My Ride

FY 2017 – FY 2026 TRANSIT DEVELOPMENT PLAN


Polk Transportation
Planning Organization


CitrusConnection


FDOT

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Chapter 1: Introduction

CHAPTER SUMMARY

INTENT

Introduce and explain the purpose and process of the 2017 Transit Development Plan, and provide a checklist of plan requirements

FINDINGS

The Plan is consistent with Florida Department of Transportation requirements, and will serve as a 10-year guiding document for transit investment

IMPLICATIONS

The Plan is designed to address major factors that influence effective and cost-efficient transit service provision, including:

- The stated goal of LAMTD and Polk TPO to continually improve transit service in Polk County;
- Shifting demographics, development patterns, and transportation investments in and around Polk County; and
- Fiscal constraints on Polk County transit service.

CHAPTER 1: INTRODUCTION

The 2017 Transit Development Plan (TDP) for Polk County serves as the strategic guide for public transportation in the county over the next 10 years. Development of the TDP includes documentation of study area conditions and demographic characteristics, an evaluation of existing transit services in Polk County, market research and public involvement efforts, the development of a situation appraisal and needs assessment, and the preparation of a 10-year TDP that provides guidance during the 10-year planning horizon of the plan.

This TDP effort is being performed and will be submitted to the Florida Department of Transportation (FDOT) by the Polk County Transportation Planning Organization (TPO) on behalf of the Lakeland Area Mass Transit District (LAMTD). LAMTD is the transit agency that administers and operates the newly consolidated Citrus Connection transit network. LAMTD is the recipient of Federal Transit Administration (FTA) grant funding and State of Florida Public Transit Block Grant (PTBG) Program funding.

This TDP is designed to address the following major factors:

- Focus on efficiency and effectiveness in the face of fiscal constraints after the failure of the 2014 sales tax referendum;
- A stated goal of LAMTD and Polk TPO to continually improve transit service in Polk County; and
- Shifting demographics, development patterns, and transportation investments in and around Polk County.

The TDP is organized into the following chapters:

Chapter 1: Introduction – Provides the background on the TDP, including purpose and requirements.
Chapter 2: Public Involvement – Describes the public outreach and input activities undertaken by LAMTD and Polk TPO, as well as the critical findings of this effort.
Chapter 3: Situation Appraisal – Documents and analyzes existing conditions affecting transit provision in Polk County.
Chapter 4: Mission and Goals – Present the vision, mission, goals, and objectives that will shape future transit provision in Polk County.
Chapter 5: Needs and Alternatives – Identifies and describes proposed alternatives for 10-year service provision.
Chapter 6: Implementation and Financial Plan – Provides a roadmap for implementation of the approved alternative course of action.

The 2017 Transit Development Plan provides a guide to future transit provision by evaluating key data and public input that helps point to a cost-feasible plan of action for the next 10 years.

State of Florida Public Transit Block Grant Program

The 2017 Polk TDP is consistent with the State of Florida Public Transit Block Grant (PTBG) Program, a program enacted by the Florida Legislature to provide a stable source of funding for public transit. The Block Grant Program requires public transit service providers to develop and adopt a 10-Year TDP. The TDP must be submitted to the Florida Department of Transportation (FDOT) District Office on or before September 1st of each year. Major Updates are due every five years with more substantial reporting

requirements. This 2017 TDP serves as a Major Update. In the interim years, the TDP takes the form of a progress report, which has less intense reporting requirements. The TDP is the guiding document for the Polk County Transportation Planning Organization (TPO) Transportation Improvement Program (TIP), as well as the FDOT Five-Year Work Program concerning public transportation in Polk County. The TDP must be consistent with the approved local government comprehensive plans and the TPO's Long Range Transportation Plan (Momentum 2040).

The 2017 Polk TDP meets the requirement for a Major TDP Update in accordance with Rule Chapter 14-73, Florida Administrative Code (F.A.C.) for the recipient of State PTBG funding in Polk County, the Lakeland Area Mass Transit District (LAMTD).

Identification of Submitting Entities

Agency: Polk TPO
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Authorizing Agency
Representative: Thomas Deardorff

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TDP Checklist

TABLE 1-1: TDP CHECKLIST

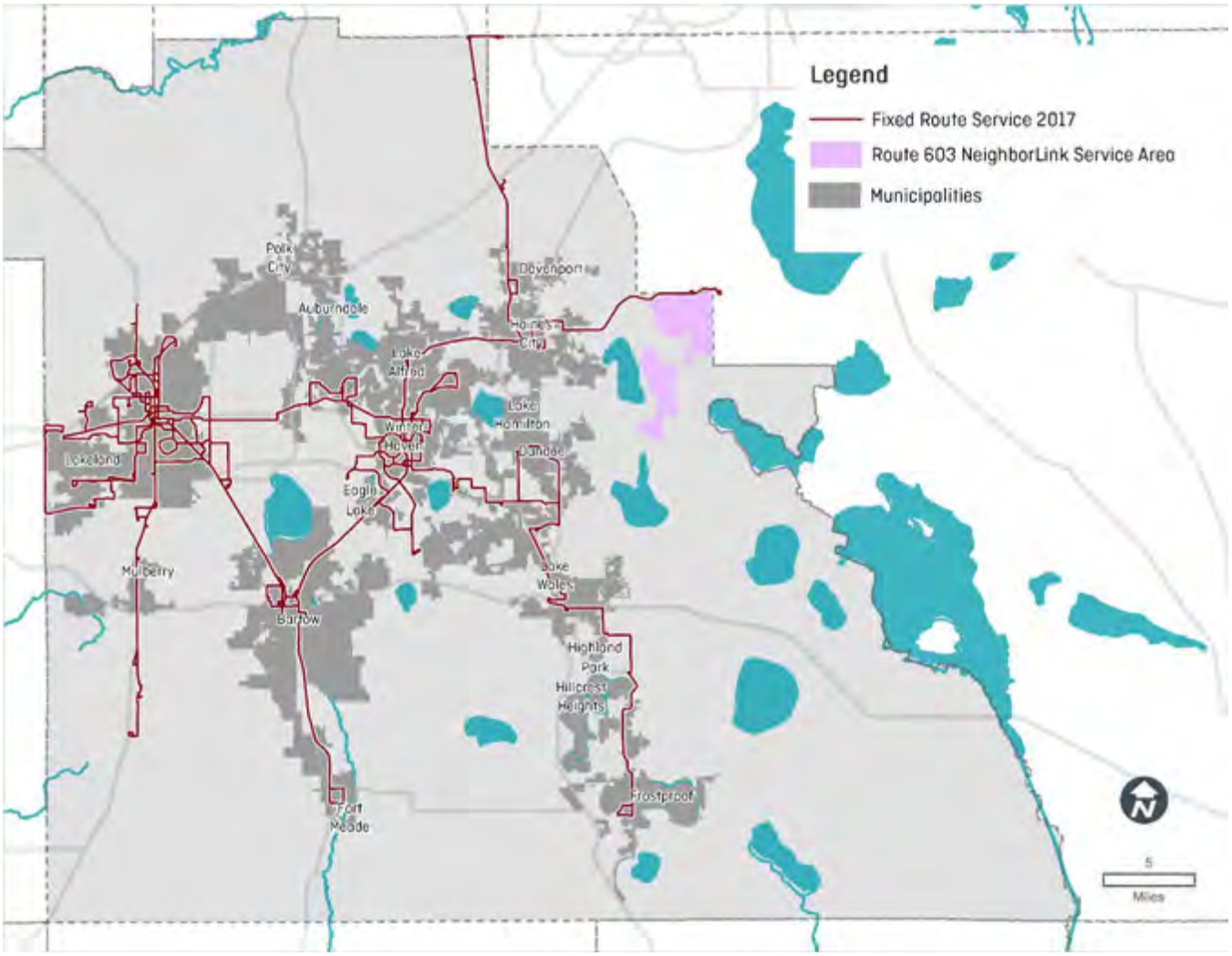
		Chapter
	Public Involvement Process	Chapter 2
✓	Public Involvement Plan (PIP) drafted	
✓	PIP approved by FDOT	
✓	Provide notification to FDOT	
✓	Provide notification to Regional Workforce Board	
✓	Provide notification to MPO	
	Situation Appraisal	Chapter 3
✓	Land Use	
✓	State and local transportation plans	
✓	Other government actions and policies	
✓	Socioeconomic trends	
✓	Organizational issues	
✓	Technology	
✓	10-year annual projections of transit ridership using approved model	
✓	Assessment of whether land uses and urban design patterns support/ hinder transit service provision	
✓	Calculate farebox recovery	
	Mission and Goals	Chapter 4
✓	Provider's goals	
✓	Provider's objectives	
	Alternative Courses of Action	Chapter 5
✓	Develop and evaluate alternative strategies and actions	
✓	Benefits and costs of each alternative	
✓	Financial alternatives examined	
	Implementation Program	Chapter 6
✓	10-year implementation program	
✓	Maps indicating areas to be served	
✓	Monitoring program to track performance measures	
✓	10-year financial plan listing operating and capital expenses	
✓	Capital acquisition or construction schedule	
✓	Anticipated revenues by sources	
	Relationship to Other Plans	Chapter 3
✓	Consistent with Florida Transportation Plan	
✓	Consistent with local government comprehensive plan	
✓	Consistent with MPO long-range transportation plan	
✓	Consistent with regional transportation goals and objectives	
	Submission	n/a
✓	Adopted by LAMTD Board August 9 2017	
✓	Adopted by PT Board August 10 2017	
✓	Submitted to FDOT by September 1 2017	

Service Area Description

Polk County is located at the geographic center of the State of Florida. It is bordered on the north by Lake and Sumter Counties, on the south by Hardee and Highland Counties, on the west by Hillsborough and Pasco Counties, and on the east by Osceola County. Covering approximately 2,011 square miles and hosting a population of 617,323, Polk ranks as Florida's 4th largest and 9th most populous county. Polk County is home to 17 incorporated municipalities, but remains primarily rural with just 18 percent of the county classified as urbanized. Among these incorporated municipalities, the largest city, Lakeland, has 100,000 residents and is located in the western edge of the county. The other city, Winter Haven (population 36,000), is located in the eastern part of the county. Bartow is located southeast of Lakeland and southwest of Winter Haven. Figure 1-1 presents a map of the county and its municipal areas.

To better understand the study area conditions and demographic characteristics of Polk County, a review of pertinent information was conducted as part of the 5-year TDP update process. The sources for this information include the U.S. Census Bureau American Community Survey (ACS), Bureau of Economic and Business Research (BEBR) at the University of Florida, FDOT, Polk County TPO, and LAMTD. The findings of this review are found in Chapter 3.

FIGURE 1-1: STUDY AREA



IMPORTANT CHANGES SINCE 2012 MYRIDE

The last TDP Major Update was completed in 2012. This TDP, branded as MyRide, laid out an ambitious expansion strategy based on the possibility of new revenue through a 2014 sales tax referendum. Upon the failure of that referendum, transit services in Polk County previously provided by three separate agencies - LAMTD, Winter Haven Area Transit (WHAT), and Polk County Transit System (PCTS) - were consolidated under LAMTD. Additionally, service contractions were undertaken due to funding limitations. These changes are reflected throughout this 2017 TDP, influencing data findings, goals and objectives, public input, alternatives considered, and the 10-year implementation plan. The aim of this TDP is to provide a fiscally constrained plan that enables LAMTD and Polk TPO to pursue innovative yet cost-effective ways to increase ridership and transit provision without relying on currently unidentified revenue sources.

Chapter 2: Public Involvement

CHAPTER SUMMARY

INTENT

To describe the ways in which LAMTD and Polk TPO received public input on transit service throughout Polk County, and report on what has been learned from that input.

FINDINGS

Public comments confirmed that while rider satisfaction is generally high, there is demand for more service, an extension of services to new areas of Polk County, and more improvements to make the service more accessible and attractive for all passengers. This includes both fixed route and demand response service.

IMPLICATIONS

Implementing the improvements proposed by the public under current financial constraints is a challenge. Strategies to increase the efficiency of service are critical, but alternative revenue sources or cost efficiencies may be needed to satisfy public preferences.

CHAPTER 2: PUBLIC INVOLVEMENT

Summary & Analysis of Findings

The update of the Polk Consolidated TDP branded "My Ride" continues the effort to represent the true needs of the citizens throughout Polk County and their vision of what good, quality, public transportation could be in Polk County.

The Polk TPO's adopted Public Participation Plan (PPP) will ensure that the public involvement activities surrounding the development of this 2017 Major Update will allow participation and public comment from every segment of the population.

The following activities have been included in the development of the TDP update:

1. Fixed-route "on-board" surveys
2. FDOT/CTD Customer satisfaction surveys
3. LAMTD surveys targeting millennials (college students)
4. Polk TPO's Adviser Network
5. TPO Community Forum (Volunteer transportation Services: Overcoming Barriers to Senior Mobility) 11/16/16 (*advertised on buses, terminal, website, City of Lakeland, Polk County, LCB, Ledger, Adviser Network, FB, Twitter)* – Public comments received
6. Social media – website, Facebook, Twitter, PGTV, Radio
7. Community Brochures (18)
8. Website – 30-day public comment period, per PPP
9. Public meeting for draft comments on July 7th, 2017
10. LRTP major update – Momentum 2040 (demographics addressing EJ areas) 2016
11. Input from Neighborhood Mobility Audits (underserved areas, public comments)

Community Public Meeting on Draft Plan

On July 17, 2017, a public meeting was advertised and held at the Winter Haven Public Library in order to collect public input on the TDP draft plan and the proposed transit improvements. Simultaneously, TPO placed the draft TDP plan on its website to solicit comments for a 30-day comment period.

The public was invited to fill out a questionnaire to prioritize what was most important to them with respect to transit improvements throughout Polk County. Twenty-five responses were recorded, all from citizens who lived within Polk County boundaries. The resounding response was that transit was "absolutely necessary" and that improving service on the existing routes was most important for better connectivity options for riders.

The public comments were summarized and offered in the following table for future consideration as funding opportunities are identified.

TABLE 2-1: PUBLIC COMMENT SUMMARY

Service Improvement	Public Comment	Follow-up Action	Staff Recommendation
Improve service hours on existing routes	Over 60% of survey respondents stated this was very important	Implement countywide as funding allows	Proceed as planned
Improve frequencies on existing routes	Over 50% of survey respondents stated this was very important	Implement countywide as funding allows	Proceed as planned
Enhance service on core bus routes	Over 50% of survey respondents stated this was very important	Implement countywide as funding allows Review current routes and ridership data to ensure high level of efficiencies in current transit services	Proceed as planned
Add new Polk City to Winter Haven route	Survey respondents stated this was very important, as Polk City is the only community in the County without transit connections	Implement as funding allows	Proceed as planned
SunRail Feeder Route from Winter Haven to Poinciana	Survey respondents stated that this was somewhat important for regional connections, but prioritized core service improvements	Implement as funding allows	Proceed as planned
General Comments	Add Sunday service	Implement as funding allows	Proceed as planned
	Longer service hours	Implement as funding allows	Proceed as planned
	New routes/services Davenport	Implement as funding allows	Proceed as planned
	Bus stop improvements US 98 & Autumn wood Grove	Implement as funding allows, provided ridership supports the capital investment	Proceed as planned

	Provide service focused on getting people to employment centers	Continue to explore opportunities for Universal Access Program	Proceed as planned
	Downtown Trolley	Continue to explore opportunities for downtown Lakeland circulation and identify funding for the same	Proceed as planned
	Free rides for veterans	Veterans UAP is currently in place and funded annually.	Proceed as planned
	Improve connectivity of people on bicycles getting to bus stops	The Polk TPO is conducting mobility studies throughout the county to identify proposed improvements for connectivity to transit.	Proceed as planned

Public comments received through the public involvement process confirmed the need for more service, an extension of services to new areas of Polk County, and more improvements to make the service more accessible and attractive for all passengers. This is consistent with the dialogue that is occurring in the community today. Many residents, groups, and elected representatives are calling for more transit options to address the mobility and quality of life issues facing Polk County today. The service improvements listed in this TDP aim to address these needs.

Potentially, the paratransit program has serious cost implications for future years' operating budgets because of the increasing demand for paratransit service, the enormous geographical size of Polk County, and the strict federal requirements associated with the service. Strategies to increase the efficiency of the service and assist passengers with using the fixed route and deviated fixed route service are critical to mitigating future costs.

The 2017-2026 TDP is a financially constrained plan. To implement the proposed improvements contained in the plan, alternative revenue sources will need to be identified and secured. This funding shortfall underscores the need to make strategic transportation investments while working to preserve and maximize the capacity of the existing transportation system.

Fixed-Route "On-Board" Surveys

Over a six-week period, Citrus Connection staff utilized interns to conduct "on-board" surveys of the fixed-route system. The data was collected at a 95% confidence interval based on 1.4 million rides. A total of 396 surveys were collected. A summary of the data is as follows:

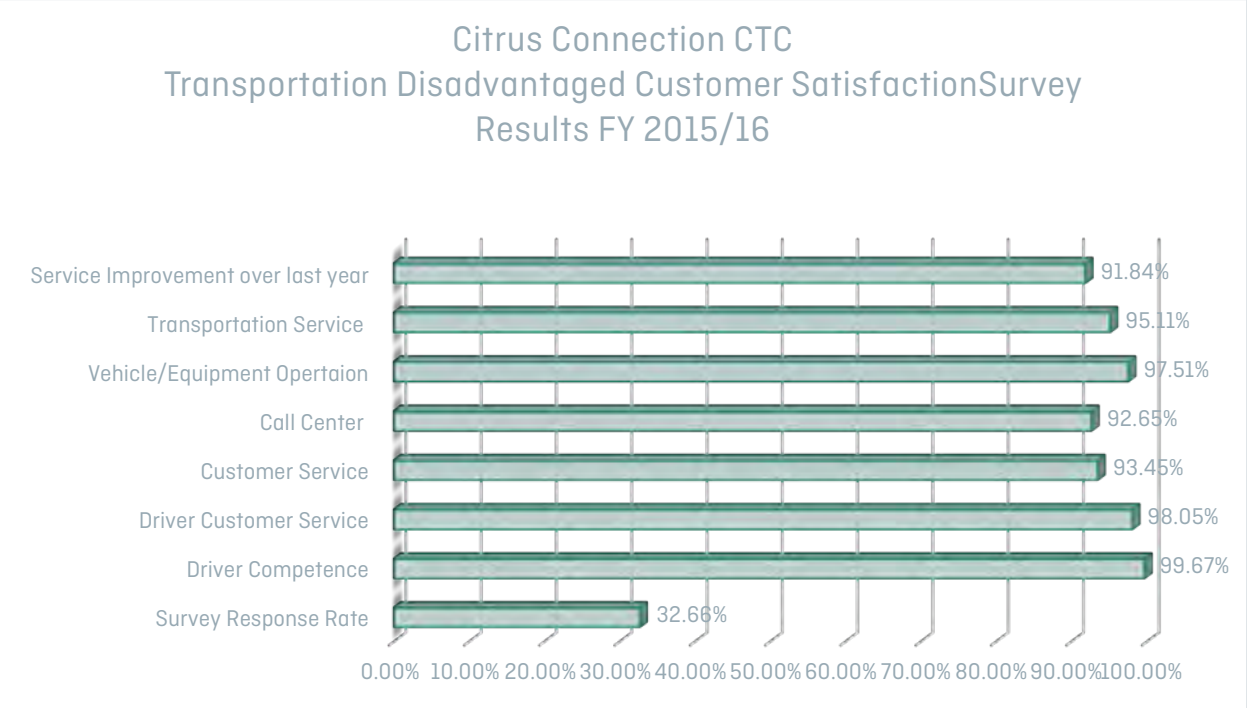
- The results indicated that 42.6% of the riders are below the age of 33, with 29% being over the age of 51.
- 52.1% of riders identify as African-American, 34.8% identify as White, 9.1% identify as Hispanic, and 4.1% identify as Other.
- 60% of riders ride Monday through Friday; 27% ride 6 days per week.
- 68% of riders stated the bus is their only means of transportation.
- 41.2% are medical-related trips; 46.9% employment; 11.9% other.
- 54.7% of customers are satisfied with service.

- Riders want increased frequency, longer hours, weekend service, more bus stops, and more bus shelters.

FDOT/CTD Customer Satisfaction Surveys

At the request of FDOT seeking information from Florida's Community Transportation Coordinators (CTC), the Citrus Connection paratransit staff conducted surveys to rate customer satisfaction. They received 161 total responses (32.66% response rate). Figure 2-1 displays the overall results, which show high satisfaction with major elements of Citrus Connection service.

FIGURE 2-1: CTC CUSTOMER SATISFACTION RESULTS



LAMTD Surveys

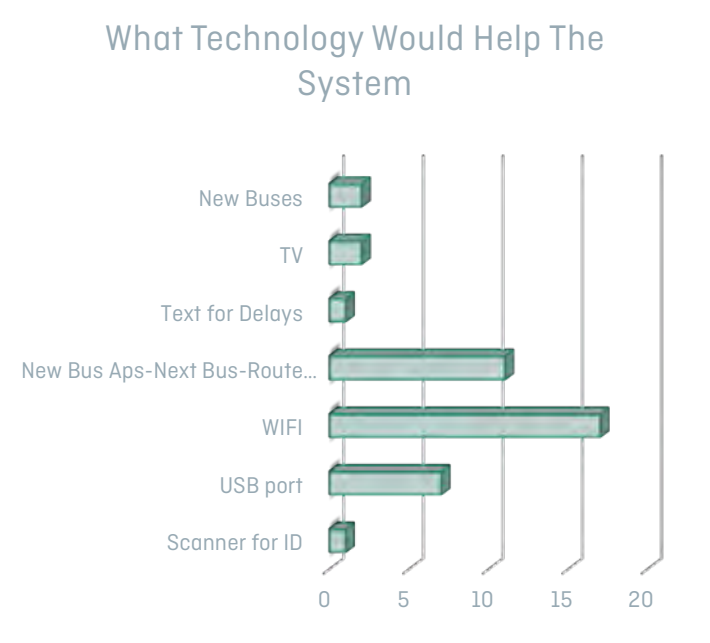
While the other surveys conducted in the development of this TDP focused on riders and customer satisfaction, staff felt that it was important to reach out specifically to the millennial population. Many studies have identified that millennials are more technology driven, and therefore, the effort was undertaken to try and identify future improvements related to technology and how it could improve ridership and the transit system overall.

Surveys were administered on two separate days, at the Polk State College campus in Lakeland, and on-board Route 60 and Route 58, both identified as having high proportions of student riders. The demographics of the surveyed students were between 19-25 years in age, and fairly split between male and female. Most rode the bus 4 to 5 days per week, with 60% of the respondents stating the bus was their only form of transportation. The majority used the bus for educational purposes, and were very satisfied with the current service. 77% of the respondents answered that they plan to use public transportation in the future.

When asked about proposed technology improvements in the transit system, respondents ranked WIFI as the most important, with new bus apps close behind, and USB ports third. When asked about proposed improvements to the transit system overall, respondents identified the following, by order of importance:

1. Frequency
2. More stops
3. New buses
4. Buses not waiting at connections
5. On time
6. More Hours
7. More Routes
8. More Days
9. Hard Seats

FIGURE 2-2: MILLENIAL SURVEY FINDINGS



The younger generation is technology driven and more likely to use public transportation to get where they need to go.

The Adviser Network

The TPO's Transportation Adviser Network was used as one of the TPO's primary public engagement tools for the TDP Major Update. The Adviser Network was created by the Polk TPO to serve as an alternative mechanism for citizen involvement in the transportation planning process. The Adviser Network provides a less formal, more extensive structure for soliciting public participation and comment. Members can participate in the planning process through eight different mediums including:

1. Attending community forums;
2. Live interactive webcasts;
3. Replays of webcasts and broadcasts via Polk Government Television (PGTV) and its website;

4. TPO Transportation School;
5. Viewing short informational videos;
6. TPO website;
7. TPO e-mail; and
8. Social media.

As a result, membership in the TPO's Adviser Network has increased to over 250 members through the development of Momentum 2040, the moniker of the region's recently completed Long Range Transportation Plan. The Adviser Network Community Forums have many non-Adviser Network members in attendance as well.

TPO Community Forum

On November 16, 2016, the Polk TPO held a Community Forum entitled "Volunteer Transportation Services: Overcoming Barriers to Senior Mobility." The purpose of this forum was to promote a discussion on overcoming barriers to senior mobility in Polk County, and to collect public comments related to transit improvements. The forum was advertised to the Adviser Network by the Polk TPO, as well as taped and shown on PGTV (Polk Television). The Adviser Network helps guide the TPO's development of priority project and future updates to the TDP and the Long-Range Transportation Plan.

Social Media

Reaching younger demographics is not always easy. They often have jobs, young families, or school which usually conflicts with government meeting times. The rise of social media networks is an opportunity to begin conversations and seek input regarding transportation issues in Polk County. Using social media networks to gather public input was performed mainly through Facebook and Twitter. Both sites were chosen based on their popularity and ease of use.

HOW THE TPO SOLICITED COMMENTS

To get a response, tweets and Facebook posts were prepared to evoke a feeling, urging the reader to give feedback, good or bad. The TPO team prepared thought-provoking images to garner interest in transportation issues. Open-ended questions on social media posts were used to allow the reader to provide a response on how transportation issues affect them personally.

THE USEFULNESS OF SOCIAL MEDIA

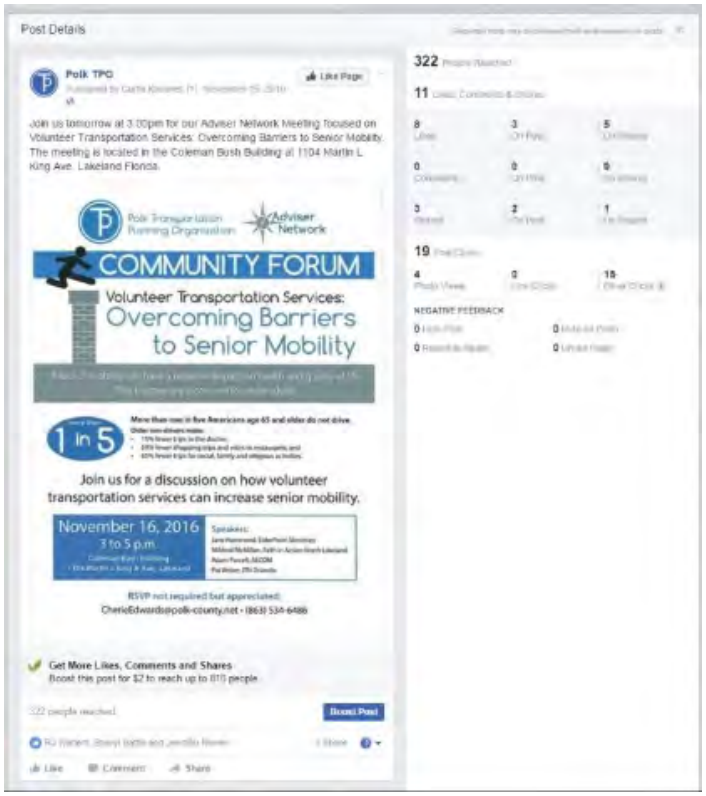
Social media not only helped reach individuals who didn't know about the Polk TPO, it allowed followers to share the TPO message and begin conversations with their own group of friends. When followers commented on posts, or shared messages, their actions augmented the TPO's reach to others who may have not known about our organization. Social media was also useful when local municipalities or groups shared Polk TPO social media posts. These posts generally gathered more comments from their local residents than the original Polk TPO posts.

NATURE OF COMMENTS

Polk TPO posts received helpful comments from members of our Adviser Network, and non-members. Comments on transit issues allowed for the opportunity to direct responders to the Polk TPO Community Remarks website where they could expand to more than 140 characters.

HOW DID SOCIAL MEDIA BRING AWARENESS TO TPO FORUMS?

Social media was used before, during, and after Adviser Network meetings. Weeks before the forums, posts were scheduled to advertise the meeting date, time, and topic. During the forums, staff would "live tweet" to solicit community support. After the forums, social media was also used to let others know what was discussed at the forums and how they could get involved for the next public event. The image to the right is an example of the tweets and the Facebook page for the Community Forum in November. Note that there were over 300 interactions on Facebook alone.



Polk Government TV

Polk Government Television (PGTV), which airs on Spectrum Channel 622, Frontier Channel 20, and Comcast Channel 5, was used in the public involvement effort. All Adviser Network forums are taped and broadcast on PGTV, and also available "on-demand" on the Polk County government website, www.polk-county.net.

Website/Internet

The Polk TPO website (www.polktpo.com) includes a section, "Community Remarks", that allows users on smartphones, tablets, laptops, PCs and other internet-connected devices to make comments on maps of Polk County communities. Users of the program can select a category under which their comments would fall (such as road improvement or transit-related issue) and the map would update for everyone to see. If used on a smartphone, the user has the option of simply using his or her GPS coordinates to properly map the location of an issue or idea, and the public could then respond to comments with a "thumbs up" or "thumbs down" as part of consensus building. The TPO regularly uses Community Remarks in its outreach to not only garner feedback and input from the public, but also to share the Draft TDP projects with the public using the Geographic Information System (GIS) layer functions of the maps.

Neighborhood Mobility Audits

Preceding the TDP major update, the Polk TPO conducted a series of Neighborhood Mobility Audits for communities in historically underserved areas. As part of Momentum 2040, the TPO's Long Range Transportation Plan, the TPO identified Environmental Justice (EJ) Planning Areas which include areas of low-income and minority populations in Polk County. Fifteen EJ areas were identified for Neighborhood Mobility Audits. These mobility audits evaluate resident access to jobs and essential services within these neighborhoods and in Polk County. Since low-income households are two to three times more likely to use public transportation or other alternative modes of transportation, the focus of the mobility audits is on non-motorized modes (bicycle and pedestrian) and transit.

After each mobility audit, TPO staff conducted public outreach efforts in the neighborhoods with a combination of in-person interviews and written questionnaires. TPO staff prepared a simple questionnaire to gauge community needs about car ownership, existing infrastructure, and recommendations for the neighborhood. To reach a larger number of survey respondents, two questionnaires were prepared. One was used at "drop-off" locations such as public housing units and local schools. The second questionnaire was used for person-to-person interviews within the neighborhood. Person-to-person interviews were conducted at locations where residents could purchase food items. TPO staff also conducted person-to-person interviews at the Women, Infants and Children (WIC) centers within the neighborhoods.

Responses from Mobility Audit Questionnaire

Three hundred and seventy-nine (379) surveys were completed in support of the mobility audits. All survey respondents had the choice of selecting which type of improvements would make it easier for them to reach the closest grocery store. Choices included "more sidewalks," "improved crosswalks," "more bicycle lanes," "more frequent transit," and "transit serving more places." The choice of "other" was also provided as an option with a space for the respondent to include a specific transportation improvement they would like to recommend for their neighborhood.

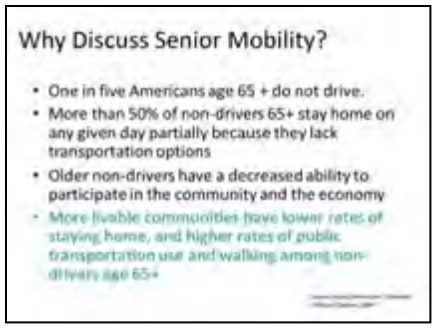
Community Needs Based on Mobility Audits

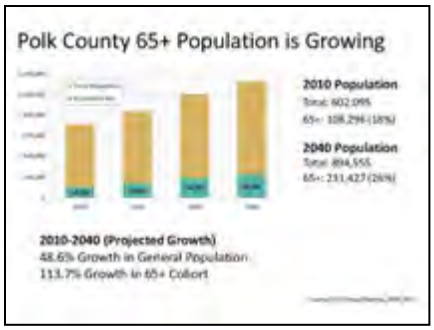
Once the questionnaires were completed, responses were compiled to assess neighborhood priority needs from the residents' point of view. TPO staff identified key projects by matching recommendations included in each Neighborhood Mobility Audit Report against recommendations received from the questionnaires. The top three projects were presented to the local jurisdictions to offer them the opportunity to rank their own priorities. Once the local jurisdictions chose their top three projects, those projects were added to Momentum 2040. The transit recommendations from the mobility audits will be included in the TDP Major Update needs plan.

Senior Mobility Audits

As mentioned above, the Polk TPO previously conducted neighborhood mobility audits that resulted in improvements specific to each EJ neighborhood. Using this successful example of a focused effort, the TPO directed a senior mobility audit to be conducted as part of the TDP Major Update to target services directly impacting Polk's senior population.

A presentation discusing the importance of addressing senior mobility was conducted at the Adviser Network event in November 2016. The presentation pointed out research shows that livable communities for Americans 65+ have higher rates of public transportation use; Polk's 65+ population is growing and aging citizens need more mobility options; and perhaps most importantly, transit is an effective tool for improving senior mobility.





To demonstrate safety concerns when utilizing transit, the TPO conducted a field review of recently constructed improvements. The photo shown here is a median cut that FDOT District 1 designed to accommodate transit access for seniors. The Polk TPO staff are crossing the busy street to demonstrate the design of the median cut for use of walkers or wheelchairs to safely use the refuge island. This location is on South Florida Avenue in front of the Lakeland Presbyterian Apartments. A simple, but extremely effective transportation design for seniors.

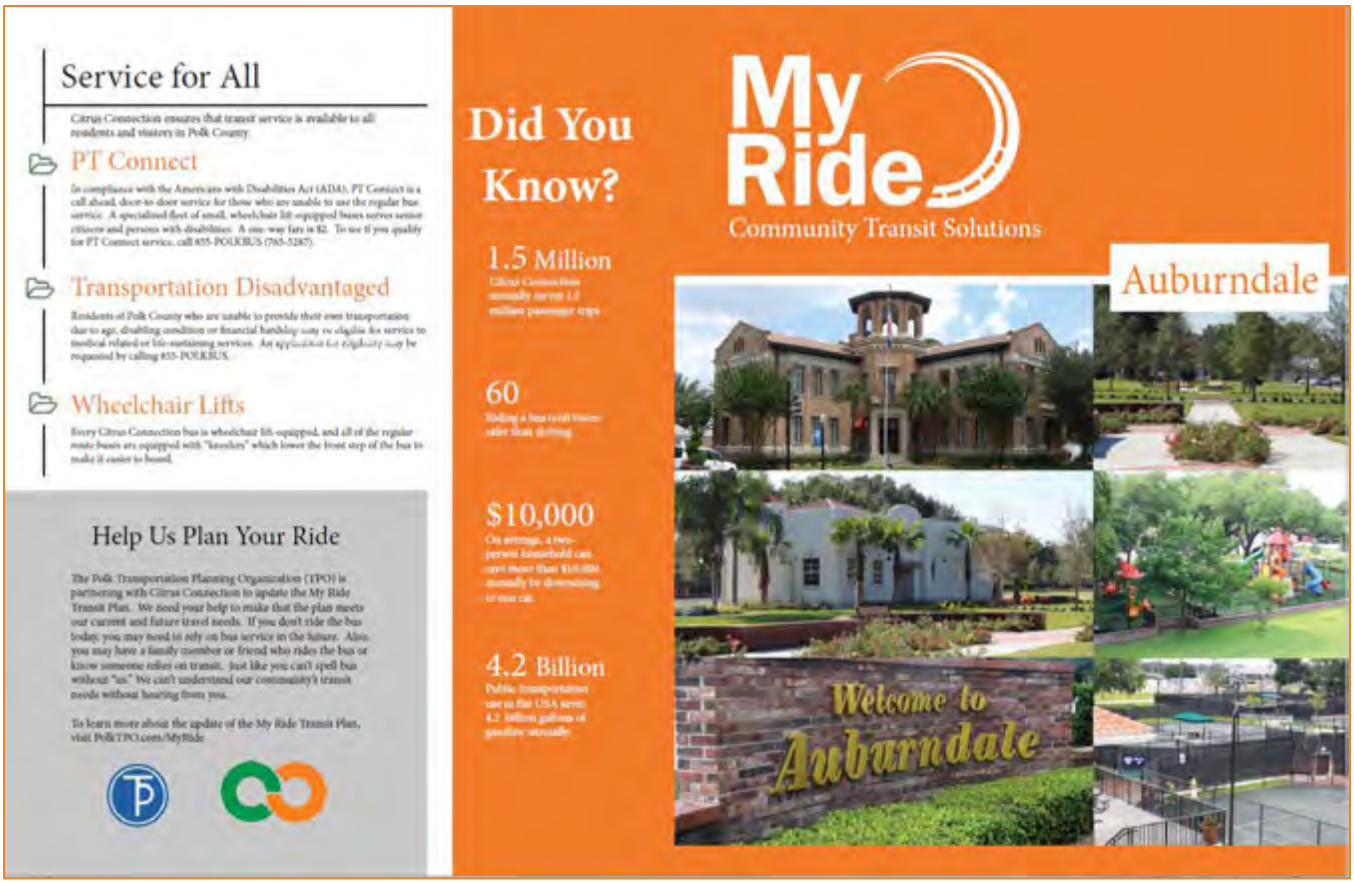
To enhance the demonstration of this median design, the Polk TPO staff initiated a new 3-Dimensional technology to enhance outreach at the Senior Mobility Forum. The median cut example was photographed using a 3-D camera to show all angles of safety issues when crossing this busy street. The 3-D goggles included multiple angles at this location, and were demonstrated at the Senior Mobility Forum.

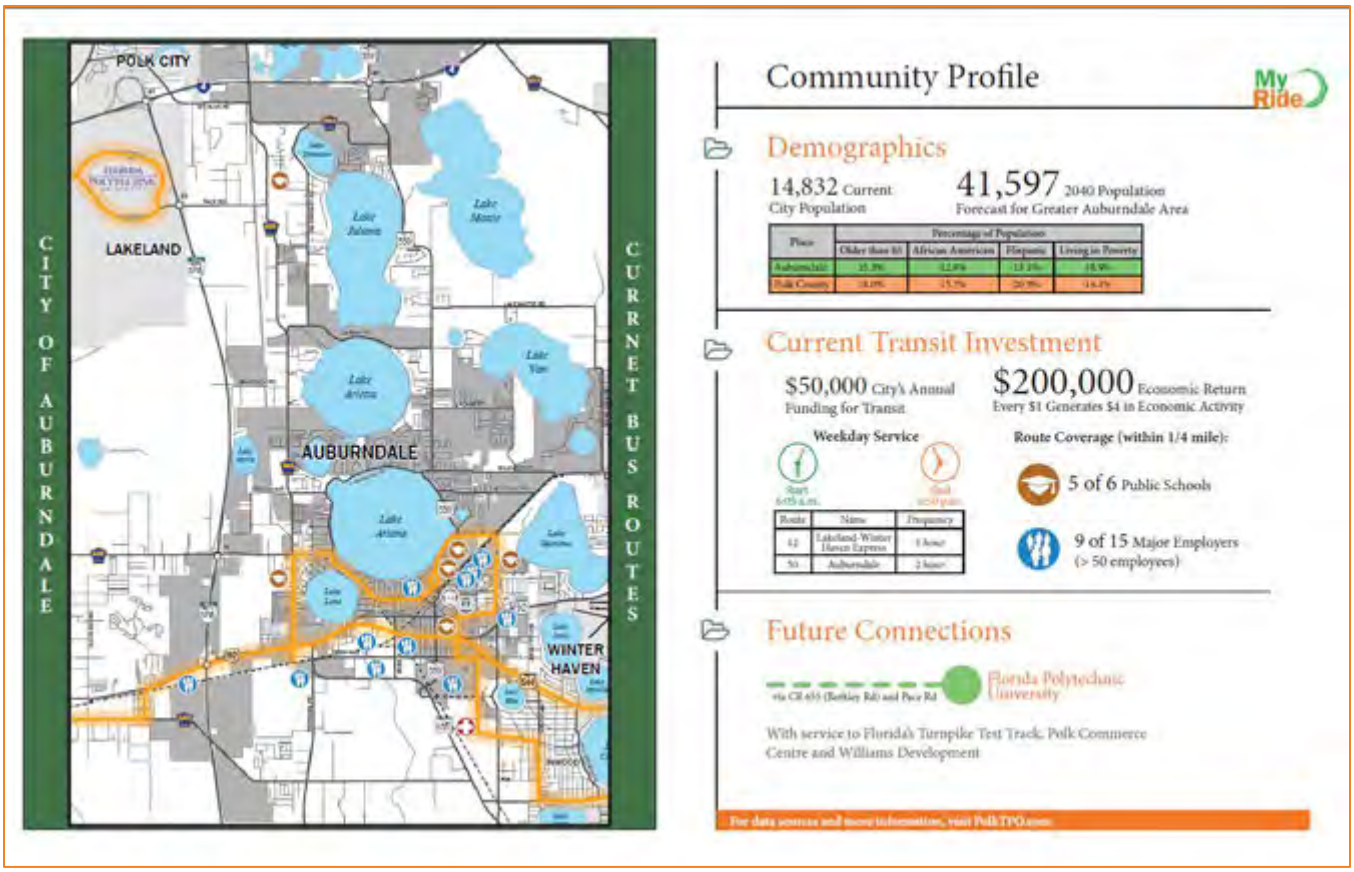
The Senior Moblity Audit methodology was presented to the Polk Technical Advisory Committee (TAC) in May 2017 including potential locations for conducting the mobility audit. The Polk TPO and the TAC members have chosen to conduct the audit within the City of Lakeland during summer 2017. The final results of the audit will be included in the Polk TDP documentation. The results of the audit, if not complete at time of TDP adoption, will not impact the overall purpose of developing and adopting the 2017 TDP Update, but will provide a functional guideline for future transit improvement discussions relating to our senior population. The Polk TPO staff will incorporate the results of the mobility audit into the 2017 TDP and other related planing documents to ensure consistency for future planning efforts. It is the intent of the Polk TPO staff to continue promoting coordiantion among the Polk TPO; LAMTD staff and the Polk County Board of County Commissioners to address senior mobility needs. The results of this audit and and future senior mobility audits will be used to prioritize and fund transit/transportation infrastructure.

Community Brochures

Eighteen Community Transit Solutions brochures were created to identify existing conditions and proposed transit solutions that are specific to each community throughout Polk County. These can be used by the local jurisdictions to educate their citizens about public transportation services in their respective communities. The following is just one example of the brochures circulated throughout Polk County.

FIGURE 2-3: MYRIDE COMMUNITY TRANSIT SOLUTIONS BROCHURE





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Chapter 3: Situation Appraisal

CHAPTER SUMMARY

INTENT

Evaluate existing transportation, land use, and demographic plans, policies, and conditions in Polk County to determine their impact on transit provision now and 10 years in the future.

FINDINGS

Existing planning documents are strongly transit supportive, and some socioeconomic and transportation trends point to increased transit use in the future. However, there are still some hurdles to overcome, particularly the county's large size, generally low density, and the costs associated with serving all county needs. Overall, LAMTD is operating an efficient service that faces hurdles that can hinder growth in ridership.

IMPLICATIONS

LAMTD will need to consider more innovative ways of increasing ridership and improving service quality. Innovations and trends in technology, cost-efficiency, and ridership attraction have been reviewed in detail and can be part of an overall action plan for the next 10 years.

CHAPTER 3: SITUATION APPRAISAL

Summary and Analysis of Findings

The situation appraisal summarizes existing conditions and demographic characteristics within the transit service area. This section establishes the context for the delivery of transit services in Polk County and provides background information needed to help understand Polk County's transit service operating environment. Included in the appraisal is an assessment of local and state land use and transportation plans, and their implication of future transit services; an analysis of socioeconomic trends; a review of existing land use and transportation conditions, and existing transit service; 10-year annual ridership estimates; and an assessment of the technological landscape and other emerging trends and innovations.

There are several key findings of the situation appraisal. First, the existing land use and transportation plans for Polk County and the jurisdictions within its boundary consistently show strong support for public transit. Second, review of socioeconomic trends reveals that LAMTD is serving a wide range of demographic groups throughout the county, but much of the service area has population and employment intensities that are often too low to support transit in other parts of the county. Third, LAMTD service is clearly cost-efficient (i.e. provides a high level of service per dollar spent) relative to peer agencies across the country, but is still less effective (i.e. has lower ridership per dollar spent) than those peer agencies, a finding consistent with the land use density issues listed earlier. Finally, a 10-year ridership forecast of existing service expects 5-10% growth in ridership in the next decade, mostly as the result of population and employment increases in Polk County. These findings set the stage for the evaluation of alternatives for future service.

Existing Land Use and Transportation Plans

BACKGROUND

Existing land use and transportation plans at the state and local level provide guidance on the future vision and priorities for transit services. The TDP is designed to be consistent with land use and transportation plans, goals, and objectives at all jurisdictional levels to meet FDOT requirements. Table 3-1 below summarizes the 15 land-use and transportation plans reviewed as part of the TDP process, providing highlights of each plan's relevance to this report and the key takeaways for transit planning. More detail on each plan is provided after the summary table. Overall, the reviewed plans show a strong foundation for multimodal transit investment during the 10-year planning horizon. Plans at various jurisdictional levels complement one another; The Florida Transportation Plan provides a framework for integrated, multimodal investments, while the county and city comprehensive plans identify sites and corridors for targeted multimodal intervention. A series of feasibility studies and situation audits help further prioritize specific roadways and bus routes for attention. These findings are used to guide the alternatives analysis so that the 2017 TDP is both consistent with existing plans, and benefits from extensive, transit-related planning efforts underway.

A review of 15 plans showed strong support for transit through both transportation and land use policies. This support is critical for efficient and effective transit provision, and lays the groundwork for collaborative transit advancements in the future.

PLAN DESCRIPTIONS

TABLE 3-1: PLAN SUMMARY TABLE

SCALE	PLAN	RELATIONSHIP TO POLK TPO	KEY TAKEAWAY FOR FUTURE TRANSIT PLANNING
State/ Region	Florida Transportation Plan	Provides state-wide framework within which the TPO functions.	Ensure that local investments support an integrated, multimodal network that focuses on regional and rural-urban connectivity.
County	2060 Transportation Vision Plan	The TPO managed this visioning process to identify multimodal transportation corridors and identify transit supportive policies for the 2060 planning horizon.	Identifies key trip generators and attractors that may serve as destinations for future transit service in the county. Activity centers in Polk City remain outside LAMTD service area.
	Polk 2030 Comprehensive Plan	Reinforces the vision laid out in the 2060 Vision Plan by providing transportation and land use policies that support multimodalism, increased density, and mixed used development.	Identifies Transit Corridors, Center Overlays, and Transit Supportive Development Areas (TSDA) to guide future transportation and land use decisions. Helps identify LAMTD routes for improvement/ expansion in the TDP.
	SunRail Extension Evaluation	Guides Polk TPO considerations around a SunRail extension into Polk County by highlighting the technical, financial and institutional barriers to the project.	Overcoming the barriers to expansion requires incremental investment and continued research and coalition building. The TDP can explore some initial supportive transit investments, particularly fixed route service to the Poinciana SunRail station opening in 2018.
	Premium Bus Service Feasibility Study	Guides location and investment decisions for premium bus service in the county.	Findings support premium bus service expansion along the US-98 corridor in Downtown Lakeland.
	US-98 Corridor Transit Design Report	Guides phasing and design decisions for premium bus service along US-98.	Initial investment should focus on signal priority and access management and later move to station construction and corridor redevelopment.
	Momentum 2040	The Long-Range Transportation Plan (LRTP) provides guidance to the TPO regarding funded and non-funded priorities.	Focus investments on funded, existing fixed-route service by improving efficiency and effectiveness measures. Work towards providing service to all 17 municipalities, and improving transit access across the county.
City	Lakeland Comprehensive Plan 2020	Provides transportation – land use policies for Lakeland that support multimodalism. Goals, objectives and policies can therefore enable the TPO to function in the most effective and efficient way possible.	Identifies Transit Oriented Corridors (TOCs) – geographic focus areas for the TDP and future transportation investment.
	Winter Haven Comprehensive Plan	Provides transportation – land use policies for Winter Haven that	Level of Service (LOS) designations determined by extent to which they

SCALE	PLAN	RELATIONSHIP TO POLK TPO	KEY TAKEAWAY FOR FUTURE TRANSIT PLANNING
		support multimodalism. Goals, objectives and policies can therefore enable the TPO to function in the most effective and efficient way possible.	support multimodalism. Identifies key corridors for transit investment.
	Bartow Community Redevelopment Plan	Collaboration with the Polk TPO to adopt minimum LOS standards for roads within Bartow city limits.	Multimodal transit investments required to meet new LOS standards, particularly within community redevelopment district.
Neighb/ Area	Central Lakeland Transit Signal Priority (TSP) Feasibility Study	Provides financial and technical justification for TSP/ bus queue jump lanes on 3 state highways in Lakeland.	Identifies 17 signalized intersections that should be the focus of TSP implementation.
	East Lake Parker/ West North Combee Area Wide Plan	Addresses the challenges of planning for Combee Road and US-92 due to heavy intermodal traffic.	Provides conceptual plans for Complete Streets along US-92 including new transit stops and shelters.
	Neighborhood Mobility Audits	Mobility audits for underserved neighborhoods, initiated and executed by the Polk TPO.	Provides a list of transportation improvements for each of 14 neighborhoods that will increase mobility for traditionally underserved communities.
	Lakeland Area Alternatives Analysis	An analysis of the extent to which the multimodal transportation network provides accessibility to work and other amenities, within a study area in northern Lakeland.	Identifies corridors within the study area that need accessibility improvements. Lakeland Hills Boulevard (Route 3) identified as most favorable corridor for multimodal development.
	US 17-92 Corridor Planning Study	Collaboration with FDOT and local agencies to determine how best to meet the needs of current and future users within the US 17-92 corridor.	*Study ongoing in 2017*

STATE PLANS

FLORIDA TRANSPORTATION PLAN

The aim of the Florida Transportation Plan is to increase the share of person trips using public transportation and other alternatives to single occupancy motor vehicles. The plan emphasizes: (i) providing additional options for shorter distance trips, such as circulators and on-demand transit; (ii) improving the efficiency and convenience of connections among local transit systems, between local and regional transit systems, and between transit and other modes; and (iii) improving public transportation services within rural areas and between rural and urban areas. The 2017 TDP supports the state vision for transportation by focusing on linking the local bus system to the regional rail system, via fixed route service to the Poinciana SunRail station.

COUNTY PLANS

POLK TPO 2060 TRANSPORTATION VISION PLAN

The Polk County TPO managed a study to prepare a Transportation Vision Plan for the 2060 planning horizon. The purpose of the Transportation Vision Plan was to prepare and refine land use forecasts to identify multimodal transportation corridors and to identify strategies, policies, and specific land use changes necessary to support the Vision Plan. Chapter 4 of the Vision Plan identifies key trip generators and attractors within Polk County based on the 2060 Centers forecast. These activity centers serve as potential destinations for future transit service expansion in Polk County. Service consolidation and expansion since the 2012 TDP has addressed many of the gaps identified by the Vision Plan. Fixed route service now covers commercial and professional centers in northeast Polk County, and in western Lakeland (including the Amazon offices). The 2060 Centers forecast also identifies professional and business commerce centers in Polk City, with particular reference to the USF Polytechnic Campus in southwest Polk City. Polk City remains the only municipality within the county that is not serviced by LAMTD.

POLK COUNTY COMPREHENSIVE PLAN

The Polk County Comprehensive Plan provides goals for future growth, broken down into objectives and policies. The Transit Supportive Development Area (TSDA) Objective states that Polk County "shall provide areas for the development of urban intensity growth through: (i) the designation and mapping of TSDAs, and (ii) the establishment of policies to govern the development of land within the TSDA". The supporting policy mechanism requires that the TSDAs: (i) promote and support higher density, mixed use development, (ii) will have sufficient urban service support over the next 10 years, and (iii) will contribute to coordinated land use and transportation efforts outlined by the 2060 Vision Plan, to increase mobility and travel options.

In order to identify TSDAs, the county plans to designate Transit Corridors and Center Overlays, and then apply transit-supportive incentives, design standards, and mobility strategies to the corridors and overlays. This approach is designed to promote and support community investment in transit. The Polk County Land Development Code provides regulations, particularly land use and dimensional requirements, that support the long-term goals of the Comprehensive Plan. The plan also calls for increased efforts towards a multimodal transportation network. By 2020, Polk County is required to provide Category I or II Fixed-Route Transit Service to all areas identified as having a "High Transit Potential" within the TSDA. The 2030 TEMS Map is a useful tool that helps guide the Transit Development Plan. The TDP uses the Map as a foundation for future transit upgrades and expansions, supplemented with market demand assessment. The comprehensive plan suggest that new bus routes could connect Lakeland, Polk City, and Auburndale, as well as Haines City, Lake Hamilton, and Poinciana. Transit improvement should be prioritized along the intercity corridors, as well as inter-municipality corridors that link Fort Meade, Mulberry, and Frostproof to the urban hubs in downtown Lakeland, Bartow, and Winter Haven.

SUNRAIL EXTENTION EVALUATION

This technical memorandum evaluates the possible extension of SunRail into Polk County, in support of the 2040 Long Range Transportation Plan Update. The memorandum covers potential staging alternatives, site considerations, feeder bus services, and institutional challenges. The memo also provides estimates of (i) 2040 ridership, and (ii) capital and operating costs.

The report identifies four theoretically viable locations in Haines City (two sites), and in Auburndale and Lakeland (1 site each), but finds that ridership is likely to be substantially lower than other SunRail stations. This, coupled with the anticipated costs of the extension, make federal funding for the project unlikely. The report also identifies several institutional challenges, including the complexity of interlocal agreements, that will make the Polk County expansion of SunRail challenging.

