2045 Long Range Transportation Plan

CONNECTING COMMUNITIES

Adopted December 12, 2019
Amended February 20, 2020

PALM BEACH Transportation Planning Agency

Adopted December 12, 2019 by the Palm Beach TPA Governing Board

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Prepared For

PALM BEACH
Transportation
Planning Agency

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3C	Continuing, Cooperative, and Comprehensive
ADA	American with Disabilities Act
BRT	Bus Rapid Transit
BTPAC	Bicycle-Trailways-Pedestrian Advisory Committee
CAC	Citizens Advisory Committee
CAS	Crash Analysis Reporting System
CDC	Centers for Disease Control
CMP	Congestion Management Process
CST	Construction
CTC	Community Transportation Coordination
DDA	Downtown Development Authority
DDR	District Dedicated Revenue
E+C	Existing + Committed
EPA	Environmental Protection Agency
FAST	Fixing America's Surface Transportation Act
FDM	FDOT Design Manual
FDOT	Florida Department of Transportation
FEC	Florida East Coast Railway
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTP	Florida Transportation Plan
FY	Fiscal Year
GIS	Geographic Information Systems
HIA	Health Impact Assessment
HTF	Highway Trust Fund
IST	Infrastructure Sales Tax
ITS	Intelligent Transportation Systems
LCB	Local Coordinating Board
LEHD	Longitudinal Employer-Household Dynamics
LEP	Limited English Proficiency
LI	Local Initiatives Program
LOPP	List of Priority Projects
LOS	Level of Service
LRT	Light Rail Transit
LRTP	Long Range Transportation Plan
LTS	Level of Traffic Stress
MAP-21	Moving Ahead for Progress in the 21st Century Act
MPO	Metropolitan Planning Organization

NHPP	National Highway Performance Program
NHS	National Highway System
O&M	Operations and Maintenance
PD&E	Project Development and Environment
PDC	Present Day Costs
PPP	Public Participation Plan
QLOS	Quality/Level of Service
RITSA	Regional ITS Architecture
ROW	Right-of-Way
RRR	Resurfacing, Restoration and Rehabilitation
RTP	Regional Transportation Plan
SEFTC	Southeast Florida Transportation Council
SERPM	Southeast Florida Regional Planning Model
SFRC	South Florida Rail Corridor
SFRTA	South Florida Regional Transportation Authority
SIS	Strategic Intermodal System
SOV	Single-Occupancy Vehicles
SSS	Safe Streets Summit
STBG	Surface Transportation Block Grant
STRANET	Strategic Highway Network
STREAM	State Roadway Enhancements and Modifications
SFTTF	State Transportation Trust Fund
TA	Transportation Alternatives
TAC	Technical Advisory Committee
TAZ	Traffic Analysis Zones
TCRPC	Treasure Coast Regional Planning Council
TD	Transportation Disadvantaged
TDP	Transit Development Plan
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TMC	Traffic Management Center
TNC	Transportation Network Company
TPA	Transportation Planning Agency
TPO	Transportation Planning Organization
TRCL	Tri-Rail Coastal Link
TSM&O	Transportation Systems Management & Operations
TSP	Transit Signal Priority
USDOT	U.S. Department of Transportation
V/C	Volume to Capacity Ratio

CHAPTER 1

Introduction

The Palm Beach Metropolitan Planning Organization (MPO) began doing business as the Palm Beach Transportation Planning Agency (TPA) in December 2017. The Palm Beach TPA is the designated MPO serving all of Palm Beach County, Florida. An MPO is a federally mandated organization comprised of elected officials serving the county, that provide a collaborative and unified local voice for setting current and future federal and state funded transportation policy and investments. The TPA's mission is to collaboratively plan, prioritize, and fund the transportation system.

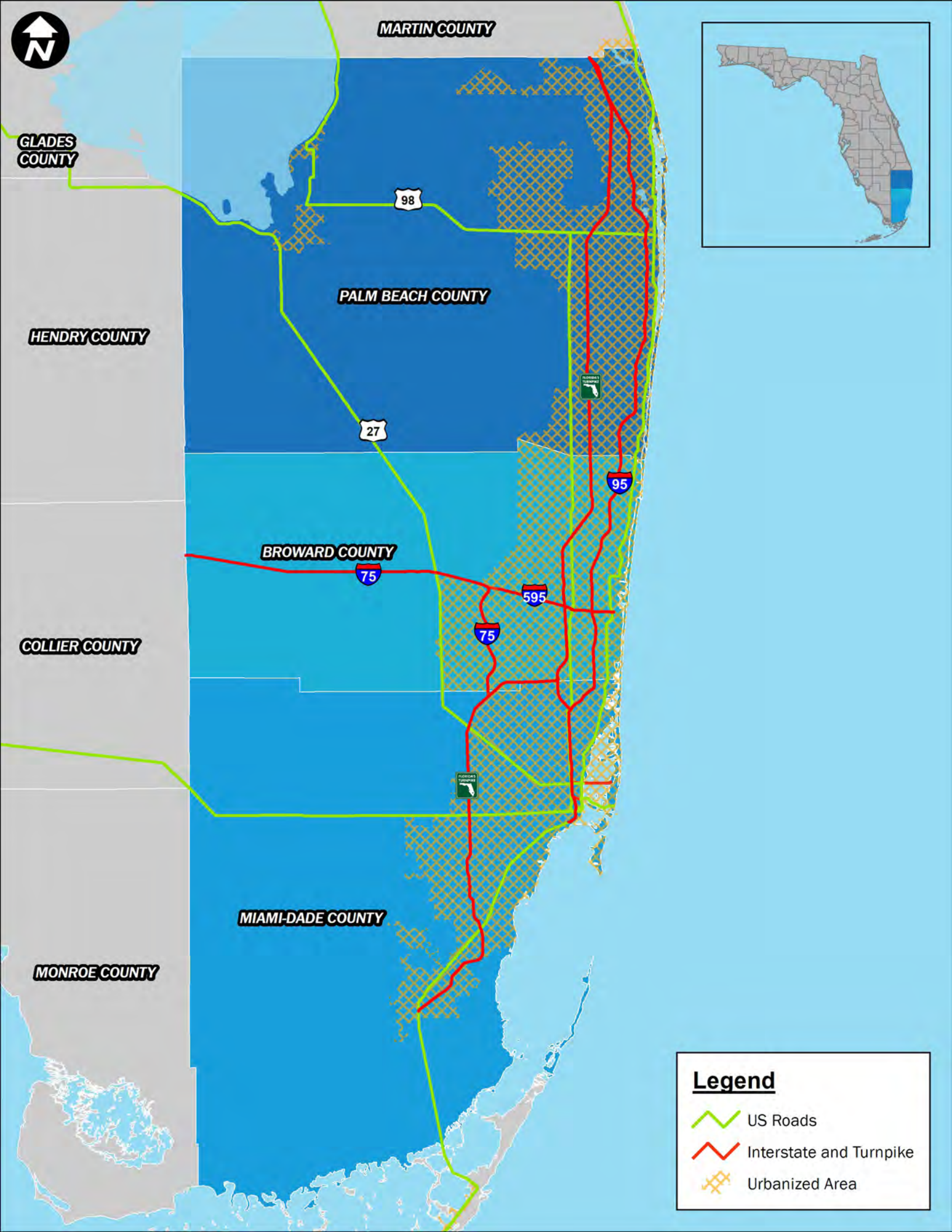
The TPA's mission to plan for the transportation system is directed by the 2045 Long Range Transportation Plan (LRTP). The LRTP provides a strategic 25-year outlook that leads investment and decision-making today to accomplish the TPA's vision of a safe, efficient, and connected multimodal transportation system. The TPA's transportation planning process encompasses all modes and users with in-depth consideration of non-motorized modes of transportation to promote equity, as well as an emphasis on both short- and long-term implementation.

MISSION

To collaboratively plan, prioritize, and fund the transportation system

VISION

A safe, efficient, and connected multimodal transportation system


MARTIN COUNTY
GLADES COUNTY
98
PALM BEACH COUNTY
HENDRY COUNTY
27
95
BROWARD COUNTY
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595
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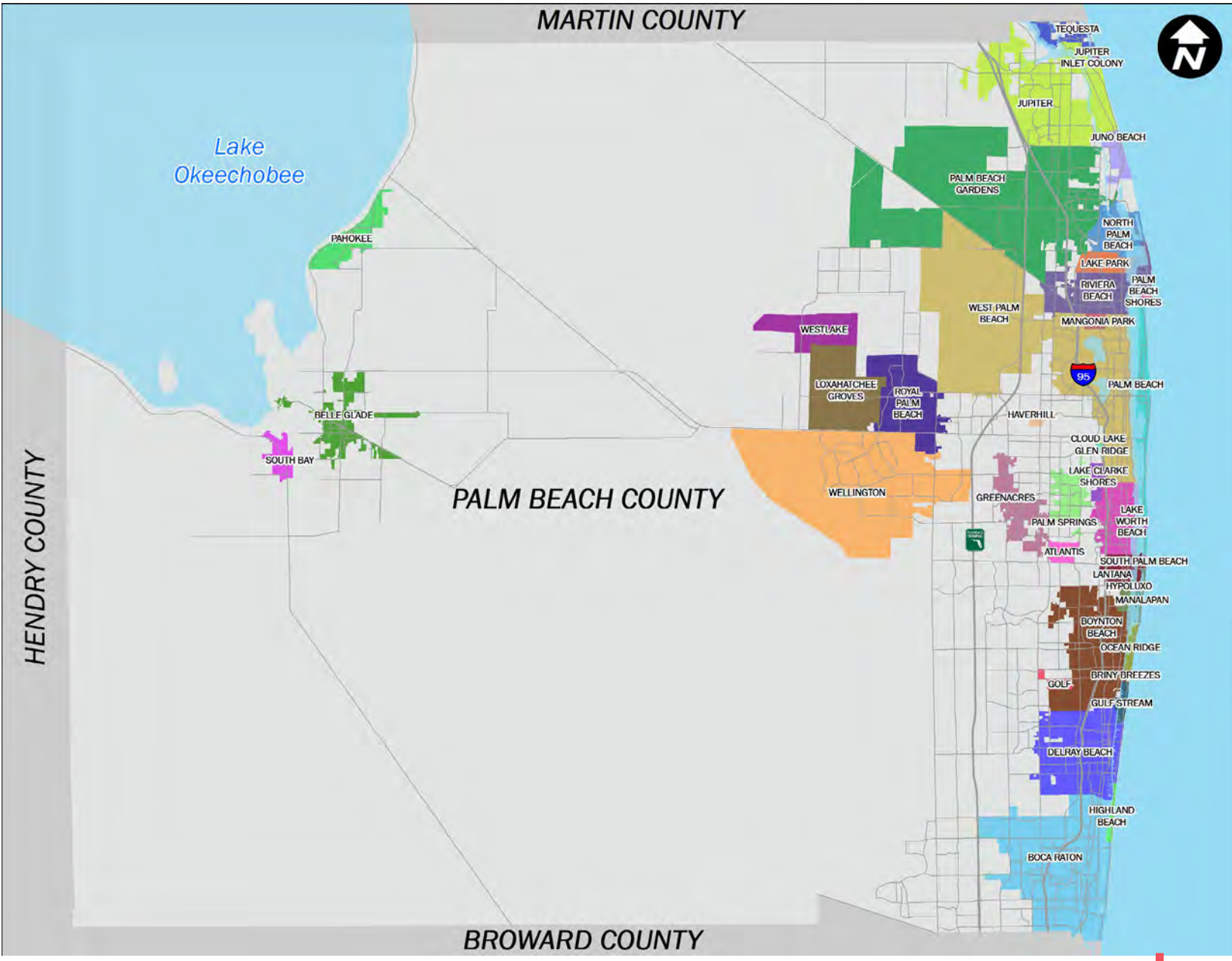
COLLIER COUNTY
MIAMI-DADE COUNTY
MONROE COUNTY
Legend
US Roads
Interstate and Turnpike
Urbanized Area



What is a Metropolitan Planning Organization (MPO)?

An MPO is a federally mandated organization designated to carry out the transportation planning process and represent localities in urbanized areas with more than 50,000 residents. An urbanized area of over 200,000 residents establishes the MPO's planning area as a Transportation Management Area (TMA), giving the MPO more planning and project prioritization responsibility of federal highway funds.

The Palm Beach TPA planning area covers the Palm Beach County portion of the Miami Urbanized Area, which includes Miami-Dade, Broward, and Palm Beach counties. Palm Beach County stretches west from Lake Okeechobee, east to the Atlantic Ocean and includes 39 municipalities, 1,970 square-miles of land, and 413 square-miles of water.

Organization Structure

The TPA's decision-making authority is through the TPA Governing Board, currently comprised of 21 locally elected officials. There are 15 elected officials from the larger municipalities, five (5) of seven (7) Palm Beach County Commissioners, and one (1) elected official from the Port of Palm Beach. The TPA has three (3) advisory committees that provide focused input and recommendations to the Governing Board. Additionally, the Transportation Disadvantaged (TD) Local Coordinating Board (LCB) reviews, advises, and evaluates Palm Tran Connection services.

Palm Beach TPA Organization Structure

GOVERNING BOARD - Comprised of 21 locally elected officials, this body has final decision-making authority for all plans and programs prepared by the TPA.

TECHNICAL ADVISORY COMMITTEE (TAC) - Professional technical representatives, primarily planners and engineers from local governments, Palm Beach County Health Department – Florida Department of Health, School District of Palm Beach County, school district, aviation, seaport, public transit agencies, and other entities.

CITIZENS ADVISORY COMMITTEE (CAC) - Citizen volunteers, nominated by Governing Board members who represent the concerns of the general public. The Board strives for representation to include minorities, the elderly, people with disabilities, and other citizens representing private industries and communities.

BICYCLE-TRAILWAYS-PEDESTRIAN ADVISORY COMMITTEE (BTPAC) - Representatives from local governments, Palm Beach County Health Department – Florida Department of Health, School District of Palm Beach County, law enforcement, bicycle advocacy groups, and other entities with a focus on non-motorized modes of travel.

TRANSPORTATION DISADVANTAGED LOCAL COORDINATING BOARD (LCB) - Focuses on the needs of the transportation disadvantaged population, specifically older adults, persons with disabilities, persons of low income, and at-risk youth. Primary responsibility is to plan for and evaluate the paratransit TD service provided by Palm Tran, the designated Community Transportation Coordinator (CTC) for Palm Beach County. *This committee is nonadvisory.*

Agency Relationships

The TPA is a formal collaboration of local, regional, state, and federal partners involved in or impacted by the metropolitan transportation planning process. The following table highlights the TPA's key agency partners, complementing the 39 municipalities within Palm Beach County.

Agency Partners
FEDERAL HIGHWAY ADMINISTRATION (FHWA) FHWA supports state and local governments in the design, construction, and maintenance of the nation's highway system.
FEDERAL TRANSIT ADMINISTRATION (FTA) FTA provides financial and technical assistance to local public transit systems, including buses, subways, light rail, commuter rail, trolleys, and ferries. FTA also oversees safety measures and helps develop next-generation technology research.
FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) FDOT's primary statutory responsibility is to coordinate the planning and development of a safe, viable, and balanced state transportation system serving all regions of the state, and to assure the compatibility of all components, including multimodal facilities.
PALM BEACH COUNTY **Airports –** Palm Beach International Airport (PBI) and three (3) other county operated airports; North Palm Beach County General Aviation Airport (F45), Palm Beach County Park Airport (LNA), and Palm Beach County Glades Airport (PHK). **Engineering -** county roads and traffic signals. **Palm Tran -** Fixed route bus service, shelters, and stops along with the Palm Tran Connection paratransit service.
PORT OF PALM BEACH The Port is an independent special taxing district, a sub-division of the State of Florida. The port district views its mission as a proactive endeavor in the regional international trade community.
SOUTHEAST FLORIDA TRANSPORTATION COUNCIL (SEFTC) Formal partnership of the Miami-Dade Transportation Planning Organization (TPO), Broward MPO, and Palm Beach TPA to ensure coordinated regional transportation planning within the U.S. Census designated Miami Urbanized Area.
SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY (SFRTA) SFRTA operates Tri-Rail, the region's commuter rail system comprised of 18 stations along the South Florida Rail Corridor (SFRC), along with complimentary shuttle services at many of the stations.
TREASURE COAST REGIONAL PLANNING COUNCIL (TCRPC) TCRPC convenes elected and appointed leaders regularly to discuss complex regional issues, develop strategic regional responses, and build consensus for setting and accomplishing regional goals.
U.S. DEPARTMENT OF TRANSPORTATION (USDOT) The USDOT top priorities are to keep the traveling public safe and secure, increase their mobility, and have our transportation system contribute to the nation's economic growth.

What is a Long Range Transportation Plan?

For urbanized areas to be eligible for federal and state funds, MPOs must maintain an LRTP covering at least 20 years that is updated every five (5) years. The purpose of the LRTP is to encourage and promote the safe and efficient management, operation, and development of a surface transportation system that serves the mobility needs of people and freight; fosters economic growth and development and takes into consideration resiliency needs while minimizing transportation-related fuel consumption and air pollution (23 U.S.C. 134).

Guided by the TPA's vision of a safe, efficient, and connected multimodal transportation system, the LRTP provides a framework to answer, "where are we today?", "where are we going in the future?", and "what can we accomplish to get to our vision?"

Framework of the LRTP

Where Are We?

- Current population and employment, their unique makeup, and where people live, work, play, learn, and access transit.
- All facilities of the existing transportation system, including the active transportation network (sidewalk and bicycle infrastructure), transit, roadways, freight, airports, and the Port of Palm Beach.
- Travel behavior of Palm Beach County transportation network users.

Where Are We Going?

- Outreach to the Palm Beach County community on attitudes towards transportation.
- Evaluate performance of the transportation system and the Goals, Values, Performance Measures, and Targets to accomplish the vision.
- Forecast future population and employment in 2030 (short-term) and 2045 (long-term).
- Forecast future multimodal demand for walk, bike, transit, and vehicles.
- Desired projects based on the forecasted growth, demand, and vision.

What Can We Accomplish?

- Project financial resources available to accomplish the vision.
- Prepare a Cost Feasible list of projects, a financially constrained project list based on available resources.
- Evaluate alternative resources to implement the vision.
- Create an implementation plan to bring the Cost Feasible list to reality.
- Examine additional scenarios that may impact implementation of the vision.

Since Directions 2040 Long Range Transportation Plan

In 2014, the TPA adopted the 2040 LRTP, *Directions 2040*. In this LRTP the TPA positioned itself to prioritize multimodal projects, increase implementation of safe Complete Streets projects, and provide a dedicated funding source for locally-driven transportation projects that further the goals of the TPA. The current status of select *Directions 2040* priorities is described below.

State Road 7 (SR-7) Extension and Widening

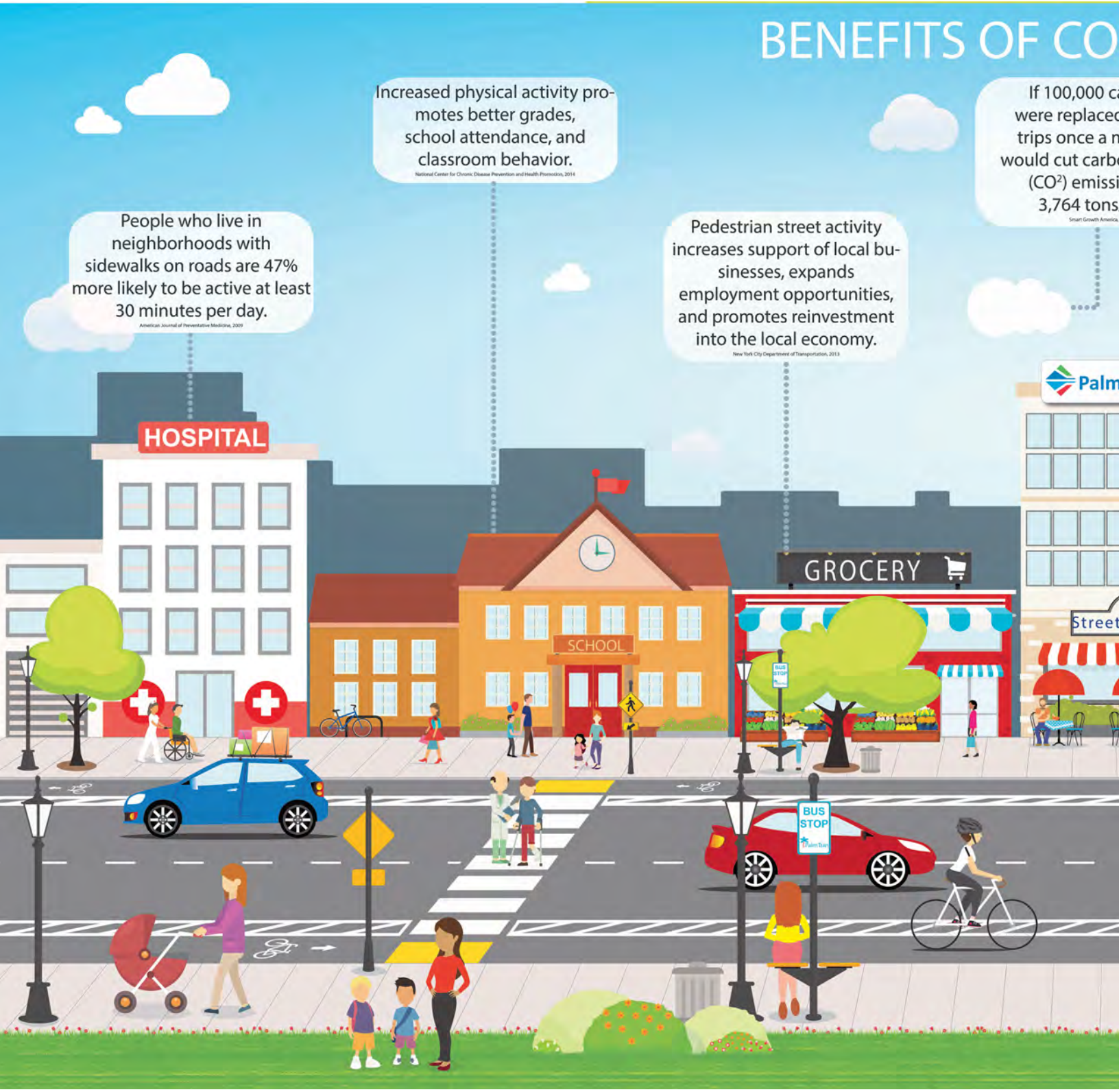
The extension of SR-7 from 60th Street to Northlake Boulevard and widening of SR-7 from Okeechobee Boulevard to 60th Street continues to be a priority moving into the 2045 LRTP.

Southern Boulevard (SR-80) Widening

The widening from two to four lanes (2L to 4L) on Southern Boulevard (SR-80) between Lake Worth Drainage District L-8 Canal and west of Forest Hill Boulevard began construction in 2018. The expected completion date is mid-2021.

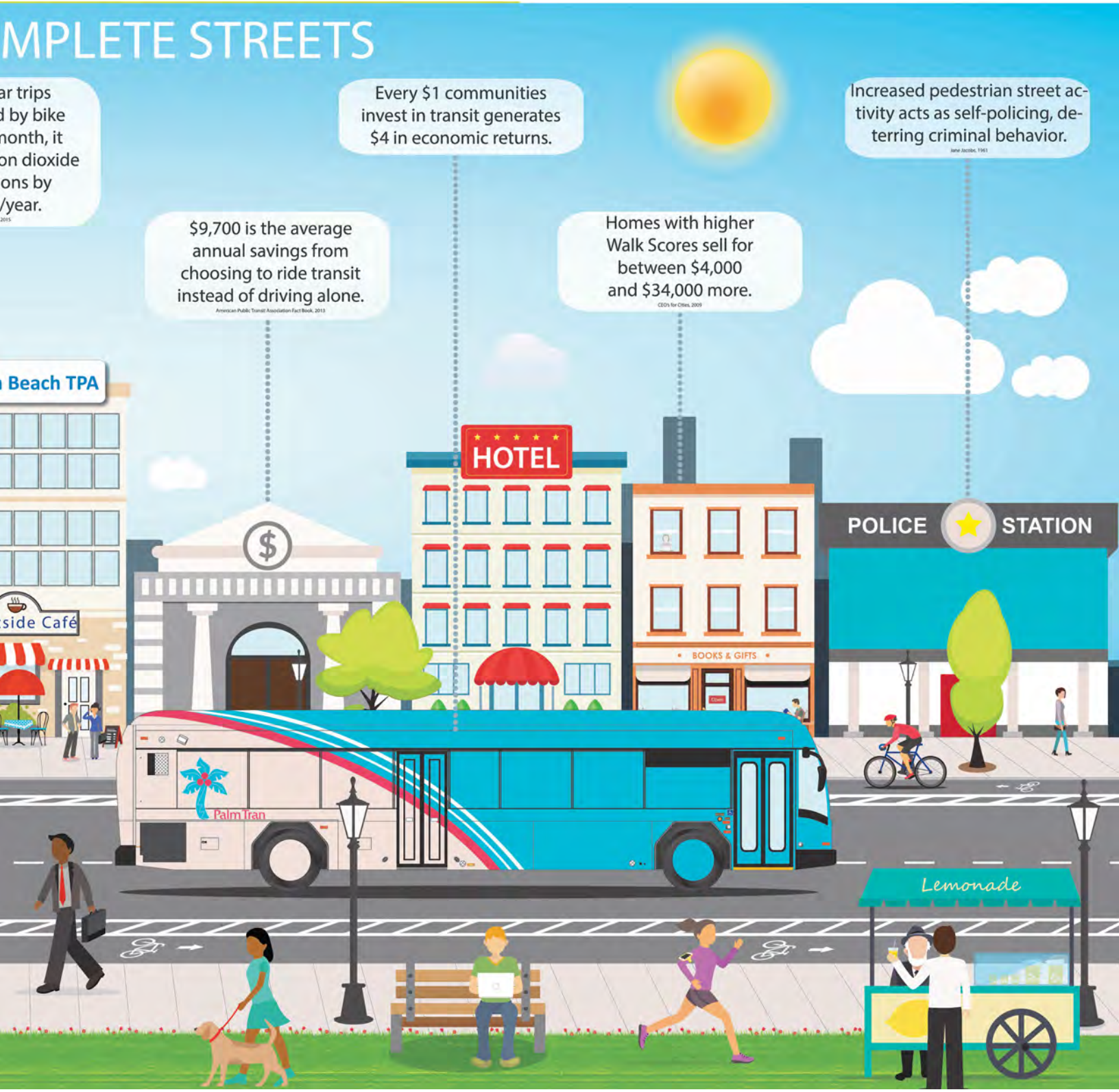
US-1 Multimodal Corridor Study

The TPA Governing Board approved the US-1 Multimodal Corridor Study in May 2018. The study examined the potential for new express bus service and, facilities to improve safety and connectivity for pedestrians and bicyclists along the corridor. The study extended 42 miles across 14 local municipalities and included a Health Impact Assessment (HIA) that helped form recommendations to community health impacts. The TPA is currently prioritizing transit signal priority (TSP), premium bus shelters, and roadway reconstruction in various locations to position the corridor for future enhanced transit service and additional multimodal facilities.



Local Initiatives Program (LI)

The LI program was created during the *Directions 2040* adoption. Approximately $20 million is available annually in federal funds for locally initiated transportation projects. As of 2019, the program includes 37 projects, with the first few projects currently under construction. The program is open to a variety of eligible project types with applicant submittals incorporating Complete Streets, transit, pedestrian and bicycle infrastructure, and signal operations.



Complete Streets

The TPA Governing Board adopted a Complete Streets Policy in March 2016 and the Complete Streets Design Guidelines in October 2017. Complete Streets is a nationally recognized term referring to roadways that are designed and operated to enable safe access for all road users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. The TPA aims to achieve a safe and convenient transportation network by implementing Complete Streets within the context of the county's diverse communities. The TPA promotes Complete Streets by prioritizing funding for Complete Streets infrastructure projects, providing educational opportunities, and encouraging municipalities to adopt and implement local Complete Streets policies.

Vision Zero Action Plan

With a focus on safety as a key tenet of the TPA's vision, the Governing Board adopted a target of zero traffic-related fatalities and serious injuries in 2018 and 2019. The TPA Governing Board embraced Vision Zero, an international movement that considers all traffic-related fatalities and serious injuries as preventable and unacceptable. The TPA Governing Board formally adopted a Vision Zero Action Plan in 2019 to move towards the target of zero traffic-related fatalities and serious injuries.

Congestion Management Process (CMP)

The CMP involves routine monitoring of all modes of travel and activity on the transportation network and manages the system's performance by identifying and advancing effective solutions that mitigate adverse impacts of congestion. Traditionally, the CMP has focused specifically on roadway capacity and travel time delays for vehicles. The TPA updated the CMP process in 2016 to include all modes of travel in response to *Directions 2040,* which placed a greater focus on the TPA's multimodal transportation goals.

Agency Rebranding

In December 2017, the Palm Beach TPA celebrated its 40th anniversary and formally rebranded and adopted a name change to Palm Beach Transportation Planning Agency away from the Palm Beach Metropolitan Planning Organization. The TPA also adopted a new mission and vision statement to provide greater clarity on the agency's purpose.

PALM BEACH Transportation Planning Agency | 40TH ANNIVERSARY

Public-Private Partnership to Increase Safety at Railroad Crossings

Virgin Trains USA, formerly known as Brightline – the only private, intercity passenger rail service in the United States - began operating between Miami, Fort Lauderdale, and West Palm Beach in 2018. The service operates on the Florida East Coast Railway (FEC) corridor, crossing dozens of roadways and heavily populated coastal communities. To increase safety and quality of life for these communities, the TPA funded crossing safety improvements allowing municipalities to establish designated quiet zones, reducing the requirements for train horns along the corridor. The TPA has funded additional safety improvements above the requirements for quiet zones at many locations. With the future expansion of Virgin Trains USA to Orlando, the TPA is collaborating with northern communities in Palm Beach County to fund a safe operation of the future service.

Safe Streets Summit (SSS)

The SSS is a collaborative effort between the Broward MPO, Miami-Dade TPO, and Palm Beach TPA to provide a local yet regionally connected approach to prioritizing Complete Streets and implementing a safe, efficient and connected multimodal transportation system throughout South Florida.

- **2017** – Palm Beach TPA joined the Miami-Dade TPO and Broward MPO in organizing the 4th Annual SSS in Sunrise, Florida. The theme was "Building Blocks for Complete Streets."
- **2018** – Palm Beach TPA hosted the 5th Annual SSS in downtown West Palm Beach for the first time outside of Broward County. The theme was "Love Your Streets."
- **2019** – Miami-Dade TPO hosted the 6th Annual SSS and the theme was "Safe Streets, Smart Streets" bringing a focus on the implementation of innovative transportation efforts that address challenges of the future.

The TPA is working collaboratively with the Broward MPO and Miami-Dade TPO to organize the 7th Annual SSS in February 2020 that will be hosted by the Broward MPO in Fort Lauderdale.

CHAPTER 2

Where Are We?

Population and Employment

Palm Beach County is comprised of 39 municipalities with large swaths of unincorporated areas, and diverse development patterns that range from agricultural communities in the Glades Area to low-density suburban-gated communities in central Palm Beach County and high-density development in more urbanized communities.

Palm Beach County is home to 1.43 million residents, with a total of 6.1 million residents in the greater Miami-Fort Lauderdale-West Palm Beach metropolitan area, making it the 7th largest metropolitan area in the country. The county continues to grow rapidly, adding 14,000 new residents per year, and requiring roughly 5,600 additional households annually to meet demand[1]. Table 1 shows the 2017 population by jurisdiction.

Table 1. 2017 Population by Jurisdiction

Jurisdiction	2017 Population[2]
West Palm Beach	112,906
Boca Raton	93,417
Boynton Beach	76,756
Delray Beach	66,580
Wellington	62,304
Jupiter	62,100
Palm Beach Gardens	53,800
Greenacres	39,568
Lake Worth Beach	38,257
Royal Palm Beach	37,934
Riviera Beach	35,431
Palm Springs	23,448
Belle Glade	17,589
North Palm Beach	12,596
Lantana	11,397
Lake Park	8,829
Palm Beach	8,295
Pahokee	5,909
Tequesta	5,857
South Bay	5,174
Highland Beach	3,654
Juno Beach	3,427
Lake Clarke Shores	3,422
Loxahatchee Groves	3,384
Hypoluxo	2,741
Haverhill	2,096
Mangonia Park	2,045
Atlantis	2,021
Ocean Ridge	1,827
South Palm Beach	1,400
Palm Beach Shores	1,217
Gulf Stream	1,005
Briny Breezes	610
Manalapan	425
Jupiter Inlet Colony	409
Golf	257
Glen Ridge	223
Cloud Lake	137
Westlake *new 2016	29
Unincorporated Area	624,941

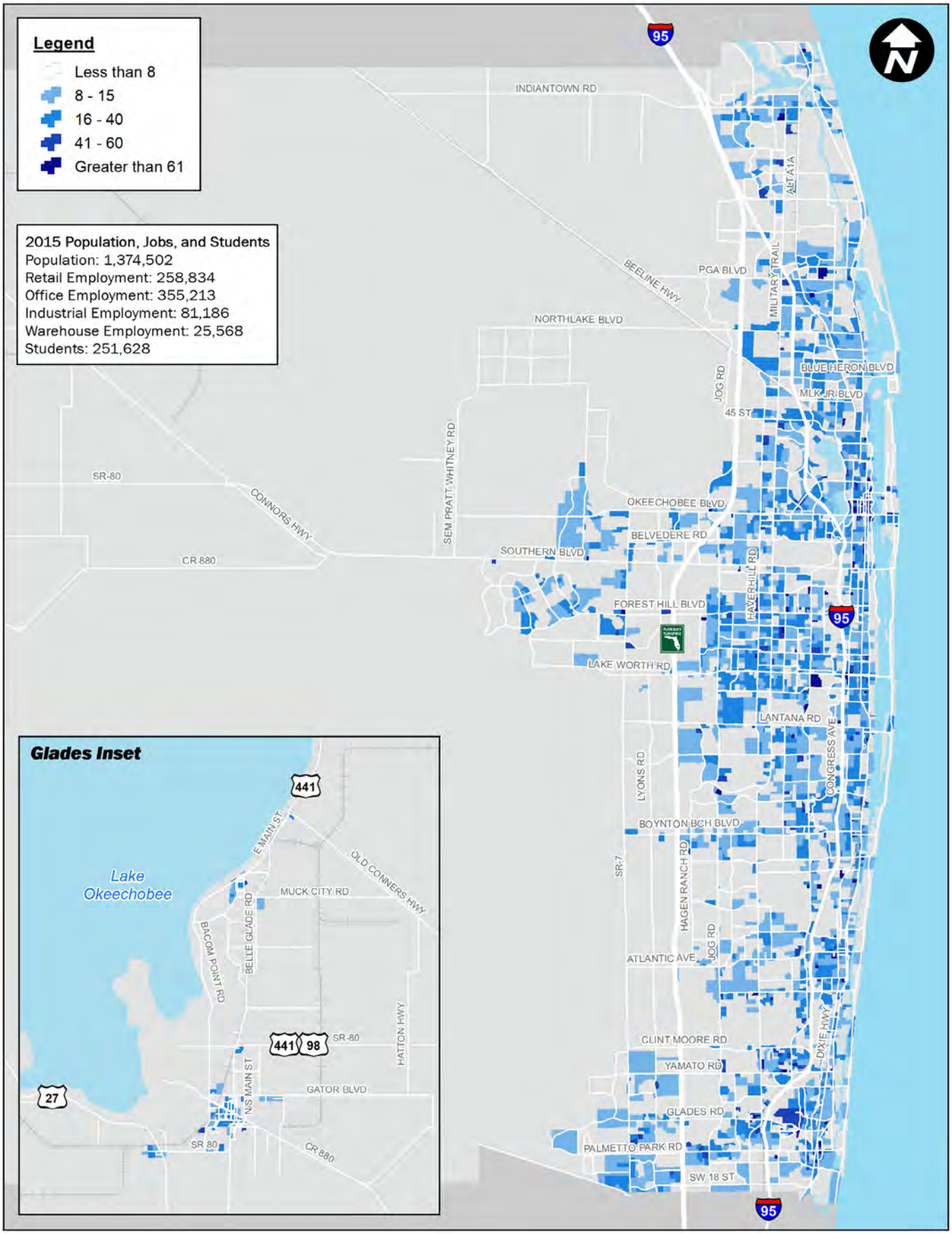
[1] Florida Bureau of Economic and Business Research, Household Estimates, 2010-2017

[2] Florida Bureau of Economic and Business Research, 2017

Walk to School Day 2018

Palm Beach County also serves as a major employment and visitor destination, employing approximately 565,000 people and hosting 7.89 million visitors in 2017. There is a significant workforce population that resides in Palm Beach County, and although many residents commute to Broward and Miami-Dade counties, Palm Beach County has experienced a net increase in employment of its working residents. Most residents live and work within the county, while the neighboring counties of Broward, Martin, and St. Lucie send more workers to Palm Beach County than they receive back. Map 1 displays 2015 population and job density (people per acre)[3].

[3] TPA Socioeconomic Estimates, 2015



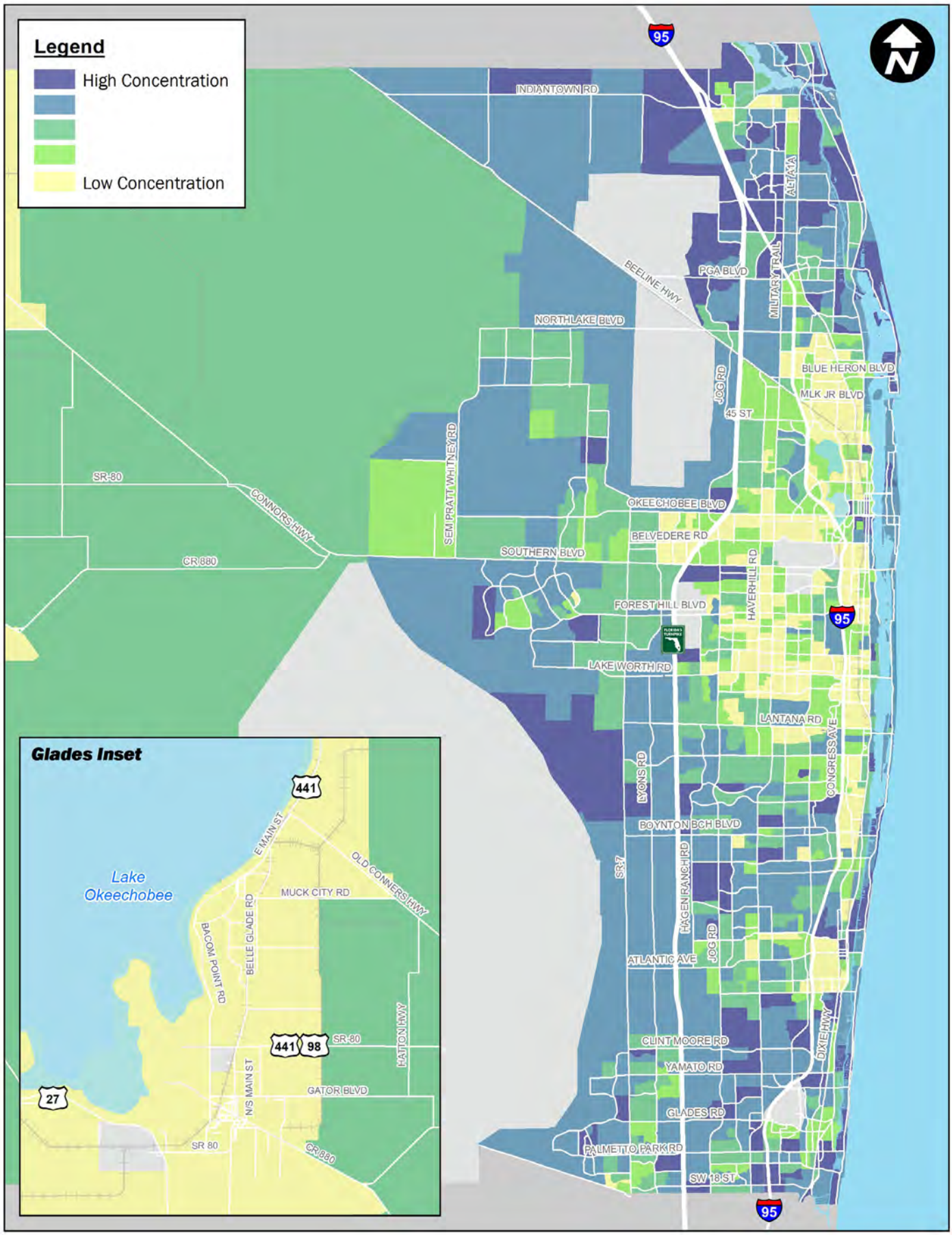
Map 1. 2015 Population and Job Density (People Per Acre)

Palm Beach County residents are diverse, almost the entirety of the recent population growth (95%) is from in-migration. Rapid growth that is diverse generates extensive needs in the transportation planning process. Key indicators are listed below.

- Almost half (47%) of residents are minority, with 22% of residents identifying as Hispanic. With the growth in minority groups comes an increase in other languages, as 33% of residents speak a language other than English, and 13% of the total population speak English less than "very well."
- Residents are transient with only 30% of residents born in Florida, while 26% were born outside of the United States.
- Palm Beach County contains a wide-array of age cohorts. The county is moderately equal in all age ranges, with 19% below the age of 18 and 23% aged 65 and above. Diverse transportation options allow for a system to benefit all citizens, regardless of age.
- The elderly population is growing. The median age, currently at 44.8, is expected to rise in the future. A growing transit-dependent age group will require mobility options. This is particularly important for elderly citizens susceptible to social isolation, as 26% of residents aged 65+ live alone.
- Residents spend 66% of their household income on housing and transportation. Housing costs within the county average 40% and transportation 26%, while a common rule of thumb for a combined cost is no more than 45%.
- Transportation mode split and travel time to work has remained consistent since 2000. Significant road network investments made within the county over the past few decades have allowed car travel to remain as the preferred transportation option for most residents countywide.

Focused attention is given to traditionally underserved citizen communities. Traditionally underserved populations are individuals who have historically been underrepresented, received inequitable treatment or funding, or experience a greater barrier to participation in the transportation planning process. Traditionally underserved is defined as race and ethnic minorities, limited English proficiency (LEP), persons with disabilities, transit-dependent (zero-vehicle households), and citizens aged 65 and older[4]. Map 2 provides an index of traditionally underserved communities within the county[5]. Darker shaded areas have a higher index of traditionally underserved groups compared to other areas within the county.

[4] National Cooperative Highway Research Program, Report 710
[5] TPA Analysis of American Community Survey (ACS) 5-Year Estimates, 2013-2017



Map 2. Traditionally Underserved Population Index

CENSUS Summary Trends

SUMMARY

1,433,417 population
1,131,191 in 2000

538,668 households
474,179 in 2000

565,660 employees[a]
499,688 in 2001

7,890,000 visitors[b]
no data in 2000

RACE & ETHNICITY

73.5%	22%	19.2%	2.7%	2.5%	2.0%
White	Hispanic or Latino (any race)	Black or African American	Asian	Some other race	Two or more races

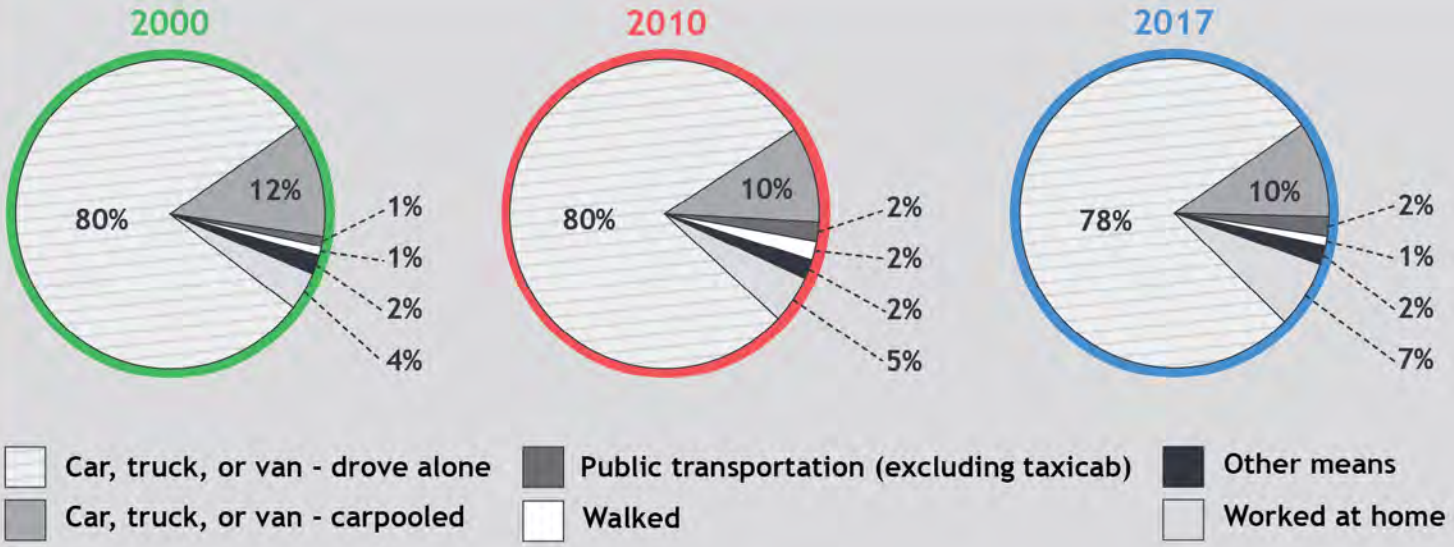
TRANSPORTATION INDICATORS

12.7% persons with a disability
21.2% in 2000

5.8% households without a vehicle
7.9% in 2000

11.7% in poverty
9.9% in 2000

TRAVEL TO WORK



Source: US Census Bureau, Decennial Census and American Community Survey 1-Year Estimates unless noted
[a] Bureau of Labor Statistics, Quarterly Census of Employment and Wages
[b] Discover the Palm Beaches
[c] Housing and Transportation Affordability Index 2017

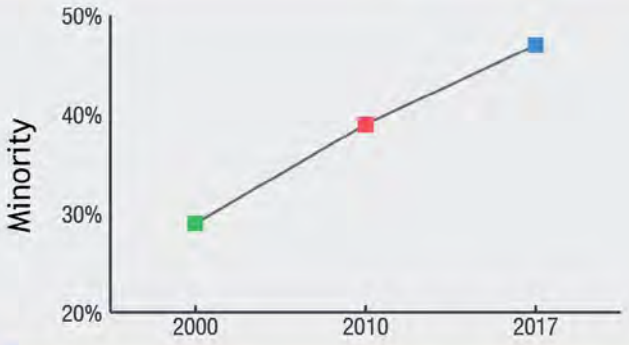
LANGUAGE

33%
speak a language other than English

22% in 2000

7.3%
speak English "not well" or "not at all"

4.9% in 2000



AGE

44.8
median age

41.8 in 2000

26%
age 65+ who live alone

26% in 2000

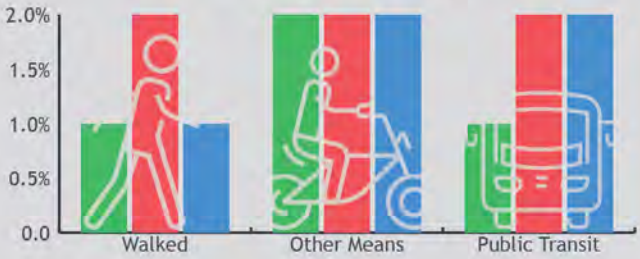
40%
housing costs as a percent of income[c]

no data in 2000

26%
transportation costs as a percent of income[c]

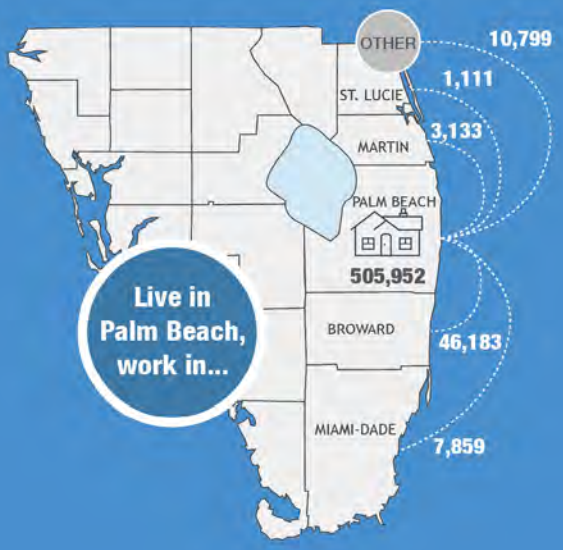
no data in 2000

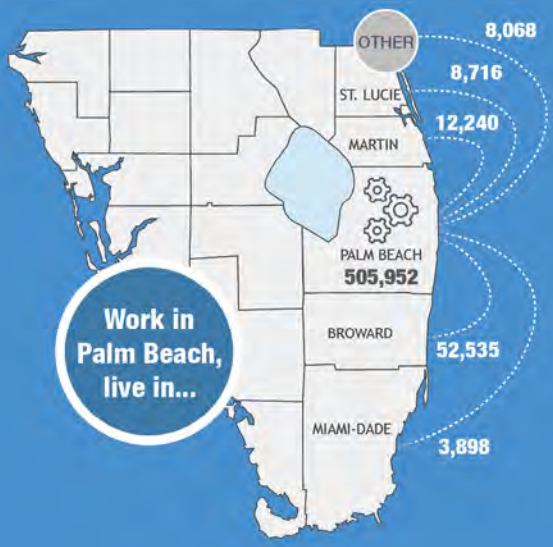
Commuting Mode Split



Average Travel Time

2000 2010 2017





County to County Commuting, average from 2009-2013

Community Health

Transportation investments have the potential to both positively and negatively impact community health. Determinants that can potentially be impacted and modified by transportation-related interventions include the following:

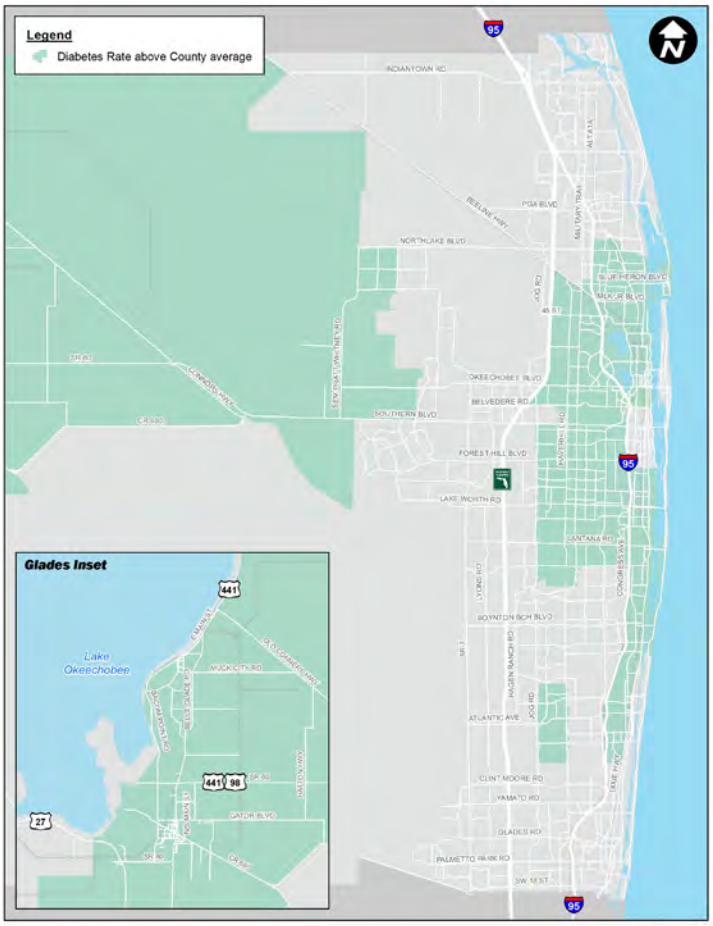
- Addressing the lack of active transportation options, such as sidewalk connections and bicycle facilities
- Barriers to accessing transportation
- Increased traffic-related pollution
- Access to health food stores in food deserts
- Increased stress associated with barriers in transportation

Preventable health outcomes of diabetes, asthma, and congestive heart failure were analyzed on the degree their rates correlate with social determinants of health, in particularly, poverty, race/ethnicity, and food deserts. The results indicate zip codes with higher percentages of black populations or higher percentages of people in poverty exhibit the greatest adverse health outcomes. Furthermore, areas considered food deserts were linked with higher rates of diabetes. Map 3, Map 4, and Map 5 display the zip codes with diabetes, asthma, and congestive heart failure rates above the Palm Beach County mean.

