |  |                                    |   |
| Ninth-cent Gas Tax  | All highway fuels  | \$78                               | Gasoline - 0¢-1¢/gallon<br>Diesel - 1¢/gallon   |
| Local Option Gas Tax  | All highway fuels  | \$690                              | Gasoline - 1¢-11¢/gallon<br>Diesel - 6¢/gallon  |
| <b>TOTAL</b>  |  | <b>\$6,044</b>                     |   |

**State and Federal Transportation Funding Mechanisms**

To develop revenue projections, FDOT combines the federal revenues and state “for state use” revenues as state/federal funds. State “for state use” revenues and federal funds are administered by FDOT. State “for local use” revenues are administered by local governments. The sources of state/federal funds include highway and off-highway fuel taxes, fuel sales taxes, and State Comprehensive Enhanced Transportation System taxes. Other state/federal revenue sources include vehicle related taxes (i.e., vehicle license fees, registration fees and title fees) and tourism related taxes (i.e., aviation fuel and rental car surcharges).

## Local Transportation Funding Mechanisms

In addition to the funding through state/federal funding mechanisms, local governments can raise revenues through local taxes (see Table 2). The counties in the MetroPlan Orlando area generally use a combination of sales taxes, gas taxes and impact fees to pay for transportation projects. The taxes most frequently used are the Local Option Gas Tax, the state-levied 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, but the recent downturn in the economy has significantly reduced revenues from impact fees.

**Table 2: LOCAL GOVERNMENT REVENUE SOURCES**

| Fund/ Tax Source   | Description  | Eligible Use   | Maximum Allowable Tax       |
|--|--|--|-----------------------------|
| <b>STATE - FOR LOCAL USE</b>                             |  |  |                             |
| Constitutional Gas Tax                                   | State shared revenue 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                   |
| <b>LOCAL</b>   |  |  |                             |
| Local Option Gas Tax (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 Tax (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 govt. comprehensive plan.  | 5¢/gallon                   |
| Ninth-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 others.  | 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 others.  | The development, construction, operation, and maintenance of transit systems, roads and bridges.   | 1%                          |
| Municipal Parking Facility Space Surcharges              | Based on a percentage of the amounts charged for the sale, lease, or rental of space at municipal parking facilities.  | Available to City of Orlando. Funds are used to improve mobility in downtown or urban core areas.  | 15%                         |
| 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 projects within the collector district. Funds must be spent within six years of collection.              | Varies with type of project |

## Financial Projections

The financial projections used in the 2040 Long Range Transportation Plan came from various sources. FDOT provided funding projections for state and federal funds. Each county in the MetroPlan Orlando area and the City of Orlando provided projections for local funding sources. LYNX (Central Florida Regional Transportation Authority) provided projected passenger revenues for bus service.

### State/Federal Funds



FDOT developed forecasts of state and federal transportation funds based on an estimate of revenues that fund the state transportation program. Forecasts are consistent with “Financial Guidelines for MPO 2040 Long Range Plans” adopted by the Metropolitan Planning Organization Advisory Council (MPOAC) in January 2013. The total state/federal funds available through 2040, based on year-of-expenditure dollars, is estimated at \$2.2 billion. In addition to capacity enhancements, FDOT also provides for maintenance of its facilities. FDOT has prepared statewide forecasts associated with safety, resurfacing, product support, operations, maintenance, and administration of its transportation system. The documentation prepared by FDOT is included in Technical Report 2: Financial Resources.

### SunRail Revenues

Revenues from SunRail are projected to include fares, usage fees, state and federal funds, interest and other revenues, such as advertising. Estimates are based on information in the SunRail Financial Plan, dated June 13, 2012, and include local support from Orange, Osceola, Seminole counties and the City of Orlando. Over the 22-year period from 2019 to 2040, the total of state, local and federal funds, usage fees, farebox and other revenues projected for SunRail is just over \$1.3 billion.



### Central Florida Regional Transportation Authority (LYNX)



LYNX provides public bus transportation to Orange, Osceola and Seminole counties. Each county and the cities of Orlando, Altamonte Springs, St. Cloud and Sanford contribute to LYNX, which also receives funding from Volusia and Lake counties for service extending into these adjacent areas. In addition to local contributions, LYNX receives state/federal operating assistance revenues as well as farebox revenues. Over the 22-year period 2019-2040, a total of about \$4.6 billion in local, state and federal funds, and farebox revenues is projected for LYNX.

## Orange County

Orange County receives revenues from the Constitutional Gas Tax, collects transportation impact fees and uses revenues from its general fund for transportation. Over the 22-year period 2019-2040, the projected revenue total is almost \$2 billion in gas taxes, impact fees and general revenues for transportation in Orange County. All of which are existing sources that planned to be maintained through 2040. No new funding sources are assumed.



## Osceola County

To fund transportation improvements and transit operations, Osceola County has exercised an Infrastructure Sales Tax and plans to implement the Charter County Transportation Surtax, dedicate a portion of its Ad Valorem Tax from new development, and use general funds. Over the 22-year period 2019-2040, a total of \$4.5 billion is projected for transportation in Osceola County.

## Seminole County

To fund transportation improvements and transit operations, Seminole County has implemented the Infrastructure Sales Tax. This was approved for a 10-year term. Of the tax revenues raised, 75% will be for roads and half of this amount (i.e., 37.5% of the total tax) will be used for projects in the long range transportation plan. Over the 22-year period 2019-2040, a total of \$787 million is projected for long range transportation projects in Seminole County. All of which are existing sources that planned to be maintained through 2040. No new transportation funding sources are assumed.



## City of Orlando



Orlando receives a portion of the Orange County Local Option Gas Tax. Orlando also collects Transportation Impact Fees and uses funds from the Downtown Community Redevelopment Agency (CRA) to fund transportation. It is anticipated that a portion of the city's funding for SunRail will be from general funds. Over the 22-year period 2019-2040, the total projected for transportation in the City of Orlando is about \$250 million.

Table 3 summarizes the projected funding by system, agency and local government as well as the source of the funds (i.e., state/federal or local). Planned improvements to some toll systems (i.e., Florida's Turnpike and Osceola County Expressway Authority) have been identified instead of the dollar amount of the improvements. In addition, the Central Florida Expressway Authority planned improvements are yet to be identified. Identifying projects instead of costs is acceptable for addressing these projects in the 2040 Plan because these projects are not initiated by MetroPlan Orlando, although they do require approval by the MetroPlan Orlando Board for implementation.