The report provides a list of action steps that might address these barriers to success. Key recommendations include: (i) plan for bus connections to Poinciana SunRail station; (ii) monitor existing ridership from Polk residents and update forecasts; (iii) undertake a PD&E study of alternatives; (iv) initiate discussions with key local and state institutions including CFCRC, FDOT, and CSX; (v) apply for federal New Starts funds; (vi) make station area improvements; and (vii) make improvements to the CSX A-Line. The authors suggest that the barriers to success are not insurmountable, but require concerted effort by Polk County residents, businesses, and policymakers if the SunRail extension is to be realized. The 2017 TDP takes the first step in this process by outlining alternatives scenarios in which fixed route bus connections are extended to the Poinciana SunRail station in Osceola County.

PREMIUM BUS SERVICE FEASABILITY STUDY

This feasibility study conducted as part of the 2012 MyRide TDP focuses on three corridors between Bartow, Lakeland and Winter Haven to assess whether enhanced premium bus services are a viable improvement for the area. Based on existing conditions, future conditions, and travel flow analyses, the report finds that existing express services operating in the three corridors should be retained, and only part of the US 98 corridor, segment US 98-2 in Downtown Lakeland, is considered supportive of premium bus service in 2025. The authors also note that Downtown Winter Haven has high potential to become supportive of premium bus service in the future; in particular, as land use and employment activity changes in the county, this segment should be closely monitored for suitability. Improvements to existing fixed routes along these corridors are based on the recommendations made in the feasibility study, as well as any service improvements that have been implemented since 2012.

US-98 CORRIDOR PREMIUM TRANSIT DESIGN FEATURES

This report emerged as result of the 2012 MyRide TDP, which called for the implementation of premium bus services along a portion of the US 98 corridor in the City of Lakeland between the Lakeland Square Mall to South Lake Parker Road and express bus service south of Lake Parker Road to Bartow. The Transit Design report provides an overview of ideal BRT conditions for different segments along the corridor, based on existing and desired demographic, land use, and transportation infrastructure conditions. It also proposes phased implementation of BRT, beginning with signal priority implementation and access management, and finally moving towards major corridor reconstruction and station development to facilitate exclusive running ways. Phasing, like design, differs for each segment of the corridor. The 2017 TDP explores signal prioritization as a strategic technological intervention that can meet the phasing requirements recommended in the Premium Transit Feasibility Study and Design Analysis. The authors argue that because it is much cheaper to build BRT lines within an existing roadway profile, current infrastructure developments should be built to accommodate future transit implementation within the envelope of the roadway.

MOMENTUM 2040

Momentum 2040 is Polk County's Long-Range Transportation Plan (LRTP) that outlines performance targets for Polk transportation. Adopted in 2015, the plan identified that only 14 of the 17 municipalities in Polk have transit service and the average Transit Connectivity Index (TCI) is 137. Momentum 2040 presents a target of providing fixed-route transit to all 17 Polk municipalities and raising the average TCI

score to 175. Citrus Connection service is currently available in 16 out of the 17 municipalities. In order to reach this target, the plan outlines existing and future transit needs, and identifies those for which funding is still needed. Funding currently exists to maintain the existing fixed route services. Funding expansion is needed to increase frequency, hours, and days of service; add new fixed routes, flex, express, and 'call and ride' services. In order to meet the FDOT requirements, the Polk TDP is consistent with these targets and strategies outlined in Momentum 2040. In particular, the TDP emphasizes investments in existing fixed routes, for which funding already exists, and focusing on efficiency and effectiveness measures. The TDP also provides limited alternatives analysis that address the Momentum 2040 targets, including expansion to all 17 municipalities.

CITY PLANS

LAKELAND COMPREHENSIVE PLAN

The Lakeland Comprehensive Plan complements the Polk Comprehensive Plan in pushing for infrastructure investments and development patterns that support the growth of multimodalism. The plan states there will be increased focus on access to sidewalks, bike lanes & parking, transit shelters and stops within the Transit Oriented Corridors (TOCs). Proposals that promote short distance trips, high levels of internal capture, and non-automotive travel will be favored over those that encourage long trips and have low capacity for alternate modes of transportation.

A number of multimodal corridors have been identified in the Lakeland area. These corridors will help guide long range public transportation investment and land use decisions in the county. They also help to guide the 2017 TDP analysis for improved fixed service:

- US 98/SR 35/SR 60: Bartow to Lakeland
- SR 37 Corridor: Mulberry to Lakeland
- SR 570/Polk Parkway Corridor
- Interstate 4: Hillsborough County Line to Osceola County
- US 92/CSX Rail Corridor

CENTRAL LAKELAND TRANSIT SIGNAL PRIORITY (TSP) FEASABILITY STUDY

The purpose of the Central Lakeland Transit Signal Feasibility Study project is to determine the need and effectiveness of a Transit Signal Priority (TSP) system and/or bus queue jump lanes while evaluating the ability to implement either or both on three state highway corridors in the City of Lakeland. The corridors analyzed include:

- SR 37 (South Florida Avenue) from the vicinity of the Pipkin Road/ Lake Miriam Drive intersection to Main Street in Downtown Lakeland
- SR 35, 700, US 98 (North Florida Avenue) from Main Street to the vicinity of the Lakeland Square Mall
- SR 33 (Lakeland Hills Boulevard) from Memorial Boulevard to the vicinity of the Socrum Loop Road

In general, it was shown that the transit travel times could be improved along all three state highway corridors if the overall signalization system was optimized through retiming and TSP implemented. There are 41 signalized intersections within the study limits. Thirty-four intersections were analyzed closely as candidates for TSP based upon schedule adherence and noted stakeholder concerns. Of those analyzed, 17 were recommended for implementation. LAMTD routes 1 (Florida Avenue Corridor) and 3 (Lakeland Hills Corridor) are within the study area. In order to implement a schedule based TSP system, all LAMTD buses servicing routes 1 and 3 need to have emitters installed. The Technological Assessment section of the Situation Appraisal explores the relationship between LAMTD and TSP in Polk County.

The total overall estimate to optimize the existing signal system and implement a GPS based TSP system is $815,614.10. The total average annual benefit to optimizing the signal systems and implementing TSP to the general travelling public and the transit system is estimated to be $3,868,350.95. Therefore, the anticipated benefit to cost ratio is 4.7:1.

WINTER HAVEN COMPREHENSIVE PLAN

The Winter Haven Comprehensive Plan outlines a number of objectives and policies related to the city's transportation future. A major objective of the plan is to "develop a safe and convenient multimodal transportation network that supports increased use of public transit, economic diversification and stability and greenhouse gas emission reduction". To this end, the plan adopts level of service (LOS) determinations for all roadways within the city. All roadways without fixed-route transit are now designated as 'Peak LOS-D'. Multimodal LOS standards for transit corridors in the city are divided into three designations depending on the following criteria: levels of fixed-route service and headways; access to and distance from transit stops; availability of bike racks on buses, transit stops and destinations; and the bike routes or systems.

The plan also outlines a policy to coordinate with the TPO, Polk Transit Authority (PTA), and FDOT to establish strategies to reduce reliance on single occupancy automobile trips. Strategies include encouraging large employers to develop commuter assistance incentives for employees that carpool/vanpool, and/or utilize transit or non-motorized modes for commuter trips. In addition, the city aims to work with the PTA to establish fixed route transit along the following corridors by 2017:

- Lucerne Park Road (SR 544)/Old Lucerne Park Road – *Service Added January 2017*
- Dundee Road (SR 542) – *No service as of January 2017*
- Recker Highway (SR 655) – *No service as of January 2017*
- Buckeye Loop Road – *No service as of January 2017*
- Thompson Nursery Road/Eloise Loop Road – *No service as of January 2017*

The city further plans to work with the PTA to establish fixed route transit service along the following corridors by 2025:

- County Road 653/Old Bartow Lake Wales Road
- Overlook Drive
- Pollard Road/CSX ILC

BARTOW COMMUNITY REDEVELOPMENT PLAN

The Bartow Community Redevelopment Plan seeks to create strong, vibrant, attractive urban residential neighborhoods. Attractive neighborhoods will encourage employers to locate in Bartow, and encourage those employees that currently commute to choose to live in Bartow. Enhancing and improving neighborhoods will also have the effect of eliminating blight and promoting social and commercial activity, particularly within the nearby historic downtown area.

Mass transit plays a key role in creating desirable residential neighborhoods. To invest in mass transit, the City of Bartow coordinated with the Polk Transportation Planning Organization (TPO) and the Central Florida Regional Planning Council in the adoption and application of multimodal levels of service (LOS) defining the minimum acceptable operating standards for state, county, and city roads within the Bartow city limits. These multimodal LOS standards promote transit by lowering highway levels of service standards where transit is available or encouraged, most notably within the community redevelopment district.

NEIGHBORHOOD/ AREA PLANS

EAST LAKE PARKER/ WEST NORTH COMBEE AREA WIDE PLAN

Combee Road and US-92 present a challenge to transportation planners as they are both major roadways that carry significant amounts of traffic, including trucks, while also serving a pedestrian and bicycle dependent neighborhood population. The area plan utilizes the design concept known as Complete Streets – a program that creates cohesive, multimodal transportation environment at the street scale. Each street is designed to accommodate a diverse mode share breakdown. Conceptual Complete Streets plans for US-92 include new transit stops, and shelters on Lake Parker Drive at US-92 (Serviced by LAMTD Route 14 – Combee/ Edgewood)

NEIGHBORHOOD MOBILITY AUDITS

Polk TPO conducted a series of mobility audits for historically underserved neighborhoods in the county. The audits aimed to identify transportation investments that will improve pedestrian, bicycle, and transit access to jobs and essential services, particularly in communities that have higher levels of low income, minority, and transportation disadvantaged populations. The initial assessment covered 11 neighborhoods, each of which was assigned a Mobility Index indicating levels of multimodal access to essential services. Four neighborhoods – Central Winter Haven, Crystal Lake-Combee, East Haines City, and Inwood – have high mobility indices. Four have moderate mobility levels, including East Bartow, Easton Park, South Fort Meade, and South Lake Wales. The final three neighborhoods - Frostproof, Mulberry, and Wahneta – have low mobility scores.

In addition, all neighborhoods have higher potential access scores than mobility scores, indicating that there are environmental factors limiting mobility that need to be addressed, such as gaps in bicycle/pedestrian infrastructure or the presence of high speed roadways. Each audit provides a list of transportation improvement projects that are anticipated to improve bicycle, pedestrian, and transit network connections between residences, workplaces, services both within and outside of each neighborhood.

LAKELAND AREA ALTERNATIVES ANALYSIS: EXISTING CONDITIONS ASSESSMENT

This analysis looks at the extent to which the multimodal transportation network provides accessibility to work and other amenities, within a study area in northern Lakeland. The report identifies corridors within the study area that need accessibility improvements. Lakeland Hills Boulevard was identified as the most favorable corridor for multimodal development. This corridor is served by LAMTD Route 3 – Lakeland Hills Corridor.

US 17-92 CORRIDOR PLANNING STUDY: EXISTING CONDITIONS REPORT

The Florida Department of Transportation worked in collaboration with local and regional agency partners such as Osceola and Polk counties, MetroPlan Orlando, and LYNX to conduct a corridor planning study for a portion of US 17/92 near the future Poinciana SunRail station. The study involved a community-based evaluation to determine how best to meet the needs of current and future users, and established a long-term plan to guide the evolution of the corridor. The study area was a five and one-half mile long section of US 17/92 in Osceola and Polk counties, from Ronald Reagan Parkway to Poinciana Boulevard. Intercession City, an unincorporated community, is in the eastern portion of the corridor.

Socioeconomic Trends

OVERVIEW

The socioeconomic trend analysis provides an overview of existing conditions within Polk County, including a description of population, economic, and journey to work characteristics. The description of conditions is intended to provide information needed to better understand the transit operating environment present in Polk County. Information pertaining to existing conditions was gathered from data presented by the US Census Bureau, Florida Department of Economic Opportunity (FDEO) and the Florida Bureau of Economic and Business Research (BEBR). The 2010-2014 American Community Survey 5-Year Estimates serve as the primary source of information in the demographic discussion.

POPULATION GROWTH AND DISTRIBUTION

In addition to being the State's 9th most populous county, Polk is also one of Florida's fastest growing. A review of past census results shows that the county's population has grown by more than 28 percent since 2000, outpacing the statewide population growth rate of 21 percent over the same period. Table 3-2 lists the 2000, 2010 and 2014 population for each municipality, change in population since 2000, and percent growth since 2000.

Available data suggests that LAMTD service is generally well aligned with socioeconomic and demographic trends, though these trends and associated spatial patterns limit service effectiveness. There are some indications that transit service is accommodating a wide range of socioeconomic and demographic groups, and doing so in a manner that is as good as, if not better, than its peers. There are also indicators that point to further opportunities to capture new riders and expand the physical footprint of the Citrus Connection service.

TABLE 3-2: POPULATION AND GROWTH RATE FOR POLK COUNTY AND ITS MUNICIPALITIES

Jurisdiction	2000 - Total Population	2010 - Total Population	2014 - Total Population	Change in Population 2000 - 2014	Percent Growth 2000 - 2014
Auburndale	11,032	13,507	13,979	2,947	21.1%
Bartow	15,340	17,298	17,766	2,426	13.7%
Davenport	1,924	2,888	3,022	1,098	36.3%
Dundee	2,912	3,717	3,833	921	24.0%
Eagle Lake	2,496	2,255	2,590	94	3.6%
Fort Meade	5,691	5,626	5,745	54	0.9%
Frostproof	2,975	2,992	3,030	55	1.8%
Haines City	13,174	20,535	21,207	8,033	37.9%
Highland Park	244	230	289	45	15.6%
Hillcrest Heights	266	254	258	-8	-3.1%
Lake Alfred	3,890	5,105	5,136	1,246	24.3%
Lake Hamilton	1,304	1,213	1,258	-46	-3.7%
Lake Wales	10,194	14,225	14,665	4,471	21.5%

Jurisdiction	2000 - Total Population	2010 - Total Population	2014 - Total Population	Change in Population 2000 - 2014	Percent Growth 2000 - 2014
Lakeland	78,452	97,422	99,942	21,490	30.5%
Mulberry	3,230	3,817	3,864	634	16.4%
Polk City	1,516	1,562	2,016	500	24.8%
Winter Haven	26,487	33,874	35,070	8,583	24.5%
Polk County Total	483,924	602,905	617,323	133,399	27.6%

Source: U.S. Census Bureau, 2002, 2006, 2012, 2016

A review of the distribution of the population across Polk County shows that approximately 77 percent of residents live within either the Lakeland or Winter Haven urbanized area. Figure 3-1 depicts the county's census-defined urbanized areas and municipal boundaries.

Polk County hosts a range of landscapes from open rural to dense urban. Accordingly, population densities by census block group within the county range from 2 to 8,221 people per square mile. The county's average population density is 343 people per square mile, up from 335 in 2010. Importantly, while Polk County was nearly in the top 100 nationwide in total population in 2010, it was only 434th in population density. In other words, while there are many Polk County residents, they are spread out. The county's highest population densities occur within the Lakeland and Winter Haven urbanized areas where densities average 1,841 and 1,539 people per square mile, respectively. Figure 3-2 depicts population density in Polk County by census block group.

FIGURE 3-1: INCORPORATED, URBANIZED, RURAL AREAS

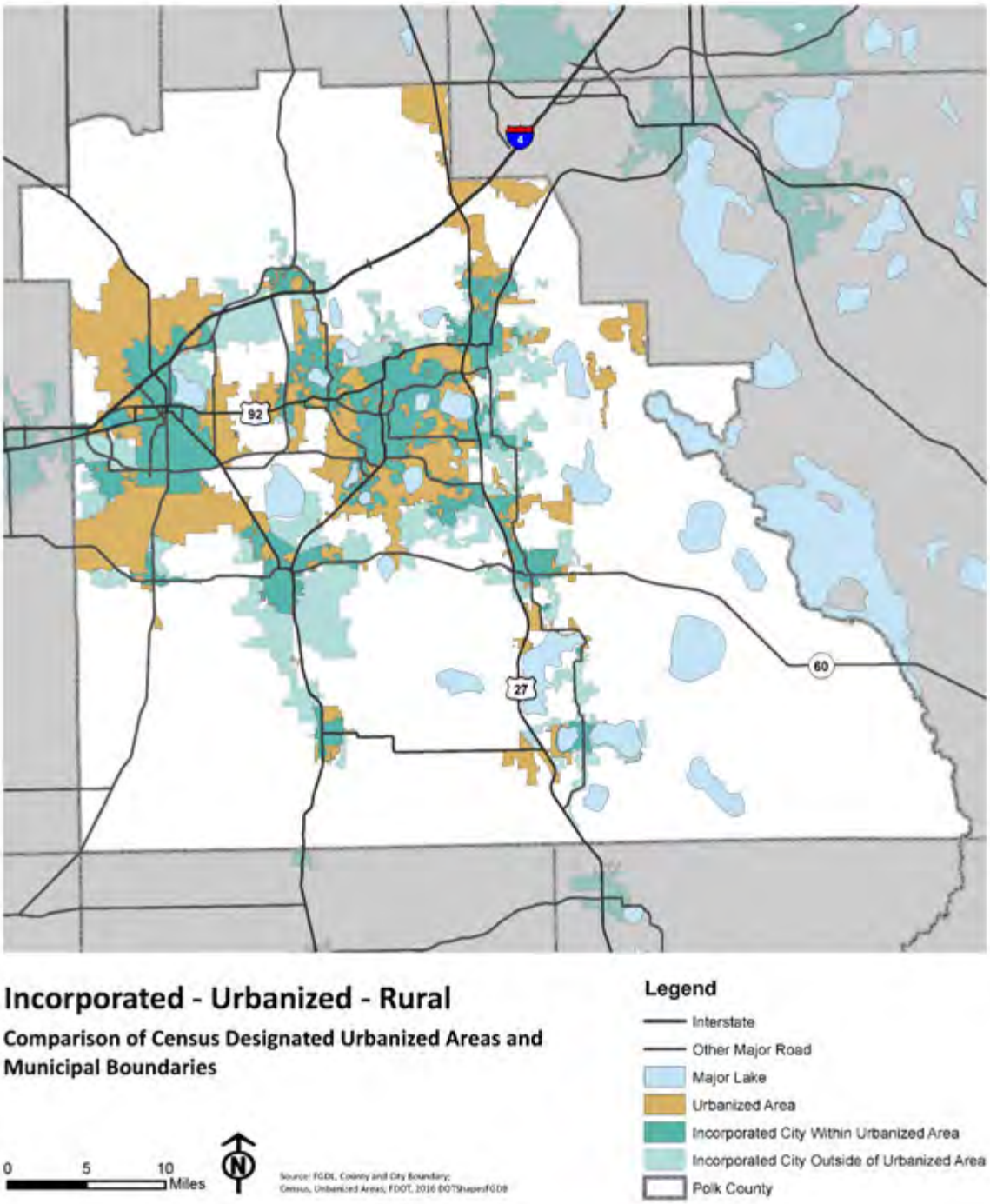
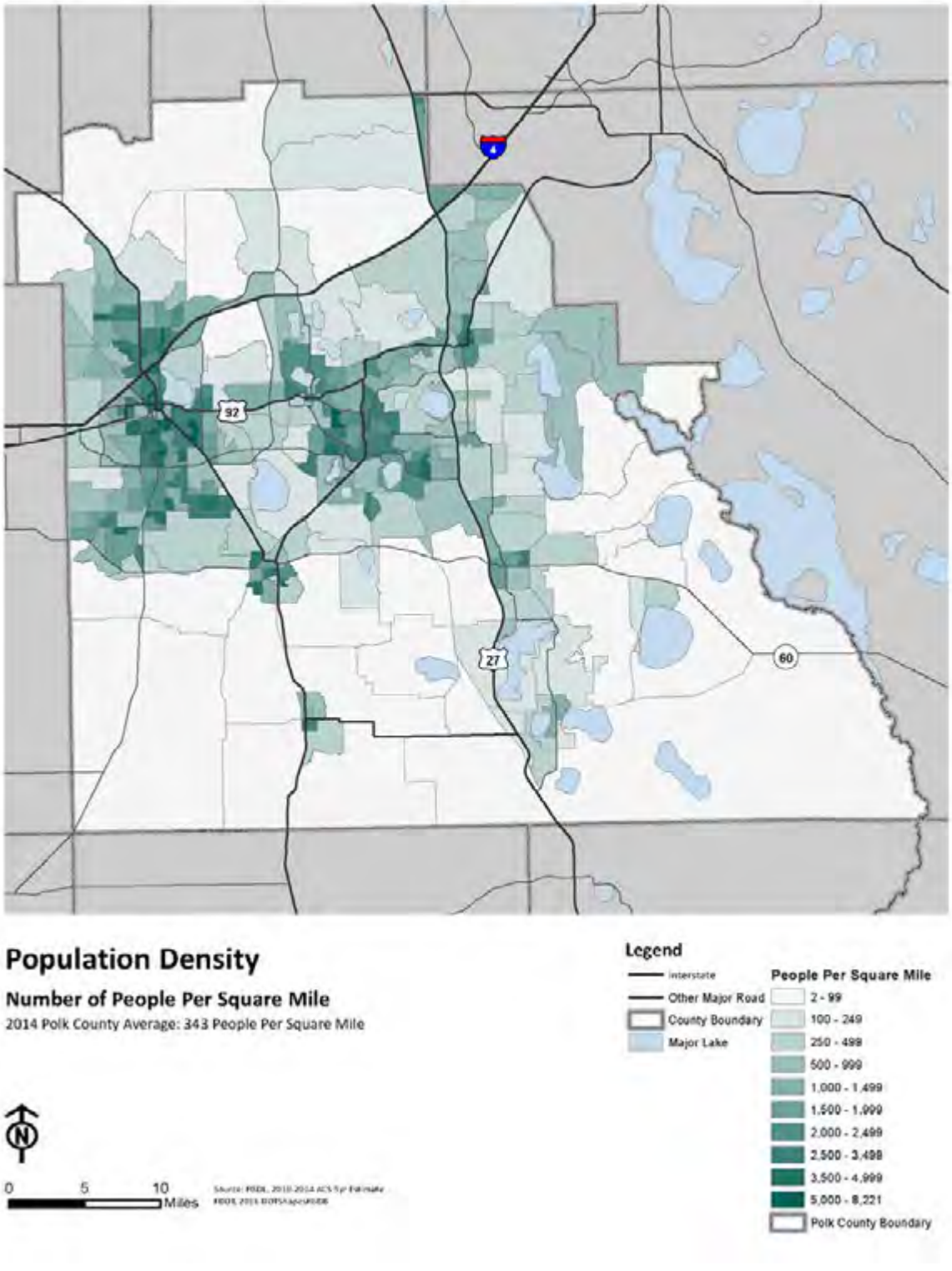


FIGURE 3-2: POPULATION DENSITY



POPULATION PROFILE

Several demographic factors can be used to assess existing conditions and evaluate the efficiency and equity of transit services provision. Table 3-3 provides a summary of demographic factors and comparison of Polk County to the state. Analysis shows the population present in Polk County differs slightly from that of the state overall. In general, Polk County supports a less diverse population with fewer working-age adults when compared to the state. Additionally, the county supports larger households with less access to an automobile.

Figure 3-3 through Figure 3-7 provide a graphical depiction of several factors taken from Table 3-3. They point in particular to spatial differences in these important demographic categories. For instance, the under 18 population is spread evenly throughout the county, while the over 65 population is more concentrated in small pockets around the county, such as along US 92 and in the southeastern parts of the county that are outside of the fixed route service area. Similarly, predominantly minority areas of the county are routinely seen in more rural parts of the county where transit service is less robust. Finally, the zero-car household residents are generally in the urbanized, transit-heavier portions of the county such as Lakeland and Winter Haven. The area around Polk City reports a high proportion of zero-car households while the actual number of such households is fairly low there. It is the only pocket of transit-dependent families currently without fixed route transit service.

TABLE 3-3: DEMOGRAPHIC CHARACTERISTICS

Population Grouping	Area			
	Polk County		Florida	
	Number	Percent	Number	Percent
Total Population	617,323	100.0%	19,361,792	100.0%
Under Age 18	142,472	23.1%	4,020,977	20.8%
Age 18 to 64	359,027	58.2%	11,822,255	61.1%
Over Age 65	115,824	18.8%	3,518,560	18.2%
Racial Minority	130,942	21.2%	4,614,596	23.8%
Hispanic	115,072	18.6%	4,517,191	23.3%
Number of Households	220,556	100.0%	7,217,508	100.0%
Average # Residents per Household	2.73	-	2.62	-
No Vehicle Household	15,253	6.9%	512,040	2.6%

Source: 2010-2014 ACS, 5-yr Estimate

FIGURE 3-3: PERCENT AND NUMBER OF RESIDENTS UNDER AGE 18

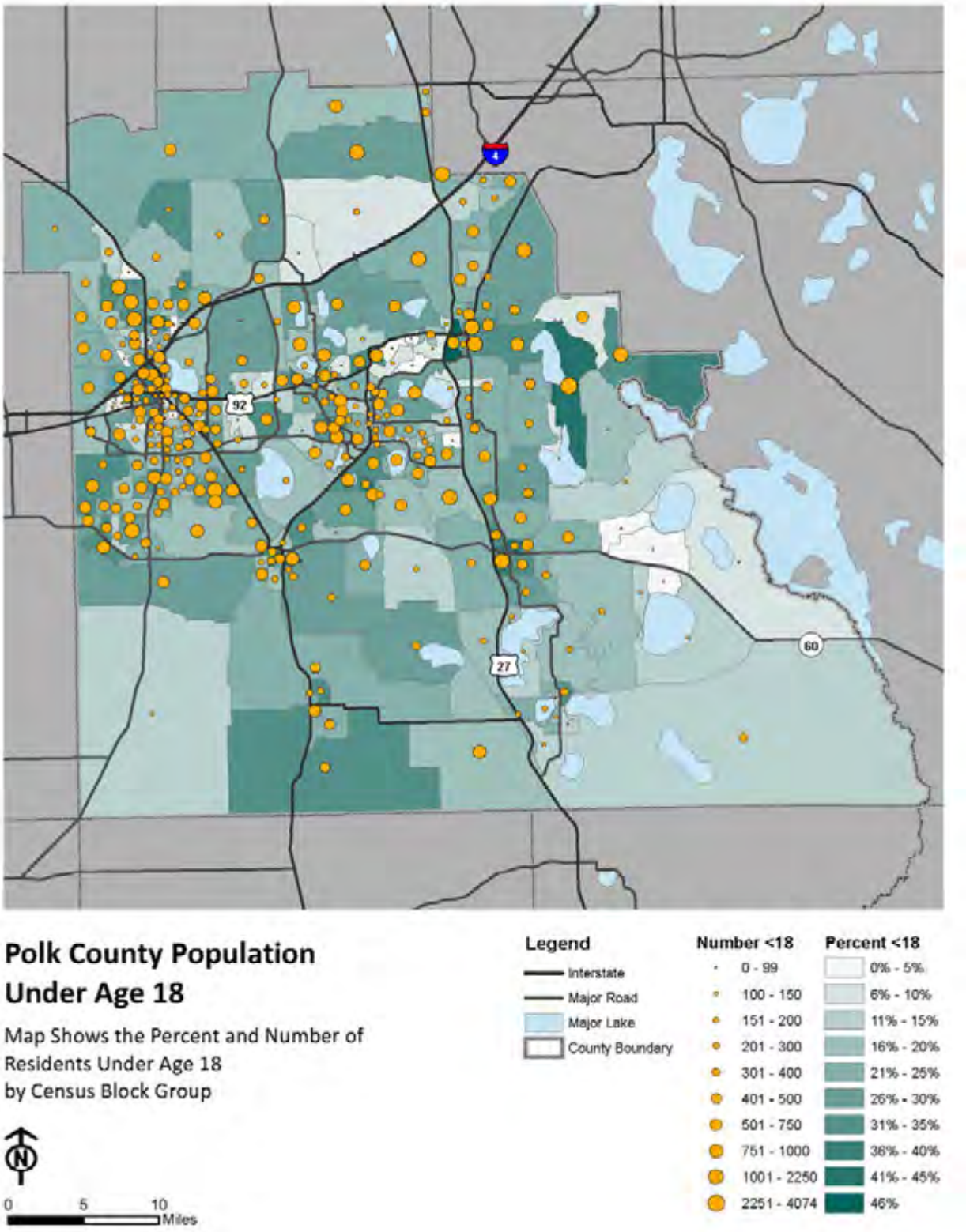


FIGURE 3-4: PERCENT AND NUMBER OF RESIDENTS OVER AGE 65

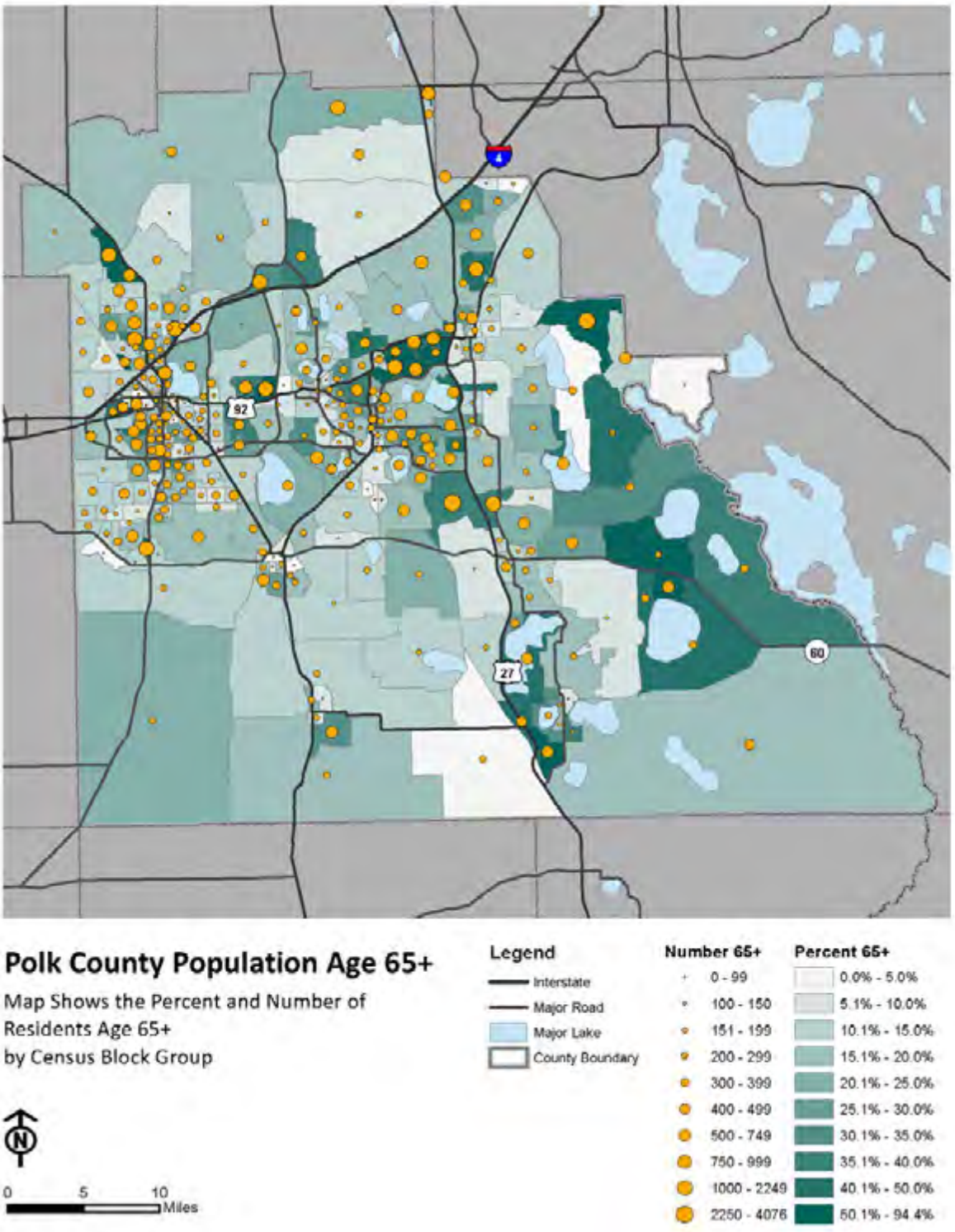


FIGURE 3-5: PERCENT AND NUMBER OF MINORITY (RACE) RESIDENTS

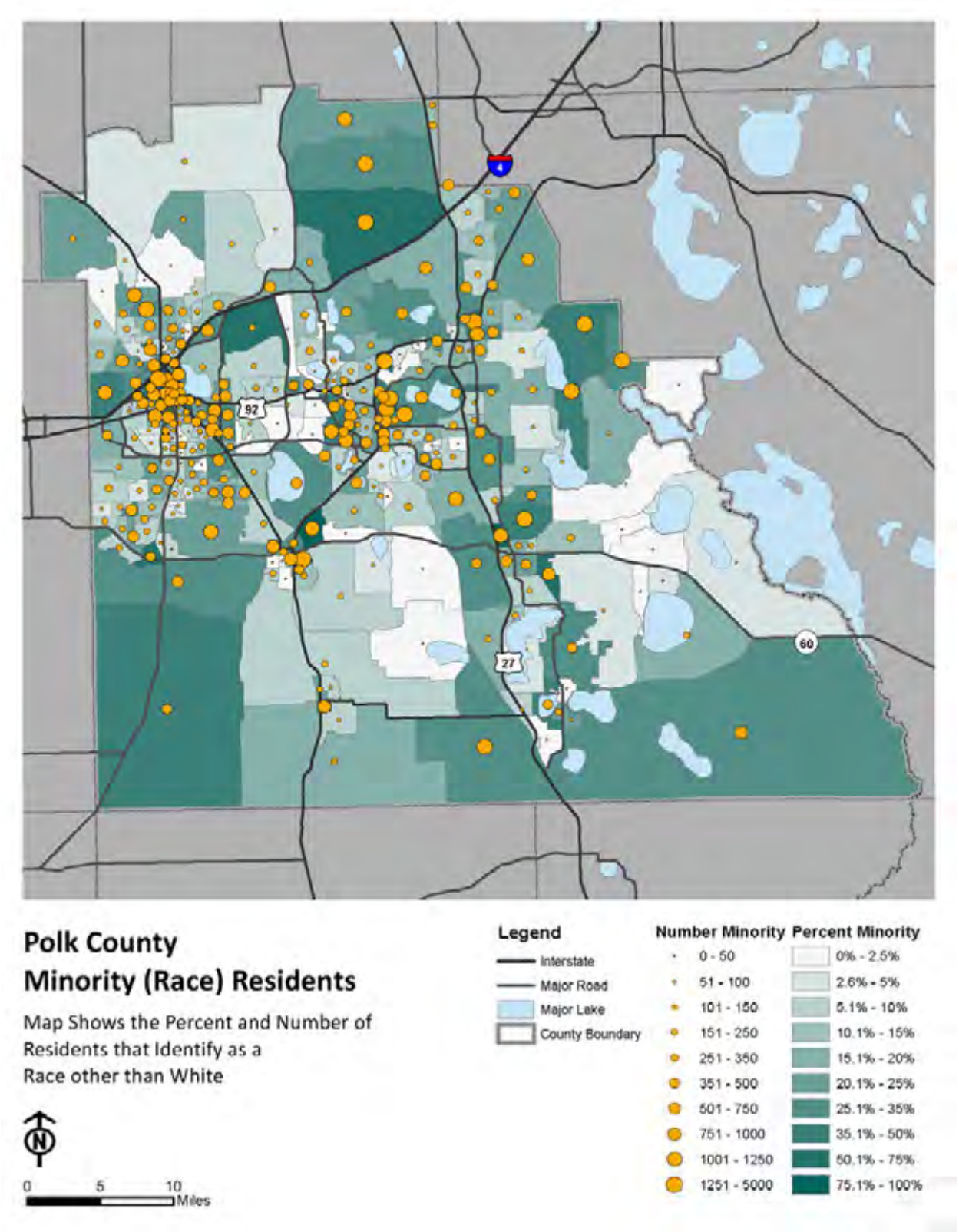


FIGURE 3-6: PERCENT AND NUMBER OF HISPANIC RESIDENTS

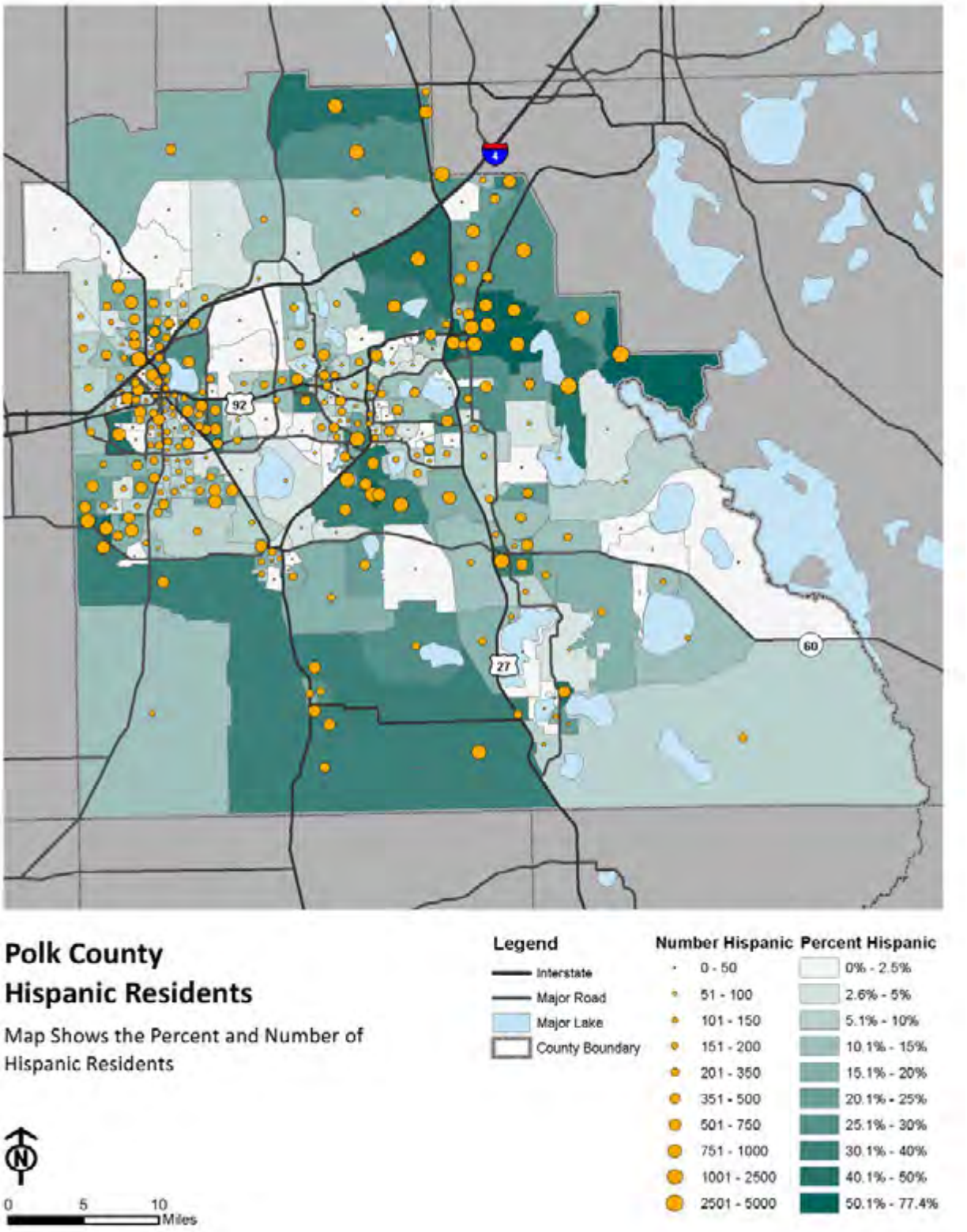
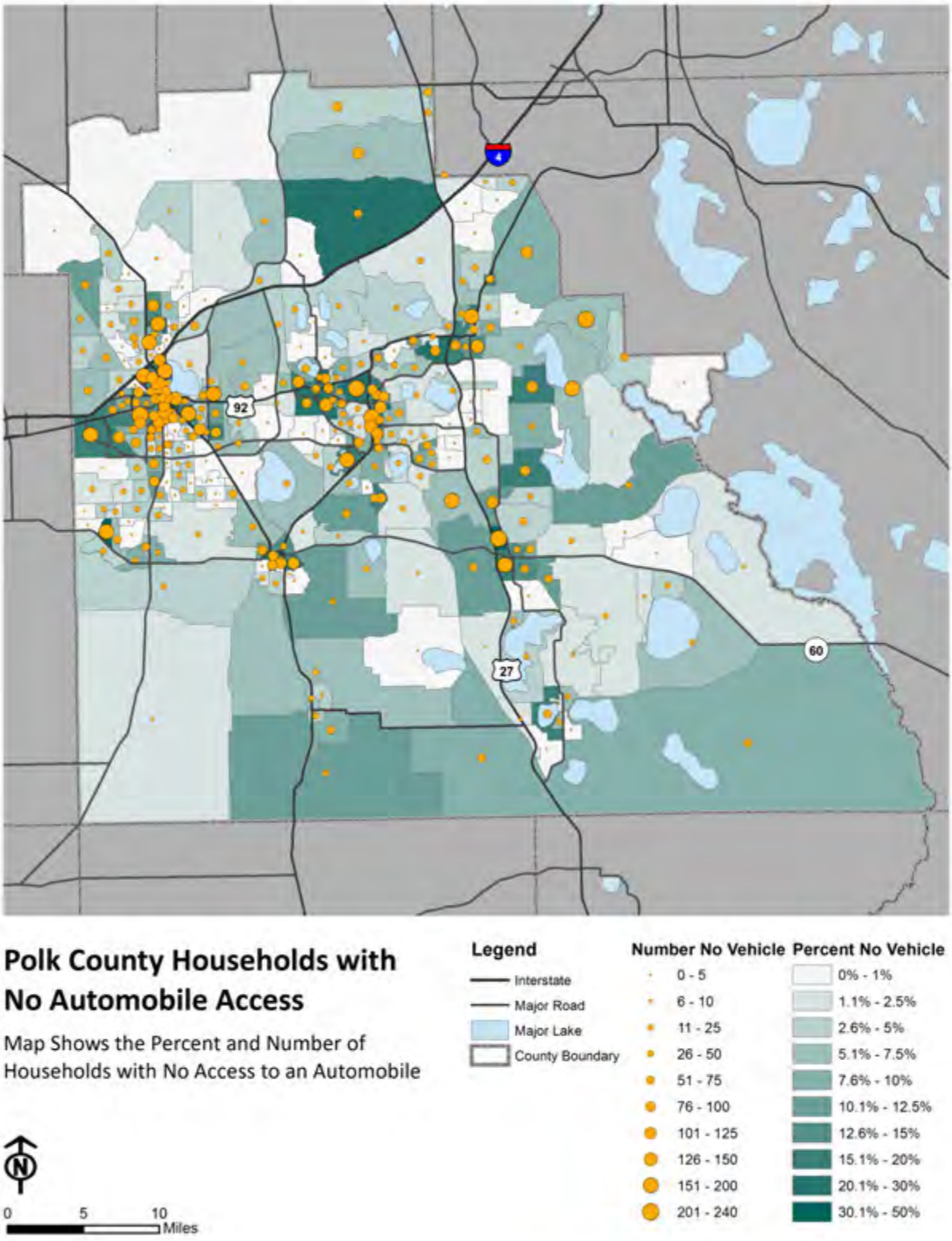


FIGURE 3-7: PERCENT AND NUMBER OF HOUSEHOLDS WITH NO ACCESS TO AN AUTOMOBILE



TRANSPORTATION DISADVANTAGED POPULATIONS

Drawing from the demographic factors noted above, and including consideration of persons with disabilities, attention in the planning process is given to those segments of the populations most dependent upon transit. The assessment of the transportation disadvantaged population is guided by Florida Statute which defines the population as:

"…those persons who because of physical or mental disability, income status, or age are unable to transport themselves or to purchase transportation and are, therefore, dependent upon others to obtain access to health care, employment, education, shopping, social activities, or other life-sustaining activities…" (Fla. Stat. § 427.011(1))

Figures taken for the Polk County Transportation Disadvantaged Service Plan show that 38.6 percent of the county's population can be classified as transportation disadvantaged. See Table 3-4 for detail.

TABLE 3-4: TRANSPORTATION DISADVANTAGED POPULATION

Transportation Disadvantaged Population Grouping	2014 (Estimated)
Non-Elderly, Disabled, Low-Income	14,856
Non-Elderly, Disabled, Not Low-Income	37,145
Elderly, Disabled, Low-Income	4,296
Elderly, Disabled, Not Low-Income	35,386
Elderly, Not-Disabled, Low-Income	1,431
Elderly, Non-Disabled, Not Low-Income	72,806
Low Income, Not Elderly, Not-Disabled	72,376
Total Transportation Disadvantaged Population	**238,296**

Source: Polk County Transportation Disadvantaged Service Plan, 2016

To meet the mobility needs of the population age 65 and over, the Polk TPO has developed a Senior Mobility Audit process that may be used to assess conditions present in communities across the county. The audit methodology is included in Appendix D. As transit planning efforts in Polk County progress, it is recommended that reference be made to the Senior Mobility Audit process to aid in the identification and prioritization of transit and supporting infrastructure investment.

POPULATION AND DEMOGRAPHIC SUMMARY

Primarily rural in landscape, Polk County supports a growing population that is less racially diverse than the State. The fastest growing areas in Polk County since 2010 generally occur north of SR 60 and south of I-4 with additional pockets of growth focused just north of Lakeland and along US 27.

When evaluated by age cohort, the fastest growth observed in the county is for residents age 65 and over. Between years 2011 and 2015, the population age 65 and over grew by more than 13,000 residents. The largest single increase reported by census block group was located in the area of Poinciana which included 1,372 new residents age 65 and over.

Table 3-5 summarizes the proportion of senior workers and their transit use. Thirteen percent of Polk County workers are 60 or older, yet this group comprises less than 10 percent of transit users. This gap –

the difference between proportion of workers and proportion of transit users – is larger than the gaps for Florida as a whole and for neighboring Hillsborough County. This effectively means there is lower ridership among seniors than would be expected, suggesting that improvements can be made in serving the county's seniors.

TABLE 3-5: PROPORTION OF WORKING SENIORS AND PROPORTION OF WORKING SENIORS USING TRANSIT

	Proportion of Total Workers	Proportion of Total Transit Users	Gap
Polk County	13.0%	9.6%	3.4%
Florida	12.2%	9.6%	2.6%
Hillsborough County	9.4%	7.5%	1.9%
Osceola County	9.3%	2.7%	6.6%

EMPLOYMENT AND INCOME

Employment

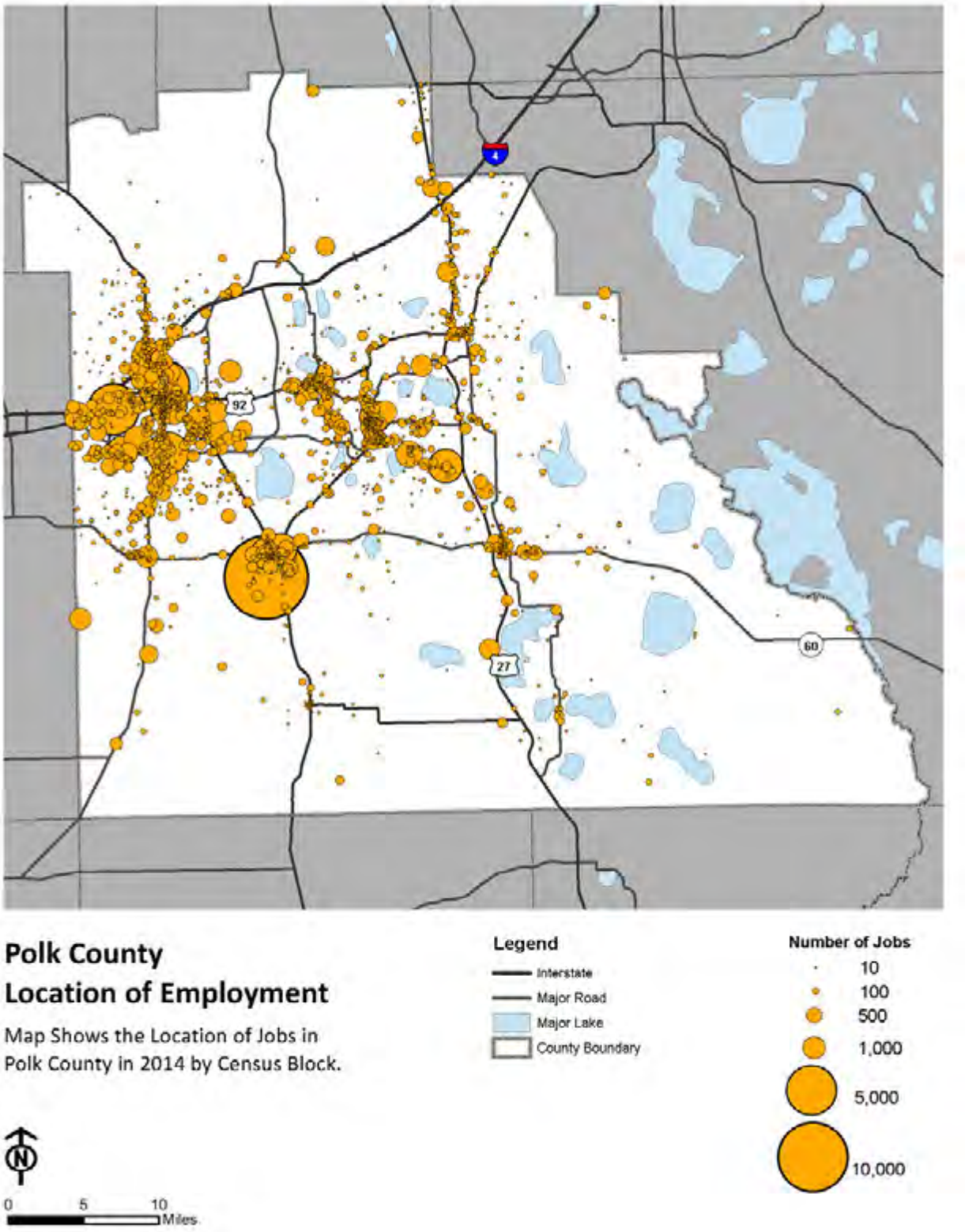
Polk County hosts approximately 210,000 jobs. Employment within the county is distributed across a range of sectors, with Health Care and Retail serving as the primary sectors of employment. Table 3-6 describes employment in Polk County by North American Industrial Classification (NAICS) Industry Sector. Figure 3-8 shows the distribution of jobs across Polk County by census block.

TABLE 3-6: NUMBER OF JOBS IN POLK BY SECTOR

NAICS Sector	Number of Jobs in County	Percent of Jobs in County
Health Care and Social Assistance	27,569	13.10%
Retail Trade	26,321	12.50%
Educational Services	19,883	9.50%
Manufacturing	17,579	8.40%
Accommodation and Food Services	16,080	7.70%
Administration & Support, Waste Management and Remediation	14,992	7.10%
Transportation and Warehousing	13,284	6.30%
Public Administration	12,123	5.80%
Construction	10,683	5.10%
Wholesale Trade	9,560	4.60%
Finance and Insurance	8,957	4.30%
Management of Companies and Enterprises	6,766	3.20%
Professional, Scientific, and Technical Services	6,638	3.20%
Other Services (excluding Public Administration)	5,009	2.40%
Agriculture, Forestry, Fishing and Hunting	4,290	2.00%
Arts, Entertainment, and Recreation	3,980	1.90%
Real Estate and Rental and Leasing	2,791	1.30%
Information	1,608	0.80%
Mining, Quarrying, and Oil and Gas Extraction	1,146	0.50%
Utilities	514	0.20%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2014).

FIGURE 3-8: LOCATION OF EMPLOYMENT IN POLK COUNTY



The U.S. Census Bureau American Community Survey summarizes current transit use by employment type. This data highlights the workers that use transit at proportionally higher rates. Table 3-7 shows that in Polk County local service workers use transit at a much higher rate than other jobs – for example, workers in arts, entertainment, recreation, accommodation, or food services comprise only 13.5% of all workers but 31.5% of all transit commuters. Local service workers comprising a larger share of transit riders is a common pattern throughout Florida and the nation as a whole. However, office jobs such as professional services or information are generally associated with an equal or even slightly higher proportions of transit use, in part because they commonly locate in denser, more transit-supportive areas. The fact that Polk County ridership is markedly lower among these workers shows untapped ridership potential in this industry sector. Determining the reasons why these types of workers aren't currently riders can be useful in prioritizing TDP strategies and investment recommendations.