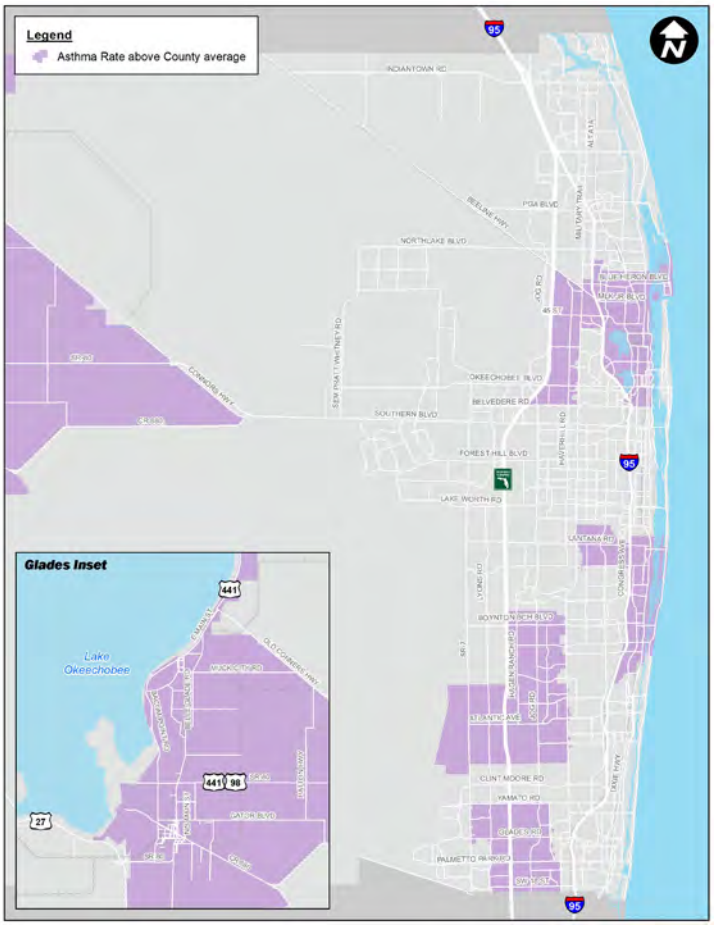
One of the ways to incorporate health into transportation planning is to conduct a HIA to evaluate the potential health effects of transportation policies, plans, or projects on the community and to help integrate these considerations into the decision-making process. A HIA is a forward-looking, evidence-based tool used to inform stakeholders and policy makers about the potential health effects of proposed projects and policies and to identify options for maximizing potential health benefits and minimizing potential harm. The *US-1 Multimodal Corridor Study* conducted by the TPA included a HIA. The outcomes of the *US-1 Multimodal Corridor Study* included proposed roadway modifications and premium transit stop locations to maximize safety and access to healthy food locations, schools, healthcare facilities, and households that have access to transit, especially in areas with the greatest need.

"When health is considered among the goals of transportation policy and land use planning, the resulting policy can help reduce air pollution; prevent traffic injuries and deaths; and lower obesity, diabetes, cardiovascular disease, and cancer rates. Such outcomes can happen when roads are designed to be pedestrian-, cyclist- and public transit-friendly. Roads that are designed for people as well as for cars and trucks can increase physical activity, enhance community quality of life, and increase access to community services. How can public officials, community members, and planners ensure that future transportation policies consider health? One way is to use a health impact assessment (HIA). Transportation HIAs help policymakers see and address the potential health effects of a proposed transportation project, plan, or policy before it is built or implemented. A transportation HIA can ensure that all people, regardless of age, income, or ability, are able to move about their 'community easily and safely."

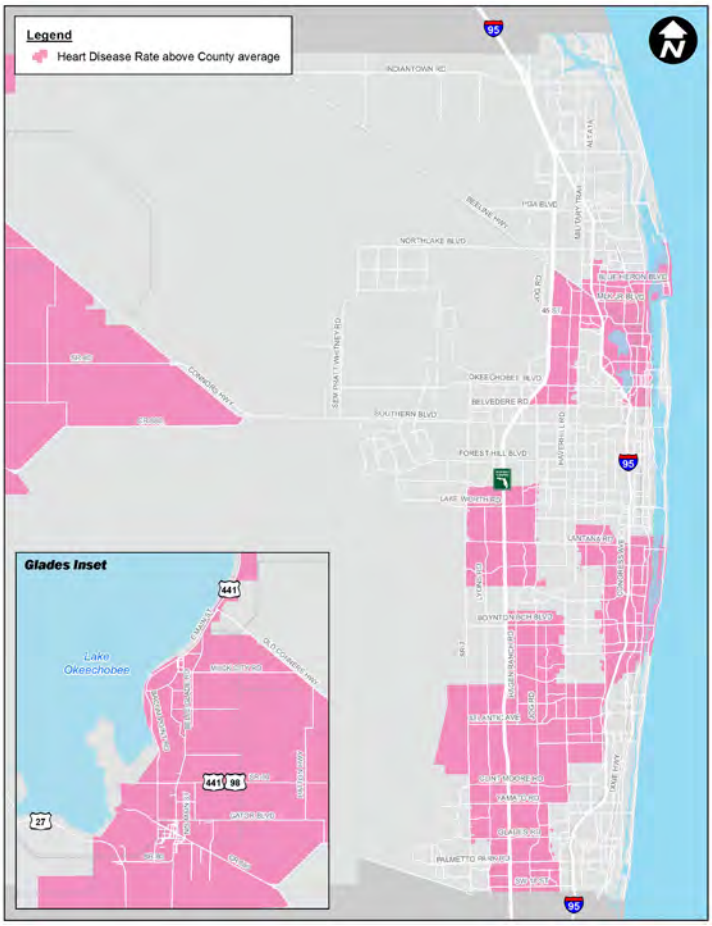
Centers for Disease and Control (CDC)



Map 3. Community Health - Diabetes



Map 4. Community Health - Asthma



Map 5. Community Health - Heart Disease

Safety/Vision Zero

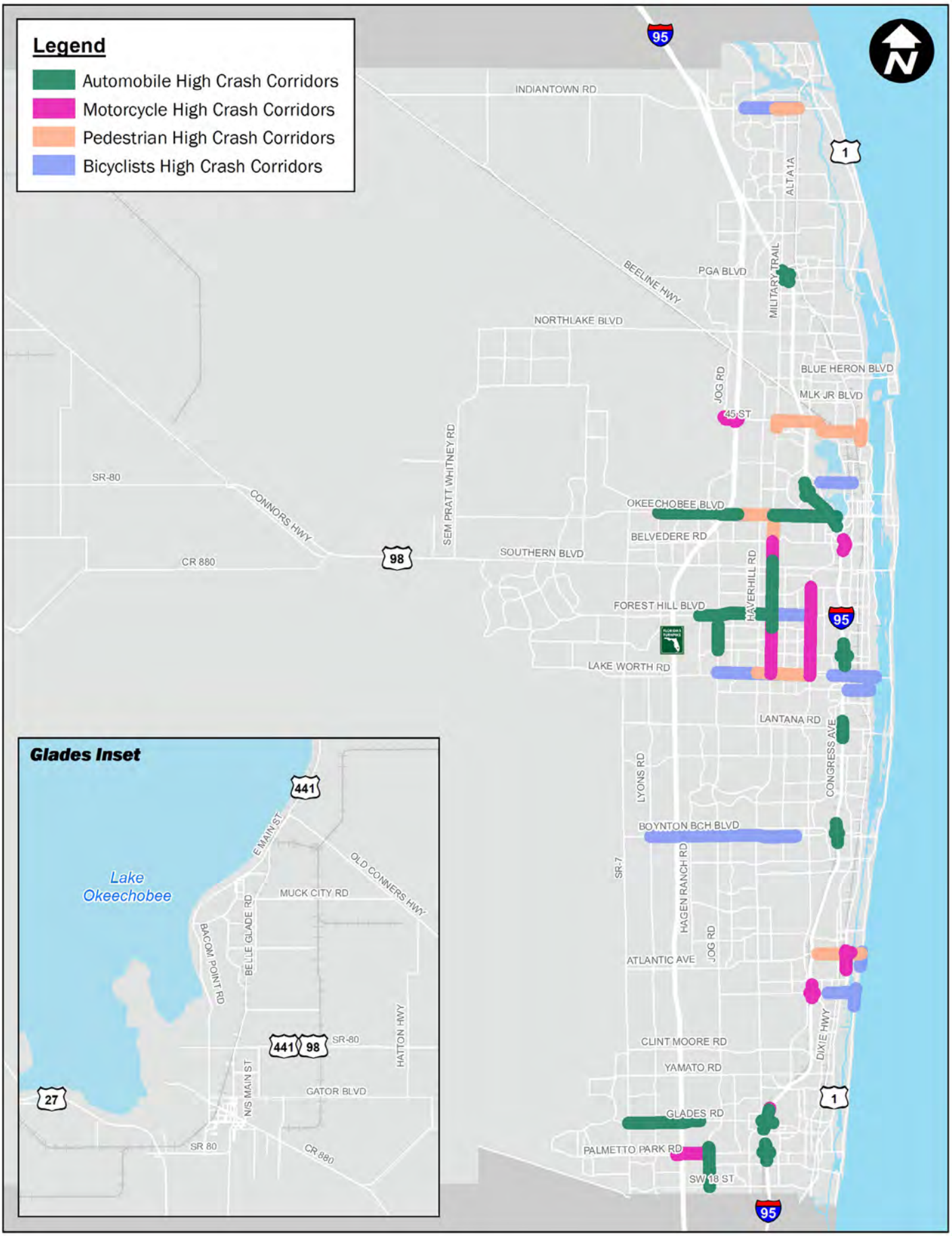
The Palm Beach TPA adopted a Vision Zero Action Plan in April 2019 to promote a culture of safety grounded in six key principles.

- Traffic-related fatalities and serious injuries are preventable and unacceptable
- Human life takes priority over mobility
- Human error is inevitable, so the transportation system should allow for it to happen without death or serious injury
- A system-level approach to safety should be adopted to effect change
- Safe human behaviors, education, and enforcement are essential contributors to a safe system
- High speed is a primary cause of traffic death and serious injury; it should be managed with sensitivity to vulnerable road users

Crash data was obtained from FDOT's Crash Analysis Reporting System (CARS) for the years 2011 through 2017. There were 6,670 fatal and serious injury crashes in Palm Beach County. These crashes resulted in over 1,000 people dying and almost 7,200 people suffering from serious injuries. Vulnerable users such as motorcyclists, bicyclists, and pedestrians accounted for less than 3% of the commute mode share in the county, however, they accounted for more than 30% of all fatal and serious injury crashes.

High crash locations for each mode (automobile, motorcycle, pedestrian, and bicyclists) is a cellular network and the densest crash clusters. The cellular network consists of a 0.25 mile wide hexagonal grid and was geospatially overlaid on the mapped fatal and serious injury crashes. The high crash locations represent either an intersection, a roadway segment, or a small network of parallel streets that exhibited a significant number of crashes within close proximity.

For more information, visit Vision Zero Action Plan Weblink: https://www.palmbeachtpa.org/safety



Map 6. Countywide High Crash Corridors, 2011-2017

Infrastructure

Pedestrian Facilities

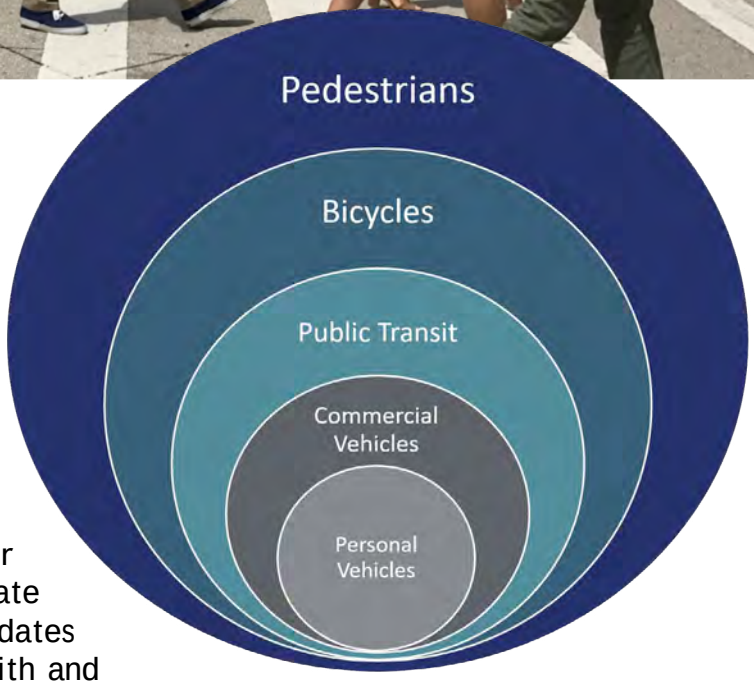


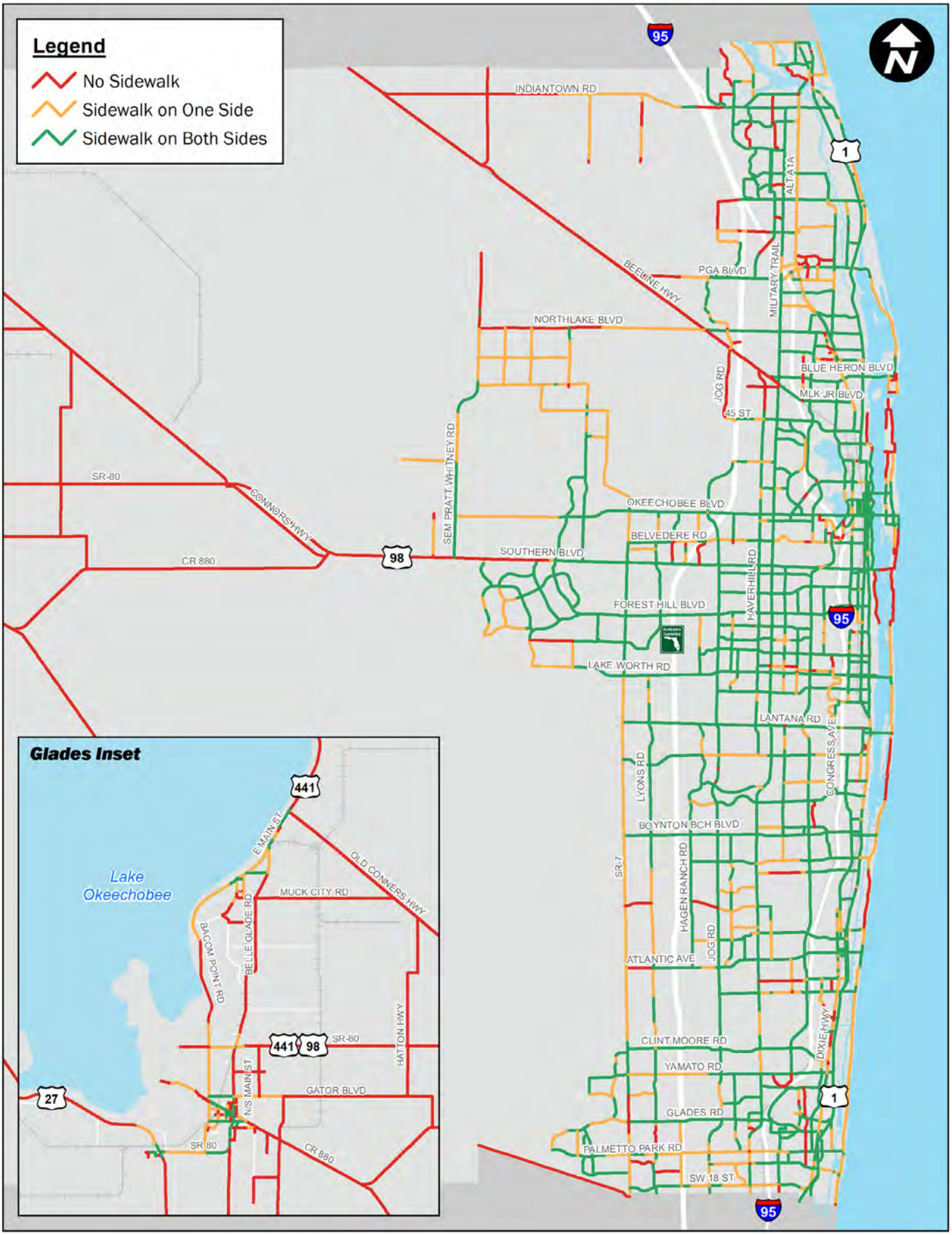
Figure 1. Transportation User Considerations

The TPA's Complete Streets Policy recognizes that every trip begins and ends as a pedestrian and follows the Transportation User Considerations, shown in Figure 1. The most vulnerable users are considered first during project design starting with pedestrians and followed by bicycles, public transit users, commercial vehicles, and finally personal motor vehicles. The objective of this approach is to create a connected network of facilities that accommodates each mode of travel in a manner consistent with and supportive of each local community. Providing safe and connected transportation facilities for users of all ages and abilities is essential for enabling everyone in a community, regardless of financial means and or physical ability, to have access to healthy foods, healthcare, jobs, education, etc. This also promotes an improved quality of life, including encouraging physical activity, social interaction, mental health, and safety.

Palm Beach County's existing pedestrian facilities include 1,164 miles of sidewalks. The TPA's Complete Streets Design Guidelines as well as FDOT and Palm Beach County's minimum standard for sidewalks is 6' wide; however, some existing sidewalks are as narrow as 4'. Map 7 displays the county's existing sidewalk network on Federal Aid Eligible roadway.

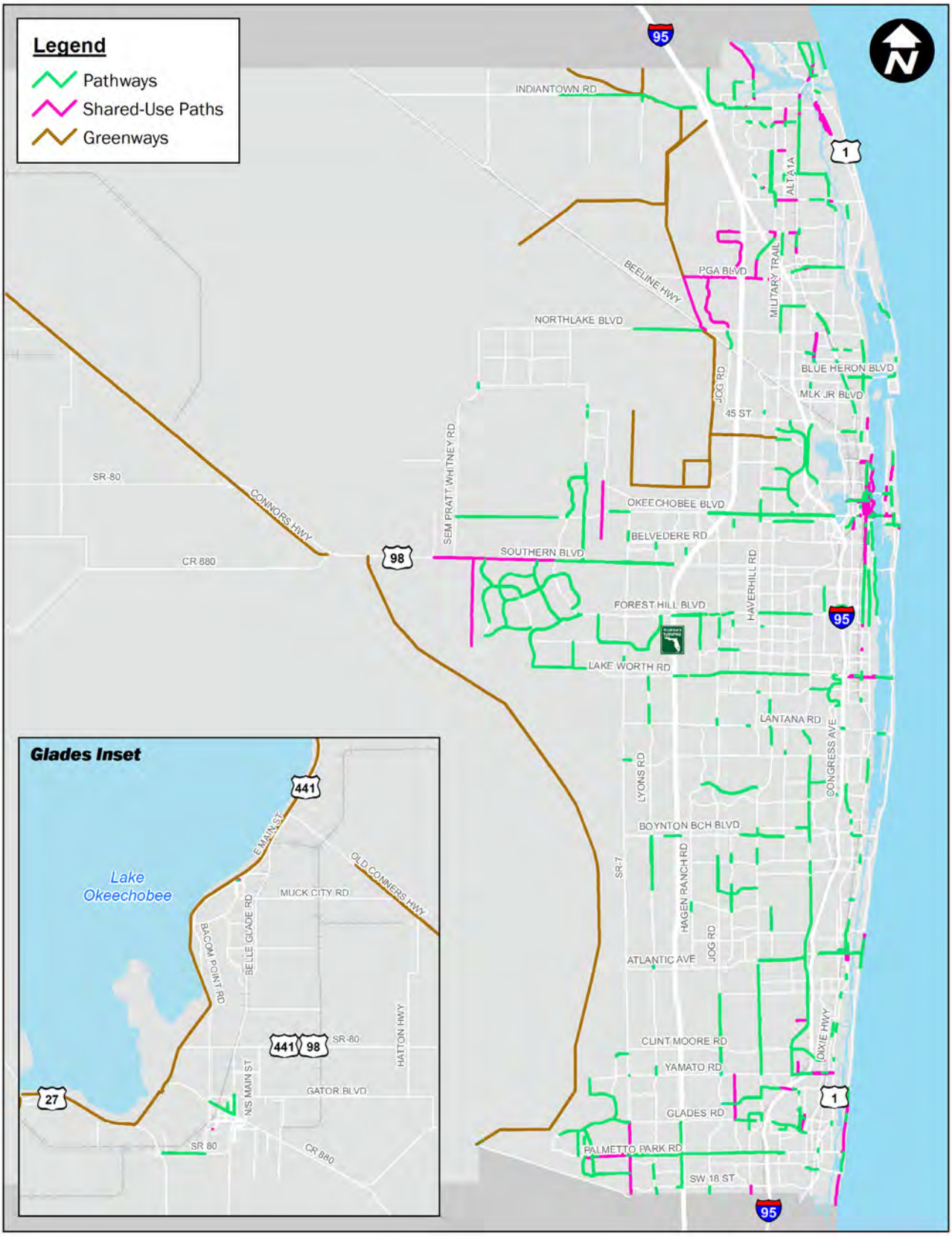
1. No sidewalk
2. Sidewalk on one side of the roadway
3. Sidewalk on both sides of the roadway

Of the existing roadway network, about 52% have a sidewalk on both sides of the roadway, 22% have a sidewalk along one side of the roadway, and 26% have no sidewalk at all.



Map 7. Existing Sidewalk Facilities

Included in the pedestrian network are wider paved paths referred to as pathways (8' to <10' feet) and shared-use paths (10'+) that can be used by both pedestrians and bicyclists. In addition, greenways (unpaved multi-use trails) are also considered part of the pedestrian network. Map 8 displays the county's existing pathways (294 miles), shared-use paths (62 miles), and greenways (155 miles).



Map 8. Existing Shared Use Paths, Pathways, and Greenways

Lack of connected pedestrian facilities can hinder a person's ability to safely access destinations, such as a transit stop, school, employment, or healthcare facility. In 2018, the TPA conducted an analysis of School Hazardous Walking Conditions, per Section 1006.23 Florida Statutes for all public elementary schools in Palm Beach County and found that there were 793 miles of school hazardous walking conditions. These types of conditions not only create an unsafe environment for children to walk to school, but also discourages walking, which may result in more vehicle trips and congestion.

Figure 2. Bicycle Facility Types

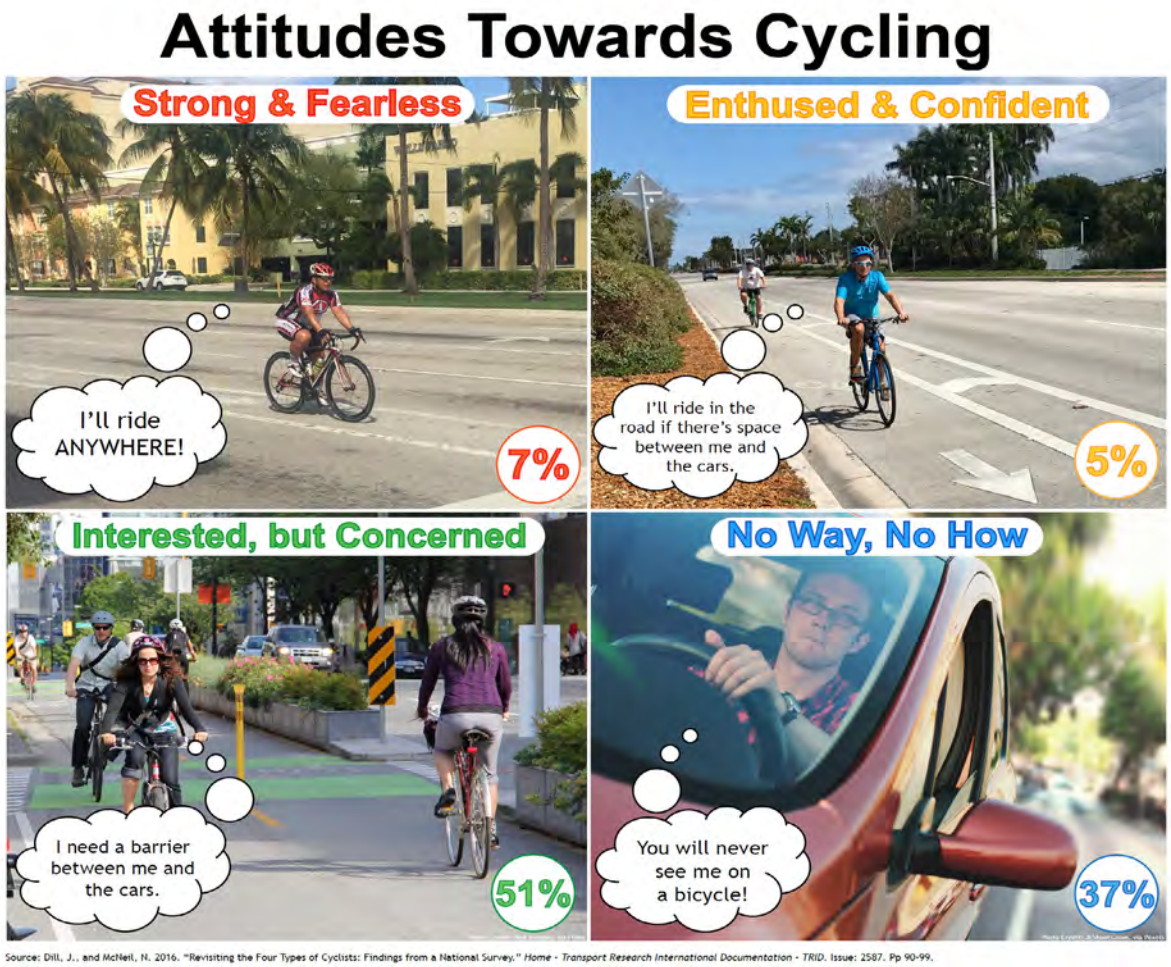
Bicycle Facilities

In Florida, a bicycle is legally defined as a vehicle and the bicyclist is a driver per Section 316.2065, F.S. Bicyclists have the same rights to the roadways and must obey the same traffic laws as the drivers of other vehicles. These laws include stopping at stop signs and red lights, riding with the flow of traffic, using lights at night, yielding the right-of-way when entering a roadway and yielding to pedestrians in crosswalks.

Palm Beach County has an array of roadway bicycle facilities including shared lane markings (sharrows) and undesignated, designated, and buffered bicycle lanes. In addition, there are off-road facilities including shared use paths and greenways. These facilities are illustrated and further defined in Figure 2. Bikeshare facilities currently exist in West Palm Beach and several other local municipalities are exploring their implementation.

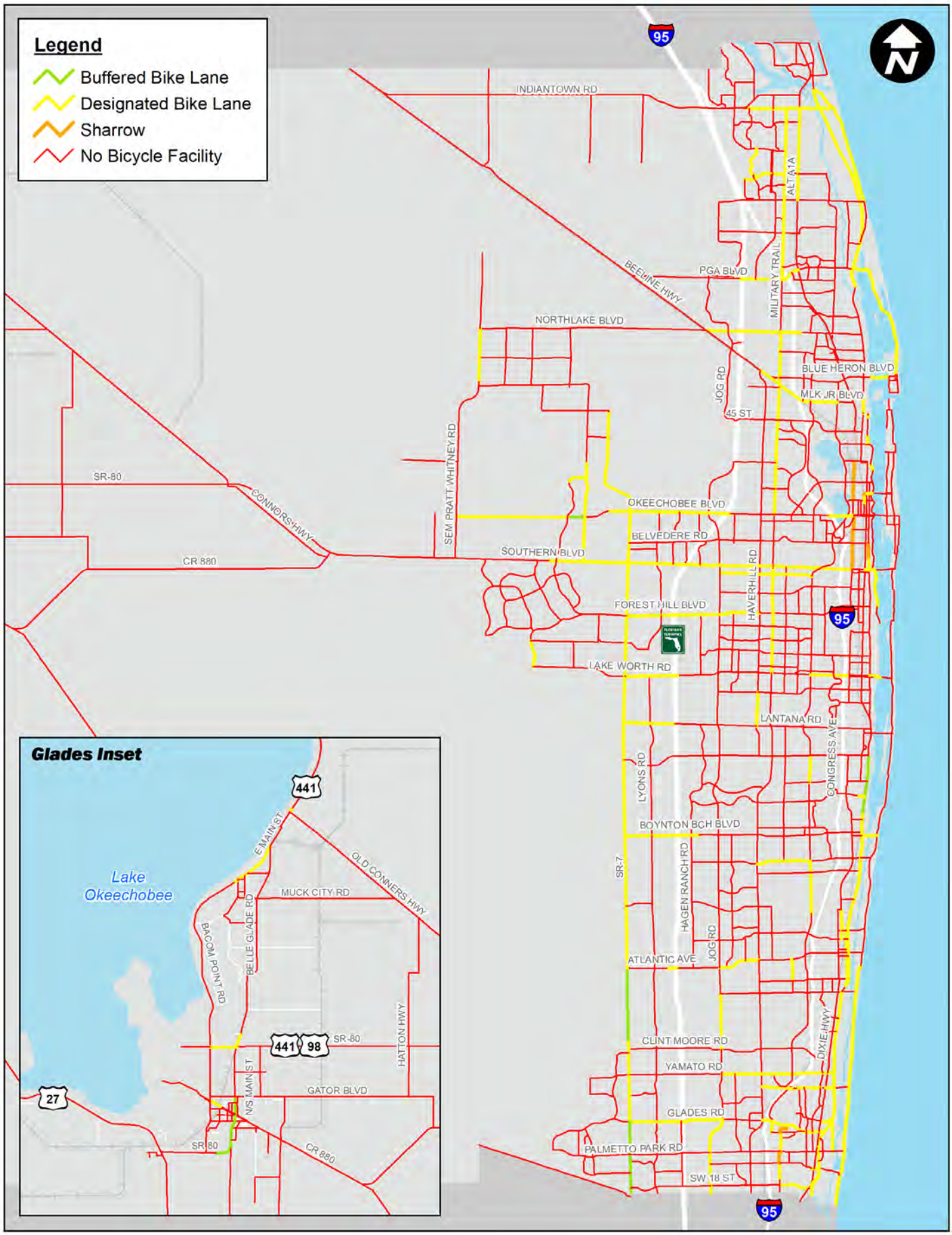
Since *Directions 2040*, FDOT adopted a *Complete Streets Policy* which has been integrated into FDOT's internal manuals, guidelines, and related documents governing the planning, design, construction, and operation of transportation facilities. In addition, FDOT prepared a Complete Streets Implementation Plan, Context Classification Guide, and FDOT Design Manual (FDM) that consider a context-sensitive approach to accommodate pedestrians, bicyclists, and transit users in urban and suburban areas. As an example, for new roadway construction projects a 7-foot buffered bicycle lane is the standard. Palm Beach County Engineering Department updated their roadway typical sections to include designated and buffered bicycle lanes in 2018.

Separated bicycle facilities have gained interest locally as they provide more protection between bicyclists and motor vehicles on roadways and are preferred by most people according to a 2016 national survey: *Revisiting the Four Types of Cyclists: Findings from a National Survey* (Transportation Research Record, 2587: 90-99, 2016). The TPA's *Complete Street Design Guidelines* also recommends separated bicycle facilities to promote safety and encourage bicycling for people of all ages and abilities.



Source: Dill, J., and McNeil, N. 2016. "Revisiting the Four Types of Cyclists: Findings from a National Survey." *Home - Transport Research International Documentation - TRID*. Issue: 2587. Pp 90-99.

Palm Beach County's existing bicycle facility network on federal aid eligible roadways is displayed in Map 9. There are six (6) miles of sharrows, 267 miles of undesignated bicycle lanes, 200 miles of designated bicycle lanes, and 13 miles of buffered bicycle lanes.

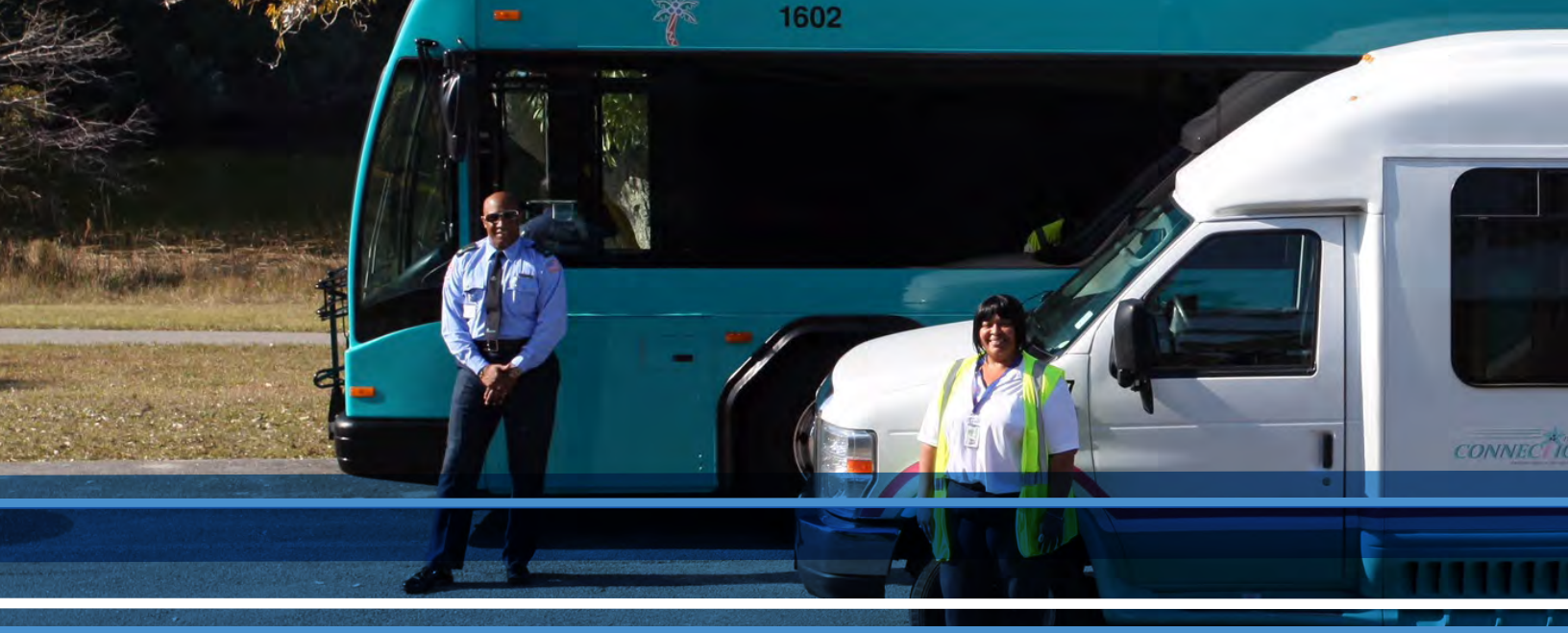


Map 9. Existing Bicycle Facilities

Unfortunately, the lack of existing bicycle facilities results in a disconnected bicycle network that is not inviting for users of all ages and abilities and can limit people's ability to safely and efficiently access destinations by bicycle. This is especially worrisome for those who have to bicycle as a means of transportation.

Connected bicycle facilities promote safety and can encourage people to choose bicycling as their mode of transportation, which in turn provides health and environmental benefits and can reduce the number of single-occupancy vehicles (SOVs) and congestion on roadways.

Bicycle facilities can also serve as first and last mile connections to transit stops.



Transit

Alternate modes of transportation are important to a successful transportation network as they increase mobility, decrease roadway congestion, and increase transportation options for the users of the network. The transit network in Palm Beach County consists of three (3) main transit systems: Palm Tran, Tri-Rail, and Virgin Trains USA. Map 10 displays the transit network in Palm Beach County, including bus and rail service as well as transit hubs, where three (3) or more transit routes connect. Local circulator systems, such as trolleys and shuttles, are also present throughout the county. The following section describes each type of existing transit service in more detail.

Palm Tran

Palm Tran is the local public transportation provider for Palm Beach County. Formerly known as CoTran, the public transit agency has been providing service since 1971. Palm Tran provides approximately 9 million trips annually, operating 117 buses across 32 routes that serve almost 3,000 bus stops.

Palm Tran Connection

Palm Tran Connection provides county-wide door-to-door service for residents who are unable to transport themselves and are dependent on others to obtain access to healthcare, employment, education, shopping, social activities, or other life-sustaining activities. Individuals are eligible for this service if they are disabled or elderly. Additionally, individuals qualify for the Transportation Disadvantaged Discount Bus Pass Program if their household income falls at or below 150% of the Federal Poverty Level.

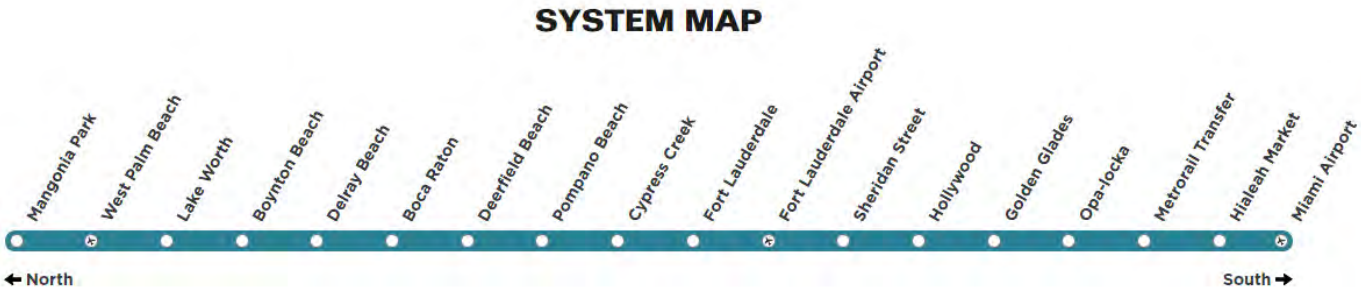
Go Glades Flex Route

Palm Tran is currently piloting a new flex-deviated service called "Go Glades" in the Belle Glade, Pahokee, and South Bay area. Go Glades operates four (4) different routes throughout the region, allowing individuals to board and arrive at fixed-route stops or at any location, predetermined upon time of scheduling the ride. Similar to Palm Tran Connection, rides must be scheduled in advance, giving Go Glades users a 2-hour timeframe to do so before their trip.

Tri-Rail

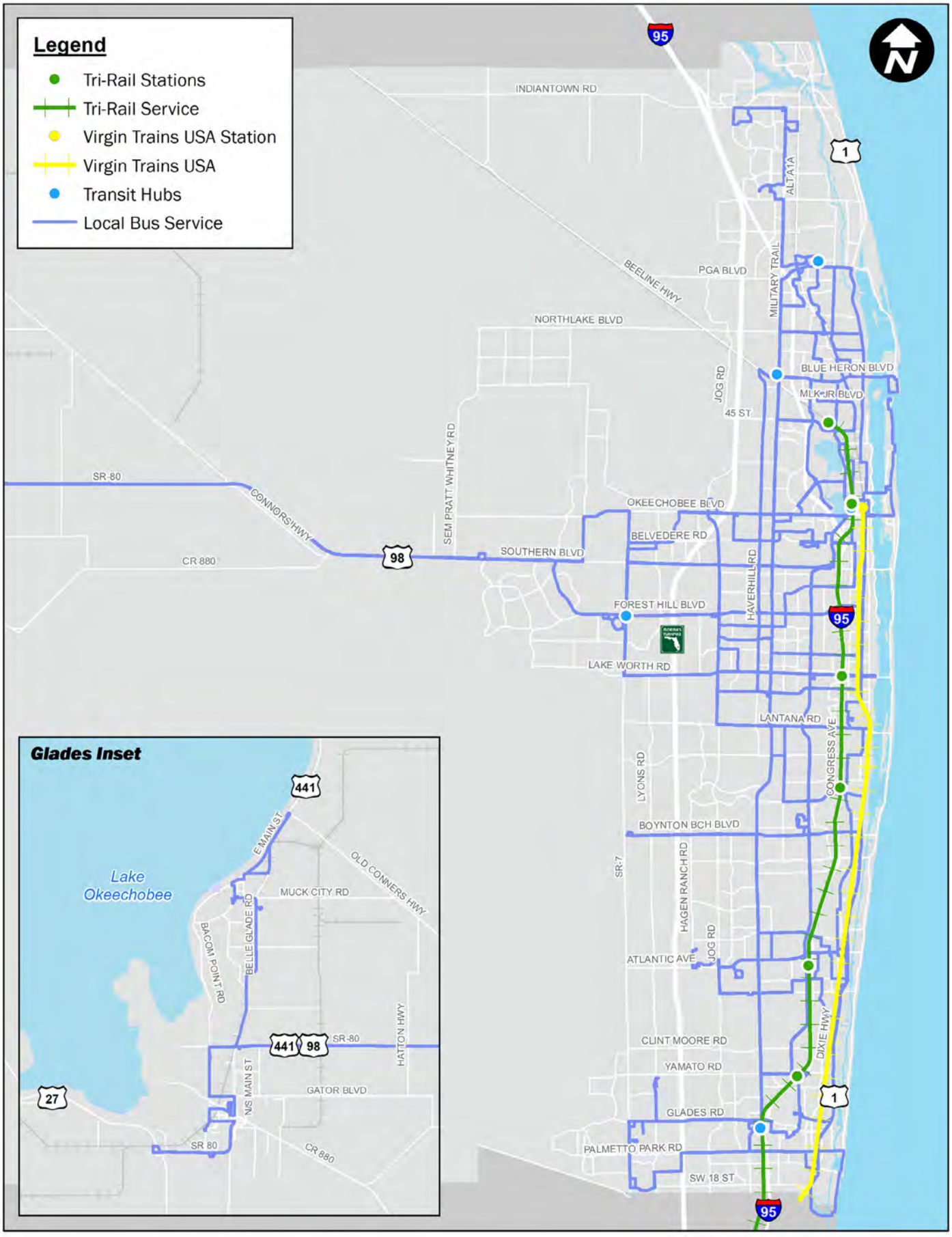
Tri-Rail is South Florida's regional commuter rail system that has been in operation since 1989. In 2003, SFRTA was created by Florida Statute to expand cooperation between Palm Beach, Broward, and Miami-Dade Counties. Today, Tri-Rail spans 71 miles along the SFRC from the Mangonia Park Tri-Rail Station in Palm Beach County to the Miami Intermodal Center next to the Miami International Airport in Miami-Dade County providing commuter rail service for over 16,000 passengers on an average weekday. There are a total of 18 Tri-Rail stations across the three (3) counties, including the following six (6) stations in Palm Beach County.

- Boca Raton
- Boynton Beach
- West Palm Beach
- Delray Beach
- Lake Worth
- Mangonia Park



Virgin Trains USA, formerly Brightline

Virgin Trains USA, formerly known as Brightline, is a private higher-speed intercity passenger rail service that currently serves three (3) stations connecting the downtown areas of Miami, Fort Lauderdale, and West Palm Beach along the FEC. This is the newest transit system serving South Florida since inception in early 2018. A one way trip from Miami to West Palm Beach takes approximately 60 minutes and a trip from Fort Lauderdale to West Palm Beach takes approximately 30 minutes. Virgin Trains USA is expanding their system from West Palm Beach to Orlando and expects to begin service in 2022.



Map 10. Existing Transit Service

Local Circulators

Local trolleys, shuttles, and circulators can be found in several communities across Palm Beach County.

- City of West Palm Beach has a local trolley service within the downtown area with three (3) routes that include stops located at Rosemary Square (formerly City Place), the Palm Beach Outlets, and the Intermodal Center.
- City of Delray Beach provides a Downtown Circulator between the Delray Beach Tri-Rail Station and Ocean Avenue at the beach.

In addition, Tri-Rail provides free shuttle service in Palm Beach County from the Boca Raton and Lake Worth stations that connect to major employers and other key destinations nearby. Tri-Rail also provides a free shuttle from their West Palm Beach station to and from the Palm Beach International Airport.

Park-and-Ride Lots

There are 13 park-and-ride lots throughout the county and FDOT maintains an annual inventory of the park-and-ride facilities[6] as shown in Table 2.

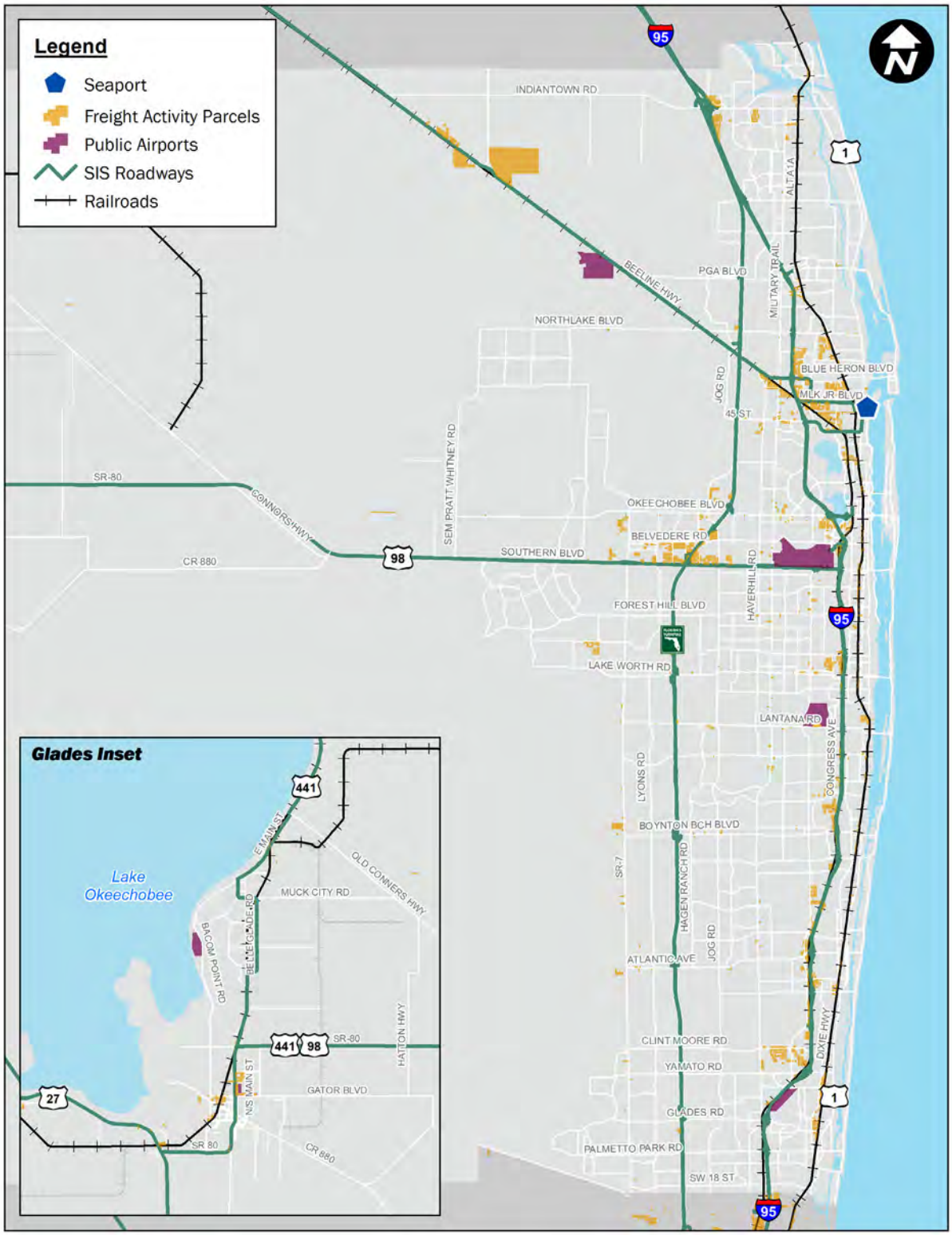
Table 2. Park and Ride Lots

#	Park and Ride Lot	Total Parking Spaces	Spaces Occupied	Ownership	Available Modes
1	Boca Raton Tri-Rail Station	164	108	SFRTA	Bus, Tri-Rail
2	Delray Beach Tri-Rail/ Amtrak Station	127	81	Palm Beach County	Bus, Tri-Rail
3	Boynton Beach Tri-Rail Station	319	110	SFRTA	Bus, Tri-Rail
4	Lake Worth Tri-Rail Station	310	153	FDOT	Bus, Tri-Rail
5	Lake Worth Road and Turnpike Milepost 93	76	29	FDOT, Turnpike Enterprise	Carpooling
6	Wellington	138	1	Village of Wellington	Bus
7	West Palm Beach	46	11	Unknown	Carpooling
8	Oakton Commons	42	8	Palm Beach Community Bank	Bus
9	West Palm Beach Tri-Rail/Amtrak Station	240	165	Palm Beach County, City of West Palm Beach	Bus, Tri-Rail
10	Mangonia Park Tri-Rail Station	265	144	DK Arena Inc	Bus, Tri-Rail
11	PGA Bouelvard and Turnpike Milepost 109	44	15	FDOT, Turnpike Enterprise	Carpooling
12	Indiantown Road and Turnpike Milepost 116	35	12	FDOT, Turnpike Enterprise	Carpooling
13	Indiantown Road and Central Bouelvard	30	6	Palm Beach County	Bus
	Total	**1839**	**843**		

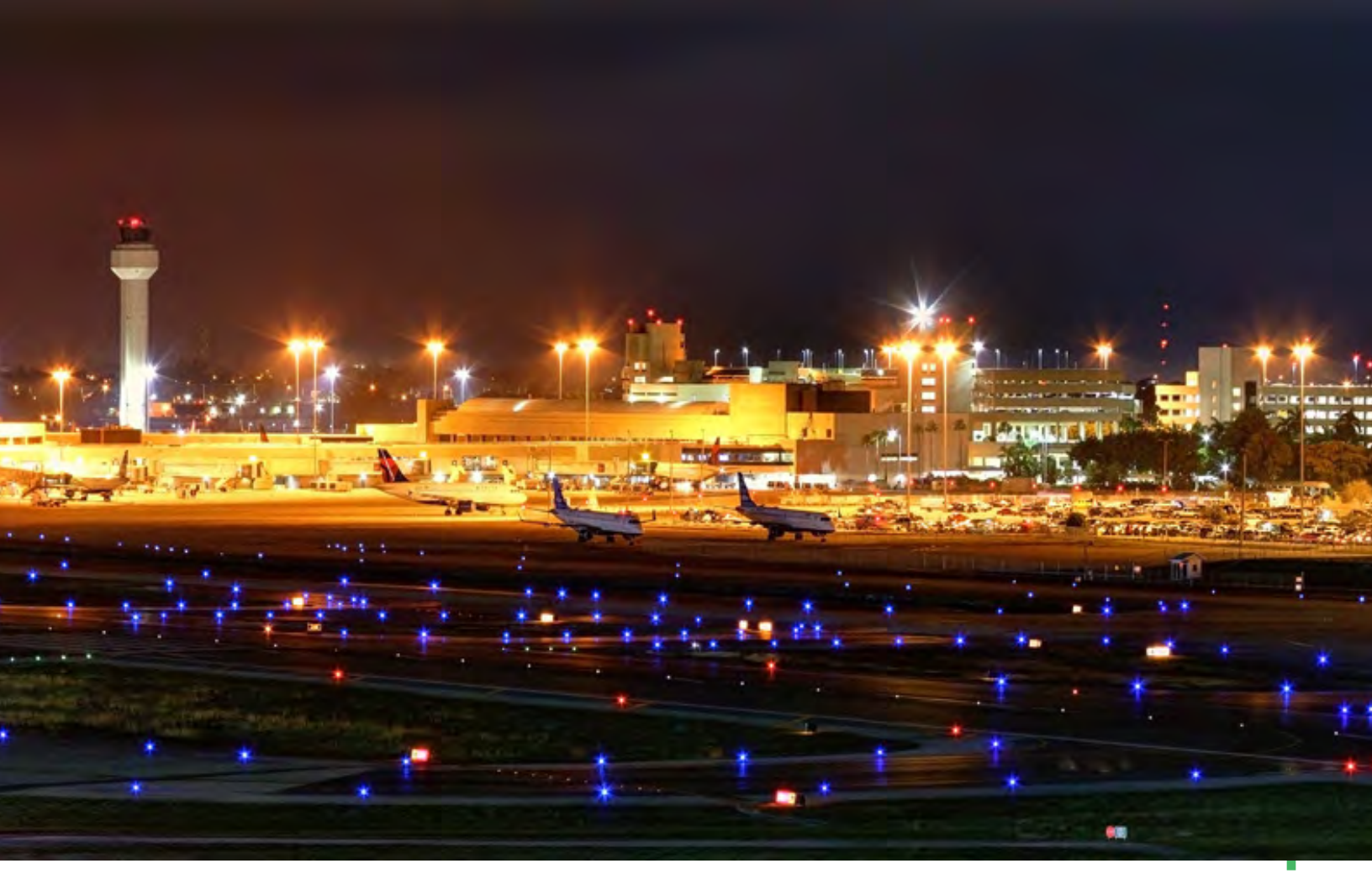
[6] FDOT District 4 2019 Park-and-Ride Inventory

Freight

Airports and the Port of Palm Beach provide both passenger and freight transport for Palm Beach County. Railway corridors serve local, regional, and statewide freight and passenger movement. In addition, the existing roadway system carries truck traffic transporting goods to and from the area. Shown in Map 11 are the freight facilities and parcels with freight-related activities such as warehouses, distribution centers, light/heavy manufacturers, and packaging plants.