**Table 3: PROJECTED REVENUES FOR THE 2040 LONG RANGE TRANSPORTATION PLAN  
(2019 - 2040)**

| System, Agency, Local Government           | State/ Federal Funds | Local Revenues       | Total             |
|--|----------------------|----------------------|-------------------|
| MetroPlan Orlando (TMA)                    | \$542.1 M            | n/a                  | \$542.1 M         |
| Strategic Intermodal System (SIS)          | \$1.956 B            | n/a                  | \$1.956 B         |
| SunRail <sup>1</sup>                       | \$337.9 M            | \$459.9 M            | \$797.8 M         |
| Florida's Turnpike                         | n/a                  | n/a                  | See Projects      |
| Osceola County Expressway Authority (OCX)  | n/a                  | n/a                  | See Projects      |
| Central Florida Expressway Authority (CFX) | n/a                  | n/a                  | TBD               |
| LYNX                                       | \$1.117 B            | \$1.461 <sup>2</sup> | \$2.578 B         |
| Orange County                              | \$1.006 B            | \$1.967 B            | \$2.973 B         |
| Osceola County                             | \$249.1 M            | \$4.548              | \$4.797 B         |
| Seminole County                            | \$336.9 M            | \$786.7 M            | \$1.123 M         |
| City of Orlando                            | n/a                  | \$249.9 M            | \$249.9 M         |
| Transportation Alternatives                | \$53.2 M             | n/a                  | \$53.2 M          |
| <b>Total</b>                               | <b>\$5.598 B</b>     | <b>\$9.473 B</b>     | <b>\$15.072 B</b> |

<sup>1</sup> The SunRail revenue total in this table excludes the revenue from usage fees. The main objective for addressing these projects in the development of the LRTP is to consider their impact to the transportation system and their effects on other transportation needs.

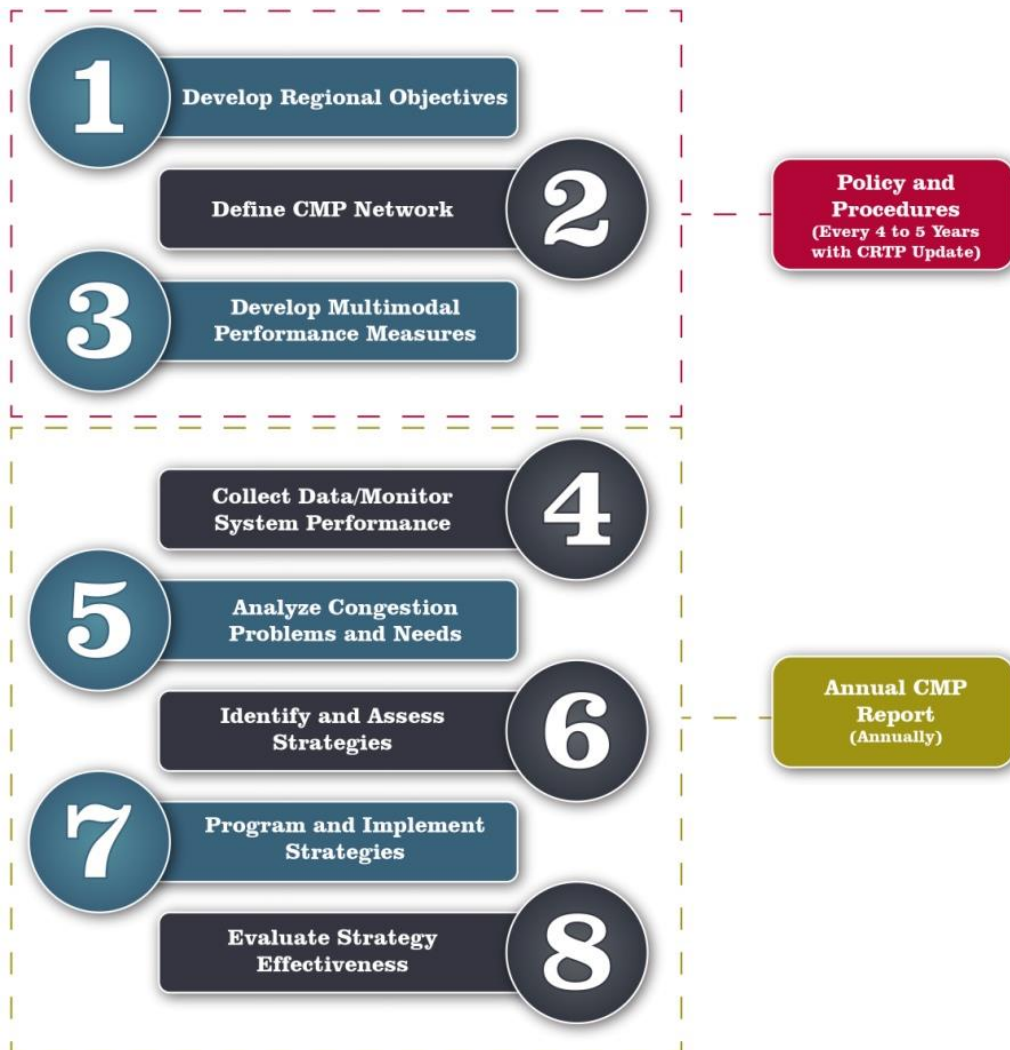
<sup>2</sup> Local revenues do not include funding from Orange, Osceola, or Seminole counties. To avoid double counting revenues, those funds are included in each county's funding.

## Chapter 6: Congestion Management Process

The MetroPlan Orlando 2040 Long Range Transportation Plan includes an update of the Congestion Management Process (CMP). The CMP was developed to address congestion through safe, effective, and integrated management and operation of the transportation system. The Congestion Management Process has been developed to meet the requirements stated in the federal planning rule section 450.320.

Many aspects of the Congestion Management Process were shaped by plans and programs already used by MetroPlan Orlando. The organization's Management and Operations (M&O) Subcommittee was enlisted to serve as the steering committee for this process, ensuring a coordinated development of performance measures and data collection plans. Input was solicited from committee members representing local governments and agencies within the MetroPlan Orlando planning area. These steps represent the primary framework of the Congestion Management Process:

Figure 6: CONGESTION MANAGEMENT PROCESS





A vibrant Congestion Management Process plays a role in addressing the region's transportation needs in light of the following:

- Many roadways in the urban area are already built out to their maximum number of travel lanes;
- Funding limits the large-scale projects that can be planned and constructed;
- Transportation safety continues to be a concern, especially for cyclists and pedestrians.