TABLE 3-7: TRANSIT USE FOR POLK COUNTY RESIDENTS BY INDUSTRY OF EMPLOYMENT

NAICS Sector	Total Workers	Public Transportation Users (Excluding Taxicab)
Workers 16 years and over	236,739	1,109
INDUSTRY	% by Industry	% by Industry
Arts, entertainment, and recreation, and accommodation and food services	13.50%	31.50%
Educational services, and health care and social assistance	21.20%	29.00%
Manufacturing	6.40%	8.30%
Retail trade	14.60%	8.30%
Other services (except public administration)	4.80%	7.80%
Professional, scientific, management, and administrative and waste management services	10.20%	4.20%
Transportation and warehousing, and utilities	5.50%	3.80%
Information and finance and insurance, and real estate and rental and leasing	7.10%	3.10%
Agriculture, forestry, fishing and hunting, and mining	2.50%	2.50%
Public administration	4.20%	1.40%
Construction	6.90%	0.00%
Wholesale trade	3.00%	0.00%
Armed forces	0.10%	0.00%

Source: 2011-2015 American Community Survey 5-Year Estimates, S0802

Labor Force

Approximately 260,000 workers reside within Polk County. Table 3-8 provides the number or workers by status and the percent of workers employed. Figure 3-9, which draws from U.S. Census Bureau Longitudinal Employer-Household Dynamics (LEHD) data, shows the distribution of where workers live across Polk County.

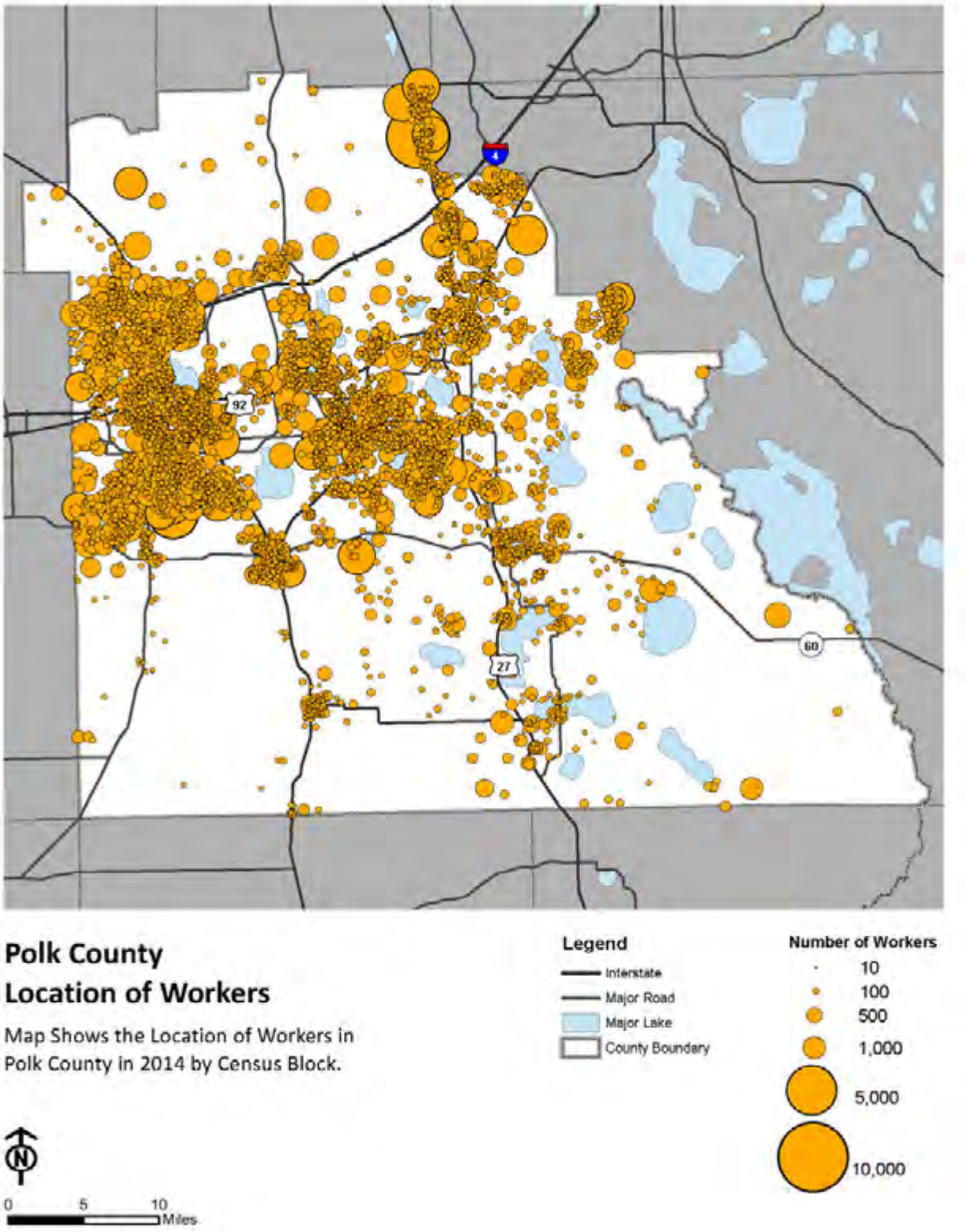
TABLE 3-8: LABOR FORCE AND EMPLOYMENT

Group / Status	Polk County	Florida
Labor Force	279,339	9,607,000
Employment	259,174	8,999,000
Unemployment	20,165	607,000
Unemployment Rate	7.2%	6.3%

Source: FDEO, Local Area Unemployment Statistics (LAUS) program, 2014

Income

FIGURE 3-9: LOCATION OF WORKERS IN POLK COUNTY



The distribution of household income in Polk County differs from that of Florida overall. As shown in Table 3-9, a disproportionate number of Polk County residents fall into the lowest income bracket while a smaller percentage of households are included in the highest income brackets. Table 3-9 also depicts median household income in Polk County by census block group.

TABLE 3-9: HOUSEHOLD INCOME

Income Group	Polk		Florida	
	Number	Percent	Number	Percent
$0 to $24,999	59,618	27.1%	831,916	17.8%
$25,000 to $49,999	64,807	29.3%	1,188,431	25.5%
$50,000 to $74,999	42,808	19.4%	918,608	19.8%
$75,000 to $99,999	25,380	11.5%	613,375	13.2%
$100,000 to $149,999	19,171	8.7%	631,643	13.6%
$150,000 to $199,999	4,894	2.2%	226,879	4.9%
$200,000 or more	3,878	1.8%	239,310	5.1%
Median Household Income	$43,063	-	$47,212	-

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates, DP03

Patterns of ridership by income bracket are in line with national trends, with higher proportions of very low earners and very high earners using transit.

TABLE 3-10: EARNINGS FOR WORKERS

EARNINGS IN THE PAST 12 MONTHS (IN 2014 INFLATION-ADJUSTED DOLLARS) FOR WORKERS	Total Workers	Total Transit Riders
Total # workers 16 years and over with earnings	236,724	1,109
	Percent of Total	
$1 to $9,999 or loss	14.2%	24.8%
$10,000 to $14,999	8.9%	19.7%
$15,000 to $24,999	18.6%	21.3%
$25,000 to $34,999	17.6%	12.7%
$35,000 to $49,999	19.1%	8.1%
$50,000 to $64,999	9.7%	3.4%
$65,000 to $74,999	3.4%	0.0%
$75,000 or more	8.6%	9.9%

Source: 2010-2014 American Community Survey 5-Year Estimates, S0802

Poverty

Table 3-11 compares the poverty rate in Polk County with that of the state. Data shows poverty is more concentrated in Polk County than statewide. **Error! Reference source not found.** shows the distribution of the population within the county living below the poverty level.

TABLE 3-11: PERCENTAGE OF RESIDENTS BELOW POVERTY

Area	Percent
Florida	16.7%
Polk County	18.5%

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates, DP03

Employment and Income Spatial Patterns

Figure 3-8 through **Error! Reference source not found.** help to illustrate the economic and employment spatial patterns present in Polk County. The Figures show that the majority of employment is focused near the cities of Lakeland and Winter Haven with a large employment center located in the City of Bartow. Smaller but numerous areas of employment are focused along major roadway corridors including US 27, SR 37, and SR 60. Unlike employment, workers are more evenly distributed across the county, but still focused in the Lakeland and Winter Haven urbanized areas and along US 27.

The mapping also shows median incomes are generally higher in rural and suburban areas, while lower incomes are concentrated in the municipalities. Finally, the mapping shows that the highest poverty rates within the county are found within the municipalities, but a large proportion of the population south of SR 60 lives below the poverty level.

FIGURE 3-10: MEDIAN HOUSEHOLD INCOME

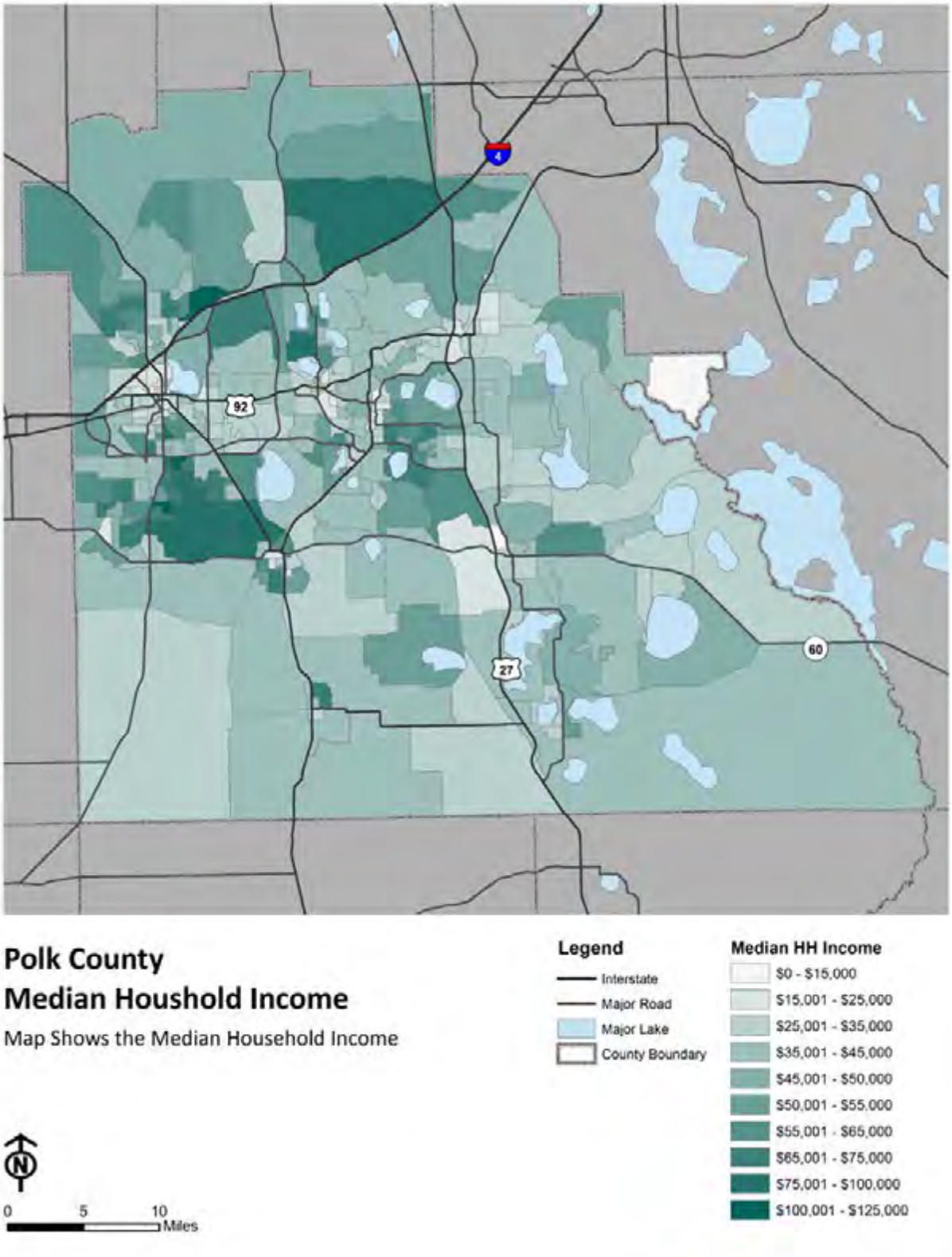
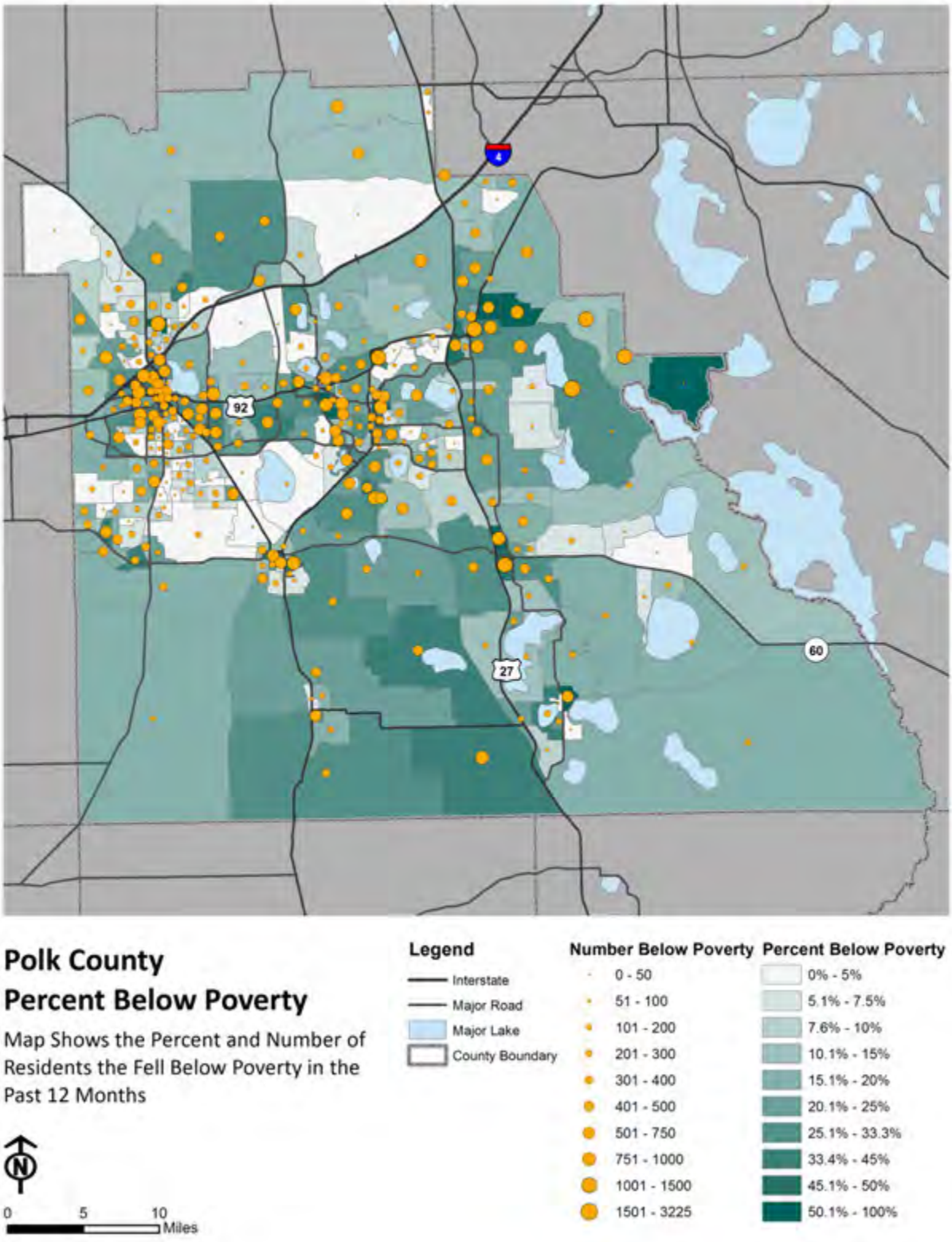


FIGURE 3-11: PERCENT AND NUMBER OF RESIDENTS BELOW POVERTY



JOURNEY TO WORK

In keeping with conditions observed at the state level, the vast majority of residents in Polk County commute through the use of an automobile. Notably, the percentage of carpools and single occupant vehicles in Polk County exceeds statewide averages, while a much smaller percentage of county residents chose to walk or use transit for their work commute. Table 3-12 below shows the number and percent of commuters by transportation mode utilized.

TABLE 3-12: MEANS OF TRAVEL TO WORK (WORKERS 16 AND OVER)

Means of Travel to Work	Florida		Polk County	
	Number	Percent	Number	Percent
Car, truck, or van -- drove alone	6,552,971	79.6%	192,815	81.4%
Car, truck, or van -- carpooled	790,924	9.6%	26,099	11.0%
Public transportation (excluding taxicab)	171,909	2.1%	1,109	0.5%
Walked	126,128	1.5%	3,116	1.3%
Other means	181,884	2.2%	4,685	2.0%
Worked at home	404,741	4.9%	8,915	3.8%

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates, DP03

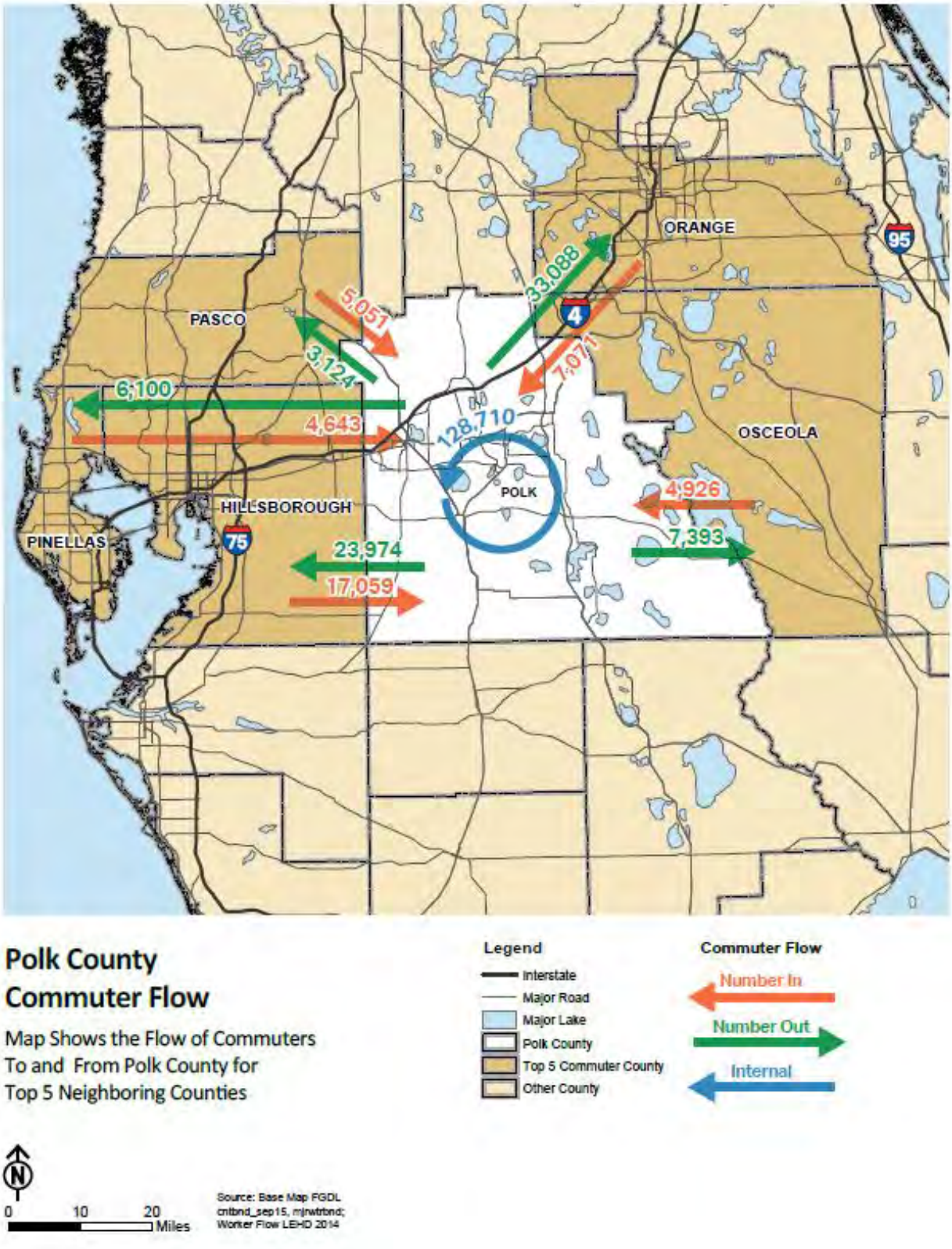
Commuter Flows and Travel Time

As noted in the employment discussion above, Polk County hosts an estimated 210,000 jobs. LEHD data shows that a majority (52 percent) of jobs in Polk County (123,710 jobs) are held by county residents, and the remaining 48 percent (81,000 jobs) are held by workers from other parts of the state. Figure 3-12 shows the flow of workers traveling between Polk County and the five top destination counties. For context, the table below provides a sample of the proportion of county jobs held by residents of that county.

County	Percent of County Jobs Held by County Residents
Lakeland	61.4%
Hillsborough	57.2%
Manatee	54.4%
Charlotte	48.2%
Osceola	39.5%

The high rate of internal capture is in part a function of the geographic size of Polk County, but points to higher than normal potential for transit use if competitive costs and commute times are possible on transit relative to auto. Based on Census Bureau estimates, the average commute time for Polk County residents is 25.6 minutes, just under the state average of 26.1 minutes. Notably, nearly half of the jobs in Polk County are held by workers that reside outside of the county. Major work trip movements include those to Orange and Hillsborough Counties. Commuter flows to the west are generally balanced with workers leaving and entering the county while flows to the east are much more directional with work trips exiting Polk County. Most work trips in Polk County are made by drivers in single occupant vehicles with less than one percent of the population traveling to work by bus. The 25.6-minute average commute time in Polk County is generally consistent with statewide averages.

FIGURE 3-12: POLK COUNTY COMMUTER FLOW



Existing Land Use and Transportation Conditions

BACKGROUND

This section includes a review of existing roadway and transit service levels in Polk County and the associated land use conditions served by transit. The review of existing transit service includes an overview of the consolidation process that produced the unified transit network Citrus Connection, run by LAMTD. Performance Evaluation and Trends sub-sections present a detailed examination of route-by-route operating performance during the last five years of available data, as well as general performance of the system relative to identified peer transit agencies nationwide.

Analysis of trends reveals an environment favorable to transit: congestion is rising, the senior population is booming, there is strong policy support for transit-friendly development patterns, and LAMTD is operating a very cost-efficient system. However, population and employment densities are fairly low and suburbanization is expected to continue. In effect, the county is so large that ridership and the competitiveness of transit relative to automobiles remain low.

ROADWAY CONDITIONS

Figure 3-13 and Figure 3-14 illustrate peak-hour level-of-service (LOS) information for Polk County's major roadways in 2016 and 2021, respectively. Comparing levels of service between maps indicates notable deterioration along US 98, north of Interstate 4; on Bartow road between Hollingsworth and Edgewood Drive; and on along Marigold Avenue, south of Cypress Parkway and north of Poinciana Parkway. LOS deterioration is also apparent along the roadway links between Lakeland and Winter Haven – particularly along Saddle Creek Road and East Main/ K-Ville Avenue. These corridors are served by the fixed route bus lines listed below.

- US 98 – Route 47 (Duff Road Shuttle)
- Bartow Road – Route 22XL (Bartow Express to Lakeland)
- Marigold Avenue – LYNX Route 603 (NeighborLink Service Area)
- East Main/ K-Ville – Route 12: (Lakeland to Winter Haven)

Saddle Creek Road is not served by fixed route service.

As LOS declines over the next 5 years, efficient transit service along these routes will become increasingly important. These corridors are considered priorities for interventions such as improved headways, express service, or Transit Signal Prioritization.

FIGURE 3-13: PEAK LOS 2016

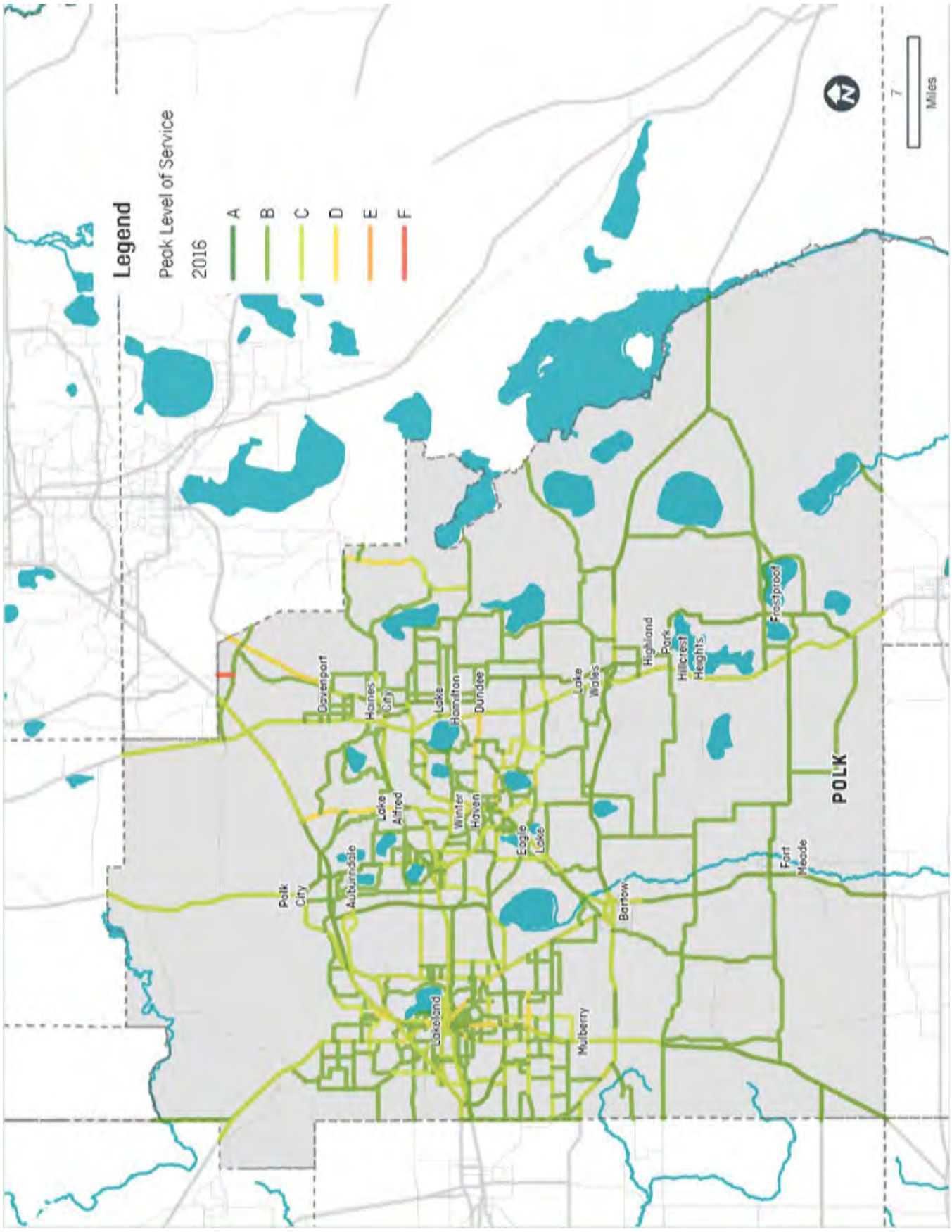
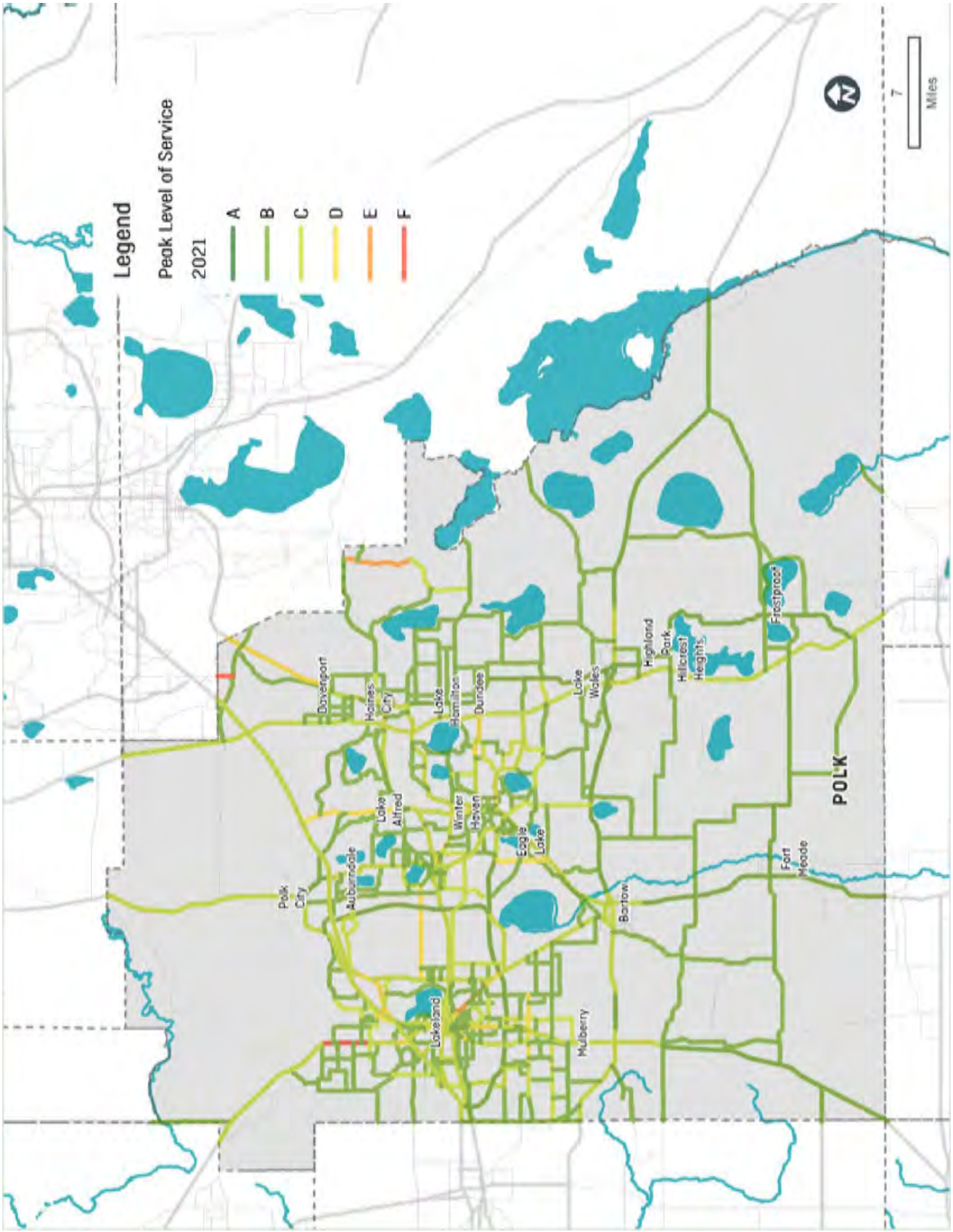


FIGURE 3-14: PEAK LOS 2021



LAND USE CONDITIONS

TRANSIT SUPPORTIVE LAND USE AND URBAN DESIGN POLICY

Transit supportive land use policies are those plans, goals and objectives that enhance effective and efficient transit provision. Transit-supportive policies support density and mixed uses; reduce sprawl; and advocate for multimodalism, non-automotive trip generation, and transit oriented development.
The transportation and land use plans reviewed at the beginning of the situation appraisal process illuminated a number of key land use policies that support transit development within Polk County. Three key transit-supportive plans - the Polk TPO 2060 Transportation Vision Plan, the Polk County 2030 Comprehensive Plan, and the City of Lakeland 2020 Comprehensive Plan – particularly guided the priorities and alternatives outlined in the 2017 TDP. Appendix A contains the full language of transit supportive policies found in these plans, as well as language from the Land Development Code regarding transit supportive Urban Design regulation. Key policies and designations are outlined and mapped below.

The 2060 Transportation Vision Plan identifies key trip generators and attractors within Polk County based on the 2060 forecast. These activity centers serve as potential destinations for future transit service expansion. The figures below illustrate key activity centers, by type, across the county. The maps show the geographical distribution of employment centers (Figure 3-15), schools and universities (Figure 3-16), hospitals and health clinics (Figure 3-17), governmental and institutional sites (Figure 3-18), and cultural and recreational sites (Figure 3-19). Activity centers are displayed in relation to half and quarter mile buffers around fixed route service. Activity centers that fall outside of the fixed route travel sheds help identify gaps in service provision.

The Polk 2030 Comprehensive Plan reinforces the vision laid out in the 2060 Vision Plan by providing transportation and land use policies that support multimodalism, increased density, and mixed used development. In particular, the plan identifies Transit Corridors, Center Overlays, and Transit Supportive Development Areas (TSDA) to guide future transportation and land use development decisions.

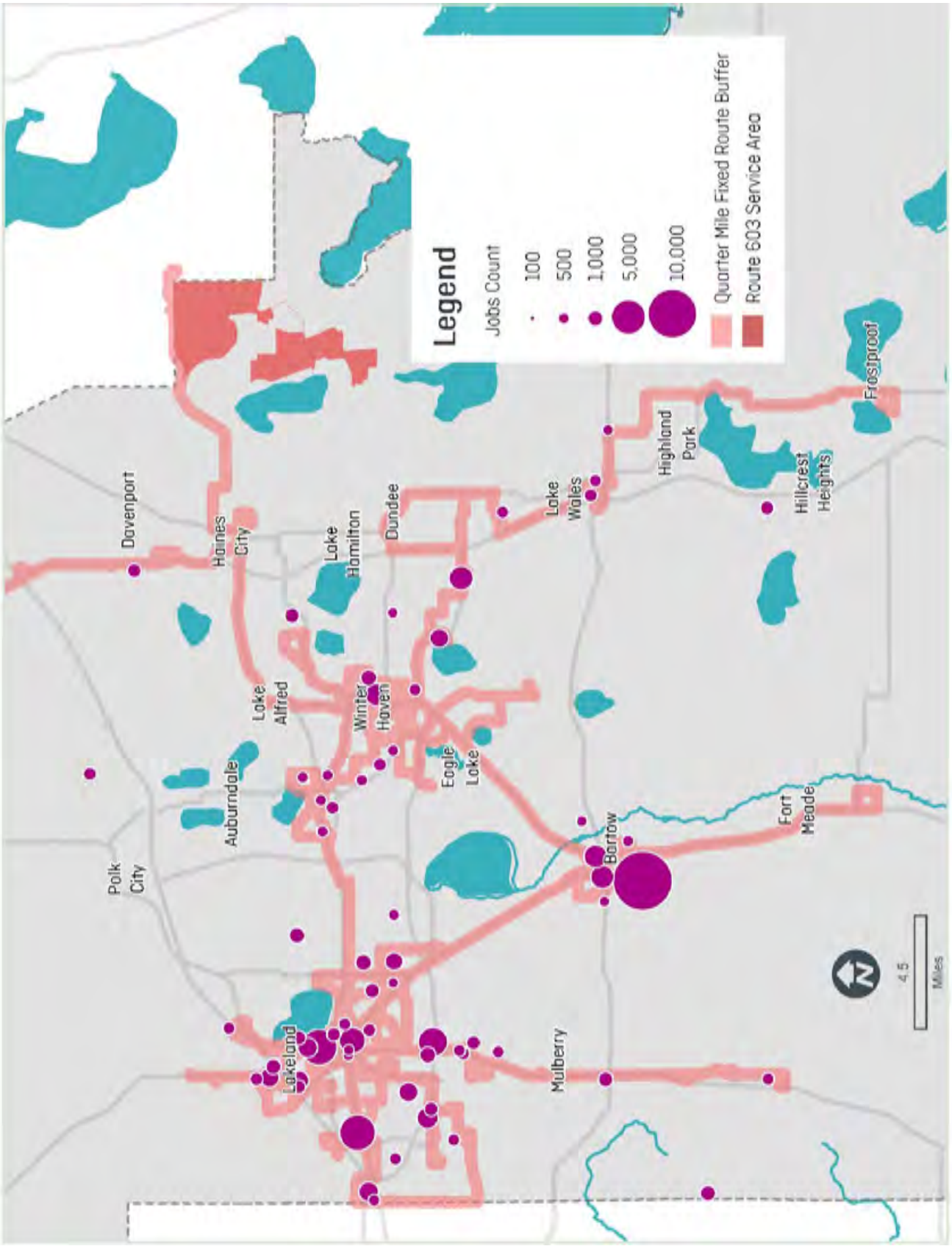
The City of Lakeland 2020 Comprehensive Plan identifies Transit Oriented Corridors (TOCs) within the city boundaries which function as geographic focus areas for future transportation investment. In doing so the Lakeland Comprehensive Plan provides goals, objectives and policies that enable the TPO to function in the most effective and efficient way possible.

Figure 3-20 through Figure 3-22 provide a graphic representation of the multimodal designations found in Polk 2030 and Lakeland 2020, including Transit Corridors and Centers, and Transit Supportive Development Areas. Figure 3-21 illustrates the downtown Lakeland roadways according to their multimodal designations, and Figure 3-22 provides the same for downtown Winter Haven.

In summary, these maps show that nearly all major activities in the county are served by fixed route service. The primary exception is with those activities in Polk City, where no service currently exists.

Nearly all major activities in the county are served by fixed route service except for Polk City destinations.

FIGURE 3-15: EMPLOYMENT CENTERS



Source: Longitudinal Employment and Household Database.