Map 11. Freight Facilities



Airports

Airports provide passenger and freight service and are an integral part of the Palm Beach County transportation system. The Palm Beach County Department of Airports operates the following four (4) airports.

- Palm Beach International Airport (PBI)
- Palm Beach County General Aviation Airport (F45) – reliever airport
- Palm Beach County Park Airport (LNA) – reliever airport
- Palm Beach County Glades Airport (PHK) – recreational airport

In addition to the Palm Beach County Department of Airports, there is the state-operated Belle Glade State Municipal Airport and the Boca Raton Airport, operated by the Boca Raton Airport Authority.

PBI is the center for all commercial air carrier service into Palm Beach County and is one of three (3) major airports serving the Miami-Fort Lauderdale-West Palm Beach metropolitan area. In 2018, a total of 13 airlines transported 3.2 million passengers through PBI, with JetBlue Airways (29%), Delta Airlines (26%), and American Airlines (19%) accounting for most of those passengers. PBI is served by two major cargo airlines - FedEx Express, the world's largest airline in terms of freight tons flown; and UPS Airlines, the third-largest cargo airline worldwide (in terms of freight volume flown).

Seaport

The Port of Palm Beach is an independent special taxing district, a sub-division of the State of Florida. Located in Rivera Beach, the port provides deep-water access to the Atlantic Ocean with a channel depth of 33 feet and connects to nearby freeways and the FEC railway. It is the fourth busiest container port in Florida and has the highest container volume per acre in the United States. The Port of Palm Beach handled a total of 292,000 shipping containers[7] in 2018. The largest types of cargo include sugar, diesel, molasses, and asphalt. Along with cargo shipping, it is also a cruise port, serving 462,533 passengers in 2018.

[7] Standard shipping container size is by TEU (Twenty-Foot Equivalent Units)

Railways

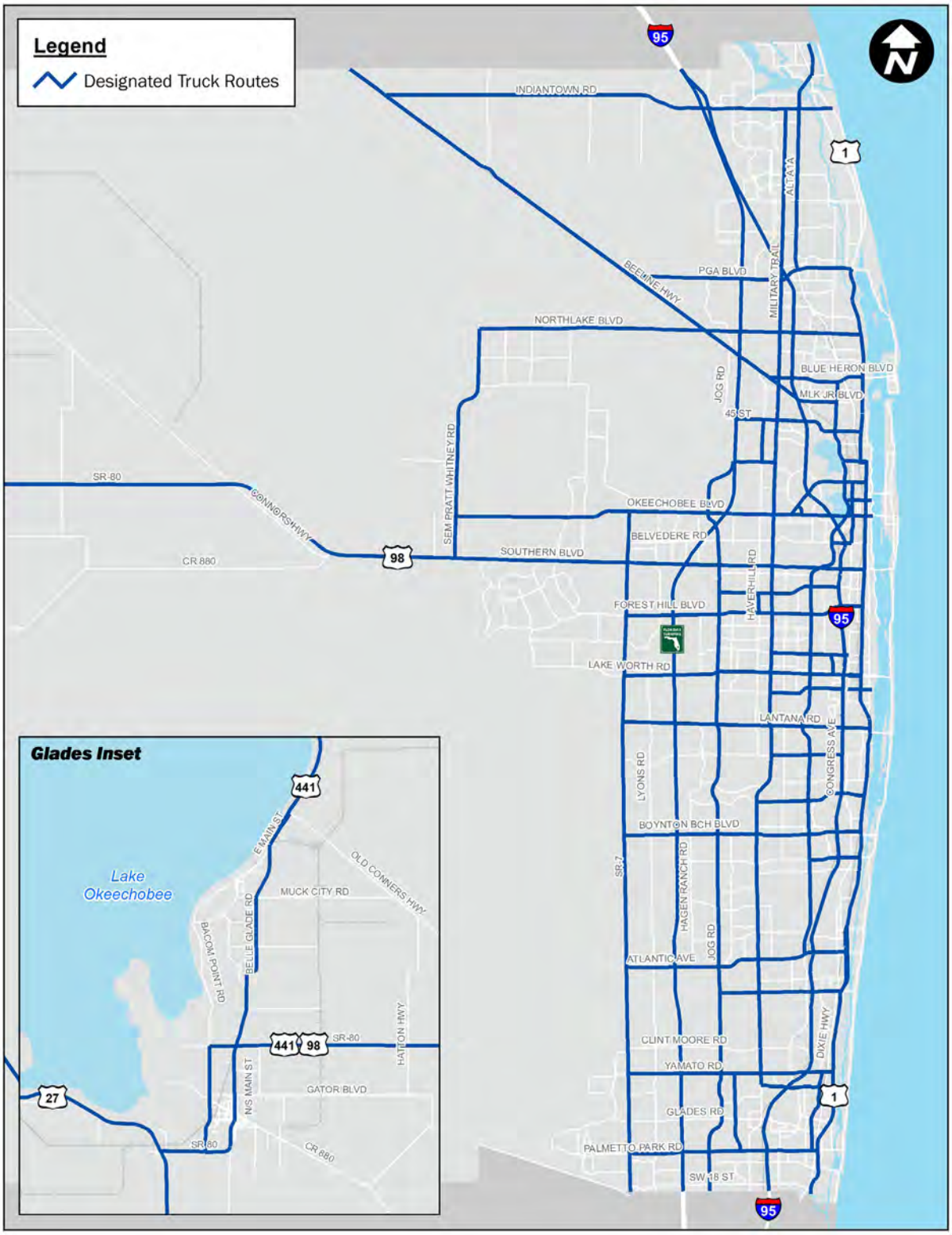
Two (2) railroads serve the region connecting Southeast Florida to the rest of North America, providing intermodal and carload services, supported by a shortline. FDOT owns the SFRC portion of the former CSX Railroad that begins east of the Interstate 95 overpass over SR-710/Beeline Highway and continues south into Miami-Dade County.

As mentioned previously, Tri-Rail operates on the SFRC. Amtrak also utilizes the SFRC and continues along the CSX corridor at the north border of the SFRC property. Amtrak originates in Miami to the south and continues to Jacksonville and further north, including stops at Delray Beach and West Palm Beach. The CSX retains a perpetual freight easement and provides all freight service on the SFRC.

The FEC railway corridor runs along the east coast of Florida. It includes numerous seaport freight stops and various other freight stops along the way, including the Port of Palm Beach. Virgin Trains USA operates passenger service on this corridor from Miami to Fort Lauderdale and West Palm Beach with plans to expand service north to Orlando.

Trucks

Trucks delivering and picking up goods travel on most roadways within the county. The heavily traveled corridors that have the highest concentration of truck traffic are identified as "Designated Truck Routes" and represent roadways with more than 1,000 daily truck trips as shown in Map 12.



Map 12. Designated Truck Routes

Roadway

Palm Beach County contains 6,668 total centerline miles of roadways that handle 38.5 million vehicle miles traveled daily, as tabulated in Table 3[8]. The roadway network is a hierarchy of various classifications that balance the mobility and accessibility needs of users. The multiple roadway designations and roadway owners that maintain the roadway system are described in more detail below.

Functional Classification

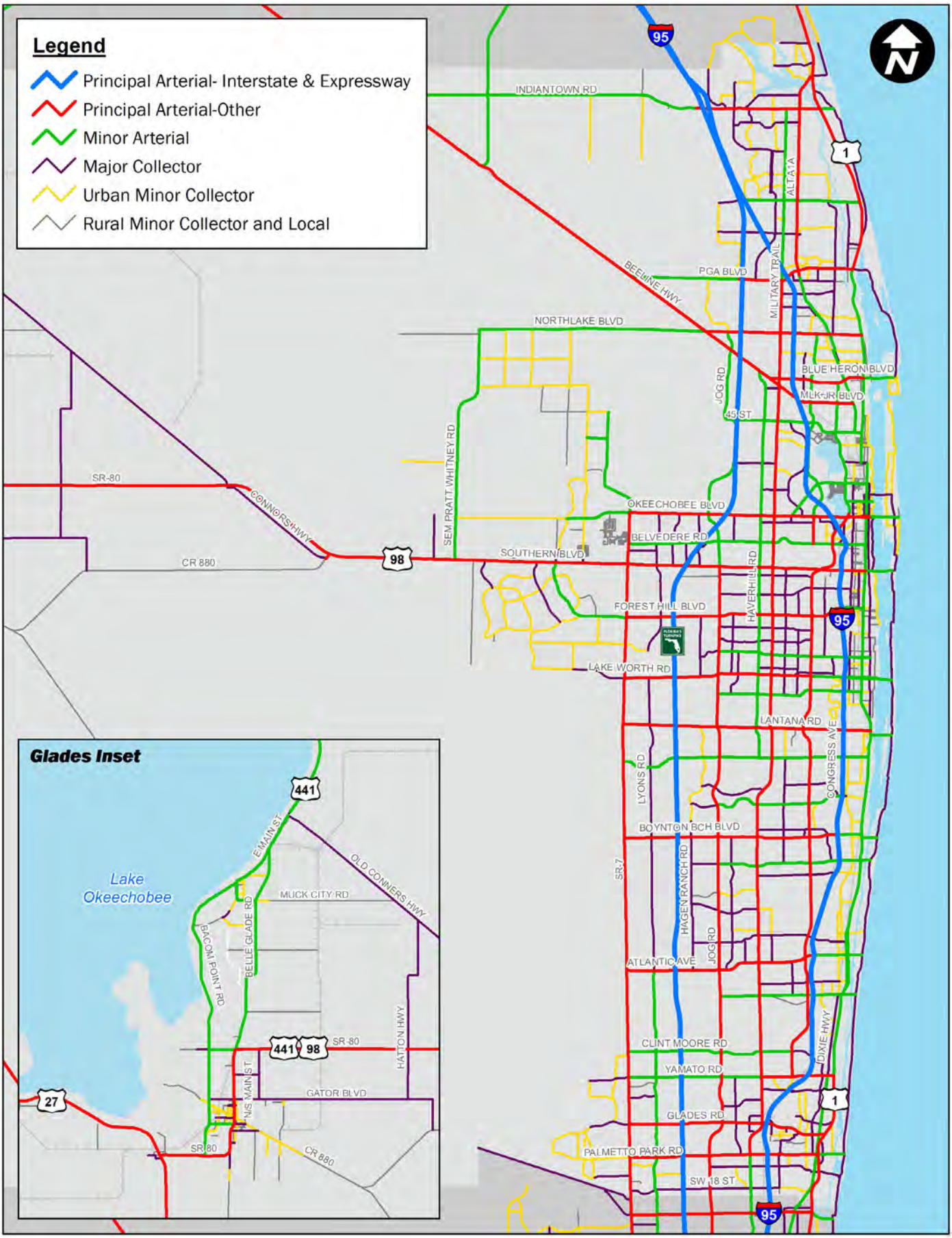
The roadway functional classification assigns roadways according to the character of service provided in relation to the total roadway network. Roadways with a higher functional classification, such as arterials, provide greater mobility with less accessibility while a local roadway provides greater accessibility with less mobility. Only roadways functionally classified as urban minor collector or above are eligible for Federal Surface Transportation Funds – the federal funds available to States and MPOs to construct projects.

Most arterial roadways are maintained by FDOT, while the majority of minor arterials, collectors, and local roadways are maintained by the county and local municipalities. In some instances, the county also maintains a few vital principal arterial roadways, including portions of Military Trail, Northlake Boulevard, Jog Road, and Lantana Road.

Table 3. Centerline Miles by Roadway Owner

Functional Classification	FDOT	County	City/Private	Total	Federal Aid Eligibility
Principal Arterial - Interstate	46	0	0	46	Yes
Principal Arterial - Expressway	45	0	0	45	Yes
Principal Arterial - Other	245	86	0	331	Yes
Minor Arterial	85	171	14	270	Yes
Major Collector	54	189	88	331	Yes
Urban Minor Collector	2	93	132	227	Yes
Rural Minor Collector	0	28	7	35	No
Local	0.62	678	4,641	5,319.62	No
Total	**477.62**	**1,245**	**4,882**	**6,604.62**	

[8] TPA GIS file; totals may vary from official FDOT counts.



Map 13. Functional Classification

Designation

Strategic Intermodal System (SIS)

The SIS, established by the Florida Legislature in 2003, is composed of a multimodal network of high priority transportation facilities important to mobility and to the economy of Florida.[9] SIS highway, rail, and waterways are categorized into three (3) types.

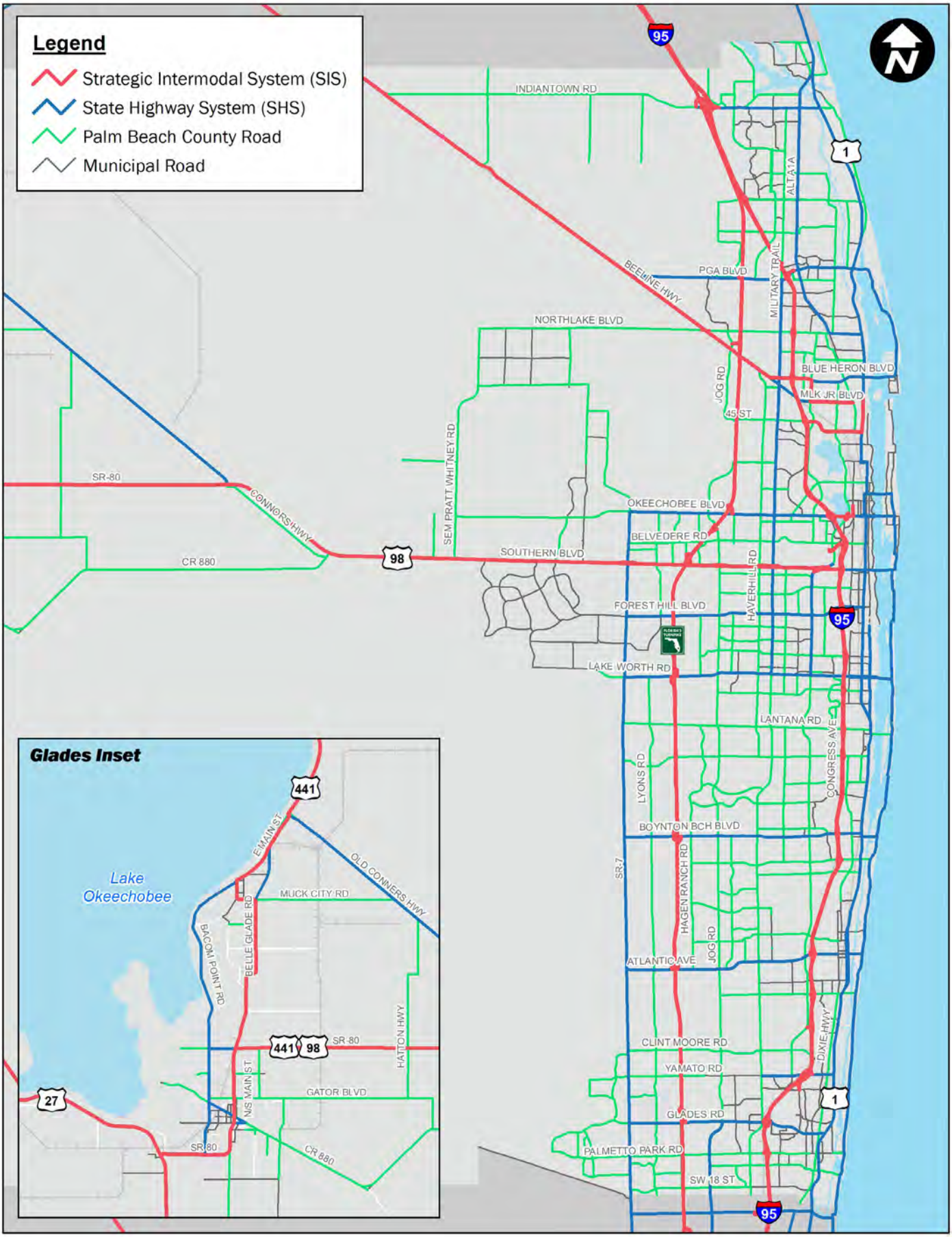
National Highway System (NHS)

The NHS consists of roadways important to the nation's economy, defense, and mobility. Many of these facilities are also included in the SIS. Specific federal funding is available to NHS facilities that may not be used on other roadways. NHS includes the following subsystems of roadways.

- **Interstate:** The Dwight D. Eisenhower National System of Interstate and Defense Highways.
- **Principal Arterials:** Highways in rural and urban areas that provide access between an arterial and a major port, airport, public transportation facility, or other intermodal transportation facility.
- **Strategic Highway Network (STRAHNET):** A network of highways that are important to strategic defense policy and which provide defense access, continuity, and emergency capabilities for defense purposes.
- **Major Strategic Highway Network Connectors:** Highways that provide access between major military installations and highways that are part of the Strategic Highway Network.
- **Intermodal Connectors:** Highways that provide access between major intermodal facilities and the other four subsystems making up the National Highway System.

Shown in Map 14[10] are the roadway designations.

[9] For more information, see Section 339.61, F.S. and Sections 339.62-65, F.S.
[10] TPA GIS Centerline



Map 14. Roadway Designation

Transportation Systems Management & Operations (TSM&O)

The FHWA defines TSM&O as a set of strategies that aim to reduce congestion, primarily by improving system capacity and efficiency. The following provides highlights of the TSM&O operations within Palm Beach County.

- Palm Beach County's Traffic Management Center (TMC) is maintained by Palm Beach County.
- The TMC is funded by FDOT and the federal government and is staffed through grants.
- Palm Beach County maintains traffic signals within the unincorporated areas of the county and 39 municipalities, excluding the City of Boca Raton and the Town of Palm Beach, which have their own operations.
- The TMC currently monitors 76% of the 1,067 signals within its system. This allows for real-time incident detection and management of signal timing phasing plans to reduce congestion as it occurs.
- The operations are supported by 170 traffic cameras countywide at critical intersections, plus 1,000 video vehicle-detection cameras mast arm traffic signals at 250 intersections countywide.
- The TMC has control over the system through 450 miles of fiber optic cable installed to connect the traffic signals and the cameras.
- Vehicle bluetooth monitoring system is being used to track vehicles travel speeds and times.

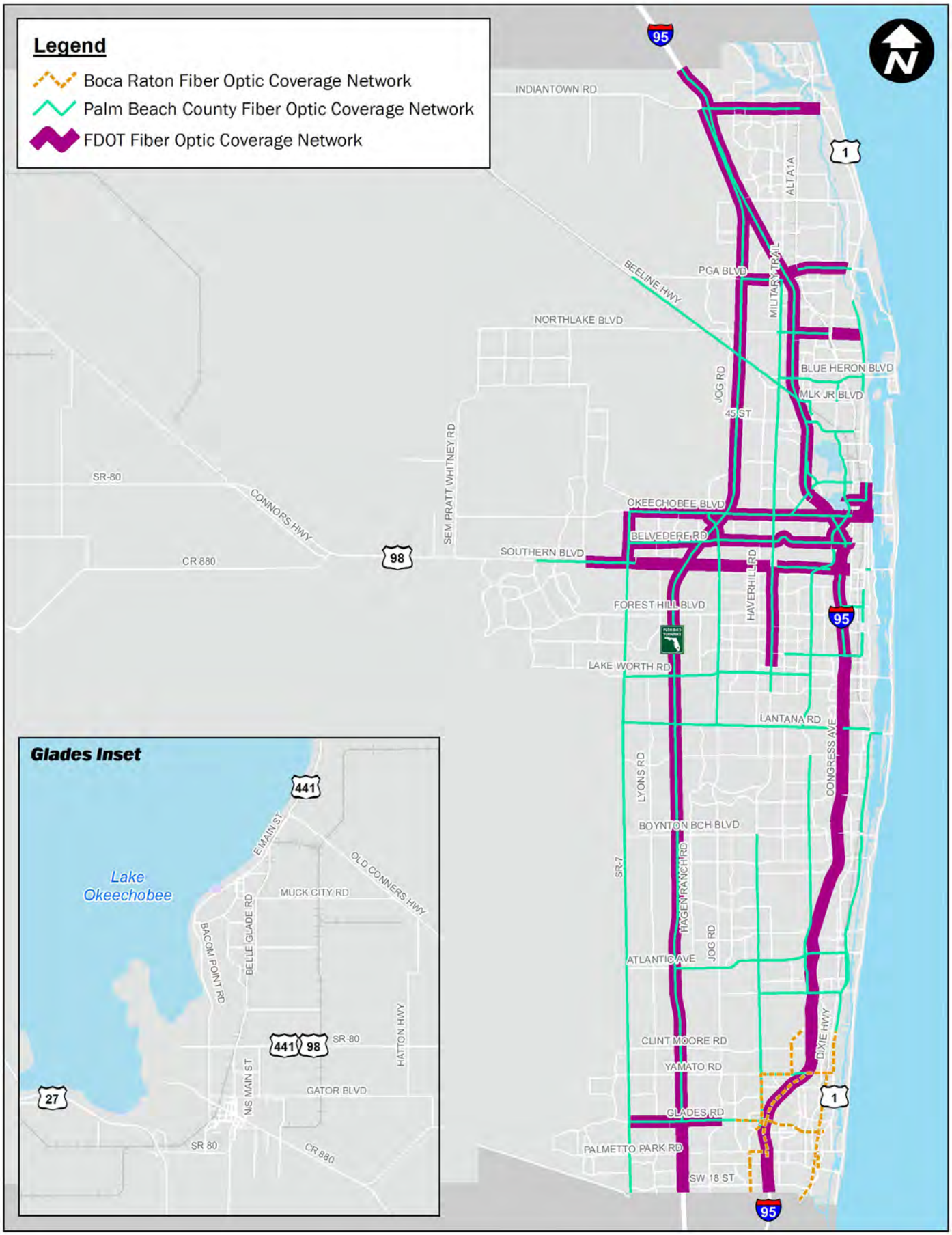
TSM&O program planning is an ongoing and iterative process, often connected to diverse plans and initiatives that change over time. The Southeast Florida Regional ITS Architecture (RITSA) provides intelligent transportation system architecture status and vision at the district level over the next 20 years. Prior to a new strategy being implemented or used, it must be included in the RITSA, as to assure it is consistent with the set goals and objectives for the region.

Three fiber optics communication networks operate in the county and are used for transportation management purposes. They are administered by FDOT, Palm Beach County, and Boca Raton as shown in Map 15.

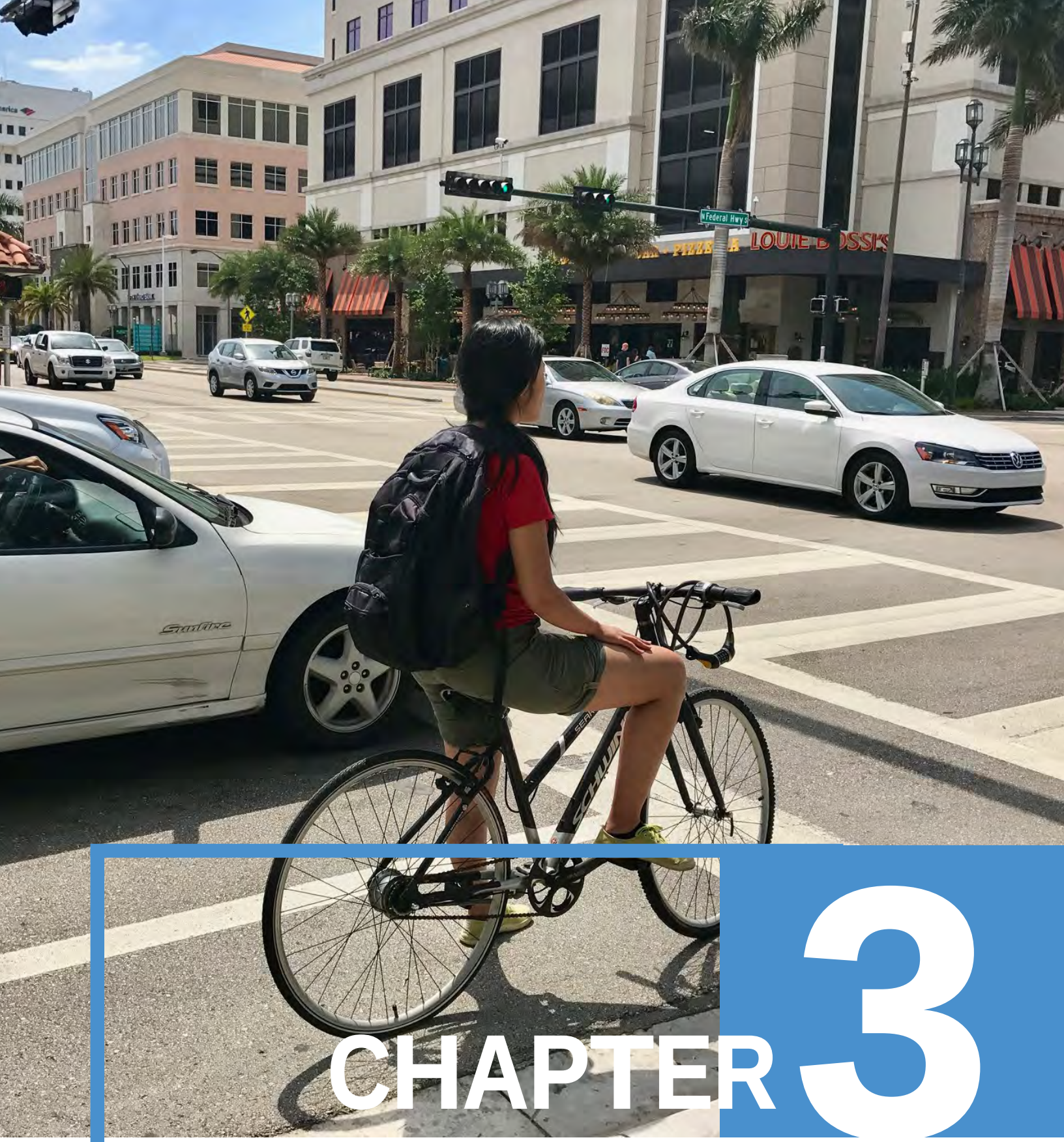
Deployment of TSM&O strategies depends on the availability of fiber optic cable, therefore expanding the strategic network constitutes a priority. Shorter-term planning focuses on enhancing network coverage on the SHS. Over time, implementation of fiber optics cable will expand to strategic arterial and collector roads.

Capital costs for the installation of fiber optics cable can be high since these projects typically involve underground work. Furthermore, operations and maintenance (O&M) can represent a significant long-term investment, based on the lifecycle of the technology deployed. To alleviate costs, fiber optics installation can be incorporated within projects with related scopes. Successful planning requires TSM&O to be incorporated at all stages of project life cycle including planning, design, project development, traffic engineering, maintenance, and safety.

Notwithstanding capital costs, the return on investment is exponential since once fiber optics cable has been installed its applications are numerous. Moreover, once the infrastructure is set in place, the ability to collect data and monitor the transportation network is significantly enhanced, guiding future investments and planning decisions.



Map 15. Existing Fiber Optic Coverage



CHAPTER 3

Where Are We Going

Public Input and Participation

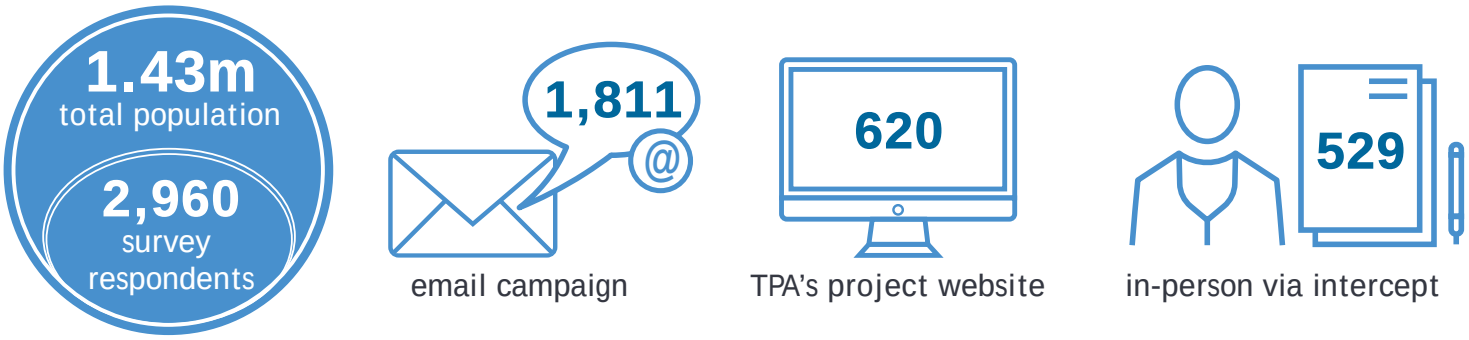
Throughout the development of the 2045 LRTP, opportunity for public input has been open, transparent, and collaborative to build consensus. Numerous efforts were targeted to the general public such as the project website, email solicitation, media coverage, intercept events, and survey. The survey was distributed and analyzed early in the development process to influence the list of projects Desires Plan and Cost Feasible Plan. The survey allowed for public input on future transportation desires for Palm Beach County and included the following survey topics:

- Prioritization of transportation project investments
- Prioritization of transportation modes to balance safety and comfort for all users within constrained spaces
- Potential funding sources to maintain and improve the transportation network

LRTP Outreach Goals

Consistent with the TPA's adopted plans:

- Public Participation Plan (PPP)
- Limited English Proficiency (LEP) Plan
- Title VI and ADA Nondiscrimination Policy & Plan



Available in both English and Spanish

Intercept surveys were held at special events, transit locations, and community locations utilizing printed and iPad with the emphasis on diversity and reaching the underserved communities.

How did the TPA distribute and promote the survey?

- Online survey links emailed to 100,000 Palm Beach County email addresses
- Employers and chambers assisted with survey distribution to the workforce and business community
- TPA website and social media
- TPA "Transportation Matters" e-newsletters
- TPA Governing Board and advisory committee meetings
- Regional/ localized video
- Presentations and communications with civic groups, community associations and business/ economic development boards
- Media coverage

The TPA public outreach team included a university consultant with extensive survey experience to create and distribute the TPA survey and to analyze results.

How did the TPA ensure geographic and demographic diversity?

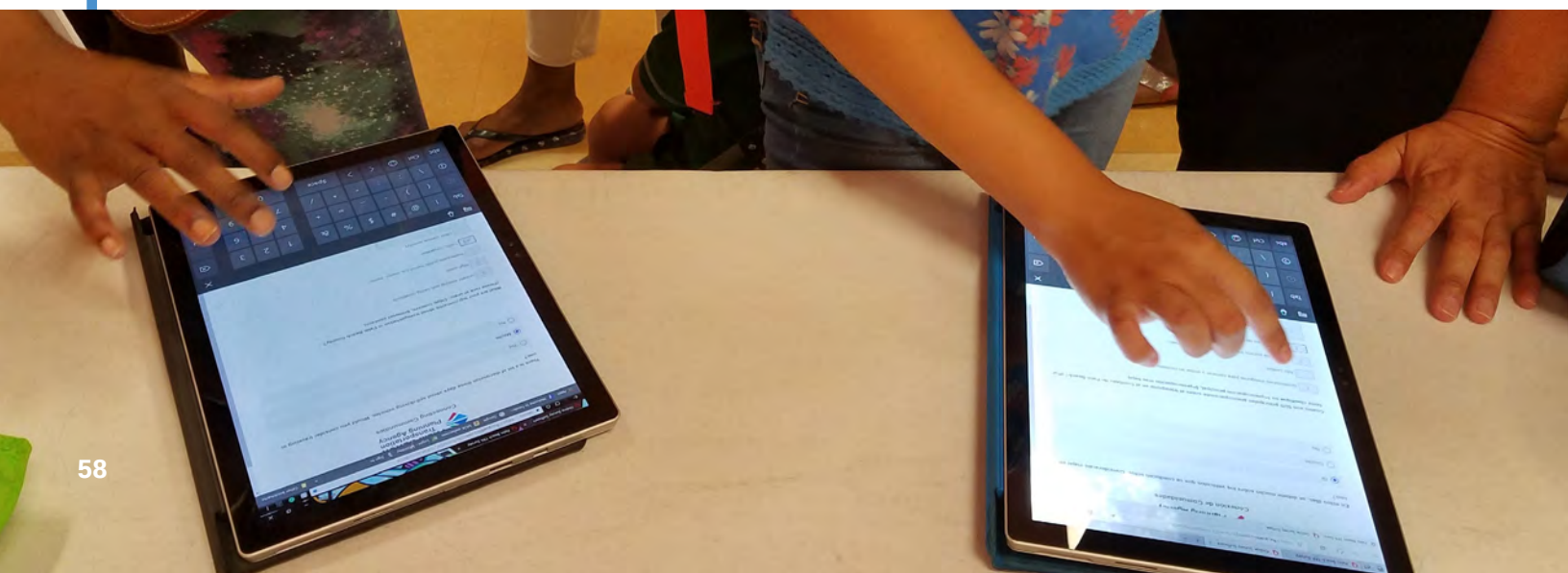
Acknowledging that members of some demographic groups are less likely to participate in a survey online, the team conducted a series of "intercept events" that specifically targeted representative groups of transit riders, veterans, seniors, non-English speakers, and minorities. Intercept events were also used to ensure geographical representation from throughout the county.

TPA teams went to gatherings and locations to target these populations, where they used tablets to conduct the online surveys, while providing assistance as needed.

Bridging language barriers

The TPA's LRTP survey was made available in both English and Spanish, to overcome language barriers with Palm Beach County's largest non-English population group, since the most recent 2017 U.S. Census Bureau[11] data on Palm Beach County's demographics shows that 22.3% of the population is of Hispanic or Latino origin.

[11] 2017 American Community Survey (ACS) 1-Year Estimates



Regional Video

A regional video was showcased to raise awareness and encourage participation.

- Created by the Public Participation Subcommittee of the Southeast Florida Transportation Council, a regional partnership of the Palm Beach TPA, Broward MPO, and Miami-Dade TPO
- Designed to support outreach for the Regional Transportation Plan and for the local Long Range Transportation Plans in the 3 counties
- TPA survey included regional transportation questions
- Video was posted to the TPA website, social media and e-newsletter issues to drive participation
- Available for viewing on the Palm Beach TPA YouTube channel

Coalition of Boynton West Residential Associations (COBRWA)

Media Coverage

This article from Palm Beach County's leading newspaper was prompted by a member of the newspaper staff who received the email solicitation to take the TPA survey. The extended online version included sample survey questions. The article increased awareness and inspired confidence in the survey's source and purpose.

The Palm Beach Post | Thursday, August 9, 2018

PALM BEACH COUNTY TRANSPORTATION PLANNING

County agency starts transportation survey

By Alexandra Seltzer
Palm Beach Post Staff Writer

If you could improve transportation in Palm Beach County, where would you want your money to go?

Pedestrian and bicycle projects? An expanded bus service? Increased bus frequency? Widening roads? Increased technology with traffic lights?

That's one of the questions the county's Transportation Planning Agency is asking Palm Beach County residents in a survey that launched last week with

Survey continued on **B5**

Survey

continued from B1

the help of Florida International University's Metropolitan Center.

The survey is a way to get the public's feedback on how local and state agencies could improve transportation and where they should put taxpayers' money to do so. The feedback will be used in the TPA's long-range transportation plan updated every five years, but also in the short term, said Malissa Booth, the agency's public relations manager. The responses will be shared with elected officials and transportation agencies including Palm Tran, the county's public bus system, and Tri-Rail, the commuter rail line that services Palm Beach, Broward and Miami-Dade counties.

"This survey is just a way to get a sounding board from the public to get feedback to officials to make decisions. What the public would like to see those funds spent on, to help influence what the priorities are," Booth said.

Questions asked include: how often they travel to Broward and Miami-Dade counties; what city they travel most to; if they would use a self-driving vehicle; and if there was more safe and convenient access to transit, pedestrian and bicycle facilities, would they use those modes more?

Also, what type of funding sources would they support to provide for transportation improvements? Increase the gas tax? The sales tax? Vehicle registration? Property tax? Tolls?

It's no secret that many roads in Palm Beach County are crowded and will continue to get more crowded as the population continues to grow. The TPA, which prioritizes and funds transportation projects and programs, is trying to encourage residents to try other modes of transportation to help limit the number of cars on the road. It would help traffic and the environment, Booth said. "Hopefully people want to use those modes as traffic gets more congested," she said.

FIU emailed the survey to about 100,000 residents last week. But it also can be accessed on the TPA's website at www.palmbeachtpa.org/participate. There is not a cutoff date yet; the TPA is keeping it open until they get at least a couple of thousand responses, Booth said.

The survey takes about 10 minutes and asks about a dozen questions that are answered anonymously. It's available in both English and Spanish. The survey was done through a contract with a consultant who selected FIU to assist because of its familiarity with similar projects.

About 500 residents have responded to the survey, said Maria Ilcheva, an assistant scholar and senior researcher with FIU's Metropolitan Center.

The center has conducted other surveys and focus groups for organizations including Miami-Dade County, Univision, Miami-Dade Expressway Authority, Broward County Department of Elections, the Greater Miami Chamber of Commerce and the Florida Department of Transportation, according to its website.

aseltzer@pbpost.com
Twitter: @alexseltzer

Intercept events

Intercept events are opportunities arranged to engage with specific stakeholder groups by going to targeted locations and gatherings. Intercept events were conducted at the following locations:

- Dump the Pump events at Tri-Rail stations (Boca Raton and West Palm Beach)
- SunFest / Downtown Development Authority (DDA) Bike Valet (West Palm Beach)
- Back-to-School Bash events (Jupiter, Greenacres, and Delray Beach)
- Brightline Train Station (West Palm Beach)
- South Florida GIS Expo (Palm Beach County Convention Center, West Palm Beach)
- VA Medical Center (Riviera Beach)
- Palm Beach County Governmental Center (West Palm Beach)
- Royal Palm Beach Library
- North County Senior Center (Palm Beach Gardens)
- Palm Beach State College (Belle Glade)
- Tri-Rail station (Boca Raton)
- Palm Tran / Intermodal Transit Hub (West Palm Beach)

Dump the Pump Day, Boca Raton

South Florida GIS Expo, West Palm Beach

West Palm Beach Veterans Administration Medical Center, Riviera Beach

Survey Results Analysis

- Categories of the survey included: transportation preference, concerns, demographics, priorities for funding sources, and overall comments.
- A total of 2,960 people responded to the survey, which was conducted in both English and Spanish.
- Outreach respondent demographics were largely aligned in gender and age with those of the community.
- Additionally, male and female respondents were nearly equal, as well as race and ethnic responses were nearly equivalent to the community census demographic (U.S. Census Bureau 2010 ethnic/race demographics) as shown in Figure 3 and Figure 4.

Current transportation modes as selected by respondents today rely heavily on single occupancy vehicles. Pedestrian mode accounted for 1.3%, bicycle 1.7%, transit 6.6%, with the remaining driving alone, using car share, or taxi/Uber/Lyft services.

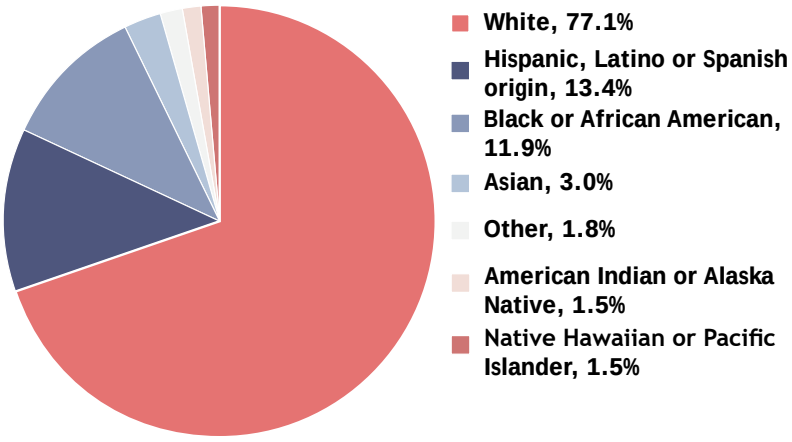


Figure 3. Respondents Ethnicity

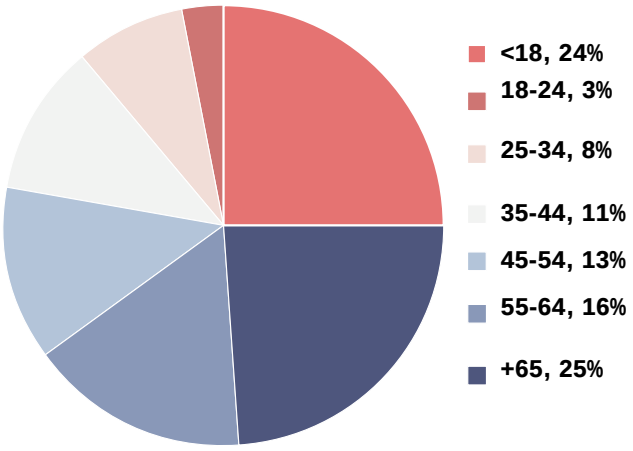


Figure 4. Respondents Age

1.3% walk

1.7% bike

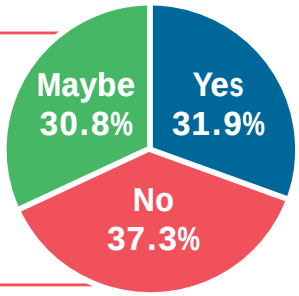
6.6% ride

90.4% drive*

*Drive includes drive alone, carpool, and rideshare

There is a lot of discussion these days about self-driving vehicles.

Would *you* consider traveling in one?



What are your *top concerns* about transportation in Palm Beach County?

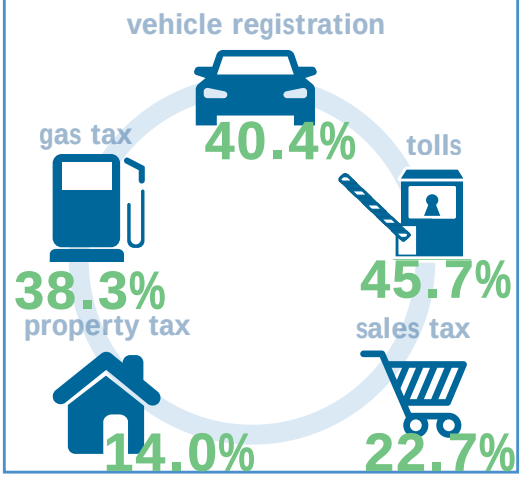
41.7% traffic congestion

inadequate public transit 28.9%

22.1% safety

high costs 7%

Which of the following transportation funding sources would you support?



How much would you spend on each type of project with $100?

$13.50 pedestrian projects

$15 bicycle projects

$25 transit projects

$24.50 roadway capacity

$22 technology-based projects

How OFTEN do you travel to Broward and/or Miami-Dade counties?*

daily 20+ times/month 9.2%

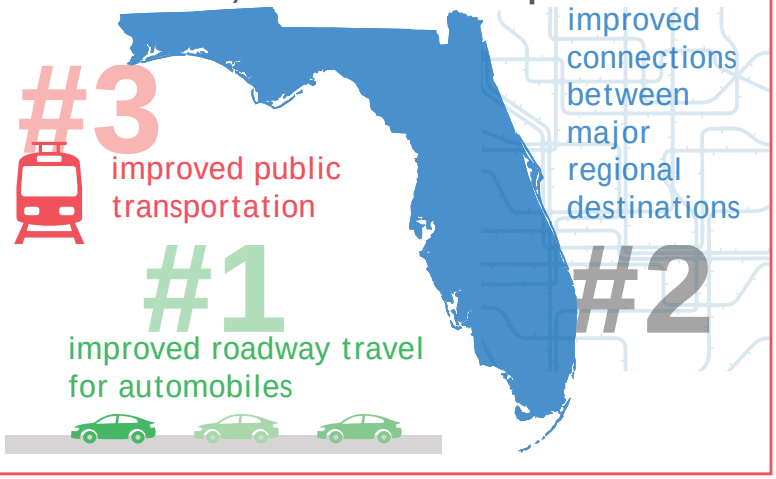
frequently 11-19 times/month 6.0%

regularly 6-10 times/month 10.6%

occasionally 1-5 times/month 31.2%

rarely <12 times/year 43.0%

When coordinating improvements with adjacent counties, which are *most* important?



General concerns with the existing transportation network include the following.