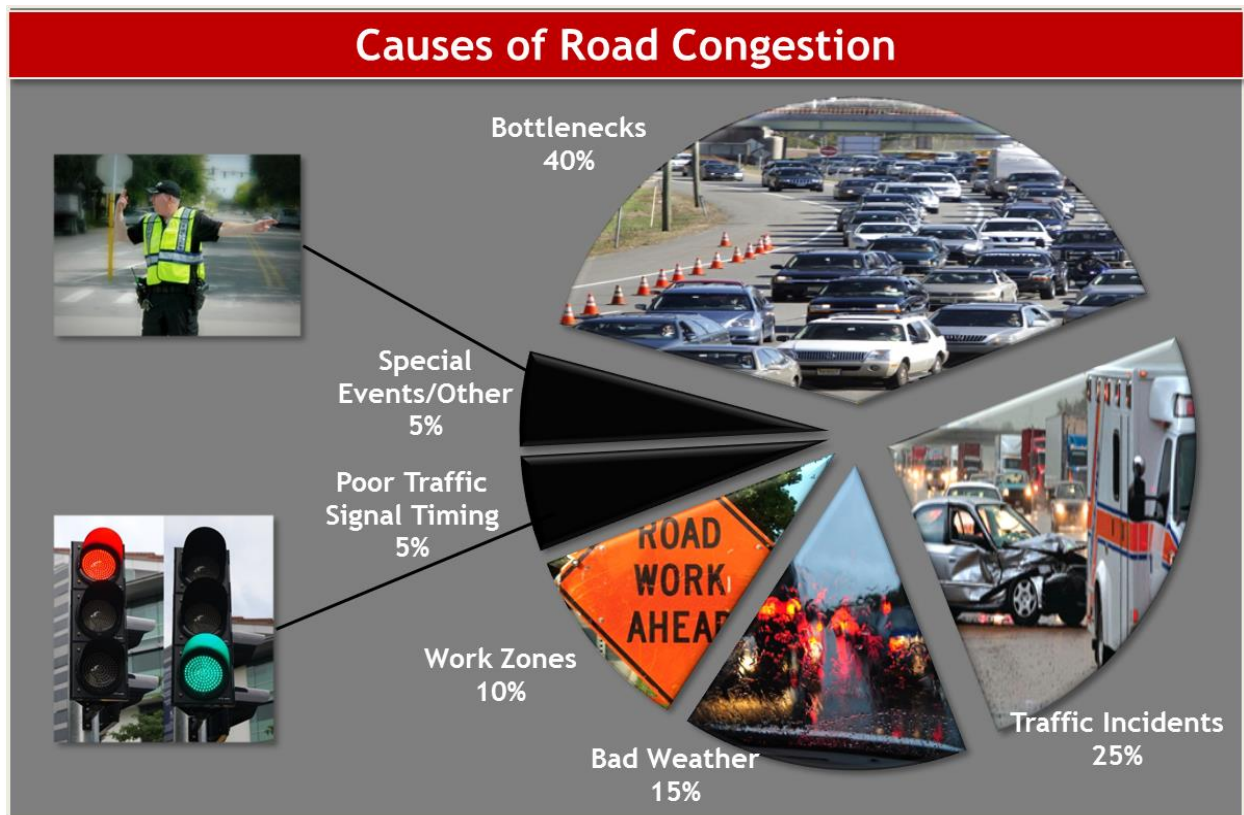
### Causes of Congestion

Congestion management begins by understanding the problem. The Congestion Management Process attempts to answer the basic questions:

- Where and when does congestion occur on the roadway network?
- How can congestion be relieved or prevented?

Figure 7 shows six major causes of congestion identified by a Federal Highway Administration (FHWA) national study.

**Figure 7: CAUSES OF ROAD CONGESTION**



## Regional CMP Objectives

Consistent with federal rules and guidance, the first step in the CMP is defining objectives to guide the overall process. This update of the Congestion Management Process continues to use the objectives identified for MetroPlan Orlando’s 2009 update of the CMP, with additional guidance from the M&O Subcommittee.

**Table 4: CONGESTION MANAGEMENT PROCESS REGIONAL OBJECTIVES**

| Objective                                | Definition  |
|--|---|
| <b>Freight &amp; Goods Movement</b>      | Enhance appropriate facilities to support efficient freight and goods movement.   |
| <b>Balanced System</b>                   | Provide a system with options that increase vehicle occupancy, minimize per capita vehicle miles traveled by auto, and promote travel by non-auto modes.  |
| <b>Bicycle System</b>                    | Provide an integrated bicycle system that connects major generators and attractors and promotes intermodal travel opportunities.  |
| <b>Pedestrian System</b>                 | Provide a system for walkers that connects to an intermodal transportation system to support neighborhood and community livability and vitality.  |
| <b>Safety</b>                            | Consider public safety in developing and preserving the transportation system, including considerations for emergencies and natural disasters.  |
| <b>Safety Enhancements</b>               | Identify and implement safety enhancements to improve security and reduce crashes, injuries, and fatalities.  |
| <b>System Preservation</b>               | Provide appropriate monitoring and maintenance to preserve and enhance system safety and security.  |
| <b>Cost-Effectiveness</b>                | Provide a system to meet the mobility needs of people, freight, services, and goods that produces good results for the price.   |
| <b>Mobility Enhancements</b>             | Promote investment in the transportation system that increases the use of transit, bicycle, and pedestrian modes and reduces dependency on single occupant auto travel.   |
| <b>Intelligent Transportation System</b> | Apply efficient and cost-effective technology to developing and enhancing the regional transportation system.   |
| <b>System Function and Performance</b>   | Designate, manage, and preserve system function to promote efficiency and cost-effectiveness consistent with adopted standards.   |
| <b>Investment Coordination</b>           | Coordinate local, regional, state, federal and private transportation investments to maximize opportunities and benefits of joint study, design, and construction of projects in the region’s Long Range Transportation Plan. |
| <b>Intergovernmental Coordination</b>    | Provide a balanced regional perspective on transportation, land use, and system investment between jurisdictions.   |
| <b>Air Quality</b>                       | Develop strategies and evaluate systems that protect clean air.   |
| <b>Funding</b>                           | Prepare financially feasible and implementable plans that demonstrate sound fiscal policy.  |

## Performance Measures

These performance measures were selected to address the existing conditions for the three-county transportation network:

- Annual Average Serious Injuries and Fatalities (by safety emphasis area)
- Vehicle Miles Traveled
- Percent of Travel in Generally Acceptable Operating Conditions (peak hour)
- Delay
- Travel Time Reliability
- Percent Miles Severely Congested
- Combination Truck Miles
- Combination Truck Travel Time Reliability
- Combination Truck Delay
- Combination Truck Percent Miles Severely Congested
- Fixed Route Major Transit Incidents
- Percent of Congested Roadway Centerline Miles with Transit Service
- Passenger Trips per Revenue Hour
- Average Peak Service Frequency
- On-Time Performance
- Annual Ridership
- Percent of Congested Roadway Centerline Miles with Pedestrian Facilities
- Percent of Congested Roadway Centerline Miles with Bicycle Facilities
- Number of Registered Carpools or Vanpools
- Number of Crashes Involving Heavy Vehicles
- Signal retiming cost/benefit
- Peak-hour travel speed - indicated as a percent of the posted speed limit
- Incident duration

The measures are in compliance with the federal direction to cover a multimodal network. The measures include elements that address safety, roadway improvements, public transit, bicycle/pedestrian/ multi-use trail facilities, travel demand management (TDM), and goods movement.

Figure 8 on the next page illustrates the relationship between the established objectives and associated performance measures. Symbols indicate the relationship based on the dominant mode, when applicable.



### Want to Learn More?

For more detailed technical information on the Congestion Management Process in the 2040 Long Range Transportation Plan, refer to **Technical Report 4: Congestion Management Process**.