FIGURE 3-16: EDUCATION CENTERS

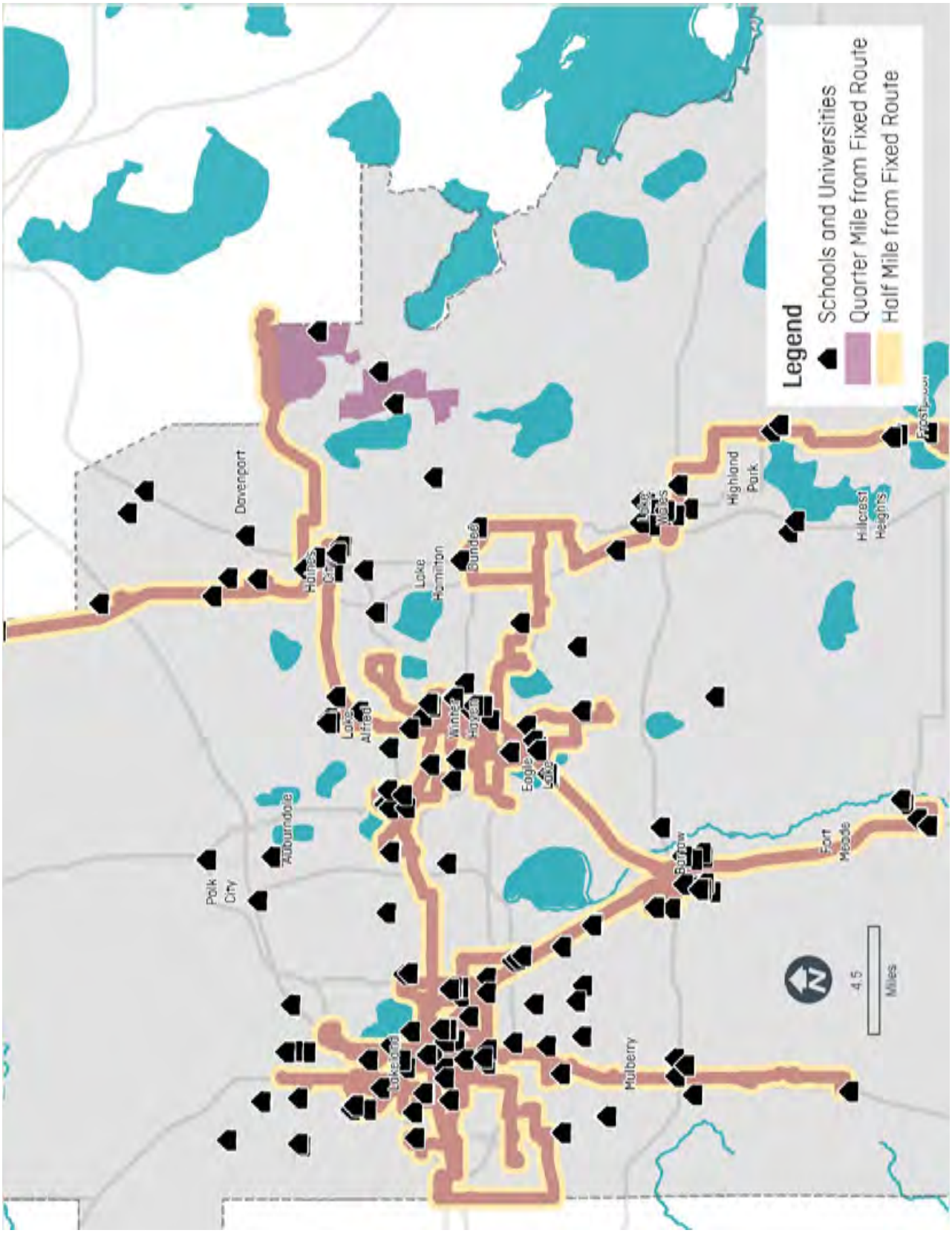


FIGURE 3-17: MEDICAL CENTERS

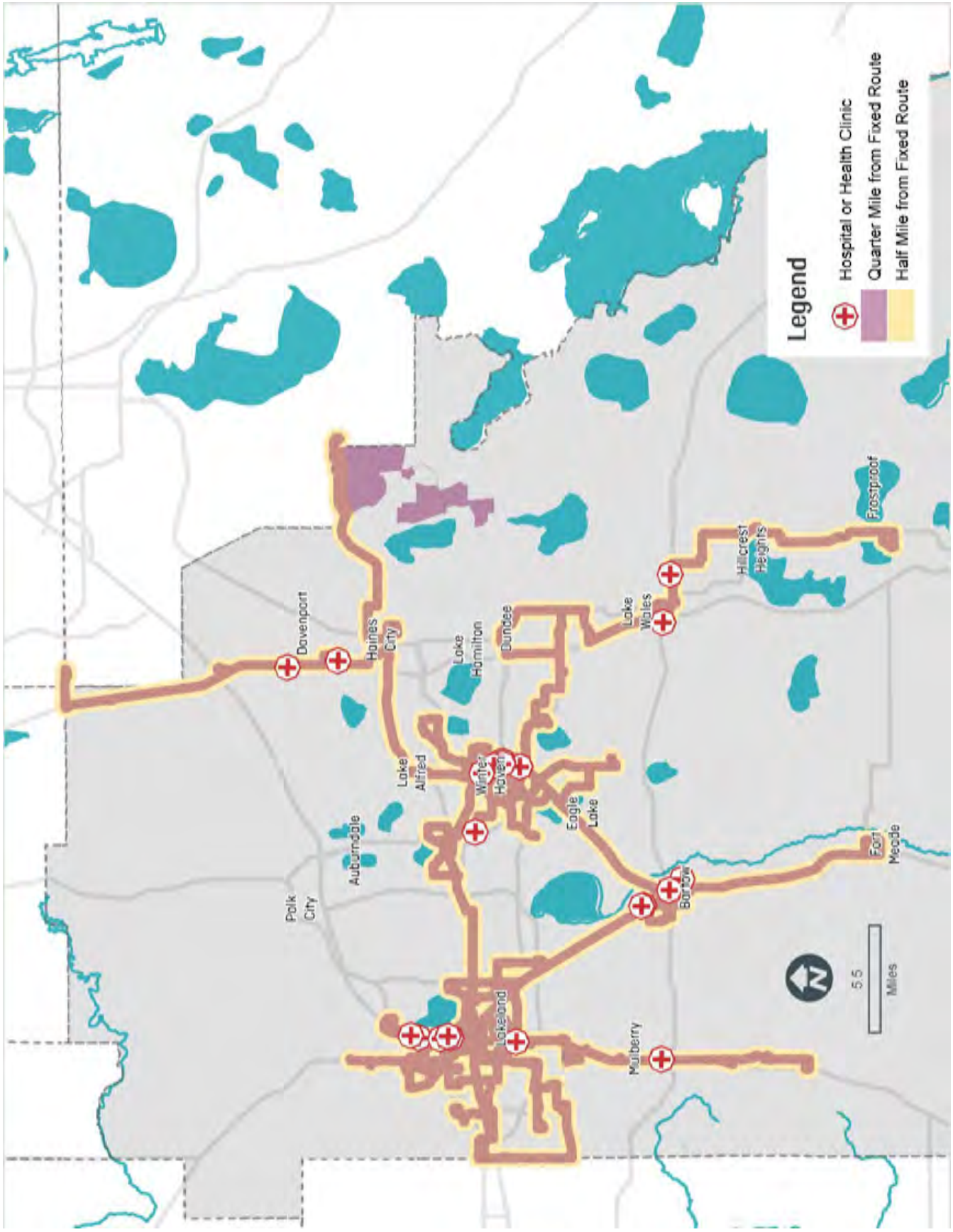


FIGURE 3-18: INSTITUTIONAL CENTERS

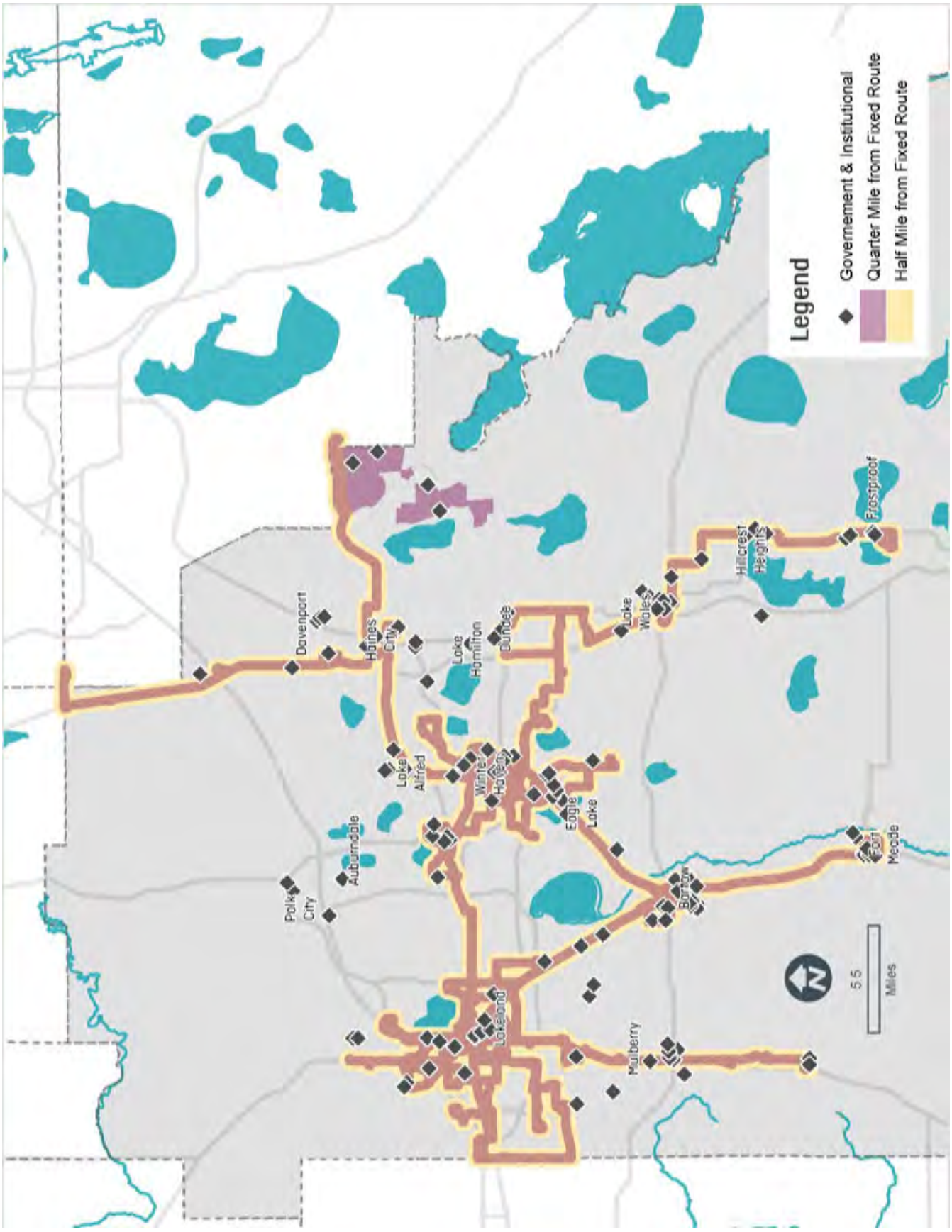


FIGURE 3-19: CULTURAL CENTERS

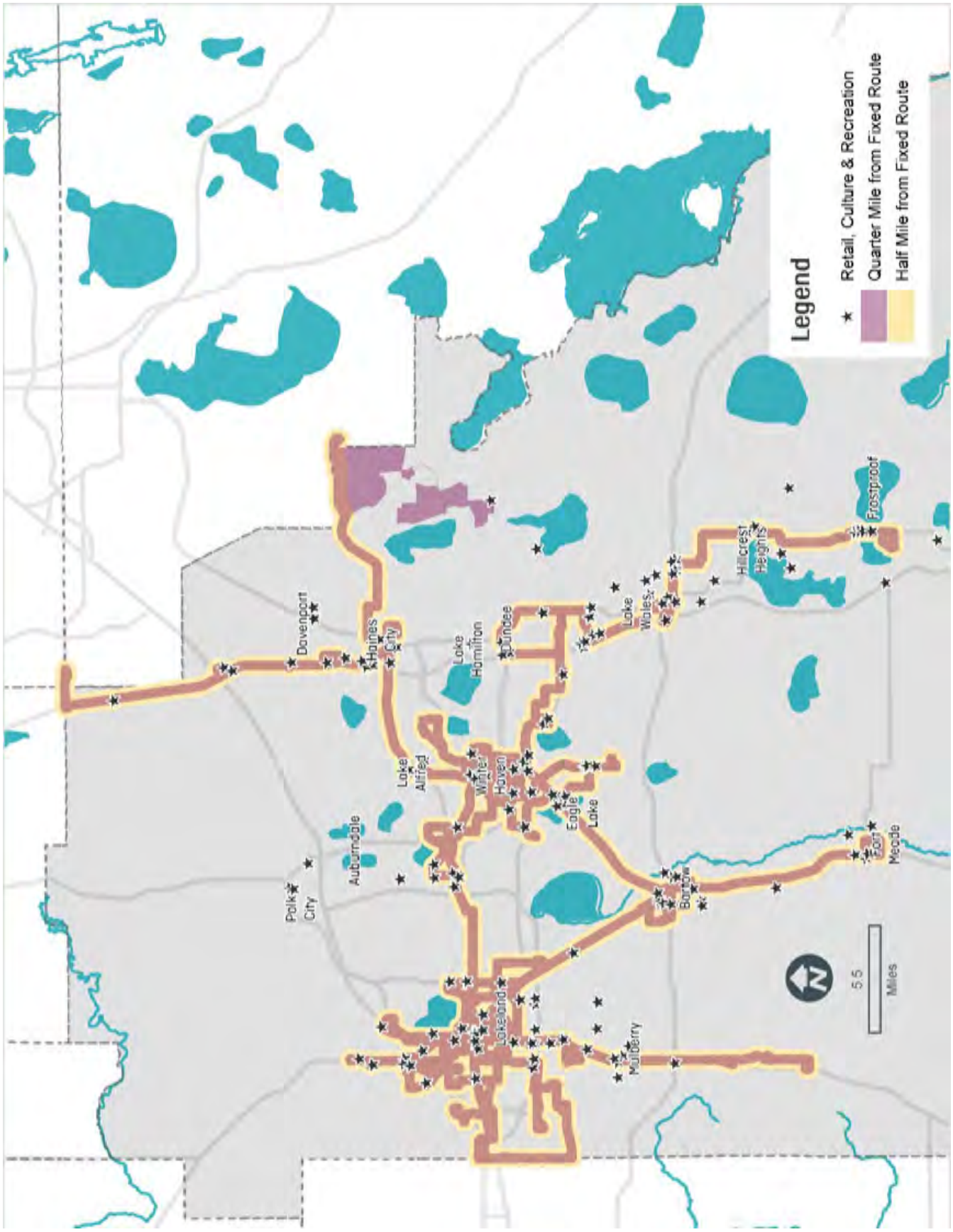


FIGURE 3-20: MULTIMODAL CORRIDORS

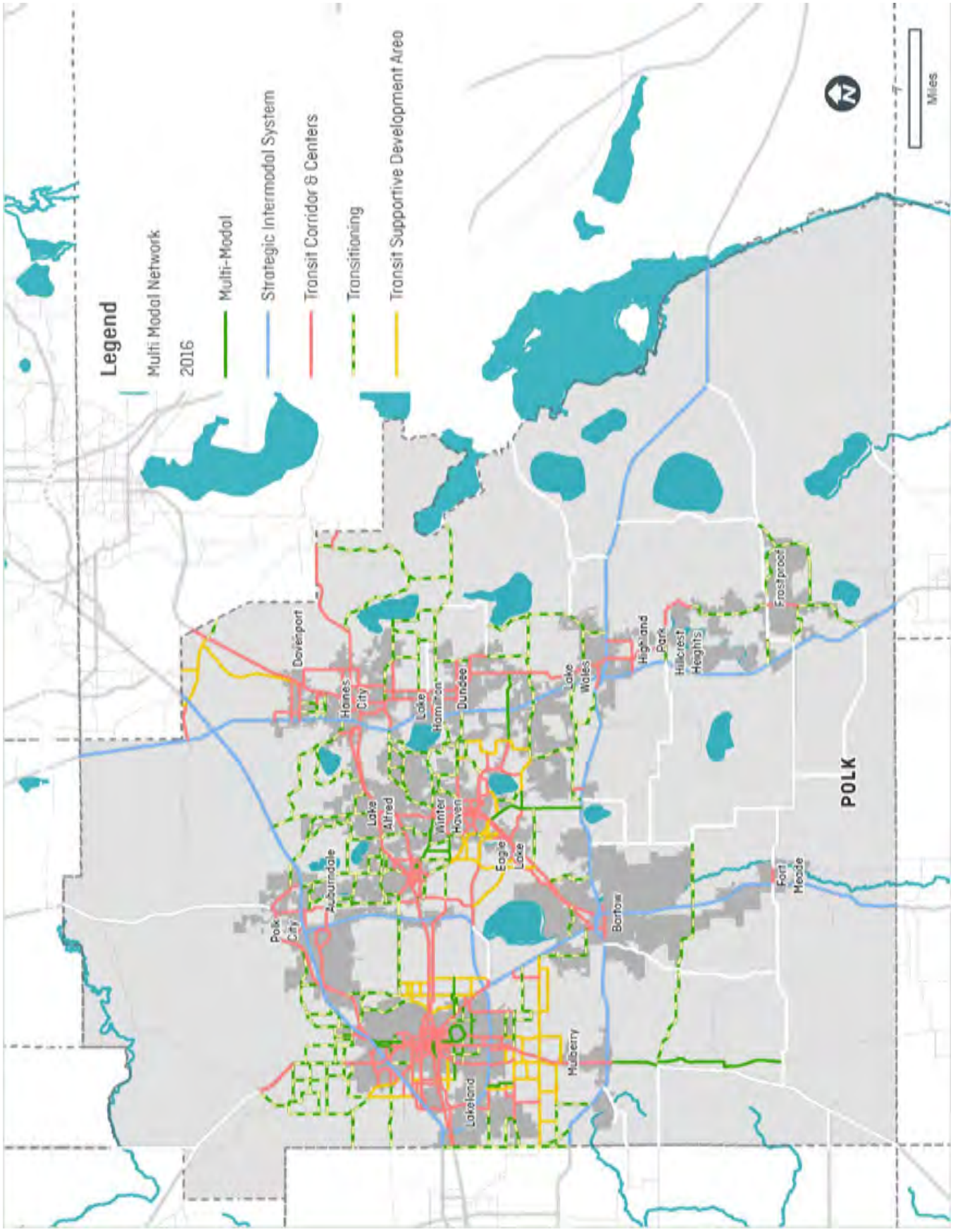


FIGURE 3-21: MULTIMODAL CORRIDORS - LAKELAND

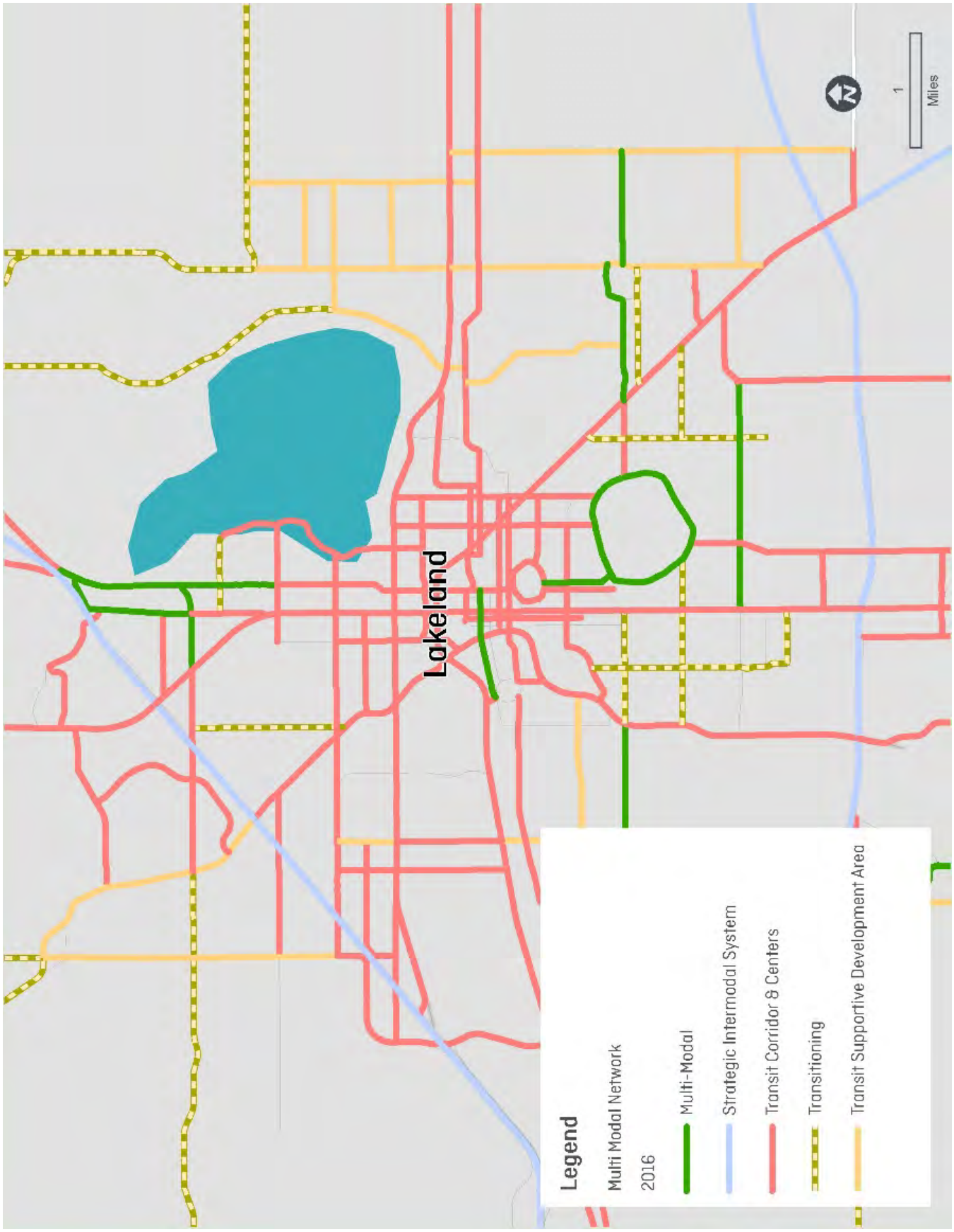
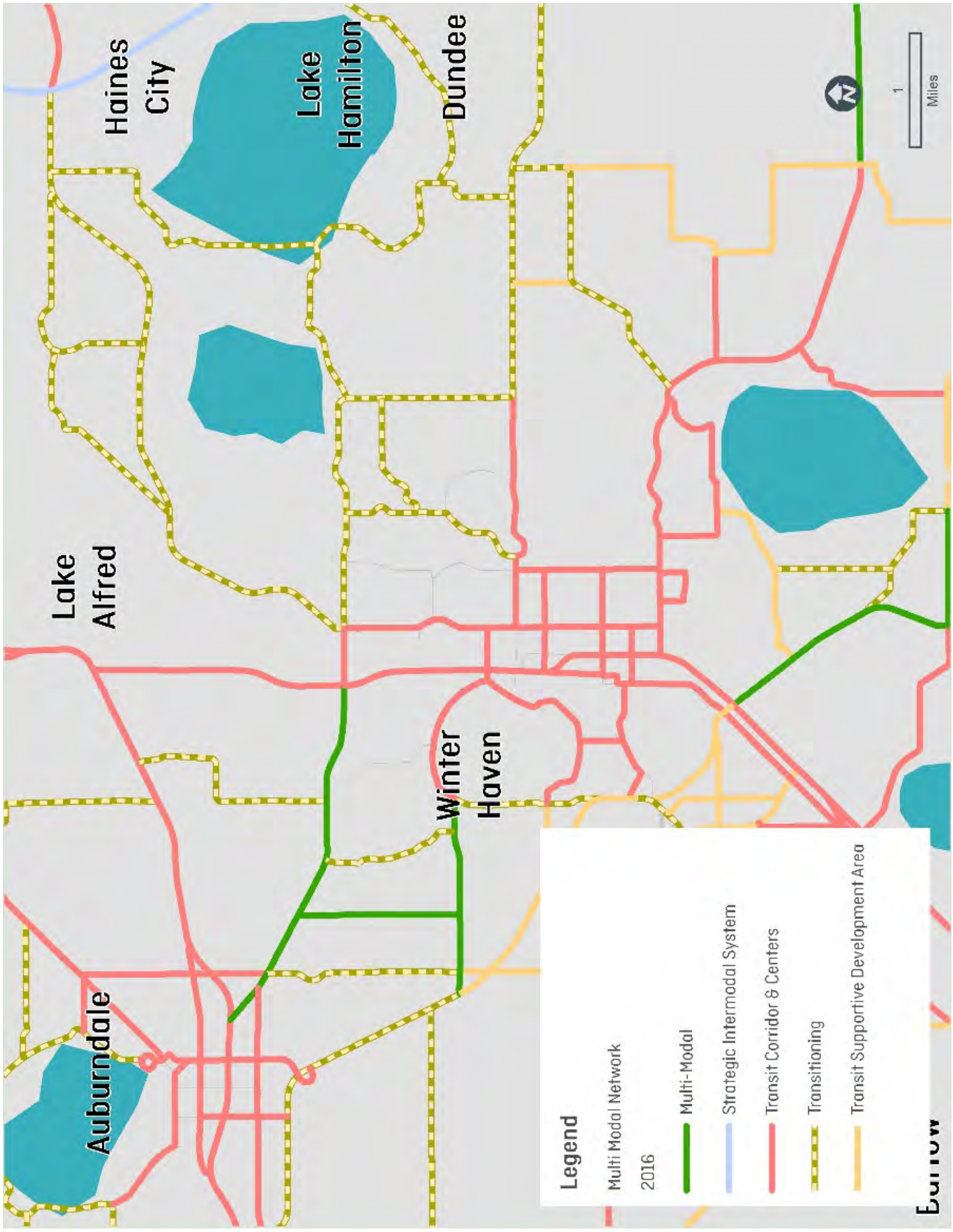


FIGURE 3-22: MULTIMODAL CORRIDORS – WINTER HAVEN



EXISTING AND FUTURE LAND USE DENSITY

Figure 3-23 through Figure 3-26 show existing 2015 and future 2025 land use densities for population and employment (per square mile). The maps show that existing fixed routes are well situated to serve those areas in the county most densely populated with people and jobs, both now, and in the future.

FIGURE 3-23: POPULATION DENSITY 2015

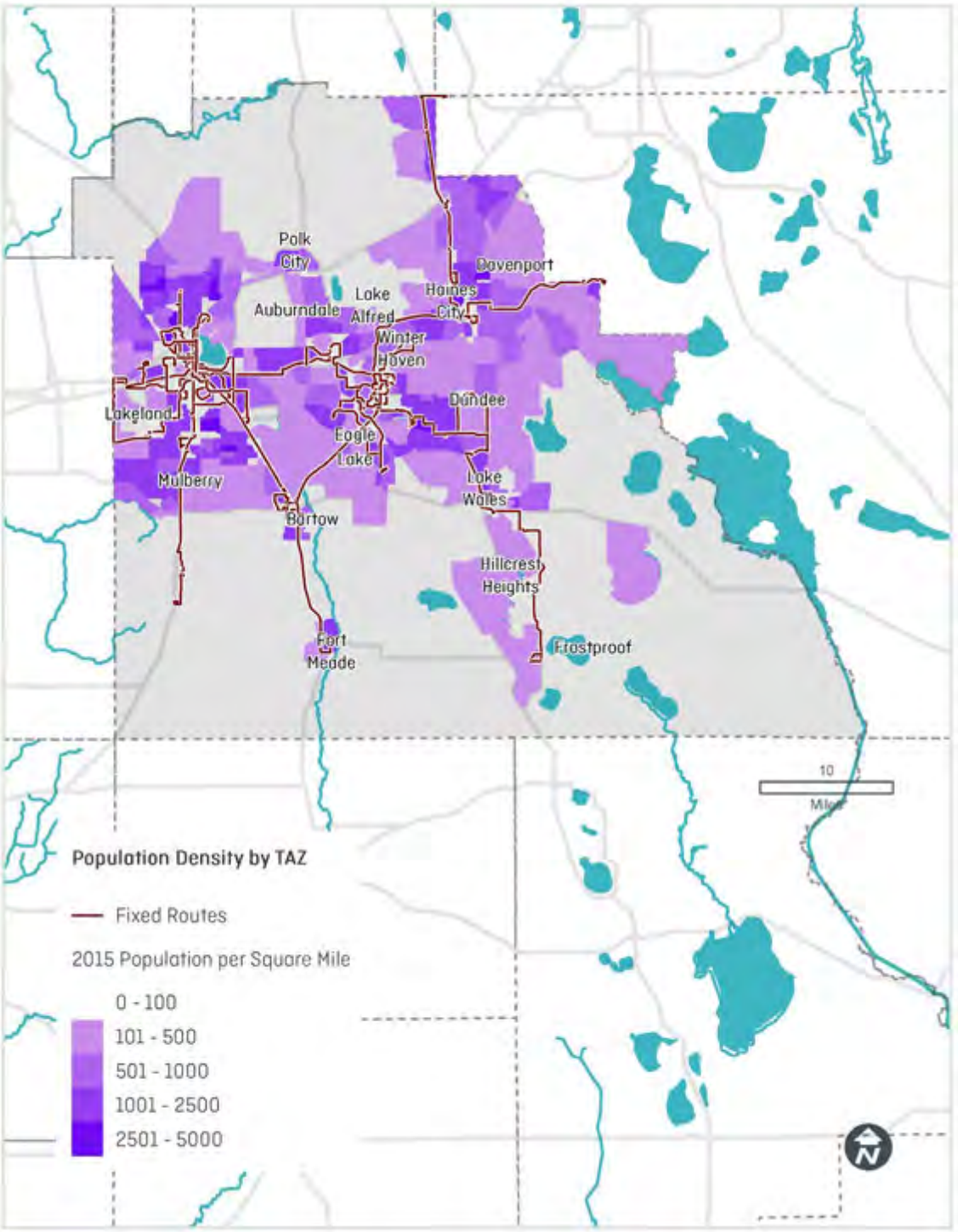


FIGURE 3-24: POPULATION DENSITY 2025

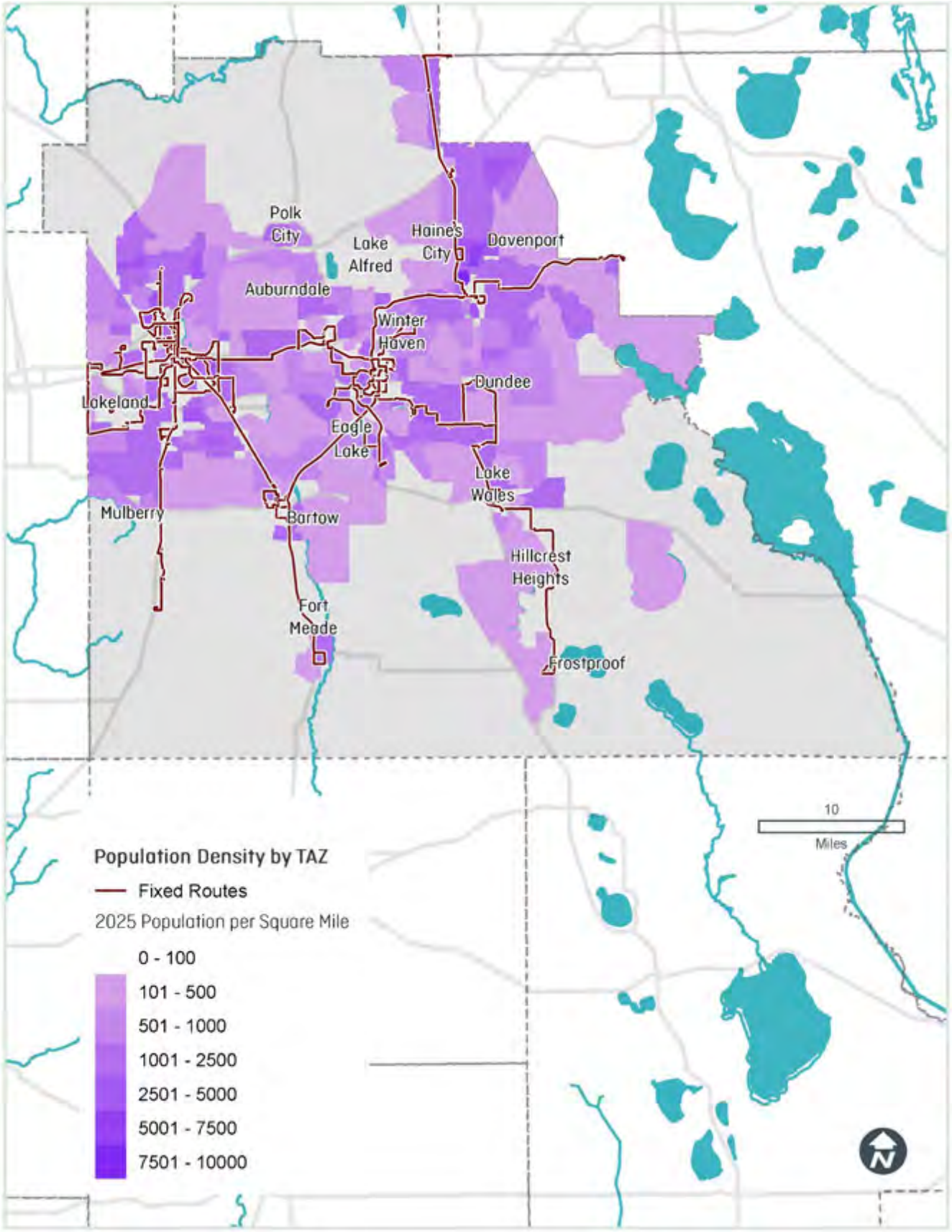


FIGURE 3-25: EMPLOYMENT DENSITY 2015

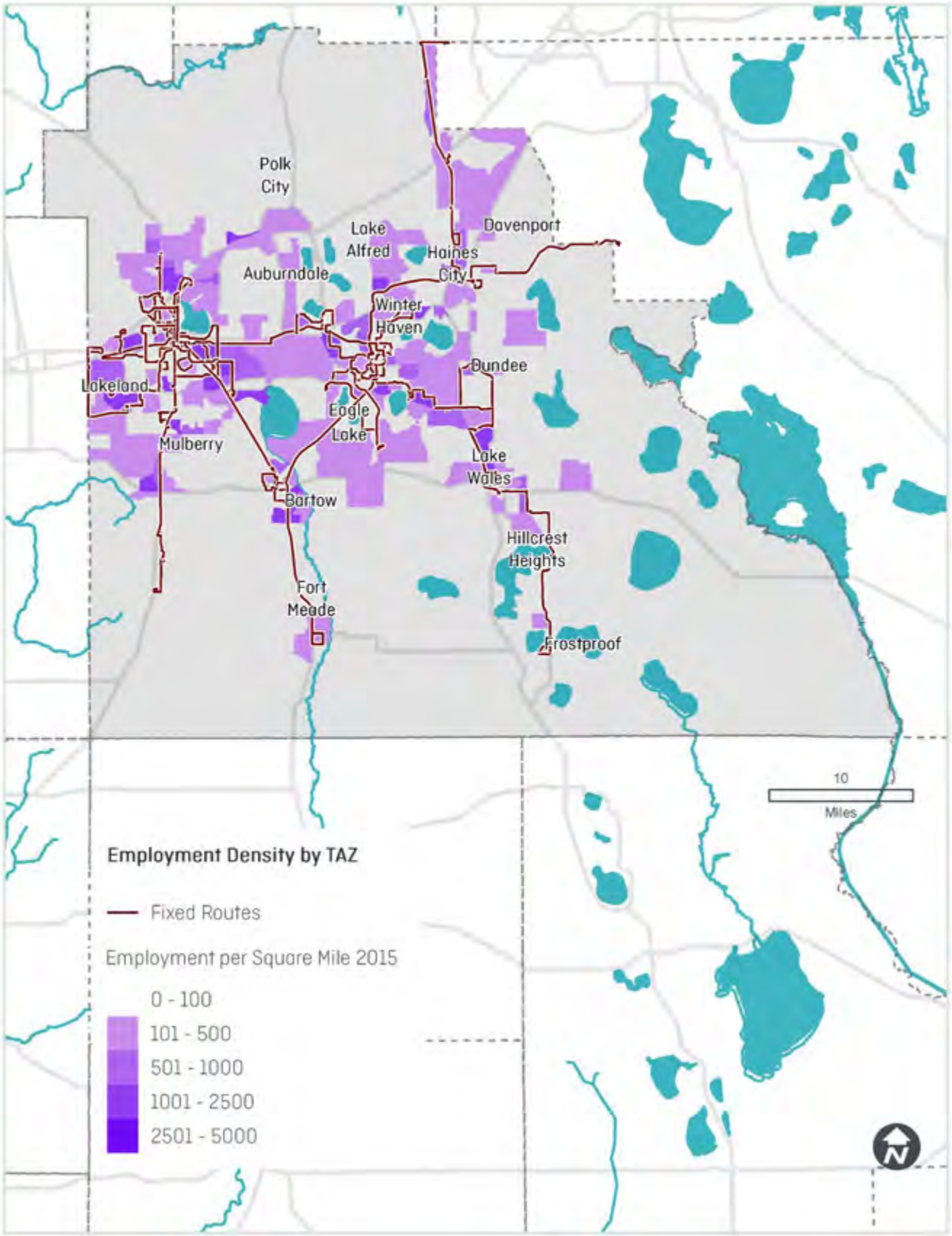


FIGURE 3-26: EMPLOYMENT DENSITY 2025

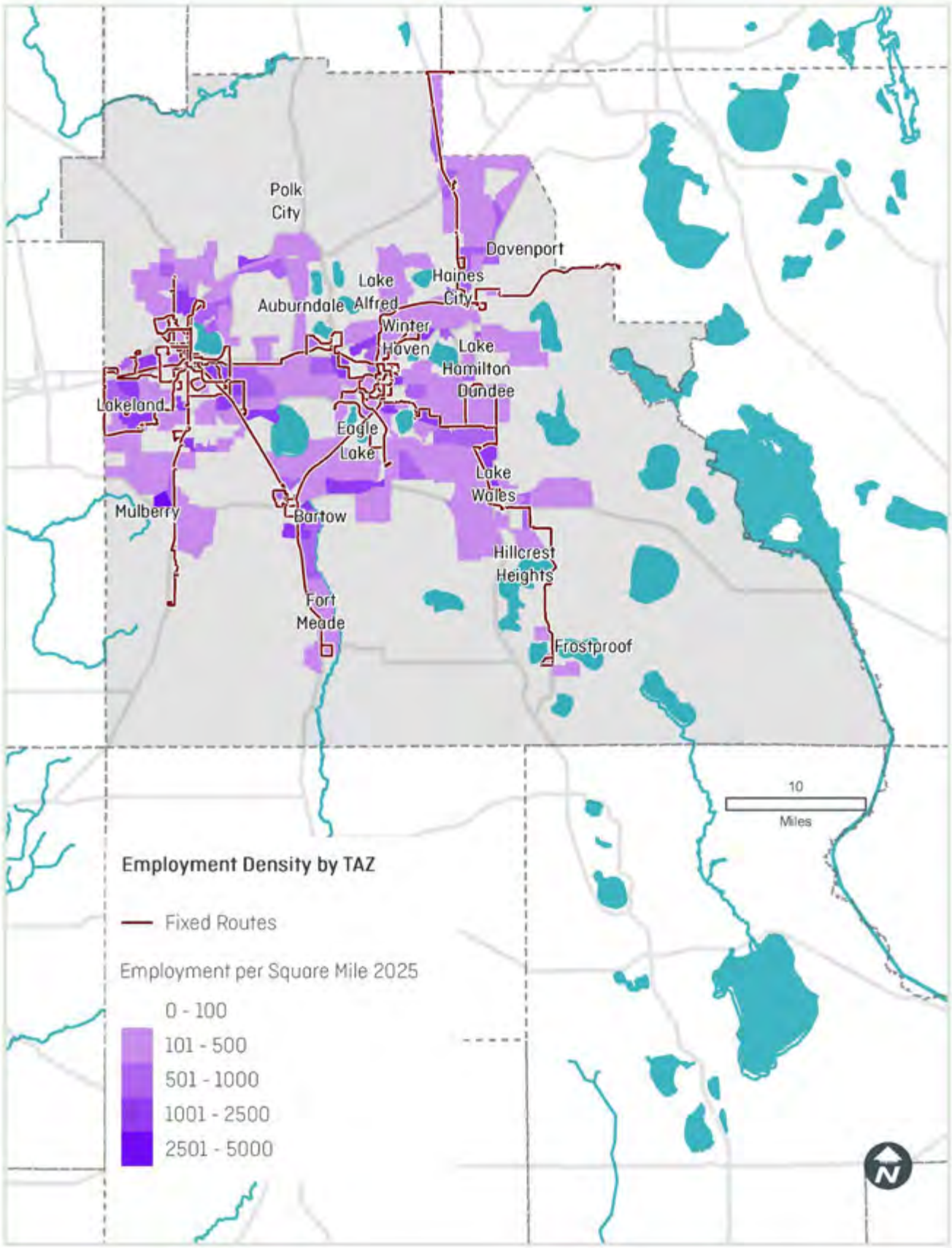


Figure 3-27 and Figure 3-28 show overall activity density in 2015 and 2025. Activity density is measured as population and employment per acre and is an important indicator of transit viability. There are well-established relationships between activity density and transit viability. For example, fixed route bus service is generally viable at an activity density of between 10 and 25 activities per square acre. The figures show those Traffic Assessment Zones (TAZs) that meet industry standards for the minimum density requirements to support LAMTD service provision. The limited number of TAZs that are above 10 activities per acre highlight the inherent difficulty of achieving high ridership numbers on Citrus Connection service. In order to provide equitable service, there are many locations where the density of population and/or employment is below what is generally considered adequate for successful transit provision.

Very few parts of Polk County have activity densities (population + employment) necessary to sustain fixed route transit

Compounding this problem of lack of activity density is the continued suburbanization of Polk County. Figure 3-27 through Figure 3-29 show the estimated proportion of population and employment within a quarter mile of fixed route service lines in 2015, 2020, and 2025. About a third of the population and half of the employment currently exist within the ¼ mile travel shed, both of which are projected to decline slightly through 2025. This decline, if real, would be a significant issue for LAMTD, as fewer riders will have easy access to transit.

FIGURE 3-27: ACTIVITY DENSITY 2015

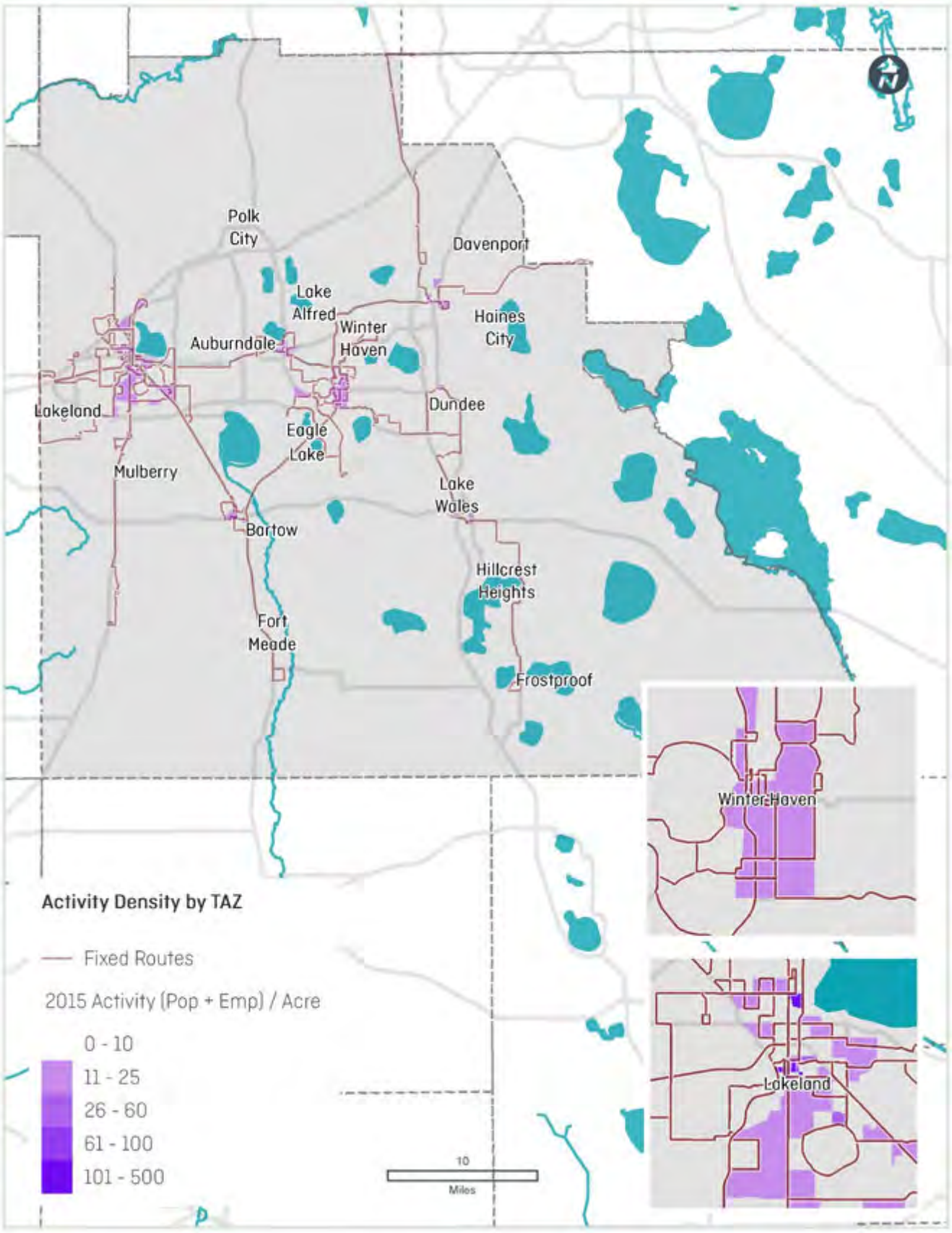


FIGURE 3-28: ACTIVITY DENSITY 2025

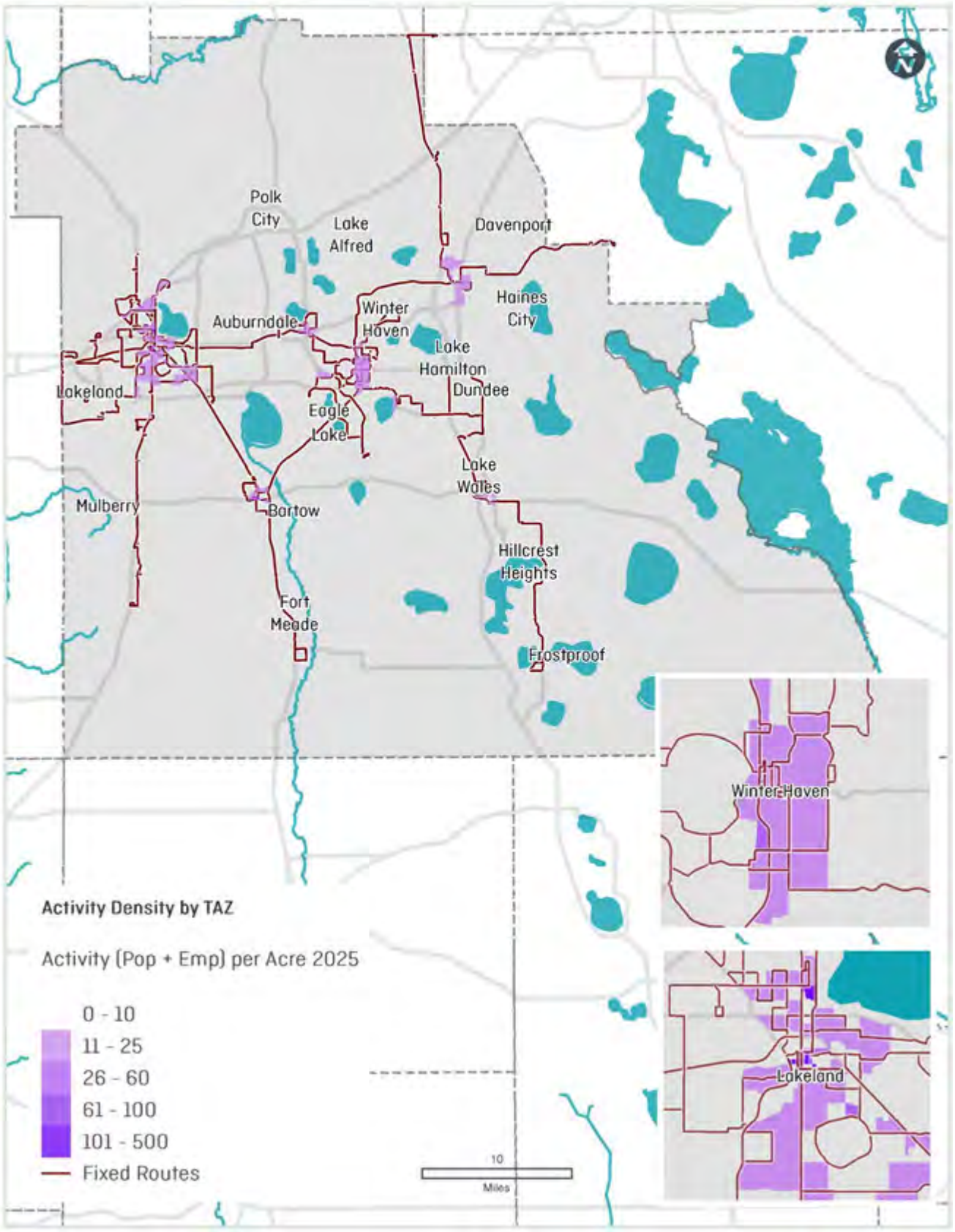
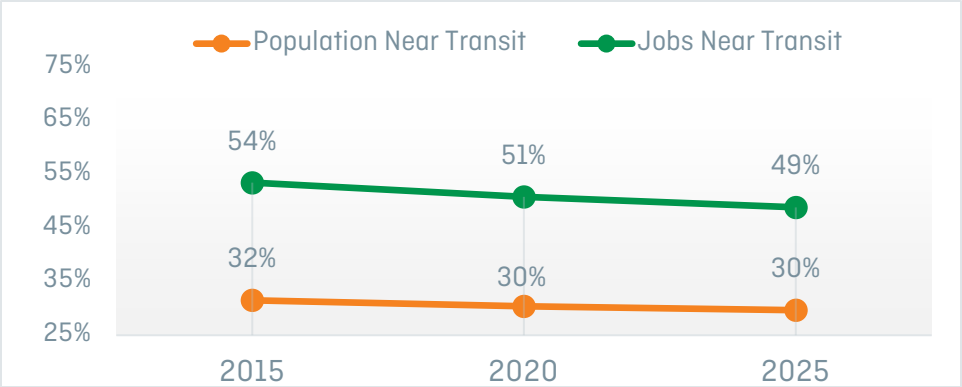


FIGURE 3-29: POPULATION AND EMPLOYMENT WITHIN 1/4 MILE OF TRANSIT



EXISTING TRANSIT SERVICE

LAMTD Consolidation

Transit services in Polk County were previously provided by three separate agencies – Lakeland Area Mass Transit (LAMTD), Winter Haven Area Transit (WHAT), and Polk County Transit System (PCTS). The fragmented approach limited the development of an effective and efficient countywide transit system. In 2007, the Polk Transit Authority (PTA) was created to oversee the consolidation of the three transit services. Through interlocal agreements, the PTA approved and adopted the countywide Polk Consolidated Transit Development Plan for all services/agencies.

Beginning October 1, 2015, the Polk County Board of County Commissioners (BoCC), the former administrator for WHAT service, contracted out all services to LAMTD. Following this, LAMTD became the Community Transportation Coordinator (CTC) for Polk County, designated by the Florida Commission for the Transportation Disadvantaged. These actions brought the delivery of all transit services under the umbrella of LAMTD, which now allows the opportunity to improve overall the efficiency of services throughout Polk County.

LAMTD administers and operates Citrus Connection. Figure 3-30 illustrates all the fixed route services within Polk County. Figure 3-31 provides further detail of ¼-mile and ¾-mile buffer service areas around fixed routes. The ¼-mile buffer represents the maximum distance that riders typically are willing to walk to get to a bus stop (also known as a walk shed). The ¾-mile buffer indicates the service area in which complementary ADA paratransit service must be provided.

Fixed Route Bus Service

Citrus Connection currently provides 24 fixed-route service lines in Polk County. An additional three routes within the county are paid for by Polk County and operated via a contract with LYNX (416, 427, and Neighborlink 603). Citrus Connection buses have a weekday service span from 5:45 a.m. to 7:15 p.m. Nine routes provide Saturday service (7:15 a.m. to 4:05 p.m.), and Route 30 in Winter Haven (Legoland) also runs on Sundays (8:15am – 3:10pm). Service frequencies are typically between 30 and 60 minutes. Citrus Connection currently manages a fleet of 41 buses as part of its fixed-route service.

Three routes provide fixed route connectivity between the county's urban hubs: Route 12 between Lakeland and Winter Haven, Route 22XW between Winter Haven and Bartow, and Route 22XL express service between Winter Haven and Lakeland. Circulator routes include routes 10 (Downtown Circulator), 25 (Bartow/ Fort Meade), 3 (Lakeland Hills Corridor), 33 (South Florida/ Carter Road Flex), 39 (Bradley Flex),

and 40/44 (Winter Haven Southside). LAMTD added two new routes in January 2017 – the 59X (County Line Express) and the 60 (Winter Haven Northeast).

FIGURE 3-30: FIXED ROUTE SERVICE 2017

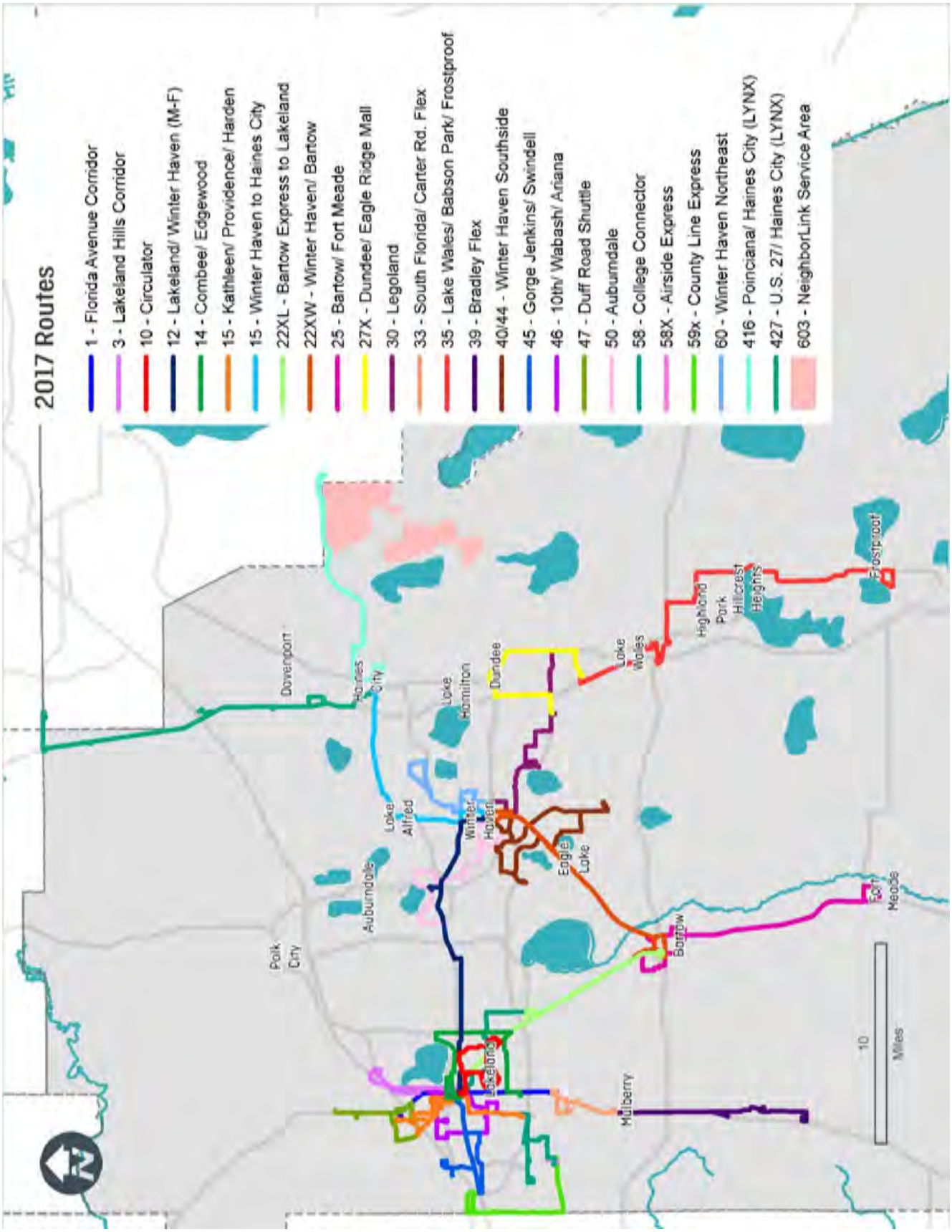


FIGURE 3-31: FIXED ROUTE TRAVEL SHEDS

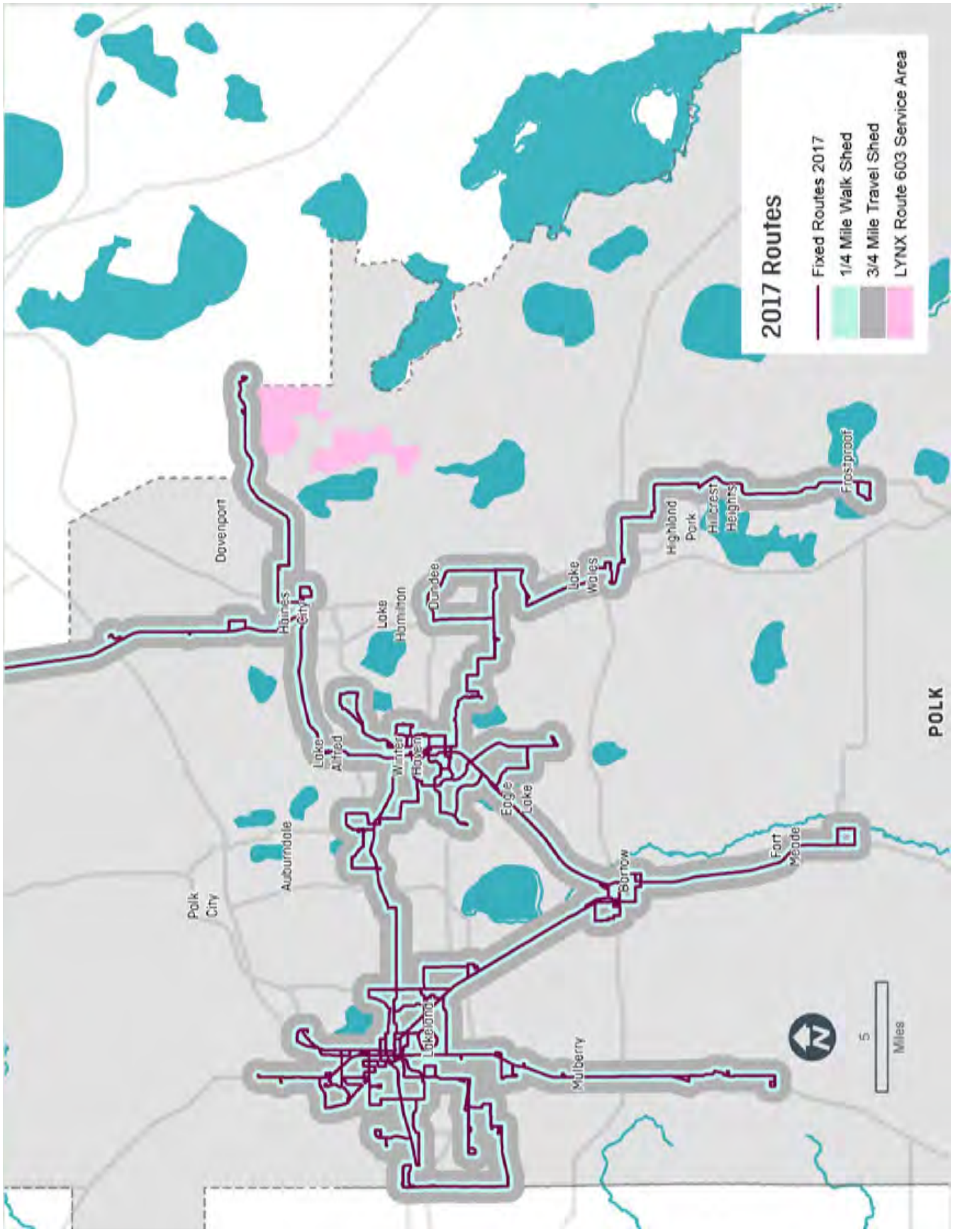


Table 3-13 shows service frequency and span for all routes. Table 3-14 includes FY 2015 route-by-route performance statistics for all Citrus Connection routes.

TABLE 3-13: FIXED ROUTE SERVICE SPANS

Route			Frequency					
			Weekday				Saturday	Sunday
Number	Description	Direction	AM Peak	Offpeak	PM Peak	Night		
1	Florida Ave	Northbound	:30	:30	:36	---	:30	---
1	Florida Ave	Southbound	:30	:30	:36	---	:28	---
10	Circulator	Circulator	:60	:60	:60	---	---	---
12	Lakeland/ WH	Eastbound	:60	:60	:60	:60	1:45	---
12	Lakeland/ WH	Westbound	:60	:60	:60	:60	1:45	---
14	Combee/ Edgewood	Northbound	:60	1:40	:60	---	---	---
14	Combee/ Edgewood	Southbound	:60	1:40	1:30	---	---	---
15	WH/ Haines City	Eastbound	:60	1:15	:60	:60	2:20	---
15	WH/ Haines City	Westbound	1:30	1:30	1:30	:60	2:20	---
15	Kathleen/Providence/Harden	Northbound	:60	:60	:60	---	---	---
15	Kathleen/Providence/Harden	Southbound	:60	:60	40	---	---	---
22XL	Bartow Express/ Lakeland	Northbound	:30	1:30	1:30	---	---	---
22XL	Bartow Express/ Lakeland	Southbound	1:30	1:30	:60	:60	---	---
22XW	WH/Bartow	Northbound	1:30	1:30	1:30	:60	2:20	---
22XW	WH/Bartow	Southbound	:60	1:15	:60	:60	2:20	---
25	Bartow/ Fort Meade	Circulator	:45	:45	:60	---	---	---
27X	Dundee/ Eagle Ridge Mall	Northbound	---	---	---	:60	---	---
27X	Dundee/ Eagle Ridge Mall	Southbound	:60	---	---	---	---	---
3	Lakeland Hills Corridor	Circulator	:45	:30	:60	---	---	---
30	Legoland	Eastbound	:60	:60	:60	:60	2:00	2:00
30	Legoland	Westbound	:60	:60	:60	:60	2:00	2:00
33	South Florida/ Carter Rd. Flex	Circulator	:30	:60	:20	---	---	---
35	Lake Wales/ Babson Park/ Frostproof	Northbound	:30	1:40	:60	:60	2:00	---
35	Lake Wales/ Babson Park/ Frostproof	Southbound	:30	1:40	1:30	---	2:00	---
39	Bradley Flex	Circulator	:60	:60	:60	---	---	---
40/44	Winter Haven Southside	Circulator	1:30	1:30	1:30	:60	3:00	---
416	Poinciana/ Haines City (LYNX)	Eastbound	---	1:30	:60	:60	---	---
416	Poinciana/ Haines City (LYNX)	Westbound	---	1:20	1:30	---	---	---
427	US 27/ Haines City (LYNX)	Northbound	1:30	1:40	:60	:60	---	---
427	US 27/ Haines City (LYNX)	Southbound	:60	1:40	1:30	---	---	---
45	Gorge Jenkins/ Swindell	Circulator	:60	:60	:60	:60	---	---
46	10th/ Wabash/ Ariana	Circulator	:60	:60	:60	---	---	---
47	Duff Road Shuttle	Circulator	:60	:60	:60	---	---	---
50	Auburndale	Circulator	1:30	1:30	1:30	:60	3:00	---
58	College Connector	Eastbound	:60	:60	:30	---	---	---
58	College Connector	Westbound	:20	:60	:30	---	---	---
58X	Airside Express	Circulator	:15	:17	:18	:16	---	---
59X	County Linke Express	Circulator	:60	3:00	:60	---	---	---
60	Winter Haven Northeast	Circulator	:60	:60	:60	:60	:60	---
603	Neighborlink (LYNX)	Circulator	1:30	2:00	1:30	---	2:00	---

TABLE 3-14: ROUTE BY ROUTE TBEST PERFORMACE STATISTICS (2015)

Route Name	Passenger Trips	Revenue Miles	Revenue Hours	Trips per Revenue Hour	Trips per Revenue Mile
Route 1	137,280	128,727.70	11,311.20	12.10	1.10
Route 3	91,000	57,032.70	4,093	22.20	1.60
Route 10	34,060	37,300	2,606.50	13.10	0.90
Route 12	70,616	124,834.10	5,944.90	11.90	0.60
Route 14	42,900	35,843.80	2,382.10	18.00	1.20
Route 15 WH/H	83,750	73,959.00	3,987.65	21.00	1.10
Route 15 K/P/H	83,750	73,959.00	3,987.65	21.00	1.10
Route 22XL	59,540	59,020.80	2,642.50	22.50	1.00
Route 22XW	43,888	69,781.00	2,767.10	15.90	0.60
Route 25	20,020	174,499.00	2,192.60	9.10	0.10
Route 27X	520	2,979.50	108.3	4.80	0.20
Route 30	83,616	127,493.60	6,673.90	12.50	0.70
Route 33	23,140	20,852.90	1,831.70	12.60	1.10
Route 35	36,920	93,526.40	3,476.00	10.60	0.40
Route 39	3,900	17,417.30	651.3	6.00	0.20
Route 45	56,680	56,855	2,810.80	20.20	1.00
Route 46	30,940	40,295.10	2,375.20	13.00	0.80
Route 47	29,640	29,963.00	1,953.80	15.20	1.00
Route 50	45,552	62,867.30	3,267.30	13.90	0.70
Route 58	57,460	90,649.70	4,424.60	13.00	0.60
Route 58X	4,160	23,114	4,196.80	1.00	0.20
Route 59X*	260	37,358.90	1,730.00	0.20	0.00
Route 60*	34,424	58,586.00	3,122.70	11.00	0.60
Route 416	5,980	33,086.70	1,366.20	4.40	0.20
Route 427	21,840	75,340.60	2,902.30	7.50	0.30
Route 603	17,576	61,610.90	4,107.70	4.30	0.30
Route 4044	29,900	61,024.00	3,298.90	9.10	0.50
Total	1,149,312	1,727,978.2	90,212.4		
Average				11.11	0.63

*TBEST estimates for routes introduced since 2015

PERFORMANCE & EVALUATION TRENDS

A trend analysis of critical performance indicators was conducted to examine the performance of LAMTD fixed-route services over time. Data was compiled from NTD reports for fiscal years 2011 to 2015, the most recent available years at the time of compilation. This analysis includes statistics and tables that present selected performance indicators and effectiveness and efficiency measures for the selected time period. Highlights of the trend analysis are presented below, and summary results are provided at the conclusion of this section. Three categories of indicators were analyzed for the performance evaluation and trend analysis:

- Performance Indicators – show quantity of service supply, passenger and fare revenue generation, and resource input.
- Effectiveness Measures – indicate the extent to which the service is effectively provided.
- Efficiency Measures – indicate the extent to which cost efficiency is achieved.

Data Limitations

The following performance trend and peer analysis follows the data collection and analysis guidelines stipulated by FDOT. In particular, data was collected from the approved Florida Transit Information System (FTIS) and National Transit Database (NTD), and analyzed for the five-year period from 2011 to 2015. However, there were several instances of questionable data, where major changes from one year to the next occurred without clear explanation. One possible reason for such changes could be the consolidation of three agencies during 2015-2016 NTD reporting year. Another could be the significant service reductions undertaken in that same year. However, these events do not account for wild swings in other years. In an attempt to confirm or remedy these data anomalies, LAMTD and the former Winter Haven Transit Authority (WHAT) performance data was provided by the Center for Urban Transportation Research (CUTR). The CUTR data too exhibited some data anomalies.

Due to these findings, longitudinal trends are provided below but will not be used as part of the development of alternatives. Instead, one recommendation for the 10-year implementation plan will be to put additional scrutiny on data collection and summarization in future years to rebuild a longitudinal dataset that can be used to make trend and forecast estimates in the future.

FIXED ROUTE TREND ANALYSIS

FTIS performance measures are provided for the 5-year period from 2011 to 2015. Percent change over time is provided to show whether each indicator is increasing or decreasing. Trend data is color coded to indicate whether the trend is positive or negative (green indicates a positive trend, red indicates a negative trend). Some indicators may see percent change decline, but are in fact a positive trend, and vice versa. For example, Total Operating Expense in Table 3-15 declined by 13.1% over 5 years, which is a positive trend, and thus indicated in green. The direction and size of the change between years is indicated by the size of the color bars across each row. Using the same example of Total Operating Expense in Table 3-15, a shorter bar in 2013 indicates that operating expenses were lowest during that year.