1. Congested roadways
2. Lack of funding for transportation projects
3. Not enough public transportation options

Over thirty questions cross-referenced by age and race/ethnicity were asked. Sample question included:

"*If you had safe and convenient access to pedestrian and bicycle facilities, would you walk or bike as your travel mode of choice?*"

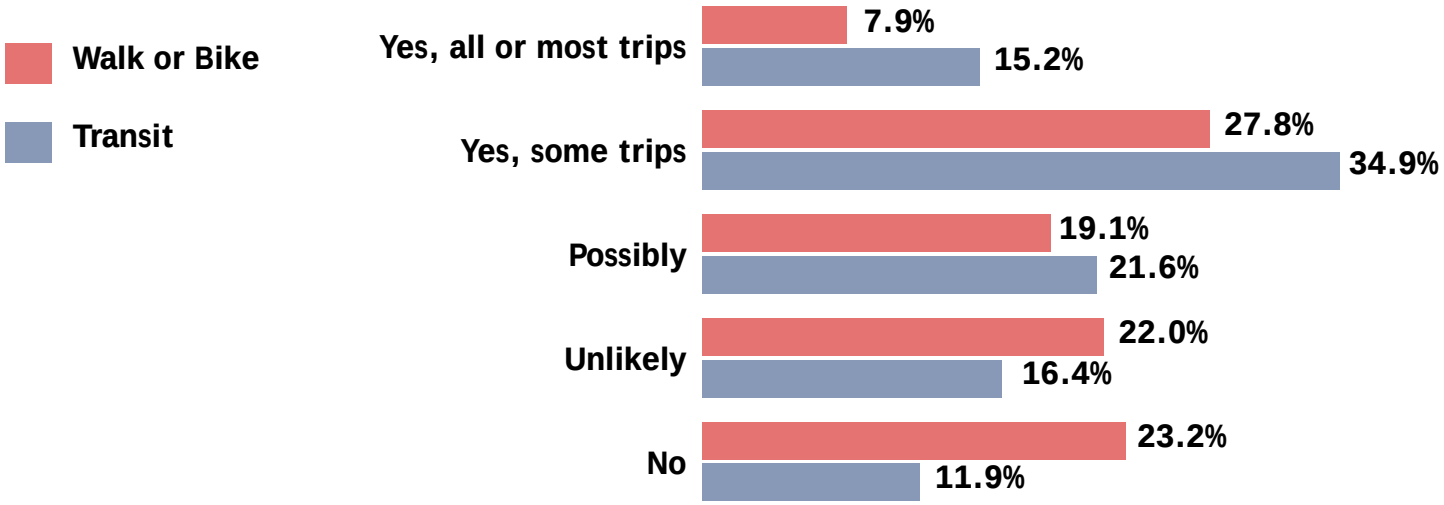
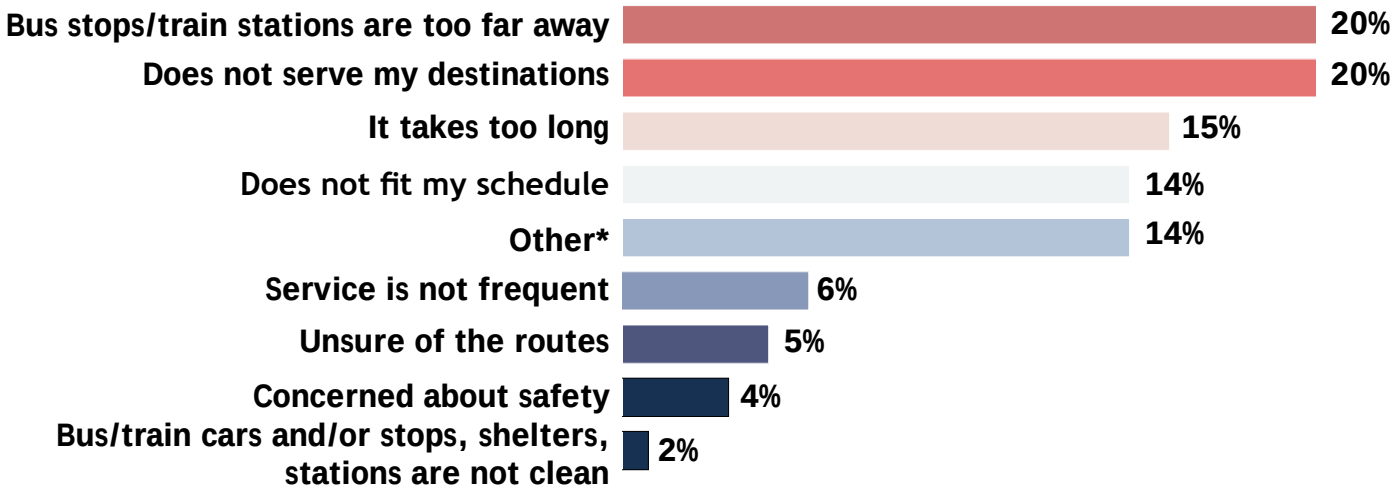


Figure 5. Willingness to Walk, Bike, or Use Transit

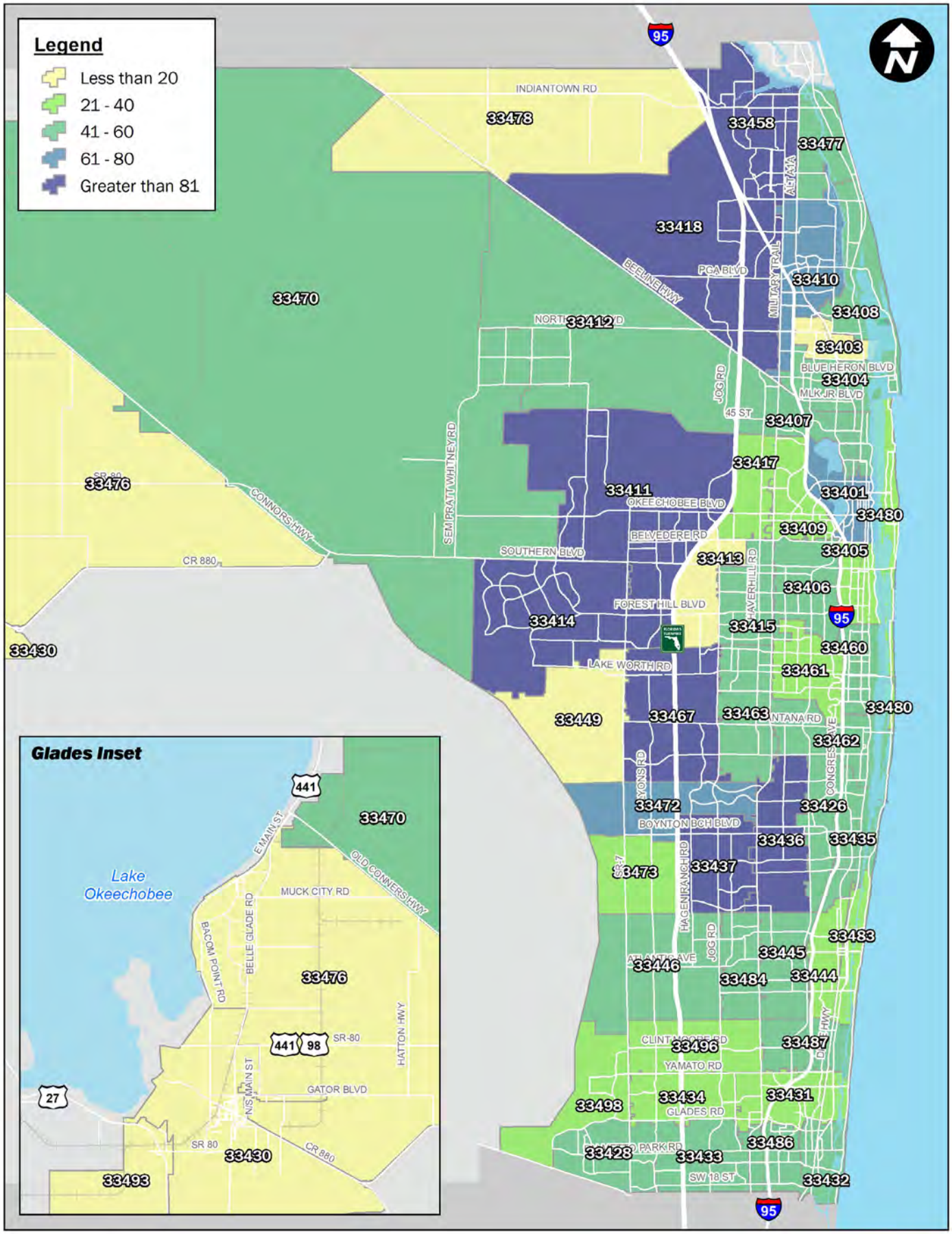
Which best describes your reason not to use transit more frequently?



*common 'Other' answers include age, physical ability, car ownership, freedom, and convenience.

Figure 6. Reasons for Transit Avoidance

Map 16 shows respondents' home zipcodes.



Map 16. Public Involvement Survey Summary

Public Workshop "Open House"

A public workshop was held on Monday, October 21, 2019, from 1:30 pm – 4:30 pm. This public workshop is part of the TPA's continuing, cooperative, and comprehensive (3C) planning process for the LRTP. It provided an interactive opportunity for the TPA's Governing Board members, advisory committee members, and the general public to review and provide comments on the draft 2045 LRTP.

The format of the workshop was an open house in which interested people could "drop-in" when they were available and engage project team members with suggestions and questions about the draft LRTP with no set time commitment. Display boards illustrated key concepts while team members facilitated discussions. Summary handouts were provided for attendees to read at their leisure and take home.

Information related to existing and future expenditures of public funds for transportation projects and programs were the focus of the workshop. Attendees from various backgrounds and perspectives were engaged about the draft 2045 LRTP and provided feedback. The stations enabled attendees to make a full contribution to discussions and hold meaningful conversations, before the adoption of the 2045 LRTP.

The LRTP provides a strategic 25-year outlook that leads investment of State and Federal funding. The LRTP provides a framework to answer, "where are we today?", "where are we going in the future?", and "what can we accomplish?" in the next 25 years to advance the TPA's vision.

2045 Long Range Transportation Plan

What is an LRTP?

Every 5 years, the Palm Beach Transportation Planning Agency (TPA) is required by federal law to review and update its Long Range Transportation Plan (LRTP). The LRTP details how Palm Beach County's multimodal transportation system will evolve over the next 25 years and seeks to advance the TPA's vision of a safe, efficient, connected and multimodal transportation system. The current 2040 LRTP was adopted by the Palm Beach TPA Governing Board in October 2014.

Why is it important to do a LRTP?

The LRTP creates a vision, develops goals and objectives, identifies needs and financial resources, and provides a cost feasible plan that shapes how state and federal transportation funds should be spent over the next 25 years.
The Long Range Plan sets the vision for transportation for all modes of travel throughout the County and prescribes which projects should be included for funding in the TPA's 5 Year Transportation Improvement Program (TIP).

What Projects does the LRTP Direct?

State and Federally funded transportation projects. Before transportation projects can be built they must first be consistent with the LRTP. The list of projects are updated every 5 years with the update of the LRTP. The LRTP must include both a Desires Plan and a Cost Feasible Plan.

What types of projects are included in an LRTP?

Transportation projects and services such as pedestrian and bicycle facility networks, enhanced transit corridors; major roadway improvements and new interchanges; and freight capacity projects (roadways, railways, seaport and airport facilities).

What is the difference between a Desires Plan and Cost Feasible Plan?

The Desires Plan provides a summary of potential transportation projects that addresses gaps in the system and community needs. The Cost Feasible Plan is developed later in the LRTP process and is a list of prioritized Desires Plan projects, which is impacted by anticipated funds throughout the 25-year planning range.

FOR MORE IMFORMATION: http://www.palmbeachtpa.org/LTRP

VISION

A safe, efficient, and connected multimodal transportation system

MISSION

to collaboratively plan, prioritize, and fund the transportation system

Timeline

2018

OCT

Public Involvement
Presented to the CAC for feedback. 3

2019

MAR

Goals, Objectives, and Measures
Presented and recommended by the TAC and CAC for approval. 6
Presented and recommended by the BTPAC for approval. 7
Adopted by the TPA Governing Board. 21

MAY

Desires Plan
Presented for information and comment by the TAC and CAC. 1
Presented for information and comment by the BTPAC. 2
Presented for information and comment by the TPA Governing Board. 16

JUN

Revenue Forecast
Presented and recommended by the TAC and CAC for approval. 5
Presented and recommended by the BTPAC for approval. 6
Presented and discussed at the TPA Governing Board. Tabled action on a proposed resolution to seek a higher allocation of existing state revenues for TPA priority projects. 20

JUL

Draft 25-Year Cost Feasible Plan
Presented and recommended by the TAC and CAC for approval. 10
Presented and recommended by the BTPAC for approval. 11
Presented and discussed at the TPA Governing Board. 18

SEP

Scenario and Implementation Plan
4 Presented and recommended by the TAC and CAC for approval.
5 Presented and recommended by the BTPAC for approval.
18 Coordination Meeting with FDOT District Four staff.
19 Adopted by the TPA Governing Board.
20 Coordination Meeting with Palm Beach County staff.

OCT

Draft of Full Plan
2 Presented for information and comment by the TAC and CAC.
3 Presented for information and comment by the BTPAC.
17 Presented for information and comment by the TPA Governing Board.
21 Presented for information and feedback at a Public Workshop.

NOV

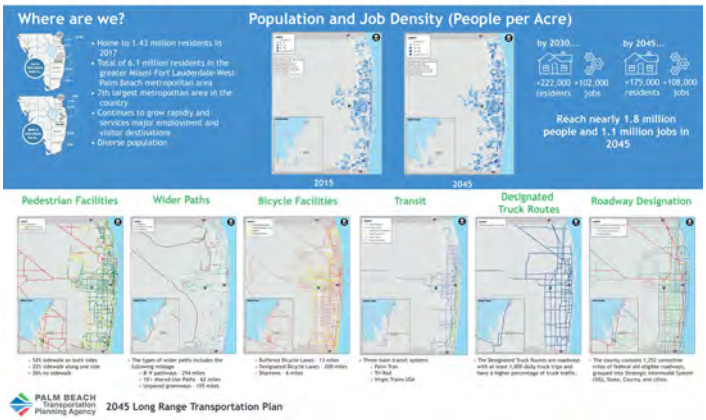
TPA Governing Board Workshop
15 Conducted TPA Governing Board Workshop.

DEC

LRTP Adoption
4 Presented and recommended by the TAC and CAC for approval.
5 Presented and recommended by the BTPAC for approval.
12 Adopted by the TPA Governing Board.

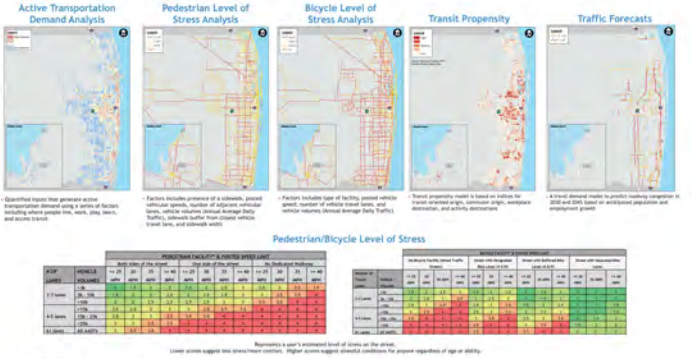
PALM BEACH Transportation Planning Agency

1. Existing Conditions and Projections



3. Multimodal Forecasting

People walking, bicycling, and riding transit have the same transportation needs as people driving.



LRTP Timeline

2018

OCT

Public Involvement

Presented to the CAC for feedback. 3

2019

MAR

Goals, Objectives, Targets

Presented and recommended by the TAC and CAC for approval. 6

Presented and recommended by the BTPAC for approval. 7

Adopted by the TPA Governing Board. 21

MAY

Desires Plan

Presented for information and comment by the TAC and CAC. 1

Presented for information and comment by the BTPAC. 2

Presented for information and comment by the TPA Governing Board. 16

JUN

Revenue Forecast

Presented and recommended by the TAC and CAC for approval. 5

Presented and recommended by the BTPAC for approval. 6

Presented and discussed at the TPA Governing Board. Tabled action on a proposed resolution to seek a higher allocation of existing state revenues for TPA priority projects. 20

Public meetings of the TPA Governing Board and its advisory committees provided opportunities throughout the LRTP development process for presentations, discussion, and public comment.

TPA meetings are promoted through www.palmbeachtpa.org, e-newsletters, and social media. Availability of the final draft plan was publicly noticed for a minimum of thirty (30) days for public review and comment prior to adoption.

JUL

Draft Cost Feasible Plan

10 Presented and recommended by the TAC and CAC for approval.
11 Presented and recommended by the BTPAC for approval.
18 Presented and discussed at the TPA Governing Board.

SEP

Scenario and Implementation Plan

4 Presented and recommended by the TAC and CAC for approval.
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Draft of Full Plan

2 Presented for information and comment by the TAC and CAC.
3 Presented for information and comment by the BTPAC.
17 Presented for information and comment by the TPA Governing Board.
21 Presented for information and feedback at a Public Workshop.

NOV

TPA Governing Board Workshop

15 Conducted TPA Governing Board Workshop.

DEC

LRTP Adoption

4 Presented and recommended by the TAC and CAC for approval.
5 Presented and recommended by the BTPAC for approval.
12 Adopted by the TPA Governing Board.

Public Participation During Plan Development TPA Advisory Committees:

- **Technical Advisory Committee (TAC)**
- **Citizens Advisory Committee (CAC)**
- **Bicycle, Trailways, Pedestrian Advisory Committee (BTPAC)**

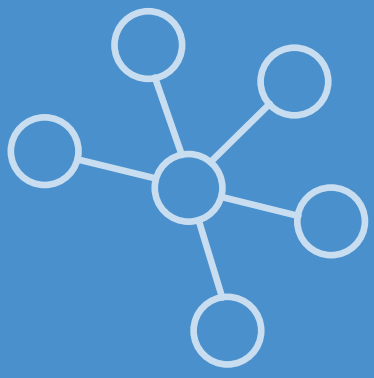
Goals, Objectives, Performance Measures and Targets

The goals, objectives, performance measures, and targets are associated with the TPA's vision of a safe, efficient, and connected multimodal transportation system. Planning year targets are set at 1-year, 2-year, 4-year, or given a more long-range target of 2030 or 2045. These measures and targets are tracked and reported annually and serve as an update to *Directions 2040* goal and target-setting process, refining current measures and integrating in federal, state, and regional goals and objectives to create a more collaborative and aligned transportation process. Moving Ahead for Progress in the 21st Century Act (MAP-21) and Fixing America's Surface Transportation Act (FAST Act) mandated MPOs and FDOT to report and adopt performance measures and targets that align with federal goals and are integrated into the TPA's goals.

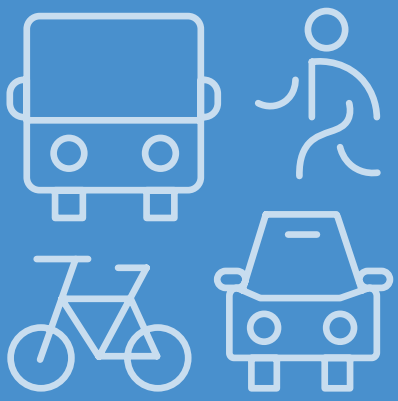
Goal 1. Preserve

Goal 2. Safe

Goal 3. Efficient



Goal 4. Connected



Goal 5. Multimodal

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PUBLIC PARKING
86

1. PRESERVE

The preservation of Palm Beach County's infrastructure, environment, and quality of life is integrated into the entirety of the TPA's transportation planning process. Maintaining the quality of the natural environment, that in turn improves quality of life, is vital for our county's future success.

Climate change and sea level rise have started to impact citizens and the transportation infrastructure in Southeast Florida. The consequences associated with sea level rise include direct physical impacts such as coastal inundation of inland areas, increased frequency of flooding in vulnerable coastal areas, and increased flooding in interior areas due to impairment of the region's storm water infrastructure. Without significant planning and investments to mitigate current impacts on climate change and ability to adapt to a changing climate, the transportation system will be less secure, have poorer quality, and become costlier.

Both US Department of Transportation (USDOT) and FDOT also prioritize the preservation of the current transportation system and environment. MAP-21 and FAST Act require the TPA and FDOT to set performance targets for the current pavement, and bridges. The public transit providers, in coordination with FDOT and the TPA, are also required to set performance targets for transit infrastructure.

Pavement and bridge infrastructure on the Interstate and State Highway System is maintained by FDOT while transit infrastructure is maintained by the public transit agencies of Palm Tran and Tri-Rail. Although maintained by other agencies, the TPA reports on this infrastructure to ensure a transparent and comprehensive evaluation of the multimodal transportation network.

Preserving the environment and ensuring resiliency are also key factors intertwined into TPA, FDOT, and USDOT transportation planning. The FAST Act requires that the TPA integrate environmental sustainability, resiliency and reliability of the transportation system, and stormwater mitigation into the planning process. FDOT also integrates transportation solutions that enhance Florida's environment and conserve energy into the Florida Transportation Plan.

The increased use of automobiles for travel has led to negative externalities on the environment, including reduced air quality. The TPA has set objectives to decrease the daily fuel use per person and reduce the daily vehicle miles travelled per person. The TPA is also dedicated to assisting Palm Tran's move towards an electric vehicle transit fleet. These objectives aim to mitigate our impact on climate change.

In order to have an adaptable transportation system, the TPA has an objective to decrease the susceptibility of inundation on our roadway system by sea-level rise and storm surge as well as annual flooding. Creating a more adaptive system that can decrease storm surge and flooding issues will create a more resilient and secure system for users.

2. SAFE

Florida consistently ranks as the most dangerous state in the nation for pedestrians. According to the Dangerous by Design 2019 Report, Florida contains 8 of the 10 most dangerous metro areas in the country. The Miami-Fort Lauderdale-West Palm Beach metro area ranks as the 14th most dangerous place to walk in the country. Palm Beach County has experienced an average of 165 traffic-related deaths annually over the past five years.

The TPA's Complete Streets Policy aims to plan, prioritize and fund projects that create a safe multimodal transportation system for users of all ages and abilities. The TPA's Complete Streets Design Guidelines provide guidance to local practitioners on how to plan and design Complete Streets that enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities along federally aid-eligible roadways in Palm Beach County.

The TPA, as well as the state and nation, are committed to eliminating fatalities and serious injuries on our roadways with the understanding that the death of any person is unacceptable. Florida shares the national traffic safety vision "Toward Zero Deaths," and formally adopted its own version of the national vision "Driving Down Fatalities" in 2012. Federal regulations require the TPA to annually adopt safety targets for each of five safety performance measures. In 2018 and again in 2019, the TPA Governing Board adopted FDOT's targets of zero traffic-related fatalities and serious injuries. In 2019, the TPA also formally adopted a Vision Zero Action Plan to make measurable steps towards reducing and ultimately eliminating these types of crashes. The Action Plan provides specific, data-driven, measurable actions the TPA can implement to work towards this reduction. A locally-driven objective to reduce the number of rail-related fatalities was also added. The region is investing in passenger-rail service, through both the private and public sector. As this service expands, the TPA is committed to investing in the safety of users of rail and in modes that are impacted.

3. EFFICIENT

Efficiency measures the reliability and productivity of the transportation system. Traditionally, the efficiency of the system was measured by vehicle travel time and the congestion of a roadway. The TPA has shifted to a more people-focused objective.

Federal legislation requires MPOs to monitor the reliability of person-miles travelled on the Interstate and on the non-Interstate NHS. An additional federally-required objective measures the reliability of trucks on the Interstate system. These measures seek to grade the roadway system on the amount of times people using the system will experience consistence travel times between destinations. A roadway segment is considered reliable when the time required to travel on it is no more than a 50% increase from the regular travel time expected on that segment.

Three objectives relate to transit efficiency, measuring the ratio of transit commute times to car commute times, and measuring the productivity of Tri-Rail and Palm Tran fixed route service. Currently, the average transit commuter spends twice as long going to work as the car commuter. In order to make an attractive and quality public transit system that competes with car travel, the time it takes to wait for buses (dwell time caused by frequency of service) and the travel time to destination needs to be improved.

Measuring passenger trips per revenue hour provides an understanding of how well public transit is performing while in service. A variety of factors impact passenger trips, including economic conditions and land use patterns. However, increased frequency, decreased travel times, and increasing amenities are investments that will lead to a more attractive service.

ISE CON CUIDADO
1304
Rt 1 Southbound
WATCH YOUR STEP

Philly
Cheese Steak

4. CONNECTED

The TPA strives to fund the infrastructure to allow citizens to safely, efficiently, and comfortably connect to the places they live, work, play, and learn. Objectives in this goal include increasing the miles of multimodal facilities to create a safe and connected multimodal transportation network. The TPA's Complete Streets Design Guidelines encourage separated bicycle facilities and wider sidewalks whenever possible to promote safe connections for non-motorized users of all ages and abilities.

Additional objectives under this goal prioritize community health and equity by striving to provide pedestrian and bicycle facilities for vulnerable users that may not have the ability to drive a personal vehicle due to age, physical, financial or other limitations. Providing non-motorized facilities within elementary school boundaries, near transit hubs, and in traditionally underserved communities help create a connected multimodal transportation network that promotes safety, physical activity, and overall community health.

By providing safe multimodal connections for all users, regardless of ability or means, everyone in the community has the ability to safely access healthy foods, healthcare, employment, education, and economic opportunities to improve quality of life.

5. MULTIMODAL

The TPA aims to create a multimodal transportation network with safe, efficient, connected, and attractive alternative modes of transportation options to help reduce reliance on SOV trips; thereby reducing congestion, preserving the environment, and promoting community health. The TPA has an ambitious target of a 15% mode split for walk, bike, and transit by 2030 and a 30% mode split by 2045. Historically, public investment in the transportation system has overwhelmingly been in roadways, furthering automobile use at the detriment of other forms of travel. Setting an ambitious goal to strive for over the next 10 and 25 years help shifts the focus of investing primarily in automobile vehicle travel to more multimodal facilities for all users of the transportation system.

The TPA supports economic vitality through freight and goods movement. Increased annual tonnage of freight in and out of the Port of Palm Beach and the Palm Beach International Airport are measures of this vitality. Improving connectivity between major trucking and freight routes, rail, ports, and distribution centers will increase the ability to provide goods and products inside and outside the region. Making it easier for residents and visitors to walk, bike or take transit to their destinations can help stimulate the local economy by creating savings on transportation costs and promoting more foot traffic to support local businesses.

WACHOVIA
1 NORTHBOUND TO GARDENS MALL VIA FEDERAL
0721
BUS STOP
ONLY BUS

Goals, Objectives & Targets

	Performance Measure	Actual Values 2014	2015	2016	2017	2018	Targets 1-yr	2-yr	4-yr	2030	2045
Goal 1: Preserve	Pavement										
	Interstate in Good condition	65.2%	58.6%	62.4%	55.2%	23.2%			≥ 60%		
	Interstate in Poor condition	0%	0%	0%	0%	0%			≤ 5%		
	Non-Interstate NHS in Good condition	21.4%	44.2%	41.7%	40.3%	39.9%		≥ 40%	≥ 40%		
	Non-Interstate NHS in Poor condition	8.8%	1.2%	0.4%	0.5%	0.1%		≤ 5%	≤ 5%		
	Bridges										
	NHS bridges in Good condition	-	-	87.7%	88.1%	87.44%		≥ 50%	≥ 50%		
	NHS bridges in Poor condition	-	-	1.16%	1.06%	1.04%		≤ 5%	≤ 5%		
Maintenance	Transit										
	Percentage of Palm Tran infrastructure exceeding useful life for:										
	Vehicles	-	-	-	-	0%	10%				
	Equipment	-	-	-	-	26%	20%				
	Facilities	-	-	-	-	0%	0%				
	Percentage of Tri-Rail infrastructure meets or exceeds useful life for										
	Equipment - Support & Maintenance Vehicles >8 yrs old	-	-	-	-	0%	0%				
	Equipment - Other vehicles (<2.5 on 1-5 scale)	-	-	-	-	0%	0%				
	Rolling Stock - locomotives, coach cars, self-propelled cars >39 yrs old	-	-	-	-	0%	0%				
	Rolling Stock - cutaway buses >10 yrs old	-	-	-	-	0%	0%				
	Percentage of Tri-Rail facilities with poor condition (<2.5 on 1-5 scale)										
	Passenger Terminals	-	-	-	-	30%	≤30%				
	Maintenance Facilities	-	-	-	-	30%	≤30%				
	Administrative Offices	-	-	-	-	0%	0%				
	Tri-Rail systems & equipment with condition (<2.5 on 1-5 scale)	-	-		-	15%	≤15%				
	Rail fixed-guideway track with performance restrictions	-	-	-	-	8%	≤8%				
Environment	Daily fuel use (gal) per person	1.2	1.24	1.27	1.3	1.29				1.25	0.95
	Daily Vehicle Miles Traveled per person	25	26.5	27.8	28.4	-				21	20
	% electric vehicles in rubber-tire transit fleet	0	0	0	0	0				75%	100%
Resiliency	Percentage of federal aid eligible milage susceptible to inundation by										
	1.2-ft sea level rise & historic storm surge	-	-	-	-	3.9%				3%	2%
	1% chance of annual flooding	-	-	-	-	26.7%				25%	20%
Goal 2: Safe	Number of fatalities	130	186	179	160	168	0				
Vision Zero	Rate of fatalities per 100 million vehicle miles traveled (VMT)	1.014	1.398	1.291	1.139	1.188	0				
	Number of serious Injuries	1050	1001	1129	1116	1163	0				
	Rate of serious injures per 100 million vehicle miles traveled (VMT)	8.817	7.522	8.141	7.947	6.923	0				
	Number of non-motorized fatalities and serious injuries combined	204	201	194	207	177	0				
	Number of rail fatalities	7	10	8	12	13	0				

	Performance Measure	Actual Values 2014	2015	2016	2017	2018	Targets 1-yr	2-yr	4-yr	2030	2045
Goal 3: Efficient											
Reliability	Percent of reliable person-miles traveled on the Interstate	86%	85%	86%	84%	85%		85%	85%		
	Percent of reliable person-miles traveled on the non-Interstate NHS	53%	48%	48%	89%	93%		93%	93%		
	Truck travel time reliability ratio (TTTR) on the Interstate	1.74	1.81	1.84	1.72	1.77		1.75	1.8		
	Ratio of transit v. car average commute time	1.85	1.93	1.97	1.97	-				1.75	1.50
Productivity	Passenger trips per revenue hour										
	for Tri-Rail service	38.63	36.41	36.41	34.96	-				40	50
	for Palm Tran fixed route service	26.47	22.39	22.39	18.4	-				30	40
Goal 4: Connected											
Complete Streets	Centerline mileage of federal aid eligible roadways that include:										
	Separated bike lanes	0	0	0	0	0				20	40
	10-ft or wider shared use pathways	25	50	50	50	72				100	150
	8 to 9-ft paved pathway	-	-	-	-	294				305	320
	Buffered bike lanes	8	8	8	8	12				20	40
	Designated bike lanes	125	160	180	180	200				300	600
	Sidewalks	-	-	-	-	1165				1300	1400
Health & Equity	Percentage of federal aid eligible mileage with:										
	Bicycle facilities within 3 miles of transit hub	10%	7%	7%	7%	10%				100%	100%
	Pedestrian facilities within 1 mile of a transit hub	85%	85%	85%	85%	85%				100%	100%
	Pedestrian facilities within 2 miles of elementary schools	-	-	-	-	79%				90%	100%
	Pedestrian facilities within 1/4 mile of a traditionally underserved community	-	-	-	-	67.7%				70%	80%
Goal 5: Multimodal											
Commuter Mode Split	Walking	1.57%	1.54%	1.49%	1.50%					5%	10%
	Biking	0.55%	0.66%	0.67%	0.62%					3%	5%
	Transit	1.92%	1.97%	1.97%	1.88%					7%	15%
Freight	Annual tonnage of freight for										
	Port of Palm Beach	2.15M	2.16M	2.52M	2.48M	2.57M				3.0M	3.5M
	Palm Beach International Airport	26.5k	26.2k	23.6k	25.8k	26.8k				30.0k	40.0k

Federal, State, and Regional GOALS

Moving Ahead for Progress in the 21st Century Act (MAP-21)

On July 6, 2012, President Obama signed into law P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21). MAP-21 creates a streamlined, performance-based, and multimodal program to address the many challenges facing the U.S. transportation system. Established national performance goals for Federal highway programs that must be integrated into the TPA planning process include:

Safety—to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

Infrastructure condition—to maintain the highway infrastructure asset system in a state of good repair.

Congestion reduction—to achieve a significant reduction in congestion on the NHS.

System reliability—to improve the efficiency of the surface transportation system.

Freight movement and economic vitality—to improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.

Environmental sustainability—to enhance the performance of the transportation system while protecting and enhancing the natural environment.

Reduced project delivery delays—to reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

Fixing America's Surface Transportation Act (FAST Act)

On December 4, 2015, President Obama signed into law Public Law 114-94, the Fixing America's Surface Transportation Act (FAST Act). The FAST Act continues requirements and goal setting established in MAP-21, and made additional provisions to the planning process. The FAST Act requires the planning process to consider projects/strategies to improve the resilience and reliability of the transportation system; stormwater mitigation; and enhance travel and tourism.

Florida Transportation Plan (FTP)

The Florida Transportation Plan (FTP) is the single overarching statewide plan guiding Florida's transportation future. The plan was created by, and provides direction to, FDOT and all organizations that are involved in planning and managing Florida's transportation system, including statewide, regional, and local partners. The FTP Policy Element is Florida's long-range transportation plan as required by both state and federal law. Florida statewide transportation goals are:

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

Florida Strategic Highway Safety Plan (SHSP)

The Strategic Highway Safety Plan (SHSP) was developed as a part of the Florida Transportation Plan. The SHSP is a statewide, data-driven safety plan for all of Florida's road users. The plan is the state's five-year comprehensive roadway safety plan for achieving Florida's vision of zero traffic-related fatalities. The SHSP includes 13 Emphasis Areas that guide Florida's safety efforts:

- Lane departure crashes
- Impared driving crashes
- Pedestrian and bicyclists
- Intersection crashes
- Occupant protection
- Motorcyclists
- Aging road users
- Commerical motor vehicles
- Speeding and aggressive driving crashes
- Teen driver crashes
- Distracted driving crashes
- Work zone crashes
- Traffic records and information systems

Southeast Florida Regional Climate Change Compact Action Plan 2.0.

The goal of the Sustainable Communities and Transportation focus area in the plan is to adapt to the impacts of climate change and reduce greenhouse gas emissions by reshaping where and how to build and how we move from place to place.

2045 Southeast Florida Regional Transportation Plan (RTP)

The Southeast Florida Transportation Council (SEFTC), a formal partnership of Miami-Dade Transportation Planning Organization, Broward Metropolitan Planning Organization, and Palm Beach Metropolitan Planning Organization, have come together to create a regionally collaborated transportation plan that is expected to be complete in Summer 2020. The 2045 Southeast Florida RTP established goals include:

- Provide an accessible, efficient, and reliable multimodal transportation system that is well integrated with supportive land uses;
- Protect the region's Health and Environment and provide for a safer and more secure transportation system for the Region's residents, businesses and visitors;
- Optimize and expedite sound investment strategies to support an expanding regional economy;
- Invest in publicly supported, equitable transportation options for all users, including low income and minority neighborhoods, as well as the aging population.

Goals, Objectives, Targets & Planning Factors

	FAST Act Planning Factors										Florida Transportation Plan Goals						
	Economic Vitality	Safety	Security	Accessibility and Mobility	Environment	Integration and Cnnectivity	Efficient System Preservation	Resiliency and Reliability	Travel and Tourism		Safety and Security	Infrastructure	Mobility	Transportation Choices	Economic Competitiveness	Quality Places	Environment and Energy
Goal 1: Preserve																	
Maintenance																	
Pavement																	
Interstate in Good condition	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Interstate in Poor condition	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Non-Interstate NHS in Good condition	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Non-Interstate NHS in Poor condition	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Bridges																	
NHS bridges in Good condition	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
NHS bridges in Poor condition	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Transit																	
Percentage of Palm Tran infrastructure exceeding useful life for:																	
Vehicles	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Equipment	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Facilities	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Percentage of Tri-Rail infrastructure meets or exceeds useful life for																	
Equipment - Support & Maintenance Vehicles >8 yrs old	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Equipment - Other vehicles (<2.5 on 1-5 scale)	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Rolling Stock - locomotives, coach cars, self-propelled cars >39 yrs old	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Rolling Stock - cutaway buses >10 yrs old	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Percentage of Tri-Rail facilities with poor condition (<2.5 on 1-5 scale)																	
Passenger Terminals	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Maintenance Facilities	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Administrative Offices	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Tri-Rail systems & equipment with condition (<2.5 on 1-5 scale)	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Rail fixed-guideway track with performance restrictions	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Environment																	
Daily fuel use (gal) per person					✓		✓	✓	✓						✓	✓	✓
Daily Vehicle Miles Traveled per person					✓		✓	✓	✓						✓	✓	✓
% electric vehicles in rubber-tire transit fleet					✓		✓	✓	✓						✓	✓	✓
Resiliency																	
Percentage of federal aid eligible milage susceptible to inundation by																	
1.2-ft sea level rise & historic storm surge	✓	✓	✓		✓			✓	✓	✓	✓	✓			✓	✓	✓
1% chance of annual flooding	✓	✓	✓		✓			✓	✓	✓	✓	✓			✓	✓	✓
Goal 2: Safe																	
Vision Zero																	
Number of fatalities	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Rate of fatalities per 100 million vehicle miles traveled (VMT)	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Number of serious Injuries	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Rate of serious injures per 100 million vehicle miles traveled (VMT)	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Number of non-motorized fatalities and serious injuries combined	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Number of rail fatalities	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓

	FAST Act Planning Factors										Florida Transportation Plan Goals						
	Economic Vitality	Safety	Security	Accessibility and Mobility	Environment	Integration and Cnnectivity	Efficient	System Preservation	Resiliency and Reliability	Travel and Tourism	Safety and Security	Infrastructure	Mobility	Transportation Choices	Economic Competitiveness	Quality Places	Environment and Energy
Goal 3: Efficient																	
Reliability																	
Percent of reliable person-miles traveled on the Interstate	✓			✓		✓	✓		✓	✓			✓	✓	✓	✓	✓
Percent of reliable person-miles traveled on the non-Interstate NHS	✓			✓		✓	✓		✓	✓			✓	✓	✓	✓	✓
Truck travel time reliability ratio (TTTR) on the Interstate	✓		✓	✓		✓	✓		✓	✓	✓		✓	✓	✓	✓	✓
Ratio of transit v. car average commute time																	
Productivity																	
Passenger trips per revenue hour																	
for Tri-Rail service	✓			✓	✓	✓	✓			✓			✓	✓	✓	✓	✓
for Palm Tran fixed route service	✓			✓	✓	✓	✓			✓			✓	✓	✓	✓	✓
Goal 4: Connected																	
Complete Streets																	
Centerline mileage of federal aid eligible roadways that include:																	
Separated bike lanes	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
10-ft or wider shared use pathways	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
8 to 9-ft paved pathways	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
Buffered bike lanes	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
Designated bike lanes	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
Sidewalks	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
Health & Equity																	
Percentage of federal aid eligible mileage with:																	
Bicycle facilities within 3 miles of a transit hub	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
Pedestrian facilities within 1 mile of a transit hub	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
Pedestrian facilities within 2 miles of elementary schools	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
Pedestrian facilities within 1/4 mile of a traditionally underserved community	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
Goal 5: Multimodal																	
Commuter Mode Split																	
Walking	✓	✓		✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓
Biking	✓	✓		✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓
Transit	✓	✓		✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓
Freight																	
Annual tonnage of freight for																	
Port of Palm Beach	✓			✓		✓	✓						✓		✓		
Palm Beach International Airport	✓			✓		✓	✓						✓		✓		

Expected Growth

Planning transportation investments requires identifying current demands and future growth patterns to identify projects needed to accommodate both existing travel patterns and expected growth. The county is expected to add 222,00 more residents and 102 more jobs by 2030. Growth is expected to continue though 2045 with an additional 175,00 residents and 108,00 jobs to reach nearly 1.8 million people and 930,000 jobs.

Additionally, Palm Beach County is aging. The largest cohorts today are between 45 and 70. By 2030, this cohort will move into the 60- to 80-year range, which will create radical shifts in the mobility needs for Palm Beach County as shown in Figure 7[12]. The desire to age in place and continue to occupy the large stock of single family housing will push the need for autonomous vehicles and active transportation facilities to support safe travel as a pedestrian and/or bicyclist. Mobility options will be especially vital for the large growth in both 18 and under and 65 and older age groups, who are more dependent on alternative modes of transportation.

While the large older cohort is aging, rapid growth is expected in the younger age ranges. It is interesting to note that much of the younger growth is not natural (births exceeding deaths) but rather through migration, both domestic (within Florida and/ or the United States) and international. While the median age may increase over the next decade, there will be a growing sense of two cultures within Palm Beach County – a younger group seeking employment opportunities, affordable housing, and mobility options, and an older group seeking retirement services, affordable housing, and mobility options.

The common denominator for both age cohorts is the need to provide a multimodal transportation system that offers mobility options and to make a wider range of housing price points affordable to our community.

[12] FL Bureau of Economic and Business Research (BEBR), 2017-2045 Population Projections

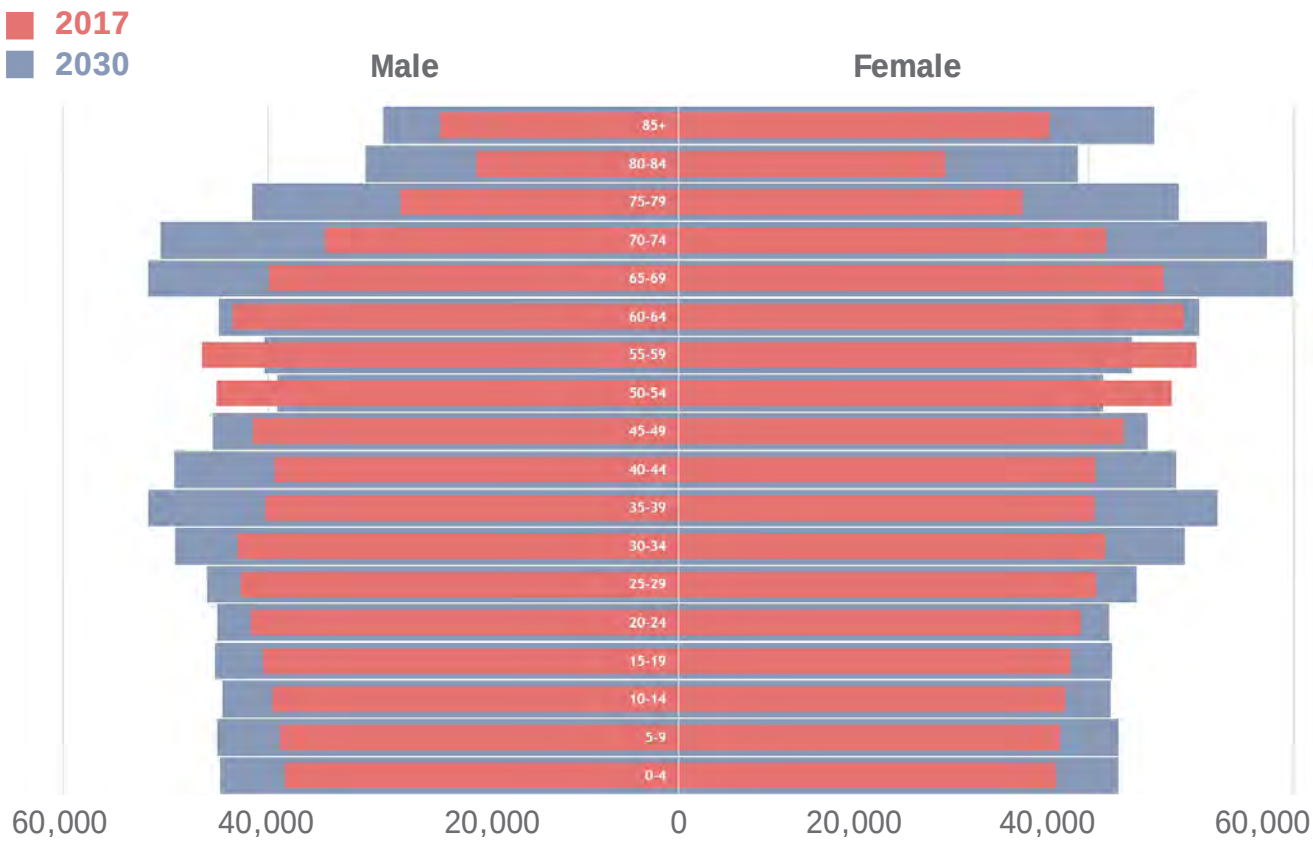
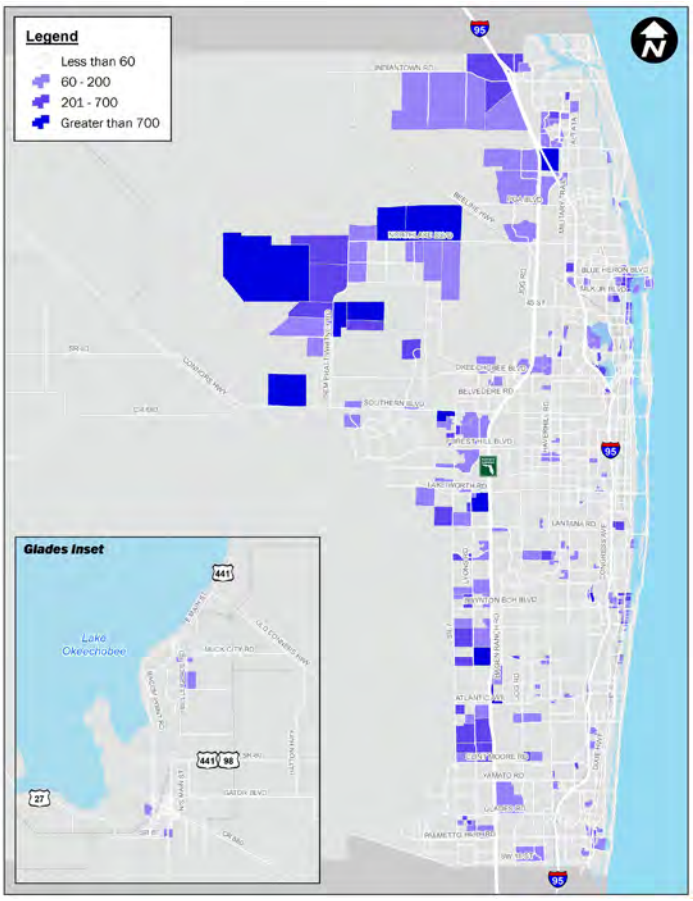


Figure 7. Total Population by Age and Sex for 2017 and 2030

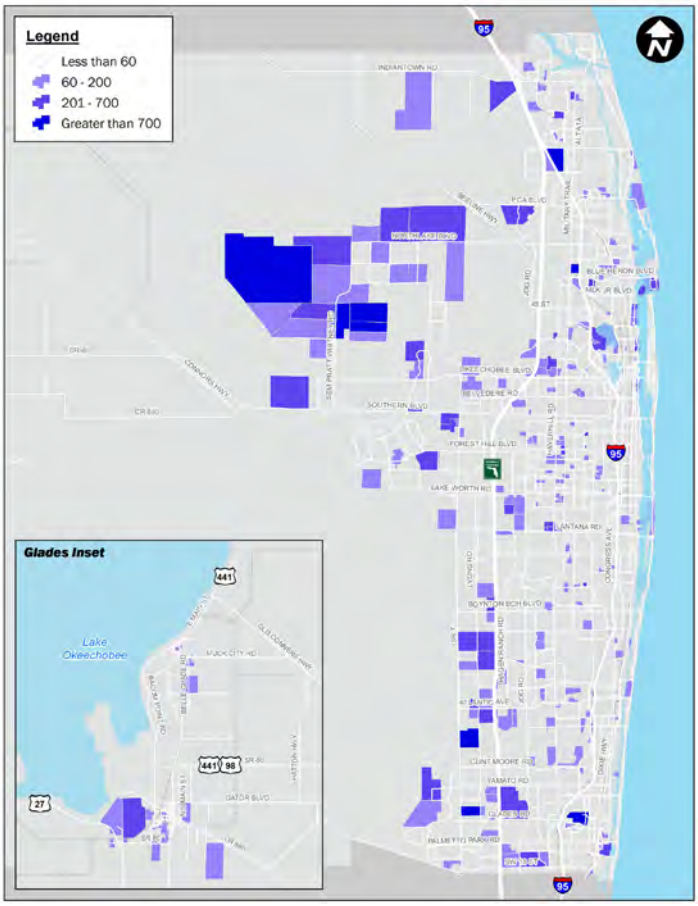
The 2030 and 2045 projections included known future developments and land uses to identify the most likely patterns of growth. Over 64,000 housing units are already sited for development with completion estimated by 2030. Much of the known residential development is expected to follow the same low-density development pattern as before, producing greater automobile dependency, adding more vehicles on roadways, and stretching the ability to serve communities with efficient public transportation options.

Employment growth is expected throughout the county, with office and service sector employment being added in urbanized areas and corridors, and in newly developed areas to meet residential needs. Large tracts of land along Beeline Highway and SR-80 may experience manufacturing and industrial job growth as designated commercial and industrial parks build out.

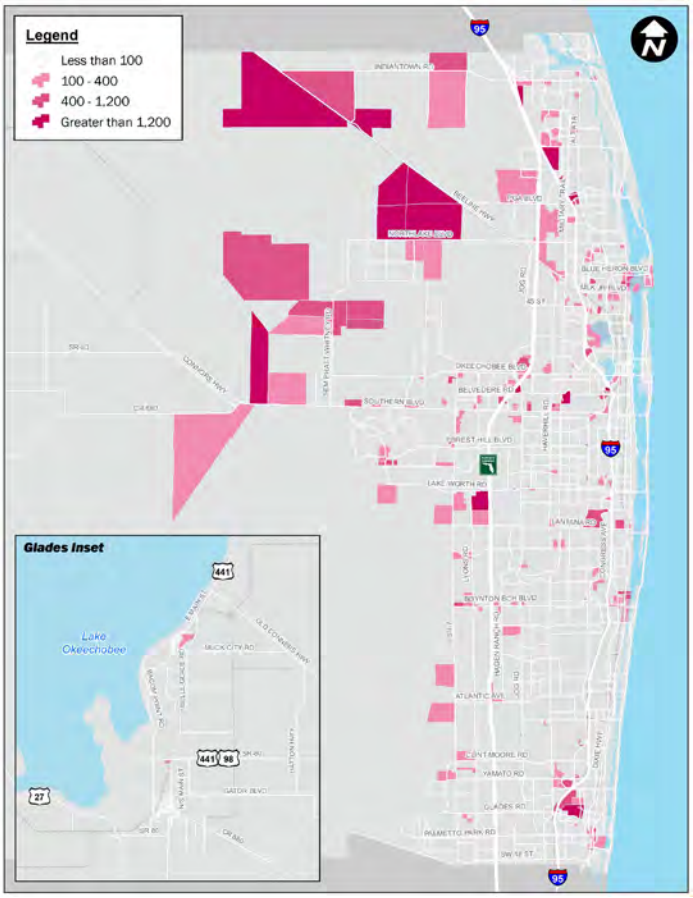
Map 17 and Map 18 show new households expected to be built through 2030 and through 2045, while Map 19 and Map 20 show additional employment expected to be added through 2030 and 2045.