**Figure 8: CMP PERFORMANCE MEASURE AND OBJECTIVE RELATIONSHIP**

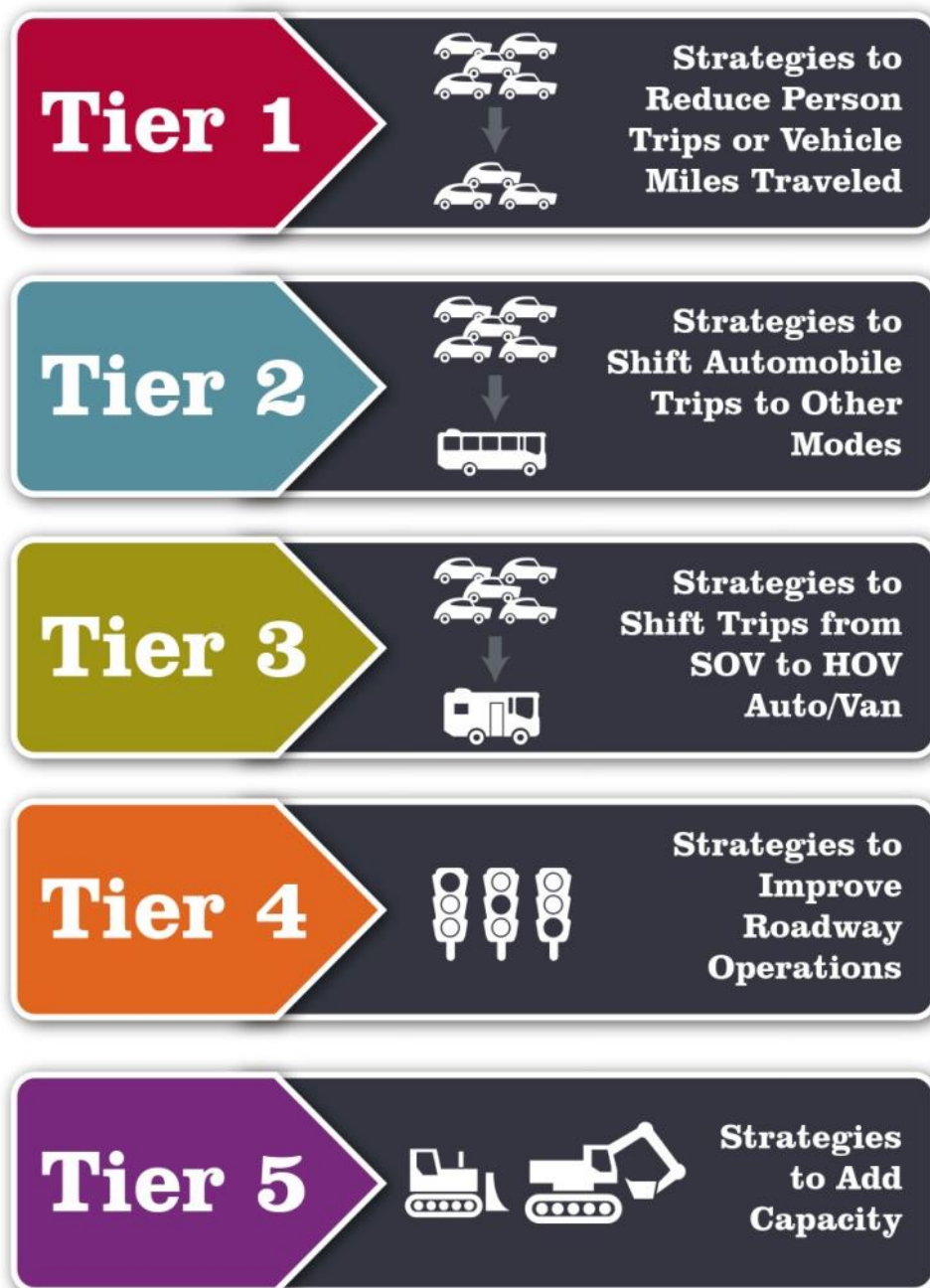
| Performance Measure  | Objectives               |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
|--|--------------------------|-----------------|----------------|-------------------|--------|---------------------|---------------------|----------------|-----------------------|-----------------------------------|---------------------------------|-------------------------|--------------------------------|-------------|
|  | Freight & Goods Movement | Balanced System | Bicycle System | Pedestrian System | Safety | Safety Enhancements | System Preservation | Cost-effective | Mobility Enhancements | Intelligent Transportation System | System Function and Performance | Investment Coordination | Intergovernmental Coordination | Air Quality |
| Annual Average Serious Injuries and Fatalities (By Safety Emphasis Area)   |                          |                 |                |                   | +      | +                   |                     |                |                       |                                   | +                               | +                       | +                              |             |
| Vehicle Miles Traveled   |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Percent of Travel in Generally Acceptable Operating Conditions (Peak Hour) |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Delay  |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Travel Time Reliability  |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Percent Miles Severely Congested (Based on V/C Ratio)                      |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Combination Truck Miles  |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Combination Truck Travel Time Reliability                                  |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Combination Truck Delay  |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Combination Truck Percent Miles Severely Congested                         |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Fixed Route Major Transit Incidents  |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Percent of Congested Roadway Centerline Miles with Transit Service         |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Passenger Trips per Revenue Hour   |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Average Peak Service Frequency   |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| On-Time Performance  |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Annual Ridership   |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Percent of Congested Roadway Centerline Miles with Pedestrian Facilities   |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Percent of Congested Roadway Centerline Miles with Bicycle Facilities      |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Number of Registered Carpools or Vanpools                                  |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Number of Crashes Involving Heavy Vehicles                                 |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Signal retiming cost/benefit   |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Peak-hour travel speed - indicated as a percent of the posted speed limit. |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |
| Incident duration  |                          |                 |                |                   |        |                     |                     |                |                       |                                   |                                 |                         |                                |             |

## Congestion Management Strategies

A toolbox of tiered approaches supports the congestion strategies. Following an approach used by other MPOs and promoted by FHWA, the toolbox is arranged so measures at the top take precedence over those at the bottom.

The “top-down” approach promotes the growing sentiment in transportation planning and the FHWA’s direction to consider all solutions before recommending additional roadway capacity.

Figure 9: CMP TOOLBOX OF STRATEGIES



## Chapter 7: Transit Element

The 2040 Long Range Transportation Plan emphasizes a highly-connected public transportation system that offers various travel options. The 2040 Transit Element took a data-driven approach to update the LYNX 2030 Vision Plan's technical analysis of 22 transit-emphasis corridors. Based on the 2040 land use assumptions of population and employment, the corridors were quantitatively reviewed to see how well each would support transit. Cost estimates were developed based on each corridor's transit operations. In addition to the technical analysis, the 2040 Transit Element provides a compilation of past and ongoing transit studies including corridor, feasibility, and alternative analysis studies.

The regional transit priorities listed in Table 5 are based on historic rankings, work conducted or under way, and recent developments. The region's next priority after SunRail Phase 3 is the OIA Refresh corridor. It is important to note that these transit priorities are set regionally, but are funded with locally generated money. The results of the studies under way and the availability of funding will impact the order in which these projects are implemented.



### Want to Learn More?

For more detailed technical information on the transit element in the 2040 Long Range Transportation Plan, refer to **Technical Report 5: Transit Element**.