TABLE 3-15: GENERAL PERFORMANCE INDICATORS

General Performance Indicator	2011	2012	2013	2014	2015	% Change
Passenger Trips	1,453,470	1,104,769	1,224,636	1,511,349	1,355,697	-6.7%
Passenger Miles	7,579,856	5,760,849	6,385,735	8,905,713	8,045,245	6.1%
Revenue Miles	1,190,542	987,379	968,850	1,306,728	1,163,580	-2.3%
Vehicle Miles	1,223,238	1,046,543	1,029,484	1,368,647	1,244,144	1.7%
Total Operating Expense (Current $)	$ 7,395,165	$ 6,849,656	$ 6,050,994	$7,498,552	$ 6,424,382	-13.1%
Vehicles Operated in Maximum Service	23	22	22	32	27	17.4%

General Performance Indicators

- LAMTD performs well overall according to general performance indicators.
- Passenger miles increased by 6.1% and vehicle miles by 1.7%. Vehicles Operated in Maximum Service rose from 23 to 27 in 5 years.
- Operating expenses fell by 13.1% over the time period due to service contractions between 2014 and 2015.
- Passenger Trips declined (6.7%), as did revenue miles (2.3%).

TABLE 3-16: EFFECTIVENESS MEASURES

	2011	2012	2013	2014	2015	% Change
Service Supply						
Vehicles Miles per Capita	11.12	9.51	7.10	9.44	3.98	-64.2%
Service Consumption						
Passenger Trips per Capita	13.21	10.04	8.45	10.42	4.34	-67.1%
Passenger Trips per Revenue Miles	1.22	1.12	1.26	1.16	1.17	-4.1%
Passenger Trips per Revenue Hour	19.24	15.88	17.26	17.97	17.02	-11.5%
Quality of Service						
Average Age of Fleet (years)	9.37	7.71	7.87	8.90	9.33	-0.4%
Average Headway (minutes)	40.66	47.2	47.91	53.41	n/a	31.4%
Number of Vehicle System Failures	342	1,258	752	515	392	14.6%
Revenue Miles Between Failures	3,481	785	1,288	2,537	2,968	-14.7%
Availability						
Revenue Miles per Route Mile	4,846	4,019	4,039	3,500	3,293	-32.0%
Weekday Span of Service (in hours)	13.92	13.92	13.00	21.08	19.08	37.1%
Route Miles per Square Mile of Service Area	3.19	3.19	3.12	4.85	4.59	43.9%

Effectiveness Measures

- LAMTD service improved substantially in terms of availability. Weekday span of service grew by over 37% and Route Miles per Square Mile of Service Area grew by almost 44%.
- Service Supply and Service Consumption declined across the board between 2011 and 2015.
- Negative trends are also apparent for headways (which increased), and the number of revenue miles between failures, which decreased.

TABLE 3-17: EFFICIENCY MEASURES

	2011	2012	2013	2014	2015	% Change
Cost Efficiency						
Operating Expense Per Service Area Capita	$ 67.23	$62.27	$ 41.73	$ 51.71	na	na
Operating Expense Per Passenger Trip	$5.09	$6.20	$4.94	$4.96	$4.74	-6.9%
Operating Expense Per Passenger Mile	$0.98	$1.19	$0.95	$0.84	$0.80	-18.4%
Operating Expense Per Revenue Mile	$6.21	$6.94	$6.25	$5.74	$5.52	-11.1%
Operating Expense Per Revenue Hour	$97.91	$98.48	$85.29	$89.15	$80.65	-17.6%
Operating Ratios						
Farebox Recovery (%)	16.35	17.72	28.7	19.87	4.42	-73.0%
Vehicle Utilization						
Revenue Miles Per Vehicle Mile	0.97	0.94	0.94	0.95	0.94	-3.1%
Labor Productivity						
Revenue Hours Per Employee FTE	890.61	892.45	924.23	822.23	1,010.17	13.4%
Passenger Trips per Employee FTE	17,139	14,176	15,954	14,774	17,192	0.3%
Energy Utilization						
Vehicle Miles Per Gallon	4.35	3.57	4.43	6.82	4.67	7.4%
Fare						
Average Fare	$0.83	$1.10	$1.42	$0.99	$0.21	-74.7%

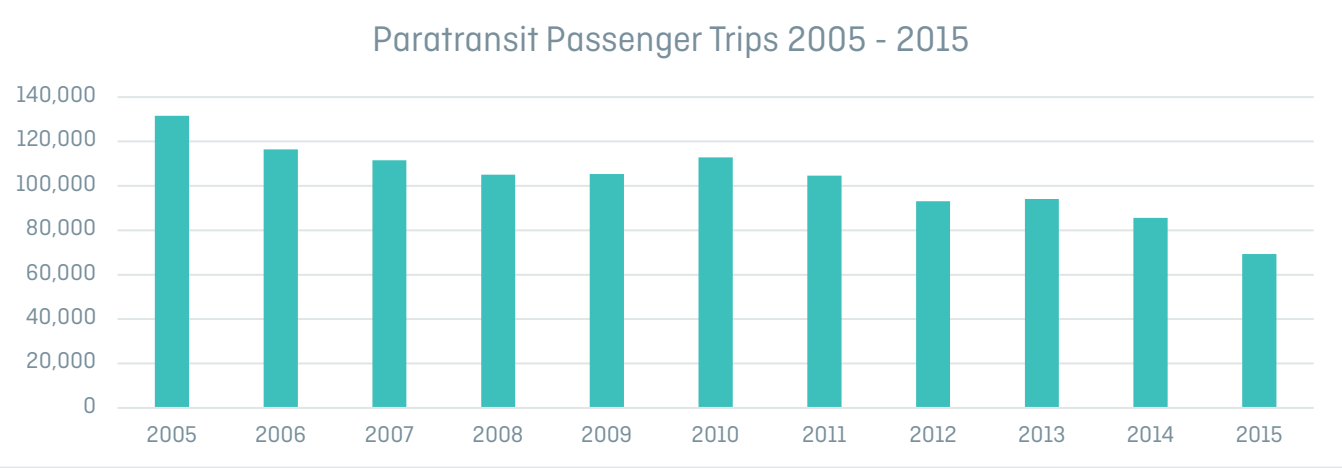
Efficiency Measures

- LAMTD continues to be an efficient service provider. Efficiency indicators trend positive for cost efficiency, labor productivity, and energy utilization.
- All indicators of operating expense fell over the 5-year period.
- Farebox Recovery may have fallen dramatically between 2014 and 2015, though missing farebox data on routes funded by LAMTD but served through contract by Lynx makes the 2015 estimate susceptible to underrepresentation.

Paratransit Service

In compliance with the Americans with Disabilities Act (ADA), paratransit bus service is provided to persons with disabilities who are unable to ride the fixed-route buses in the LAMTD service area. LAMTD Paratransit is a door-to-door, shared ride service providing transportation throughout the area. Every bus carries ADA certified lift-equipment and operators are available to provide boarding assistance. Paratransit operates six days a week and its hours are consistent with fixed route service. Paratransit reservations are taken from 8 AM to 5 PM weekdays and Saturday 8 AM to 4 PM. There is no ADA service on Sundays or on national holidays. LAMTD maintains a fleet of 40 Paratransit vehicles. One-way fare on Paratransit is $2. Paratransit bus passes are available for pre-purchase as single-use pass or multi-ride pass and may be purchased with cash, money order, debit or charge cards at the offices, by phone, by mail or online. Approved Personal Care Attendants (PCA) ride for free. Table 3-18 shows Paratransit ridership from 2005 to year 2015. Table 3-19 shows the 5-year trend analysis for demand respond service. The decline in ridership and increase in expenses across the board is consistent with system wide trends due to fiscal constraints.

TABLE 3-18: PARATRANSIT TRIPS



DEMAND RESPONSE TREND ANALYSIS

TABLE 3-19: DEMAND RESPONSE TREND ANALYSIS

Selected Performance Indicator	2011	2012	2013	2014	2015	% Change
Performance Measures						
Passenger Trips	104,565	93,046	94,053	85,567	69,268	-34%
Passenger Miles	719,071	580,920	577,004	542,095	413,470	-42%
Revenue Miles	367,373	319,132	364,242	366,923	267,390	-27%
Vehicle Miles	405,800	351,548	390,129	399,964	293,055	-28%
Total Operating Expense (Current $)	$2,251,227	$1,626,734	$ 2,479,874	$ 2,681,822	$ 2,838,456	26%
Effectiveness Measures						
Passenger Trips per Revenue Miles	0.28	0.29	0.26	0.23	0.26	-7%
Passenger Trips per Revenue Hour	3.38	3.34	3.02	2.93	2.91	-14%
Efficiency Measures						
Operating Expense Per Passenger Trip	$ 21.53	$ 17.48	$ 26.37	$ 31.34	$ 40.98	90%
Operating Expense Per Passenger Mile	$ 3.13	$ 2.80	$ 4.30	$ 4.95	$ 6.87	119%
Operating Expense Per Revenue Mile	$ 6.13	$ 5.10	$ 6.81	$ 7.31	$ 10.62	73%
Operating Expense Per Revenue Hour	$ 72.83	$ 58.33	$ 79.71	$ 91.96	$ 119.10	64%

PEER REVIEW ANALYSIS

The peer review process was performed for all the fixed-route bus services provided in Polk County, as well as for all the ADA (demand response) services. The fixed-route peer review and the ADA service peer review were conducted using 2015 NTD information for all selected peers. Selected performance indicators, effectiveness measures, and efficiency measures are provided throughout this section in tabular and graphical formats to illustrate the performance of LAMTD relative to its various peers. For each selected indicator and measure, the tables provide the LAMTD value, the minimum value among the peer group, the maximum value among the peer group, the mean of the peer group, and the percent that LAMTD's values are away from the mean.

FIXED-ROUTE SERVICE PEER SELECTION PROCESS

The fixed-route peer selection was conducted using the 2015 Florida Transit Information System (FTIS). Once the peers were selected, 2015 NTD data were collected for the peer review analyses. Peers were identified through an objective assessment of nine standard variables in the NTD:

- Geography (southeastern United States)
- Service Area Population
- Service Area Size (square miles)
- Service Area Population Density
- Operating Expense
- Revenue Miles
- Passenger Trips
- Average Speed
- Vehicles Operated in Maximum Service

First, the peer group selection was based on geographic location; the states included were Texas, Louisiana, Arkansas, Mississippi, Alabama, Tennessee, Kentucky, Virginia, North Carolina, South Carolina, Georgia, and Florida. Fixed-route systems operating in these southeastern states were identified. The systems meeting this criterion were analyzed based on the eight remaining variables. The only exception is Mountain Metropolitan Transit (MMT) in Colorado; this transit agency was included in the 2012 peer group at the request of LAMTD and PCTS/WHAT staff, and is therefore included in the most recent iteration of the peer group analysis. Figure 3-32 illustrates the iterative approach used during peer selection that provided a blend of NTD peers and input from the agency.

A potential peer received 1 point for each measure for which its value was within ±10 percent of LAMTD's performance value. One-half point was given for each measure that fell within ±20 percent of LAMTD's value. Three of the measures, however, were the primary measures of comparison. These included service area population density, revenue miles, and vehicles operated in maximum service. To give weight to systems that are close to LAMTD's value for these three variables, one-half point extra was awarded to peers falling within plus or minus 10 percent of LAMTD's value. After the total scores were determined, the potential peers were ranked in descending order. Based on the total scores each system received, and additional input from LAMTD, 10 peer systems were selected.

Table 3-20 presents the transit systems selected for the consolidated peer review analysis.

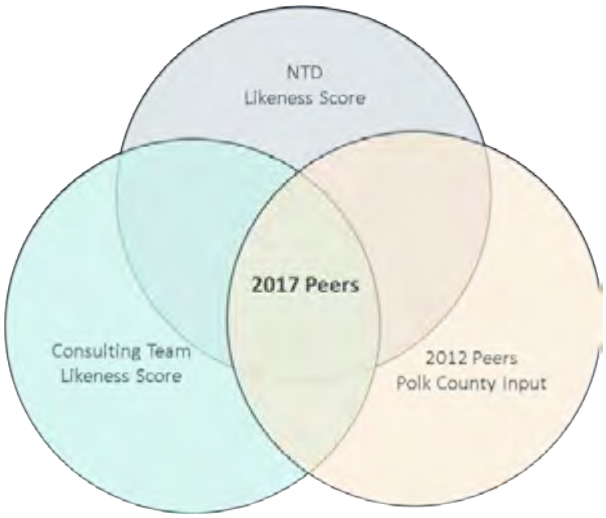


FIGURE 3-32: PEER SELECTION METHOD

TABLE 3-20: SELECTED PEER SYSTEMS

SYSTEM	LOCATION
Lakeland Area Mass Transit (LAMTD)	Polk County, FL
Escambia County Area Transit	Pensacola, FL
City of Tallahassee	Tallahassee, FL
SunTran	Ocala, FL
Manatee County Area Transit	Bradenton, FL
Fayetteville Area System of Transit	Fayetteville, NC
Cape Fear Public Transportation Authority	Wilmington, FL
Waco Transit System, Inc.	Waco, TX
Shreveport Area Transit System	Shreveport, LA
Mountain Metropolitan Transit	Colorado Springs, CO

The peer review analysis was conducted using 2015 NTD data available in the FTIS and at FTA's NTD database website, http://www.ntdprogram.gov. Selected performance indicators, effectiveness measures, and efficiency measures are summarized below.

TABLE 3-21: FIXED ROUTE PEER ANALYSIS

Values	LAMTD	Peer Group Min	Peer Group Max	Peer Group Mean	LAMTD % from Mean	Indicator
Performance Indicators						
Service Area Population	312,388	64,655	527,294	254,626	23%	o
Service Area Size (Square Miles)	77	55	743	192	-60%	o
Service Area Population Density	4,057	434	4,512	1,970	106%	o
Passenger Trips	1,355,697	417,920	3,732,277	1,875,979	-28%	-
Revenue Miles	1,163,580	492,050	2,626,563	1,460,649	-20%	-
Total Operating Expense	**$ 2,816,336**	**$ 1,081,125**	**$ 6,052,519**	**$ 3,499,512**	**-20%**	**+**
Vehicles Operated in Maximum Service	27	6	70	33	-17%	-
Effectiveness Measures						
Vehicle Miles Per Service Area Capita	3.98	3.98	12.81	6.60	-40%	-
Passenger Trips Per Revenue Mile	1.17	0.85	1.85	1.24	-6%	-
Average Age of Fleet (in years)	9.33	5.04	9.33	7.10	31%	-
Efficiency Measures						
Operating Expense Per Service Area Capita	**$ 9.02**	**$ 8.67**	**$ 37.29**	**$ 15.59**	**-42%**	**+**
Operating Expense Per Passenger Trip	$ 4.74	$ 3.53	$ 5.90	$ 4.50	5%	-
Operating Expense Per Revenue Mile	$ 5.52	$ 4.56	$ 6.85	$ 5.47	1%	-
Farebox Recovery (%)	4.43	4.43	34.35	17.53	-75%	-
Revenue Miles Per Vehicle Mile	0.94	0.94	0.98	0.962	-2%	-
Passenger Trips Per Employee FTE	17,192	14,596	100,216	29,655	-42%	-
Average Fare	$ 0.21	$ 0.21	$ 1.41	$ 0.83	-75%	o

o neutral relationship
- negative relationship
+ positive relationship

The findings of the fixed route peer analysis show several indicators where LAMTD performance is either consistent with or better than its peers. Indicators related to operating expense are particularly strong. However, several efficiency measures are well below peers, including farebox recovery ratio and passenger trips per employee. It should be noted that the farebox reported does not include the routes operated in the northeast portion of Polk County that are operated by Lynx through contract with the transit agency.

TABLE 3-22: DEMAND RESPONSE PEER ANALYSIS

Values	LAMTD	Peer Group Min	Peer Group Max	Peer Group Mean	LAMTD % from Mean	Indicator
Performace Indicators						
Service Area Population	312,388	64,655	527,294	254,626	23%	o
Service Area Size (Square Miles)	77	55	743	192	-60%	o
Service Area Population Density	4,057	434	4,512	1,970	106%	o
Passenger Trips	69,268	17,143	206,580	77,985	-11%	-
Revenue Miles	267,390	95,702	1,346,984	544,343	-51%	-
Total Operating Expense	$ 2,838,456.00	$ 500,422.00	$ 5,931,415.00	$ 2,276,594.30	25%	-
Vehicles Operated in Maximum Service	11	2	86	23	-51%	-
Effectiveness Measures						
Vehicle Miles Per Service Area Capita	0.94	0.94	3.43	2.40	-61%	-
Passenger Trips Per Revenue Mile	**0.26**	**0.10**	**0.26**	**0.15**	**71%**	**+**
Average Age of Fleet (in years)	5.40	2.04	6.36	4.04	34%	-
Efficiency Measures						
Operating Expense Per Service Area Capita	$ 9.09	$ 5.00	$ 14.53	$ 8.86	3%	-
Operating Expense Per Passenger Trip	$ 40.98	$ 22.17	$ 40.98	$ 29.06	41%	-
Operating Expense Per Revenue Mile	$ 10.62	$ 2.58	$ 10.62	$ 4.57	132%	-
Farebox Recovery (%)	4.44	4.44	52.58	12.12	-63%	-
Revenue Miles Per Vehicle Mile	**0.91**	**0.75**	**0.97**	**0.89**	**2%**	**+**
Passenger Trips Per Employee FTE	1,921	1,868	3,048	2,381	-19%	-
Average Fare	$ 1.82	$ 1.28	$ 11.66	$ 3.12	-42%	o

o neutral relationship
- negative relationship
+ positive relationship

The findings of the demand response peer analysis show strength in effectiveness measures relative to peers, including passenger trips per revenue mile and per employee, but higher operating expenses than peers, likely reflecting the large geographic scope of LAMTD demand response service.

SECURITY & SAFETY STANDARDS

Security and safety data from 2011 to 2015 was collected from FTIS. The data show general stability in both incidents and injuries. A one-year spike in incidents and injuries in 2013 is the only anomaly in an otherwise steady period of vehicular safety that does not suggest the need for significant changes in LAMTD safety or security policies and procedures.

TABLE 3-23: 5-YEAR SAFETY AND SECURITY TRENDS

	2011	2012	2013	2014	2015	Total
Incidents						
Total Incidents	4	2	5	2	3	**16**
Collision	1	0	2	1	0	**4**
Fire	0	0	0	0	0	**0**
Security	0	0	0	0	0	**0**
Not Otherwise Classified	3	2	3	1	3	**12**
Injuries						
Total Injuries	4	2	10	2	3	**21**
Passenger	3	1	5	1	0	**10**
Employee	1	0	1	0	0	**2**
Rev. Fac. Occupant	0	1	3	0	3	**7**
Other:						
Pedestrian in Crossing	0	0	0	1	0	**1**
Other Vehicle Occupant	0	0	1	0	0	**1**

Ten-Year Annual Ridership

2026 TRAVEL DEMAND TBEST MODELING

Polk County ridership forecasts were prepared using the FDOT-approved transit demand forecasting tool, Transit Boardings Estimation and Simulation Tool (TBEST). TBEST is a comprehensive transit analysis and ridership forecasting model capable of simulating travel demand at the individual route level. The software was designed to provide near- and mid-term forecasts of transit ridership consistent with the needs of transit operational planning and TDP development. In producing model outputs, TBEST also considers the following factors:

- Transit network connectivity – the level of connectivity between routes within the bus network; the greater the connectivity between bus routes, the more efficient the bus service becomes.
- Spatial and temporal accessibility – service frequency and the distance between stops; the larger the physical distance between potential bus riders and bus stops, the lower the level of service utilization; similarly, less frequent service is perceived as being less reliable and utilization decreases.
- Time-of-day variations – accommodates peak-period travel patterns by rewarding peak service periods with greater service utilization forecasts.
- Route competition and route complementary – accounts for competition between routes; routes connecting to the same destinations or anchor points or that travel on common corridors, experience decreases in service utilization; conversely, routes that are synchronized and support each other in terms of schedule and service to major destinations or transfer locations benefit from that complementary relationship.

Using FDOT-approved software, transit ridership on existing Citrus Connection routes was estimated to grow about 7% over the next 10 years.

The first task in updating the Polk County network in TBEST involved collecting service data from transit agency staff. Data required to update the Polk County network included the following:

- Bus schedules with time points and route map;
- Operating characteristics for bus transit routes, including route type, headways, route length, days of service, service span, and fares;
- Observed average daily ridership by route;
- Socioeconomic data in GIS and tabular formats; and
- GIS bus stop and route layers.

For TBEST modeling as part of the 2017 MyRide TDP, the most recent version of the modeling software, TBEST Version 4.2.1 was used.

MODEL INPUTS, ASSUMPTIONS, AND LIMITATIONS

TBEST uses various data as model inputs, including transit networks, demographic data, and special ridership generators. Further detail on these inputs and the assumptions made in modeling the Polk County system in TBEST are presented in this section. It should be noted, however, that the model is not interactive with roadway network conditions. Therefore, ridership forecasts will not show direct sensitivity to changes in the roadway traffic conditions or speeds.

Transit Network

The transit route network for all Polk County routes was updated to reflect the most recent, existing schedules for routes currently operating in 2015, the validation year for the model. The transit network in TBEST required various steps to reflect the current route alignments and service characteristics in Polk County, including the following:

1. Download the Polk County transit system distribution file and loading it into the TBEST software.
2. Create the Polk County validation scenario.
3. Update InfoUSA data to 2015.
4. Enter observed average daily ridership.

Demographic Data

The demographics, including population and employment, used as the base input for the TBEST model were derived from the 2010 Census and 2015 InfoUSA spatial and tabular databases. The model uses a census block-level personal geodatabase as the format for spatial distribution of population data. TBEST uses a socioeconomic data growth function to project population and employment data. A population growth rate and an employment growth rate were interpolated using 2040 TAZ forecasts developed for the Polk County LRTP. As indicated previously, as applied, the growth rates do not reflect fluctuating economic conditions as experienced in real time, but one limitation of TBEST is that population and employment data are hardcoded into the model and cannot be modified by end-users.

Special Generators

Special generators and transfer points in Polk County were determined to evaluate locations with opportunities for high ridership. Special generators include locations such as:

- Auburndale Civic Center;
- Eagle Ridge Mall;
- Florida Southern College;
- Lakeland Linder Regional Airport;
- Lakeland Square Mall;
- Polk State College;
- Legoland;
- Lake Miriam Shopping Center; and
- Walmart Supercenter at Poinciana.

Transfer stations include the following:

- Lakeland Downtown Terminal; and
- Winter Haven Terminal.

TBEST Modeling Results

This section includes a description of the TBEST model run and summarizes the ridership forecasts produced by TBEST. It is important to keep in mind that while TBEST is an important tool for evaluating improvements to existing and future transit services, model outputs do not account for latent demand for transit that could yield significantly higher ridership, and, correspondingly, model outputs may overestimate demand in isolated cases. In addition, TBEST cannot display sensitivities to external factors such as an improved marketing and advertising program, changes in pricing service for customers, and other local conditions. Furthermore, although TBEST provides ridership projections at the route and bus stop levels, its strength lies more in its ability to facilitate relative comparisons of ridership productivity. As a result, model outputs are not absolute ridership projections, but rather provide comparative evaluations for actual service implementation decisions, effectively serving as a no-build ridership growth scenario that identifies ridership increases that will occur as long as service remains the same over a 10-year period.

Using the inputs and assumptions described in this document, the model was successfully validated. The validation process uses observed ridership data and socioeconomic data to check for reasonableness and sensitivity within the model. Using the validated model, the 2017 and 2026 scenarios were created. Both scenarios represent the existing fixed-route system without any modifications. A model run was performed in each scenario, and the results are described in Table 3-24. Table 3-24 shows the projected number of average daily riders by route in 2026 and ridership growth rates from 2017 to 2026 derived from TBEST.

According to TBEST, average daily weekday ridership is expected to increase 6.9 percent (from 3,843 to 4,107 average daily riders) by 2026. Ridership on three routes is forecasted to grow by more than 10 percent. Fifteen additional routes are forecasted to grow between 5 and 10 percent during the 10-year time period.

TABLE 3-24: AVERAGE WEEKDAY RIDERSHIP

Route Name	2017	2026	% Change 2017 - 2026
Route 1	472	486	3%
Route 3	310	349	12.60%
Route 10	120	128	6.70%
Route 12	218	237	8.70%
Route 14	152	158	3.90%
Route 15 K/P/H	233	250	0.1%
Route 15 WH/H	293	320	0.1%
Route 22XL	221	229	3.60%
Route 22XW	121	126	4.10%
Route 25	77	83	7.80%
Route 27X	2	2	0%
Route 30	272	294	8.10%
Route 33	91	97	6.60%
Route 35	127	138	8.70%
Route 39	15	17	13.30%
Route 45	204	216	5.90%
Route 46	110	120	9.10%
Route 47	113	121	7.10%
Route 50	130	139	6.90%
Route 58	203	212	4.40%
Route 58X	16	17	6.20%
Route 416 (LYNX)	24	25	4.20%
Route 427 (LYNX)	92	100	8.70%
Route 4044	79	83	5.10%
Route 59X	1	1	0%
Route 60	88	97	10.20%
Route 603 (LYNX)	59	62	5.10%
Totals	3,843	4,107	6.90%

Implications

Based on the TBEST results shown, maintaining the status quo will result in small increases in ridership. To increase the market share for transit, service expansion will need to occur.

Innovations & Trends

As part of the TDP, a series of technical memoranda were undertaken to assess new technologies and trends in operations, cost-efficiency, revenue generation, and ridership generation. Appendix B includes a review of current innovations in controlling costs, increasing revenue and attracting new ridership. Appendix C looks in depth at relevant technological innovations that may be adopted in the TDP's 10-year timeframe.

The primary finding of the costs, revenue, and ridership innovations memorandum was that LAMTD is already performing several of the innovations and plans identified as best practice, but that continued efforts are worthwhile on several fronts, including the following:

- Continued promotion of the Universal Access Program;
- Continued promotion of the Community Bus Shelter Program;
- Continued use of FDOT excess toll revenues to match federal capital programs;
- Initiation of transit travel training and promotion to community groups;
- Development of even more aggressive advertising sales;
- Identifying paid naming opportunities for LAMTD facilities and services;
- Consideration by Polk County and its municipalities of a multimodal mobility fee on new development;
- Efforts to control insurance costs; and
- Encouragement of local governments to continue to invest in sidewalks that enhance access to transit services.

As noted, LAMTD's innovative management team is already working on several of the opportunities identified and other innovations will be advanced by LAMTD management in the near future.

As detailed in the technological assessment memorandum (Appendix C), technological change is the wave of the future and transit operations will be a full participant. LAMTD has already taken steps to implement several technological innovations identified. Emerging technologies that will be the most relevant and could be pursued by LAMTD include:

- Strong pursuit of transit signal priority systems on major LAMTD service routes;
- Consideration of alternative fuel vehicles, based on their life cycle cost features, as current fleet vehicles are replaced;
- Implementation of electronic touch card technology as a primary method of fare payment;
- Implementation of real time GPS-based smart phone applications;
- Integration of trip planning capabilities into the LAMTD passenger information system; and
- Adding on-board wi-fi and charging capabilities to LAMTD vehicles.

Moving forward with these technological applications will ensure LAMTD is keeping pace with state of the art practices in the transit industry.

CHAPTER 4: MISSION AND GOALS

CHAPTER SUMMARY

INTENT

Present the vision, mission, goals, and objectives that will shape the future of LAMTD

FINDINGS

LAMTD has four key objectives, each of which can be achieved through targeted indicators and strategic actions. The objectives include:

- Safety Objective
- Livability Objective
- Mobility Objective
- Economic Objective

IMPLICATIONS

To fulfil the key objectives, LAMTD will focus on three strategic actions:

1. Developing new ridership markets.
2. Increasing marketing and public engagement.
3. Pursuing performance standards that prioritize safety and efficiency.

CHAPTER 4: MISSION AND GOALS

Chapter 4 provides the vision, mission, goals and objectives that drive LAMTD. This chapter serves as the foundation of the TDP by outlining the agency's vision for the mobility services delivered to Polk County, and the necessary goals and objectives. The goals and objectives serve as the roadmap for internal and external actions and initiatives that must be undertaken in order for the organization to reach its ideal future. Goals, objectives, and strategies are determined by assessing the existing transit conditions in the county, identifying gaps and issues, and using the vision to determine how best to address the gaps and issues.

Core Values

1. Safe and reliable transportation should be available to all regardless of their age, ability or social status.
2. Transportation is a part of the fabric of our community. Transportation projects and services should support vibrant communities and our vision for the future.
3. The best plans come from community collaboration. Leveraged resources go farther.

Vision

"Effectively connecting people with their world through expanded, environmentally-friendly service with full support of the communities we serve."

Mission

"We strive to be a superior provider of transportation services that contribute to the economic growth and quality of life for the communities we serve."

Goal

"Develop and maintain a public transportation system to provide safe travel for all users which supports livable communities and economic activity."

Objectives

SAFETY OBJECTIVE

Safe and secure travel conditions on public transportation.

Target: Maintain zero traffic-related fatalities on public transportation system.
Target: Annually reduce injuries and accidents/incidents on public transportation system.

Strategy and Action: As part of the Transit Development Plan update, document the current safety and security of public transportation services and identify best safety and security practices for implementation as warranted.

LIVABILITY OBJECTIVE

Provide travel options for persons of all ages and abilities.

Target: Overall average Transit Connectivity Index score of 175 for Polk County Census block groups.
Target: 75% of senior residents (age 65+) with high or moderate access to fixed-route transit services based on the Transit Connectivity Index.

Strategy and Action:

1. Support requirements for new development that place emphasis on the provision of complete streets, connectivity and access to transit.
2. Participate in the development of community strategies to support aging in place and senior mobility.
3. Provide transportation infrastructure and services that support livable communities and ensure mobility for all residents.

MOBILITY OBJECTIVE

Provide transportation options for intercity and local travel.

Target: Provide fixed-route transit service to all municipalities in Polk County.

Strategy and Action:

1. Evaluate public transportation options for intercity travel as part of the Transit Development Plan.
2. As part of the Transit Development Plan update, document current public transportation options for intercity travel and identify opportunities for intercity and regional connections including feeder bus service to the Poinciana SunRail station.

ECONOMIC OBJECTIVE

Provide transportation infrastructure and services that support economic vitality and job creation.

Strategy and Action:

1. Focus on developing new ridership markets (economic growth, market-driven, outside of the traditional public transportation market segment).
2. The transit agency shall initiate and partner in programs to educate the community on the need for and the value of public transportation. These efforts will include community forums, transit summits, public meetings and regular updates to local government and other stakeholders.
3. The transit agency will make the best use of existing resources to provide cost-efficient services and be a good steward of public resources. As part of a continuing commitment to the safe and cost-effective delivery of service, a set of Performance Standards will be used to evaluate said standards on an annual basis.

TABLE 4-1: PERFORMANCE STATISTICS

Area of Evaluation	Performance Standard
Ridership	Achieve ridership of 15 passengers per hour on fixed-routes in operation more than 5 years.
Ridership	Achieve ridership of 10 passengers per hour on fixed-routes in operation less than 5 years.
"On-Time" Performance	Achieve an "on-time" performance rating of 90% at the route and system level.
Accident Rate	Less than 2 accidents per 100,000 miles of revenue service.
Spare Ratio	Maintain a spare ratio of 20% for fixed-route service.
Administrative Cost	Hold administrative cost to less than 20% of total operating cost.
Maintenance Costs	Hold maintenance cost to less than 20% of total operating cost.
Marketing	Allocate at least 2% of total operating budget for advertising and promotion of the TDP and initiatives.
Operating Ratio	Achieve an operating ratio (farebox revenue/total operating expenses) of at least 20%.
Implement Green Initiatives	Where appropriate, consider potential to transition to alternative fuel vehicles for economic and environmental benefits and for reducing carbon emissions and fossil fuels.

CHAPTER 5: NEEDS AND ALTERNATIVES

CHAPTER SUMMARY

INTENT

Present the development and evaluation of transit service improvements for the 2017 – 2026 planning horizon.

FINDINGS

In a fiscally constrained transit environment the highest priority routes include:

22XL – Bartow/ Lakeland
12 – Lakeland/Winter Haven
3 – Lakeland Hills Corridor
60 – Winter Haven Northeast
14 – Combee/Edgewood
58 – College Connector
30 - Legoland
22XW – Winter Haven/ Bartow
33 – South Florida/ Carter Road
15 – Winter Haven - Haines
15 – Kathleen/ Providence/ Harden
1 – Florida Avenue
427 – LYNX US 27/ Haines City

New routes proposed include:

Polk City/ Winter Haven
Fixed Route Service

Winter Haven / Poinciana SunRail
Express Feeder Service

IMPLICATIONS

The needs assessment and alternatives evaluation is used to build a fiscally responsible, context specific 10-year implementation plan [Chapter 6].

CHAPTER 5: NEEDS AND ALTERNATIVES

Summary and Analysis of Findings

This chapter presents the development and evaluation of transit service improvements for the 2017–2026 Polk TDP. The development of service improvement alternatives began with a needs assessment to determine which routes should be prioritized for intervention over the next ten years. The needs assessment was built using an analysis of existing conditions outlined in the situation appraisal, discussions with local agency staff, and feedback received through public outreach efforts. The chosen routes were ranked based on a weighting method that included both quantitative and qualitative measures (Appendix E). The findings of this ranking method guide the implementation timeline. The final list of alternatives consists of service improvements to 13 existing routes, and service expansion in the form of 2 new routes. Attention was paid to the option of providing feeder service to the future Poinciana SunRail stop, which is slated to open in 2019.

Needs Assessment

A needs assessment was conducted to determine which improvements to implement over the 10-year span of the 2017 TDP. The needs assessment took the form of a qualitative gap analysis. The analysis identified those routes that are priorities for intervention, and financially responsible interventions within a fiscally constrained transit environment. A set of evaluation criteria was built to understand which routes:

i. Are a priority for LAMTD or Polk TPO staff, as well as the public;
ii. Serve high transit demand areas and have high ridership; and
iii. Are productive, efficient routes that can be improved in a fiscally responsible way.

Table 5-1 provides an outline of the qualitative needs assessment model. Detailed descriptions of each category and measure are provided below.

TABLE 5-1: NEEDS ASSESSMENT AND ALTERNATIVES EVALUATION SUMMARY

Category	Criteria	Measure	Priority
Local Input	Staff Input	Identified by LAMTD or Polk TPO Staff as a priority	High
		Identified by LAMTD or Polk TPO Staff as infeasible based on prior study	High
	Public Outreach	Identified by the public as a priority	Medium
	Policy & Planning Environment	Identified as a priority in local policies or plans	Medium
Transit Markets	Population & Employment Centers	Population growth rate in municipalities served by route is higher than county growth rate	Medium
		Employment Centers concentrated in municipality served by route	Medium
		Activity Density >25 per acre consistently along the route	Low
	Ridership	High ridership corridor (> 200 average weekday riders)	Medium
		TBEST Ridership forecast >10% between 2017-2026	Medium
	Regional Connections	Connects two or more counties or major municipalities	Low
	Equity & Transit Dependent Communities	Routes serve block groups identified as high concentration of minority populations, poverty, and zero car households	High

Category	Criteria	Measure	Priority
Productivity, Efficiency and LOS	Productivity	Trips/ hour > 20	Medium
	Cost Efficiency	Cost per trip < average cost/trip for all routes	Medium
	Roadway Service Levels	Declining LOS by 2021	Medium
	Frequency	Peak Service Headways > 60 minutes	Medium

LOCAL INPUT

High priority was given to those routes that were identified as priorities by LAMTD and TPO staff, the public, and existing planning materials. By valuing local input from these sources, the alternatives developed in the 2017 TDP are contextually appropriate. The proposed alternatives are designed to build upon existing momentum, and to consider current challenges and fiscal constraints.

- **Staff Input:** Staff input was used to identify those routes that need to be prioritized for intervention, as well as those that should be removed from the alternatives list. This localized data allowed for nuanced alternatives development by highlighting opportunities and challenges that cannot be captured by quantitative data analysis.
- **Public Outreach:** The feedback from public outreach efforts (outlined in Chapter 2) was given high priority in developing alternatives. This ensures that the 2017 TDP is sensitive to the needs and desires of existing and potential LAMTD riders.
- **Policy & Planning Environment:** Existing plans, reports, feasibility analyses, and policy documents were assessed in Chapter 3 to determine which routes, neighborhoods, and municipalities have already been identified as priorities for intervention. Using these resources to determine necessary service improvements and new routes ensures that the 2017TDP builds on existing momentum in transit infrastructure and development.

TRANSIT MARKETS

The purpose of assessing transit markets during the alternatives development was two-fold. First, identifying high ridership routes, neighborhoods and municipalities is essential if these routes are to receive much needed improvements to support rapid growth and high ridership into the future. Second, high ridership and strong transit markets are essential to sustain the capital and operational costs associated with improvements.

- **Population & Employment Centers:** The demographic analysis (Chapter 3) helped identify those routes that serve population and employment centers in the county. High population growth was defined as those municipalities that are growing faster than the county as a whole. Employment centers were identified by the concentration of jobs in the municipalities served by each route. Routes were considered to have sufficient activity density to support continued and improved fixed routes service if the activity density (population plus employment) was greater than 25 activities per acre. This benchmark is the industry standard required to support fixed route bus service.
- **Ridership:** Using the FDOT approved TBEST model, ridership estimates were calculated for all existing routes, as well as proposed new routes. Routes with the highest average weekday ridership (more than 200 trips), were deemed as priorities for supporting high ridership into the future.
- **Regional Connections:** In addition to demand at the neighborhood and municipal level, the regional transit market was included in the analysis. With a newly consolidated transit system, it is

important to identify those routes that connect major cities and municipalities, and those that extend into neighborhood counties. These are often capital intensive routes that provide essential regional connectivity. It is therefore important to consider the costs and benefits of continued and improved service along these corridors.

- Equity and Transit Dependent Communities: The Situation Appraisal (Chapter 3) identified the block groups in the county that are home to low income, minority communities. It also identified the geographical distribution of households that do not have automobile access, and are therefore transit dependent. During the needs assessment, high priority was given to routes that serve low income, transit dependent, minority communities.

PRODUCTIVITY & EFFICIENCY

In a fiscally constrained transit environment, it is important that the alternatives show evidence of both need and financial viability. The 2017 TDP prioritizes those routes than can be improved within the fiscal constraints of the current budget, due to existing productivity and efficiency levels. Service characteristics for existing routes, as well as the roadways they occupy, were also assessed to determine which routes have capacity for improvement.

- Productivity: Productivity was measured in trips per hour. Productive routes were those routes that carried more than 20 trips per hour.
- Cost Efficiency: Cost efficiency was determined using the FDOT approved TBEST model for calculating cost per trip. Those routes where the cost per trip is lower than the average cost per trip for all routes were considered cost efficient.
- Roadway Service Levels: The Situation Appraisal identified those roadway corridors along which level of service (LOS) is expected to decline by 2021. Routes along those corridors were prioritized with the assumption that improved transit service will be essential to address declining roadway LOS.
- Frequency: Frequency along existing routes was included in the needs assessment to determine those that have significant capacity for improved headways. Routes with headways greater than 60 minutes during peak hours were highlighted. Routes that arrive infrequently but have high ridership needs and strong transit markets were considered good candidates for service improvements.

Thirteen existing routes were identified as priorities for improved service between 2017 and 2026. Table 5-2 shows each route, as well as its relative ranking based on how it performed during the needs assessment. This ranking was used to guide the order of implementation for improvements over the 10-year planning horizon. The cost associated with each improvement was used to further organize improvements into the fiscally responsible implementation plan in Chapter 6. Proposed new routes include service to Polk City and to the future Poinciana SunRail station. New routes are not ranked as they cannot be measured against existing routes in the needs assessment model.

TABLE 5-2: PRIORITY ROUTES

Service Improvements: Existing Routes		
Route Name	Service Category	Ranking
12 – Lakeland/Winter Haven	Traditional Fixed Route	1
1 – Florida Avenue	Traditional Fixed Route	2
22XL – Bartow/ Lakeland	Express Route	2
22XW – Winter Haven/ Bartow	Traditional Fixed Route	3
15 – Winter Haven - Haines	Traditional Fixed Route	3
3 – Lakeland Hills Corridor	Traditional Fixed Route	4
427 – LYNX US 27/ Haines City	Traditional Fixed Route	4
60 – Winter Haven Northeast	Traditional Fixed Route	5
14 – Combee/Edgewood	Traditional Fixed Route	6
58 – College Connector	Traditional Fixed Route	6
30 - Legoland	Traditional Fixed Route	7
33 – South Florida/ Carter Road	Flex Route	7
15 – Kathleen/Providance/Harden	Traditional Fixed Route	7
Service Expansion: New Routes		
Polk City	Traditional Fixed Route	
SunRail Feeder Route	Express Feeder Route	

Developing Alternatives

Once routes and geographical areas were identified as priorities for intervention, the nature of the improvements to each route had to be determined. Overall, the alternative scenarios for Polk's transportation future can be grouped into two major categories:

- Service improvements:
  Improvements to existing service frequency (headways), extended weekday service hours (span), more weekend service (either Saturday or Sunday), and improved speed (a result of implementing Transit Signal Priority [TSP])
- Service expansion:
  New routes operating in areas of the county with no existing service, and proposed feeder routes to the future Poinciana SunRail Station.

SERVICE IMPROVEMENTS

LAMTD provides a variety of public transportation services to both urban and rural areas across the county. The 2012 MyRide TDP developed a services hierarchy that guides the customization of services based on the distinct community needs in each service area. Table 5-3 summarizes the hierarchy and indicates the corresponding service areas and operating characteristics. Existing service along the priority routes identified in Table 5-2 was measured against the benchmarks provided by the service hierarchy. Alternatives were developed to raise levels of service to the recommended frequency, span, and weekend service for each service type.

The hierarchy was developed so that Polk TPO would have a consistent implementation guideline for all future service rollouts. It is used here as a tool to ensure that the 2017 TDP builds on a foundation put in place by the 2012 MyRide TDP. The level of service benchmarks associated with each transit type were used to guide the service improvements proposed in the 2017 TDP. Due to fiscal constraints, the 2017 implementation plan focuses on three categories of service: Express Routes, Traditional Fixed Routes, and Flex Routes. These transit types are highlighted below in Table 5-3, along with their associated benchmarks for frequency, span, and days of service, and further defined in Table 5-1.

TABLE 5-3: SERVICE HIERACHY

Developed as part of the 2012 MyRide Plan				
Service Area	Mode	Service Level		
		Frequency	Service Span*	Days of Service
Urban	Premium (BRT)	10-15 min	14 Hours	5 Days
	Express	30-min peak	Peak Hour	5 Days
	Traditional Fixed Route (Urban)	<=60 min	14-16 Hours	6-7 Days
Rural	Traditional Fixed Route (Rural)	>= 60 Min	14 Hours	6 Days
	Flex	Varies by Service	14 Hours	6 Days
	Call-and-ride	Varies by Service	14 Hours	6 Days
County-Wide	Community Transit Options	N/A	N/A	7 Days
	Commuter Services/ Vanpool	N/A	N/A	5Days
	Taxi-Access Program	N/A	N/A	7 Days
*14 Hours = 6:00 AM to 8:00PM, 16 Hours = 6:00 PM to 10:00 PM				

FIGURE 5-1: TRANSIT TYPES - DEFINITIONS

PRIORTY TRANSIT TYPES
As defined in the 2012 MyRide Plan

Express Service: Express services are characterized as peak-hour limited stop services primarily designed to meet the transportation needs of commuters. Express service ideally operates as a point-to-point service. For the TDP evaluation, express services are proposed to operate on 30- minute service frequencies five days a week during AM and PM peak service periods. The new feeder routes to the Poinciana SunRail station will fall under this category.

Traditional Fixed-Route Service (Urban, Frequency <= 60 min): This kind of service refers to traditional fixed-route service operating in mixed traffic in urbanized areas of the county.

Traditional Fixed-Route Service (Rural, Frequency >= 60 min): Traditional fixed route service that operates in areas with rural characteristics fall into this category. They will generally have service frequencies of 60 minutes or more. In some instances, rural fixed-route service will warrant more frequent service depending on ridership and vehicle loads.

Flex Service: This service is designed to operate in rural areas and provides connections between major city cores via major corridors. Service is provided as a deviated fixed-route service with a maximum number of deviations per round trip. Each deviation is limited to a maximum of ¾-mile distance away from the trunk line. Route deviation is a hybrid public transportation service with features of fixed-route, fixed-schedule transit service and demand–responsive, curb-to-curb service. Requests for route deviation must be made in advance. Another advantage of this service is that the route-deviated service is officially recognized as demand-responsive and, therefore, meets all requirements for complementary paratransit service required by ADA. No separate complementary ADA paratransit service is required. The service frequencies for this service varies from 60 to 90 minutes, and service is generally provided on weekdays and Saturdays.

SERVICE EXPANSION: NEW ROUTES

This TDP proposes two potential new routes: one that serves Polk City (the only municipality in Polk County without fixed route service in 2017) and one that feeds commuters to the future Poinciana SunRail station. These alternatives were determined based on the needs assessment, with significant input from the Polk TPO staff. Two alternatives for each route were modelled using the FDOT approved TBEST software. Recommendations for implementation were made based on the estimated average weekday ridership for 2026. The routes recommended for implementation, highlighted in Table 5-4, are:

1. Express feeder service between Winter Haven Terminal and Poinciana SunRail Station
2. Traditional fixed route service between Polk City and Winter Haven via Auburndale/ Berkeley Road

A full description of the operation characteristics of the various alternatives, as well as the performance indicators (ridership) calculated in TBEST, are available in Table 5-4.

TABLE 5-4: NEW ROUTE ALTERNATIVE EVALUATION

Priority areas identified in needs assessment	Poinciana SunRail Station feeder alternatives		Polk City service alternatives	
Proposed Route	Alternative A: Winter Haven to Poinciana	Alternative B: Auburndale to Poinciana	Alternative A: Polk City - Lakeland	Alternative B: Polk City – Winter Haven
Stops	5 stops (with Park 'n Ride): Winter Haven Terminal, Lake Alfred, Haines City, Davenport, Poinciana SunRail Station	5 stops (with Park 'n Ride): Auburndale Civic Center, Lake Alfred, Haines City, Davenport, Poinciana SunRail Station	Regular stops every 1.5 miles	Regular stops every 1.5 miles
Length (Miles)	28	27	14	16
Total IVTT (minutes)	50	55	25	27
Frequency (minutes)	30	30	60	60
Weekday Span (Hours)	14	14	14	14
Weekend Service	no	no	Saturday	Saturday
Estimated Average Weekday Ridership in 2026 (TBEST)	70	52	41	4
Identified by LAMTD/ Polk TPO Staff as Priority	✓	✗	✗	✓
Recommended for implementation	✓	✗	✗	✓

2026 Alternatives

Table 5-5 presents all the proposed 2026 alternatives, their corresponding service category, and a matrix of service improvements. Thirteen existing routes are proposed to receive service improvements that would raise their frequency, hours of operation, and weekend service to the benchmark standards in the service hierarchy (Table 5-3). Routes 1 and Route 3 have proposed speed improvements – a level-of-service measure that functions as a proxy for the implementation of Transit Signal Priority (TSP). Two new routes are recommended as options for service expansion – fixed route service between Polk City and Lakeland, and feeder route service from Winter Haven to the future Poinciana SunRail Station that is slated to open in 2019. Figure 5-2 illustrates the routes proposed for service improvement between 2017 and 2026. Figure 5-3 shows the proposed new routes.

TABLE 5-5: ALTERNATIVES SUMMARY

Rank	Route Name	Service Category	Service Improvement				
			Frequency	Span	Speed	Weekend	New
1	12 - Lakeland/ Winter Haven		X	X		X	
2	1 - Florida Avenue		X	X	X	X	
2	22XL – Bartow/ Lakeland	Express Route	X	X		X	
3	22XW – Winter Haven/ Bartow	Traditional Fixed Route	X	X		X	
3	15 – Winter Haven - Haines	Traditional Fixed Route	X	X		X	
4	3 – Lakeland Hills Corridor	Traditional Fixed Route		X	X	X	
4	427 – LYNX US 27/ Haines City	Traditional Fixed Route	X	X		X	
5	60 – Winter Haven Northeast	Traditional Fixed Route	X	X		X	
6	14 – Combee/Edgewood	Traditional Fixed Route	X	X		X	
6	58 – College Connector	Traditional Fixed Route	X				
7	30 - Legoland	Traditional Fixed Route	X	X			
7	33 – South Florida/ Carter Road	Flex Route		X		X	
7	15 – Kathleen/Providance/Harden	Traditional Fixed Route		X		X	
			Service Expansion				
	Polk City to Lakeland	Traditional Fixed Route					X
	Winter Haven to Poinciana SunRail Station	Express Feeder Route					X

FIGURE 5-2: 2026 ALTERNATIVES - IMPROVED SERVICE

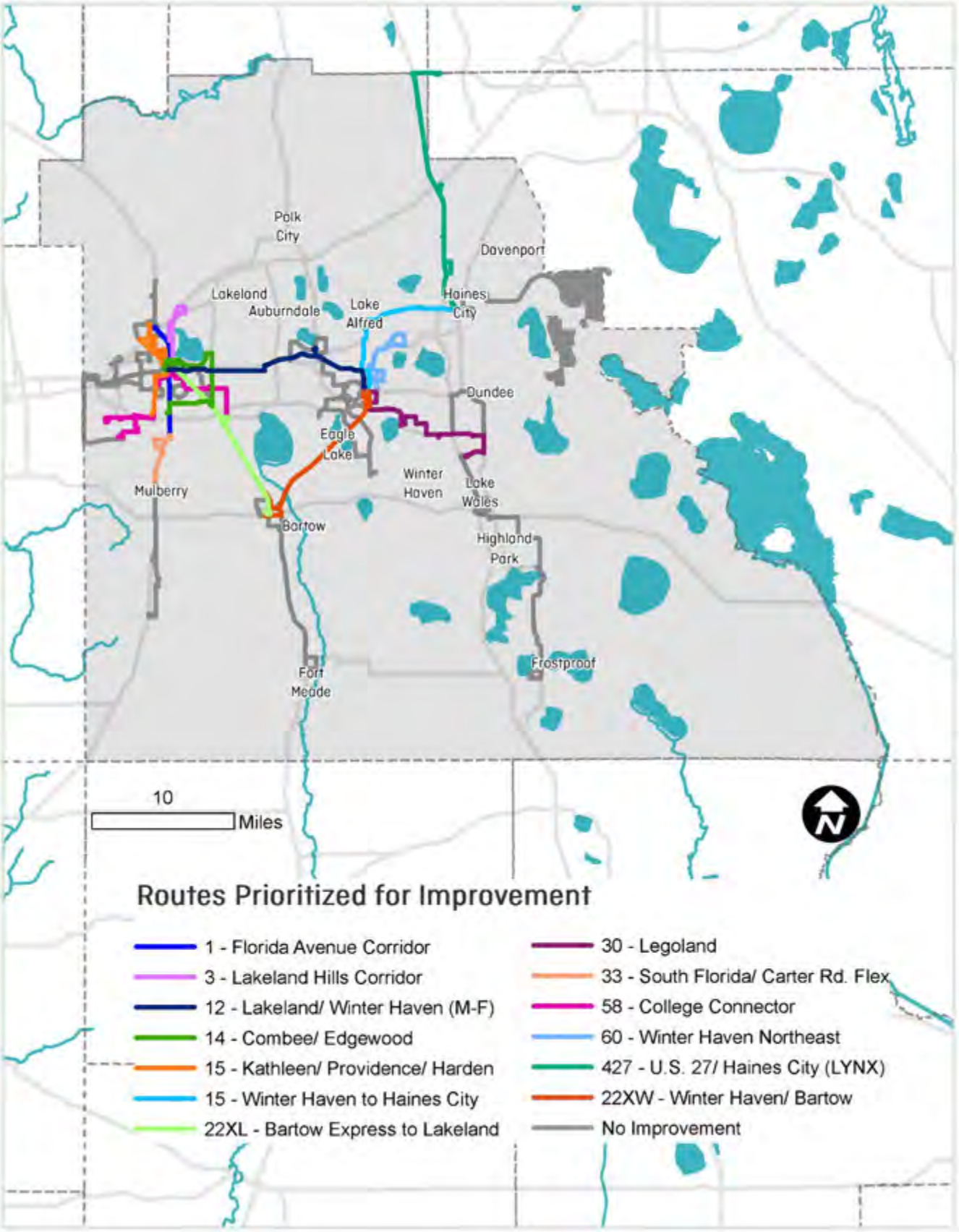
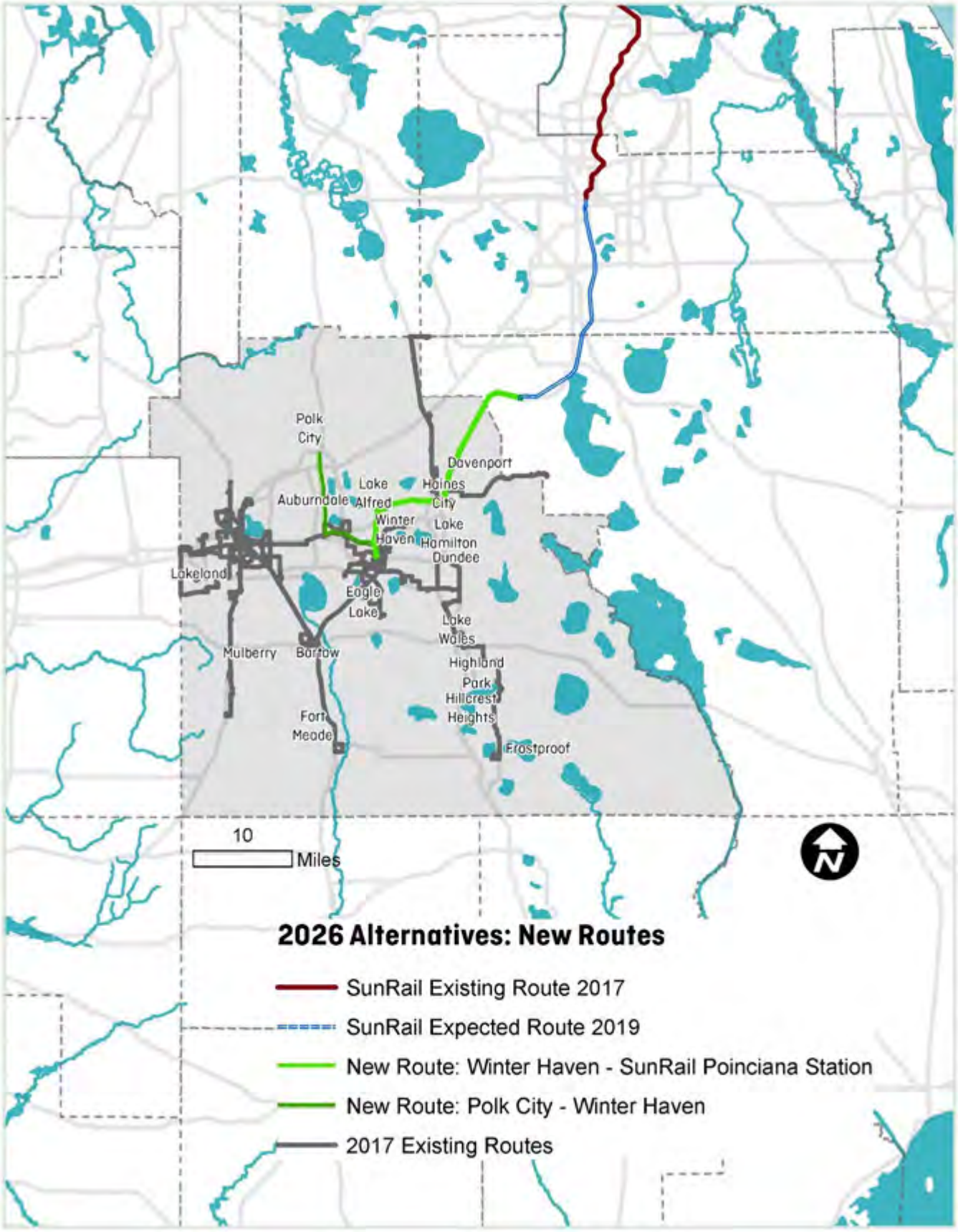


FIGURE 5-3: 2026 ALTERNATIVES - EXPANDED SERVICE



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CHAPTER 6: IMPLEMENTATION AND FINANCIAL PLAN

CHAPTER SUMMARY

INTENT

Present the implementation timeline and financial implications of service maintenance, as well as service improvements and expansions identified and prioritized in Chapter 5.