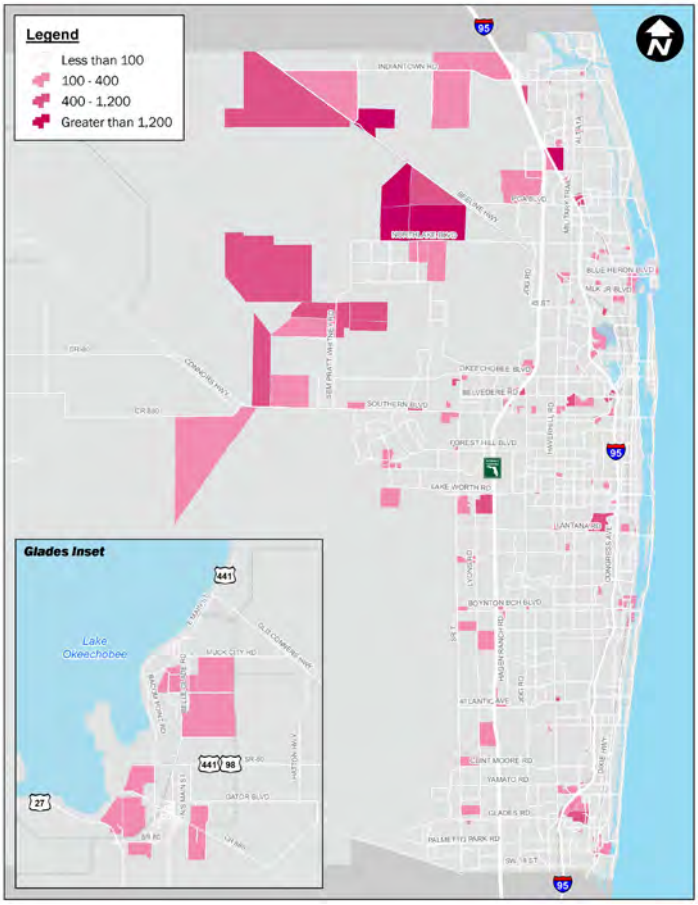
Map 17. Households Added from 2015 to 2030



Map 18. Households Added from 2030 to 2045



Map 19. Employees Added from 2015 to 2030

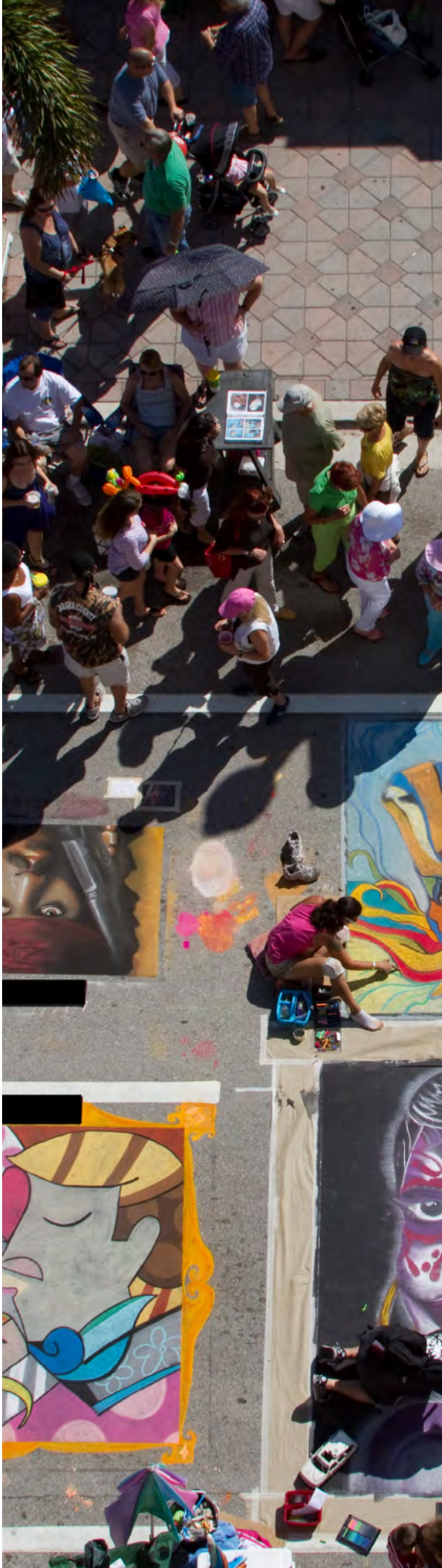


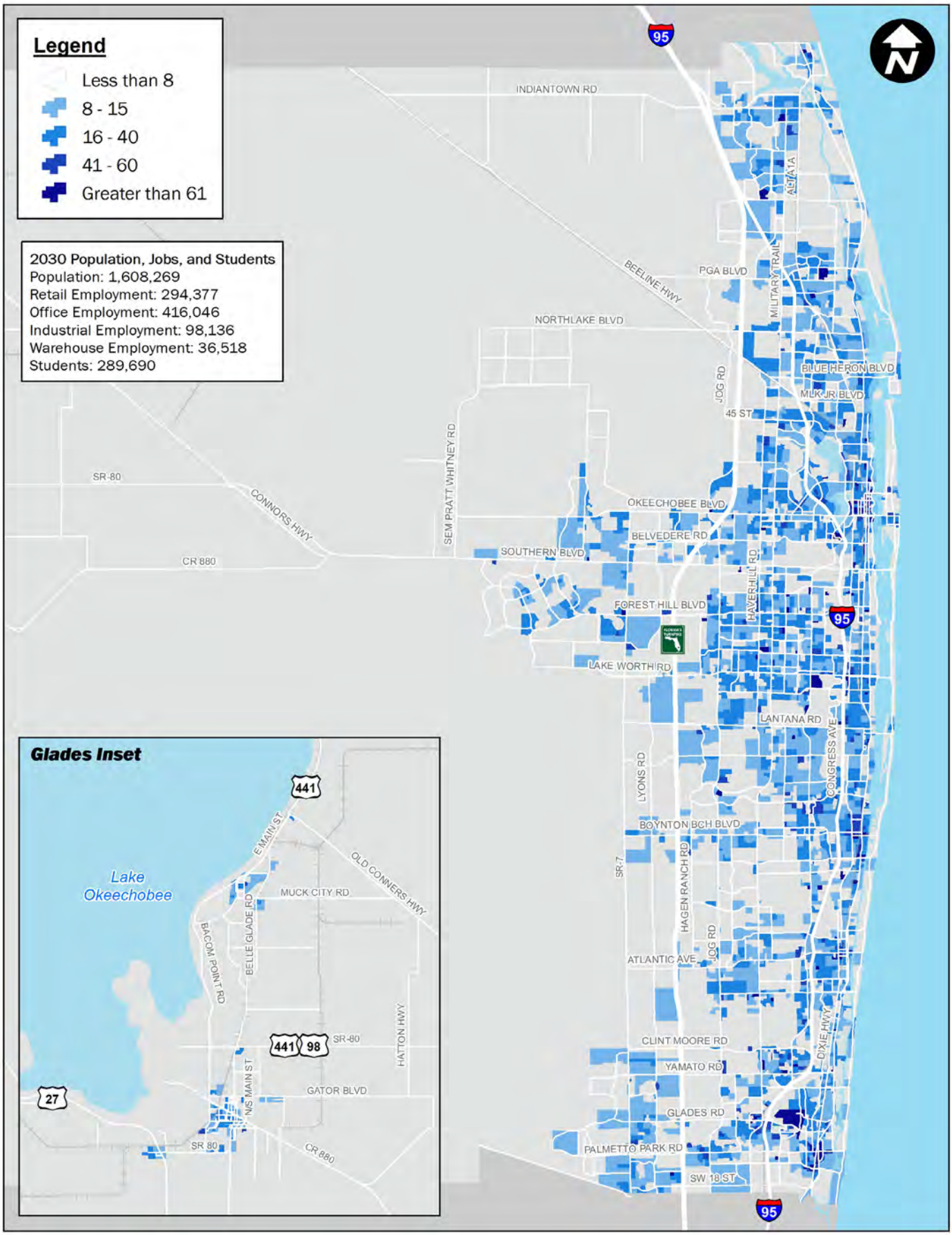
Map 20. Employees Added from 2030 to 2045

Although much of the growth displayed in the maps is new construction at relatively low densities that will primarily be served by automobile facilities, the county is beginning to see growth in population density through redevelopment along some of its major urban corridors. These redevelopment trends coupled with infill in urbanized areas may support multimodal transportation options and allow for investment in multimodal facilities and services while increasing the efficiency of providing public transportation.

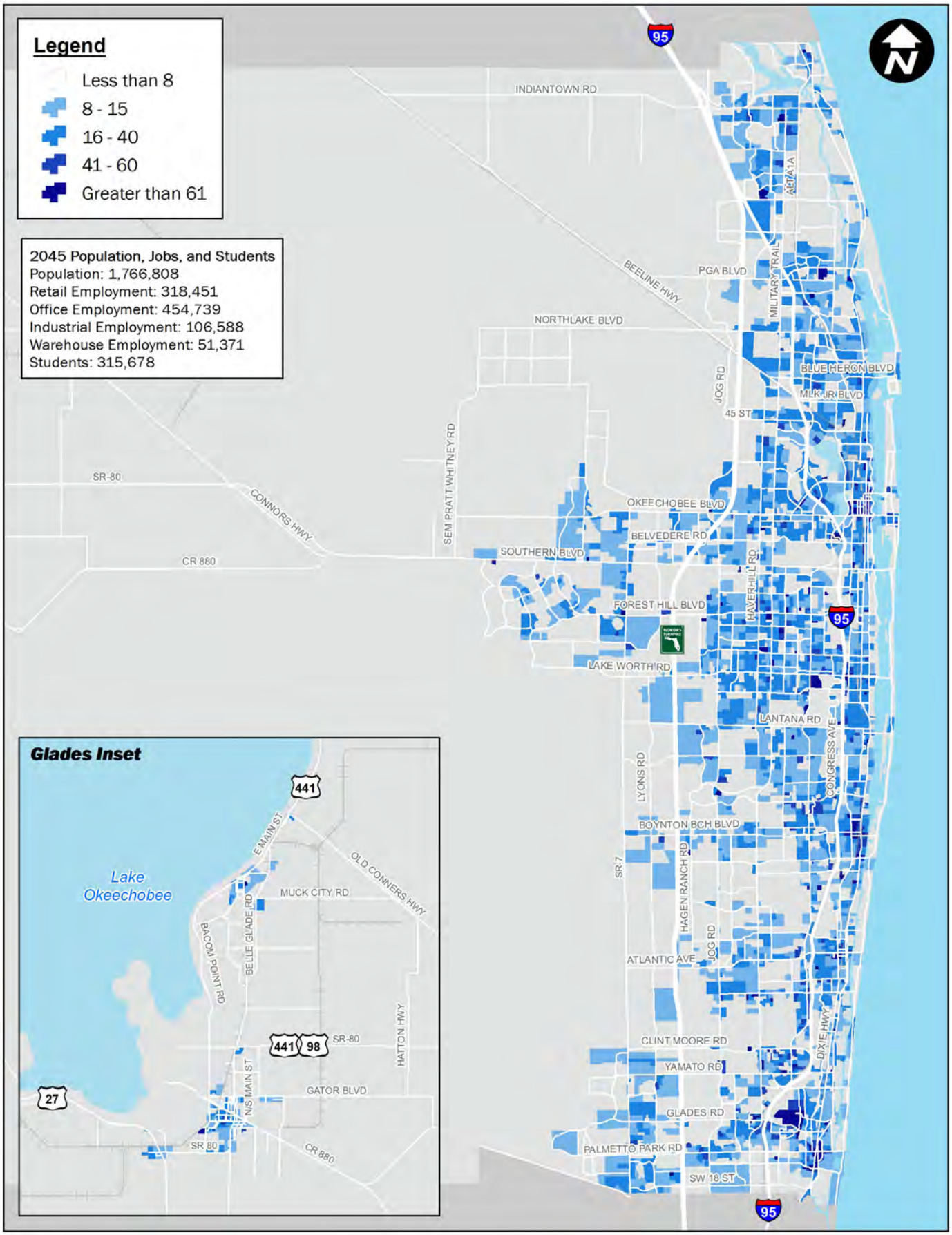
Map 21 and Map 22 show total people per acre (including housing, employment, and student enrollment) projected to 2030 and 2045. These figures function as a surrogate for mode split estimation; where there are less than 8 people per acre the predominant means of transport will be personal automobiles. However, as people density increases the propensity for active and public transportation increases as well. At 8-15 people per acre, local bus service becomes useful. Above 16 people per acre warrants consideration of Bus Rapid Transit (BRT) service in either shared use or dedicated lanes, and above 41 people per acre warrants evaluation of light rail transit service.

The following sections use a combination of population and employment projections, demographic information, and estimated people density to forecast the demand for various multimodal transportation facilities and services within the county.





Map 21. 2030 Population and Job Density (People Per Acre)



Map 22. 2045 Population and Job Density (People Per Acre)

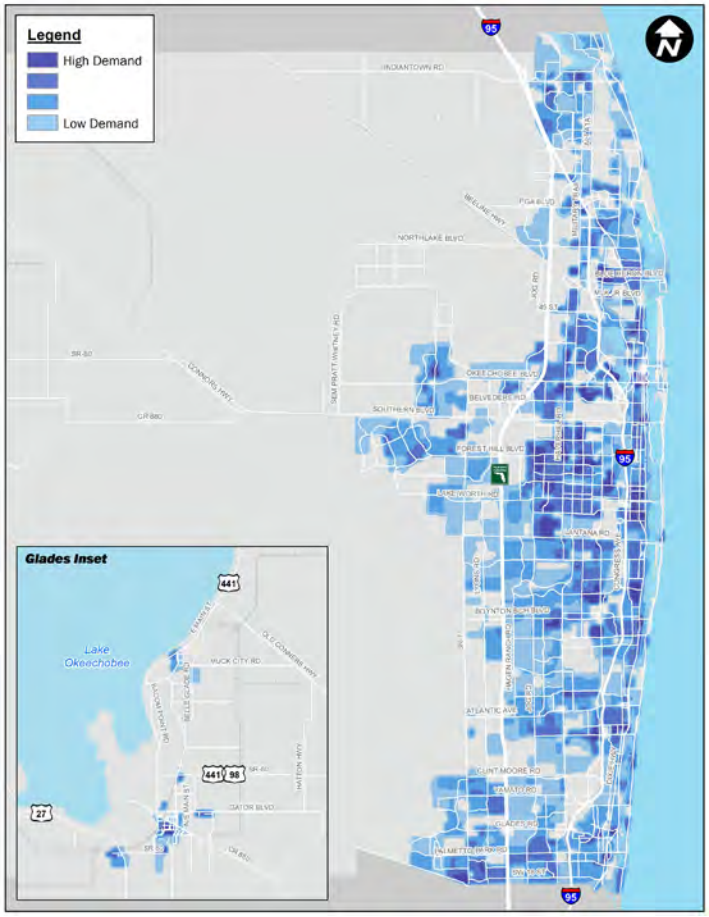
Multimodal Forecast

People walking, bicycling, and riding transit have the same transportation needs as people driving. They must use the transportation system to access the places where they live, work, learn, and play. The following section outlines the methodology and inputs used to perform an objective, data-driven, multimodal demand analysis for pedestrians, bicyclists, transit riders, and motorists.

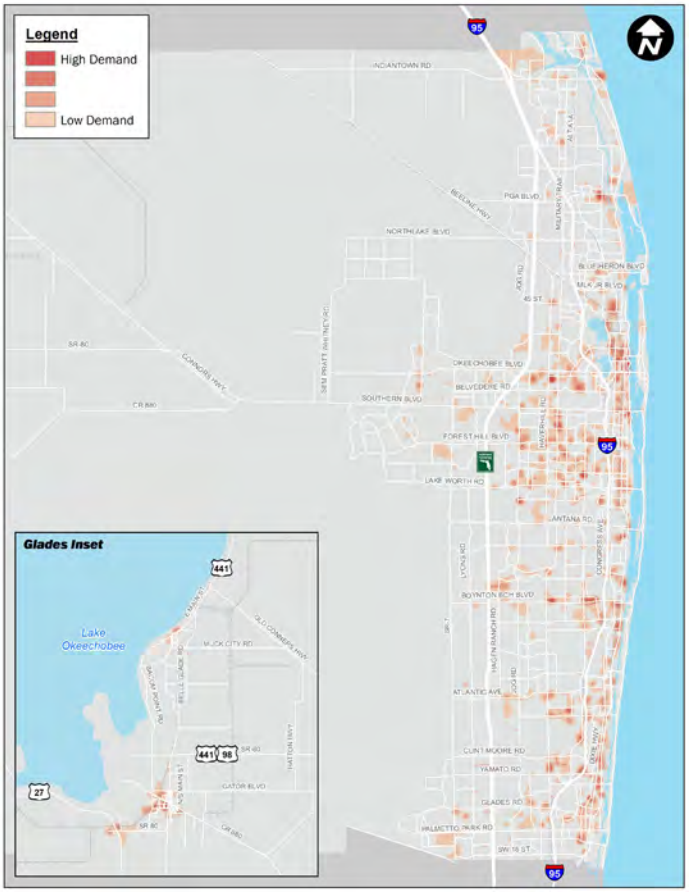
Active Transportation Demand Analysis

The analysis first quantified inputs that generate active transportation demand using a series of factors including where people live, work, play, learn, and access transit. Next, it synthesized results with a composite map that displayed the cumulative results of this analysis used to inform project recommendations and prioritization. The analysis computed these data inputs using geographic information systems (GIS) and illustrated outputs based on density and proximity.

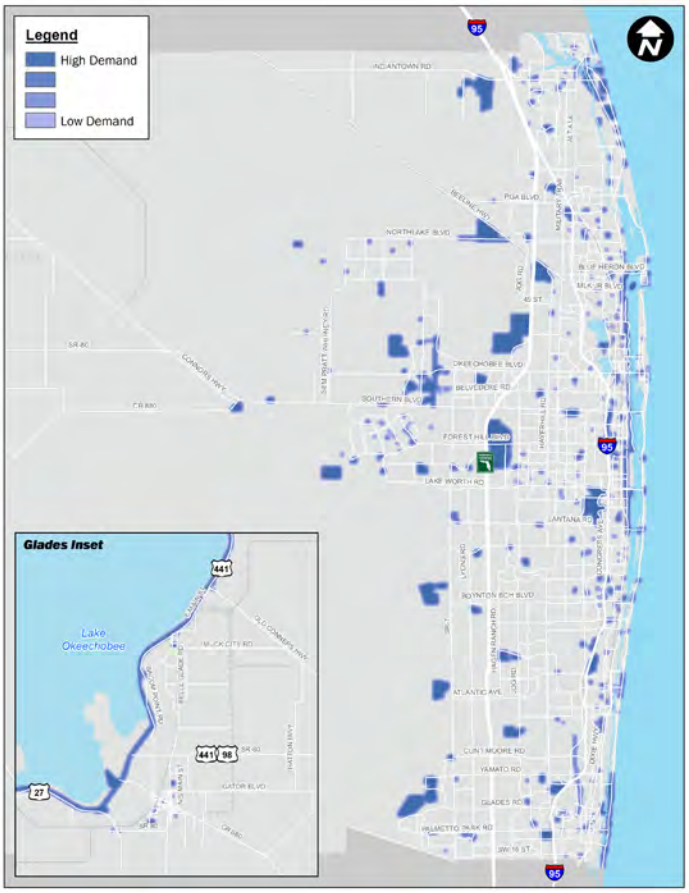
Map 23 to Map 27 display the individual factors used to develop the composite Active Transportation Demand shown in Map 28. The Active Transportation Demand Map depicts where people in Palm Beach County are most likely to walk, bicycle and take transit based on the density of people who live, work, play, learn and access transit.



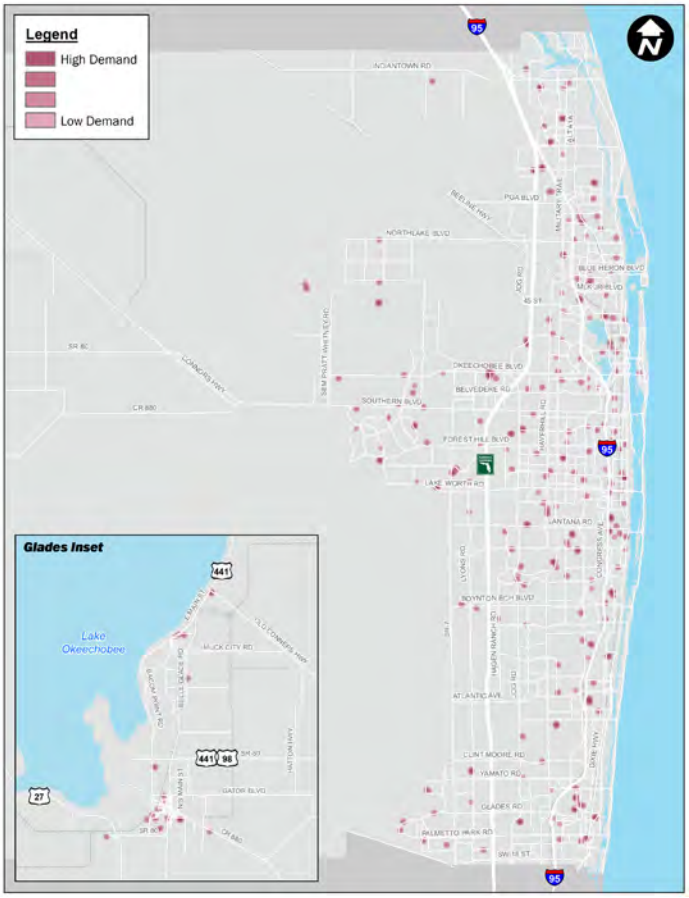
Map 23. Where People Live



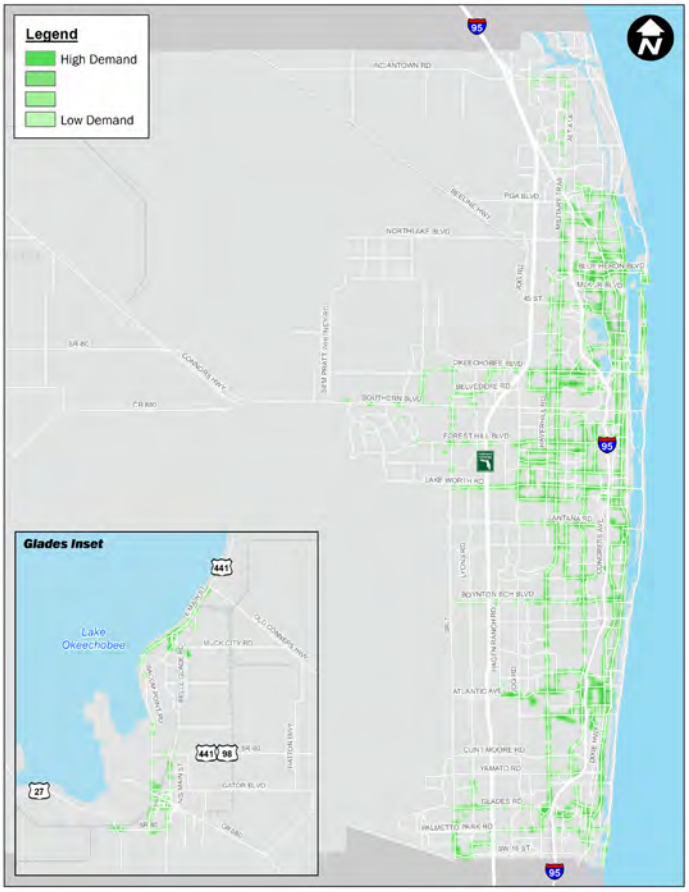
Map 24. Where People Work



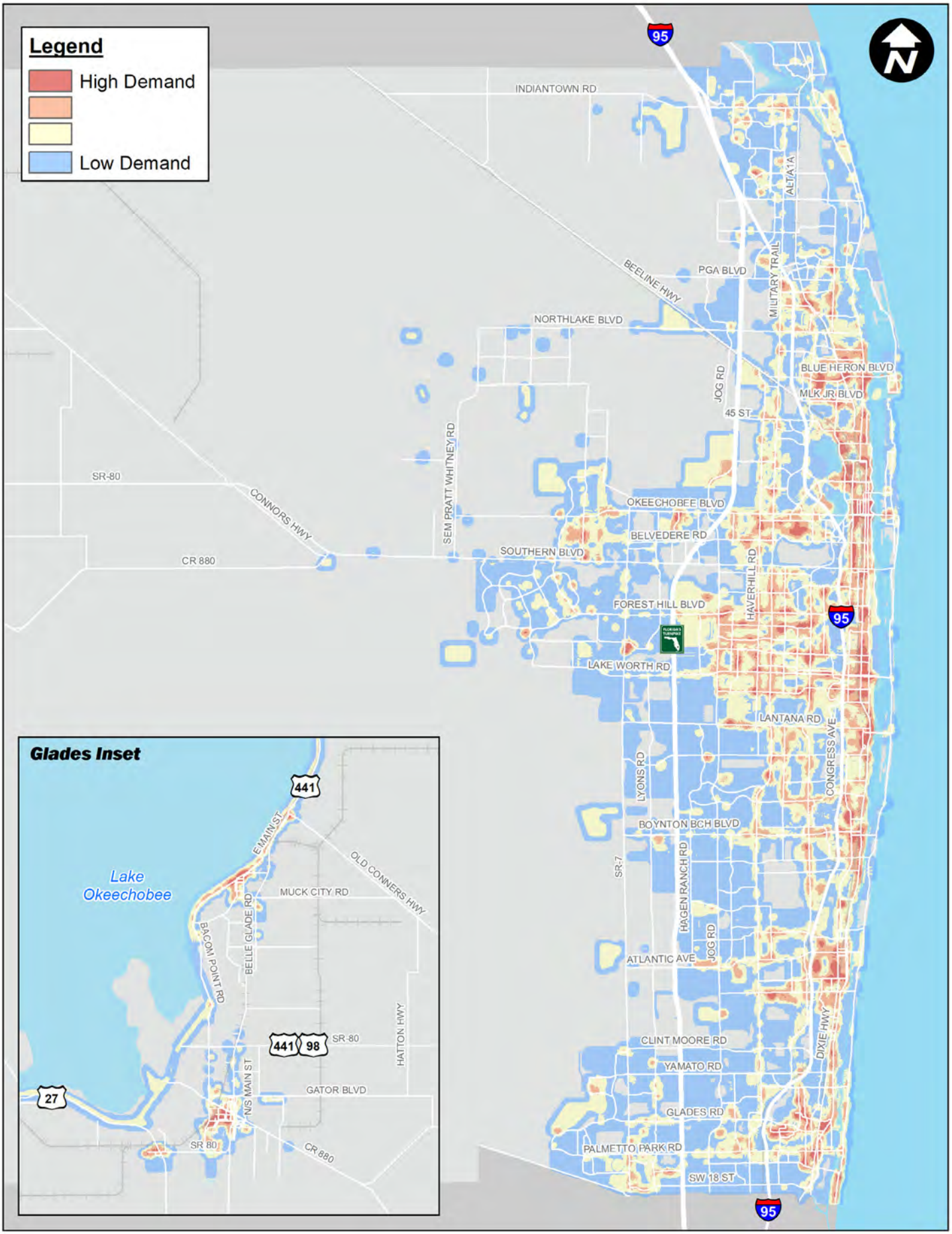
Map 25. Where People Play



Map 26. Where People Learn



Map 27. Where People Access Transit



Map 28. Active Transportation Demand

Pedestrian and Bicycle Level of Stress Analysis

After identifying the areas in the county with the greatest demand for active transportation, the analysis examined existing conditions for pedestrians and bicyclists by evaluating existing pedestrian and bicycle facilities and then performing a Level of Traffic Stress (LTS) analysis for arterial and collector roadways in the county. LTS considers the supply of roadways and pedestrian infrastructure and generates a score that represents a user's estimated level of comfort, or "traffic stress," on the street. The LTS scores can be used to understand who may be willing to use the roadway based on its conditions.

In short, the lower the score, the more comfortable a street is to walk and bicycle along, making streets a score of one (1) the most comfortable and a score of four (4) considered stressful for anyone, regardless of age or ability.

The Active Transportation Demand and LTS analyses for pedestrians and bicyclists led to the identification of a Tier 1 and Tier 2 priority network of pedestrian and bicycle facilities needed to create a safe, efficient and connected multimodal transportation system for all users.

Pedestrian Level of Stress Analysis

The factors used in the Pedestrian LTS Analysis are listed below.

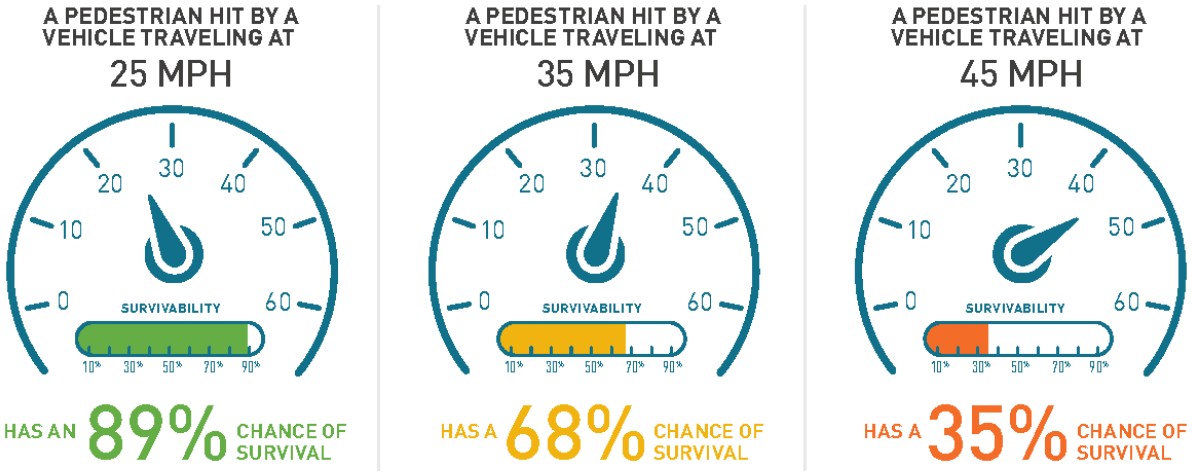
- Presence of a sidewalk
- Posted vehicular speeds
- Number of adjacent vehicular lanes
- Vehicle volumes (Annual Average Daily Traffic)
- Sidewalk buffer from closest vehicle travel lane
- Sidewalk width

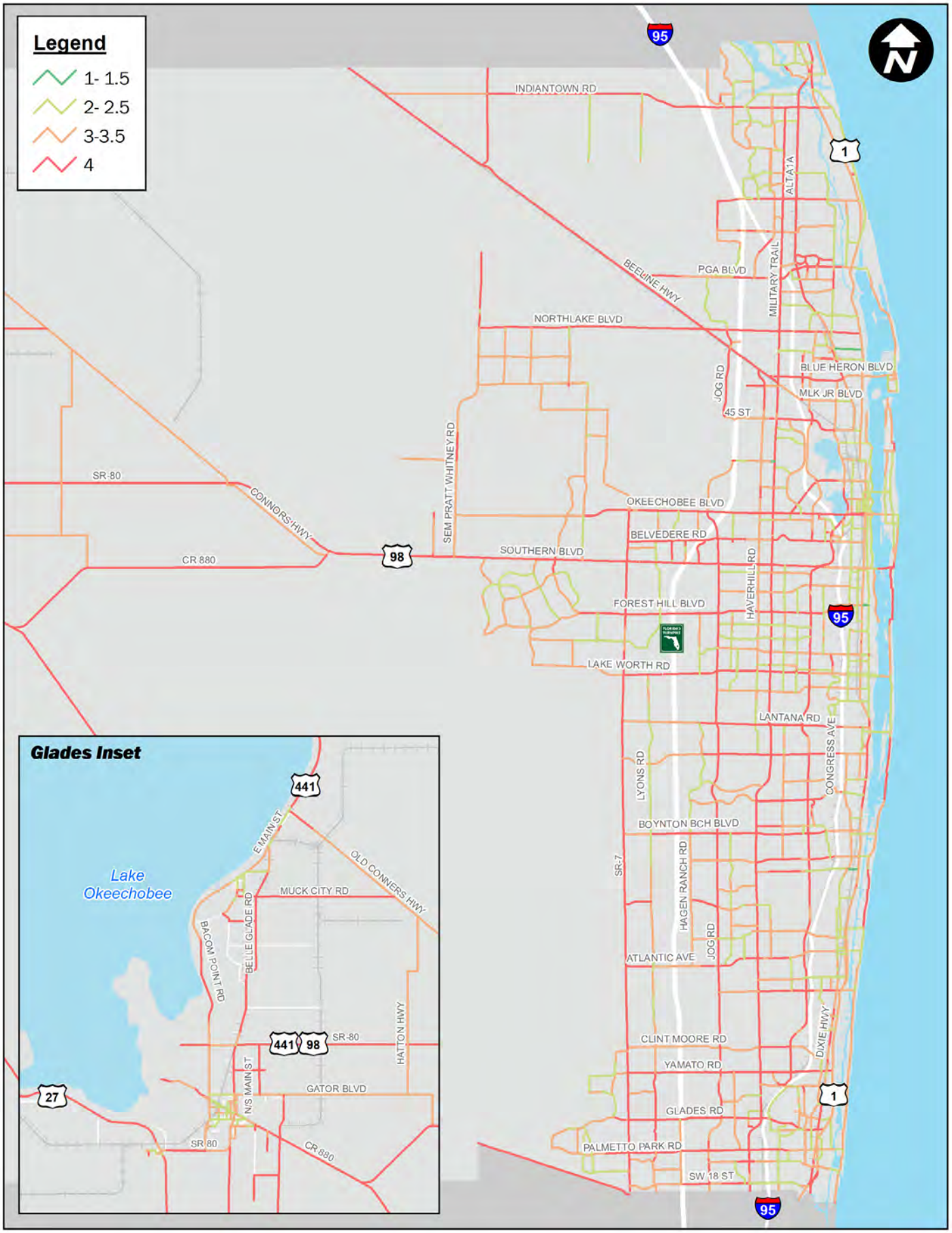
Table 4 represents the LTS scoring for roadways based on the inputs in the Pedestrian LTS Analysis. Roadways with less separation from vehicles, higher traffic volumes, more lanes, and higher posted speeds generally score higher than roadways with the opposite conditions. A roadway with an LTS one (1) is generally suitable for children under the age of ten (10) trained to safely cross streets, while an LTS four (4) is uncomfortable for most able-bodied adults. Map 29 displays the Pedestrian LTS on roadways in Palm Beach County.

Table 4. Pedestrian LTS's Data Inputs

		PEDESTRIAN FACILITY* & POSTED SPEED LIMIT											
		Both sides of the street				One side of the street				No Dedicated Walkway			
# OF LANES	VEHICLE VOLUMES	<= 25 MPH	30 MPH	35 MPH	>= 40 MPH	<= 25 MPH	30 MPH	35 MPH	>= 40 MPH	<= 25 MPH	30 MPH	35 MPH	>= 40 MPH
2-3 lanes	<3k	1	1.5	2	2	1.5	2	2.5	3	2.5	3	3.5	3.5
	3k - 10k	1.5	2	2	2.5	2	2.5	2.5	3	3	3.5	3.5	4
	>10k	2	2	2.5	2.5	2.5	2.5	3	3	3.5	3.5	4	4
4-5 lanes	<15k	2.5	2.5	3	3	3	3.5	3.5	3.5	4	4	4	4
	15k - 25k	2.5	3	3	3.5	3.5	3.5	4	4	4	4	4	4
	>25k	3	3	3.5	3.5	4	4	4	4	4	4	4	4
6+ lanes	All AADTs	3	3.5	3.5	4	4	4	4	4	4	4	4	4

Speed has a major influence on level of comfort a person walking when using a roadway. This factor has also been studied in its relationship to severity of an injuries or fatalities associated with vehicular speed. Pedestrians involved in crashes where vehicles are moving at a slower rate of speed are less likely to experience an injury or be killed in a collision than those on higher speed corridors. The illustration below describes the relationship between vehicle speed and pedestrian survivability in a crash.





Map 29. Pedestrian Level of Traffic Stress

Per the Pedestrian LTS analysis results displayed in Figure 8 below, 42% of roadways received a LTS four (4) rating, which would be uncomfortable for most able-bodied adults, and unsuitable for children or people using mobility devices. Generally, adults will only travel on these roadways if given no other choice to reach a destination and primarily to reach a place of employment.

Only 0.2% of the roadways received an LTS one (1) or 1.5 score, which is suitable for children under the age of ten trained to safely cross roadways, and people using a mobility device.

Roadways with an LTS score of two (2) or 2.5 represented 21% of the roadways in the county. These roadways are suitable for most teenagers and young adults but younger children should be accompanied by an adult. People using a mobility device on LTS two (2) roadways should be able to traverse most sidewalks without issues but may experience discomfort.

The remaining 37% of roadways were LTS three (3). These roadways are unsuitable for children and teenagers. Some able-bodied adults will be uncomfortable using these roadways, but will use the roadways out of necessity to reach a destination, typically a place of employment.

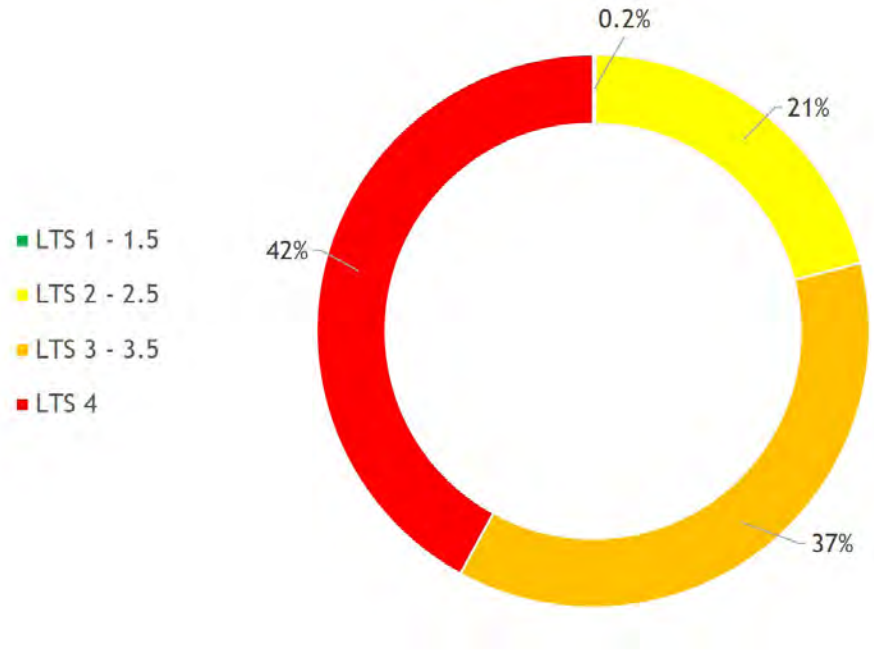


Figure 8. Pedestrian LTS: Percentage of Total Network Analyzed

Bicycle Level of Traffic Stress Analysis

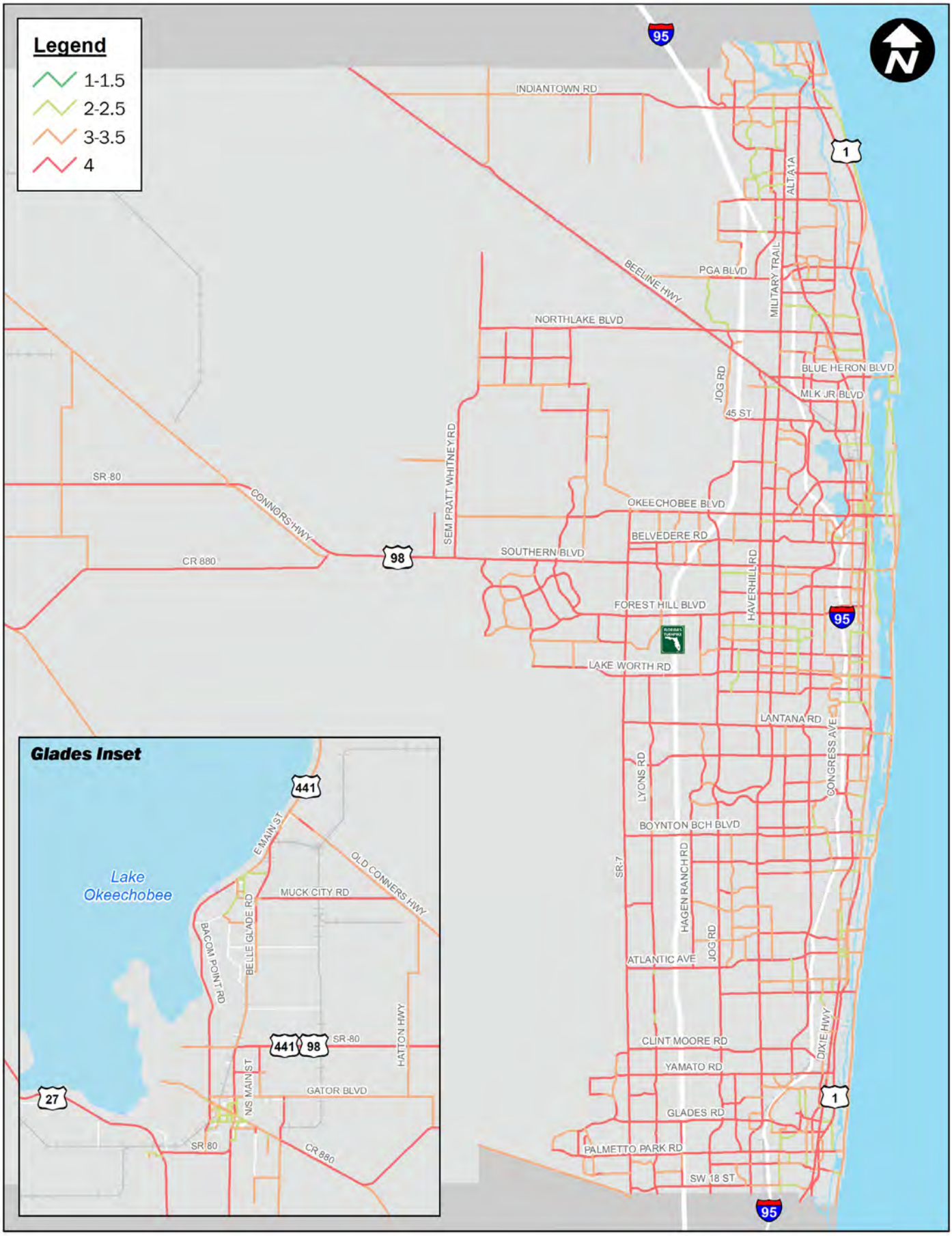
The factors used in the Bicycle LTS Analysis are listed below.

- Type of facility
- Posted vehicle speed
- Number of vehicle travel lanes
- Annual average daily traffic

Table 5 represents the scoring for various roadways based on the inputs in the Bicycle LTS Analysis. Roadways with less separation from vehicles, higher traffic volumes, more lanes, and higher posted speeds generally score higher than roadways with the opposite condition. Map 30 displays the Bicycle LTS on roadways in Palm Beach County.

Table 5. Bicycle LTS's Data Inputs

		BICYCLE FACILITY* & POSTED SPEED LIMIT												
		No Bicycle Facility (Mixed Traffic Streets)				Street with Designated Bike Lanes (4-5 ft)			Street with Buffered Bike Lanes (6-8 ft)			Street with Separated Bike Lanes		
Number of Travel Lanes	Vehicle Volumes	<= 25 MPH	30 MPH	35 MPH	>= 40 MPH	<= 30 MPH	35 MPH	>= 40 MPH	<= 30 MPH	35 MPH	>= 40 MPH	<= 30 MPH	35 MPH	>= 40 MPH
2-3 Lanes	<3k	1.5	2	2.5	3	1.5	2	2.5	1	1.5	2	1	1	1
	3k - 10k	2	2.5	3	3.5	2	2.5	3	1	1.5	2	1	1	1
	>10k	2.5	3	3.5	4	2.5	3	3.5	1.5	2	2.5	1	1	1.5
4-5 Lanes	<15k	3	3.5	4	4	2.5	3	3.5	2	2.5	3	1	1	1.5
	15k - 25k	3.5	4	4	4	3	3.5	4	2.5	3	3.5	1	1.5	2
	>25k	4	4	4	4	3.5	4	4	3	3.5	4	1.5	2	2
6+ Lanes	All AADTs	4	4	4	4	3.5	4	4	3.5	4	4	2	2	2



Map 30. Bicycle Level of Traffic Stress

LTS one (1) roadways are considered those suitable for all ages and abilities. In this analysis, the only roadways which would be classified as LTS one (1) were those with either separated bike lanes or buffered bike lanes on low-speed, low-volume roads. No roadways in Palm Beach County received an LTS one (1) or 1.5.

Conversely, LTS four (4) roadways are those used primarily by able bodied adults either using the roadway out of necessity, with no other option to reach a destination, or who have a high tolerance for stress. These roadways are not suitable for adolescents, or those who are uncomfortable with high stress roadways when bicycling. Sixty percent of roadways in Palm Beach County are LTS Four (4). Figure 9 below summarizes the LTS score as a percentage of the total arterial and collector network.

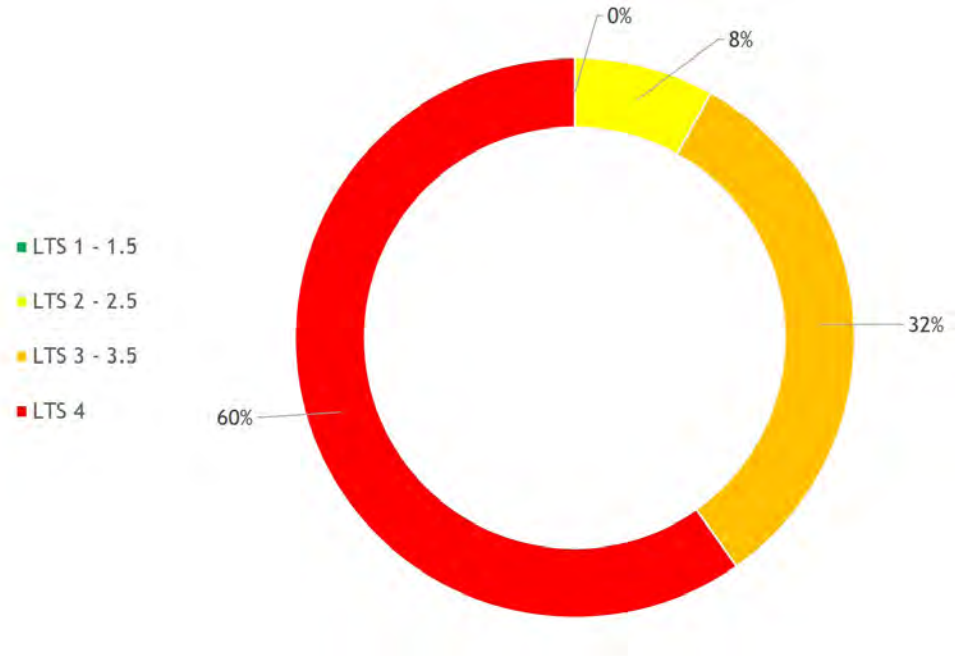


Figure 9. Bicycle LTS: Percentage of Total Network Analyzed

Transit Modal Analysis

Using the active transportation demand analysis results along with Palm Tran's current high ridership routes and 2045 forecasted jobs and population, an enhanced transit network of corridors was identified consistent with the Southeast Florida Regional Transportation Plan. These corridors have the greatest potential for enhanced transit service to reduce transit travel times, increase regional connectivity, and provide improved vehicles and transit amenities to attract riders. Table 6 summarizes each corridor's general characteristics and Map 31 displays the alignments.

Table 6. Enhanced Transit Corridor General Characteristics

Corridor Name	Primary Roads	Begin	End	Corridor Length (one-way miles)
US-1	US-1 / Dixie Highway	PGA Boulevard (Gardens Mall)	Palmetto Park Road (Boca Raton)	37.20
Congress	Congress Avenue	WPB Intermodal Transit Center (ITC)	Yamato Road (Tri-Rail Boca Raton)	23.68
Military Trail	Military Trail	PGA Boulevard (Gardens Mall)	Glades Road (Town Center Mall)	33.87
Lake Worth	Lake Worth Road / US-441	US-441 / Forest Hill Boulevard (Wellington Mall)	US-1	10.98
Forest Hill	Forest Hill Boulevard	US-441 / Forest Hill Boulevard (Wellington Mall)	US-1	9.21
Atlantic	Atlantic Avenue	Military Trail	US-1	3.47
Okeechobee	Okeechobee Boulevard	US-441 / Forest Hill Boulevard (Wellington Mall)	WPB ITC	13.65
Boynton Beach	Boynton Beach Boulevard / US-441	Military Trail	US-1	4.01
Glades	Glades Rd	Glades Rd/Butts Rd (Town Center Mall)	US-1	2.59

Map 31. Enhanced Transit Corridors

Table 7 summarizes the number of stations, spacing, and ridership catchment for each corridor. The maximum quarter mile ridership catchment is based on the percentage of existing Palm Tran ridership that can potentially be captured by the selected stations. The ridership catchment still helps validate the selection of the potential station locations.

Table 7. Enhanced Transit Corridor Stop Characteristics and Potential Ridership Catchment

Corridor Name	Corridor Length (one-way miles)	Total Stations	Average Station Spacing (miles)	Maximum ¼ Mile Ridership Catchment
US-1	37.20	37	0.99	91.23%
Congress	23.68	24	1.01	87.42%
Military Trail	33.87	24	0.71	83.25%
Lake Worth	10.98	11	1.00	87.23%
Forest Hill	9.21	10	1.09	87.23%
Atlantic	3.47	3	0.86	91.49%
Okeechobee	13.65	14	1.03	91.52%
Boynton Beach	4.01	4	1.00	93.33%
Glades	2.59	3	1.16	81.24%

The prioritization of the transit corridors was based primarily on the stop-level statistics calculated during the selection of station locations, but also uses Longitudinal Employer-Household Dynamics (LEHD) work trips as a corridor-level measure. A weighted-score ranking system was utilized to prioritize the corridors by potential ridership demand. Table 8 displays the categories, data sources, weighting percentage, and normalization factor used.

Table 8. Corridor Prioritization Categories and Weight Factors

Category	Source	Weight	Normalization Factor
Factored Ridership (¼ mi - selected stations)	Palm Tran APC - Average Daily Activity (January-April 2018)	40%	None
LEHD Work Trips to Corridor (¼ mi - corridor buffer)	OnTheMap LEHD 2015	20%	By Mile
2015 Population Near Corridor Stops (¼ mi - selected stations)	Palm Beach TPA TAZ 2015	15%	By Station Count
2015-2045 Population Growth % (¼ mi - selected stations)	Palm Beach TPA TAZ Estimates	5%	None
2015 Employment Near Corridor Stops (¼ mi - selected stations)	Palm Beach TPA TAZ 2015	15%	By Station Count
2015-2045 Employment Growth (¼ mi - selected stations)	Palm Beach TPA TAZ Estimates	5%	None

Each category utilized a quarter mile buffer (for stops and corridor measures) to aggregate data and generate the final weighted score. Population and employment data were aggregated based on the intersection of Traffic Analysis Zones (TAZ) with the quarter mile buffer. LEHD work trips to the buffered corridor was calculated using the United States Census Bureau OnTheMap application. Since Palm Tran ridership was not differentiated by route, the factored ridership metric was created to evenly distribute ridership data at major shared stop locations and refrained from considerably over-counting ridership activity. For example, the West Palm Beach Intermodal Transit Center (ITC) is served by three (3) enhanced transit corridors and has close to 4,000 total daily activity. Instead of triple counting ridership activity for each corridor, it was evenly distributed amongst the three corridors. This high-level approach was used at all high ridership station locations that were served by more than one corridor (e.g. transit centers and malls). This method was not applied to lesser magnitude stops and/or shared intersections due to a lack of significance.

The final weighted scores were built on a 100-point scale and assigned to each corridor based on how they ranked amongst each corridor by category. A normalization factor was applied to several categories to account for corridor length and the number of station variability. For example, LEHD work trips had a weight of 20% and a maximum score of 20 points. Each corridors' total work trips were first normalized by mile and then ranked from nine (9) to one (1), with nine representing the best score. The 20-point maximum score was divided by nine to create a score interval (≈2.22). Each corridor rank was then multiplied by the score interval to determine their category score. This method was applied to all weighted categories and aggregated to develop a final weighted score. Table 9 displays each corridors' category and final weighted scores.

Table 9. Corridor Weight Score Prioritization Ranking

Corridor Name	Factored Ridership	LEHD Work Trips to Corridor	2015 Population	2015-2045 Population Growth	2015 Employment	2015-2045 Employment Growth	Weighted Score	Rank
US-1	40.00	11.11	11.67	3.89	11.67	4.44	82.78	1
Okeechobee	22.22	13.33	10.00	3.33	13.33	2.22	64.44	2
Military Trail	35.56	6.67	6.67	4.44	5.00	2.78	61.11	3
Congress	31.11	8.89	3.33	2.78	10.00	3.33	59.44	4
Lake Worth	26.67	4.44	15.00	0.56	6.67	1.11	54.44	5
Forest Hill	17.78	17.78	13.33	1.11	1.67	0.56	52.22	6
Glades	4.44	20.00	1.67	1.67	15.00	3.89	46.67	7
Atlantic	8.89	15.56	5.00	5.00	8.33	1.67	44.44	8
Boynton Beach	13.33	2.22	8.33	2.22	3.33	5.00	34.44	9
Weight	*40%*	*20%*	*15%*	*5%*	*15%*	*5%*		
Normalized by:	*None*	*By Mile*	*By Stop*	*None*	*By Stop*	*None*		

The methodology used to prioritize each corridor was a comparative analysis exercise that ranks corridors by potential ridership demand. The weighted scores were used for ranking purposes but may not directly correlate to actual ridership estimates due to a lack of corridor specific origin and destination knowledge. For example, the Okeechobee corridor contains higher population, employment, and work trip volumes, but according to OnTheMap, less than 3% of the work trips share an origin and destination within a quarter mile of the corridor. This trend is similar for most of the corridors and it is likely that users of the future transit network will have to transfer to and from other modes to connect their origins and destinations. These could include local circulators, Park & Ride, other transit routes, Transportation Network Companies (TNCs), or some form of micromobility (ex. walking, bicycling, or scooter) for shorter trips to access the enhanced transit network. Additional analyses accounting for potential transit market travel patterns and local fixed route and enhanced transit corridor connections/transfers will need to be conducted to fully understand the potential ridership demand.