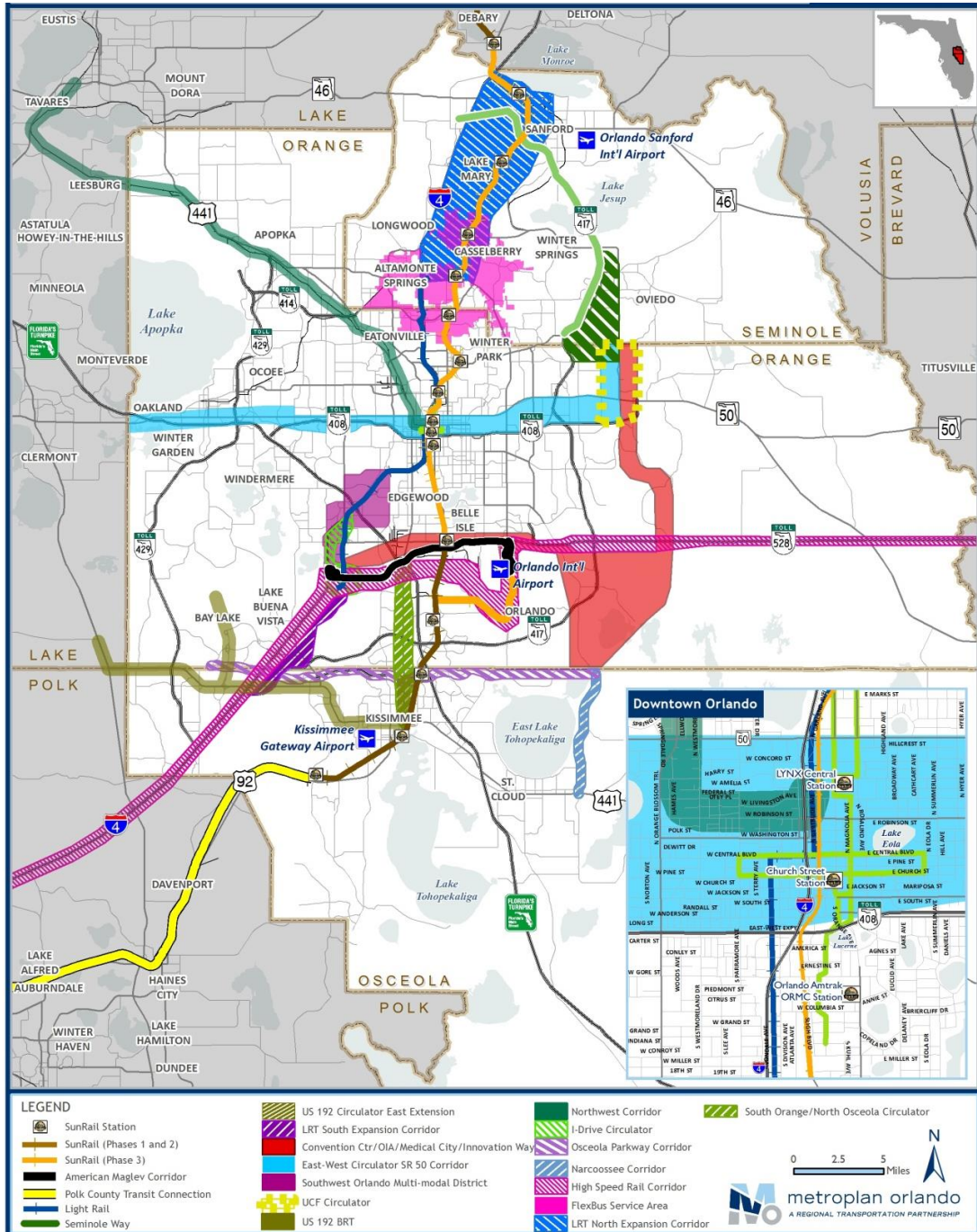
**Table 5: REGIONAL TRANSIT PRIORITIES**

| Project Name                             | Project Details   |
|--|---|
| LYNX Bus                                 | LYNX service operational in 2014 including LYMMO N/S and E/W extensions, and the SunRail feeder bus service   |
| SunRail: Phases 1 & 2                    | Commuter Rail from Deland in Volusia County through Seminole and Orange counties and ending in the Poinciana area in Osceola County   |
| SunRail: Phase 3                         | Commuter rail extension from Meadow Woods Station to the future Intermodal Terminal at Orlando International Airport  |
| OIA Refresh AA Corridor                  | Transit corridor connecting the Orange County Convention Center and the future Intermodal Terminal at Orlando International Airport   |
| US 192 Bus Rapid Transit                 | Adopted Locally Preferred Alternative (LPA): BRT along US 192 with service connections between Four Corners area, Walt Disney World, Osceola Parkway, SunRail station, and the Kissimmee Intermodal Terminal  |
| Kissimmee Transit Circulator: Phases 1&2 | Multi-route transit circulator system providing enhanced local access to SunRail and increased mobility within the downtown Kissimmee area  |
| LYNX Transit Development Plan (TDP)      | Orange County: Link 100, Lake Nona Circulator, Link 445 Ext, Goldenrod Ext, Conway Circulator, Meadow Woods Circulator, Orlovista Circulator; Osceola County: St. Cloud NeighborLink and Link 426; Seminole County: Link 100, Link 101, CR 429/Redbug Connector |
| US 441 AA Corridor                       | Transit corridor connecting the cities of Eustis, Mount Dora, and Tavares in Lake County, continuing through northwest Orange County and the City of Apopka, ending in downtown Orlando   |
| SR 50 AA Corridor                        | Transit corridor connecting west Orange County and the UCF area along the SR 50 corridor and Alafaya Trail (SR 434)   |
| LYNX 2030 Vision Corridors               | Remaining 18 Transit Emphasis Corridors identified in the LYNX 2030 Vision  |

## 2040 Transit Blueprint

The 2040 Transit Blueprint - depicted in Figure 10 - includes local bus, express bus, demand-response paratransit, bus rapid transit (BRT), FlexBus, commuter rail, Maglev, and high speed rail. With multiple transit services proposed for the region, costs exceed revenues. The map below presents the public transit coverage that would be available in the region if all the previously mentioned projects were implemented.