FINDINGS

This implementation and financial plan is the first completed after the consolidation of LAMTD and Polk County/WHAT. The newly consolidated transit service provider, Citrus Connection, has yet to gain the full efficiencies of consolidation.

IMPLICATIONS

Citrus Connection is operating at a substantial deficit. It can gain efficiencies and reach a balanced budget in the 10-Year planning horizon of this TDP by:

- Continuing consolidation efforts;
- Reducing costs; and
- Leveraging additional revenue sources.

CHAPTER 6: IMPLEMENTATION AND FINANCIAL PLAN

Summary and Analysis of Findings

This section presents the Implementation and Financial Plan as well as cost and revenue assumptions. A set of operations, capital and infrastructure priorities were developed in coordination with specified goals and initiatives for the 10-year planning horizon of this TDP. This implementation and financial plan is the first completed after the consolidation of LAMTD and Polk County/WHAT. The consolidated transit service provider, Citrus Connection, has yet to gain the anticipated efficiencies of consolidation, as it is operating at a substantial deficit.

The priorities of the next ten years focus on maximizing existing efficiency, improving service on existing routes, and implementing new routes that expand service coverage, including connections to SunRail. However, LAMTD does not currently have the revenue to fund all priorities; therefore, new revenue sources will need to be identified to reach these goals.

2017-2016 Ten-Year MyRide Plan Priorities

MyRide Plan Priorities were grouped into two categories: (1) operations priorities, and (2) capital and infrastructure priorities. A more detailed description of each category and its corresponding priorities can be found below.

OPERATIONS

Operations priorities address transit service maintenance, improvements, and expansion. For example, increasing span and adding weekend service to an existing route are considered operational improvements. Operations priorities for the 2017 TDP include:

- Maximize existing service efficiency
  In a fiscally constrained transit environment, maximizing existing service efficiency is a high priority. Service efficiency includes:
  - Coordinated vehicle maintenance,
  - Consolidated administration and maintenance activities, and
  - Coordinated contracting for fuel and maintenance supplies and activities.
- Implement service improvements
  Service improvements were also identified as priorities for implementation. Service improvements include:
  - Improvements to existing service frequency (headways),
  - Extended weekday service hours (span), and
  - Additional weekend service (either Saturday or Sunday).
- Service expansion
  Service expansion is a priority for implementation for the 10-Year Needs Plan. Service expansion includes:
  - New routes operating in county activity centers with no existing service, and
  - A proposed feeder route to the future Poinciana SunRail Station.

CAPITAL AND INFRASTRUCTURE

Capital and Infrastructure priorities address buildings, vehicles, and transit infrastructure used to enhance transit service provision. Capital and Infrastructure priorities for the 2017 TDP include:

- Downtown Lakeland Intermodal Center

A Downtown Lakeland Intermodal Center was identified as a capital priority to improve service efficiency, enhance passenger experience, and maximize capital investments. This facility could include vehicle bays, passenger amenities, and an administration and operations office.

- East Polk Maintenance Facility
  A maintenance facility in East Polk County was identified as a need to service vehicles that deliver transit services to East Polk County routes. There is an existing maintenance facility in West Polk County. This need was identified prior to consolidation of transit services in Polk County.
- Park-and-Ride Facilities
  The proposed feeder route to the future Poinciana SunRail station is associated with five park-and-ride facilities, three of which have been budgeted for new construction in this Ten-Year MyRide Needs Plan. The facilities are integral to the success of the feeder route as a regional transit mode.
- Vehicle expansion and replacement
  Coordinated vehicle replacement was identified as a capital priority to maximize existing service and optimize investment in rolling stock (including buses, vans, support vehicles). Vehicles will be replaced according to FTA guidelines for each category of rolling stock. In addition, fleet size will be expanded to accommodate increased service frequency on existing routes and to service new routes.
- IT and technology
  Transit Signal Priority (TSP) technology is a cost-effective capital priority. Route 1 and Route 3 were identified for TSP implementation as a part of their service improvements in Chapter 5. TSP infrastructure would be acquired the year before implementation of each route's improvements. A one-time cost allocation for TSP infrastructure and capital could be recovered by improved speeds.

2017-2026 Ten-Year MyRide Plan Costs

This section outlines the necessary capital and operating costs for the implementation of the 10-Year Needs Plan. Cost assumptions, a cost per revenue hour analysis, and a vehicle replacement and expansion plan are described below. Cost estimates were completed through FY 2026.

COST ASSUMPTIONS

Cost assumptions were developed to forecast the cost of improvements and identify service characteristics in the MyRide Plan. These assumptions were grouped into two categories: operating cost assumptions and capital cost assumptions. Detail on select capital cost estimates are available in Appendix F.

A variety of factors informed these assumptions, including FTA guidelines, NTD data, trend data, the 2012 TDP Major Update, the 2016 TDP Annual Update, and discussions with Polk Transit staff. These assumptions are outlined in Table 6-1.

TABLE 6-1: COST ASSUMPTIONS

Assumption	Life Span	Assumption for 2017	Notes/Source
Operating Cost			
Fixed-Route Operating Cost per Revenue Hour	n/a	$122.49	Staff Input
Fixed-Route Operating Cost per Revenue Mile	n/a	$6.75	Staff Input
ADA Paratransit Operating Cost	n/a	$1,212,197	2017 TDSP Appendix 6: Rate Calculation Model
Operating Cost Inflation Rate	n/a	2.15%	Averaged Inflation Rate, 2000-2016
Capital Cost			
Fixed Route Bus (30'-35')	12	$462,969	Staff Input
Fixed Route Demand Response (24' Ford El Dorado)	5	$70,434	Staff Input
Paratransit (29' Minibus)	5	$125,925	Staff Input
Paratransit (Other Vehicles)	5	$78,722	Staff Input
Van	5	$49,707	Staff Input
Heavy Duty Maintenance Vehicle	5	$56,183	Inflation-adjusted cost from 2016 TDP Annual Update
Support Vehicle	5	$23,495	Inflation-adjusted cost from 2016 TDP Annual Update
Existing Peak Fixed Route Vehicle Fleet Size	n/a	40	Staff Input
Existing Paratransit Vehicle Fleet Size	n/a	41	Staff Input
Simple Bus Stop	n/a	$12,000	Staff Input
Sheltered Bus Stop	n/a	$25,000	Staff Input
Park-and-Ride Facility	n/a	$700,000	RPG Estimate – See Appendix F
East Polk Transit Maintenance Facility	n/a	$2,000,000	RPG Estimate – See Appendix F
Downtown Lakeland Intermodal Center	n/a	$1,140,000	RPG Estimate – See Appendix F
Downtown Lakeland Intermodal Center (Design and Engineering)	n/a	$285,000	25% of construction cost above
Transit Signal Priority (TSP) Infrastructure - Florida Ave	n/a	$373,000	Central Lakeland TSP Feasibility Study
Transit Signal Priority (TSP) Infrastructure - Lakeland Hills Blvd	n/a	$94,000	Central Lakeland TSP Feasibility Study
Transit Signal Priority (TSP) Infrastructure	n/a	$384,614	Central Lakeland TSP Feasibility Study
Spare Vehicle Ratio	n/a	20%	FTA standard
Capital Cost Inflation Rate	n/a	2.15%	Averaged Inflation Rate, 2000-2016

COST PER REVENUE HOUR

As shown in Table 6-1, the operating cost per revenue hour is $122.49. Cost per revenue hour for this plan reflects a conservative expectation of service efficiencies to be gained from consolidation. Several factors support this assumption:

- Coordinated vehicle replacement schedule;
- Implementation of a maintenance facility in East Polk County; and
- Coordinated contracting for fuel and maintenance supplies and activities.

VEHICLE REPLACEMENT AND EXPANSION PLAN

To estimate capital costs, a Vehicle Replacement and Expansion Plan was developed, which outlines the vehicle needs to maintain existing service, make service improvements or expand service. A vehicle replacement plan schedules the acquisition of vehicles needed to replace vehicles in the existing fleet, while a vehicle expansion plan schedules the acquisition of additional vehicles needed to implement service improvements or new service. A vehicle replacement plan was prepared using existing fleet inventories and the assumed life span for capital assets shown in Table 6-1. A vehicle expansion plan was developed using route length, average speed, service frequency, and FTA guidance on useful life of rolling stock measured in accumulated revenue miles. The industry standard 20 percent spare ratio is factored into both replacement and expansion plans. A total of 177 buses will need to be acquired throughout the 10-year planning horizon of the TDP. Table 6-2 summarizes the annual 2017 My Ride Needs Plan vehicle replacement and expansion needs of the 10-year planning horizon of the TDP.

TABLE 6-2: TEN-YEAR VEHICLE REPLACEMENT AND EXPANSION PLAN

Table 6-2
Vehicle Replacement and Expansion Plan

	Existing Service				Service Improvements & Expansions	
Year	Fixed Route Bus (30'- 35')	Fixed Route Demand Response (24')	Paratransit (29')	Paratransit (Other)	Fixed Route Bus (30'- 35')	TOTAL
FY 2017	20	0	0	24	0	**44**
FY 2018	0	0	0	4	2	**4**
FY 2019	0	0	0	5	1	**5**
FY 2020	4	2	0	12	5	**18**
FY 2021	0	0	1	8	4	**9**
FY 2022	6	0	1	18	4	**25**
FY 2023	1	0	0	4	4	**5**
FY 2024	6	0	1	8	3	**15**
FY 2025	0	3	0	10	2	**13**
FY 2026	1	0	1	8	4	**10**
TOTAL	**38**	**5**	**4**	**101**	**29**	
TOTAL	**148**					
TOTAL	**177**					

2017-2026 Ten-Year MyRide Plan Revenues

This section outlines the anticipated operating and capital revenues for the 10-Year planning horizon of the TDP. Revenue assumptions, federal grant administration details, and farebox recovery goals are described below. Revenue estimates were completed through FY 2026. Table 6-3 outlines the revenue assumptions utilized for the MyRide Plan. Detail on select revenue assumptions are available in Appendix F.

REVENUE ASSUMPTIONS

Revenue assumptions and revenue projections for the ten-year planning horizon of this TDP were developed using the following information:

- Federal 5307 grants to Citrus Connection were administered to two transit service providers: LAMTD and Polk County Transit Authority.
- An initiative to increase fare shares among cities within the transit service area is in progress.
- Farebox recovery ratio for fixed-route bus service is currently at 14%. It should be noted that the farebox reported does not include the routes operated in the northeast portion of Polk County that are operated by Lynx through contract with the transit agency. If these routes were included the current farebox ratio would be higher and more in line with the industry standard. Citrus Connection has identified and is working towards a farebox recovery goal of 20% of cost in the next three years. Farebox recovery revenue projections have been adjusted to include increases in both FY 2017 and FY 2018 to reach the recovery goal.
- All other revenue projections are based on FY 2016 funded revenues, adjusted for inflation. Opportunities and strategies for increased revenue generation are discussed further in Appendix B: Current Innovations and Emerging Trends.
- Full implementation of the MyRide Plan will require an increase in local funding. Opportunities and strategies for increased revenue generation are discussed further in Appendix B: Current Innovations and Emerging Trends.

TABLE 6-3: REVENUE ASSUMPTIONS

Assumption	Assumption FY 2017	Notes/Sources
Revenue		
Ad Valorem Millage Rate	6.7815	Florida Office of Economic and Demographic Research, Polk County
Revenue Growth Assumption	2.15%	Same as capital and operating cost inflation rates
Farebox Recovery Ratio	14%	Staff Input
Farebox Recovery Goal	20%	Industry standard
FAST Act - 5307 Operating	31%	Staff Input
FAST Act - 5307 Capital	69%	RPG Estimate based on Staff Input
Ad Valorem Tax Revenue Growth Assumption	5.1%	Based on average change in revenue per mill 1996 - 2011, assumption used in 2016 Annual Update
ADA Paratransit Operating Revenue	$1,247,735	2017 TDSP Appendix 6: Rate Calculation Model
ADA Paratransit Capital Revenue	$210,083	2017 TDSP Appendix 6: Rate Calculation Model

2017-2026 Ten-Year MyRide Plan Service Implementation

The 10-Year MyRide Service Implementation Plan establishes a timeline for maintenance of existing service, as well as implementation of service improvements and service expansions. The Service Implementation Plan was developed using an annualized operating cost and the priority ranking system described in greater detail in Table 5-5: Alternatives Summary.

SERVICE IMPLEMENTATION PLAN

The Service Implementation Plan recommends maintaining existing service in FY 2017 and FY 2018, with the first improvement in FY 2019. Costs are budgeted to incrementally increase from FY 2019 through FY 2026. This will allow for Polk Transit to apply for grant funding in the year prior to implementation, as 5307

grant funding is available five years after initial award. It is important to address that the implementation schedule shown below is a recommendation and a project could be advanced or delayed as priorities change and funding becomes available. As mentioned above, if additional funding is not identified, full implementation of the MyRide Plan cannot be realized. Table 6-4 outlines the service implementation plan for the MyRide Plan from FY 2017 through FY 2026.

TABLE 6-4: SERVICE IMPLEMENTATION PLAN

Service Type/Mode	Description	Operating Characteristics		
		Frequency (Weekday)	Service Span (Weekday)	Days of Service
FY 2017 and FY 2018				
Route 1/101 Florida Ave Corridor	Maintain Existing Fixed Route Service	30 mins	6:15 AM - 6:05 PM	Mon - Sat
Route 3/301 Lakeland Hills Corridor	Maintain Existing Fixed Route Service	60 mins	6:15 AM - 6:05 PM	Mon - Fri
Route 10 Circulator	Maintain Existing Fixed Route Service	60 mins	6:15 AM - 6:05 PM	Mon - Fri
Route 12 Lakeland to WH	Maintain Existing Fixed Route Service	60 mins	6:15 AM - 7:05 PM	Mon - Sat
Route 14 Combee/Edgewood	Maintain Existing Fixed Route Service	120 mins	7:15 AM - 6:05 PM	Mon - Fri
Route 15 (N/S) Kathleen/Providence/Harden	Maintain Existing Fixed Route Service	60 mins	6:15 AM - 6:05 PM	Mon - Fri
Route 15 (E/W) Winter Haven/Haines City	Maintain Existing Fixed Route Service	90 mins	5:45 AM - 7:00 PM	Mon - Sat
Route 22XL Bartow Express	Maintain Existing Fixed Route Service	90 mins	5:55 AM - 5:10 PM	Mon - Fri
Route 22XW Winter Haven/Bartow	Maintain Existing Fixed Route Service	90 mins	5:45 AM - 7:00 PM	Mon - Sat
Route 25 Bartow/Fort Meade	Maintain Existing Fixed Route Service	90 mins	5:45 AM - 5:45 PM	Mon - Fri
Route 27X Dundee/Eagle Ridge Mall	Maintain Existing Fixed Route Service	60 mins	6:00 AM - 7:05 AM	Mon - Fri
Route 30 Legoland	Maintain Existing Fixed Route Service	60 mins	6:15 AM - 7:10 PM	Mon - Sun
Route 32/33 South Fl/Carter Rd.	Maintain Existing Fixed Route Service	60 mins	7:41 AM - 6:05 PM	Mon - Fri
Route 35 Bartow/Lake Wales	Maintain Existing Fixed Route Service	120 mins	6:10 AM - 7:05 PM	Mon - Sat
Route 39 Bradley	Maintain Existing Fixed Route Service	5 hrs	6:45 AM - 5:35 PM	Mon - Fri
Route 40/44 Winter Haven Southside	Maintain Existing Fixed Route Service	90 mins	5:45 AM - 7:05 PM	Mon - Sat
Route 45 George Jenkins/Swindell	Maintain Existing Fixed Route Service	60 mins	6:15 AM - 7:05 PM	Mon - Fri
Route 46 10th/Wabash/Ariana	Maintain Existing Fixed Route Service	60 mins	6:15 AM - 5:05 PM	Mon - Fri
Route 47 Duff Rd. Shuttle	Maintain Existing Fixed Route Service	60 mins	8:15 AM - 5:05 PM	Mon - Fri
Route 50 Auburndale	Maintain Existing Fixed Route Service	90 mins	5:45 AM - 7:05 PM	Mon - Sat
Route 58 College Connector	Maintain Existing Fixed Route Service	60 mins	6:30 AM - 4:40 PM	Mon - Fri
Route 58X Airside Express	Maintain Existing Fixed Route Service	15 mins	7:00 AM - 1:00 AM	Mon - Fri
Route 59X County Line Express	Maintain Existing Fixed Route Service	60 mins	6:15 AM - 6:05 PM	Mon - Fri

Service Type/Mode	Description	Operating Characteristics		
		Frequency (Weekday)	Service Span (Weekday)	Days of Service
Route 60 Winter Haven Northeast	Maintain Existing Fixed Route Service	60 mins	6:15 AM - 7:05 PM	Mon - Sat
Route 416 Poinciana/Haines City LYNX	Maintain Existing Fixed Route Service	150 mins	10:40 AM - 7:00 PM	Mon - Fri
Route 427 US 27/Haines City LYNX	Maintain Existing Fixed Route Service	120 mins	6:25 AM - 7:12 PM	Mon - Fri
Route 603 Neighborlink Line LYNX	Maintain Existing Fixed Route Service	90 mins	6:05 AM - 6:15 PM	Mon - Fri
ADA Paratransit Service	Maintain Existing ADA Paratransit Service	n/a	6:00 AM – 6:30 PM	Mon - Sat
FY 2019				
Route 12 Lakeland to WH	Increase Frequency Increase Hours of Service Add Weekend Service	30 mins	6:15 AM - 8:05 PM	Mon - Sat
FY 2020				
Route 1/101 Florida Ave Corridor	Increase Frequency Increase Hours of Service Add Weekend Service	15 mins	6:15 AM - 8:05 PM	Mon - Sun
FY 2021				
Route 14 Combee/Edgewood	Increase Frequency Increase Hours of Service Add Weekend Service	60 mins	6:15 AM - 8:05 PM	Mon - Sat
Route 15 Winter Haven - Haines City	Increase Frequency Increase Hours of Service Add Weekend Service	60 mins	5:45 AM - 7:35 PM	Mon - Sun
Route 22XL Bartow Express	Increase Frequency Increase Hours of Service Add Weekend Service	30 mins	5:55 AM – 7:10 PM	Mon - Sat
SunRail Feeder Winter Haven to Poinciana	Add New Service	30 mins	6:15 AM - 8:05 PM	Mon - Fri
FY 2022				
Route 30 Legoland	Increase Frequency Increase Hours of Service	30 mins	6:15 AM - 8:05 PM	Mon - Sun
Route 58 College Connector	Increase Frequency	30 mins	6:30 AM - 4:40 PM	Mon - Fri
Route 427 US 27/Haines City LYNX	Increase Frequency Increase Hours of Service Add Weekend Service	60 mins	6:15 AM - 8:05 PM	Mon - Sat
FY 2023				
Polk City to Winter Haven	Add New Service	60 mins	6:15 AM - 8:05 PM	Mon - Sat
Route 22XW Winter Haven/Bartow	Increase Frequency Increase Hours of Service Add Weekend Service	60 mins	6:15 AM - 8:05 PM	Mon - Sun
FY 2024				
Route 60 Winter Haven Northeast	Increase Frequency Increase Hours of Service Add Weekend Service	30 mins	6:15 AM - 8:05 PM	Mon - Sun
FY 2025				

Service Type/Mode	Description	Operating Characteristics		
		Frequency (Weekday)	Service Span (Weekday)	Days of Service
Route 15 Kathleen/Providence/Harden	Increase Hours of Service Add Weekend Service	60 mins	6:15 AM - 8:05 PM	Mon - Sat
FY 2026				
Route 3/301 Lakeland Hills Corridor	Increase Hours of Service Add Weekend Service	60 mins	6:15 AM - 8:05 PM	Mon - Sat
Route 32/33 South Fl/Carter Rd.	Increase Hours of Service Add Weekend Service	60 mins	6:15 AM - 8:05 PM	Mon - Sat

Table 6-5 summarizes the projected costs and revenues for the MyRide Needs Plan. Based on cost and revenue assumptions applied, a total budget deficit of $101.39 million is anticipated over the ten-year planning horizon of the TDP.

Table 6-6 summarizes the projected operating costs and revenues for the MyRide Needs Plan from FY 2017 through FY 2026. The table groups costs into three categories: (1) maintain existing service, (2) service improvements, and (3) service expansion. Based on the operating cost and revenue assumptions applied (Table 6-1 and Table 6-3) an operating budget deficit of $87.07 million is anticipated over the ten-year planning horizon of the TDP.

Table 6-7 summarizes the projected capital costs and revenues for the MyRide Needs Plan from FY 2017 through FY 2026. The table groups costs into the same three categories. Based on the capital cost and revenue assumptions applied (Table 6-1 and Table 6-3), a capital budget deficit of $14.32 million is anticipated over the ten-year planning horizon of the TDP.

Table 6-8 summarizes the projected operating and capital revenues for the MyRide Needs Plan from FY 2017 through FY 2026. Based on the operating and capital revenue assumptions applied (Table 6-3), a revenues budget of $192.37 million is anticipated over the ten-year planning horizon of the TDP.

Table 6-9 summarizes the projected operating and capital costs for the MyRide Needs Plan from FY 2017 through FY 2026. The table groups costs into two categories: (1) maintain existing service and, (2) service improvements & expansions. Based on the operating and capital cost assumptions applied (Table 6-1), a cost budget of $293.77 million is anticipated over the ten-year planning horizon of the TDP.

TABLE 6-5: TEN-YEAR MYRIDE PLAN BUDGET

Table 6-5
Ten-Year Budget Estimates

	FY 2017 Estimated	FY 2018 Estimated	FY 2019 Estimated	FY 2020 Estimated	FY 2021 Estimated	FY 2022 Estimated	FY 2023 Estimated	FY 2024 Estimated	FY 2025 Estimated	FY 2026 Estimated	TOTAL
TOTAL COSTS	$ 28,351,874.13	$ 16,056,950.46	$ 19,386,395.52	$ 28,518,403.51	$ 31,728,053.54	$ 41,089,117.20	$ 39,576,502.48	$ 44,707,368.39	$ 44,007,664.38	$ 48,223,251.95	$ 341,645,581.58
TOTAL REVENUES	$ 17,154,684.63	$ 17,669,318.24	$ 18,201,156.14	$ 18,598,819.21	$ 19,008,936.95	$ 19,432,660.56	$ 19,871,587.74	$ 20,327,941.89	$ 20,804,845.35	$ 21,306,737.73	$ 192,376,688.45
Budget Surplus/Deficit	$ (11,197,189.49)	$ 1,612,367.78	$ (1,185,238.38)	$ (9,919,584.31)	$ (12,719,116.59)	$ (21,656,456.64)	$ (19,704,914.74)	$ (24,379,426.51)	$ (23,202,819.03)	$ (26,916,514.22)	$ (149,268,893.13)
Fund Balance	$ (11,197,189.49)	$ (9,584,821.71)	$ (10,770,061.09)	$ (20,689,645.40)	$ (33,408,761.99)	$ (55,065,218.63)	$ (74,770,133.38)	$ (99,149,559.88)	$ (122,352,378.91)	$ (149,268,893.13)	

Table 6-6
Ten-Year Operating Revenues and Costs

	FY 2017 Estimated	FY 2018 Estimated	FY 2019 Estimated	FY 2020 Estimated	FY 2021 Estimated	FY 2022 Estimated	FY 2023 Estimated	FY 2024 Estimated	FY 2025 Estimated	FY 2026 Estimated	TOTAL
Operating Costs											
Existing Fixed-Route Service	$ 12,565,969.13	$ 12,836,137.46	$ 13,112,114.42	$ 13,394,024.88	$ 13,681,996.41	$ 13,976,159.34	$ 14,276,646.76	$ 14,583,594.67	$ 14,897,141.95	$ 15,217,430.51	**$ 138,541,215.53**
Existing ADA Paratransit Service	$ 1,212,197.00	$ 1,238,259.24	$ 1,264,881.81	$ 1,292,076.77	$ 1,319,856.42	$ 1,348,233.33	$ 1,377,220.35	$ 1,406,830.59	$ 1,437,077.44	$ 1,467,974.61	**$ 13,364,607.55**
Maintain Existing Service	**$ 13,778,166.13**	**$ 14,074,396.70**	**$ 14,376,996.23**	**$ 14,686,101.65**	**$ 15,001,852.83**	**$ 15,324,392.67**	**$ 15,653,867.11**	**$ 15,990,425.25**	**$ 16,334,219.40**	**$ 16,685,405.11**	**$ 151,905,823.08**
Service Improvements	$ -	$ -	$ 2,594,626.26	$ 7,487,815.74	$ 11,579,344.56	$ 16,435,324.92	$ 18,136,634.34	$ 20,145,733.82	$ 22,360,645.55	$ 24,836,741.48	**$ 123,576,866.66**
Service Expansion	$ -	$ -	$ -	$ -	$ 2,307,691.20	$ 2,357,306.56	$ 2,798,267.36	$ 2,858,430.11	$ 2,919,886.36	$ 2,982,663.91	**$ 16,224,245.49**
Service Improvements & Expansions	**$ -**	**$ -**	**$ 2,594,626.26**	**$ 7,487,815.74**	**$ 13,887,035.76**	**$ 18,792,631.48**	**$ 20,934,901.70**	**$ 23,004,163.92**	**$ 25,280,531.91**	**$ 27,819,405.39**	**$ 139,801,112.16**
Total Operating Costs	**$ 13,778,166.13**	**$ 14,074,396.70**	**$ 16,971,622.49**	**$ 22,173,917.39**	**$ 28,888,888.59**	**$ 34,117,024.14**	**$ 36,588,768.81**	**$ 38,994,589.18**	**$ 41,614,751.30**	**$ 44,504,810.51**	**$ 291,706,935.24**
Operating Revenues											
LAMTD - Local General Revenue	$ 1,139,046.05	$ 1,163,535.54	$ 1,188,551.55	$ 1,214,105.41	$ 1,240,208.68	$ 1,266,873.16	$ 1,294,110.94	$ 1,321,934.32	$ 1,350,355.91	$ 1,379,388.56	**$ 12,558,110.12**
PCTA - Contract Revenue	$ 4,222,739.01	$ 4,313,527.90	$ 4,406,268.75	$ 4,501,003.53	$ 4,597,775.10	$ 4,696,627.27	$ 4,797,604.76	$ 4,900,753.26	$ 5,006,119.45	$ 5,113,751.02	**$ 46,556,170.05**
PCTA - Passenger Fares	$ 2,318.81	$ 2,368.66	$ 2,419.59	$ 2,471.61	$ 2,524.75	$ 2,579.03	$ 2,634.48	$ 2,691.12	$ 2,748.98	$ 2,808.08	**$ 25,565.08**
LAMTD - Farebox Revenue	$ 483,555.00	$ 617,439.29	$ 756,857.08	$ 773,129.51	$ 789,751.79	$ 806,731.46	$ 824,076.18	$ 841,793.82	$ 859,892.39	$ 878,380.08	**$ 7,631,606.61**
PCTA - Farebox Revenue	$ 87,401.00	$ 111,600.15	$ 136,799.47	$ 139,740.65	$ 142,745.08	$ 145,814.10	$ 148,949.10	$ 152,151.51	$ 155,422.76	$ 158,764.35	**$ 1,379,388.17**
LAMTD - FTA 5307 Operating	$ 826,972.86	$ 844,752.78	$ 862,914.97	$ 881,467.64	$ 900,419.19	$ 919,778.20	$ 939,553.44	$ 959,753.83	$ 980,388.54	$ 1,001,466.90	**$ 9,117,468.35**
PCTA - FTA 5307 Operating	$ 355,082.16	$ 362,716.43	$ 370,514.83	$ 378,480.90	$ 386,618.24	$ 394,930.53	$ 403,421.54	$ 412,095.10	$ 420,955.15	$ 430,005.68	**$ 3,914,820.59**
Property Tax	$ 3,770,949.19	$ 3,852,024.60	$ 3,934,843.13	$ 4,019,442.26	$ 4,105,860.27	$ 4,194,136.26	$ 4,284,310.19	$ 4,376,422.86	$ 4,470,515.95	$ 4,566,632.05	**$ 41,575,136.77**
TD Commission	$ 63,640.47	$ 65,008.74	$ 66,406.43	$ 67,834.17	$ 69,292.60	$ 70,782.39	$ 72,304.21	$ 73,858.76	$ 75,446.72	$ 77,068.82	**$ 701,643.32**
State Block Grant	$ 759,174.71	$ 775,496.97	$ 792,170.16	$ 809,201.81	$ 826,599.65	$ 844,371.55	$ 862,525.53	$ 881,069.83	$ 900,012.83	$ 919,363.11	**$ 8,369,986.16**
FL Transportation Disadvantaged Program	$ 572,761.18	$ 585,075.54	$ 597,654.67	$ 610,504.24	$ 623,630.09	$ 637,038.13	$ 650,734.45	$ 664,725.24	$ 679,016.84	$ 693,615.70	**$ 6,314,756.08**
FDOT Service Development	$ 1,593.54	$ 1,627.80	$ 1,662.80	$ 1,698.55	$ 1,735.07	$ 1,772.37	$ 1,810.48	$ 1,849.40	$ 1,889.17	$ 1,929.78	**$ 17,568.96**
FDOT Congestion Management	$ 3,370.95	$ 3,443.43	$ 3,517.46	$ 3,593.08	$ 3,670.34	$ 3,749.25	$ 3,829.86	$ 3,912.20	$ 3,996.31	$ 4,082.23	**$ 37,165.10**
JARC	$ 157,166.97	$ 160,546.06	$ 163,997.80	$ 167,523.75	$ 171,125.51	$ 174,804.71	$ 178,563.01	$ 182,402.12	$ 186,323.76	$ 190,329.72	**$ 1,732,783.41**
Private	$ 18,387.00	$ 18,782.32	$ 19,186.14	$ 19,598.64	$ 20,020.01	$ 20,450.44	$ 20,890.13	$ 21,339.27	$ 21,798.06	$ 22,266.72	**$ 202,718.73**
FDOT Urban Transit Capital	$ 231,294.16	$ 236,266.98	$ 241,346.72	$ 246,535.68	$ 251,836.20	$ 257,250.67	$ 262,781.56	$ 268,431.37	$ 274,202.64	$ 280,098.00	**$ 2,550,043.98**
Paratransit Operating Revenue	$ 1,457,798.00	$ 1,489,140.66	$ 1,524,161.98	$ 1,563,269.67	$ 1,607,123.10	$ 1,656,707.72	$ 1,713,451.91	$ 1,779,406.13	$ 1,857,516.08	$ 1,952,040.87	**$ 16,600,616.12**
Total Operating Revenues	**$ 14,153,251.07**	**$ 14,603,353.86**	**$ 15,069,273.52**	**$ 15,399,601.11**	**$ 15,740,935.86**	**$ 16,094,397.25**	**$ 16,461,551.77**	**$ 16,844,590.14**	**$ 17,246,601.54**	**$ 17,671,991.68**	**$ 159,285,547.60**
Budget Surplus/Deficit	**$ 375,084.94**	**$ 528,957.16**	**$ (1,902,348.97)**	**$ (6,774,316.28)**	**$ (13,147,952.93)**	**$ (18,022,626.89)**	**$ (20,127,217.04)**	**$ (22,149,999.04)**	**$ (24,368,149.76)**	**$ (26,832,818.83)**	**$ (132,421,387.64)**
Fund Balance	**$ 375,084.94**	**$ 904,042.10**	**$ (998,306.87)**	**$ (7,772,623.14)**	**$ (20,920,576.07)**	**$ (38,943,202.96)**	**$ (59,070,420.00)**	**$ (81,220,419.04)**	**$ (105,588,568.81)**	**$ (132,421,387.64)**	

Table 6-7
Ten-Year Capital Revenues and Costs

	FY 2017 Estimated	FY 2018 Estimated	FY 2019 Estimated	FY 2020 Estimated	FY 2021 Estimated	FY 2022 Estimated	FY 2023 Estimated	FY 2024 Estimated	FY 2025 Estimated	FY 2026 Estimated	TOTAL
Capital Costs											
Replacement Fixed Route 30-35' Buses	$ 7,407,504.00	$ -	$ -	$ 1,480,431.37	$ -	$ 2,574,623.75	$ 525,995.63	$ 2,686,522.69	$ -	$ 560,657.00	**$ 15,235,734.45**
Spare Fixed Route 30-35' Buses	$ 1,851,876.00	$ -	$ -	$ 493,477.12	$ -	$ 514,924.75	$ -	$ 537,304.54	$ -	$ -	**$ 3,397,582.41**
Replacement Fixed Route 24' Buses	$ -	$ -	$ -	$ 150,150.10	$ -	$ -	$ -	$ -	$ 167,000.39	$ -	**$ 317,150.49**
Spare Fixed Route 24' Buses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 83,500.19	$ -	**$ 83,500.19**
Replacement Minibuses (29')	$ -	$ -	$ -	$ -	$ 137,108.84	$ 140,056.68	$ -	$ 146,143.85	$ -	$ 152,495.59	**$ 575,804.96**
Spare Minibuses (29')	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
Replacement Other Paratransit Vehicles	$ 1,574,440.00	$ 241,243.57	$ 328,573.74	$ 839,095.19	$ 599,995.02	$ 1,313,346.23	$ 268,316.64	$ 639,532.70	$ 746,608.75	$ 667,328.23	**$ 7,218,480.07**
Spare Other Paratransit Vehicles	$ 314,888.00	$ 80,414.52	$ 82,143.44	$ 167,819.04	$ 85,713.57	$ 262,669.25	$ 89,438.88	$ 91,361.81	$ 186,652.19	$ 95,332.60	**$ 1,456,433.30**
Maintain Existing Service	**$ 11,148,708.00**	**$ 321,658.09**	**$ 410,717.18**	**$ 3,130,972.82**	**$ 822,817.43**	**$ 4,805,620.66**	**$ 883,751.15**	**$ 4,100,865.60**	**$ 1,183,761.52**	**$ 1,475,813.43**	**$ 28,284,685.87**
Route 1/101 Florida Ave Corridor	$ -	$ -	$ 483,090.67	$ -	$ -	$ -	$ 525,995.63	$ -	$ -	$ 560,657.00	**$ 1,569,743.31**
Route 3/301 Lakeland Hills Corridor	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
Route 12 Lakeland to WH	$ -	$ 472,922.83	$ -	$ -	$ -	$ 514,924.75	$ -	$ -	$ 548,856.59	$ -	**$ 1,536,704.17**
Route 14 Combee/Edgewood	$ -	$ -	$ -	$ 493,477.12	$ -	$ -	$ -	$ -	$ -	$ -	**$ 493,477.12**
Route 15 Winter Haven - Haines City	$ -	$ -	$ -	$ 493,477.12	$ -	$ -	$ -	$ 537,304.54	$ -	$ -	**$ 1,030,781.66**
Route 15 Kathleen/Providence/ Harden	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
Route 22XL Bartow Express	$ -	$ -	$ -	$ 493,477.12	$ -	$ -	$ -	$ -	$ -	$ 560,657.00	**$ 1,054,134.13**
Route 22XW Winter Haven/Bartow	$ -	$ -	$ -	$ -	$ -	$ 514,924.75	$ -	$ -	$ -	$ -	**$ 514,924.75**
Route 30 Legoland	$ -	$ -	$ -	$ -	$ 504,086.88	$ -	$ -	$ -	$ 548,856.59	$ -	**$ 1,052,943.47**
Route 32/33 South Fl/Carter Rd.	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
Route 58 College Connector	$ -	$ -	$ -	$ -	$ 504,086.88	$ -	$ -	$ -	$ -	$ -	**$ 504,086.88**
Route 60 Winter Haven Northeast	$ -	$ -	$ -	$ -	$ -	$ -	$ 525,995.63	$ -	$ -	$ -	**$ 525,995.63**
Route 427 US 27/Haines City LYNX	$ -	$ -	$ -	$ -	$ 504,086.88	$ -	$ -	$ -	$ -	$ -	**$ 504,086.88**
Polk City to Winter Haven	$ -	$ -	$ -	$ -	$ -	$ 514,924.75	$ -	$ -	$ -	$ -	**$ 514,924.75**
Sunrail Feeder Winter Haven to Poinciana	$ -	$ -	$ -	$ 493,477.12	$ -	$ 514,924.75	$ 525,995.63	$ 537,304.54	$ -	$ 560,657.00	**$ 2,632,359.05**
Spare 30-35' Buses	$ -	$ 472,922.83	$ -	$ 493,477.12	$ 504,086.88	$ -	$ 525,995.63	$ 537,304.54	$ -	$ 560,657.00	**$ 3,094,444.01**
Simple Bus Stop	$ -	$ -	$ -	$ -	$ -	$ 106,773.40	$ -	$ -	$ -	$ -	**$ 106,773.40**
Park-and-Ride Facility	$ -	$ 715,050.00	$ 730,423.58	$ 746,127.68	$ -	$ -	$ -	$ -	$ -	$ -	**$ 2,191,601.26**
East Polk Transit Maintenance Facility	$ 2,000,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 2,000,000.00**
Downtown Lakeland Intermodal Center	$ 1,140,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 1,140,000.00**
Downtown Lakeland Intermodal Center (Design and Engineering)	$ 285,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 285,000.00**
Transit Signal Priority (TSP) Infrastructure - Florida Ave	$ -	$ -	$ 389,211.42	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 389,211.42**
Transit Signal Priority (TSP) Infrastructure - Lakeland Hills Blvd	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 111,438.39	$ -	**$ 111,438.39**
Transit Signal Priority (TSP) Infrastructure	$ -	$ -	$ 401,330.19	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 401,330.19**
Service Improvements & Expansions	**$ 3,425,000.00**	**$ 1,660,895.67**	**$ 2,004,055.86**	**$ 3,213,513.30**	**$ 2,016,347.53**	**$ 2,166,472.40**	**$ 2,103,982.53**	**$ 1,611,913.61**	**$ 1,209,151.56**	**$ 2,242,628.01**	**$ 21,653,960.47**
Total Capital Costs	**$ 14,573,708.00**	**$ 1,982,553.76**	**$ 2,414,773.03**	**$ 6,344,486.13**	**$ 2,839,164.95**	**$ 6,972,093.06**	**$ 2,987,733.68**	**$ 5,712,779.21**	**$ 2,392,913.07**	**$ 3,718,441.44**	**$ 49,938,646.34**
Capital Revenues											
LAMTD - FTA 5307 Capital	$ 1,840,681.54	$ 1,880,256.19	$ 1,920,681.70	$ 1,961,976.35	$ 2,004,158.85	$ 2,047,248.26	$ 2,091,264.10	$ 2,136,226.28	$ 2,182,155.14	$ 2,229,071.48	**$ 20,293,719.88**
PCTA - FTA 5307 Capital	$ 790,344.17	$ 807,336.57	$ 824,694.31	$ 842,425.24	$ 860,537.38	$ 879,038.93	$ 897,938.27	$ 917,243.94	$ 936,964.69	$ 957,109.43	**$ 8,713,632.93**
FTA 5309 Capital Investment Grant	$ 160,344.86	$ 163,792.27	$ 167,313.80	$ 170,911.05	$ 174,585.64	$ 178,339.23	$ 182,173.52	$ 186,090.25	$ 190,091.19	$ 194,178.15	**$ 1,767,819.97**
FTA 5310 Paratransit	$ 210,063.00	$ 214,579.35	$ 219,192.81	$ 223,905.46	$ 228,719.42	$ 233,636.89	$ 238,660.08	$ 243,791.28	$ 249,032.79	$ 254,386.99	**$ 2,315,968.08**
Total Capital Revenues	**$ 3,001,433.56**	**$ 3,065,964.39**	**$ 3,131,882.62**	**$ 3,199,218.10**	**$ 3,268,001.29**	**$ 3,338,263.31**	**$ 3,410,035.97**	**$ 3,483,351.75**	**$ 3,558,243.81**	**$ 3,634,746.05**	**$ 33,091,140.85**
Budget Surplus/Deficit	**$ (11,572,274.44)**	**$ 1,083,410.63**	**$ 717,109.59**	**$ (3,145,268.03)**	**$ 428,836.33**	**$ (3,633,829.75)**	**$ 422,302.30**	**$ (2,229,427.47)**	**$ 1,165,330.74**	**$ (83,695.39)**	**$ (16,847,505.49)**
Fund Balance	**$ (11,572,274.44)**	**$ (10,488,863.81)**	**$ (9,771,754.22)**	**$ (12,917,022.25)**	**$ (12,488,185.92)**	**$ (16,122,015.67)**	**$ (15,699,713.37)**	**$ (17,929,140.84)**	**$ (16,763,810.10)**	**$ (16,847,505.49)**	

Table 6-8
Ten-Year Operating and Capital Revenue Projections

	FY 2017 Estimated	FY 2018 Estimated	FY 2019 Estimated	FY 2020 Estimated	FY 2021 Estimated	FY 2022 Estimated	FY 2023 Estimated	FY 2024 Estimated	FY 2025 Estimated	FY 2026 Estimated	TOTAL
Operating Revenues											
LAMTD - Local General Revenue	$ 1,139,046.05	$ 1,163,535.54	$ 1,188,551.55	$ 1,214,105.41	$ 1,240,208.68	$ 1,266,873.16	$ 1,294,110.94	$ 1,321,934.32	$ 1,350,355.91	$ 1,379,388.56	**$ 12,558,110.12**
PCTA - Contract Revenue	$ 4,222,739.01	$ 4,313,527.90	$ 4,406,268.75	$ 4,501,003.53	$ 4,597,775.10	$ 4,696,627.27	$ 4,797,604.76	$ 4,900,753.26	$ 5,006,119.45	$ 5,113,751.02	**$ 46,556,170.05**
PCTA - Passenger Fares	$ 2,318.81	$ 2,368.66	$ 2,419.59	$ 2,471.61	$ 2,524.75	$ 2,579.03	$ 2,634.48	$ 2,691.12	$ 2,748.98	$ 2,808.08	**$ 25,565.08**
LAMTD - Farebox Revenue	$ 483,555.00	$ 617,439.29	$ 756,857.08	$ 773,129.51	$ 789,751.79	$ 806,731.46	$ 824,076.18	$ 841,793.82	$ 859,892.39	$ 878,380.08	**$ 7,631,606.61**
PCTA - Farebox Revenue	$ 87,401.00	$ 111,600.15	$ 136,799.47	$ 139,740.65	$ 142,745.08	$ 145,814.10	$ 148,949.10	$ 152,151.51	$ 155,422.76	$ 158,764.35	**$ 1,379,388.17**
LAMTD - FTA 5307 Operating	$ 826,972.86	$ 844,752.78	$ 862,914.97	$ 881,467.64	$ 900,419.19	$ 919,778.20	$ 939,553.44	$ 959,753.83	$ 980,388.54	$ 1,001,466.90	**$ 9,117,468.35**
PCTA - FTA 5307 Operating	$ 355,082.16	$ 362,716.43	$ 370,514.83	$ 378,480.90	$ 386,618.24	$ 394,930.53	$ 403,421.54	$ 412,095.10	$ 420,955.15	$ 430,005.68	**$ 3,914,820.59**
Property Tax	$ 3,770,949.19	$ 3,852,024.60	$ 3,934,843.13	$ 4,019,442.26	$ 4,105,860.27	$ 4,194,136.26	$ 4,284,310.19	$ 4,376,422.86	$ 4,470,515.95	$ 4,566,632.05	**$ 41,575,136.77**
TD Commission	$ 63,640.47	$ 65,008.74	$ 66,406.43	$ 67,834.17	$ 69,292.60	$ 70,782.39	$ 72,304.21	$ 73,858.76	$ 75,446.72	$ 77,068.82	**$ 701,643.32**
State Block Grant	$ 759,174.71	$ 775,496.97	$ 792,170.16	$ 809,201.81	$ 826,599.65	$ 844,371.55	$ 862,525.53	$ 881,069.83	$ 900,012.83	$ 919,363.11	**$ 8,369,986.16**
FL Transportation Disadvantaged Program	$ 572,761.18	$ 585,075.54	$ 597,654.67	$ 610,504.24	$ 623,630.09	$ 637,038.13	$ 650,734.45	$ 664,725.24	$ 679,016.84	$ 693,615.70	**$ 6,314,756.08**
FDOT Service Development	$ 1,593.54	$ 1,627.80	$ 1,662.80	$ 1,698.55	$ 1,735.07	$ 1,772.37	$ 1,810.48	$ 1,849.40	$ 1,889.17	$ 1,929.78	**$ 17,568.96**
FDOT Congestion Management	$ 3,370.95	$ 3,443.43	$ 3,517.46	$ 3,593.08	$ 3,670.34	$ 3,749.25	$ 3,829.86	$ 3,912.20	$ 3,996.31	$ 4,082.23	**$ 37,165.10**
JARC	$ 157,166.97	$ 160,546.06	$ 163,997.80	$ 167,523.75	$ 171,125.51	$ 174,804.71	$ 178,563.01	$ 182,402.12	$ 186,323.76	$ 190,329.72	**$ 1,732,783.41**
Private	$ 18,387.00	$ 18,782.32	$ 19,186.14	$ 19,598.64	$ 20,020.01	$ 20,450.44	$ 20,890.13	$ 21,339.27	$ 21,798.06	$ 22,266.72	**$ 202,718.73**
FDOT Urban Transit Capital	$ 231,294.16	$ 236,266.98	$ 241,346.72	$ 246,535.68	$ 251,836.20	$ 257,250.67	$ 262,781.56	$ 268,431.37	$ 274,202.64	$ 280,098.00	**$ 2,550,043.98**
Paratransit Operating Revenue	$ 1,457,798.00	$ 1,489,140.66	$ 1,524,161.98	$ 1,563,269.67	$ 1,607,123.10	$ 1,656,707.72	$ 1,713,451.91	$ 1,779,406.13	$ 1,857,516.08	$ 1,952,040.87	**$ 16,600,616.12**
Total Operating Revenues	**$ 14,153,251.07**	**$ 14,603,353.86**	**$ 15,069,273.52**	**$ 15,399,601.11**	**$ 15,740,935.66**	**$ 16,094,397.25**	**$ 16,461,551.77**	**$ 16,844,590.14**	**$ 17,246,601.54**	**$ 17,671,991.68**	**$ 159,285,547.60**
Capital Revenues											
LAMTD - FTA 5307 Capital	$ 1,840,681.54	$ 1,880,256.19	$ 1,920,681.70	$ 1,961,976.35	$ 2,004,158.85	$ 2,047,248.26	$ 2,091,264.10	$ 2,136,226.28	$ 2,182,155.14	$ 2,229,071.48	**$ 20,293,719.88**
PCTA - FTA 5307 Capital	$ 790,344.17	$ 807,336.57	$ 824,694.31	$ 842,425.24	$ 860,537.38	$ 879,038.93	$ 897,938.27	$ 917,243.94	$ 936,964.69	$ 957,109.43	**$ 8,713,632.93**
FTA 5309 Capital Investment Grant	$ 160,344.86	$ 163,792.27	$ 167,313.80	$ 170,911.05	$ 174,585.64	$ 178,339.23	$ 182,173.52	$ 186,090.25	$ 190,091.19	$ 194,178.15	**$ 1,767,819.97**
FTA 5310 Paratransit	$ 210,063.00	$ 214,579.35	$ 219,192.81	$ 223,905.46	$ 228,719.42	$ 233,636.89	$ 238,660.08	$ 243,791.28	$ 249,032.79	$ 254,386.99	**$ 2,315,968.08**
Total Capital Revenues	**$ 3,001,433.56**	**$ 3,065,964.39**	**$ 3,131,882.62**	**$ 3,199,218.10**	**$ 3,268,001.29**	**$ 3,338,263.31**	**$ 3,410,035.97**	**$ 3,483,351.75**	**$ 3,558,243.81**	**$ 3,634,746.05**	**$ 33,091,140.85**
TOTAL REVENUES	**$ 17,154,684.63**	**$ 17,669,318.24**	**$ 18,201,156.14**	**$ 18,598,819.21**	**$ 19,008,936.95**	**$ 19,432,660.56**	**$ 19,871,587.74**	**$ 20,327,941.89**	**$ 20,804,845.35**	**$ 21,306,737.73**	**$ 192,376,688.45**

Table 6-9
Ten-Year Operating and Capital Cost Estimates

	FY 2017 Estimated	FY 2018 Estimated	FY 2019 Estimated	FY 2020 Estimated	FY 2021 Estimated	FY 2022 Estimated	FY 2023 Estimated	FY 2024 Estimated	FY 2025 Estimated	FY 2026 Estimated	TOTAL
Operating Costs											
Existing Fixed-Route Service	$ 12,565,969.13	$ 12,836,137.46	$ 13,112,114.42	$ 13,394,024.88	$ 13,681,996.41	$ 13,976,159.34	$ 14,276,646.76	$ 14,583,594.67	$ 14,897,141.95	$ 15,217,430.51	**$ 138,541,215.53**
Existing ADA Paratransit Service	$ 1,212,197.00	$ 1,238,259.24	$ 1,264,881.81	$ 1,292,076.77	$ 1,319,856.42	$ 1,348,233.33	$ 1,377,220.35	$ 1,406,830.59	$ 1,437,077.44	$ 1,467,974.61	**$ 13,364,607.55**
Maintain Existing Service	**$ 13,778,166.13**	**$ 14,074,396.70**	**$ 14,376,996.23**	**$ 14,686,101.65**	**$ 15,001,852.83**	**$ 15,324,392.67**	**$ 15,653,867.11**	**$ 15,990,425.25**	**$ 16,334,219.40**	**$ 16,685,405.11**	**$ 151,905,823.08**
Service Improvements	$ -	$ -	$ 2,594,626.26	$ 7,487,815.74	$ 11,579,344.56	$ 16,435,324.92	$ 18,136,634.34	$ 20,145,733.82	$ 22,360,645.55	$ 24,836,741.48	**$ 123,576,866.66**
Service Expansion	$ -	$ -	$ -	$ -	$ 2,307,691.20	$ 2,357,306.56	$ 2,798,267.36	$ 2,858,430.11	$ 2,919,886.36	$ 2,982,663.91	**$ 16,224,245.49**
Service Improvements & Expansions	**$ -**	**$ -**	**$ 2,594,626.26**	**$ 7,487,815.74**	**$ 13,887,035.76**	**$ 18,792,631.48**	**$ 20,934,901.70**	**$ 23,004,163.92**	**$ 25,280,531.91**	**$ 27,819,405.39**	**$ 139,801,112.16**
Total Operating Costs	**$ 13,778,166.13**	**$ 14,074,396.70**	**$ 16,971,622.49**	**$ 22,173,917.39**	**$ 28,888,888.59**	**$ 34,117,024.14**	**$ 36,588,768.81**	**$ 38,994,589.18**	**$ 41,614,751.30**	**$ 44,504,810.51**	**$ 291,706,935.24**
Capital Costs											
Replacement Fixed Route 30-35' Buses	$ 7,407,504.00	$ -	$ -	$ 1,480,431.37	$ -	$ 2,574,623.75	$ 525,995.63	$ 2,686,522.69	$ -	$ 560,657.00	**$ 15,235,734.45**
Spare Fixed Route 30-35' Buses	$ 1,851,876.00	$ -	$ -	$ 493,477.12	$ -	$ 514,924.75	$ -	$ 537,304.54	$ -	$ -	**$ 3,397,582.41**
Replacement Fixed Route 24' Buses	$ -	$ -	$ -	$ 150,150.10	$ -	$ -	$ -	$ -	$ 167,000.39	$ -	**$ 317,150.49**
Spare Fixed Route 24' Buses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 83,500.19	$ -	**$ 83,500.19**
Replacement Minibuses (29')	$ -	$ -	$ -	$ -	$ 137,108.84	$ 140,056.68	$ -	$ 146,143.85	$ -	$ 152,495.59	**$ 575,804.96**
Spare Minibuses (29')	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
Replacement Other Paratransit Vehicles	$ 1,574,440.00	$ 241,243.57	$ 328,573.74	$ 839,095.19	$ 599,995.02	$ 1,313,346.23	$ 268,316.64	$ 639,532.70	$ 746,608.75	$ 667,328.23	**$ 7,218,480.07**
Spare Other Paratransit Vehicles	$ 314,888.00	$ 80,414.52	$ 82,143.44	$ 167,819.04	$ 85,713.57	$ 262,669.25	$ 89,438.88	$ 91,361.81	$ 186,652.19	$ 95,332.60	**$ 1,456,433.30**
Maintain Existing Service	**$ 11,148,708.00**	**$ 321,658.09**	**$ 410,717.18**	**$ 3,130,972.82**	**$ 822,817.43**	**$ 4,805,620.66**	**$ 883,751.15**	**$ 4,100,865.60**	**$ 1,183,761.52**	**$ 1,475,813.43**	**$ 28,284,685.87**
Route 1/101 Florida Ave Corridor	$ -	$ -	$ 483,090.67	$ -	$ -	$ -	$ 525,995.63	$ -	$ -	$ 560,657.00	**$ 1,569,743.31**
Route 3/301 Lakeland Hills Corridor	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
Route 12 Lakeland to WH	$ -	$ 472,922.83	$ -	$ -	$ -	$ 514,924.75	$ -	$ -	$ 548,856.59	$ -	**$ 1,536,704.17**
Route 14 Combee/Edgewood	$ -	$ -	$ -	$ 493,477.12	$ -	$ -	$ -	$ -	$ -	$ -	**$ 493,477.12**
Route 15 Winter Haven - Haines City	$ -	$ -	$ -	$ 493,477.12	$ -	$ -	$ -	$ 537,304.54	$ -	$ -	**$ 1,030,781.66**
Route 15 Kathleen/Providence/ Harden	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
Route 22XL Bartow Express	$ -	$ -	$ -	$ 493,477.12	$ -	$ -	$ -	$ -	$ -	$ 560,657.00	**$ 1,054,134.13**
Route 22XW Winter Haven/Bartow	$ -	$ -	$ -	$ -	$ -	$ 514,924.75	$ -	$ -	$ -	$ -	**$ 514,924.75**
Route 30 Legoland	$ -	$ -	$ -	$ -	$ 504,086.88	$ -	$ -	$ -	$ 548,856.59	$ -	**$ 1,052,943.47**
Route 32/33 South Fl/Carter Rd.	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
Route 58 College Connector	$ -	$ -	$ -	$ -	$ 504,086.88	$ -	$ -	$ -	$ -	$ -	**$ 504,086.88**
Route 60 Winter Haven Northeast	$ -	$ -	$ -	$ -	$ -	$ -	$ 525,995.63	$ -	$ -	$ -	**$ 525,995.63**
Route 427 US 27/Haines City LYNX	$ -	$ -	$ -	$ -	$ 504,086.88	$ -	$ -	$ -	$ -	$ -	**$ 504,086.88**
Polk City to Winter Haven	$ -	$ -	$ -	$ -	$ -	$ 514,924.75	$ -	$ -	$ -	$ -	**$ 514,924.75**
Sunrail Feeder Winter Haven to Poinciana	$ -	$ -	$ -	$ 493,477.12	$ -	$ 514,924.75	$ 525,995.63	$ 537,304.54	$ -	$ 560,657.00	**$ 2,632,359.05**
Spare 30-35' Buses	$ -	$ 472,922.83	$ -	$ 493,477.12	$ 504,086.88	$ -	$ 525,995.63	$ 537,304.54	$ -	$ 560,657.00	**$ 3,094,444.01**
Simple Bus Stop	$ -	$ -	$ -	$ -	$ -	$ 106,773.40	$ -	$ -	$ -	$ -	**$ 106,773.40**
Park-and-Ride Facility	$ -	$ 715,050.00	$ 730,423.58	$ 746,127.68	$ -	$ -	$ -	$ -	$ -	$ -	**$ 2,191,601.26**
East Polk Transit Maintenance Facility	$ 2,000,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 2,000,000.00**
Downtown Lakeland Intermodal Center	$ 1,140,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 1,140,000.00**
Downtown Lakeland Intermodal Center (Design and Engineering)	$ 285,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 285,000.00**
Transit Signal Priority (TSP) Infrastructure - Florida Ave	$ -	$ -	$ 389,211.42	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 389,211.42**
Transit Signal Priority (TSP) Infrastructure - Lakeland Hills Blvd	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 111,438.39	$ -	**$ 111,438.39**
Transit Signal Priority (TSP) Infrastructure	$ -	$ -	$ 401,330.19	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 401,330.19**
Service Improvements & Expansions	**$ 3,425,000.00**	**$ 1,660,895.67**	**$ 2,004,055.86**	**$ 3,213,513.30**	**$ 2,016,347.53**	**$ 2,186,472.40**	**$ 2,103,982.53**	**$ 1,611,913.61**	**$ 1,209,151.56**	**$ 2,242,628.01**	**$ 21,653,960.47**
Total Capital Costs	**$ 14,573,708.00**	**$ 1,982,553.76**	**$ 2,414,773.03**	**$ 6,344,486.13**	**$ 2,839,164.95**	**$ 6,972,093.06**	**$ 2,987,733.68**	**$ 5,712,779.21**	**$ 2,392,913.07**	**$ 3,718,441.44**	**$ 49,938,646.34**
TOTAL COSTS	**$ 28,351,874.13**	**$ 16,056,950.46**	**$ 19,386,395.52**	**$ 28,518,403.51**	**$ 31,728,053.54**	**$ 41,089,117.20**	**$ 39,576,502.48**	**$ 44,707,368.39**	**$ 44,007,664.38**	**$ 48,223,251.95**	**$ 341,645,581.58**

APPENDIX A: TRANSIT SUPPORTIVE LAND USE & DESIGN POLICY

Introduction

Transit supportive land use policies are those plans, goals and objectives that enhance or deter the transit agency from operating in the most effective and efficient manner possible. Plans that support density and mixed uses; reduce sprawl; and advocate for multimodalism, non-automotive trip generation, and transit oriented development; are considered transit supportive.