The Transit Modal Analysis also included an assessment of potential ridership demand for existing Tri-Rail and future Tri-Rail Coastal Link (TRCL) stations in Palm Beach County. A total of 17 stations, seven (7) existing Tri-Rail and 10 future TRCL stations, were analyzed as part of this effort. Southeast Florida Regional Planning Model (SERPM) 6.7 ridership estimates developed as part of the TRCL study coupled with existing Palm Tran Ridership Activity and 2030 population/employment estimates were used to categorize and rank potential ridership demand. The SERPM estimates were the primary source of the demand categorization and utilized planning-level 2030 ridership estimates with anticipated service levels of 30-minute peak / 60-minute off peak on the Red Line (operates along the existing Tri-Rail corridor in Palm Beach County) and 60-minute peak / 120-minute off peak on the Green Line (operates along the FEC railway corridor and serves new TRCL stations). These operating plans were developed during the TRCL study.

Potential ridership is highly dependent on service levels, access to origins and destinations, and proximity to other stations. The new TRCL stations would likely improve connections to more origins and destinations; however, with significantly less frequent service than existing Tri-Rail service, they will expectedly garner lower ridership projections. Also, several Green Line stations are located near existing Tri-Rail stations (e.g. Tri-Rail Lake Worth and TRCL Downtown Lake Worth). This may cause the transfer of existing ridership from one station to another instead of only experiencing ridership growth at the new station. With these concepts in mind, a potential ridership demand table was created using a qualitative scale including the following components: High, Medium-High, Medium, Low-Medium, and Low. Table 10 displays the stations ranked by ridership demand.

Table 10. Corridor Prioritization Ranking

Station Rank	Station Name	Potential Ridership Demand
1	Military Trail and NW 19th St	High
2	Boca Raton Station	High
3	West Palm Beach Station	Medium-High
4	Lake Worth Station	Medium-High
5	Boynton Beach Station	Medium-High
6	Delray Beach Station	Medium
7	Mangonia Park Station	Medium
8	TRCL Downtown Boca Raton	Medium
9	TRCL Downtown West Palm Beach	Medium
10	TRCL Downton Lake Worth	Medium
11	TRCL Downtown Boynton Beach	Medium-Low
12	TRCL Downtown Delray Beach	Medium-Low
13	TRCL Palm Beach Gardens	Medium-Low
14	TRCL Jupiter	Medium-Low
15	TRCL West Palm Beach/St. Mary's	Low
16	TRCL Lake Park	Low
17	TRCL Riviera Beach	Low

Table 10 primarily uses the SERPM ridership estimates to place them into a specific ridership demand category. The ranking amongst each category was determined by assessing 2030 population and employment estimates within a quarter mile (i.e. walking access) and five miles (i.e. park-and-ride potential), existing Palm Tran Activity within a half mile, and station proximity. A conceptual graphic map with ridership potential is displayed in Figure 10.

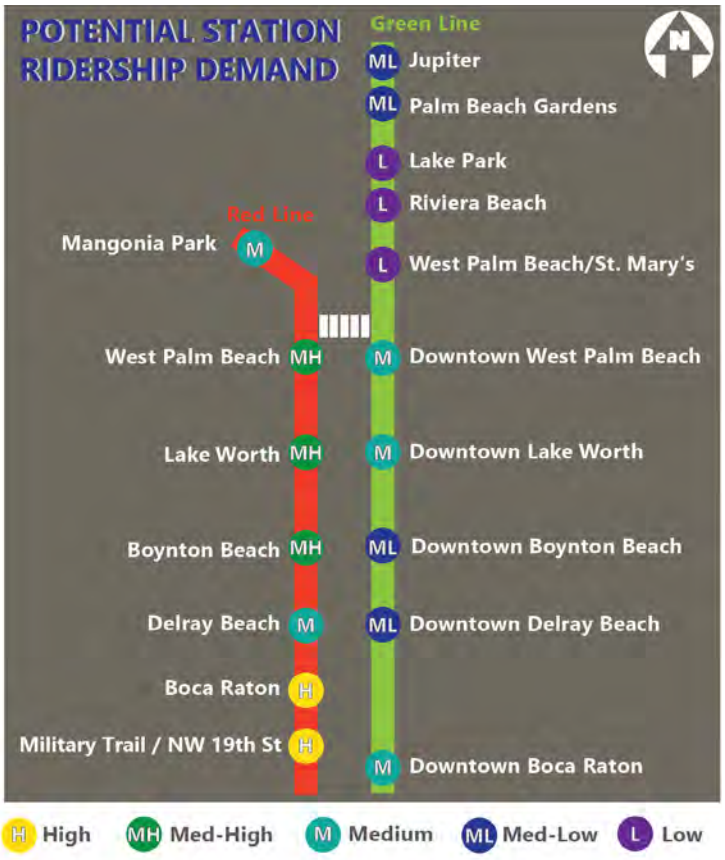


Figure 10. Potential Commuter Rail Station Ridership Demand

Roadway Analysis

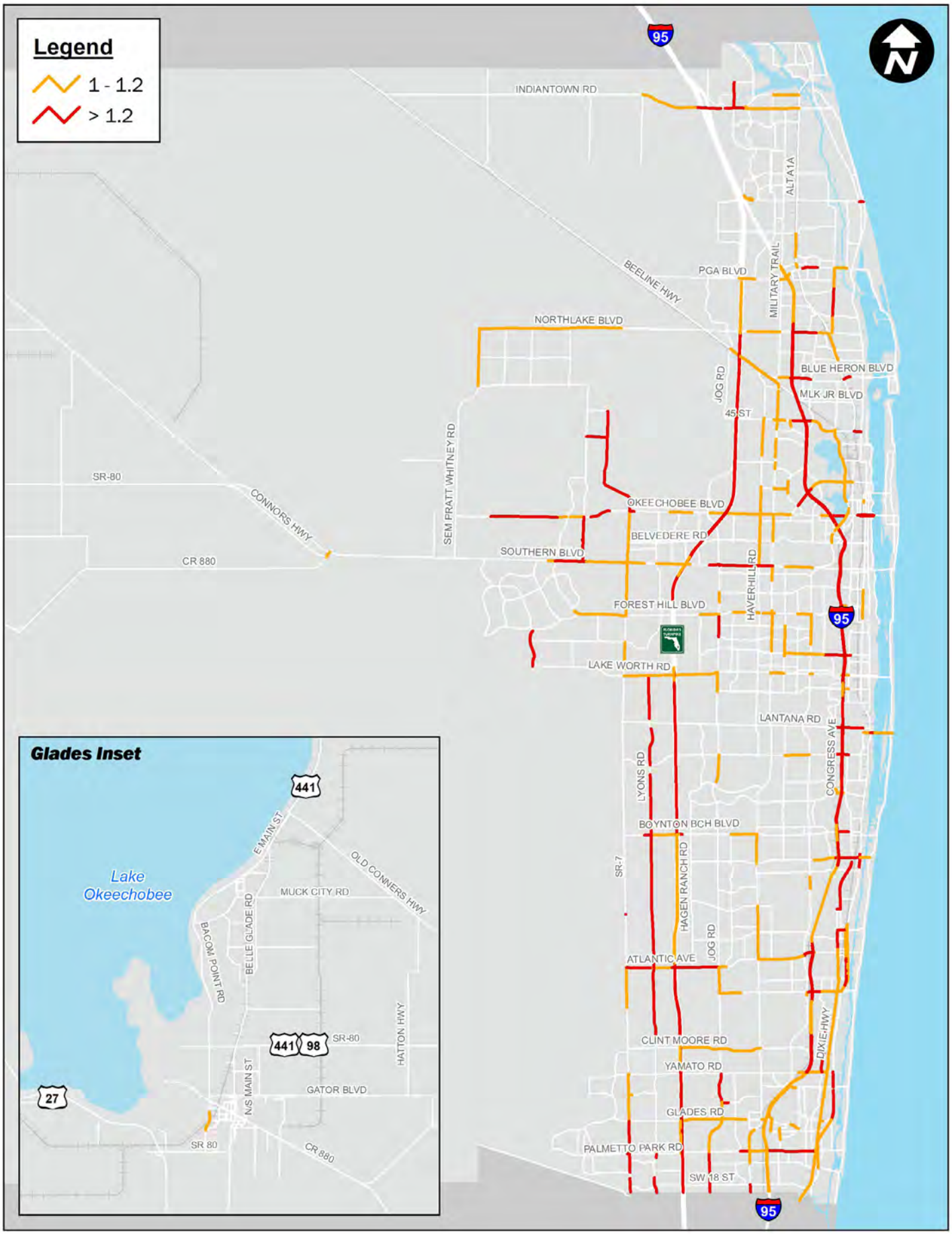
SERPM version 8.0, was used as the travel demand modeling tool to analyze roadway conditions in the following analysis years.

- **Base Year 2015 –** 2015 base year conditions
- **Interim Year 2030 –** 2030 existing + committed (E+C) highway and transit network with 2030 socioeconomic data
- **Horizon Year 2045 –** 2045 E+C highway and transit network with 2045 socioeconomic data

The roadway capacities on all the highway network are from the 2012 FDOT Quality/Level of Service (QLOS) Handbook Tables. Level of Service (LOS) D daily capacities are used for roadways in urban and rural areas. The model volumes and LOS D daily capacities were used to develop Volume over Capacity (V/C) maps for the analysis years as shown in Table 11 and Map 32 displays the 2045 V/C.

Table 11. Socioeconomic Data & Roadway Statistics

		2015	2030 E+C	% Change vs 2015	2045 E+C	% Change vs 2015
Socioeconomic Data	**Households**	574,000	689,000	20%	764,000	33%
	Population	1,378,000	1,598,000	16%	1,759,000	28%
	Employment	721,000	845,000	17%	931,000	29%
Roadway Statistics	**Lane Miles**	5,055	5,163	2%	5,163	2%
	Average V/C (LOS D)	0.44	0.51	16%	0.57	30%
	Total Vehicle Miles Traveled (VMT)	32,300,000	38,400,000	19%	42,400,000	31%
	Total Vehicle Hours Traveled (VHT)	736,000	907,000	23%	1,041,000	41%



Map 32. 2045 Volume to Capacity

Desired Projects & Costs

The Desires Plan provides a list of "needs" that address the results of the multimodal demand analysis. The Desires Plan is unconstrained by readily available financial forecasts. The list includes pedestrian projects to fill in known gaps, bicycle projects to improve the bicycle network, enhanced transit corridors, and roadway reconstruction and widening projects.

Pedestrian and Bicycle

The demand analysis identified high active transportation areas where people live, work, play, learn, and access transit. The active transportation areas were also analyzed for social equity, connectivity gaps and LTS.

Pedestrian and bicycle Tier 1 and Tier 2 priority networks were identified based on the active transportation demand analysis and LTS results that were synthesized to determine locations with the greatest need within the county's urban areas. In addition to active transportation demand and pedestrian and bicycle LTS, the following factors were considered in this process.

- High Pedestrian and Bicycle Crash Locations
- Traditionally underserved areas
- High Ridership Transit Corridors
- Connections to transit hubs

This information was used to identify a priority network of safe and connected pedestrian and bicycle facilities along roadways with the greatest need in Palm Beach County.

Pedestrian desires include two Tiers: Tier 1 missing sidewalks in areas with high active transportation demand and equity disparities and Tier 2: all other sidewalk gaps in the county's urbanized areas. Additional focus of the LRTP is to improve streetscape and furnishing zones, enhance crosswalks, and add safe mid-block crossings where possible to decrease the LTS and increase pedestrian safety.

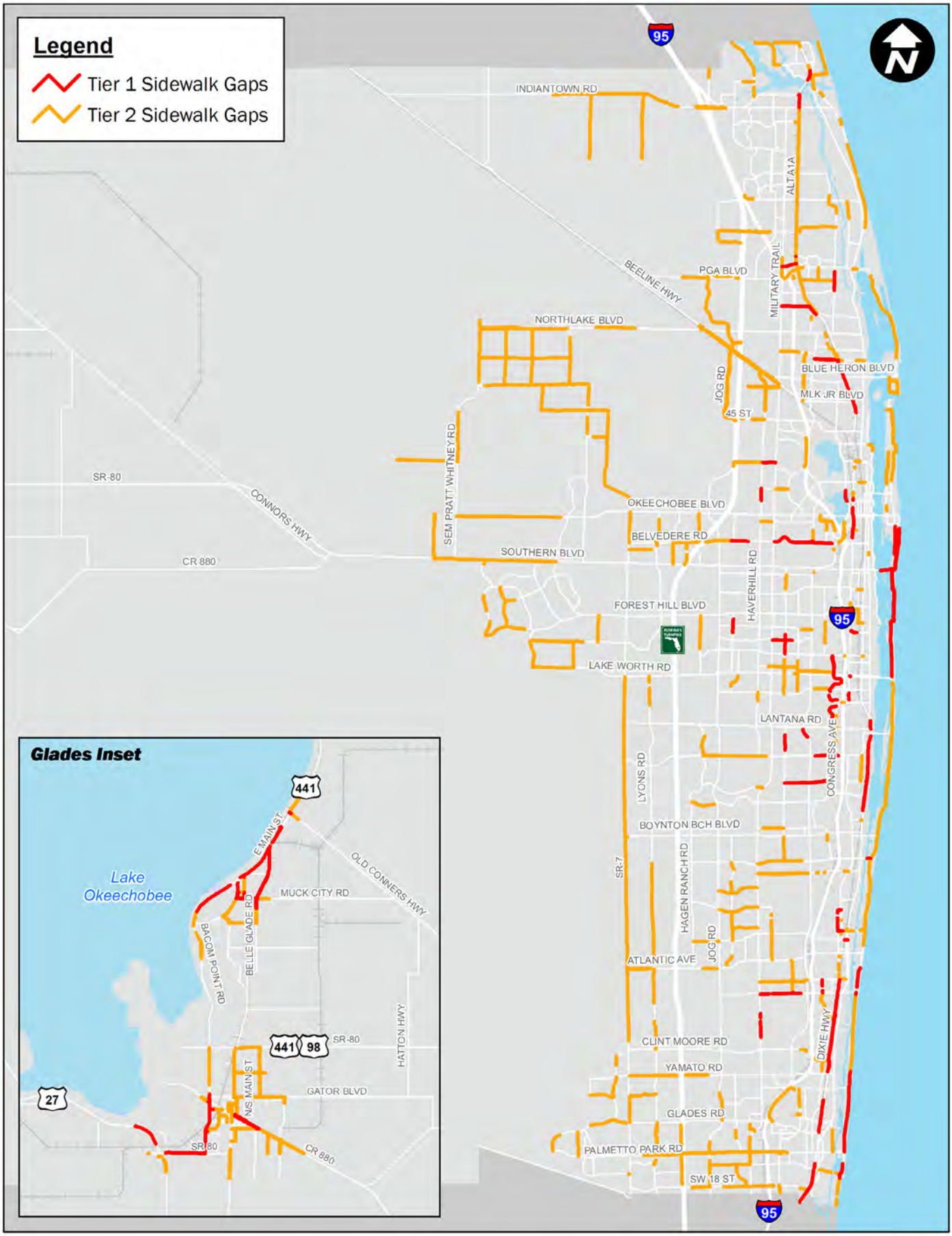
The Pedestrian Priority Network analysis focused on missing sidewalks in urban areas throughout the county and identified Priority Tier 1 sidewalk gaps in the areas with the greatest need and Tier 2 sidewalk gaps as second priority, with the ultimate goal of creating a safe and connected pedestrian network to encourage walking as a means of transportation for those that have a choice and allow all people, regardless of financial means, age or ability, to safely access places they live, work, learn, play and take transit. The TPA's Complete Streets Design Guidelines recommend a minimum of six (6) feet for sidewalk width, with wider pedestrian facilities preferred to provide a more comfortable experience.

Likewise, the bicycle desires map illustrates a Tier 1 and Tier 2 priority network of desired connected bicycle facilities within the urbanized areas, with the following facilities where feasible (in order of preference).

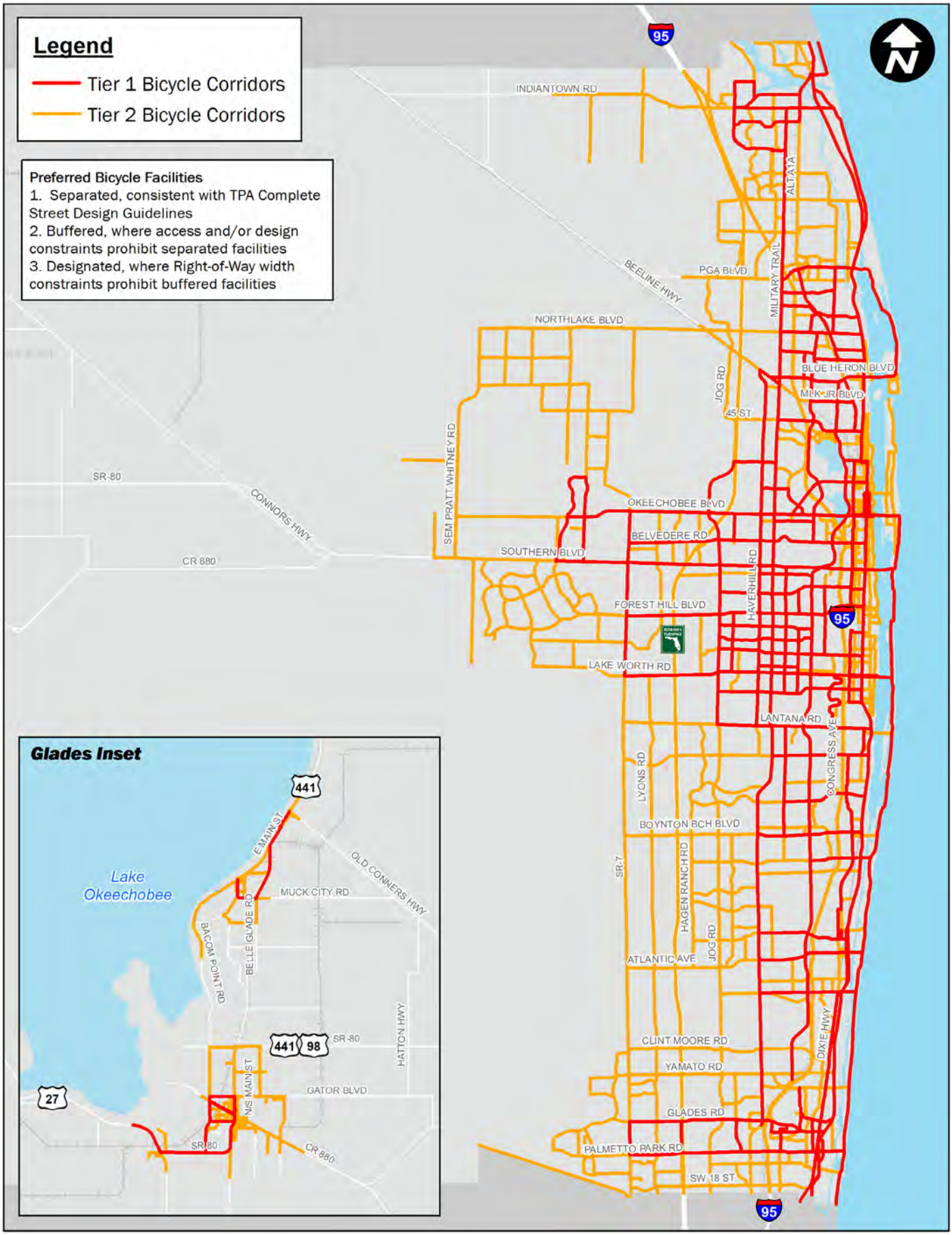
1. **Separated facilities** – consistent with the TPA's *Complete Street Design Guidelines*
2. **Buffered** - where access and/or design constraints prohibit separated facilities
3. **Designated** - where right-of-way width constraints prohibit buffered facilities

The Bicycle Priority Network analysis identified a connected network of Tier 1 and Tier 2 priority bicycle facilities in urban areas throughout the county and prioritizes separated bicycle facilities to create a safe and connected bicycle network for users of all ages and abilities and encourage bicycling as a means of transportation to places people live, work, learn, play and access transit. When separated bicycle facilities are not feasible, then buffered bicycle facilities are preferred. When neither separated nor buffered bicycle facilities are possible, then at minimum a dedicated bicycle lane is desired to ensure a connected bicycle facility network.

Map 33 and Map 34 display the desired pedestrian and bicycle projects.



Map 33. Pedestrian Priority Gaps



Map 34. Bicycle Priority Networks

Transportation Systems Management and Operations (TSM&O)

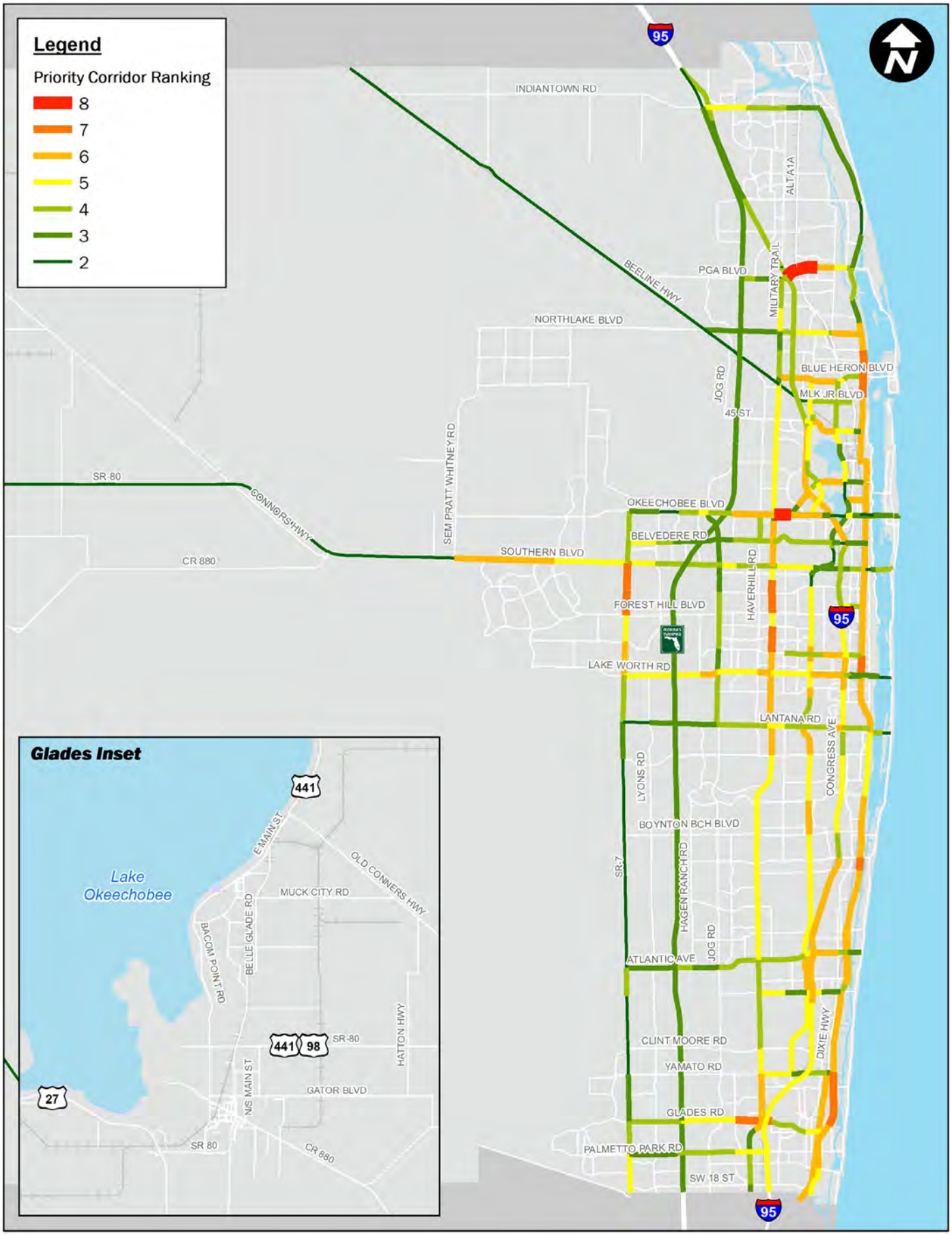
Long-range planning for TSM&O improvements must consider that program planning is an ongoing and iterative process, often connected to diverse plans and initiatives that change over time. TSM&O strategies range from traffic and transit management to technologies aimed at active travelers, work zones, and newly adopted vehicle technologies such as electric, connected, and autonomous vehicles. Overall, successful TSM&O strategies can enhance safety, increase travel time reliability, reduce all lanes cleared time, increase throughput, and reduce delays. Implementation can occur at the system, corridor, or intersection level.

Broward and Palm Beach County have conjunctively developed a TSM&O Master Plan as a guide to systematic, collaborative, and sustainable program development and delivery. The recommendations of this plan are consistent with the areas identified in the Broward & Palm Beach County TSM&O Master Plan, 2017. Map 35 display the Priority Corridor Ranking as per the TSM&O Master Plan.

Traffic Management, Transit Management, and Safety and Emergency Management were identified as potential service areas. Three sets of criteria were used to prioritize corridors in need of improvements according to service areas:

- V/C, signal density, and bottlenecks data was used to rank projects for Traffic Management improvements
- Crash density data was used to rank projects for Safety and Emergency Management improvements
- Transit ridership data was used to rank projects that would most benefit from Transit Management improvements

Each segment was given a rank based on each of the specified criteria, and the overall sum of the three rankings was used to prioritize the overall network. The highest values correspond to those segments in highest need of attention.



Map 35. TSM&O Priority Corridors

Transit

Eleven (11) enhanced transit facilities were identified based on a thorough analysis of density, transit propensity, social equity, and existing and projected highest transit ridership corridors. The enhanced network is intended to be dense, linear, walkable and served by connected pedestrian and bicycle facilities.

Enhanced transit in this context refers to frequent and convenient transit service with limited stops, branded vehicles/stations, level boarding, off-board fare payment, and transit signal priority. Enhanced transit may include Bus Rapid Transit (BRT) Lite operating in mixed traffic, BRT operating mostly in dedicated bus lines, or LRT operating mostly in dedicated rail lines.

Proposed BRT Lite along US-1

561 PLAN

The corridors are collectively named the "5-6-1 Plan" because they consist of five (5) north/south corridors and six (6) east/west corridors, resulting in one (1) connected system as shown in Map 36.

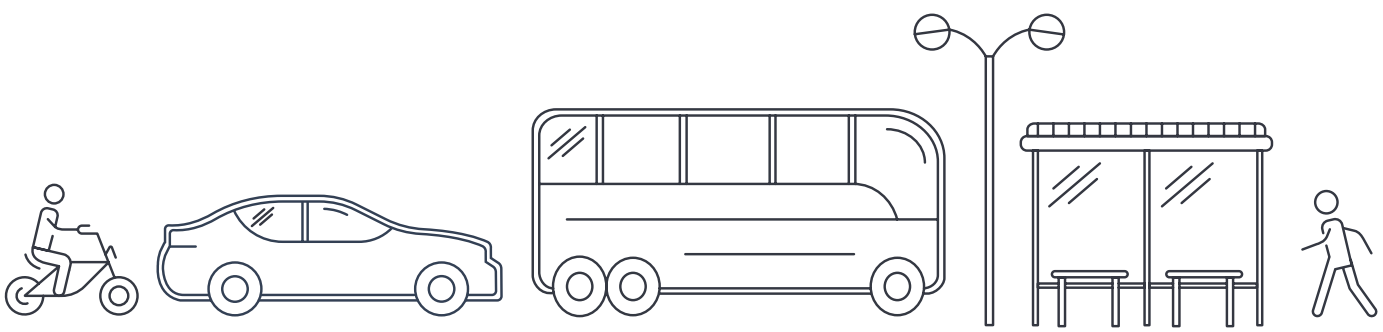
Five (5) North/South Corridors

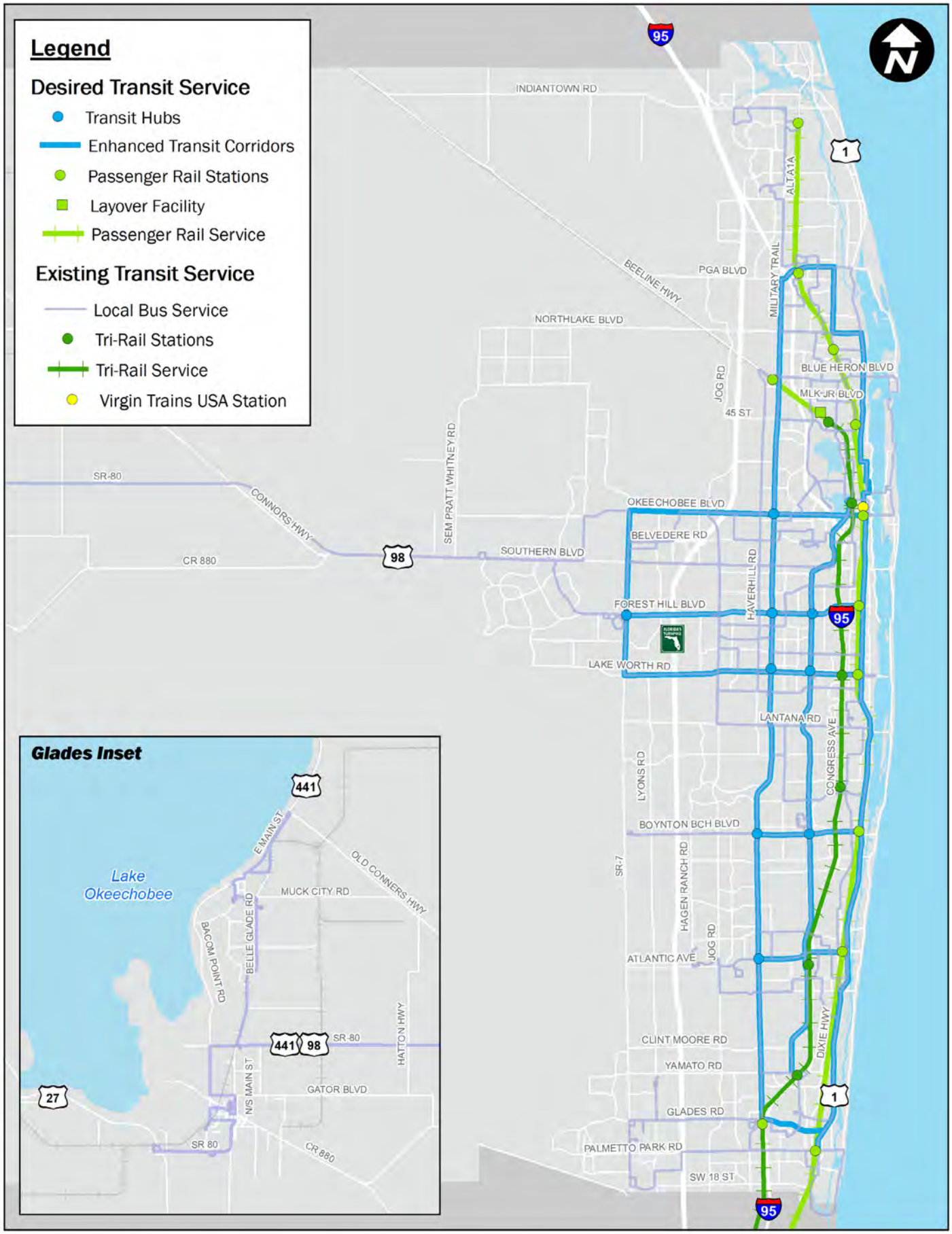
1. Tri Rail
2. Tri-Rail Coastal Link
3. US 1
4. Congress Avenue
5. Military Trail

Six (6) East/West Corridors

1. Okeechobee Boulevard
2. Forest Hill Boulevard
3. Lake Worth Road
4. Boynton Beach Boulevard
5. Atlantic Avenue
6. Glades Road

Table 12 provides the location, description, and 2018 present day costs (PDC) for the different phases of projects. A project number (FM) is provided when a project reaches the Transportation Improvement Program (TIP).





Map 36. Desires Plan - Transit

Table 12. Desires Plan - Transit

LRTP#	Location	Description	Present Day Costs (values in $1,000)				
			PD&E	D	ROW	CST	Total
TPA003	Atlantic Ave from Military Trl to US 1	Enhanced transit & assoc. multimodal improvements	$233	$1,862		$20,715	$23,275
TPA004	Boynton Beach Blvd from Military Trl to US 1	Enhanced transit & assoc. multimodal improvements	$266	$2,128		$23,674	$26,600
TPA005	Congress Ave from Yamato Rd to Okeechobee Blvd	Enhanced transit & assoc. multimodal improvements	$1,576	$12,608		$140,268	$157,605
TPA006	FEC Railway from 15th St in WPB to Martin County	Construct supplemental safety measures		$83		$668	$750
TPA007	Forest Hill Blvd from SR 7 to US 1	Enhanced transit & assoc. multimodal improvements	$612	$4,894		$54,450	$61,180
TPA008	Glades Road from Butts Rd to US 1	Enhanced transit & assoc. multimodal improvements	$173	$1,383		$15,388	$17,290
TPA009	Lake Worth Rd from SR 7 to US 1 SR 7 from Lake Worth Rd to Forest Hill Blvd	Enhanced transit & assoc. multimodal improvements	$732	$5,852		$65,104	$73,150
TPA010	Military Trail from Glades Rd to PGA Blvd	Enhanced transit & assoc. multimodal improvements	$2,254	$18,035		$200,637	$225,435
TPA011	Okeechobee Blvd from SR 7 to US 1 SR 7 from Forest Hill Blvd to Okeechobee Blvd	Enhanced transit & assoc. multimodal improvements	$911	$7,288		$81,083	$91,105
TPA015	Tri Rail Northern Layover Facility on SFRC E of I-95 in Mangonia Park/WPB	Construct new layover and light maint. facility				$8,000	$8,000
TPA016	Passenger Station on SFRC railway (Tri Rail) on E side of Military Tr S of Glades Rd	Passenger Rail station		$1,500	$7,832	$18,332	$27,664
TPA017	Tri-Rail Coastal Link on FEC railway from Boca Raton to West Palm including stations in Boca Raton, Delray Beach, Boynton Beach, Lake Worth and West Palm Beach	New Commuter Rail passenger service	$2,482	$38,331		$421,643	$479,140
TPA018	Tri-Rail Coastal Link on FEC railway from West Palm to Jupiter Including stations in West Palm Beach, Riviera Beach, Lake Park, Palm Beach Gardens, and Jupiter	New Commuter Rail passenger service	$1,350	$8,762		$96,378	$109,520
TPA019	Tri-Rail Extension on CSX/SFRC from Mangonia Park to Blue Heron Blvd, including a new station at the VA Hospital in Riviera Beach	Commuter Rail passenger service extension	$591	$3,152		$34,672	$39,400
TPA020	Tri-Rail rolling stock	1/3 share of vehicle purchase to support current service and future expansion in Palm Beach, Broward, & Miami-Dade counties				$24,000	$24,000
TPA021	US 1 from Boynton Beach Blvd to PGA Blvd	Enhanced transit & assoc. multimodal improvements	$1,684	$6,736		$74,096	$84,200
TPA022	US 1 from Palmetto Park Rd to Boynton Beach Blvd	Enhanced transit & assoc. multimodal improvements	$1,842	$7,368		$81,048	$92,100
TPA024	Passenger Station on FEC railway @ Palmetto Park Rd in Boca Raton	Passenger Rail station		$1,000	$4,000	$7,300	$12,300
TPA025	Passenger Station on FEC railway @ PGA Blvd in Palm Beach Gardens	Passenger Rail station		$1,000	$4,000	$7,300	$12,300

Roadway and Freight

Roadway desires include projects from the FDOT Strategic Intermodal System (SIS) Cost Feasible list, Florida's Turnpike list, TPA Directions 2040 LRTP Cost Feasible Plan list that have yet to be implemented, and Palm Beach County roadway capacity projects as shown in Map 37. Roadway capacity desires projects is based on future demand projects.

Table 13. TPA Roadway Projects

			2018 Present Day Costs (values in $1,000)				
LRTP#	Location	Description	PD&E	D	ROW	CST	Total
TPA001	Atlantic Ave from SR-7 to Lyons Rd	Widen 2L to 4L		$3,198	$10,432	$14,702	$28,332
TPA002	Atlantic Ave from Lyons Rd to Jog Rd	Widen 4L to 6L		$3,403	$25,000	$50,053	$78,456
TPA012	Hooker Hwy from SR 715 to SR 80	Widen 2L to 4L	$570	$2,280	$3,420	$11,400	$17,670
TPA013	SR 7 from Okeechobee Blvd to 60th St	Widen 2L to 4L				$20,357	$20,357
TPA014	SR 7 from 60th St to Northlake Blvd	New 4L		$760	$3,752	$50,278	$54,790
TPA023	US 27 Connector from US 27 to SR-715/Hooker Hwy	New 2L	$2,500	$4,313	$5,000	$21,564	$33,377

Table 14. FDOT SIS Roadway Projects

LRTP#	Location	Description	2018 Present Day Costs (values in $1,000)				
			PD&E	PE	ROW	CST	Total
SIS001	Beeline Hwy/SR-710 from Blue Heron Blvd to Congress Ave	Intersection & TSMO Improvements		$1,295		$13,014	$14,309
SIS002	Beeline Hwy/SR-710 from Blue Heron Blvd to Northlake Blvd	Widen 4L to 6L		$2,022	$1,445	$119,775	$123,242
SIS003	I-95 @ 10th Ave North	Modify Interchange	$1,467	$2,650	$6,246	$23,142	$33,505
SIS004	I-95 @ 45th St	Construct Diverging Diamond Interchange	$1,846	$2,355	$2,488		$6,689
SIS005	I-95 @ 6th Ave South	Modify Interchange	$5	$30	$5,761	$11,251	$17,047
SIS006	I-95 @ Belvedere Rd	Add 2nd NB to EB right turn lane		$820		$3,126	$3,946
SIS007	I-95 @ Belvedere Rd	Modify Interchange - Southbound Ramp	$1,900	$3,444	$6,000	$30,887	$42,231
SIS008	I-95 @ Central Blvd	Construct New Interchange	$1,743	$4,475	$9,081	$63,038	$78,337
SIS021	I-95 @ Boynton Beach Blvd	Modify Interchange	$1,457	$3,830	$19,050	$37,294	$61,631
SIS009	I-95 @ Gateway Blvd	Modify Interchange	$3	$199	$10,416	$51,990	$62,608
SIS036	I-95 @ Glades Rd	Modify Interchange			$1,757	$1,529	$3,286
SIS010	I-95 @ Hypoluxo Rd	Modify Interchange	$6	$2,250	$948	$17,185	$20,389
SIS011	I-95 @ Indiantown Rd	Signalize NB Ramp, Add EB Lane on Indiantown		$472	$547	$7,229	$8,248
SIS012	I-95 @ Lantana Rd	Modify Interchange	$1,812	$2,030	$7,853	$19,986	$31,681
SIS013	I-95 @ Linton Blvd	Modify Interchange	$2	$46	$1,517	$972	$2,537
SIS014	I-95 @ Linton Blvd	Modify Interchange		$895		$12,030	$12,925
SIS015	I-95 @ Northlake Blvd	Add turn lanes, lengthen ramps, access mgmt		$138	$16,847	$37,556	$54,541
SIS016	I-95 @ Okeechobee Blvd	Add right turn from EB Okeechobee Blvd to SB I-95		$309		$1,148	$1,456
SIS017	I-95 @ Palm Beach Lakes Blvd	Modify Interchange	$100	$1,386		$12,993	$14,479
SIS018	I-95 @ PGA Blvd	Add Auxiliary Lane to SB on-ramp		$749		$6,802	$7,551
SIS019	I-95 @ Southern Blvd	Modify Interchange	$2,587	$7,750	$8,403	$106,923	$125,663
SIS020	I-95 @ Woolbright Rd	Modify Interchange	$1,439	$1,120	$24,808	$12,714	$40,081
SIS025	I-95 from Linton Blvd to Southern Blvd	Add managed lanes (potentially convert HOV, add 2 managed Lanes (12 total + aux)	$6,000	$15,000	$5,000	$416,201	$442,201

FM	Location	Description	2018 Present Day Costs (values in $1,000) PD&E	PE	ROW	CST	Total
SIS027	I-95 from Southern to Congress Ave (overpass)	Add managed lanes (potentially convert HOV, add 2 managed Lanes (12 total + aux)	$3,000	$6,000	$10,000	$168,168	$187,168
SIS037	I-95 from Congress Ave (overpass) to Blue Heron Blvd	Add managed lanes (potentially convert HOV, add 2 managed Lanes (12 total + aux)	$4,000	$10,000	$5,000	$139,730	$158,730
SIS026	I-95 from S of Indiantown Rd to Martin County	Add highway capacity (potentially widen 6L to 8L)	$1,800	$2,815		$28,290	$32,905
SIS028	Southern Blvd @ SR-7	Add EB and WB Right & Left Turn Lanes		$599	$2,889	$5,411	$8,899
SIS029	Southern Blvd @ SR-7	Modify Interchange	$1,443	$2,886		$28,863	$33,192
SIS030	Southern Blvd @ Forest Hill Blvd	Add turn lane		$8		$304	$312
SIS038	Southern Blvd @ Sansbury Way	Modify Intersection		$1		$342	$343
SIS031	Southern Blvd from US-27 to I-95	Corridor Management, ITS		$2,274		$13,305	$15,579
SIS032	Southern Blvd from W of Binks Forest Drive to W of Royal Palm Beach Blvd	Add highway capacity (potentially widen 6L to 8L)	$1,900	$1,609	$2,940	$16,247	$22,696
SIS033	Southern Blvd from W of Royal Palm Beach Blvd to I-95	Add highway capacity	$6,000	$15,000	$200,332	$1,009,985	$1,231,317
SIS034	US 27 from Broward County to Hendry County	Add freight roadway capacity	$5,000	$12,000	$30,618	$281,957	$329,575
SIS035	US 27 from Krome Avenue (Miami-Dade County) to Evercane Road (Hendry County)	Corridor Management, ITS		$3,733		$21,841	$25,574

Table 15. Florida's Turnpike Roadway Projects

LRTP#	Location	Description	2018 Present Day Costs (values in $1,000) PD&E	D	ROW	CST	Total
TPK001	Turnpike @ Hypoluxo Rd	New Interchange	$2,000				$2,000
TPK002	Turnpike from Broward County to Glades Rd	Widen 6L to 10L with managed lanes	$6,072	$10,855		$295,308	$312,236
TPK003	Turnpike from Glades Rd to Atlantic Ave	Widen 6L to 10L with managed lanes	$7,637	$9,820		$512,447	$529,904
TPK004	Turnpike from Atlantic Ave to Boynton Beach Blvd	Widen 6L to 10L with managed lanes	$6,734	$10,521		$252,254	$269,509

TPK005	Turnpike from WPB Service Plaza to Okeechobee Blvd	Widen 4L to 8L with managed lanes	$16,380	$5,000		$344,230	$365,610
TPK006	Turnpike from Okeechobee Blvd to SR-710/Beeline Hwy	Widen 4L to 8L with managed lanes		$3,000		$135,700	$138,700
TPK007	Turnpike from SR-710/ Beeline Hwy to Indiantown Rd	Widen 4L to 8L		$21,545	$4,611	$375,238	$401,394

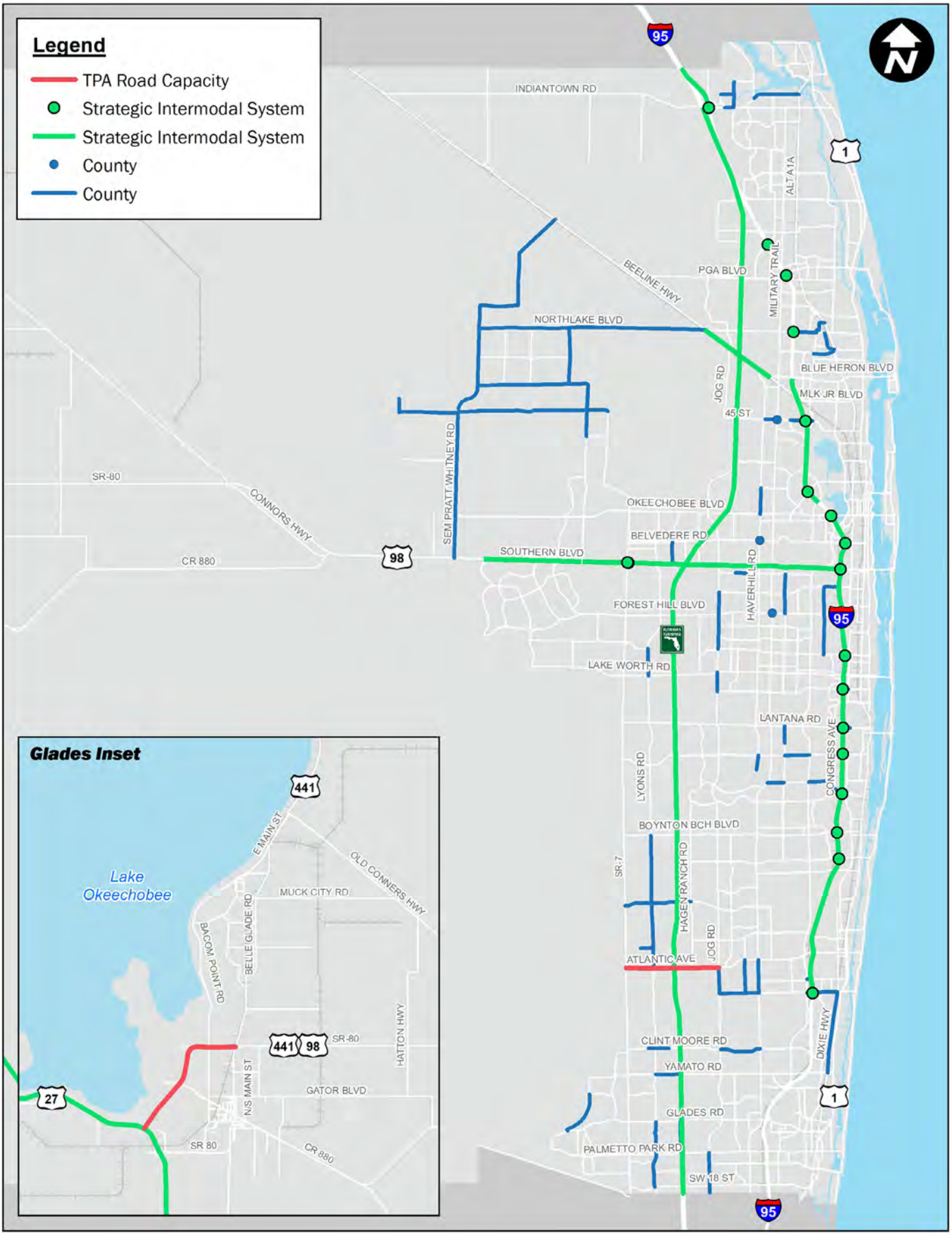
Table 16. Palm Beach County Roadway Projects

			2018 Present Day Costs (values in $1,000)				
LRTP#	Location	Description	PD&E	PE	ROW	CST	Total
PBC001	Countywide Locations	Small intersections and small capacity improvement projects		$34,293	$59,233	$218,225	$311,750
PBC002	6th Ave S from I-95 to South A St	Widen 4L to 6L		$600	$900	$1,500	$3,000
PBC003	10th Ave from Congress Ave to I-95	Add 3rd WB thru lane		$3,300	$4,950	$8,250	$16,500
PBC004	190th St North from 60th St N to northern terminus	New 4L		$3,000	$4,500	$7,500	$15,000
PBC005	45th St from E of Haverhill Rd to W of Military Trl	Widen 4/5L to 6L				$2,160	$2,160
PBC006	45th St at Military Trl	Intersection improvements		$180	$5,000	$1,000	$6,180
PBC007	45th St from Village Blvd to I-95	Widen 6L to 8L		$400	$600	$1,000	$2,000
PBC008	45th St from I-95 to Congress Ave	Intersection improvements		$420	$200	$2,200	$2,820
PBC010	60th St North from 190th St N to M-Canal	New 4L		$600	$900	$1,500	$3,000
PBC011	60th St North from M-Canal to Seminole Pratt Whitney Rd	Widen 2L to 4L		$1,100	$1,650	$2,750	$5,500
PBC012	60th St North from Seminole Pratt Whitney Rd to 140th Ave N	New 4L		$1,700	$2,550	$4,250	$8,500
PBC121	60th St North from W of 140th Ave N to Avocado Blvd	Widen 2L to 3L, M Canal relocation		$500	$2,310	$3,850	$7,700
PBC013	60th St North from W of 140th Ave N to Avocado Blvd	Widen 3L to 5L		$375	$750	$1,500	$2,625
PBC014	60th St North from Avocado Blvd to E of 120th Ave N	Widen 2L to 3L			$200	$7,000	$7,200
PBC015	60th St North from Avocado Blvd to SR 7	Widen 3L to 5L		$1,800	$2,700	$4,500	$9,000
PBC018	Benoist Farms Rd from SR 80 to Belvedere Rd	Widen 2L to 3L				$5,200	$5,200
PBC019	Boca Rio Rd from Palmetto Park Rd to Glades Rd	Widen from 2/3L to 5L		$800	$1,200	$2,000	$4,000
PBC124	Center St from Loxahatchee River Rd to Alt A1A	Widen 2L to 3L		$720	$1,080	$1,800	$3,600