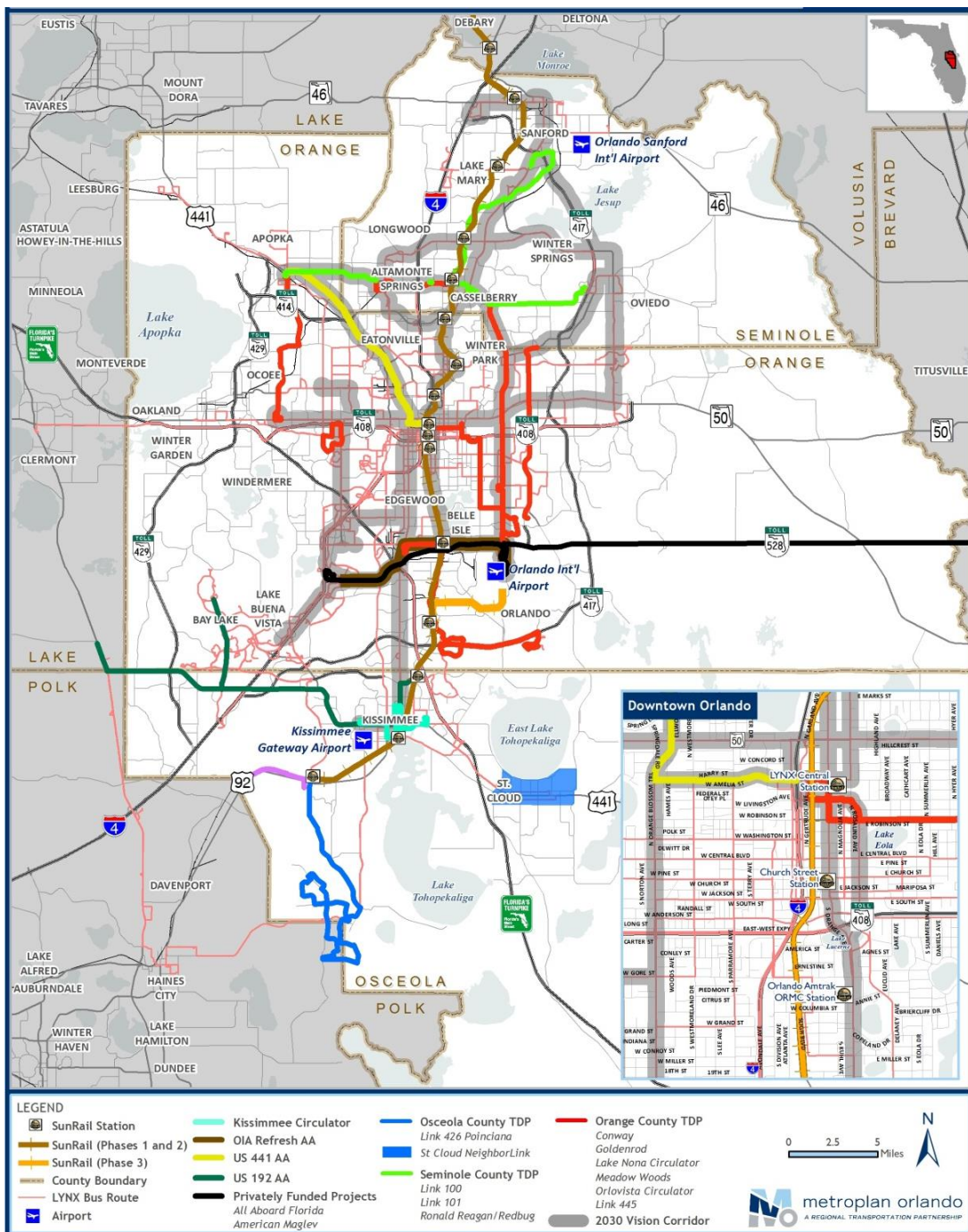
Figure 10: 2040 TRANSIT BLUEPRINT



## Cost Feasible Transit Plan

The Cost Feasible Plan identifies projects from the 2040 Transit Blueprint and aligns revenue sources to fund each project as a means of determining which projects will be advanced and when. To determine which projects are cost feasible, the portion of the total cost that will need to be funded by the local governments was identified and compared to local revenues available. It was assumed that federal and state matches will be readily available once local funds are set. Figure 11 displays the 2040 LRTP Cost Feasible transit network.

Figure 11: 2040 COST FEASIBLE TRANSIT NETWORK





## Chapter 8: Active Transportation - Bicycle and Pedestrian

MetroPlan Orlando’s Bicycle & Pedestrian Advisory Committee (BPAC) reviews and prioritizes bicycle and pedestrian projects using a comprehensive and replicable process outlined in Figure 12 below. The committee is made up of citizens and representatives from local governments. Each year, the BPAC determines whether it will accept new project applications while developing the Prioritized Project List. When funding becomes available, this ranked list is used to determine funding order. Projects are divided into three categories: 1) Pedestrian and Bicyclist Mobility, 2) Regionally Significant Trails and 3) Safe Routes to School.

Pedestrian and Bicyclist Mobility and Safe Routes to School projects are ranked on these criteria: expected facility use, direct connection to transit, inclusion in local government bicycle and pedestrian plans, linkage with other bikeway facilities, connectivity to roads, bicycle and pedestrian level of service, and readiness for construction. Regionally Significant Trails are ranked on regional importance, economic development potential, intermodal connectivity, readiness for construction, trail surface, and MPO funding share.

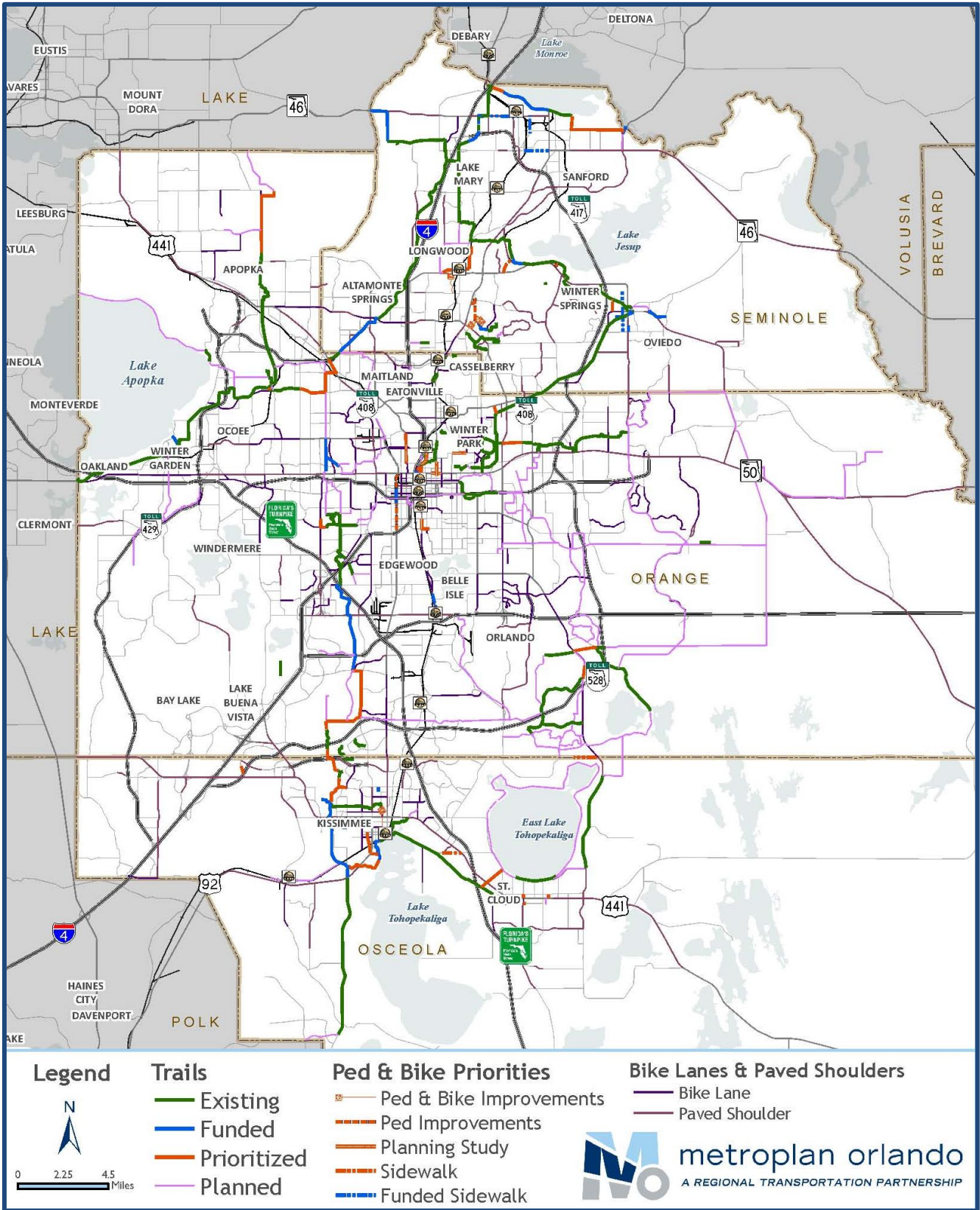
Individual projects are not specifically named in the long range plan to allow for maximum flexibility in funding and prioritizing. Instead, they are included in the Prioritized Project List (view the latest list at [www.MetroPlanOrlando.com](http://www.MetroPlanOrlando.com)).