The transportation and land use plans reviewed in the situation appraisal process illuminated a number of key land use policies that support transit development within Polk County. In particular, the Polk County 2030 Comprehensive Plan, and the City of Lakeland 2020 Comprehensive Plan guided the priorities and alternatives outlined in the 2017 TDP. Appendix A contains the full language of transit supportive policies found in these plans, as well as language from the Land Development Code regarding transit supportive Urban Design regulation.

Polk 2030 Comprehensive Plan

Chapter 2 of the Polk County 2030 Comprehensive Plan addresses the future land use element. It includes several policies concerning mixed-land use and transit centers and corridors. Specific policies relevant to the development of the TDP are as follows:

POLICY 2.104-A5: DEVELOPMENT CRITERIA

POLICY 2.104-A6: GENERAL INCENTIVES
Polk County shall encourage and promote compact, mixed-use by allowing:

a. increased densities and intensities within the Transit Corridors and Centers Overlay District subject to Policy 2.104-A7; and
b. increased densities for affordable or workforce housing subject to Policy 2.104-A7.

POLICY 2.104-A7: DENSITIES AND INTENSITIES
To promote efficient land use patterns and compact mixed-use development, the TSDA and the Transit Corridors and Centers Overlay (TCC Overlay) within the TSDA shall include higher densities and intensities of development. The maximum densities and intensities listed in Toble 2.104.1 exceed those listed in Policy 2.109-A1 and Policy 2.119-A1 and the policies that include the description for each of the referenced land use category as provided for within this Element. The Mixed Use category within Tables 2.104.1 and 2.104.2 is for those nonresidential land use categories that permit residential as provided for in this Element or the Appendices for the Selected Area Plans (SAP). The Transit Corridors and Centers Overlay includes three separate components that expand the residential density of selected Future Land Use Districts. These three components as depicted in Figure 1. include:

a. Transit Corridor – an area within ¼ mile of fixed route transit service;
b. Transit Center – an area within a one mile radius of the point of access for transit services; and
c. Transit Center Core – an area within ¼ mile of the point of access for transit services.

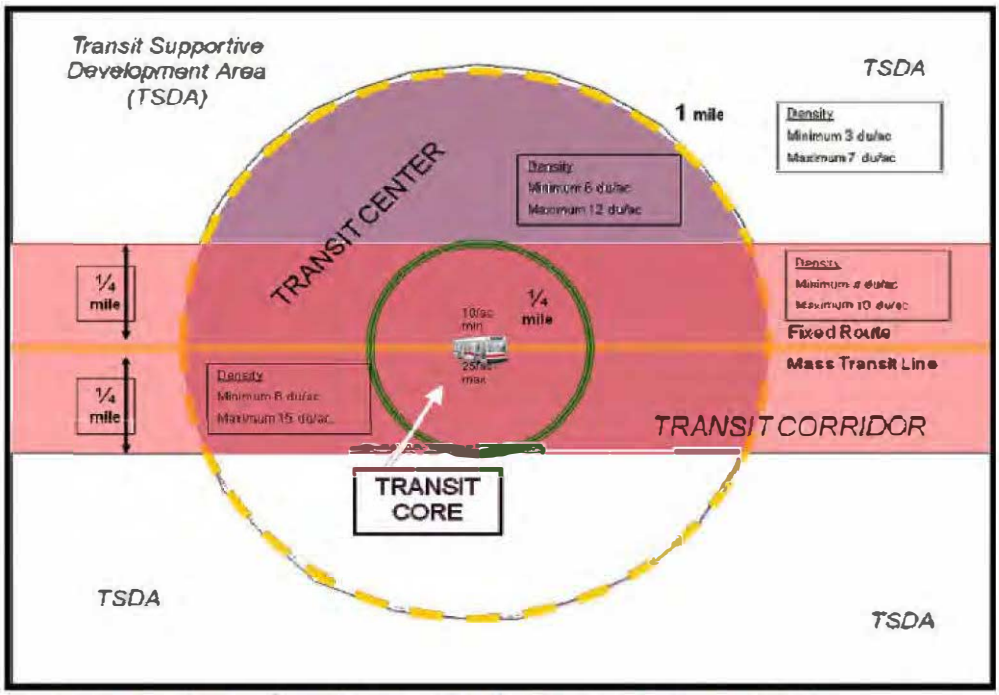


Figure 1 Residential Low (RL) densities within the TSDA and its Overlay Districts

Maximum densities are established within the TSDA and the respective components of the Transit Corridors and Centers Overlay as listed in Table 2.104.1. The maximum densities are not guaranteed within the respective land use categories and shall only be permitted subject to the requirements established in Policy 2.104-A5 Development Criteria and Policy 2.124-A3 Design Principles. Table 2.104.1 also includes recommended minimum densities to support future investments in public transportation. These recommended minimum densities may be required under the Land Development Code to coincide with planned public or private sector transit investments. Residential projects with less than the recommended minimum density will be encouraged to include a site design that allows for project phasing in order to

Table 2.104.1

DENSITY SCHEDULE	Residential Low	Residential Medium	Residential High	Mixed Use
Transit Supportive Development Area (TSDA)	3 du/ac min 7 du/ac max	5 du/ac min 10 du/ac max	7 du/ac min 15 du/ac max	
Transit Corridor	4 du/ac min 10 du/ac max	7 du/ac min 12 du/ac max	10 du/ac min 17 du/ac max	
Transit Center	6 du/ac min 12 du/ac max	10 du/ac min 15 du/ac max	12 du/ac min 18 du/ac max	10 du/ac min 18 du/ac max
Transit Corridor w/in Transit Center	8 du/ac min 15 du/ac max	12 du/ac min 18 du/ac max	15 du/ac min 20 du/ac max	10 du/ac min 20 du/ac max
Transit Center Core	10 du/ac min 25 du/ac max	15 du/ac min 30 du/ac max	20 du/ac min 40 du/ac max	15 du/ac min 40 du/ac max

preserve the maximum development potential of the subject parcel(s). Within the TSDA and Transit Corridors and Centers Overlay portion of the TSDA, non-residential uses may be approved at the listed intensities. The Floor Area Ratios (FAR) listed in Table 2.104.2 exceed those listed in Policy 2.109-A1 and Policy 2.119-A1 and policies that include the description for each of the referenced land use category as provided for within this Element. The FARs listed in Table 2.104.2 for RL, RM and RH are for non residential uses when permitted per this Comprehensive Plan. The Mixed Use category within Table 2.104.2 is for those land use categories that permit non-residential and residential uses as provided for in this Element or the Appendices for the Selected area Plans (SAP). The listed maximum FARs are not guaranteed within the respective land use categories and shall only be permitted subject to the requirements established in Policy 2.104-A5 Development Criteria and Policy 2.124-A3 Design Principles. Table 2.104.2 includes recommended minimum FARs to support future investments in public transportation. These recommended minimum FARs may be required under the Land Development Code to coincide with planned public or private sector transit investments. Projects with less than the recommended minimum FAR will be encouraged to include a site design that allows for project phasing in order to preserve the maximum development potential of the subject parcel(s). To support the development of compact, mixed land uses and to ensure mobility within the Transit Corridors and Centers Overlay, Polk County shall implement the development incentives and standards enumerated in Policy 2.124-A6.

Table 2.104.2

INTENSITY SCHEDULE	Residential Low	Residential Medium	Residential High and non-residential districts	Mixed Use
Transit Supportive Development Area (TSDA)	0.25 FAR min 0.5 FAR max	0.35 FAR min 0.75 FAR	0.5 FAR min 1.5 FAR max	
Transit Corridor (TCO)	0.3 FAR min 1.0 FAR max	0.5 FAR min 1.5 FAR max	0.7 FAR min 2.0 FAR max	
Transit Center (TCE)	0.5 FAR min 1.5 FAR max	0.7 FAR min 2.0 FAR max	1.0 FAR min 2.5 FAR max	1.0 FAR min 3.0 FAR max
Transit Corridor w/in Transit Center	0.5 FAR min 1.5 FAR max	0.7 FAR min 2.0 FAR max	1.0 FAR min 2.5 FAR max	1.0 FAR min 3.0 FAR max
Transit Center Core (TCEC)	1.0 FAR min 3.0 FAR max	1.0 FAR min 3.0 FAR max	1.0 FAR min 3.0 FAR max	1.0 FAR min 3.0 FAR max

POLICY 2.104-A8: URBAN SERVICE BOUNDARY

The Transit Supportive Development Area shall contiguous urban development within a 10-year timeframe. This designation does not prevent or discourage development in other Development Areas, but rather serves as a focal point for the provision of community infrastructure and services needed to support compact, mixed-use development and energy efficient land use patterns.

POLICY 2.104-A9: TSDA ALLOCATION

The Transit Supportive Development Area should contain developable land having capacity to sustain a projected population and residential demand for a period of ten years.

SECTION 2.124-A: TRANSIT CORRIDORS AND CENTERS OVERLAY

OBJECTIVE 2.124-A:

Polk county shall promote and support community investment in transit by:

a. the designation and mapping of a Transit Corridors and Centers Overlay;
b. the establishment of transit-supportive incentives and design standards applicable to development within the overlay;
a. the establishment of mobility strategies within corridors and centers; and
b. the coordinated implementation of design standards and mobility strategies consistent with other jurisdictions within the respective transit corridors.

POLICY 2.124-A1: PURPOSE

Core Transit Corridors and Centers, as identified in the Transportation Planning Organization's (TPO) 2060 Transportation Vision Plan, provide the basis for the Transit Corridor and Centers Overlay. The overlay will provide a framework for land use policies and mobility strategies that:

a. Connect our city centers;
b. Improve access to transit services including high speed rail service;
c. Improve transit access to/from rural areas;
d. Promote compact, mixed-use development;
e. Improve travel connections and access between land uses;
f. Provide a pedestrian-scale built environment and encourage pedestrian activity;
g. Promote the provision of public spaces and improved access to public spaces;
h. Implement reduced or flexible parking standards;
i. Increase travel options as part of a multi-modal transportation system;
j. Reduce reliance on single-occupant vehicles (SOV) and vehicle miles traveled; and
k. Reduce energy consumption and greenhouse gas emissions.

POLICY 2.124-A2: DESIGNATION AND MAPPING

The Transit Corridors and Centers (TCC) Overlay shall be shown on the Future Land Use Map Series to include three separate components as follows:

a. Transit Corridor – an area within ¼ mile of fixed route transit service;
b. Transit Center – on area within a one mile radius of the point of access for transit services; and
c. Transit Center Core – an area within ¼ mile of the point of access for transit services.

POLICY 2.124-A3: DESIGN PRINCIPLES

Polk County shall implement site design principles in the form of development incentives and standards. These design principles shall address:

a. Convenient, direct and safe pedestrian connections to building entrances, existing and planned transit
a. stops, parking facilities, mixed land uses and public spaces;
b. Pedestrian-scale blocks and interconnected street networks to promote pedestrian mobility;
c. Architecture and streetscape features, such as awnings, articulated facades, pedestrian lighting,
d. sidewalk furniture, street trees and store front display windows to create a human-scale or pedestrian focused environment;
e. Orientation of buildings and entrances towards streets or public spaces to encourage and support

f. pedestrian activity;
c. Discouragement of auto-dependent uses in close proximity to transit hubs;
d. Provision of complete streets to increase mobility for transportation system users;
e. Provision of parks, plazas and greenways to create community gathering places;
f. Provision of bicycle parking;
g. Incorporation of transit facilities and amenities into site design, e.g., shelters, benches, and lighting;
h. Provision of structured parking as part of mixed land uses; and
i. Reduced or shared parking.

POLICY 2.124-A4: OVERLAY WITHIN TRANSIT SUPPORTIVE DEVELOPMENT AREA (TSDA)
The TSDA is an area where infrastructure and community services are available or planned to support higher densities and intensities of development. In areas where the TCC Overlay coincides with the TSDA, Polk County shall provide incentives for compact, mixed-use development. These incentives may include:

a. Project approval through an administrative and technical review process;
b. Expedited permit reviews;
c. Reduced impact or permitting fees.

POLICY 2.124-A5: OVERLAY IN OTHER DEVELOPMENT AREAS
Outside of the TSDA, Polk County shall implement site design principles and mobility strategies within the TCC Overlay to maximize access to existing or future transit services and promote the development of transit service and centers. The Transit Centers are intended to support transit ridership and service development and to improve transit access to/from rural areas.

POLICY 2.124-A6: CO-LOCATION OF CIVIC OR COMMUNITY USES
Polk County shall identify and promote opportunities to co-locate civic or community uses within the Transit Corridors and Centers Overlay including:

a. urban parks;
b. community recreation centers;
c. schools;
d. child care facilities;
e. libraries and medical facilities;
f. governmental buildings; and
g. Police, Fire and EMS facilities.

Buildings in these areas should be sited to form a green space or public common for community use. Site planning, building orientation, architectural design and landscaping should reflect the character of the community.

POLICY 2.124-A7: DEVELOPMENT STANDARDS
Polk County shall require, through the Land Development Code, transit-supportive standards to be applied to development within the Transit Corridors and Centers Overlay. These standards may include, but will not be limited to:

a. Provision of pedestrian infrastructure;
b. Provision of transit facilities and passenger amenities;
c. Building orientation, e.g. orientation towards a street or public space; and
d. Maximum parking requirements.

POLICY 2.124-A8: COMPATIBILITY
The Land Development Code shall include appropriate design standards and other measures to ensure thot new development within Transit Corridors and Centers is compatible with existing neighborhoods and uses.

POLICY 2.124-A9: MOBILITY STRATEGIES
Polk County shall implement mobility strategies within the
TCC Overlay to support non-motorized transportation and transit service development and to maximize access to existing and planned transit services. These strategies will be incorporated in the Multi-Modal Transportation Level of Service Standards and may include, but will not be limited to:

a. Provision of an extensive pedestrian system;
b. Elimination of gaps in sidewalk network;
c. Complete street treatment including improved pedestrian and bicycle crossings;
d. Provision of transit facilities and passenger amenities;
e. Provision of bicycle parking; and
f. Shared, reduced or maximum parking requirements.

POLICY 2.124-A10: COMMUNITY INVESTMENT
Polk County shall consider funding improvements as part of the annual update of the Capital Improvement Element to support the provision of complete streets, continuous sidewalk networks, transit facilities and passenger amenities, and public spaces. Candidate projects within the Transit Corridors and Centers Overlay shall receive priority consideration.

POLICY 2.124-A11: PUBLIC-PRIVATE PARTNERSHIPS
The County shall support the merging of public and private interests and resources for the purposes of facilitating transit-oriented development with the overlay. Particularly in Transit Centers or Hubs, public-private partnerships may be used to leverage transit enhancements and infrastructure, create mixed uses inclusive of civic and community spaces, and establishes redevelopment strategies.

POLICY 2.124-A12: REDEVELOPMENT STRATEGIES
Polk County shall establish strategies and incentives within the Land Development Code to facilitate the redevelopment of sites with mixed uses and pedestrian-oriented features.

POLICY 2.124-A13: BROWNFIELD REDEVELOPMENT
Polk County shall identify and mop candidate brownfield sites within the Transit Corridors and Centers Overlay to promote the redevelopment of sites in close proximity to transit and other community services.

POLICY 2.124-A14: AFFORDABLE AND WORKFORCE HOUSING
Polk County shall identify and mop existing and candidate sites for affordable and workforce housing within the Transit Corridors and Centers Overlay as part of o comprehensive strategy to promote sustainable housing and neighborhoods.

POLICY 2.124-A15: SEAMLESS TRANSPORTATION SYSTEM
The Transit Corridors and Centers Overlay includes transit corridors that extend into and through municipal jurisdictions. To ensure a seamless transportation system, Polk County will coordinate with the cities to encourage the implementation of consistent land use policies and mobility strategies within these corridors.

POLICY 2.124-A16: NEW TRANSIT CENTERS
Property owners that seek to establish a new Transit Center shall consult with the Polk Transportation Planning Organization and the Growth Management Department to determine the appropriate data and analysis needed to support a Comprehensive Plan Map Amendment. The consideration of a new center shall address land use trends and plans for transit service development.

POLICY 2.124-A17
Development in parcels that are located in the TSDA and inside the boundary of an adopted Selected Area Plan (SAP), may obtain higher densities or intensities as allowed by the TSDA-TCCO where applicable. Development must be otherwise consistent with the development criteria of the adopted SAP.

Lakeland 2020 Comprehensive Plan

The Future Land Use Element of the City of Lakeland 2020 Comprehensive Plan includes a specific objective related to transit-oriented corridors and identifies specific policies to achieve this objective. The objective indicates the delineation of a Transit-Oriented Corridors (TOC) Overlay to address existing and planned key fixed transit routes and to promote a wide range of uses within ¼ mile of these key transit corridors and ½ mile from transit activity centers including passenger rail stations. It also allows creation of incentives and minimum requirements for new or re-development projects within these corridors. Specific policies include:

POLICY 3A
Transit-Oriented Corridors shall encourage a mix of complementary land uses with medium to high residential densities along key designated existing or planned fixed route transit corridors. All new or redevelopment within a TOC shall be designed with pedestrian, bike and transit friendly site design. The City shall promote the following land uses in vertical or horizontal mixes within a TOC:

a. Non-residential future land uses with residential uses above the first floor where appropriate, including Activity Center uses.
b. Public & Institutional, PI Uses, including but not limited to government, place of worship, community, educational, daycare, recreational &/or medical/clinic uses;
c. Residential Medium (RM) & Residential High (RH) uses;
d. Recreational and open/green space appropriate for an urban setting.

Policy 3B
Minimum densities of new residential subdivisions and multi-family residential development within residential land use designations and located in the TOC shall be 7 du/acre within the 1/8-mile TOC buffer area and 5 du/acre within the ¼-mile TOC buffer area. Minimum densities are not intended for infill development within primarily single family neighborhoods nor do they apply to platted subdivisions. Maximum residential densities within such land use designations shall be allowed up to 22 dwelling units per acre within 1/8 mile of the TOC and 16 du/acre within ¼ mile of the TOC. Maximum densities are not guaranteed; they may be limited by site features, land use compatibility issues including those relating to scale and mass, other requirements of this Plan and/or other City regulations. To qualify for the density increase, transit service must be operational within the designated corridor or have committed funding in the first 3 years of an adopted CIP or work program. Corridor depth shall be approximate and measured from centerline of the applicable roadways. TOC density increases shall not apply to any Conservation or Preservation land use areas or in the Green Swamp Area of Critical State Concern. Owners with parcels that are located partially within a TOC and/or its density buffer area shall be subject to a determination by the Community Development Director or his designee as to whether a majority of the developable parcel (excludes jurisdictional wetlands) is located within the corridor(s) in which case the entire developable parcel may be deemed within the applicable corridor(s).

Policy 3C
Wherever possible the City's TOCs shall align and connect with the Polk County Transit Corridors & Centers Overlay.

Policy 3D

The City shall adopt and implement Land Development Regulations that include elements of a form-based code which emphasizes design standards including maximum building setbacks, open/green space requirements, street shading treatments, maximum block lengths, relationship of development to the street, and provisions that require "complete streets" and intermodal connectivity as based upon the adopted roadway typologies in the Transportation Element of this Plan. Within the TOCs, compatibility of land uses shall be ensured primarily through appropriate building and site design standards which reflect a transit-oriented, urban form as well as other limits which may need to be imposed such as transitioning of building mass and/or density/intensity of uses or other limits as appropriately applied through zoning and/or development plan review.

Policy 3E

All new and redevelopment within the TOC shall be designed with primary focus on safe, attractive and functional access for the pedestrian, with secondary focus on the vehicle. This primary focus shall be reinforced by the City's land development and building regulations which address urban form, energy efficiency and transportation including: flexible parking and parking maximums, limited driveway cuts, cross/shared access, green spaces, setbacks, block length, sun/rain pedestrian protection treatments, and bicycle and transit facilities.

Policy 3F

Geographically variable impact fees shall also be considered as a means to encourage redevelopment and infill. Impact fee ordinance changes may include offering a discount for redevelopment in the Central City TSA outside of the Core Improvement Area and/or a discount in the Transit Oriented Corridors where a mix of uses is proposed in new or re-development.

Policy 3G

Where a new passenger rail service station stop is located within the City, a small area land use plan shall be required for an area approximately ½ mile or more around the proposed station site. The plan shall address the proposed mix of uses needed, expected maximum and minimum densities/intensities, parking areas and/or associated offsite park and ride or transfer facilities, general range of scale/mass of buildings, compatibility with surrounding uses, any required public services or infrastructure improvements, and connectivity with other modes of transportation including bus, bike and pedestrian modes. Development plans shall reflect a transit oriented, pedestrian friendly design. At least one noticed workshop is recommended for general public and surrounding landowner input; the final plan shall require City Commission approval.

Land Development Code

Multi-Family Development
(Revised 04/19/16 – Ord. 16-022; 01/24/12 – Ord. 12-003; 03/19/08 – Ord. 08-004; 10/23/02 - Ord. 02-69; 01/03/05 - Ord. 04-80)

In addition to all applicable regulations the following standards shall apply:

Multi-Family Development

6. Multi-family development within the Linear Commercial Corridor (LCC) districts shall:

a. Only be permitted as a mixed-use development within the Transit Supportive Development Area (TSDA) Transit Centers and Corridors Overlay; Develop no more than 25% of the site with units that are detached from nonresidential structures; and,
b. Meet development densities prescribed in Table 2.104.1 of The Comprehensive Plan.

Section 401.06 The North Ridge Selected Area Plan
(Revised 03/06/02 - Ord. 02-13)

A. Purpose and Intent
This Selected Area Plan (SAP) was adopted in the Polk County Comprehensive Plan to recognize the anticipated high level of urbanization during the next twenty years along the US 27 corridor between Haines City and Interstate 4 and along US 17/92 north of Haines City and south of CR 54. The districts and performance standards that follow implement the public/private initiatives outlined in the Plan. In order to achieve an efficient and highly desirable urban growth pattern, a balance of residential and non-residential uses is required, as well as a range of housing opportunities and short trips between housing, employment, and shopping including access management. The approach utilized in the SAP districts include the creation of traditional neighborhood villages and access management standards while preserving sensitive environmental resources.

D. Modified Land Use Requirements
(Revised 01/24/12 – Ord. 12-003; 05/07/08 – Ord. 08-013; 07/25/07 – Ord. 07-039)

2. Residential Low - 3 (RL-3X) and Residential Low - 4 (RL-4X) B In addition to the other applicable provisions, the following regulations shall apply:
b. Multifamily buildings:
i. Permitted to have up to four units per building in the RL-3X and RL-4X provided the overall density for the district is maintained in accordance with Table 4.16 and 4.18, however, this provision may be waived within the TSDA with the approval of a Planned Development; and

ii. There is no minimum lot size or height limitation for multifamily building in the RL-3X and RL-4X.

Salvage Yard
(Revised 08/07/12 – Ord. 12-025; 04/04/02 - Ord. 02-18)
1. Salvage yards shall be prohibited on lots less than ten acres. The minimum lot size may be reduced to eight acres for property located within a Transit Corridor and Center Overlay (TCCO) District.

All Development Projects - In addition to all requirements of this Code, development in all districts, except ROSX and PRESVX and bona-fide agricultural uses, Family Farms, Family Homestead, and Lots of Record, shall be consistent with the following (this criteria shall be evaluated by the DRC at Levels 2, 3 and 4 to determine the consistency of each development request with the following criteria):
a. Transit stops shall be incorporated into the development every 1/4 mile along U.S. Highway 98. This shall include a bench, signage, and pedestrian cover at the discretion or approval of the Transit Director;

Table 4.13 Density and FAR Bonus Point Schedule
TRANSPORTATION
Open space with pedestrian use area or corridors to break up parking areas 2 pts
Sidewalks in divider median of parking lots to separate pedestrian and vehicular traffic provided at least every other drive isle 5 pts
Curb and gutter for internal roads (less than 3 du/ac) 1 pts
Mass transit stop including shelter and benches (if on a planned or committed route) 3 pts
Parking Structure (exempt from FAR calculation) 6 pts

6. Business Park Center (BPCX) and INDUSTRIAL (INDX) - In addition to applicable provisions in this Code, the following provisions shall apply to BPCX and INDX districts within this SAP:
7. Institutional (INSTX) - In addition to applicable provisions in this Code, the following provisions shall apply to INSTX districts within this SAP:

Section 401.01 I-4 / NE Parkway Plan Districts
A. ***Purpose and Intent (Revised 10/06/10 – Ord. 10-070)***
The I-4/NE Parkway plan districts implement the I-4/NE Parkway Selected Area Plan (SAP) of the Polk County Comprehensive Plan. Development within the I-4/NE Parkway plan districts shall comply with all land use requirements and development standards contained in the I-4/NE Parkway Selected Area Plan (SAP) in Section 2.131-A of the Polk County Comprehensive Plan as well as conditions in the Polk Commerce Centre Development of Regional Impact Development Order for those areas of this SAP that are within the DRI.

E. ***Mixed Use-X Performance Standards (Revised 10/06/10 – Ord. 10-070)***
In order to develop the Mixed Use-X in accordance with the intent outlined in the Polk County Comprehensive Plan, the following performance standards shall apply. Said standards are in addition to those outlined in this Section, which apply to the entire SAP.

11. A transit stop shall be incorporated into the development every ¼ mile along an internal collector roadway. This shall include but not be limited to a bench, signage, and pedestrian cover at the discretion or approval of the Transit Director.

LAKELAND LDC

http://www.lakelandgov.net/Portals/CommDev/Planning%20Division/Current%20Planning/LDCs/Land%20Development%20Code_12-20-16.pdf

ARTICLE 10: CONCURRENCY STANDARDS

10.2 DEFINITIONS

Central City Transit Supportive Area: Area within which less stringent roadway levelsof-service are allowed due to the presence of a traditional street grid network, extensive bicycle and pedestrian networks and transit services and facilities. Levels-of-service may be measured on an averaged corridor basis for facilities with common trip ends.

e. Any development shall be required to provide transit facilities when needed based on traffic impacts, coordination with the Polk Transportation Planning Organization, and when necessary to help mitigate transportation impacts.

APPENDIX B: CURRENT INNOVATIONS & EMERGING TRENDS

Introduction

LAMTD management is committed to providing comprehensive and affordable service to communities across Polk County. To maximize public benefit, the agency strives to control costs, while continuously attracting new ridership and increasing revenue. Existing funding sources include City of Lakeland ad valorem taxes, budgetary appropriations from the Polk County Board of County Commissioners, special contracts with business and government partners, and federal and state sources.

This appendix (B) of the Transit Development Plan update explores innovative strategies for controlling costs, generating revenue and attracting ridership. Primary source materials include the American Public Transit Association[1] and Transportation for America[2], as well as a series of reports prepared by the National Center for Transit Research at USF's Center for Urban Transportation Research (CUTR) - the leading national source on this subject. CUTR has produced a series of reports under the title, *Lessons Learned in Transit Efficiencies, Cost Reductions, and Revenue Generation*,[3]. Their efforts have also been summarized by the Transportation Research Board[4].

It is important to note that LAMTD already uses several creative approaches to provides high-quality service, within their financial constraints. Strategies already implemented by LAMTD include:

- **Universal Access Partnerships** allow employees, students or members of an affinity group to ride bus services free of charge, based on on annual contract with the organization. Examples include Polk State College, Florida Polytechnic University, LEGOLand, City of Winter Haven, GEICO, and Polk County School Board. This program provides a great service to members of contracting organizations and provides LAMTD with predictable funding sources
- The **Summer of Safety Program** allows all students between 12 and 18 to ride for free during the summer
- Providing **multiple fare options**, including single fares; day, weekly and monthly passes; and multi-ride discount pocks. This variety allows riders to choose the option that caters best to their individual needs
- The **Community Bus Shelter Program** is a series of partnerships between LAMTD and local businesses and agencies to provide bus shelters that protect riders from inclement weather
- The **Safe Place Program** allows a child in trouble to board a bus and indicate their distress to the specially trained drivers, who then contact the dispatcher
- The **Art in Transit Program** features painters and other artists showcasing their art on board buses thereby offering dynamic rider experiences

[1] American Public Transportation Association, *Innovative Funding Sources for Transit*, September 2012.
[2] Transportation for America, *Thinking Outside the Farebox: Creative Approaches to Financing Transit Projects, undated.*
[3] National Center for Transit Research, University of South Florida Center for Urban Transportation Research, *Lessons Learned in Transit Efficiencies, Revenue Generation, and Cost Reductions*, Second Edition, July 2003
[4] Transportation Research Boord, *Maintaining Transit Effectiveness Under Major Financial Constraints*, which was produced as part of the Transit Cooperative Research Program (Synthesis 112), 2014.

Actions to Attract New Ridership

LAMTD's uses several innovative tools to attract new ridership. The **Universal Access Program** is particularly effective, and the agency is continuing to develop partnerships. Future efforts will focus on partnering with major employers in the area, such as the Detroit Tigers and Publix Corporation, and other significant origin and destination points such as shopping malls, business parks, and educational institutions. Other ongoing programs, including the Art in Transit Program and the Summer Safety Program enhance the ridership experience and introduce potential new riders to LAMTD's services.

For many people, a significant barrier to using transit for the first time is the apprehension and confusion associated with the new experience. The simple mechanisms for boarding, paying fare, or requesting a stop can be overwhelming for newcomers. Providing education and orientation about transit ridership can go a long way to increase confidence amongst potential riders, and is an important step in working towards increased ridership. These techniques – known as **transit travel training** – include visits to local community groups at schools, social and fraternal clubs, and group housing locations to brief potential riders on the basics of how to ride.

Milwaukee County Transit developed a 15-minute film that targeted case managers, the provider community, assisted living centers, and sheltered workshops, with the goal of shifting paratransit rides to fixed-route rides. Other agencies practicing travel training include the Orange County Transportation Authority, Washington Metropolitan Transit Authority, and Hillsborough Area Regional Transit (HART) in Tampa. These programs can be used to increase transit ridership in the general public, though several have been developed specifically to assist people with disabilities in making the transition to fixed route services. The HART program includes personalized help from a HART team member, and step-by-step instructions on using the transit guide, reading a passenger schedule, and riding the bus. LAMTD recently obtained a grant to support a travel trainer for people with disabilities and to serve as a mobility manager.

Another action to attract new ridership is investing in **improved pedestrian facilities**, which can have a significant impact on the willingness to use transit. Creating safe paved bus stop areas with good sidewalk access makes it much easier to access and utilize existing transit services. As such, LAMTD will encourage local governments to invest in these facilities.

There is also ample opportunity to secure LAMTD's place as an important and beloved asset by **developing an increased community presence strategy**. The Capital District Transportation Authority (CDTA) in upstate New York is actively involved in local community events, such as festivals, fairs, and economic development projects. Management staff indicates that the strategy has transformed public perception of CDTA[5].

In addition to innovative strategies, it is vital to continue focusing on the fundamentals. Frequent and reliable service; safe, clean vehicles; and courteous drivers are a necessity if LAMTD is to continue to be recognized as an outstanding community resource.

[5] Prall, Derek. August 3 2016. "Regaining and maintaining ridership: How public transportation agencies both large and small are retaining their ridership while reaching out to new communities". *American City & County Online*. Available at http://americancityandcounty.com/public-transit/regaining-and-maintaining-ridership. Last accessed December 14 2016

Actions to Increase Revenue

One of the most effective means for LAMTD to increase revenue is the **Universal Access Program**. The program's success can be attributed to its two-pronged benefit structure. That is, the program is designed to increase both ridership and revenue.

Many transit agencies, including LAMTD, earn revenue through providing **advertising opportunities** for local vendors and service providers. LAMTD already pursues some of these advertising ventures, and must weigh the potential revenues against the possible diminution of its own transit agency brand. These advertising opportunities can include:

- Bus advertising, both inside and outside the vehicle. Increasingly, transit agencies are including digital advertising as part of their offerings
- Allowing advertising on schedule materials
- Promoting advertising on bus shelters
- Selling advertising space on the agency website
- Allowing advertising on fare media
- Selling naming rights to passenger shelters and terminal or transfer facilities.

Many transit agencies have successfully sold **naming rights** to various elements of their systems. One of the most dramatic examples has been the Greater Cleveland Regional Transit Authority's "Health Line" Bus Rapid Transit Corridor, for which GCRTA has earned millions of dollars. The nearby Tampa TECOLine Streetcar System successfully sold the naming rights to the system and naming rights to several stations. As LAMTD contemplates the possibility of an intermodal center jointly with AMTRAK and Greyhound, there may be opportunities for naming rights and to include rental retail space.

Recent changes in Florida statutes have encouraged local governments to implement **multimodal mobility fees**. These fees are one-time charges paid by developers to contribute ta the cost of transportation improvements needed to serve the new development. Dozens of Florida local governments have enacted multimodal mobility fees. These go beyond traditional roadway impact fees, such as those in Polk County, by including transit improvements in both the capital improvement program (and sometimes transit operations) as allowable expenditures. Implementation would require enactment of mobility fee ordinances by the affected local governments and creation of mechanisms for directing a portion of the fees to LAMTD. Neighboring Osceola County and Hillsborough County and several municipalities within their borders have already enacted multimodal mobility fees.

Another important source of revenue which is already being used by LAMTD is the use of toll revenues generated by Florida DOT as the match for federal capital grants. The wide range of actions taken by transit agencies across the nation to increase revenue sources have also included:

- Leasing unused office space
- Sale of waste oils and lubricants for recycling. For example, LYNX sells waste oil (approx. 2500 gallons per month) to a waste management company
- Performing vehicle maintenance work for other agencies including other public organizations and non-profit organizations.

- Surplus property sales
- Allowing vendors to pay to distribute coupon books to transit customers
- Transportation to special events contracts
- Charging vendors for the ability to locate newspaper and vending machines at shelters and transfer facilities
- Charging for parking use at transit park and ride facilities, though the ridership implications would need to be carefully evaluated.

Actions to Reduce Costs

Several actions to reduce costs have been undertaken by transit agencies across the nation. Among them have been:

- Efforts to manage health care costs, including employee wellness programs, safety programs, and self-insurance
- Contracting with the private sector for providing services using taxi companies or Uber for special transportation services. LAMTD is already partnering with Uber far programs to provide access to Veteran's Administration facilities. Neighboring HART has recently unveiled the first in the nation door to bus connector service operated by a transit agency, a smartphone app. PSTA has similarly initiated a subsidized "last mile-first mile" service using taxis and Uber
- Using smaller buses when higher capacity is not required
- Joint purchasing programs, as exemplified by participation in FDOT's bus buy program, which allows transit agencies to purchase buses off a state contract with the leverage of group purchasing.

Summary

While a wide range of opportunities have been identified in the national research, those deemed most relevant to LAMTD will include:

- Continued promotion of LAMTD's Universal Access Program
- Continued promotion of the Community Bus Shelter Program
- Transit travel training and promotion to community groups
- Development of even more aggressive advertising sales
- Naming opportunities for LAMTD facilities and services
- Consideration by Polk County and its municipalities of a multimodal mobility fee on new development
- Continued use of FDOT excess toll revenues to match federal capital programs
- Efforts to control insurance costs
- Encouraging local governments to continue to invest in sidewalks that enhance access to transit services.

As noted earlier, LAMTD's innovative management team is already working on several of the opportunities identified. Other efforts to increase ridership, increase revenue and reduce costs will be evaluated by LAMTD management, and those that are relevant and practical for Polk County will be advanced.

APPENDIX C: TECHNOLOGICAL ASSESSMENT

Introduction and Summary of Findings

Technological change is the wave of the future and transit operators will be a full participant. LAMTD has already taken steps to implement several of the technological innovations discussed in this section. Emerging technologies that will be the most relevant to LAMTD during the time period of this TDP will include:

- Strong pursuit of transit signal priority systems on major LAMTD service routes
- Consideration of alternative fuel vehicles, based on their life cycle cost features, as current fleet vehicles are replaced
- Implementation of electronic touch card technology as a primary method of fare payment
- Implementation of real time GPS-based smart phone applications
- Integration of trip planning capabilities into the LAMTD passenger information system
- Adding on-board wi-fi and charging capabilities to LAMTD vehicles

Moving forward with these technological applications will ensure LAMTD is keeping pace with state of the art practices in the transit industry.

Transit Signal Priority

Transit signal priority is a readily available technology that can significantly improve transit operations and reliability. It has been successfully applied by many transit agencies, in cooperation with local governments. LAMTD could benefit from a recently completed project, the Central Lakeland Transit Signal Priority Feasibility Study, which was undertaken to determine the effectiveness of a transit signal priority system on three state highway corridors in the City of Lakeland, SR 37, SR 33, and US 98. It was shown that the transit travel times could be improved along all three state highway corridors if the overall signalization system was optimized through retiming and TSP was implemented. There are 41 signalized intersections within the study limits of which 17 were recommended for implementation. During the time frame of this TDP, LAMTD will actively advocate for transit signal priority on key routes.

Alternative Fuel Vehicles

With rising fuel prices and concerns about natural resources, transit agencies have begun to replace traditional gasoline and diesel buses with alternative fuel buses. These can include compressed natural gas, liquefied petroleum gas, hybrid-electric battery-electric, and other technologies. As LAMTD replaces its current diesel fleet, it will evaluate the life cycle cost implications of transitioning to alternative fuels.

Research from the American Public Transportation Association, found that 41.3% of U.S. public transportation buses were using alternative fuels or hybrid technology as of January 1, 2014[1].

[1] http://www.metro-magazine.com/sustainability/news/293950/41-of-u-s-public-transit-buses-use-alt-fuels-hybrid-technology

APTA statistics for 2014 show that 16.9% of public transit buses were hybrid-electric. 16.7% of U.S. transit buses used compressed natural gas (CNG), liquefied natural gas (LNG) and blends. Biodiesel is used by 7.4% of public transit buses. Other alternative fuels, such as propane and hydrogen, account for 0.3%. Specific January 2014 Florida examples that were cited, include:

- **Fort Lauderdale, Fla.** – Broward County Transit (BCT) hos 81 hybrid buses and on additional 5 on order. BCT began purchasing hybrid buses in 2008 and have ordered approximately 11 each year. BCT also purchased 138 new propane fueled buses in 2014 to be used exclusively for its paratransit program. BCT now maintains the largest propane paratransit fleet in the Southeast. They also added 5 new ultra-low sulfur diesel commuter coach style buses to its fleet in December 2014 with plans to buy 9 more. The commuter coach buses operate on and can travel up to 400 miles. These buses will be used for BCT's Express Bus Service.

- **Orlando, Fla.** – Central Florida Regional Transportation Authority (LYNX) began operating all hybrid electric buses for its LYMMO fleet in April 2014. LYNX also entered into a public-private partnership (P3) where the transit agency will receive a turnkey CNG fueling station and the generation of revenue from third-party customers. Under the terms of the P3, switching from diesel to CNG is expected to provide the agency with annual positive returns on its investment approximately three years from the scheduled completion. LYNX will purchase and/or lease an initial 35 CNG buses and is projected to have more than 150 CNG buses within the next five years. The 150 CNG buses would represent half of its current pool of 300 diesel vehicles, resulting in a more fuel-diversified and environmentally friendly fleet. In May 2009 LYNX became the first transit agency in the nation to build, operate and blend its own biodiesel fueling station.

- **St. Petersburg, Fla.** – Pinellas Suncoast Transit Authority (PSTA) introduced 10 hybrid-electric buses to the fleet in 2009 to improve fuel economy and lower emissions. Since then, PSTA has significantly expanded that number, amounting to over a quarter of the fleet.

- **Star Metro in Tallahassee** is moving toward an all-electric battery fleet, which began with the purchase of five battery powered buses and the creation of charging stations at the downtown transfer facility and at Star Metro's maintenance facility.

The Florida DOT has published a research report, prepared by the USF Center for Urban Transportation Research, that compares the costs and benefits of various types of alternative fuel buses[2]. The CUTR study found that the overwhelming majority of buses operated in Florida are diesel, though alternative fuels ae making inroads. Alternative fueled vehicles were found to be much more expensive, averaging nearly twice the capital cost of diesel buses, while having slightly better fuel economy. CUTR also developed a spreadsheet model that can be used to evaluate cost comparisons between various bus propulsion systems.

[2] Florido DOT, prepared by CUTR/USF, *Tracking Costs of Alternatively Fueled Buses in Florida,* December 2011.

New Payment Systems

On-boord tronsit fare collection can significantly slow bus operations. Passengers must have exact change and the more popular a bus route the more delay at each stop. Currently, LAMTD has a wide variety of fare payment choices, including onboard buses with cash, an online and phone ordering system, in-person transit offices, and by mail. Orders placed online or by phone are mailed via U.S. Mail within one day of processing and online orders require a minimum $10.00 purchase. These options are helpful in meeting the needs of customers. LAMTD is currently working on an electronic payment option using touch card technology to supplement its existing fare options. Electronic fares can reduce fair evasion, reduce the burden of carrying change, and allow for paperless ticketing. Advantages to contactless ticketing include the capability of offering many different types of passes (day, week, month) without the bus driver having to keep physical passes on board.

Real-Time Transit GPS/Smart Phone Applications

With advances in technologies there are now many ways to track bus arrivals and departures through interactive transit websites / smart phone applications, Quick Response (QR) codes on bus stop signs, and push-button real time information.

Regional Transit System (RTS)[3] in Gainesville, Florida is a good example of interactive bus tracking. RTS provides real-time information to those on their website or on their smart phone application. Transit riders can see the buses physically moving on the interactive maps as they make their way along their routes. Additionally, the time for the bus to reach each stop along the route is available. Some routes even include information about how full the bus is so riders know if they will be able to board. Those with no smart phones can text a number to receive bus arrival information.

Santa Clarita Transit[4] in California provides both QR codes and push buttons at bus stops for transit riders to track their buses. QR codes are matrix barcodes that direct to various sources of information including bus location information on the transit agency's website. Santa Clara Transit has installed arrival display signs at 30 key bus stops around their city. With the bus of a route number button on a sign, arrival information will be displayed on an overhead digital sign.

QR codes are already in place at more than 1,500 bus stops throughout Polk County and when scanned take users directly to the findmyroute website where they are able to view routes, physical location of stops, and landmarks near stops (Citrus Connection and schools). Importantly, LAMTD is also working on the implementation of real-time bus location, based on GPS technology.

[3] http://ufl.tronsloc.com/

[4] http://santaclaritatransit.com/resources/transit-information-network/

Trip Planning

First time transit riders may be nervous about taking a trip across town. Similarly, a veteran transit rider may be on a tight schedule trying to make connecting routes. A way to ease transit rider's concerns is to provide online transit trip planning. Riders can select the day of their trip, their beginning and end points, and the time they plan to depart to see what routes serve their trip and when buses are scheduled to arrive. Additionally, sometimes fare costs are included in trip planning calculations. Routes provided can be filtered by best route, fewest transfers, and least walking to transit stops. Almost all transit agencies that provide trip planning information across the state of Florida utilize Google's Trip Planner[5]. However, another trip planning program available is One Bus Away utilized by the Hillsborough Area Regional Transit Authority (HART).

Currently, the LAMTD website does not provide a trip planning tool, but is currently working on its implementation.

Wi-fi Equipped Buses

Wifi-equipped buses allow passengers to check e-mails, catch up on news, or search the web to make positive use of their travel time. While wifi-equipped buses benefit passengers who want to stay productive during a trip or relax by watching videos online, they are part of a bigger picture for smart phone "contactless ticketing" where passengers scan their phones and have dedicated account based fare cards for travel. It is important to note that since wifi signals on these types of buses will be shared with many other customers it may result in connections that are slower than normal at peak service times. Notably, Wi-fi equipped buses was identified as the top technology preference in LAMTD's recent college student survey.

Automated Vehicles

With the advances in personal automated vehicles (AV), efforts are also underway to apply these same technologies to transit vehicles. Automated vehicles include features such as radar, GPS, and cameras to sense the environment and navigate with little to no human input. This creates an opportunity for safer and more efficient trips by removing the human-error element of driving.

To date, there are only two operational transit-related automated vehicle technologies in the United States.[6] Both are prototypes under Federal Transit Administration (FTA) grants. These include the Minnesota Valley Transit Authority / University of Michigan Apple Valley driver assist system and the Lane Transit District (LTD) / University of California – Berkeley magnetic guidance system.

The advancement of automated vehicle prototypes and systems in Europe have become more common place than in the United States with the July 2015 legislation amendment to allow large-scale tests of self-driving passenger cars and trucks on public roads in many European cities.

While automated vehicles may be part of transit's features in the future, they are well beyond the timeframe of this transit development plan.

[5] https://maps.google.com/landing/transit/index.html
[6] http://www.nctr.usf.edu/wp-content/uploads/2015/10/77975-508-Version.pdf

APPENDIX D: SENIOR MOBILITY AUDIT

Senior Mobility Audit
West Lakeland

INTRODUCTION

As a partner in support of the Livable Polk Initiative, the Polk Transportation Planning Organization (TPO) elected to perform the first in a series of senior mobility audits to identify and tailor transportation investments to enhance multi-modal connections between senior residents and essential services (e.g., shopping, medical care facilities, civic and social engagement opportunities, etc.). The goal of the targeted infrastructure investment is make it easier for the senior citizens to maintain their independence and engagement in the community in circumstances where the operation of a motor vehicle may no longer be a preferred option of travel.

The audit includes an evaluation of existing conditions (accounting for demographics, land uses, pedestrian infrastructure, transit service, etc.); an assessment of factors that enhance or limit mobility (through a series of indices developed as part of the previous Neighborhood Mobility Audit effort); and a list of projects intended to improve pedestrian and transit network connections between residences and activity centers.

This Senior Mobility Audit documents the findings relevant to the West Lakeland Study Area as presented in the following sections.

1.0 DEFINE NEIGHBORHOOD

The West Lakeland area was identified through stakeholder input as the first Polk County neighborhood to be assessed by a senior mobility audit. United States Census Block Group Data (referred to as Census Data from this point forward) was first used to identify concentrations of "senior" (age 65 and older) populations within Polk County. In addition to age, additional characteristics including income and access to a motor vehicle were used to identify the location of potentially vulnerable senior populations. Once the presence of these populations was identified, the Polk Transportation Planning Organization (TPO) engaged local municipal government staff to further define the boundaries of the study area. The engaged group used local knowledge and elements such as land uses, activity centers, physical features, housing types, travel, and social patterns to identify community edges and define the West Lakeland study area.