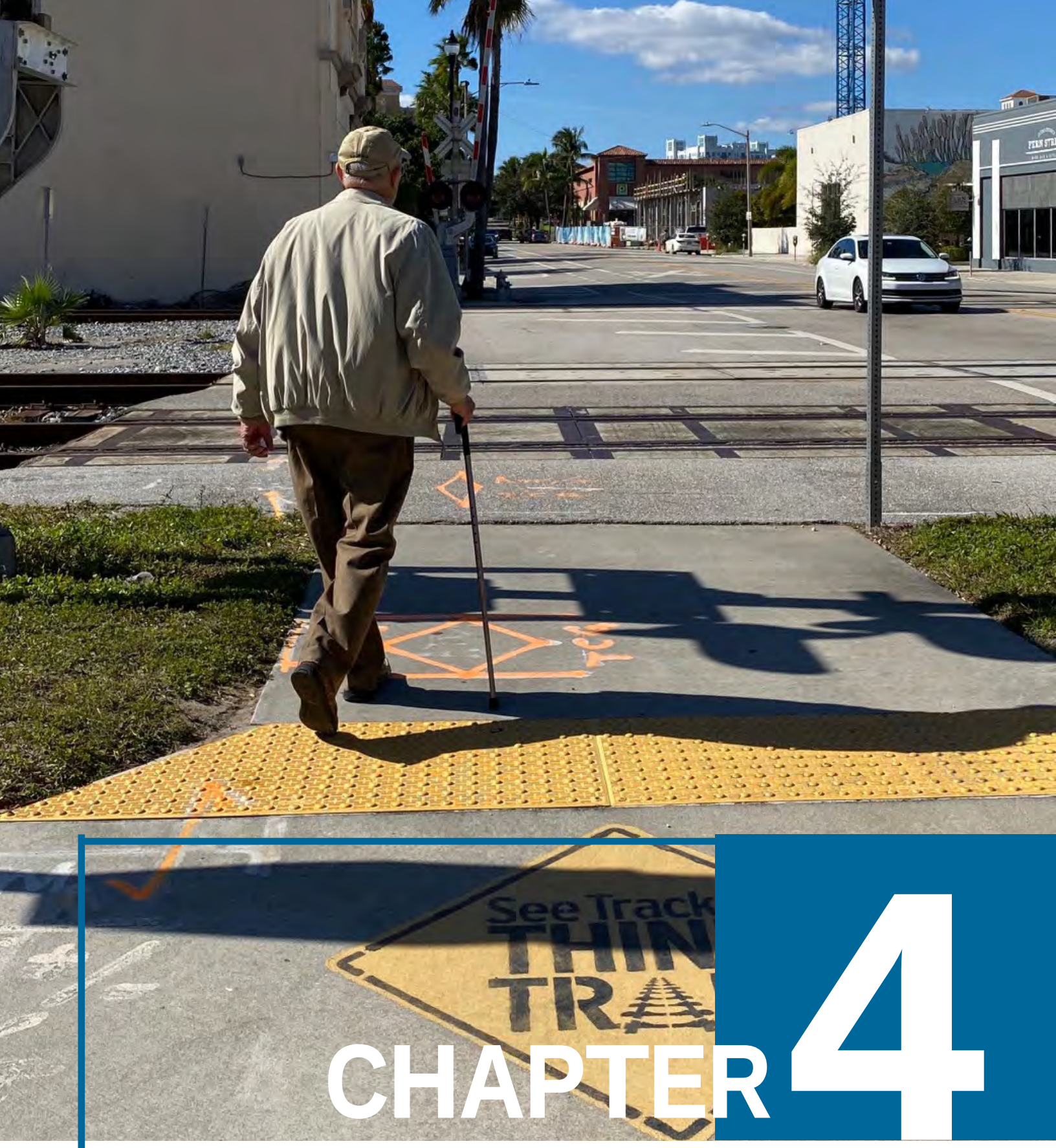
LRTP#	Location	Description	2018 Present Day Costs (values in $1,000) PD&E	PE	ROW	CST	Total
PBC021	Central Blvd from Indiantown Rd to Roebuck Rd	Widen 2/3L to 5L with new bridge over C-18		$1,000	$1,500	$2,500	$5,000
PBC022	Church St from Limestone Creek Rd to W of Central Blvd	Reconstruct 2L to include a roundabout				$2,000	$2,000
PBC023	Clint Moore Rd from W of Lyons Rd to E of Lyons Rd	Widen 4L to 6L			$200	$2,500	$2,700
PBC024	Clint Moore Rd from Jog Rd to Military Trl	Intersection improvements			$1,700	$2,380	$4,080
PBC027	Coconut Blvd from S of Temple Blvd to S of Northlake Blvd	Widen 2L to 5L		$1,400	$1,500	$5,100	$8,000
PBC029	Congress Ave from Northlake Blvd to Alt A1A	New 3L			$5,760	$6,000	$11,760
PBC030	Coral Ridge Drive from Glades Rd to Burt Aaronson Park Dr	New 2L		$1,040	$1,560	$2,600	$5,200
PBC032	Donald Ross Rd from Prosperity Farms Rd to Ellison Wilson Rd	Widen 4/5L to 6L		$550		$1,900	$2,450
PBC033	Donald Ross Rd from Ellison Wilson Rd to US 1	Widen 4L to 6L		$400	$600	$1,000	$2,000
PBC035	Flavor Pict Rd from SR 7 to Lyons Rd	Widen 2L to 4L		$600	$900	$1,500	$3,000
PBC036	Flavor Pict Rd from Lyons Rd to Hagen Ranch Rd	New 4L, including bridge over Florida's Turnpike		$2,000	$3,000	$5,000	$10,000
PBC118	Florida Mango Rd from 10th Ave North to N of Edgewater Dr	Widen 2L to 3L				$3,300	$3,300
PBC119	Florida Mango Rd from Edgewater Dr to Barbados Rd	Widen 2L to 3L				$1,900	$1,900
PBC117	Florida Mango Rd from Barbados Rd to N of Myrica Rd	Widen 2L to 3L				$3,100	$3,100
PBC120	Florida Mango Rd from Myrica Rd to Summit Blvd	Widen 2L to 3L				$2,200	$2,200
PBC020	Forest Hill Blvd at Military Trl	Intersection improvements		$2,485	$6,699	$5,082	$14,266
PBC122	Gun Club Rd from E of Jog Rd to W of Haverhill Rd	Widen 2L to 3L			$100	$2,340	$2,440
PBC040	Happy Hallow Rd from Smith Sundy Rd to Lyons Blvd	New 2L				$650	$650
PBC041	Haverhill Rd from Le Chalet Blvd to Hypoluxo Rd	Widen 2L to 3L and construct new 3L		$1,000	$1,500	$2,500	$5,000
PBC042	Haverhill Rd at Belvedere Rd	Intersection improvements		$380	$200	$2,100	$2,680
PBC043	Haverhill Rd from Okeechobee Blvd to Community Dr	Widen 5L to 6L		$1,800	$2,700	$4,500	$9,000
PBC044	High Ridge Rd from Gateway Blvd to Miner Rd	Widen 2L to 5L		$800	$1,200	$2,000	$4,000

LRTP#	Location	Description	2018 Present Day Costs (values in $1,000) PD&E	PE	ROW	CST	Total
PBC045	Hypoluxo Rd from Lawrence Rd to Congress Ave	Intersection improvements		$430	$600	$2,200	$3,230
PBC047	Indiantown Rd from Island Way to Central Blvd	Intersection improvements		$550	$3,200	$3,100	$6,850
PBC049	Jog Rd from Linton Blvd to Atlantic Ave	Intersection improvements		$550	$300	$2,700	$3,550
PBC050	Jog Rd from Melaleuca Ln to Lake Worth Rd	Intersection improvements		$330	$1,100	$3,300	$4,730
PBC051	Jog Rd from 10th Ave N to Summit Blvd	Intersection improvements		$770	$3,000	$5,000	$8,770
PBC053	Kirk Rd from N of Forest Hill Blvd to Summit Blvd	Widen 2L to 3/5L			$100	$3,200	$3,300
PBC123	Kirk Rd from Summit Blvd to Gun Club Rd	Widen 2L to 3/5L			$100	$3,950	$4,050
PBC055	Lantana Rd from High Ridge Rd to Andrew Redding Rd	Widen 5L to 6L		$1,000	$1,500	$2,500	$5,000
PBC056	Lawrence Rd from S of Ponza Place to Lantana Rd	Widen 2L to 3L		$400		$2,200	$2,600
PBC057	Linton Blvd from Jog Rd to Sims Rd	Widen 4L to 6L		$600	$900	$1,500	$3,000
PBC058	Linton Blvd from Sims Rd to Military Trl	Widen 5L to 6L		$200	$300	$500	$1,000
PBC059	Linton Blvd from Congress Ave to Old Dixie Hwy	Intersection improvements		$570	$4,500	$1,600	$6,670
PBC060	Lyons Rd from SW 18th St to Glades Rd	Widen 4L to 6L		$1,600	$2,400	$4,000	$8,000
PBC061	Lyons Rd from Atlantic Ave to Flavor Pict Rd	Widen 2L to 4L		$500	$3,320	$9,550	$13,370
PBC062	Lyons Rd from Flavor Pict Rd to Boynton Beach Blvd	Widen 2L to 4L			$100	$8,000	$8,100
PBC063	Lyons Rd from N of Lake Worth Rd to Stribling Way	New 2L		$400	$540	$1,060	$2,000
PBC065	Military Trl from Linton Blvd to Lake Ida Rd	Intersection improvements		$400	$800	$2,500	$3,700
PBC066	Miner Rd from Congress Ave to High Ridge Rd	Widen 2L to 3L		$400	$600	$1,000	$2,000
PBC067	Miner Rd from Military Trl to Lawrence Rd	New 3L		$750	$500	$3,800	$5,050
PBC069	Northlake Blvd from Seminole Pratt Whitney Rd to 140th Ave N	Widen 4L to 6L		$1,600	$2,400	$4,000	$8,000
PBC070	Northlake Blvd from Hall Blvd to Coconut Blvd	Widen 2L to 4L				$8,200	$8,200
PBC071	Northlake Blvd from 140th Ave N to Coconut Blvd	Widen 4L to 6L		$1,400	$2,100	$3,500	$7,000
PBC072	Northlake Blvd from Coconut Blvd to SR 7 (Const. by Avenir)	Widen 4L to 6L		$1,200	$1,800	$3,000	$6,000
PBC073	Northlake Blvd from SR 7 to Beeline Hwy	Widen 4L to 6L		$600	$900	$1,500	$3,000

LRTP#	Location	Description	2018 Present Day Costs (values in $1,000)				
			PD&E	PE	ROW	CST	Total
PBC074	Northlake Blvd from I-95 to Congress Ave	Intersection improvements		$600	$900	$1,500	$3,000
PBC082	Old Dixie Hwy from Yamato Rd to Linton Blvd	Widen 2L to 3L			$7,000	$10,000	$17,000
PBC083	Old Dixie Hwy from Yamato Rd to Linton Blvd	Widen 3L to 5L		$10,000	$15,000	$25,000	$50,000
PBC084	Old Dixie Hwy from Park Ave to Northlake Blvd	Widen 3L to 5L		$600	$900	$1,500	$3,000
PBC085	Orange Blvd from Seminole Pratt Whitney Rd to Coconut Blvd	Widen 2L to 3L	$200	$1,900	$2,850	$4,750	$9,500
PBC093	Park Ave West from Congress Ave to Old Dixie Hwy	New 3L		$600	$900	$1,500	$3,000
PBC094	Powerline Rd from Broward County Line to Palmetto Park Rd	Widen 4L to 6L		$1,300	$1,950	$3,250	$6,500
PBC100	Royal Palm Beach Blvd from N of Persimmon Blvd to N of 60th St	Widen 2L to 5L			$950	$8,100	$9,050
PBC101	Royal Palm Beach from N of 60th St S of Orange Blvd	Widen 2L to 5L				$6,000	$6,000
PBC102	Royal Palm Beach from N of 60th St to Orange Blvd; Orange Blvd from Coconut Blvd to Royal Palm Beach Blvd; Coconut Blvd from Orange Blvd to S of Temple Blvd	Widen 2L to 5L		$1,000	$4,400	$6,600	$12,000
PBC104	Seminole Pratt Whitney Rd from SR 80 to Okeechobee Blvd	Widen 4L to 6L		$1,000	$1,500	$2,500	$5,000
PBC105	Seminole Pratt Whitney Rd from Okeechobee Blvd to Sycamore Dr E	Widen 4L to 6L		$1,260	$1,890	$3,150	$6,300
PBC106	Seminole Pratt Whitney Rd from Sycamore Dr E to 60th St N	Widen 4L to 6L		$1,140	$1,710	$2,850	$5,700
PBC107	Seminole Pratt Whitney Rd from 60th St N to Orange Blvd	Widen 4L to 6L		$840	$1,260	$2,100	$4,200
PBC108	Seminole Pratt Whitney Rd from Orange Blvd to Northlake Blvd	Widen 4L to 6L		$1,320	$1,980	$3,300	$6,600
PBC109	Seminole Pratt Whitney Rd from Northlake Blvd to 100th Lane North	Widen 2L to 4L		$1,600	$2,400	$4,000	$8,000
PBC110	Seminole Pratt Whitney Rd from 100th Lane North to Avenir	New 4L		$1,600	$2,400	$4,000	$8,000
PBC111	Seminole Pratt Whitney Rd from Avenir to SR 710/Beeline Hwy	New 4L		$6,000	$9,000	$15,000	$30,000
PBC112	Sims Rd from Linton Blvd to Atlantic Ave	New 3L		$800	$1,200	$2,000	$4,000
PBC113	Summit Blvd from E of Florida Mango to W of I-95	Widen 4L to 5L		$400	$600	$1,000	$2,000
PBC116	Yamato Rd from W of Lyons Rd to W of Turnpike	Widen 4L to 6L				$3,940	$3,940



Map 37. Desires Plan – Roadway Capacity



CHAPTER 4

What Can We Accomplish?

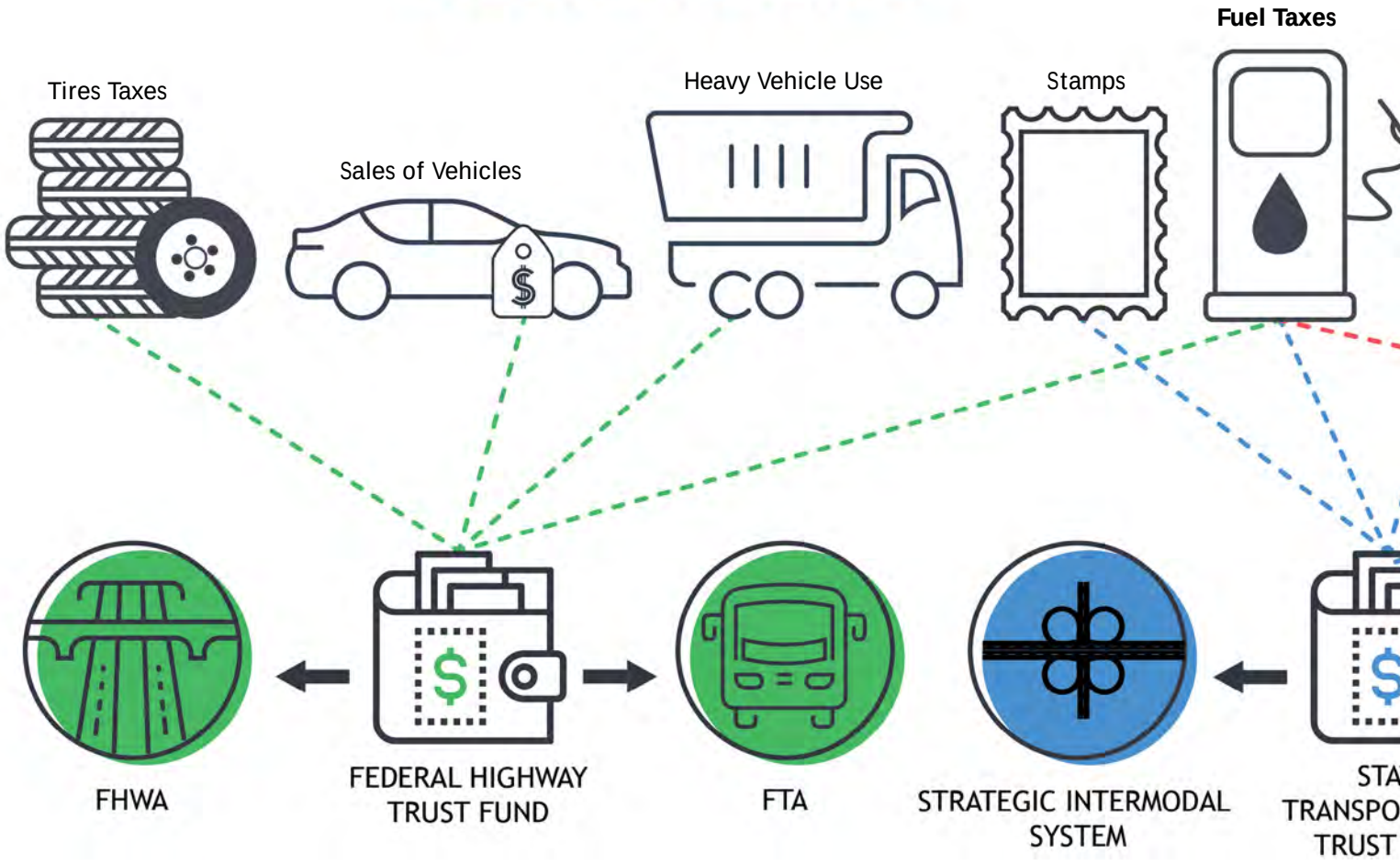
Financial Resources

Understanding how money goes from your pocket through multiple layers of government into a construction project in your neighborhood is challenging. There are multiple funding streams and a laundry list of eligibility criteria on how money can be used. This section attempts to provide you – citizen, elected official, staff - with a streamlined understanding of where funding originates and how it can be spent in order to give you the power to impact how we invest in our future.

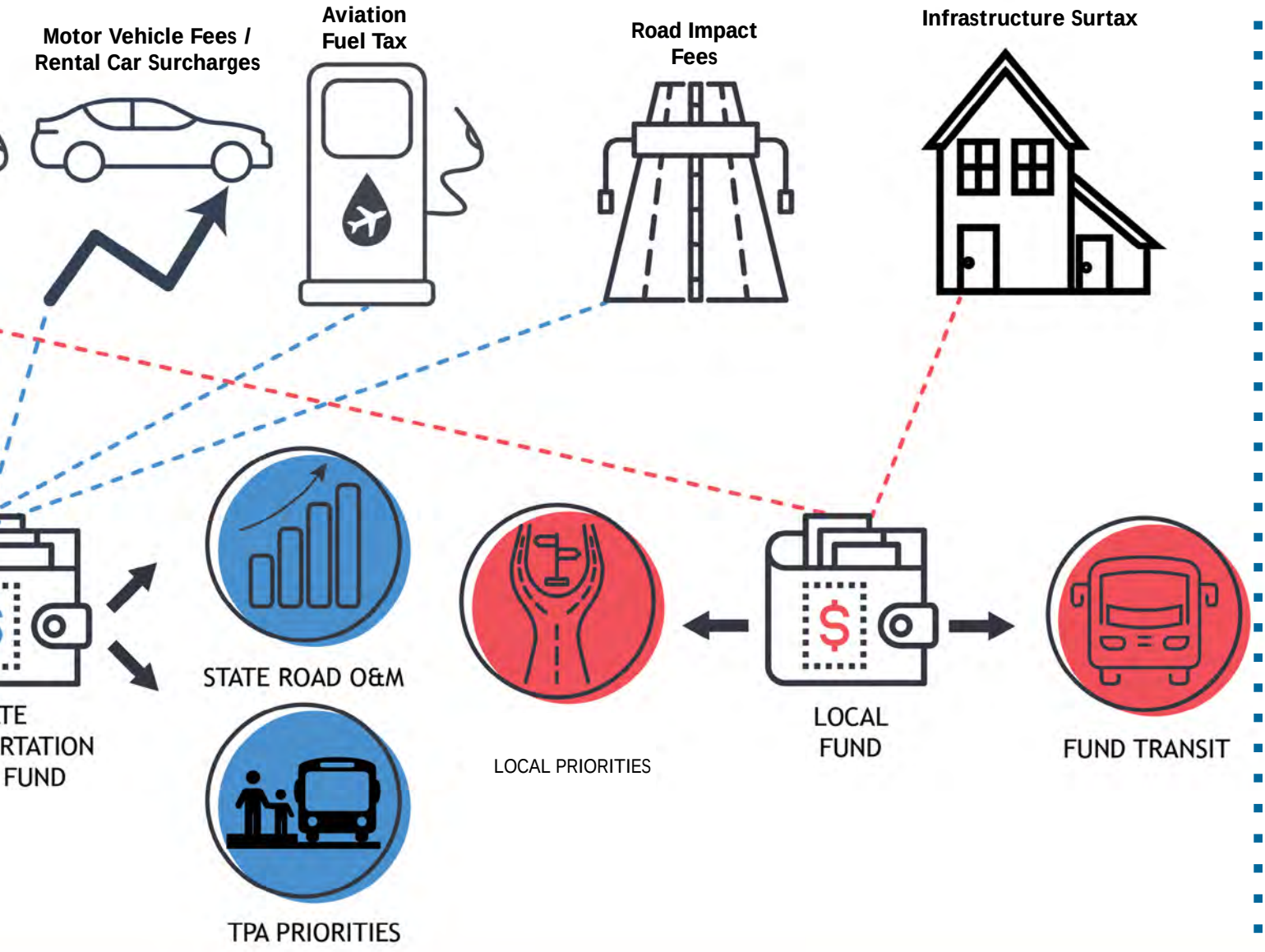
Planning level year of expenditure (YOE) revenue projections were developed through the year 2045. The projections include Federal, State, and local sources. These projections represent the TPA's outlook on available future transportation program funding in Palm Beach County.

Federal and state law require the LRTP to include a financial plan that indicates how projects will be built using reasonably expected available revenues. The following section provides a breakdown of how revenues are generated from various sources, how much revenue is forecasted to 2045, and how we plan to spend those funds towards projects. Although the LRTP is primarily focused on the planning and prioritization of federal and state dollars, the financial section attempts to provide the full cost of transportation within Palm Beach County, including local government investments.

Where Does Our MONEY? Come From



Federal transportation funding is collected primarily through federal fuel taxes and truck-related taxes on tires, sales of vehicles, and heavy vehicle use. These funds are deposited into the Federal Highway Trust Fund (HTF), and distributed to programs administered by the Federal Highway Administration (FHWA), focused on highway capacity and maintenance, and the Federal Transit Administration (FTA), focused on developing and maintaining mass transit. Funds are given eligibility limitations to further national goals and objectives, and then given to states through formula grants and discretionary allocations.



Florida's transportation funding sources come from a combination of state fuel taxes, motor vehicle fees, document stamps, rental car surcharges, and aviation fuel tax. These funds are deposited into the State Transportation Trust Fund (STTF) and given eligibility limitations to further state goals and objectives. Toll revenues are also collected, and are distributed for its own debt service, operations, maintenance, and capacity building.

Local funding sources include local gas taxes, road impact fees, an infrastructure surtax, and occasionally general funds from property taxes. These funds expand and maintain the locally owned roadways, fund transit, and sometimes pay for portions of federal and state funded projects.

What kinds of projects and services can the TPA fund?

Federal transportation funding since 2005 has been steered by three major legislative bills: "Safe, Accountable, Flexible, Efficient Transportation Equity: A Legal for Users" (SAFETEA-LU) in 2005, "Moving Ahead for Progress in the 21st Century" (MAP-21) in 2012, and "Fixing America's Surface Transportation" (FAST) Act in 2015. The current FAST Act funding is scheduled to lapse in 2020, but historically the new bills have maintained similar funding allocation and eligibility criteria.

Federal programs are intended to meet federal goal and objectives described on pages 84 and 85 of this document. The State has direct oversite over the majority of the federal funding, except for the Surface Transportation Block Grant (STBG) program and Transportation Alternatives set-aside programs that provide direct funding to the TPA based on population size. Federal transit funds are given directly to the public transit agencies for implementation. Table 17 provides a summary of the main federal programs and their eligibility.

State funding programs are spent on statewide goals and objectives described on page 84 and 85 of this document. For major capacity improvements, the state follows their own version of a financial plan, titled the SIS Cost Feasible Plan. The TPA obtains a portion of state funds, specifically District Dedicated Revenue (DDR) to use towards the TPA Cost Feasible List of projects.

Local funds build out the thoroughfare network identified in the Palm Beach County Comprehensive Plan, as well as maintain and operate the existing locally owned transportation system, including roadways, bridges, transit, and other multimodal infrastructure.

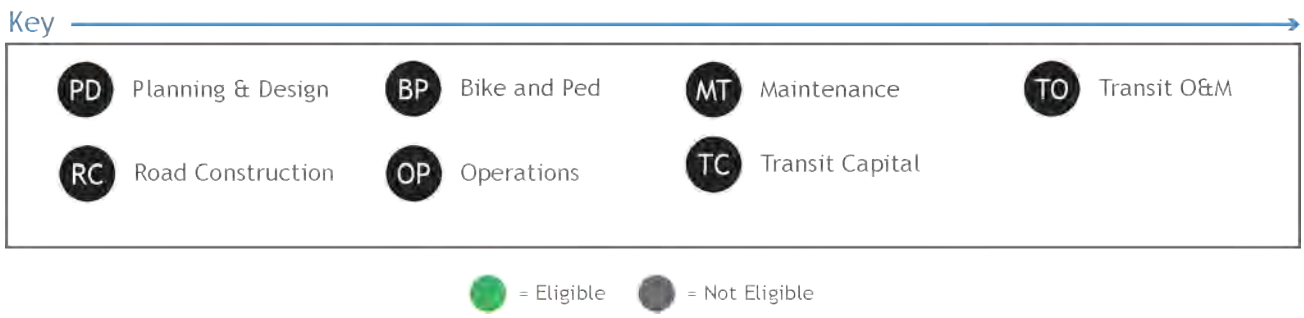


Table 17. Federal Funding Eligibility

National Highway Performance Program (NHPP)

Supports national goals of improving infrastructure condition, safety, mobility, or freight movement. The State allocates this funding for statewide needs to construct capacity and operational improvements. This program funds the NHS.

Eligible Facilities	Allocation
National Highway System (NHS)	Lump sum at the state level

National Highway Freight Program

Capacity and operational improvements on the National Highway Freight Network.

Eligible Facilities	Allocation
National Highway Freight Network	Lump Sum at the State Level

Surface Transportation Block Grant (STBG) Program

The most flexible federal funding eligibility. Federal legislation gives the TPA an apportionment of STBG funds based on population size to directly prioritize projects. The TPA has chosen to use these funds to administer the Local Initiatives competitive grant program.

Eligible Facilities	Allocation
Federal Aid Eligible Roads, Transit	State Population, Palm Beach County Population

FTA Section 5307 - Urbanized Area

Provides funding to public transit capital, planning, job access and reverse commute projects, as well as operating expenses in certain circumstances. Current funding levels only support maintaining current transit operations.

Eligible Facilities	Allocation
Public Transit	Formula Allocation to UZAs over 200,000 population

Transportation Alternatives Set-Aside

Additional STBG funding set aside for nonmotorized transportation. Federal legislation gives the TPA an apportionment of STBG funds based on population size to directly prioritize projects. The TPA has chosen to use these funds to administer the Transportation Alternatives competitive grant program.

Eligible Facilities	Allocation
All Areas	State Population, Palm Beach County Population

FTA Section 5337 - State of Good Repair

Provides capital assistance for maintenance, replacement, and rehabilitation projects of existing high-intensity fixed guideway and high-intensity motorbus systems to maintain a state of good repair. 5337 funds assist in implementing Transit Asset Management plans. Current funding levels only support maintaining current transit operations.

Eligible Facilities	Allocation
Public Transit	Formula Allocation to UZAs

Highway Safety Improvement Program (HSIP)

Safety projects consistent with the State's Strategic Highway Safety Plan (SHSP). Projects must meet Benefit/Cost elegibility criteria.

Eligible Facilities	Allocation
All Areas	Lump Sum at the State Level

FTA Section 5339 - Bus and Bus Facilities

Rehabilitate and purchase buses and related equipment and to construct bus-related facilities including technological changes or innovations to modify low or no emission vehicles or facilities.

Eligible Facilities	Allocation
Public Transit	Formula Allocation to Urbanized Areas

Table 18. State Funding Eligibility

District Dedicated Revenue (DDR)

Statutorily known as the State Comprehensive Enhanced Transportation Systems (SCETS) Tax. Funds are predominantly spent on the SHS but may also be used for district public transportation projects. A portion is used for Resurfacing, Restoration and Rehabilitation (RRR) to preserve the investment which has already been made in the SHS.

*May pay up to 50% of the non-federal share of a transit capital project.

Eligible Uses: PD, MT, RC, TC *50%, BP, TO, OP

Eligible Facilities	Allocation
State Highway System	Spent in County Where Collected to Maximum Extent Feasible

State Public Transportation (DPTO)

Florida Statutes requires that a minimum of 15% of all state revenues deposited into the STTF be allocated to freight, logistics and passenger operations programs.

*May pay up to 50% of the non-federal share of a transit capital project.

Eligible Uses: PD, MT, RC, TC *50%, BP, TO, OP

Eligible Facilities	Allocation
State Highway System	Lump Sum at the State Level then Allocation to Various Modal Programs

State Primary Highways & Public Transportation Office (DS)

Predominantly spent on the SHS statewide based on needs. A portion is used for RRR to preserve the investment which has already been made in the SHS.

*May pay up to 50% of the non-federal share of a transit capital project.

Eligible Uses: PD, MT, RC, TC *50%, BP, TO, OP

Eligible Facilities	Allocation
State Highway System	Needs-Based for RRR then Allocated by Statutory Formula

Turnpike Improvement (PKYI) and Turnpike Master Bond Fund (PKBD)

Capacity, operational improvements, and operations and maintenance for the Turnpike system.

Eligible Uses: PD, MT, RC, TC, BP, TO, OP

Eligible Facilities	Allocation
Turnpike System	Needs-based for Turnpike

State Interstate (DI)

Spent on the SIS.

Eligible Uses: PD, MT, RC, TC, BP, TO, OP

Eligible Facilities	Allocation
Interstate	Highest Priority

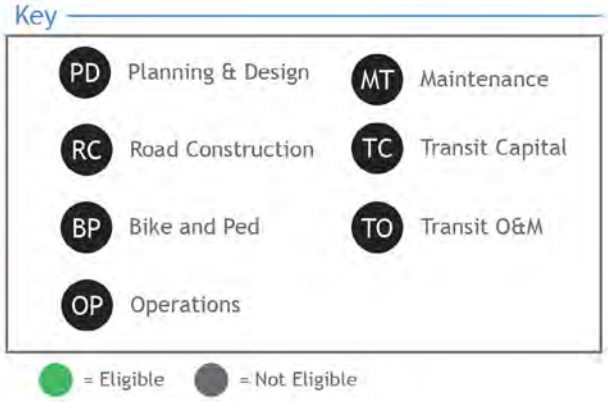


Table 19. Local Funding Eligibility

Impact Fees (IF)

Fees collected on new development. Funds collected from impact fees are for new roadway capacity facilities necessitated by new development. They shall not be used to replace existing capital facilities or to fund existing deficiencies.

Eligible Uses: PD, MT, RC, TC, BP, TO, OP

Eligible Facilities	Allocation
All Roadways	Must be Spent in Impact Fee Zone Collected

Infrastructure Surtax (IST)

One cent tax on sales to finance the renewal and replacement of existing capital investments, including roadway surfaces, bridges, drainage improvements, canals, park amenities, and government buildings, and projects to maintain levels of service. Current sales tax expires December 31, 2026.

Eligible Uses: PD, MT, RC, TC, BP, TO, OP

Eligible Facilities	Allocation
All Facilities	City and Palm Beach County

Gas Taxes (GT)

Local portion of gas tax collected. May be spent on all transportation expenditures.

Eligible Uses: PD, MT, RC, TC, BP, TO, OP

Eligible Facilities	Allocation
All Facilities	City and Palm Beach County

Ad Valorem

Ad valorem is property tax revenue commonly placed in a local government's general fund. Funding is generally intended to meet the existing operational needs of the local government rather than large capital expansion. Local governments occasionally use this fund as a match to leverage federal and state dollars.

Eligible Uses: PD, MT, RC, TC, BP, TO, OP

Eligible Facilities	Allocation
All Facilities	City and Palm Beach County

Key

- PD Planning & Design
- MT Maintenance
- RC Road Construction
- TC Transit Capital
- BP Bike and Ped
- TO Transit O&M
- OP Operations

= Eligible = Not Eligible

How much future revenue will we have?

A long-range revenue forecast was developed based on a review of historic funding allocation trends and the current practice of how those funds are spent. The TPA Cost Feasible list is constrained to these revenue projections and are a reasonable assumption of spending practice moving forward. However, the Implementation section of this LRTP will provide a more comprehensive approach to collaboratively funding the priorities of FDOT and TPA based on the broader eligibility of fund programs rather than on current practice.

Revenue projections are categorized into sections for new construction, ongoing operations and maintenance, and transit capital and operations. New construction entails the funding available for priorities projects in the TPA's prioritization list, FDOT's prioritization list from the SIS Cost Feasible Plan, and Palm Beach County's priorities.

Funding availability is broken down in four fiscal year time bands, as shown in Table 20.

- FY 20-24 to match the TPA's adopted TIP
- FY 25-30 to support creation of a focused 10-year investment plan
- FY 31-35
- FY 36-45

Revenue Forecast for New Construction Projects

Palm Beach Transportation Planning Agency Prioritization

Available funding for direct TPA Prioritization supports the TPA's Major Project list from the Cost Feasible Plan and the two (2) TPA administered competitive grant programs.

Major projects funding must be spent on the State Highway System. Funding is from state DDR and DS, and a small portion of federal STBG statewide funds. Along with roadway capacity and operational improvements, the TPA can select transit capital projects for implementation on the State Highway System but state funding for these projects are currently restricted by statute to no more than half of the non-federal share of the total capital cost.

All of the STBG funds appropriated to the TPA are used for the TPA's annual competitive Local Initiatives (LI) grant program. Created during the 2040 LRTP, the LI program funds non-regionally significant transportation projects identified by local agency partners.

The STBG Transportation Alternatives (TA) set-aside funds are used entirely for the TPA's annual competitive TA grant program. The TA program funds infrastructure for non-motorized users, such as sidewalks, bicycle facilities, trailways, Complete Streets, and safety-related infrastructure.

Florida Department of Transportation Prioritization

FDOT leads the selection of projects on the largest roadways in the state highway system – the SIS and Turnpike. The role of the TPA is to endorse, modify or reject the projects selected by FDOT.

SIS projects are prioritized through the Strategic Intermodal System Cost Feasible Plan. These projects are funded with a combination of federal and state transportation revenues. FDOT uses the largest federal source of funds available to the state – National Highway Performance Program (NHPP). DDR and DS funds are also used for SIS, which pull from the same source as TPA Prioritized projects.

Palm Beach County Prioritization

Palm Beach County maintains a 5-Year Road Program that includes roadway capacity projects, a portion of Palm Tran operating funds, and other infrastructure needs. The County and City lead the selection of projects on these local facilities. The role of the TPA is to support project selection through transportation-related policies (e.g. Complete Streets, Vision Zero, etc.) and to support project implementation through provision of project funding.

Road impact fees are the main source of local roadway capacity improvements. The TPA forecasted future revenues using population and employment projections, determining collected fee for future developments. The gas tax also funds road capacity improvements as well as other multimodal projects and operations. The revenue forecast for new construction is only including a portion of the gas taxes that are forecasted to be used towards new construction.

Table 20. Revenue Forecast for New Construction Projects

Program	Projected Revenue in Millions				
	20-24 (TIP)	25-30	31-35	36-45	Total
TPA Prioritization					
Funding available for TPA Prioritization.					
TPA Projects on State Roads	**$117.5**	**$161.2**	**$157.7**	**$417.2**	**$853.6**
District Dedicated Revenue (DDR)	$85.3	$84.1	$82.3	$217.6	$469.3
Primary Highways & Public Transportation Office (DS)	$32.3	$77.1	$75.4	$199.5	$384.3
Local Initiatives - TPA Projects on County/City Roads	**$120.9**	**$137.8**	**$114.8**	**$229.6**	**$603.0**
Surface Transportation - Urbanized (SU)	$102.2	$122.6	$102.2	$204.3	$531.2
Surface Transportation - Any Area (STP-A)[a]	$18.7	$15.2	$12.7	$25.3	$71.8
Transportation Alternatives - TPA Ped/Bike Projects	**$15.5**	**$18.6**	**$15.5**	**$31.0**	**$80.6**
Surface Transportation - Alternatives (TALU)	$7.8	$9.3	$7.8	$15.5	$40.3
Surface Transportation - Alternatives Any Area (TALT)[a]	$7.8	$9.3	$7.8	$15.5	$40.3
Florida Department of Transportation Prioritization					
Funding prioritized by FDOT and Florida's Turnpike. TPA role is to endorse/modify/reject projects. Funding reflects planned projects in Palm Beach County over next 25 years.					
Strategic Intermodal System (SIS)	**$405.0**	**$241.7**	**$178.7**	**$1,930.3**	**$2,755.8**
National Highway Performance Program (NHPP)	$221.8	$144.7	$59.8	$1,158.2	$1,584.5
Statewide Interstate (DI)	$147.9	$96.5	$39.9	$772.1	$1,056.3
District Dedicated Revenue (DDR)	$21.2	$0.3	$47.4	$0.0	$69.0
Primary Highways & Public Transportation Office (DS)	$14.1	$0.2	$31.6	$0.0	$46.0
Turnpike	**$408.6**	**$2,076.7**	**$0.0**	**$0.0**	**$2,485.3**
Turnpike Improvement (PKYI)	$64.4	$2,076.7	**$0.0**	**$0.0**	$2,141.0
Turnpike Master Bond Fund (PKBD)	$344.2	**$0.0**	**$0.0**	**$0.0**	$344.2
Palm Beach County Prioritization					
Funding available for Palm Beach County Prioritization, included in LRTP per federal regulations. TPA can choose to exclude specific projects but this does not constrain County actions.					
Palm Beach County	**$293.7**	**$200.1**	**$166.7**	**$333.5**	**$994.0**
Road Impact Fees[b]	$186.2	$149.1	$124.2	$248.5	$708.1
5-cent Local Option Gas Tax (LOGT)[c]	$107.4	$51.0	$42.5	$85.0	$285.9

[a]FDOT may elect to retain these funds for other projects
[b]Includes current balance + projected revenue
[c]Includes current balance, state grant revenue, + projected revenue

Revenue Forecast for Operations and Maintenance

Table 21. Funding Available for Operations and Maintenance

Program	Projected Revenue in Millions				
	20-24 (TIP)	25-30	31-35	36-45	Total
Florida Department of Transportation					
Includes resurfacing, bridge, and operations & maintenance programs. Projections provided are 34.1% of the total funding projected for FDOT District 4 (based on share of lane state lane miles in Palm Beach County)					
State Highway System Operations & Maintenance	**$611.2**	**$812.8**	**$749.9**	**$1,551.2**	**$3,725.1**
Palm Beach County					
Includes resurfacing, bridge, and operations & maintenance of county owned facilities.					
Operations and Maintenance	**$384.0**	**$384.0**	**$288.0**	**$576.0**	**$1,632.0**
6-cent Local Option Gas Tax	$33.5	$40.2	$33.5	$67.0	$174.2
5-cent Local Option Gas Tax	$12.0	$14.4	$12.0	$24.0	$62.4
1-cent Local Option Gas Tax (9th cent)	$17.0	$20.4	$17.0	$34.0	$88.4
1-cent County Gas Tax	$29.5	$35.4	$29.5	$59.0	$153.4
2-cent Constitutional Gas Tax	$67.5	$81.0	$67.5	$135.0	$351.0
User Fees & Other	$41.0	$49.2	$41.0	$82.0	$213.2
Ad Valorem Tax (ADV)	$87.5	$105.0	$87.5	$175.0	$455.0
Infrastructure Sales Tax (IST)	$96.0	$38.4	$0.0	$0.0	$134.4

The majority of the federal-aid eligible transportation system of roadways and bridges within Palm Beach County are operated and maintained by FDOT and Palm Beach County.

Florida Department of Transportation (FDOT)

FDOT revenues for state system preservation are set aside to meet the statewide goals and established performance targets through the following programs:

- Resurfacing: Resurfacing of pavements on the National Highway System (NHS), State Highway System (SHS) and local roads as provided by state law.
- Bridges: Repair and replace deficient bridges on the NHS and SHS. In addition, not less than 15% of the amount of 2009 federal bridge funds must be expended off the federal-aid highway system (e.g., on local bridges not on the SHS).
- Operations and maintenance: Activities to support and maintain transportation infrastructure once it is constructed and in place.

FDOT provides forecasted revenues for these programs at the District level. The $3.725 Billion in investment is an estimate of District 4 total funds to be spent in Palm Beach County. FDOT typically uses set-aside State and Federal funding dedicated to system preservation to fund these programs.

Palm Beach County

Palm Beach County Engineering operates and maintains many principal and minor arterials and major collector roadways that make up the major grid roadway network within Palm Beach County. They also oversee the operations of most traffic signals within the county, including those on state roadways (although operated by Palm Beach County, this funding is shown in the FDOT O&M line).

Operations and maintenance of the Palm Beach County owned facilities is funded through a variety of local option gas taxes with the remainder coming from general revenue ad valorem taxes. An Infrastructure Surtax (IST) passed by voters of Palm Beach County also funds resurfacing and bridge maintenance needs within the county.

Palm Tran

Palm Tran operates the passenger bus services within Palm Beach County. The majority of Palm Tran's operating budget is from local revenue sources, including gas and ad valorem taxes, followed by the federal formula-based grants of Federal Transit Administration (FTA) Section 5307 and 5339. A more detailed 10-year funding outlook updated annually is available in Palm Tran's Transit Development Plan (TDP).

The Federal Transit Administration (FTA) 5307 and 5349 formula-based funds given to Palm Tran are eligible to expand the capacity of the system. However, current total funding levels dedicated to Palm Tran do not provide enough to fund and operate major capacity expansions. Since current practice is to spend these funds on Operations and Maintenance, they are shown in this section rather than in "Funding Available for New Construction".

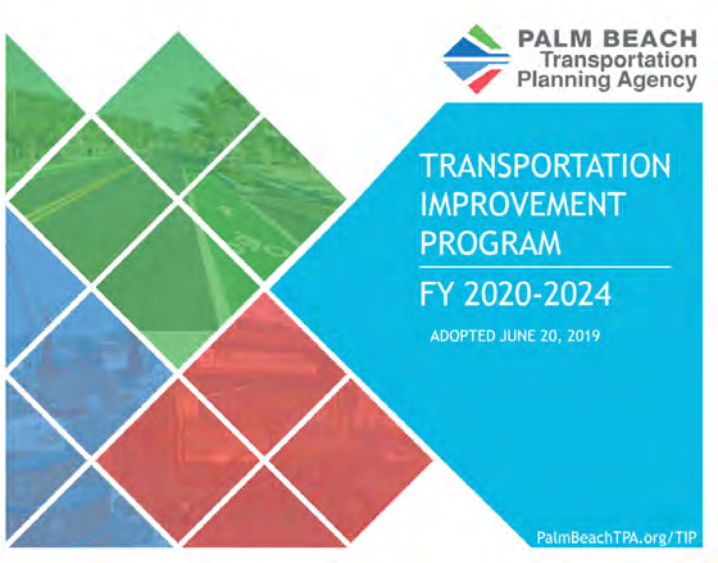
Table 22. Funding Available for Palm Tran

Program	Projected Revenue in Millions				
	20-24 (TIP)	25-30	31-35	36-45	Total
Palm Tran (Palm Beach County)					
Funding available for Palm Tran Operations and Maintenance. Although a many of these sources can be used for transit capital expansion, current funding revenue provides enough to maintain current service.					
Palm Tran	**$582.6**	**$821.3**	**$713.5**	**$1,471.0**	**$3,588.4**
FTA Section 5307	$84.8	$101.7	$84.8	$169.6	$440.8
FTA Section 5339	$10.2	$12.2	$10.2	$20.4	$53.0
State Block Grant: Public Transportation Office (DPTO)	$16.2	$51.5	$50.4	$133.3	$251.3
State Block Grant: District Dedicated Revenue (DDR)	$14.7	$0.0	$0.0	$0.0	$14.7
State Transportation Disadvantaged (TD)	$14.6	$23.2	$22.7	$59.9	$120.4
Palm Beach County Gas Tax	$170.9	$205.1	$170.9	$341.8	$888.7
Ad Valorem	$203.8	$341.2	$302.5	$605.1	$1,452.6
Farebox Revenue - Fixed Route	$48.7	$62.5	$52.1	$104.3	$267.6
Farebox Revenue - Paratransit	$14.8	$19.4	$16.2	$29.1	$79.5
Advertising Revenue	$3.8	$4.5	$3.8	$7.6	$19.7

Transportation Improvement Program (TIP) and Priority Projects

The first five years of the Cost Feasible Plan is the adopted FY 2020-2024 TIP. The TIP is a staged program showing how transportation revenues will be invested in various projects and services over the first five years of the LRTP. The TIP includes a detailed breakdown of funding sources and specific details for each project such as a project description, lead agency, and phases and funding amounts in specific fiscal years. It is expected that phases funded in fiscal year (FY) 2020 through FY 2024 will have been completed by the next LRTP update, which is updated every five (5) years.

The TIP includes 457 projects totaling over $2.8 billion. Nearly 50% of the total funding in the TIP is allocated to operations and maintenance of the roadway and transit systems. While some of these funds can be used to rebuild existing facilities to be safer and more multimodal, many of these dollars are just maintaining the existing system in a state of good repair. Nearly 30% of the funding in the TIP is adding roadway capacity to the SIS, projects that are selected by FDOT to reduce vehicle congestion and improve regional mobility. An additional 10% of the funding is adding roadway capacity and/or making roadway modifications to improve safety on the state and local roadway systems. Another 9% is allocated to projects selected by the TPA Governing Board to promote a safe, efficient, connected and multimodal transportation system through its Major Projects and Local Initiatives and Transportation Alternatives Programs. The final 5% is allocated to airport, railway and seaport capacity, and maintenance projects.



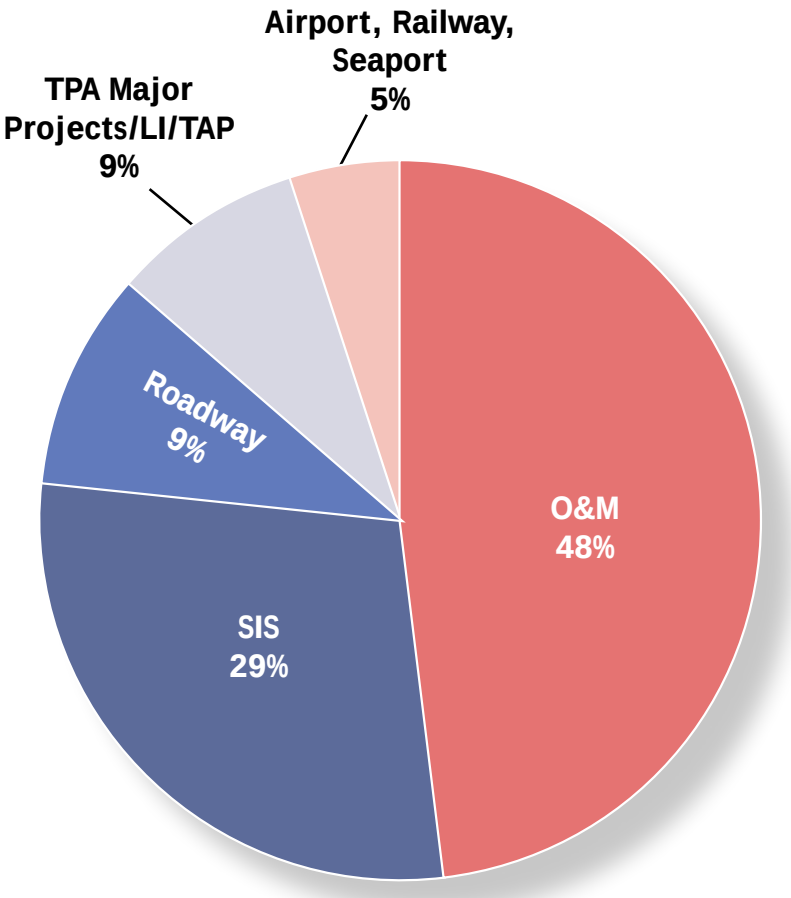


Figure 11. TIP Funding

TPA Priority Projects are prioritized to be included in the TPA's TIP through annual adoption of a List of Priority Projects (LOPP) by the TPA Governing Board. The Major Projects in the LOPP are selected from the Cost Feasible Plan, while the Local Initiatives and Transportation Alternatives Projects are selected through an annual competitive application process.

In a similar fashion, FDOT maintains and annually updates a SIS Second Five Year Plan to indicate which roadway projects are expected to be funded in the annual update to the TIP.

New projects tend to be included in the "New 5th Year" of the TIP. This means that new priorities taken from the Cost Feasible list to be included in the List of Priority Projects, and subsequently the TIP, will start the first portions of their phases in the last year of the TIP. For example, next year's new priorities from the LRTP will be included in FY 2025.

Since transportation projects are implemented over several years and five years of funding projections have already been allocated to existing priorities, this LRTP focuses mostly on projects, programs, and actions that will influence years 6-10 of the LRTP. Taken together with the TIP, this forms the "10-Year Plan".

Cost Feasible Plan

The Cost Feasible Plan allocates the available funding to the Desired Projects list within the following Fiscal Year (FY) time bands:

- FY 20-24: the TPA's adopted TIP
- FY 25-30: the 10-year investment plan that serves as the "pipeline of projects for the TIP
- FY 31-35
- FY 36-45

Projects in the Cost Feasible Plan are grouped by prioritizing agencies: Palm Beach Transportation Planning Agency (TPA), Florida Department of Transportation and Florida's Turnpike, and Palm Beach County.

Table 23. Summary Revenue and Expenditures for New Construction Projects

	Revenue and Expenditures in Millions (Year of Expenditure)				
	20-24 (TIP)	25-30	31-35	36-45	Total
TPA Major Projects					
Revenue	$253.9	$317.5	$288.0	$677.8	$1,537.2
Expenditures	$253.9	$310.8	$294.7	$627.5	$1,486.9
Balance	**$0**	**$6.7**	**$0.1**	**$50.3**	**$50.3**
Strategic Intermodal System Capacity Projects					
Revenue	$405.0	$241.7	$178.7	$1,930.3	$2,755.8
Expenditures	$405.0	$241.7	$178.7	$1,930.3	$2,755.8
Balance	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Turnpike Capacity Projects					
Revenue	$408.6	$2,076.6	$0.0	$0.0	$2,485.2
Expenditures	$408.6	$2,076.6	$0.0	$0.0	$2,485.2
Balance	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
County Road Capacity Projects					
Revenue	$293.7	$200.1	$166.7	$333.5	$994.0
Expenditures	$221.3	$266.5	$156.1	$295.5	$909.4
Balance	**$72.3**	**$6.0**	**$10.2**	**$48.2**	**$48.2**

Palm Beach TPA Projects

The TPA is charged with identifying projects to accommodate projected transportation demand in Palm Beach County. These projects are funded with a combination of federal and state transportation revenues and are subdivided into the following categories.

State Roadway Enhancements and Modifications (STREAM) Program

The TPA leads the selection of projects on the other state-maintained roadways in Palm Beach County.

These projects are funded with primarily state transportation revenues and supplemented with a small portion of federal funding.

Funding Source: State Transportation Revenues (primarily DDR and DS funds)
Funding Amount: ~$530M ($20-$30M/yr)
Project Location: State roadways
Project Selection: Projects are identified annually by TPA staff through a data-driven process and included in the TPA's annually adopted list of priority projects.
Lead Agency: Primarily FDOT because these projects are on the state highway system
Project Description: Funding set-aside of state transportation revenues to advance the TPA's vision, Complete Street policy and Vision Zero commitment through enhancements and modifications to state roadways, including but not limited to the construction of 37 miles of sidewalk, over 50 miles of separated and/or buffered bike lanes, and nearly 100 transit shelters on state roadways identified in the Desires Plan. The funds will be used for design, right-of-way acquisition, and construction/implementation for the following types of projects on the state roadway system:

- Safety (infrastructure projects to advance the TPA's commitment to zero traffic-related fatalities and serious injuries)
- Complete Streets (including protected or buffered bike lanes, wider sidewalks, high visibility crosswalks, street lighting, first and last-mile connections to transit, etc.)
- Enhanced Transit (transit shelters, ADA compliant connections, transit signal prioritization, queue-jump lanes, etc.)
- Transportation System Management & Operations (TSM&O), including technology investments (adaptive traffic signals, autonomous and connected vehicle systems, etc.)
- Environmental Resiliency Projects (roadway stabilization/elevation, sustainable infrastructure, etc. to adapt to sea level rise, inland flooding, and storm surge)
- Additional improvements on routine roadway resurfacing projects to incorporate Safety, Complete Streets, Transit, TSM&O, and environmental resiliency.