**Figure 12: BICYCLE & PEDESTRIAN PROJECT PRIORITIZATION PROCESS**



Figure 13 depicts the existing, funded, planned, and prioritized bicycle, pedestrian, and trail improvement projects for the MetroPlan Orlando region.

Figure 13: BICYCLE, PEDESTRIAN, AND TRAIL PRIORITIES

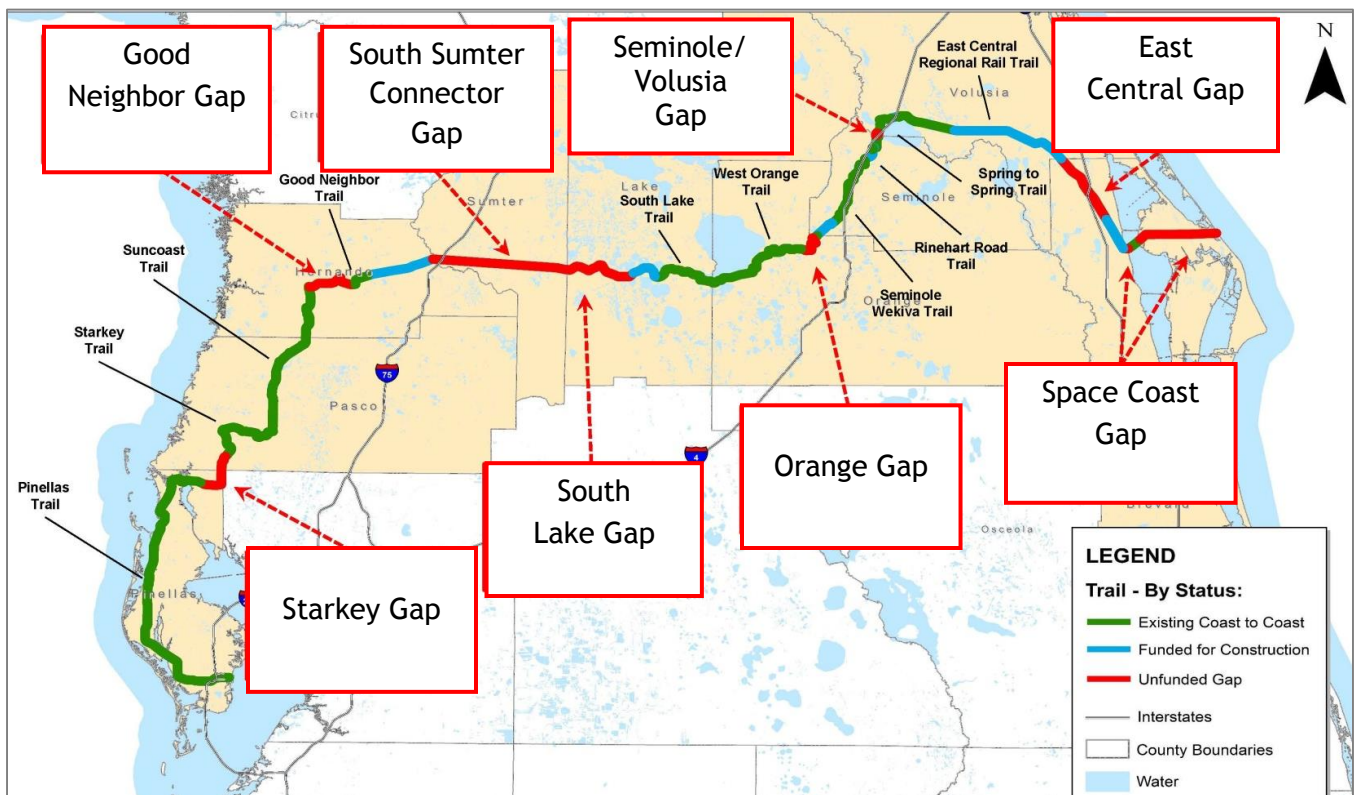


## Coast-to-Coast Connector

MetroPlan Orlando is working with FDOT and partners in surrounding counties to complete the Coast-to-Coast Connector, a 275-mile trail linking Florida's Gulf and Atlantic coasts. A map of the project, including gaps, is below.

There are two trail gaps in MetroPlan Orlando's three-county area: 1) Orange Gap, consisting of one segment from Hiawassee Rd. to Pine Hills and another segment from Clarcona Ocoee Rd. to the Seminole County line; 2) Seminole/Volusia Gap, consisting of small gaps in Seminole County's Rinehart Trail and two segments in Volusia County. These gaps are at the top of the priority list for special funding that could become available, through state sources or appropriations from the Florida Legislature.

**Figure 14: COAST-TO-COAST CONNECTOR GAPS**



## Active Transportation in the 2040 Plan

The 2040 Long Range Transportation Plan documents MetroPlan Orlando's comprehensive bicycle and pedestrian project prioritization process, with these goals:

- Provide connectivity and close gaps in the bike lane and sidewalk network.
- Serve areas that have a higher potential for bicycle and pedestrian use and demand, based on a review of socioeconomic data.
- Identify opportunities to expand the bicycle/pedestrian network and connect to transit, making the region more user-friendly for multimodal commuter trips.

To enhance the current prioritization process and connectivity efforts, the Bicycle and Pedestrian element of the 2040 Plan identifies gaps in the bicycle and pedestrian network throughout the three-county area. This was done through data collection, systems analysis, and cost estimates. After the areas were ranked using existing conditions, socioeconomic data and connectivity to transit, projects already planned or programmed were removed to clearly show needs.

The BPAC uses these recommendations to develop future project priorities. The identified segment list emphasizes providing connectivity, serving demand, and meeting public needs.



### Want to Learn More?

For more detailed technical information on the bicycle and pedestrian components of the 2040 Long Range Transportation Plan, including project lists, refer to **Technical Report 6: Bicycle and Pedestrian Plan**.

## Chapter 9: Freight Mobility

All the materials we need for everyday activities will, at some point, join more than 200 million tons of freight flowing in our region each year. About 95% of our goods move by truck, with the remaining 5% moving by rail, sea, and air. Without efficient movement of goods and services, the economy cannot thrive. Freight is the economy in motion.

Freight and goods movement are demand-driven, meaning that freight volumes grow as population, income, and employment grow. Integrating freight into the planning process is critical to the region due to the role of freight in these policy areas:

- Safety
- Economic Competitiveness
- Regional Mobility
- Air Quality
- Community Impacts

### Freight in the 2040 Plan

As the region grows, demand for goods and services will test our transportation system. For more than a decade, MetroPlan Orlando has monitored and planned for freight movement throughout the area, which includes 56% construction materials, 27% consumer goods, 11% fuels and chemicals, and 6% other goods. The freight element of the 2040 Plan sets the foundation for fully integrating freight into the long range planning process.

An assessment of the current and future freight situation revealed three primary categories of needs and deficiencies: 1) capacity and congestion; 2) community impacts, including air quality and safety; and 3) institutional and regulatory bottlenecks. Addressing needs and deficiencies will require multifaceted solutions that include infrastructure, operational and institutional recommendations.