Examples of projects currently funded or prioritized to be funded in the TIP include:

- Transit shelters on US 1 and Okeechobee Blvd
- Transit Signal Prioritization on US 1, Okeechobee Blvd and Lake Worth Rd
- Reconstruction of portions of US 1 to enhance pedestrian, bicycle and transit facilities
- Street lighting on SR 80
- High visibility crosswalks and travel demand detection devices on Indiantown Rd
- Reconstruction of portions of Boynton Beach Blvd to add a shared-use pathway and pedestrian lighting
- Reconstruction of Lake Worth Rd to add pedestrian safety enhancements and traffic calming

Local Initiatives (LI) Program

Funding Source: Federal Transportation Revenues (primarily SU and SA funds)
Funding Amount: $420M ($20M/yr)
Project Location: County and City federal-aid eligible roadways

Project Selection: Projects will be identified annually through a competitive application process and scored based on the Goals, Objectives and Targets in the LRTP. Selected projects will be included in the TPA's annually adopted List of Priority Projects (LOPP).
Lead Agency: Primarily local municipality applicants with funding provided via Local Agency Program (LAP) agreement. Projects may also be implemented by FDOT.
Project Description: Eligible projects include complete streets, including lane narrowing, lane repurposing, bicycle and pedestrian facilities, Intelligent Transportation Systems (ITS), operational improvements, signing and lighting; transit vehicles and facilities; and freight efficiency improvements, including airport & seaport off-site capacity improvements, truck movements, and railway capacity.

Examples of projects currently funded or prioritized to be funded in the TIP include:

- Traffic signal updates to provide video camera detection and fiber optic cable installation along main corridors to increase Intelligent Transportation Systems (ITS) technology throughout the county
- Pedestrian scale lighting in Riviera Beach
- West Palm Beach and Delray Beach trolley expansions
- Palm Tran purchase of electric buses and charging stations

Transportation Alternatives (TA) Program

Funding Source: Federal Transportation Revenues (TALU and TALT funds)
Funding Amount: $80M ($3M/yr)
Project Location: Various – can be located on or off roadways
Project Selection: Projects will be identified annually through a competitive application process and scored based on the Goals, Objectives and Targets in the LRTP with a specific emphasis on non-motorized transportation. Selected projects will be included in the TPA's annually adopted list of priority projects.

Project Description: Eligible projects include non-motorized infrastructure, such as, sidewalk facilities, bicycle facilities, trailways, complete streets projects, pedestrian lighting, and safety-related infrastructure.

Examples of projects currently funded or prioritized to be funded in the TIP include:

- Pedestrian crossing enhancements along A1A/Ocean Dr
- Shared use pathway along Clear Lake Trail in West Palm Beach
- Pedestrian lighting along Florida Power & Light pathway in Royal Palm Beach

Enhanced Transit Corridors and Commuter Rail

The Cost Feasible Plan funds the Project Development and Environmental (PD&E) phase for all enhanced transit corridors through 2030. Additional funding for design, right-of-way and construction cannot be included in the Cost Feasible Plan until a dedicated local fund source has been identified to leverage state and federal capital funding and to support operations of new transit service.

Funding Source: State Transportation Revenues (primarily DDR and DS funds) and federal planning funds to fund PD&E studies. Funding for right-of-way and construction from competitive federal and state grants with local matches (not yet identified).
Funding Amount: $15.3M programmed for Project Development & Environmental (PD&E)
Project Location: State roadways
Project Selection: Corridors identified through multimodal demand analysis

Project Description: Enhanced transit and associated multimodal improvements, including premium transit shelters, off-board ticketing, signal prioritization, etc.

State Road Construction Projects

The Cost Feasible Plan funds the roadway capacity and expansion of major TPA roadway priorities: State Road 7 widening and extension, Atlantic Avenue widening, and US 27 connector.

Funding Source: State Transportation Revenues (primarily DDR and DS funds) and supplemented with a small portion of federal funding.
Funding Amount: $232 million programmed for completion of all projects.
Project Location: State roadways
Project Selection: Corridors identified through multimodal demand analysis and local priority.

Project Description: Six (6) total projects are funded for roadway capacity:

- Atlantic Ave from SR-7 to Lyons Rd - widen from 2 lanes to 4 lanes
- Atlantic Ave from Lyons Rd to Jog Rd – widen from 4 lanes to 6 lanes
- Hooker Hwy from SR 715 to SR 80 – widen from 2 lanes to 4 lanes
- US 27 Connector from US 27 to SR-715 – new 2 lane roadway
- SR-7 from Okeechobee Blvd to 60th St – widen from 2 lanes to 4 lanes
- SR-7 from 60th to Northlake Blvd – new 4 lane roadway

FDOT

FDOT leads the selection of projects on the SIS. These projects are funded with a combination of federal and state transportation revenues. The role of the TPA is to endorse, modify, or reject the projects selected by FDOT.

Strategic Intermodal System (SIS) Roadway and Freight

Although FDOT revenue sources may be used for multimodal facilities, the SIS Cost Feasible Plan has predominantly prioritized focused on roadway capacity. FDOT and modal partners have not been able to identify cost feasible projects beyond the FDOT work program sufficiently to include them in the SIS CFP. Other SIS projects include freight corridors and large-scale Intelligent Transportation Systems (ITS) infrastructure.
Funding Source: Federal Transportation Revenues primarily from National Highway Performance Program (NHPP), State Transportation Revenues primarily from statewide Interstate (DI), District Dedicated Revenue (DDR), Primary Highways & Public Transportation Office (DS) funds.
Funding Amount: $2.75 billion programmed towards projects
Project Location: SIS roadways
Project Selection: Identified at statewide-level by FDOT and adopted into FDOT's SIS Cost Feasible Plan.

Project Description: The SIS Cost Feasible Plan programs major roadway capacity expansions for all SIS roadways within the county. The TPA Cost Feasible Plan includes the following:

- Widening to 12 lanes with managed lanes to I-95 from Linton Blvd to Blue Heron Blvd
- I-95 highway capacity widening to 8 lanes from Indiantown Rd into Martin County
- 1 new interchange and 17 interchange modifications
- US 27 freight capacity from Broward County to Hendry County
- Beeline Hwy (SR 710) widening to 6 L from Blue Heron Blvd to Northlake Blvd
- SR-80 highway capacity widening to 8 lanes from Binks Forest Dr to Royal Palm Beach Blvd
- PD&E study for SR-80 highway capacity from Royal Palm Beach Blvd to I-95

Turnpike Roadway

FDOT's Florida Turnpike prioritizes Turnpike capacity improvements. These projects are funded by toll revenue collections.

Funding Source: Turnpike toll revenues
Funding Amount: $2.49 billion programmed towards projects
Project Location: Florida's Turnpike
Project Selection: Identified at statewide-level by Florida's Turnpike office

Project Description: Major Turnpike roadway capacity expansions are programmed in the TPA Cost Feasible plan, including:

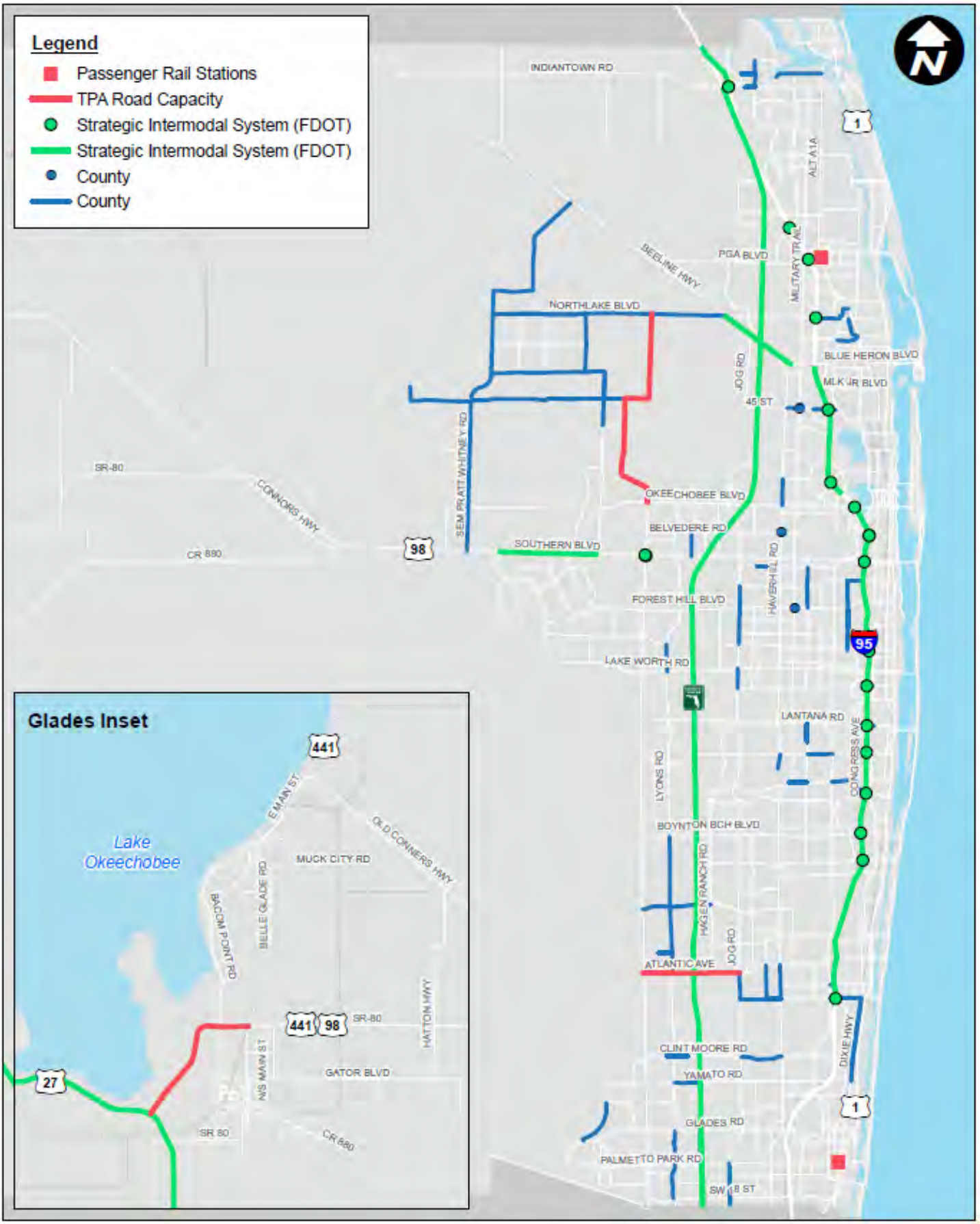
- Widening to 10 lanes with managed lanes from Broward County to Boynton Beach Blvd
- Widening to 8 lanes with managed lanes from West Palm Beach Service Plaza to Beeline Hwy (SR 710)
- Widening to 8 lanes from Beeline Hwy (SR 710) to Indiantown Rd

Palm Beach County (County Roadways)

The County and municipalities lead the selection of projects on local facilities. **The role of the TPA is to support project selection through transportation-related policies (e.g. Complete Streets, Vision Zero, etc.) and to support project implementation through provision of project funding.** The project list only includes roadway segments programmed for widening.

Funding Source: Road impact fees and local gas taxes
Funding Amount: $854 million programmed
Project Location: County-maintained roadways
Project Selection: Identified through Palm Beach County and local municipalities. The County directly administers projects through the Palm Beach County 5-Year Road Program. The County's selection is independent of the Palm Beach TPA Cost Feasible Plan. The TPA adopted projects into the TPA Cost Feasible Plan that are consistent with the Mission and Vision of the TPA.

Project Description: The TPA Cost Feasible Plan includes 18 new roadway segments, 84 roadway widening projects, 15 larger intersection modifications, and a line item for smaller intersection projects countywide.



Map 38. Projects with Construction Funding through 2045

Map 39. Projects with Funding for Studies through 2045

Palm Beach Transportation Planning Agency (TPA) Prioritization

TPA Cost Feasible List of Priority Projects

				Programming Tiers ->	FY 20-24 (TIP)				FY 25-30 (2030 Plan)				2031-2035 (2045 Plan)				2036-2045 (2045 Plan)			
LRTP#	FM	Location	Description		PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST
TPA-SRM		State Road Modifications	Set-aside to advance safety, complete streets, enhanced transit, TSM&O and resiliency							$11,000		$58,080		$13,400		$83,080		$40,000		$328,000
TPA-LI		Local Initiatives Program	Set-aside to advance multimodal projects on federal aid eligible county and city roadways			$20,000		$80,000		$24,000		$96,000		$20,000		$80,000		$20,000		$80,000
TPA-TA		Transportation Alternatives Program	Set-aside to advance pedestrian & bicycle projects					$15,500				$18,600				$15,500				$31,000
TPA001	2296584	Atlantic Ave from SR 7 to Lyons Rd	Widen 2L to 4L				$10,432	$14,702												
TPA002	4405751	Atlantic Ave from Lyons Rd to Jog Rd	Widen 4L to 6L			$3,403	$18,000				$15,840	$66,070								
TPA003		Atlantic Ave from Military Trl to US 1	Enhanced transit & assoc. multimodal improvements						$233									$1,862		
TPA004		Boynton Beach Blvd from Military Trl to US 1	Enhanced transit & assoc. multimodal improvements						$266									$2,128		
TPA005		Congress Ave from Yamato Rd to Okeechobee Blvd	Enhanced transit & assoc. multimodal improvements						$1,576											
TPA006	4353432	FEC Railway from 15th St in WPB to Martin County	Construct supplemental safety measures			$83		$668												
TPA007		Forest Hill Blvd from SR 7 to US 1	Enhanced transit & assoc. multimodal improvements						$612									$4,894		
TPA008		Glades Road from Butts Rd to US 1	Enhanced transit & assoc. multimodal improvements						$173									$1,383		
TPA009		Lake Worth Rd from SR 7 to US 1 SR 7 from Lake Worth Rd to Forest Hill Blvd	Enhanced transit & assoc. multimodal improvements						$732									$5,852		
TPA010		Military Trl from Glades Rd to PGA Blvd	Enhanced transit & assoc. multimodal improvements						$2,254											
TPA011	4417581	Okeechobee Blvd from SR 7 to US 1 SR 7 from Forest Hill Blvd to Okeechobee Blvd	Enhanced transit & assoc. multimodal improvements		$3,750				$911									$7,288		$83,111
TPA012		Hooker Highway from SR 715 to SR 80	Widen 2L to 4L										$570	$2,280	$3,420	$17,670				
TPA013	2296647	SR 7 from Okeechobee Blvd to 60th St	Widen 2L to 4L					$20,357												
TPA014	2296646	SR 7 from 60th St to Northlake Blvd	New 4L				$2,887	$50,278												
TPA015	4297671	Tri-Rail Northern Layover Facility on SFRC E of I-95 in Mangonia Park/WPB	Construct new layover and light maint. facility					$8,000												
TPA016	4304582	Passenger Station on SFRC railway (Tri-Rail) on E side of Military Tr S of Glades Rd	Passenger Rail station																	
TPA017	4170316	Tri-Rail Coastal Link on FEC railway from Boca Raton to West Palm including stations in Boca Raton, Delray Beach, Boynton Beach, Lake Worth and West Palm Beach	New Commuter Rail passenger service		$2,500															
TPA018	4170317	Tri-Rail Coastal Link on FEC railway from West Palm to Jupiter Including stations in West Palm Beach, Riviera Beach, Lake Park, Palm Beach Gardens, and Jupiter	New Commuter Rail passenger service		$1,350															
TPA019		Tri-Rail Extension on CSX/SFRC from Mangonia Park to Blue Heron Blvd, including a new station at the VA Hospital in Riviera Beach	Commuter Rail passenger service extension						$1,100											
TPA020		Tri-Rail rolling stock	1/3 share of vehicle purchase to support current service and future expansion in Palm Beach, Broward, & Miami-Dade counties																	
TPA021		US 1 from Boynton Beach Blvd to PGA Blvd	Enhanced transit & assoc. multimodal improvements						$1,684									$3,368		
TPA022		US 1 from Palmetto Park Rd to Boynton Beach Blvd	Enhanced transit & assoc. multimodal improvements						$1,842									$3,684		
TPA023	4417571	US 27 Connector from US 27 to SR-715/Hooker Hwy	New 2L		$250				$2,500	$4,313					$5,000	$33,424				
TPA024		Passenger Station on FEC railway @ Palmetto Park Rd in Boca Raton	Passenger Rail station						$1,000	$1,000					$4,000	$11,315				
TPA025		Passenger Station on FEC railway @ PGA Blvd in Palm Beach Gardens	Passenger Rail station						$1,000					$1,000	$4,000					$14,965
				TPA Total	**$7,850**	**$23,486**	**$31,319**	**$189,505**	**$15,882**	**$40,313**	**$15,840**	**$238,750**	**$570**	**$36,680**	**$16,420**	**$240,989**		**$90,460**		**$537,076**

PD&E Project Development & Environmental - Determines the location and conceptual design of feasible build alternatives for improvements and their social, economic and environmental effects.

PE Preliminary Engineering

ROW Right-of-Way - Acquisition of necessary right-of-way (property), based on the construction plans

CST Construction - the project is awarded and is being built.

Florida Department of Transportation Prioritization

Projects from the FDOT Strategic Intermodal System (SIS) Plan. TPA role is to endorse/modify/reject projects.

				Programming Tiers ->	FY 20-24 (TIP)				FY 25-30 (2030 Plan)				2031-2035 (2045 Plan)				2036-2045 (2045 Plan)			
LRTP#	FM	SIS	Location	Description	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST
TPK001	4397411		Turnpike @ Hypoluxo Rd	New Interchange	$2,000															
TPK002	4182141		Turnpike from Broward County to Glades Rd	Widen 6L to 10L with managed lanes		$10,855						$389,807								
TPK003	4171321		Turnpike from Glades Rd to Atlantic Ave	Widen 6L to 10L with managed lanes		$9,820						$676,430								
TPK004	4371691		Turnpike from Atlantic Ave to Boynton Beach Blvd	Widen 6L to 10L with managed lanes		$10,521						$332,975								
TPK005	4061435		Turnpike from WPB Service Plaza to Okeechobee Blvd	Widen 4L to 8L with managed lanes		$5,000		$344,230												
TPK006	4061436		Turnpike from Okeechobee Blvd to SR-710/Beeline Hwy	Widen 4L to 8L with managed lanes						$3,000		$179,124								
TPK007	4157481		Turnpike from SR-710/Beeline Hwy to Indiantown Rd	Widen 4L to 8L		$21,545	$4,611					$495,314								
SIS001		3407	Beeline Hwy/SR-710 from Blue Heron Blvd to Congress Ave	Intersection & TSMO Improvements										$1,295						$27,420
SIS002	4192511		Beeline Hwy/SR-710 from Blue Heron Blvd to Northlake Blvd	Widen 4L to 6L		$2,022	$1,445	$119,775												
SIS003	4127331		I-95 @ 10th Ave North	Modify Interchange	$17	$2,650	$6,246					$23,142								
SIS004	4365191		I-95 @ 45th St	Construct Diverging Diamond Interchange	$2	$2,355	$2,488	$14,629				$14,629								
SIS005	4369631		I-95 @ 6th Ave South	Modify Interchange	$5	$30	$5,761	$11,251												
SIS006	4397591		I-95 @ Belvedere Rd	Add 2nd NB to EB right turn lane		$820		$3,126												
SIS007	4441211	3416	I-95 @ Belvedere Rd	Modify Interchange - Southbound Ramp		$355								$3,089	$6,000					$55,318
SIS008	4132651		I-95 @ Central Blvd	Construct New Interchange	$3	$65	$9,081					$78,471								
SIS021	4358041		I-95 @ Boynton Beach Blvd	Modify Interchange	$3	$272	$19,050	$37,294												
SIS009	2319321		I-95 @ Gateway Blvd	Modify Interchange	$3	$199	$10,416	$10,130				$41,860								
SIS036	4124204		I-95 @ Glades Rd	Modify Interchange			$1,757	$1,529												
SIS010	4132571		I-95 @ Hypoluxo Rd	Modify Interchange	$6	$2,250	$948	$260				$17,185								
SIS011	4397581		I-95 @ Indiantown Rd	Signalize NB Ramp, Add EB Lane on Indiantown		$472	$547	$7,229												
SIS012	4132581		I-95 @ Lantana Rd	Modify Interchange	$398	$2,030	$7,853	$200				$19,786								
SIS013	4353841		I-95 @ Linton Blvd	Modify Interchange	$2	$46	$1,517	$972												
SIS014	4353842		I-95 @ Linton Blvd	Modify Interchange		$895		$12,030												
SIS015	4358031		I-95 @ Northlake Blvd	Add turn lanes, lengthen ramps, access mgmt		$138	$16,847	$37,556												
SIS016	4397551		I-95 @ Okeechobee Blvd	Add right turn from EB Okeechobee Blvd to SB I-95		$9		$1,148												
SIS017	4132601		I-95 @ Palm Beach Lakes Blvd	Modify Interchange	$100	$1,386						$12,993								

Costs expressed in Year of Expenditure (YOE) dollars
Values in thousands (1,000s)

				Programming Tiers ->	FY 20-24 (TIP)				FY 25-30 (2030 Plan)				2031-2035 (2045 Plan)				2036-2045 (2045 Plan)			
LRTP#	FM	SIS	Location	Description	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST
SIS018	4435901		I-95 @ PGA Blvd	Add Auxiliary Lane to SB on-ramp		$749		$250				$6,552								
SIS019	4355161		I-95 @ Southern Blvd	Modify Interchange		$7,775					$8,403									
SIS020	4372791		I-95 @ Woolbright Rd	Modify Interchange	$501	$1,120	$24,808					$12,714								
SIS025	4442021	3399	I-95 from Linton Blvd to Southern Blvd	Add managed lanes (potentially convert HOV, add 2 managed Lanes (12 total + aux)	$2,500									$15,000	$5,000					$745,416
SIS027	4442022	3400	I-95 from Southern to Congress Ave (overpass)	Add managed lanes (potentially convert HOV, add 2 managed Lanes (12 total + aux)	$5,400									$6,000	$10,000					$119,877
SIS037	4442023	3401	I-95 from Congress Ave (overpass) to Blue Heron Blvd	Add managed lanes (potentially convert HOV, add 2 managed Lanes (12 total + aux)									$4,000	$10,000					$5,000	$250,257
SIS026	4132522	3402	I-95 from S of Indiantown Rd to Martin County	Add highway capacity (potentially widen 6L to 8L)	$125				$575					$2,815						$50,667
SIS028	4378681		Southern Blvd @ SR-7	Add EB and WB Right & Left Turn Lanes		$599	$2,889					$5,411								
SIS029		3395	Southern Blvd @ SR-7	Modify Interchange									$1,443	$2,886						$51,693
SIS030	4363071		Southern Blvd @ Forest Hill Blvd	Add turn lane		$8		$304												
SIS038	4351581		Southern Blvd @ Sansbury Way	Modify Intersection		$1		$342												
SIS031		3396	Southern Blvd from US-27 to I-95	Corridor Management, ITS										$2,274		$19,612				
SIS032		3393	Southern Blvd from W of Binks Forest Drive to W of Royal Palm Beach Blvd	Add highway capacity (potentially widen 6L to 8L)									$1,900	$1,609	$2,940	$23,947				
SIS033		3394	Southern Blvd from W of Royal Palm Beach Blvd to I-95	Add highway capacity									$6,000							
SIS034		3390	US 27 from Broward County to Hendry County	Add freight roadway capacity									$5,000	$12,000					$30,618	$594,083
SIS035		3391	US 27 from Krome Avenue (Miami-Dade County) to Evercane Road (Hendry County)	Corridor Management, ITS										$3,733		$32,193				
				SIS Total	$9,065	$26,246	$111,653	$258,025	$575		$8,403	$232,743	$18,343	$60,701	$23,940	$75,752			$35,618	$1,894,731
				TPK Total	$2,000	$57,741	$4,611	$344,230		$3,000		$2,073,650								

Costs expressed in Year of Expenditure (YOE) dollars
Values in thousands (1,000s)

PD&E Project Development & Environmental - Determines the location and conceptual design of feasible build alternatives for improvements and their social, economic and environmental effects.

PE Preliminary Engineering

ROW Right-of-Way - Acquisition of necessary right-of-way (property), based on the construction plans

CST Construction - the project is awarded and is being built.

FDOT Prioritization from FDOT Work Program FY 2019/2020 through FY 2023/2024; FDOT, SIS First Five-Year Plan, FY 2019/20 through FY 2023/2024; FDOT, SIS Second Five-Year Plan, FY 2024/25 through FY 2028/2029; FDOT, SIS Long Range Cost Feasible Plan, FY 2029-2045

Palm Beach County Prioritization

Select projects that may be implemented through the Palm Beach County Road Program in collaboration with affected local governments. Shown for information and planning consistency purposes.

				Programming Tiers ->	FY 20-24 (TIP)				FY 25-30 (2030 Plan)				2031-2035 (2045 Plan)				2036-2045 (2045 Plan)			
LRTP#	FM	SIS	Location	Description	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST
PBC001			Countywide Locations	Small intersections and small capacity improvement projects		$6,859	$11,847	$43,645		$6,859	$11,847	$43,645		$6,859	$11,847	$43,645		$13,717	$23,693	$87,290
PBC002			6th Ave S from I-95 to South A St	Widen 4L to 6L						$600	$900	$1,980								
PBC003		2018511	10th Ave from Congress Ave to I-95	Add 3rd WB thru lane						$3,300	$4,950	$10,890								
PBC004			190th St North from 60th St N to northern terminus	New 4L														$3,000	$4,500	$14,914
PBC005	2016501	2016501	45th St from E of Haverhill Rd to W of Military Trl	Widen 4/5L to 6L				$2,160												
PBC006			45th St at Military Trl	Intersection improvements						$180	$5,000	$1,320								
PBC007			45th St from Village Blvd to I-95	Widen 6L to 8L						$400	$600	$1,320								
PBC008			45th St from I-95 to Congress Ave	Intersection improvements						$420	$200	$2,904								
PBC010			60th St North from 190th St N to M-Canal	New 4L														$600	$900	$2,983
PBC011			60th St North from M-Canal to Seminole Pratt Whitney Rd	Widen 2L to 4L						$1,100	$1,650	$3,630								
PBC012			60th St North from Seminole Pratt Whitney Rd to 140th Ave N	New 4L						$1,700	$2,550	$5,610								
PBC121			60th St North from W of 140th Ave N to Avocado Blvd	Widen 2L to 3L, M Canal relocation		$500	$1,200				$1,110	$5,082								
PBC013			60th St North from W of 140th Ave N to Avocado Blvd	Widen 3L to 5L														$375	$750	$2,983
PBC014	2017515	2017515	60th St North from Avocado Blvd to E of 120th Ave N	Widen 2L to 3L			$200	$7,000												
PBC015			60th St North from Avocado Blvd to SR 7	Widen 3L to 5L														$1,800	$2,700	$8,948
PBC018		2015509	Benoist Farms Rd from SR 80 to Belvedere Rd	Widen 2L to 3L				$5,200												
PBC019			Boca Rio Rd from Palmetto Park Rd to Glades Rd	Widen from 2/3L to 5L										$800	$1,200	$2,000				
PBC124			Center St from Loxahatchee River Rd to Alt A1A	Widen 2L to 3L		$720	$1,080					$2,376								
PBC021			Central Blvd from Indiantown Rd to Roebuck Rd	Widen 2/3L to 5L with new bridge over C-18														$1,000	$1,500	$4,971
PBC022		2014503	Church St from Limestone Creek Rd to W of Central Blvd	Reconstruct 2L to include a roundabout				$2,000												
PBC023	2017516	2017516	Clint Moore Rd from W of Lyons Rd to E of Lyons Rd	Widen 4L to 6L				$2,500												
PBC024		"2018101 2018102"	Clint Moore Rd from Jog Rd to Military Trl	Intersection improvements			$1,700	$2,380												
PBC027	2023009903	2018506	Coconut Blvd from S of Temple Blvd to S of Northlake Blvd	Widen 2L to 5L			$1,500	$5,100												
PBC029	4330641	2012517	Congress Ave from Northlake Blvd to Alt A1A	New 3L			$4,000	$5,000												
PBC030			Coral Ridge Drive from Glades Rd to Burt Aaronson Park Dr	New 2L		$1,040	$1,560	$2,600												
PBC032	20239906	2019502	Donald Ross Rd from Prosperity Farms Rd to Ellison Wilson Rd	Widen 4/5L to 6L		$550		$1,900												
PBC033			Donald Ross Rd from Ellison Wilson Rd to US 1	Widen 4L to 6L		$400	$600	$1,000												
PBC035			Flavor Pict Rd from SR 7 to Lyons Rd	Widen 2L to 4L										$600	$900	$2,325				
PBC036			Flavor Pict Rd from Lyons Rd to Hagen Ranch Rd	New 4L, including bridge over Florida's Turnpike						$2,000	$3,000	$6,600								
PBC118		2016500	Florida Mango Rd from 10th Ave North to N of Edgewater Dr	Widen 2L to 3L				$3,300												
PBC119		2015520	Florida Mango Rd from Edgewater Dr to Barbados Rd	Widen 2L to 3L				$1,900												
PBC117	2017517	2017517	Florida Mango Rd from Barbados Rd to N of Myrica Rd	Widen 2L to 3L				$3,100												
PBC120		2014511	Florida Mango Rd from Myrica Rd to Summit Blvd	Widen 2L to 3L				$2,200												
PBC020	4378781	2012504	Forest Hill Blvd at Military Trl	Intersection improvements			$6,699	$5,082												
PBC122		2018501	Gun Club Rd from E of Jog Rd to W of Haverhill Rd	Widen 2L to 3L			$100	$2,340												
PBC040	2020009910	2018021	Happy Hallow Rd from Smith Sundy Rd to Lyons Blvd	New 2L				$650												

Costs expressed in Year of Expenditure (YOE) dollars
Values in thousands (1,000s)

Programming Tiers ->					FY 20-24 (TIP)				FY 25-30 (2030 Plan)				2031-2035 (2045 Plan)				2036-2045 (2045 Plan)			
LRTP#	FM	SIS	Location	Description	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST
PBC041			Haverhill Rd from Le Chalet Blvd to Hypoluxo Rd	Widen 2L to 3L and construct new 3L										$1,000	$1,500	$3,875				
PBC042			Haverhill Rd at Belvedere Rd	Intersection improvements						$380	$200	$2,772								
PBC043			Haverhill Rd from Okeechobee Blvd to Community Dr	Widen 5L to 6L														$1,800	$2,700	$8,948
PBC044			High Ridge Rd from Gateway Blvd to Miner Rd	Widen 2L to 5L										$800	$1,200	$3,100				
PBC045			Hypoluxo Rd from Lawrence Rd to Congress Ave	Intersection improvements						$430	$600	$2,904								
PBC047			Indiantown Rd from Island Way to Central Blvd	Intersection improvements						$550	$3,200	$4,092								
PBC049			Jog Rd from Linton Blvd to Atlantic Ave	Intersection improvements						$550	$300	$3,564								
PBC050			Jog Rd from Melaleuca Ln to Lake Worth Rd	Intersection improvements			$1,100	$3,300												
PBC051			Jog Rd from 10th Ave N to Summit Blvd	Intersection improvements						$770	$3,000	$6,600								
PBC053		2022009918	Kirk Rd from N of Forest Hill Blvd to Summit Blvd	Widen 2L to 3/5L			$100	$3,200												
PBC123	2023009901		Kirk Rd from Summit Blvd to Gun Club Rd	Widen 2L to 3/5L			$100	$3,950												
PBC055			Lantana Rd from High Ridge Rd to Andrew Redding Rd	Widen 5L to 6L										$1,000	$1,500	$3,875				
PBC056	2014506	2014506	Lawrence Rd from S of Ponza Place to Lantana Rd	Widen 2L to 3L				$2,200												
PBC057			Linton Blvd from Jog Rd to Sims Rd	Widen 4L to 6L						$600	$900	$1,980								
PBC058			Linton Blvd from Sims Rd to Military Trl	Widen 5L to 6L						$200	$300	$660								
PBC059			Linton Blvd from Congress Ave to Old Dixie Hwy	Intersection improvements						$570	$4,500	$2,112								
PBC060			Lyons Rd from SW 18th St to Glades Rd	Widen 4L to 6L						$1,600	$2,400	$5,280								
PBC061			Lyons Rd from Atlantic Ave to Flavor Pict Rd	Widen 2L to 4L		$500	$3,320					$12,606								
PBC062		20239905	Lyons Rd from Flavor Pict Rd to Boynton Beach Blvd	Widen 2L to 4L			$100	$8,000												
PBC063			Lyons Rd from N of Lake Worth Rd to Stribling Way	New 2L	$100													$400	$540	$2,108
PBC065			Military Trl from Linton Blvd to Lake Ida Rd	Intersection improvements						$400	$800	$3,300								
PBC066			Miner Rd from Congress Ave to High Ridge Rd	Widen 2L to 3L						$400	$600	$1,320								
PBC067			Miner Rd from Military Trl to Lawrence Rd	New 3L		$750	$500	$3,800												
PBC069			Northlake Blvd from Seminole Pratt Whitney Rd to 140th Ave N	Widen 4L to 6L										$1,600	$2,400	$6,200				
PBC070		2003503B	Northlake Blvd from Hall Blvd to Coconut Blvd	Widen 2L to 4L				$8,200												
PBC071			Northlake Blvd from 140th Ave N to Coconut Blvd	Widen 4L to 6L						$1,400	$2,100	$4,620								
PBC072			Northlake Blvd from Coconut Blvd to SR 7 (Const. by Avenir)	Widen 4L to 6L		$1,200	$1,800	$3,000												
PBC073			Northlake Blvd from SR 7 to Beeline Hwy	Widen 4L to 6L						$600	$900	$1,980								
PBC074			Northlake Blvd from I-95 to Congress Ave	Intersection improvements						$600	$900	$1,980								
PBC082	2014500	2014500	Old Dixie Hwy from Yamato Rd to Linton Blvd	Widen 2L to 3L			$7,000	$10,000												
PBC083			Old Dixie Hwy from Yamato Rd to Linton Blvd	Widen 3L to 5L														$10,000	$15,000	$49,713
PBC084			Old Dixie Hwy from Park Ave to Northlake Blvd	Widen 3L to 5L										$600	$900	$2,325				
PBC085	20239913		Orange Blvd from Seminole Pratt Whitney Rd to Coconut Blvd	Widen 2L to 3L	$200					$1,900	$2,850	$6,270								
PBC093			Park Ave West from Congress Ave to Old Dixie Hwy	New 3L		$600	$900	$1,500												
PBC094			Powerline Rd from Broward County Line to Palmetto Park Rd	Widen 4L to 6L										$1,300	$1,950	$5,038				
PBC100	2023009904	2018502	Royal Palm Beach Blvd from N of Persimmon Blvd to N of 60th St	Widen 2L to 5L			$950					$10,692								
PBC101	20239931	2014501	Royal Palm Beach from N of 60th St S of Orange Blvd	Widen 2L to 5L				$6,000												
PBC102	20239931	2018507	Royal Palm Beach from N of 60th St to Orange Blvd; Orange Blvd from Coconut Blvd to Royal Palm Beach Blvd; Coconut Blvd from Orange Blvd to S of Temple Blvd	Widen 2L to 5L		$1,000	$4,400													
PBC104			Seminole Pratt Whitney Rd from SR 80 to Okeechobee Blvd	Widen 4L to 6L										$1,000	$1,500					$4,971
PBC105			Seminole Pratt Whitney Rd from Okeechobee Blvd to Sycamore Dr E	Widen 4L to 6L										$1,260	$1,890					$6,264
PBC106			Seminole Pratt Whitney Rd from Sycamore Dr E to 60th St N	Widen 4L to 6L										$1,140	$1,710					$5,667

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Values in thousands (1,000s)

				Programming Tiers ->	FY 20-24 (TIP)				FY 25-30 (2030 Plan)				2031-2035 (2045 Plan)				2036-2045 (2045 Plan)			
LRTP#	FM	SIS	Location	Description	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST
PBC107			Seminole Pratt Whitney Rd from 60th St N to Orange Blvd	Widen 4L to 6L										$840	$1,260					$4,176
PBC108			Seminole Pratt Whitney Rd from Orange Blvd to Northlake Blvd	Widen 4L to 6L										$1,320	$1,980					$6,562
PBC109			Seminole Pratt Whitney Rd from Northlake Blvd to 100th Lane North	Widen 2L to 4L						$1,600	$2,400	$5,280								
PBC110			Seminole Pratt Whitney Rd from 100th Lane North to Avenir	New 4L						$1,600	$2,400	$5,280								
PBC111			Seminole Pratt Whitney Rd from Avenir to SR 710/ Beeline Hwy	New 4L										$6,000	$9,000	$23,250				
PBC112			Sims Rd from Linton Blvd to Atlantic Ave	New 3L						$800	$1,200	$2,640								
PBC113			Summit Blvd from E of Florida Mango to W of I-95	Widen 4L to 5L						$400	$600	$1,320								
PBC116			Yamato Rd from W of Lyons Rd to W of Turnpike	Widen 4L to 6L				$3,940												
				County Total	**$300**	**$14,119**	**$50,756**	**$156,147**		**$31,909**	**$61,957**	**$172,609**		**$26,119**	**$40,737**	**$95,633**		**$32,692**	**$52,283**	**$210,497**

Costs expressed in Year of Expenditure (YOE) dollars
Values in thousands (1,000s)

PD&E Project Development & Environmental - Determines the location and conceptual design of feasible build alternatives for improvements and their social, economic and environmental effects.

PE Preliminary Engineering

ROW Right-of-Way - Acquisition of necessary right-of-way (property), based on the construction plans

CST Construction - the project is awarded and is being built.

Scenario Planning for Funding Policies

The 2045 LRTP envisions a bold future transportation system for Palm Beach County, a system that provides a variety of attractive transportation options for users of all ages and abilities that are safe, efficient, convenient, and connected. However, current funding policies create a challenging path forward to realize this vision.

The TPA first seeks to leverage existing funding sources to the maximum extent feasible by working with federal, state, regional and local partners to program existing transportation dollars in alignment with the vision, goals and objectives of the LRTP. The TPA is also working collaboratively to evaluate additional revenue sources to support implementation of the desired enhanced transit corridors. The following section describes existing funding sources available and identifies potential actions to better utilize these revenues as well as examines potential additional revenue sources that could help realize the full transportation system vision.

Federal Funding

Federal transportation funding comes through the Highway and Transit Trust Funds which are primarily funded by the flat (non-indexed) federal tax of 18.4 cents a gallon on motor fuels. Because the tax is not indexed to inflation and fleet fuel efficiency is increasing, revenue for the trust funds is projected to remain flat into the future[13], while total federal spending on highways buys less now than at any time since the early 1990's[14].

Federal funds are divided into formula funding distributed to each state and nationwide competitive grant programs. The latter funding may allow for implementation of major capital projects like enhanced transit and freight infrastructure that are not currently in the LRTP's Cost Feasible Plan.

State Funding

State transportation funding comes through the State Transportation Trust Fund which is funded through a combination of fuel taxes, license and registration fees, tolls, and documentary stamp taxes on real estate transactions.

The LRTP focuses on ensuring that fuel taxes (District Dedicated Revenue) and managed lane tolls (I-95 Express) generated in Palm Beach County are invested, to the maximum extent feasible, in the implementation of the Cost Feasible Plan, major roadways, transit corridors and state road reconstruction projects.

Local Funding

Local transportation funding comes through constitutional and local option gas taxes, developer paid impact fees, and property taxes. Exploring the repurposing of existing local funding sources and/or establishing new funding sources would increase the available revenue for pedestrian and bicycle facilities and support the advancement of enhanced transit services. Repurposed and/or new local revenues can also serve as a required match for competitive grant opportunities.

[13] Congressional Budget Office, Highway Trust Funds Account, 2019 Baseline https://www.cbo.gov/system/files/2019-01/51300-2019-01-highwaytrustfund.pdf

[14] Congressional Budget Office, Approaches to Making Federal Highway Spending More Productive, 2016 https://www.cbo.gov/publication/50150

Table 24. Potential Actions for Revenue Sources

Lead Authority	Status Quo	Potential Action(s)	Outcome(s)
	Federal		
US Congress	Flat fed tax at 18.4 cents/gal	Index fuel tax	▪ Increases federal revenue ▪ Increases taxes for roadways users
US Congress	Flat fed tax at 18.4 cents/gal	Convert to mileage-based user fee	▪ Creates sustainable, equitable federal revenue
USDOT (FDOT prioritizes)	National Highway Performance Program (NHPP) funds roadway improvements on SIS	Expand usage to transit capital	▪ Increases funds for transit projects ▪ Decreases funds for major roadways
TPA, Palm Tran, SFRTA, County, and Cities	No applications for Discretionary Grants (BUILD, New Starts, Small Starts, CRISI, etc)	Support applications for grant funds	▪ Increases funds for transit, freight, and railway projects
	State		
FDOT	District Dedicated Revenue (DDR) - Florida Statute stipulates funds to be spent in county collected to maximum extent feasible	Track and ensure all funding collected in Palm Beach County spent in county per statute.	▪ Increases funds for TPA major projects and state road reconstructions in PBC ▪ Decreases funds for districtwide projects or projects outside PBC
FDOT	District 4 SIS projects have historically been funded with a higher share of district formula funds (roughly 50%)	Fund District 4 SIS projects with a lower share of district formula funds (roughly 30%) to match statewide practice	▪ Increases funds for TPA major projects and state road reconstructions in PBC ▪ Decreases funds for SIS projects in PBC
TPA and FDOT	State provides ~$6M/ yr block grant funding to Palm Tran to support transit operations	Fund enhanced transit operations with additional state DDR funds	▪ Increases funds for transit operations ▪ Decreases funds for TPA major projects and state road reconstructions in PBC
FDOT	I-95 managed toll lane revenues will repay construction cost, be used on projects outside PBC	Change state policy to remove requirement to repay construction cost, keep managed lane revenue in PBC	▪ Increases funds for TPA major projects and state road reconstructions in PBC ▪ Decreases funds for projects in other areas of the state

Lead Authority	Status Quo	Potential Action(s)	Outcome(s)
TPA, Palm Tran, SFRTA, County, and Cities	No applications for Discretionary Grants (Florida New Starts)	Support applications for grant funds	▪ Increases funds for transit projects
	Local		
Palm Beach County	Road impact fees spent on roadway capacity projects	Research mobility fee that may fund multimodal improvements	▪ Increases funds for ped, bike and transit projects ▪ Maintains funds for needed road projects ▪ Creates local funds for competitive transit grant matching
Palm Beach County	Transportation surtax	Voters approve transportation surtax towards multimodal investments	▪ Increases funds for ped, bike and transit projects ▪ Increases taxes paid in PBC ▪ Creates local funds for competitive transit grant matching ▪ Creates local funds for transit operating costs
Palm Beach County and Cities	Tax Increment Financing (TIF)	Establish districts along enhanced transit corridors	▪ Creates local funds for competitive transit grant matching ▪ Creates local funds for transit operating costs ▪ Decreases property taxes for general purpose government

Implementation

To implement the Cost Feasible Plan and advance its desired projects, the following actions have been identified.

The TA and LI programs have an annual competitive grant application process where projects are submitted to the TPA and prioritized for funding. The TPA programs approximately $20 million dollars annually for the LI program towards eligible projects, which include Complete Street improvements, transit capital, freight efficiency, and non-motorized infrastructure. The total annual funding for the TA program is approximately $3 million dollars. TA eligible projects include on and off road pedestrian and bicycle facilities.

State Roadway Modifications projects are a discretionary fund for creating safer and more efficient multi-modal projects along the SHS. The projects will be prioritized through the annual LOPP.

Pedestrian Network

The Tier 1 projects are missing sidewalks in areas with high active transportation demand and equity disparities on the federal-aid eligible roadway network. To fund construction of the Tier 1 projects, the following will be done.

1. Continue the LI and TA programs that award ~$23 million annually to multimodal projects using a scoring system that prioritizes funding for the Tier 1 pedestrian network.
2. Create a funding set-aside program for state roadway reconstruction and modifications to improve the non-motorized network along state roadways with a focus on the Tier 1 pedestrian network.
3. Seek to include construction of missing Tier 1 pedestrian facilities in all TPA, FDOT, and County roadway construction projects.
4. Propose construction of missing Tier 1 pedestrian facilities in upcoming FDOT and local resurfacing projects.
5. Research existing mobility plans and fees in Florida to determine feasibility of mobility fee for pedestrian facilities.

Bicycle Network

The Tier 1 priority network of bicycle facilities (a hierarchy of separated bike lanes and/or shared use pathways, then buffered bike lanes, then designated bike lanes) are where they would be most highly utilized on the federal-aid eligible roadway network. To fund construction of the network, the following will be done.

1. Continue the Local Initiatives and Transportation Alternatives programs that award ~$23 million annually to multimodal projects using a scoring system that prioritizes funding for the Tier 1 bicycle network.
2. Create a funding set-aside program for state roadway reconstruction and modifications to improve non-motorized network along state roadways with a focus on the Tier 1 bicycle network.
3. Seek to include construction of Tier 1 premium bicycle facilities in TPA, FDOT, and County roadway construction projects,where feasible.
4. Propose inclusion of premium bicycle facilities on the Tier 1 bicycle network for upcoming FDOT and local resurfacing projects, where feasible.
5. Identify projects to advance the SUN-Trail network in Palm Beach County.
6. Research existing mobility plans and fees in Florida to determine feasibility of mobility fee for bicycle facilities.
7. Advocate for more specific standards regarding separated bicycle facilities to increase the percentage of people willing to consider bicycling as a form of transportation.

Enhanced Transit Corridors

The TPA identified a desired connected network of enhanced transit services comprised of five (5) north/south corridors (US 1, FEC railway, Tri-Rail, Congress Avenue and Military Trail) and six (6) east/west corridors (Okeechobee Blvd, Forest Hill Blvd, Lake Worth Rd, Boynton Beach Blvd, Atlantic Ave and Glades Rd). Together, this system is known as the "561 Plan." This system is intended to operate in addition to and to complement the local bus and paratransit services. To advance implementation of this network, the following will be done.

1. **Collaborate with Key Partners**
   The TPA will work alongside Palm Tran, SFRTA, FDOT, the Miami-Dade TPA, Broward MPO, the Southeast Florida Transportation Council, and the private sector to identify roles and responsibilities including lead and participating agencies, local municipalities, and intended operators for each corridor.

2. **Conduct multimodal corridor studies to select locally preferred alternatives**
   The TPA and/or other lead agencies will conduct multimodal corridor studies similar to the *US-1 Multimodal Corridor Study, 2018*. The LRTP includes funding for these studies in the Cost Feasible Plan. The following lists the purpose of the studies.

   a. Evaluate transit service alternatives, including full project costs and benefits
   b. Select a locally preferred alternative for each corridor
   c. Determine a funding strategy to implement the locally preferred alternative
   d. Identify additional roadway modifications to support pedestrian, bicycle, vehicle, and freight mobility in each corridor
   e. Identify potential land use changes to support the preferred alternative

3. **Secure dedicated funding for public transportation**
   The TPA will leverage existing funding sources to the maximum extent feasible. Additionally, the TPA will work local partners to secure new local revenues to support enhanced transit service in Palm Beach County. Table 19 includes more details for Local Funding Eligibility.

4. **Implement transit-supportive growth management policies and plans**
   Based on the 2045 projections of approved developments and buildout of adopted future land use designations in local comprehensive plans, the density and intensity of development support the introduction of enhanced transit service identified in the 561 Plan. However, the TPA will work with local governments along the corridors to create transit-supportive property development regulations to maximize the potential mobility (ridership) and economic development (tax base) benefits of investment in the 561 Plan.

Roadway and Freight

The TPA's LRTP includes several new roadway construction and roadway widening projects to support the regional mobility needs of Palm Beach County through 2045. The SIS projects primarily seek to add vehicle capacity to the major corridors (I-95, Turnpike, SR 80, and SR 710), to add freight capacity to US 27, and to improve access to the corridors (I-95 and Turnpike interchanges). The TPA projects focus on the widening of a state roadway to relieve congestion (Atlantic Avenue) and the construction of new state roadways to improve connectivity (US 27 connector, SR 7 extension). Finally, the County roadway projects seek to focus investment in additional roadway capacity where land development patterns dictate an auto-centric approach to mobility. To advance implementation of this network, the following will be done.

1. Prioritize the state and federal funding needed for the TPA projects.
2. Coordinate with FDOT to provide the benefits and cost of each SIS project before including the project in the TPA's TIP.
3. Evaluate the projected demand for County roadway capacity projects when presenting the County's road program to the TPA Board as informational content in the TIP.

TPA Routine Implementation

The TPA is committed to ensuring that transportation projects in Palm Beach County advance the TPA's vision and are faithful to their original intent from conception to construction. As such, the TPA actively participates in the project development process as noted below.

Conception

- **Efficient Transportation Decision Making (ETDM)** for capacity projects - considers natural, physical, cultural, and community resource impacts. Informs the development of project scopes before advancing to detailed Project Development and Environment (PD&E) phase.
- Desk audit and site visit for smaller projects - identify environmental impacts, public impacts.

Clarification

- FDOT Multimodal Scoping Checklist (MMSC) - ensures all project elements are included in design, including pedestrian, bicycle, transit, aviation, rail, roadway capacity and freight projects.

Confirmation

- Electronic Review Comment (ERC) System - FDOT maintained system that ensures design implements project intent.

Construction

- Ensure project is completed per design.
- Update TPA maintained Geographic Information System (GIS) layers.

Monitoring

Annual Systems Report Card and Implementation

Performance measures are reported annually in June to continuously track the progress towards meeting the adopted LRTP goals and objectives. The Annual Systems Report Card summarizes the progress over the last year towards meeting the identified measures and is inclusive of multimodal measures as well as the CMP.

The Annual Systems Report Card also includes the status of TPA Priority Projects and implementation steps towards achieving their completion. TPA Priority Projects include projects prioritized for funding on the Major TPA Priority List, LI Program, and TA Program. The Report Card monitors the current phase of these projects and upcoming major milestones to allow partners, committees, and the public to remain informed and involved throughout the planning process.

List of Obligated Projects

Published annually in October after the close of the federal fiscal year, the List of Obligated Projects details the actual federal funding spent on programmed projects in the TIP. The list includes project name, identification number, location, description, and a difference between what was programmed and obligated by phase. The list serves as the official source of the final full federal cost of a project. Although not required to be published, the TPA continues to work with FDOT to obtain accurate state and local funding obligation amounts.

2045
Long Range Transportation Plan

PALM BEACH Transportation Planning Agency