- Physical infrastructure refers to investment in the transportation system such as roadways, rail, and ports. Improvements may include new facilities, capacity enhancements or reconstruction to existing facilities, reconstruction, and maintenance activities such as repaving.
- Operational solutions focus on improving the efficiency and flow of the existing system. Examples include improving signage and wayfinding programs, synchronizing traffic signals to maximize traffic flows, altering the time of day freight traffic is on



### Want to Learn More?

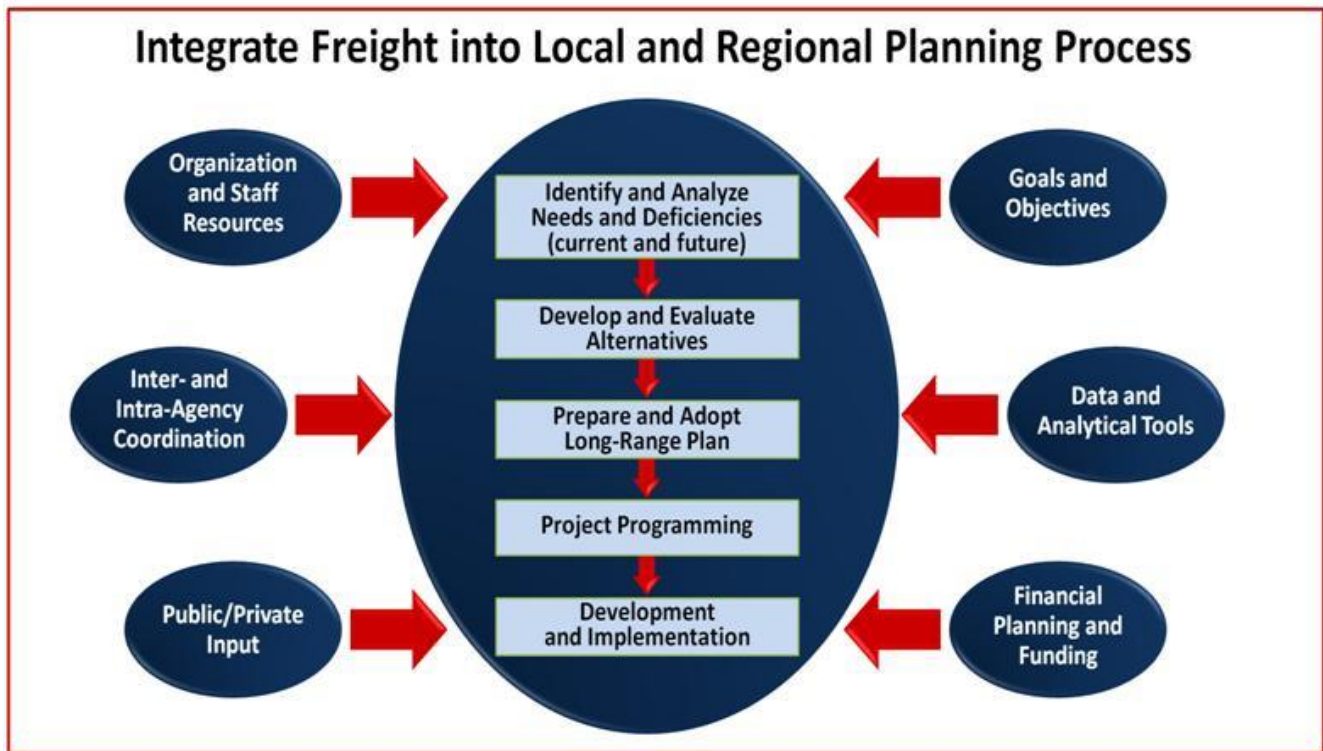
For more detailed technical information on freight aspects of the 2040 Long Range Transportation Plan, refer to **Technical Report 7: Freight Mobility**.

the roads to make better use of infrastructure, and providing real-time traffic data to dispatchers and drivers.

- Institutional solutions focus on policies, regulations, and governance issues that give rise to unintended impacts on goods movement and communities. Institutional bottlenecks arise from industry regulations such as truck size and weight and drivers' hours of service rules; local, regional, and state governance over publicly owned assets such as roads leads to local officials having total responsibility (including funding requirements) for local roads that may have regional, state, or even national roles in terms of the freight movement; and public policies such as how projects are selected and prioritized in the regional, state, and federal planning processes.

Establishing a regional freight program integrated into the existing transportation planning process is essential to meet future demand. This will include training, outreach, data collection, tool development, and performance measures. A Freight Advisory Council will play a key role by providing input from this public and private sector group to the MetroPlan Orlando Board. The outcome of a far-reaching freight program is a balanced transportation system that meets the needs of people and freight.

Figure 15: FREIGHT & REGIONAL PLANNING



## Chapter 10: Safety Focus



Safety is at the forefront of MetroPlan Orlando's planning and community outreach processes. When creating transportation plans, safety impacts on various users are considered, including drivers, bicyclists, and pedestrians.

### Safety Through Engineering

MetroPlan Orlando established safety as an emphasis area in 2005. Since then, many safety tasks have been coordinated by the Management and Operations (M&O) Subcommittee.

We also ensure a coordinated process by maintaining strong working relationships with the Community Traffic Safety Teams (CTST) in each of the three counties as well as the CTST Statewide Coalition.

A regional crash database, launched in 2010, is a Web-based system that allows MetroPlan Orlando partners to access detailed crash reports. This data makes it possible to target low-cost engineering solutions to crash trouble spots and to suggest larger projects that could have significant safety implications on high-crash corridors. The data also serves as a starting point for our public awareness and involvement efforts in areas where there are crash concerns.



### Want to Learn More?

For more detailed information on safety aspects of the 2040 Long Range Transportation Plan, refer to:

- **Technical Report 4: Congestion Management Process**
- **Technical Report 6: Bicycle and Pedestrian Plan**
- **Public Involvement Report**

The 2040 Long Range Transportation Plan recommends enhanced strategies and effective countermeasures that reflect emerging traffic safety concerns in the three-county area. As mentioned in **Chapter 6: Congestion Management Process**, this effort also considers the main target areas of the Florida Strategic Highway Safety Plan, as required under federal law: aggressive driving; intersection crashes; vulnerable road users; and lane departure crashes. The 2040 Plan also will reflect continuing priority areas in the Strategic Highway Safety Plan, such as the occupant protection, impaired driving, traffic data and decision support systems, impaired and distracted driving, aging road users, younger drivers, and work zone safety.

### Safety Through Education

In addition to the traditional transportation planning process, MetroPlan Orlando advocates for bicycle and pedestrian safety through education. Public involvement activities for the 2040 Plan showed that residents are concerned about bicycle and pedestrian safety.

Community outreach efforts are coordinated with partner agencies that focus on bicycle and pedestrian safety. MetroPlan Orlando also provides financial and in-kind support to these safety education programs:



**Best Foot Forward:** Pedestrian safety initiative using education, engineering and enforcement with the goal of cutting pedestrian injuries and deaths in half in five years. Visit [iyield4peds.org](http://iyield4peds.org) to learn more about this program.



**Cycling Savvy:** A traffic cycling course that empowers cyclists as confident road users. The course provides strategies for safe, stress-free cycling and gives participants the tools to read and problem-solve any traffic situation. Visit [CyclingSavvy.org](http://CyclingSavvy.org) to learn more about this program.