The West Lakeland study area was confirmed geographically as the area of contiguous development bounded by Ariana Street to the south, US 92 to the north, Wabash Avenue to the west, and Sikes Blvd to the east.

2.0 AREA OVERVIEW

The West Lakeland study area, as the name denotes, is situated at the western edge of the City of Lakeland. The study area covers 3.1 square miles and incorporates several distinct neighborhoods including Central Avenue, Lake Hunter Terrace, Lake Beulah, Lake Bonnet, Crescent Heights, and Westgate. Major focal points within the study area include the Lakeland Center, Publix Employment Office, Florida Baptist Children's Homes, and site of the planned 160 acre Lake Bonnet Park. Other activity centers present include the Wabash Community Center, the Lakeland Housing Authority, three local parks, four public schools, 13 churches, and two shopping complexes with groceries. Residential use within the study area is characterized by a mix of single and multi-family homes with several large mobile home parks present. The CSX "S" Line bisects the study area creating a divide between north and south.

West Lakeland represents an area of Polk County that supports both an exceptionally large senior citizen population and exceptionally high (relative to other areas of Polk County) level of transit service. The transit routes that pass through the study area provide a direct connection to governmental, medical, civic, recreational, and other types of useful daily trips.

Community Services and Places

An evaluation of national trends in travel behavior shows that average trip frequency, length, and purpose change as individuals age. Notably, the portion of the population age 65+ makes fewer work trips, instead, traveling most often to access shopping or run errands, participate in social or recreational activities, or for meals. **Table 2.1** summarizes information taken from the National Household Travel Survey (NHTS) regarding trip purpose and age.

Table 2.1: Trip Frequency by Purpose by Age Cohort

Trip Purpose	***Age***					
	<19	***19-33***	***34-49***	***50-64***	***65-74***	***75+***
Work	3%	23%	24%	23%	10%	5%
School/Daycare/Religious	29%	7%	3%	3%	4%	5%
Medical/Dental	2%	2%	2%	3%	5%	7%
Shopping/Errands	17%	24%	26%	31%	38%	40%
Social/Recreational	28%	18%	15%	16%	18%	18%
Family Personal Business/Obligations	3%	4%	5%	6%	7%	7%
Transport Someone	7%	10%	13%	7%	7%	5%
Meals	9%	11%	10%	10%	11%	13%
Other	2%	1%	1%	1%	1%	1%

Source: 2009 National Household Travel Survey, Travel Day Trip File

The trip purposes identified in Table 2 were used to identify the types of services and activities most frequented by residents age 65 and older. The list below summarizes the general use types associated with senior activity centers.

1. Religious - churches, mosques, synagogues, or other religious centers
2. Medical - hospitals, doctors offices, pharmacies, or other medical/dental centers
3. Shopping – Retail stores, groceries, or other markets
4. Services – banks, post offices, or other government offices
5. Social and Recreation- community centers, clubs, or parks
6. Meals – diners, cafeterias, or other restaurants

The location of the various use types were then identified within the West Lakeland study area. Property Appraiser's Department of Revenue (DOR) Code information and community asset inventories retrieved from the Florida Geographic Data Library (FGDL) served as the basis for the identification of uses included in **Table 2.2** and **Figure 2.1**.

Table 2.2: Community Services and Places Based on Property Appraiser and Geographic Data

Service/Place	Within West Lakeland Study Area	Outside of Study Area Quarter-Mile*
Religious Centers	25 [Located throughout the study area]	47
Medical Facilities	0	13
Shopping Opportunities	43 [Retail centers are focused at edge of study area, 4 neighborhood/community shopping centers, 2 drug stores, 2 dollar stores, 8 convenience stores]	93
Banking and Government Services	4 [Adult Day Health Center, WIC Office, 2 Governmental Offices, 0 Banks]	7
Social and Recreation	10 [Wabash Community Center, Jenkins Arena, 3 Clubs and Lodges, 4 public parks, 3 recreational trails]	11
Dining and Meals	11 [Wabash Community Center, 6 present in shopping plazas, 5 free standing restaurants]	18

Source(s): Polk County Property Appraiser, 2016; Florida Geographic Data Library, 2016; and Field Review, 2017.
*Cumulative count includes service/place from lower geography.

With the exception of medical facilities, all of the use types identified above were found to be present within the Study Area. Religious centers are distributed evenly throughout the study area and provide a wide opportunity for access. The primary opportunity for shopping rests in the two community shopping centers present within the study area. The location of these shopping centers places the vast majority of study area residents less than a mile from a grocery store or pharmacy. Banking and Governmental Services are minimally represented within the study area. No bank or post office was identified. The Citrus Connection and Lakeland Housing Authority represent the major governmental offices present

within the community. The opportunity for engagement in social/recreation activity was well represented within the study area. The Wabash Community Center, Westside Park, Southwest Softball Complex, Westgate-Central Trail, and Lake Beulah Trail all serve to support recreation in the southern portion of the study area. Development of the planned Springs Park and Chase Street Trail will enhance access to recreation in the northern extent of the study area. The opportunity to obtain meals outside of the home includes congregate meals served at the Wabash Community Center located on Southern Avenue, and a number of restaurants sited along major arterials.

Residential Use

Residential use within the study area includes a mix of single family, mobile home, and multi-family units. Separated by major transportation corridor sand other features, the residential use falls within and is generally oriented to one of the neighborhoods defined by the City of Lakeland. The area is unique in that it supports six large mobile home parks (1,785 units in total) registered as a 55+ community with the State of Florida. The study area also supports the West Lake Public Housing development which supports 125 units. **Figure 2.1** depicts the location of the residential use present within the study area.

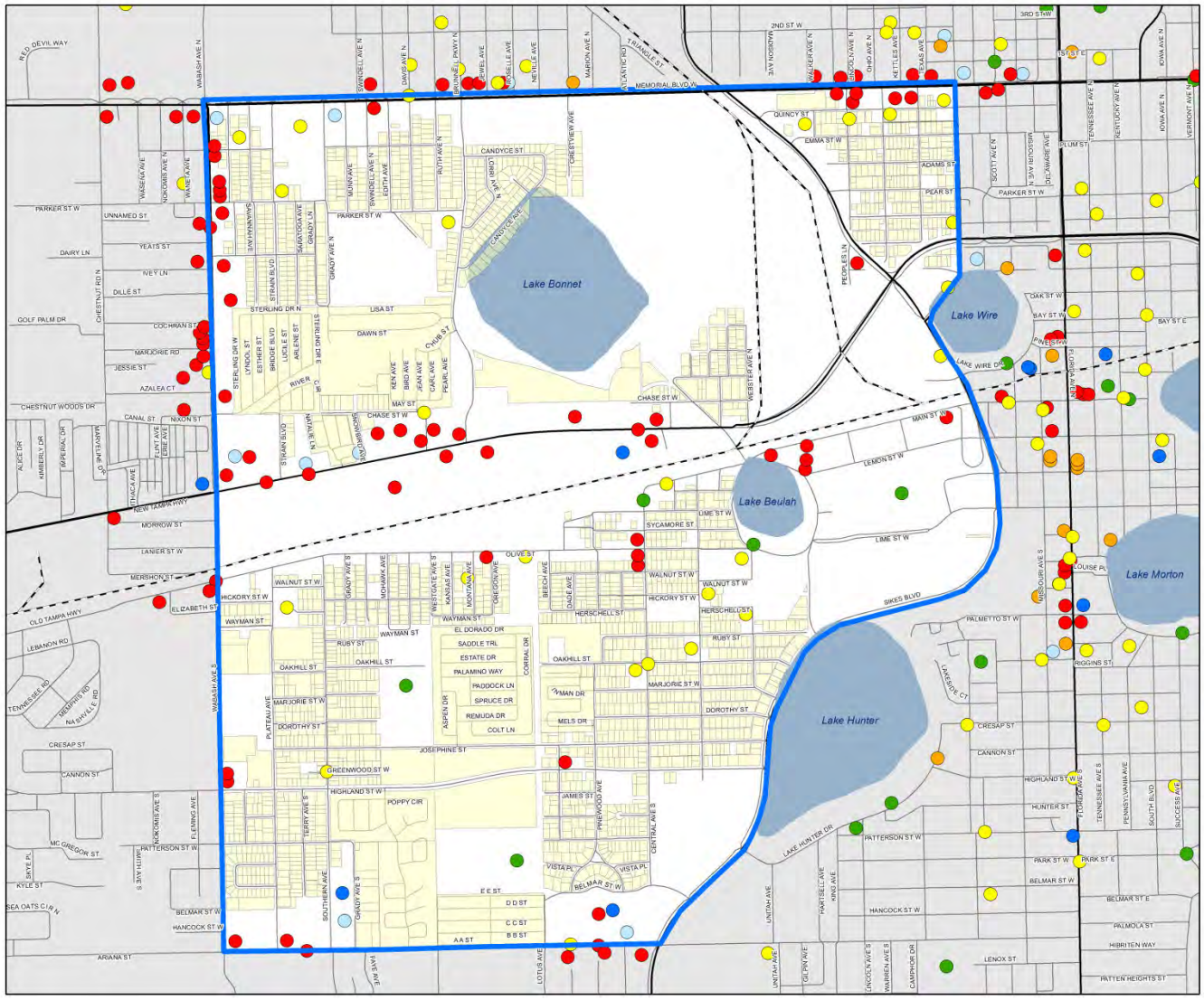


Figure 2.1
West Lakeland Services, Places, and Residential Use

Legend

Services and Places

- Religious Center
- Medical Facility
- Shopping Opportunity
- Banking and Government Service
- Social and Recreation
- Dining and Meals

West Lakeland

- Study Area Boundary

Location of Residential Use

- Residential Parcel

Other Map Elements

- Interstate
- US Highway
- State Road
- Local Road
- Rail
- Lake

0 0.25 0.5 Miles

Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

Demographic Characteristics

Based on American Community Survey 5-Year Estimates for Census Block Groups comprising Polk County and West Lakeland study area, the demographic characteristics of the study area are shown to differ from Polk County in the areas of racial composition, age distribution, income, and access to a motor vehicle, as presented in **Table 2.3**.

Table 2.3: Demographic Characteristics of Polk County and the West Lakeland Neighborhood

Demographic Characteristic	Polk County		West Lakeland Study Area	
	Count	***Percent***	***Count***	***Percent***
Population	617,323	N/A	9,105	N/A
White	486,381	78.8	5,445	59.8
Black or African American	92,931	15.1	3,050	33.5
American Indian and Alaskan Native	1,749	0.3	48	0.5
Asian	10,449	1.7	171	1.9
Native Hawaiian and Other Pacific Islander	222	0.1	0	0.0
Some Other Race	12,327	2.0	162	1.8
Two or More Races	13,264	2.1	229	2.5
Hispanic or Latino	115,072	18.6	1,593	17.5
Age 17 and Under	142,472	23.1	2,169	23.8
Age 65 and Over	115,824	18.8	2,261	24.8
Limited English Proficiency[(1)]	43,655	7.5	719	8.4
Housing Units with No Vehicle Available	15,253	6.9	622	22.9
Median Household Income	43,063	N/A	30,197	N/A

Source(s): 2007-2011 American Community Survey 5-Year Estimates; [(1)] Percent derived using Population 5 years and over.

The West Lakeland area was selected as the subject of a Senior Mobility Audit based on the presence of an exceptionally large number of residents age 65 and over, presence of a relatively large low-income population, and large number of households with no vehicle access. More detailed analysis of the distribution of the senior population across the study area shows that the senior population is generally concentrated in the south and west portions of the Study Area. The Census Block Groups that make up that portion of the study area encompass several large mobile home retirement communities.

3.0 EXISTING TRANSPORTATION INFRASTRUCTURE AND SAFETY

Recent inventories of existing infrastructure reveal that a large portion of the roadway network within the study area contains sidewalks. With the exception of system gaps identified on Ariana St, Main St, and Wabash Ave, all major arterial and collector roadways within the study area support a sidewalk on at least one side of the roadway. The CSX S-Line and Sikes Blvd appear to serve as barriers to movement at points within the study area. No pedestrian crossing accommodation is present along the 1.8 miles of the CSX S-Line that pass within the study area. Additionally, the configuration of Sikes Blvd in the area of Lemon St and Orange St limits pedestrian movement along that segment of the corridor. The planned development of a regional park just east of Lake Bonnet will likely increase demand for movement of bicyclists and pedestrians across the CSX S-Line.

The City of Lakeland has made recent significant improvement to pedestrian infrastructure with the construction of sidewalks on Highland St and the first phase of the Westgate – Central Trail. Additional planned improvements to the pedestrian system that will further enhance pedestrian mobility within the study area are identified in Section 5.

The West Lakeland Study Area is exceptionally well served by transit when compared to other communities in Polk County. Citrus Connection Routes 15, 45, 46, and 58 operate within the project study area, operating at 60-minute headways primarily along the major roadway corridors including Ariana St, George Jenkins Blvd, Wabash Ave, Central Ave, and Sikes Blvd. Service is generally provided on weekdays between the hours of 6:00 am and 6:00 pm; no weekend service is provided on weekends. Transit stops (servicing the four routes) are located throughout the West Lakeland study area. Transit Routes travel along Ariana St, George Jenkins Blvd, Wabash Ave, Central Ave, and Sikes Blvd. A total of 57 transit stops are located within the study area. Of the 57 stops, all but seven are connected to sidewalks; the isolated bus stops occur primarily along Ariana St and Wabash Ave.

A comparison of existing multi-modal infrastructure with 2010 – 2014 bicycle and pedestrian crash frequencies (obtained from the Polk TPO) reveals areas where hazardous bicycle and/or pedestrian conditions may exist. While a number of crashes occurred on local streets within the study area, the majority of crashes took place on a handful of major arterials, most notably, Memorial Blvd and Wabash Ave. Though potentially hazardous, these roadways serve as critical links for West Lakeland residents to access community services and places or transit facilities via walking (see **Table 3.1** for a detailed listing of bicycle and pedestrian crashes). The number of bicycle and pedestrian injury crashes per 1,000 residents observed in West Lakeland places the area near the center of the range of averages observed in other major metropolitan areas.

Table 3.1: Reported West Lakeland Bicycle and Pedestrian Crashes 2010-2014

Crash Type	Number of Crashes	Crashes Per 1,000 Residents
Bicycle Fatality	0	0.00
Bicycle Injury	23	2.53
Bicycle Property Damage Only	3	0.33
Pedestrian Fatality	2	0.22
Pedestrian Injury	23	2.53
Pedestrian Property Damage Only	0	0.00
Total Combined Crashes	***51***	***5.60***

Source(s): West Lakeland Study Area Population (9,105) based 2010-2014 American Community Survey 5-Year Estimates.
Crash Rate = (Total Crashes x 1,000 / Population).
Crashes counted based on occurrence within the defined neighborhood plus a 100-foot buffer area.

Summary

Community services located within the neighborhood can be accessed by residents via walking or transit use given the notable internal sidewalk network coverage. Additionally, the transit service present operates at a relatively high level of service, and provides connections to proximate Lakeland Regional Medical Center, Governmental Offices housed in Lakeland City Hall, and regional shopping opportunities provided at the Lakeland Square Mall. Conversely, access to community services are limited by gaps in the sidewalk network (along Ariana St, Wabash Ave, and Main St), and significant barrier created by the lack of pedestrian crossing accommodation along the CSX corridor. **Figure 3.1** depicts the existing sidewalk coverage, transit service, and crash locations within the West Lakeland study area.

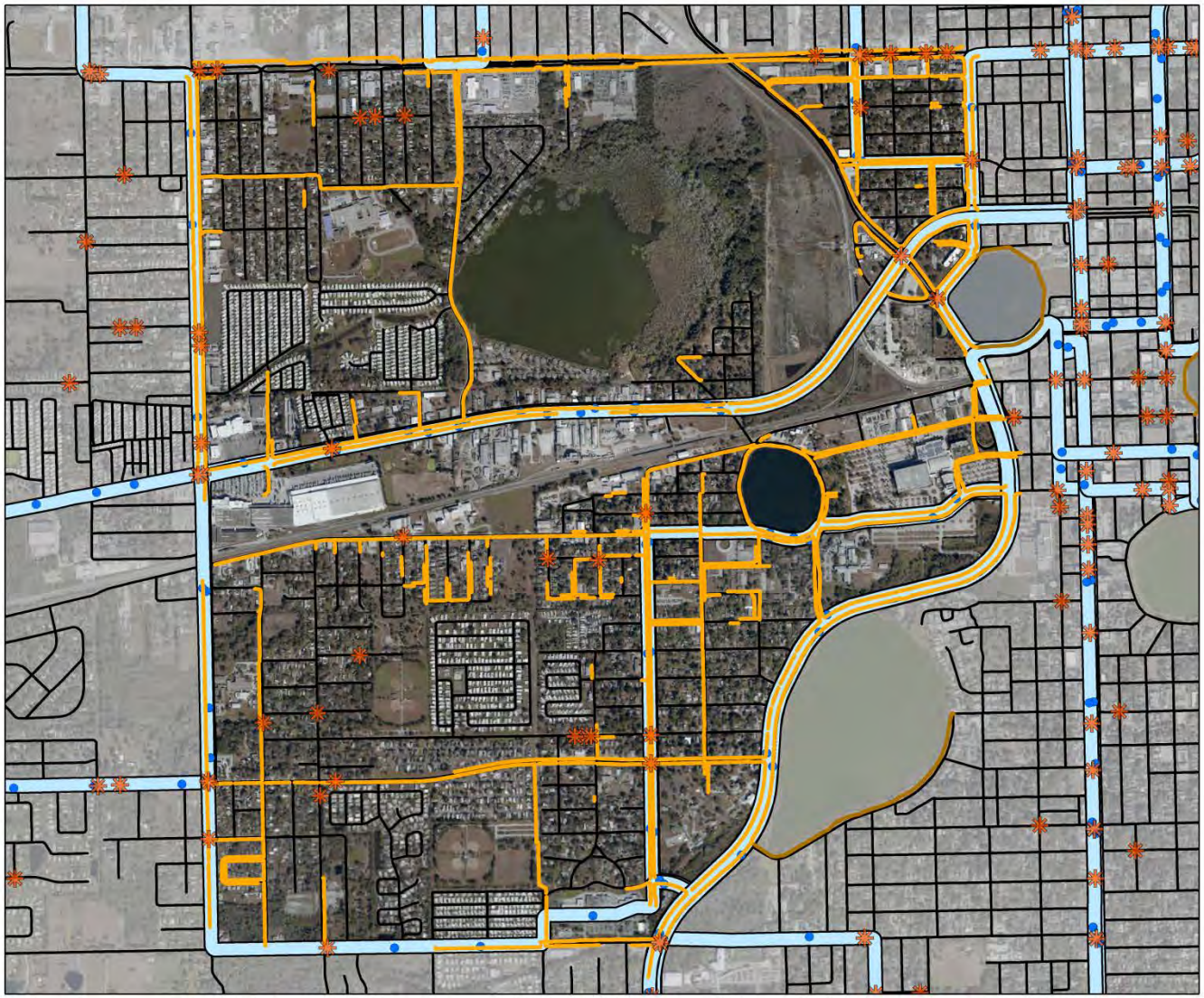


Figure 3.1
West Lakeland Infrastructure and Crash Location

Legend

Bicycle and Pedestrian Crash Locations

- Bike and Pedestrian Crash Location

Sidewalks and Trails

- Existing Sidewalk
- Existing Trail

Transit System Elements

- Bus Stop
- Bus Route

Other Map Elements

- Roadway

N

0 0.25 0.5 Miles

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX,

4.0 ACCESS TO COMMUNITY SERVICES AND PLACES

To better understand overall pedestrian and transit access in the West Lakeland study area, factors that may influence an individual's selection of an alternative travel mode to complete a trip were analyzed, including:

- Presence of infrastructure to support opportunities to walk or take transit; and
- Presence of gaps and barriers that may limit walking or transit access.

As described earlier, these parameters were assessed through the application of a series of indices that were developed as part of the previous Neighborhood Mobility Audit Methodology: Walking Access Index, Transit Connectivity Index, Gaps Index, and Barriers Index. Each index was based on a grid of quarter-mile squares composing the subject neighborhood [a grid was developed to establish a consistent geographic unit of analysis across Polk County]. The indices were applied to the West Lakeland study area to help determine need and key areas within the community to focus pedestrian and transit improvements. A final Mobility Index (a cumulative score of the individual scores calculated for each of the noted indices) was also prepared to convey the overall mobility level of the neighborhood. The indices are described below in detail.

Opportunities

Walking Access Index

The walking access index was developed as a measure of walking potential. It gauges the connectivity of streets, dwelling unit density, and the diversity or mix of land uses within a quarter-mile distance to identify this potential. **Figure 4.1** displays the walking access index for the West Lakeland study area. The walking access index reveals that a high potential for walking trips is present within the dense, diverse, highly urbanized West Lakeland community.

Community services and places that may be accessed within the West Lakeland study area are relatively evenly distributed across the community. Retail and other shopping opportunities are focused along the major arterials with parks and religious centers interspersed with the residential use. Other features accessible just beyond the boundary of the study area are presented in **Table 4.1**. A number of additional services, notably medical, are located just outside of the study area's boundaries.

Table 4.1: Community Services & Places within Quarter-Mile Distance of West Lakeland Study Area

Service/Place	Within a Quarter-Mile	Service/Place	Within a Quarter-Mile
Religious Centers	25	*Banking and Government Svc.*	4
Medical Facilities	0	*Social and Recreation*	10
Shopping Opportunities	43	*Dining and Meals*	11

Source(s): Polk County Property Appraiser, 2012 – 2013 and Florida Geographic Data Library, 2013.

Due to the range of walking access index scores for each of the eighteen quarter-mile squares that compose the West Lakeland study area, an average was calculated to provide an overall walking access index score of 2.7 (with 0.0 being the least favorable condition and 3.0 being the most favorable condition).

Figure 4.1
West Lakeland
Walking Access Index

Legend

Quarter-Mile Square Score

- High Walk Potential
- Moderate Walk Potential
- Low Walk Potential
- No Walk Potential

West Lakeland Study Area

- Study Area Boundary

Other Map Elements

- Major Road
- Local Road
- Lakes

0 0.25 0.5 Miles

Service Layer Credits:

Transit Connectivity Index

The transit connectivity index was developed to assess the location, intensity, and frequency of transit service. **Figure 4.3** displays the transit connectivity index (TCI) for the West Lakeland Study Area. The TCI reveals that transit service within the West Lakeland Study is present at exceptionally high levels for a community in Polk County.

The West Lakeland study area is served by Citrus Connection transit routes that run on Ariana St, George Jenkins Blvd, Wabash Ave, Central Ave, and Sikes Blvd at 60-minute headways. The location of the transit routes at the edges and across central portions of the study area place virtually every residence within the community less than a half-mile walk of transit. Service is generally provided on weekdays between the hours of 6:00 am and 6:00 pm; no weekend service is provided. Routes 15, 45, 46, and 58 result in more than 374 trips per week providing neighborhood residents with direct access to essential services and an expanded opportunity for community engagement. The routes connect directly to major activity centers including Lakeland Regional Medical Center, Lakeland Square Mall, Polk State College, Lakeland Public Library, Wabash Community Center, and Southgate Shopping Center.

The transit connectivity index scores for each of the 19 quarter-mile squares that compose the West Lakeland study area, combine to produce an average transit connectivity index score of 2.9 (with 0.0 being the least favorable condition and 3.0 being the most favorable condition). The county-wide index highlights the high level of transit service present in the study area.

Figure 4.2
West Lakeland
Transit Connectivity Index

Legend

Quarter-Mile Square Score

- High Transit Access
- Moderate Transit Access
- Low Transit Access
- No Transit Access

West Lakeland Study Area

- Study Area Boundary

Other Map Elements

- Major Road
- Local Road
- Lakes

0 0.25 0.5 Miles

Service Layer Credits:

Gaps and Barriers

Gaps and barriers in the pedestrian and transit networks are discussed collectively in this section as each (together and separately) influences access to community services and places. The quality of the connection between trip origin and destination guides an individual's selection of travel mode.

As noted earlier, the use of alternative modes of travel by residents of West Lakeland is notable when compared to Polk County. In addition, the calculated walking access index shows a very high potential for pedestrian within the study area given the dense and diverse character of the community. Additionally, transit coverage within the neighborhood is exceptional as most residents are able to access a fixed transit route within a reasonable walking distance, and the routes connect residents to a diverse range of activities and services outside of the neighborhood. As such, the West Lakeland area provides an environment conducive for walking and transit use; however, elements hindering these travel options within the neighborhood must also be considered.

Gaps Index

The gaps index was developed to measure the presence of transportation network gaps. As indicated through **Figure 4.3**, moderate sidewalk gaps occur within the study area. However, as shown through detailed analysis most major arterial and collector roadways within the study area support a sidewalk. Generally, the greatest level of sidewalk gaps exists in the extreme southern (Ariana St) and western (Wabash Ave) portions of the study area. The gaps present along Ariana St and Wabash Ave occur in an area that supports shopping, transit, and recreation activity.

Based on the range of gap index scores for each of the eighteen quarter-mile squares that compose the West Lakeland study area, an average was calculated to provide an overall gap index score of 1.4 (with 3.0 being the least favorable condition and 0.0 being the most favorable condition).

Barriers Index

The barriers index assesses the presence of high speed, multiple-lane roadways; rail lines; and waterways (rivers, streams, or canals) which may hinder the potential for a walking trip. The relatively high barriers index score affirms that the West Lakeland study area has a high number of impediments to pedestrian movement. As noted previously, the CSX S-Line generally divides the study area into distinct northern and southern extents. The effect of the rail corridor is worsened by the lack of adequate pedestrian crossings. Sikes Blvd, located between the Study Area and Downtown Lakeland is a multi-land high-speed roadway that generally severs the gridded street pattern present on either side. Though pedestrian accommodation is present along the corridor the limited integration of the roadway with the surrounding street network limits the connection the roadway provides to pedestrian activity.

The overall barriers index score, based on an average of the barrier index scores for the 19 quarter-mile squares that compose the West Lakeland study area, is 2.3 (with 3.0 being the least favorable condition and 0.0 being the most favorable condition).

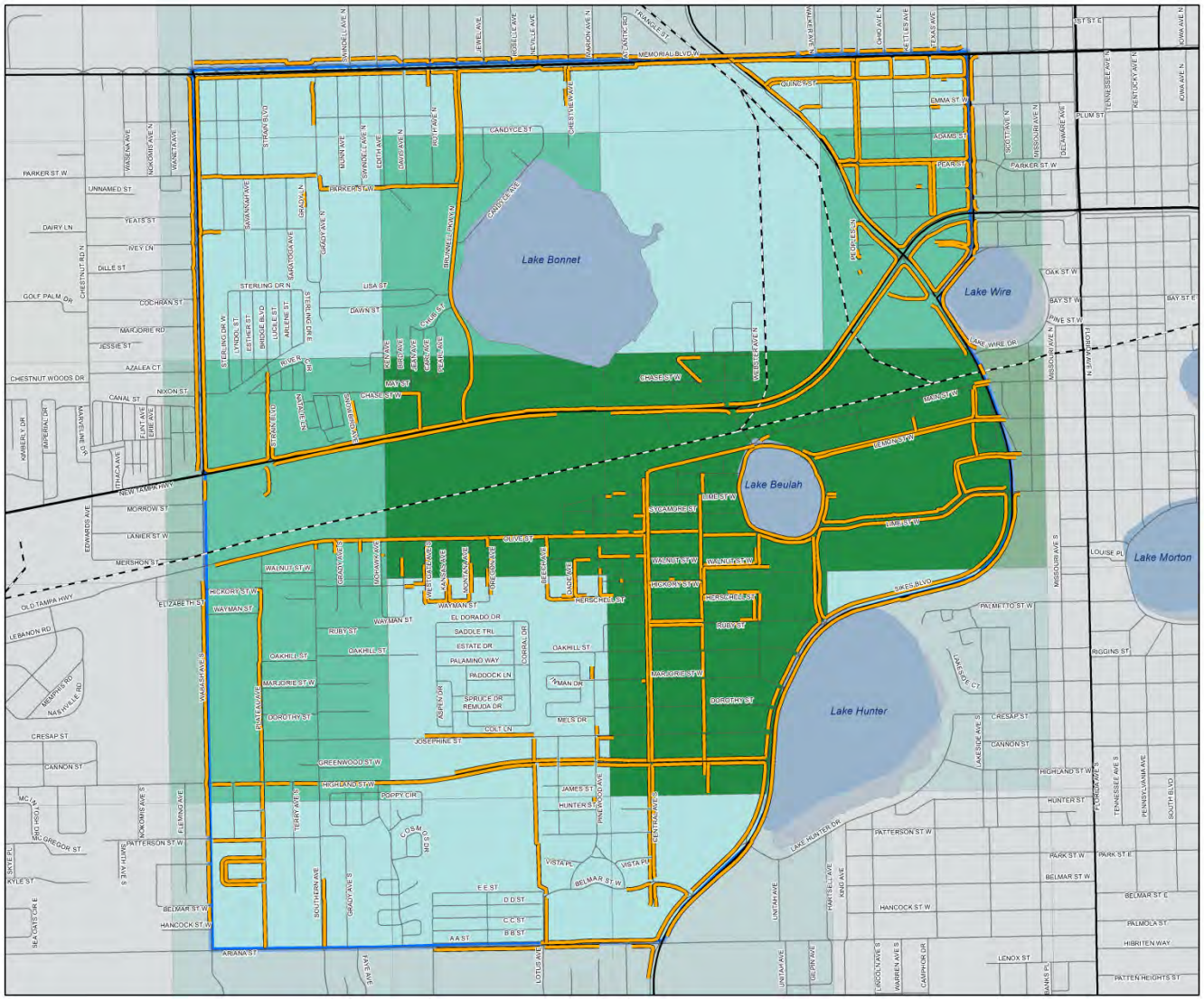


Figure 4.3
West Lakeland Sidewalk Gaps

Legend

Quarter-Mile Square Score

- Few Gaps Present
- Minimal Gaps Present
- Moderate Gaps Present
- High Level of Gaps Present

Location of Sidewalks

- Existing Sidewalk

West Lakeland Study Area

- Study Area Boundary

Other Map Elements

- Major Road
- Local Road
- Lakes

0 0.25 0.5 Miles

Service Layer Credits:

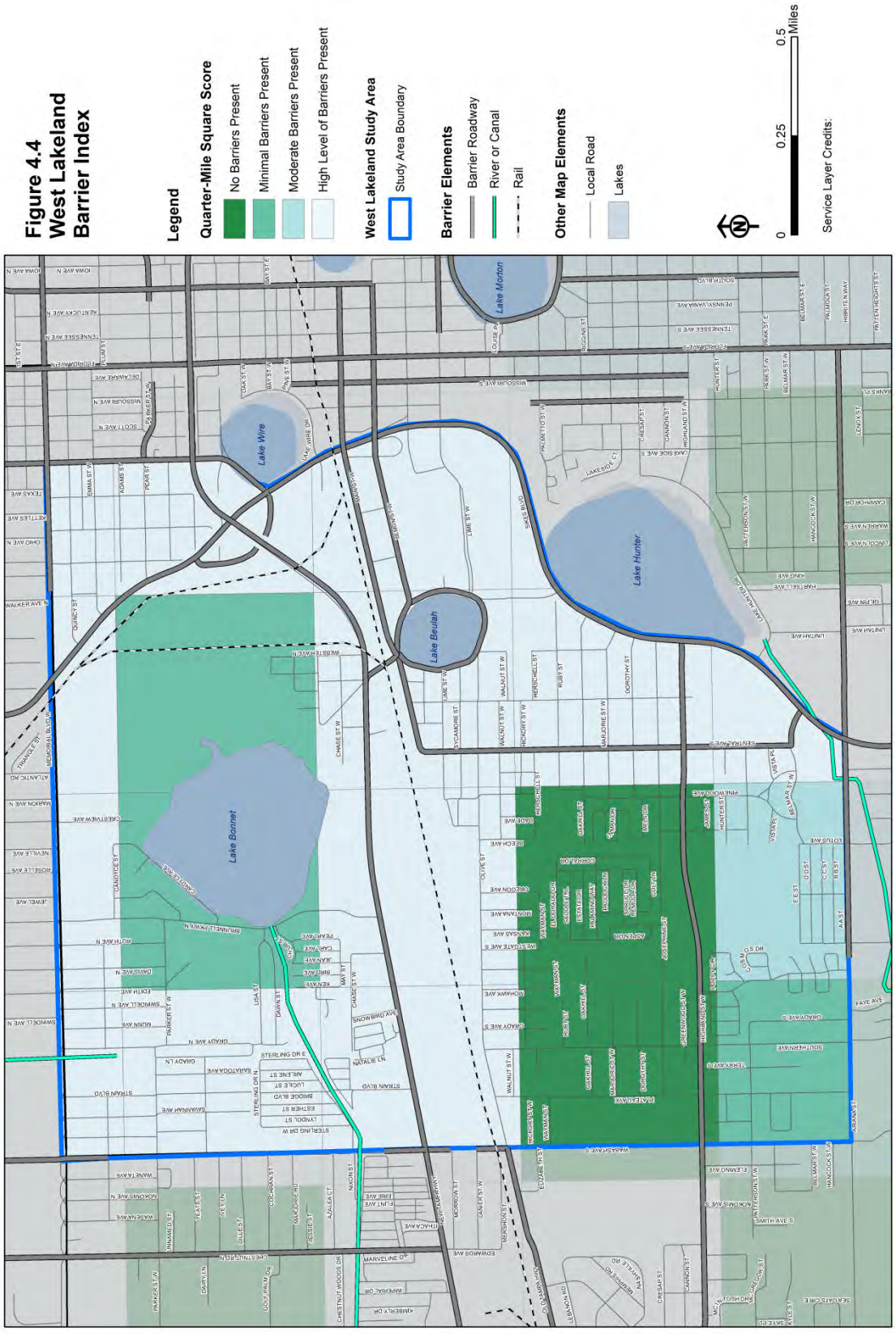


Figure 4.4
West Lakeland
Barrier Index
Legend
Quarter-Mile Square Score
No Barriers Present
Minimal Barriers Present
Moderate Barriers Present
High Level of Barriers Present
West Lakeland Study Area
Study Area Boundary
Barrier Elements
Barrier Roadway
River or Canal
Rail
Other Map Elements
Local Road
Lakes
0
0.25
0.5
Miles
Service Layer Credits:
Lake Morton
Lake Wire
Lake Hunter
Lake Beulah
Lake Bonnet

Mobility Indices

To summarize the overall mobility of the West Lakeland Study Area, a dashboard of scores was derived to depict the factors that suggest the potential for walking and transit activity, and the presence of those factors that left unmitigated would likely reduce walking and transit use in an area. As illustrated below, the potential for the West Lakeland study area to support walking and transit use is exceptionally high for a Polk County community. This overall score is presented as the Mobility Index. **Figure 4.6** provides a "dashboard" or graphical representation of the individual indices and Mobility Index for the West Lakeland study area.

Figure 4.6: West Lakeland Study Area Mobility Dashboard

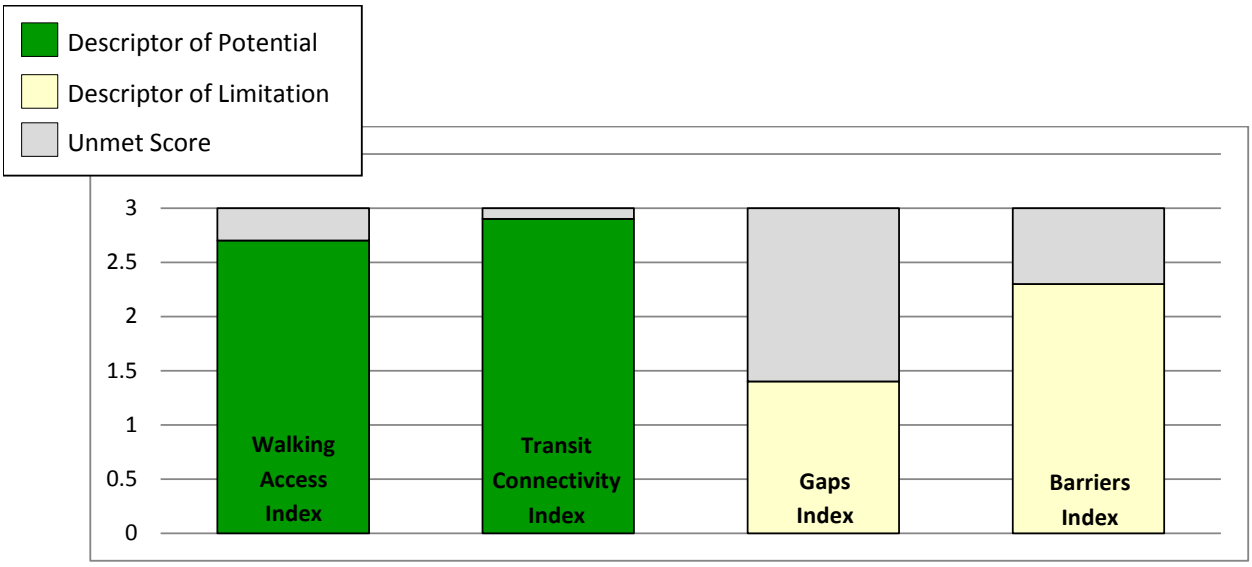


Table 4.4: West Lakeland Study Area Index Scores

Walking Access Index	Transit Connectivity Index	Gaps Index	Barriers Index
2.7	2.9	1.4	2.3

Source(s): AECOM Index Calculations.

The West Lakeland Study Area incorporates a series of urbanized neighborhoods. Residential areas are located within close proximity to civic, recreation, and shopping centers, a factor that generally supports walking and transit use. Additionally, most of the essential community services are present within a reasonable distance of travel (quarter-mile) of the study area; those that are not present in the area can be accessed by transit.

However, gaps in the sidewalk and presence of barriers to non-vehicular movement reduce pedestrian mobility, and access to transit. As such, areas identified as having deficient infrastructure should be targeted for improvement to support safe, comfortable, and continuous walking and transit connections.

5.0 MOBILITY IMPROVEMENTS

Based on the findings described in Sections 2.0 – 4.0, improvements within the West Lakeland study area should be focused on closing remaining sidewalk gaps, reducing the barrier created by the CSX corridor, and better connect the surrounding community to the exceptional level of transit service present in the study area. These improvements are intended to encourage walking and transit by senior residents.

Table 5.1 and **Figure 5.1** present pedestrian infrastructure improvement recommendations. The recommendations were developed locally and drawn from existing documents including the FDOT Work Program, City and County Capital Improvements Plans, Polk County Comprehensive Plan, Polk TPO Momentum 2040, the Lakeland City-Wide Pathways Plan, and finally consultation with local staff.

Table 5.1: West Lakeland Pedestrian and Bicycle Infrastructure Improvements

Location	Improvement	Map #
W Side of Wabash Ave from Ariana St to W Hancock St	-Add sidewalk(s)	1
N Side of Ariana St from Wabash Ave to Southern Ave	-Add sidewalk(s)	2
N Side of Ariana St from Southern Ave to Lotus Ave	-Add sidewalk(s)	3
S Side of Ariana St from E of Lotus Ave to W of Sikes Blvd	-Add sidewalk(s)	4
S Side of Belmar St from Lotus Ave to S Central Ave	-Add sidewalk(s)	5
E Side of Southern Ave from N of Wabash Community Center to Josephine St	-Add sidewalk(s)	6
E Side of Wabash Ave from W Highland St to Olive St	-Add sidewalk(s)	7
N Side of Josephine St from Plateau Ave to Westgate - Central Trail	-Add sidewalk(s)	8
Westgate - Central Trail from W Highland St to Olive St	-Add Trail Segment(s)	9
W Side of Pinewood Ave from W Highland St to Marjorie St	-Add sidewalk(s)	10
N Side of Josephine St from Westgate - Central Trail to S Central Ave	-Add sidewalk(s)	11
W Side of Pinewood Ave from Marjorie St to Oakhill St	-Add sidewalk(s)	12
N Side of Oakhill St from W of Gourlie St to S Central Ave	-Add sidewalk(s)	13
W Side of Wabash Ave from Old Tampa Hwy to Lanier St	-Improved pedestrian railroad crossing	14
E Side of Wabash Ave from Lanier St to S of George Jenkins Blvd	-Add sidewalk(s)	15
Chase Street Trail from Wabash Ave to George Jenkins Blvd	-Add Trail Segment(s)	16
Sloan Ave from Lake Beulah Dr to George Jenkins Blvd	-Improved pedestrian railroad crossing	17

Source(s): Polk County Comprehensive Plan (includes Bicycle and Pedestrian Ways Map and Capital Improvements Element), Polk TPO Momentum 2040, FDOT Work Program, City and County Capital Improvements Plans, Polk County Comprehensive Plan, Lakeland City-Wide Pathways Plan and Locally Developed Recommendation.

Table 5.2 presents a series of transit facility enhancement recommendations. Attention was given to those areas where multiple transit lines converge and those areas where multi-modal corridors and transit routes intersect. Note the location of proposed bus stop enhancements at the point of interaction between Brunnell Parkway and Route 45, and Highland Street at two points of interaction with Route 46. The improvement recommendations listed in Table 5.2 are also depicted in Figure 5.1.

Table 5.2: West Lakeland Study Area Transit Infrastructure Improvements

Location	Improvement	Map #
Sikes Blvd at Central Ave	-Add multimodal node at intersection of Routes 15, 46, and 58 (includes transit shelter & enhanced pedestrian accommodations)	18
Wabash Ave at W Highland St	-Add multimodal node (includes transit shelter & enhanced pedestrian accommodations)	19
Central Ave at W Highland St	-Add multimodal node (includes transit shelter & enhanced pedestrian accommodations)	20
Brunell Pkwy at George Jenkins Blvd	-Add multimodal node both directions (includes transit shelter & enhanced pedestrian accommodations)	21, 22
Southern Ave at Ariana St	-Add multimodal node (includes transit shelter & enhanced pedestrian accommodations)	23

It is recommended that additional targeted outreach be conducted within the West Lakeland study area to assess the use of the existing transit system by the resident senior population. The identification of local preference within the community would set a base from which additional recommendations related to transit facilities and operations could be adjusted.

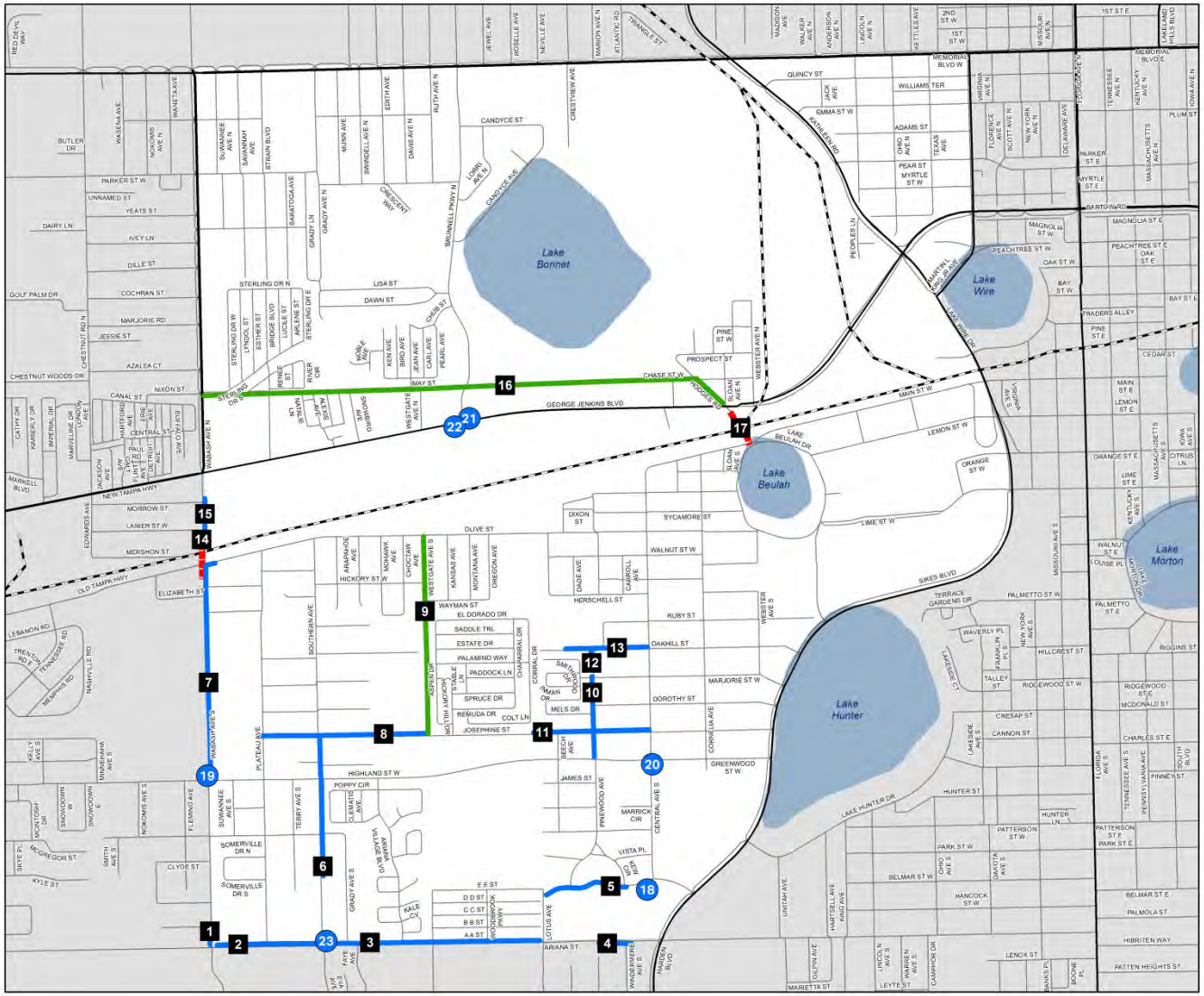


Figure 5.1
West Lakeland Infrastructure Enhancements

Legend

Improvement Type

- Rail Crossing
- Sidewalk
- Trail
- Transit Improvements

Other Map Elements

- Rail
- US Highway
- State Road
- Local Road
- Lake

Service Layer Credits:

APPENDIX E: NEEDS AND EVALUATION MATRIX

Needs Assessment and Evaluation Method

A needs assessment was conducted to determine which improvements to implement over the 10-year span of the 2017 Transit Development Plan. The needs assessment took the form of qualitative gap analysis. A set of evaluation criteria was built to understand which routes:

i. Are a priority for LAMTD or Polk TPO staff, as well as the public;
ii. Serve high transit demand areas and have high ridership; and
iii. Are productive, efficient routes that can be improved in a fiscally responsible way.

Table E 1 provides an outline of the qualitative needs assessment model. Detailed descriptions of each category and measure are provided in Chapter 5. Each existing fixed route was allocated points based on performance in each of the three categories (local input, transit markets, productivity and efficiency). Points were allocated to a route if the route met any of the 11 criteria. The number of points allocated was determined by level of priority (High = 3 points; Medium = 1 point; Low = 0.5 points). Points for each route were tallied to determine the total score for each route. Finally, total scores were ranked relative to one another, to inform the decisions about order of implementation. Routes with 4 points and above were identified as priorities for improvement. Table E 2 shows the full needs and evaluation matrix and the resulting ranks.

TABLE E 1: NEEDS ASSESSMENT SUMMARY

Category	Criteria	Measure	Priority
Local Input	Staff Input	Identified by LAMTD or Polk TPO Staff as a priority	High
		Identified by LAMTD or Polk TPO Staff as infeasible based on prior study	High
	Public Outreach	Identified by the public as a priority	Medium
	Policy &Planning Environment	Identified as a priority in local policies or plans	Medium
Transit Markets	Population & Employment Centers	Population growth rate in municipalities served by route is higher than county growth rate	Medium
		Employment Centers concentrated in municipality served by route	Medium
		Activity Density >25 per acre consistently along the route	Low
	Ridership	High ridership corridor (> 200 average weekday riders)	Medium
		TBEST Ridership forecast >10% between 2017-2026	Medium
	Regional Connections	Connects two or more counties or major municipalities	Low
	Equity &Transit Dependent Communities	Routes serve block groups identified as high concentration of minority populations, poverty, and zero car households	High
Productivity, Efficiency and LOS	Productivity	Trips/ hour > 20	Medium
	Cost Efficiency	Cost per trip < average cost/trip for all routes	Medium
	Roadway Service Levels	Declining LOS by 2021	Medium
	Frequency	Peak Service Headways > 60 minutes	Medium

TABLE E 2: NEEDS AND EVALUATION MATRIX

	Category	**Local Input**				**Transit Markets**							**Productivity, Efficinecy & Service**				
	Criterea	**Policy & Planning**	**Staff Input**		**Public Outreach**	**Population & Employment**			**Ridership**		**Regional Connections**	**Equity**	**Roadway Service Levels**	**Frequency**	**Productivity**	**Cost Efficiency**	
	Measure	Identified in Policies and Plans	Identified by LAMTD/ TPO Staff as priority	Identified by LAMTD/ TPO Staff as infeasable	Identified by public as priority	Population growth rate > county growth rate	Employment Centers concentrated in city served by route	Activity Density >25 per acre consistently along the route	High ridership corridor (> 200 ADR)	Ridership expected to grow more than 10% between 2017-2026	Connects two more more counties or major municipalities	Route serves low income, minority, transit dependent communities	Declining LOS by 2021	Peak service headway > 60	Productive Routes (trips/hr >20)	Cost per trip is lower than the average	
	Weight	Medium (1)	High (3)	High (-5)	Medium (1)	Medium (1)	Medium (1)	Low (0.5)	Medium (1)	Medium (1)	Low (0.5)	High (3)	Medium (1)	Medium (1)	Medium (1)	Medium (1)	RANK
12	Lakeland/ WH	1	3	0	0	1	1	0	1	0	0.5	0	1	0	0	0	8.5
1	Florida Ave	1	3	0	1	1	0	0.5	1	0	0	0	0	0	0	0	7.5
22XL	Bartow Express/ Lakeland	1	0	0	0	1	1	0	0	0	0.5	0	1	1	1	1	7.5
22XW	WH/Bartow	0	0	0	0	0	1	0.5	0	0	0.5	3	0	1	1	0	7.0
15	WH/ Haines City	0	0	0	0	1	0	0.5	0	0	0.5	3	0	1	0	1	7.0
3	Lakeland Hills Corridor	1	0	0	0	1	0	0.5	1	1	0	0	0	0	0	1	5.5
427	US 27/ Haines City (LYNX)	0	0	0	0	1	0	0	0	0	0.5	3	0	1	0	0	5.5
60	Winter Haven Northeast	0	3	0	1	0	0	0	0	1	0	0	0	0	0	0	5.0
14	Combee/ Edgewood	1	0	0	0	1	0	0.5	0	0	0	0	0	1	1	0	4.5
58	College Connector	1	0	0	1	1	0	0.5	1	0	0	0	0	0	0	0	4.5
30	Legoland	0	3	0	0	0	0	0.0	1	0	0	0	0	0	0	0	4.0
33	South Florida/ Carter Rd. Flex	1	0	0	1	1	0	0	0	0	0	0	0	0	1	0	4.0
15	Kathleen/Providence/Harden	0	0	0	0	1	0	0.5	1	0	0.5	0	0	0	0	1	4.0
39	Bradley Flex	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3.0
45	Gorge Jenkins/ Swindell	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	3.0
10	Circulator	0	0	0	0	1	0	0.5	0	0	0	0	0	0	1	0	2.5
25	Bartow/ Fort Meade	0	0	0	0	0	1	0	0	0	0.5	0	0	0	1	0	2.5
47	Duff Road Shuttle	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2.0
603	Neighborlink (LYNX)	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2.0
416	Poinciana/ Haines City (LYNX)	0	0	-5	0	1	0	0	0	0	0.5	3	0	1	1	0	1.5
46	10th/ Wabash/ Ariana	0	0	0	0	1	0	0.5	0	0	0	0	0	0	0	0	1.5
591	County Linke Express	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1.0
40/44	Winter Haven Southside	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1.0
581	Airside Express	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1.0
27X	Dundee/ Eagle Ridge Mall	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
50	Auburndale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
35	Lake Wales/ Babson Park/	1	0	-5	1	0	0	0.5	0	0	0.5	0	0	1	0	0	-1.0

APPENDIX F: SERVICE IMPLEMENTATION AND FINANCIAL PLAN ASSUMPTIONS

RATIONALE FOR SERVICE IMPLEMENTATION PLAN ASSUMPTIONS

The Implementation Plan was developed using estimated operating costs derived from operating cost assumptions to maintain existing service, improve existing service and implement service expansions. The plan recommends maintaining existing service through 2017 and 2018, and implementation of the first improvement in 2019. From 2019 through 2026, service improvements were planned for implementation based on an annualized operating cost and a priority ranking system, further detailed in Appendix E.

Implementation of service expansion (new service) used a different methodology. The SunRail feeder route was planned for implementation in 2022, based on the anticipated timeline of the proposed SunRail station in Poinciana. The Polk City to Lakeland route was planned for implementation in 2023 for the purposes of balanced budgeting.

All fixed-guideway service improvements, including increased hours of service, improved service frequency, and additional weekend service, are scheduled for implementation simultaneously to estimate the total cost of improvements at the route level. In addition, capital acquisition for fixed-guideway service was planned for simultaneous improvements.

RATIONALE FOR CAPITAL COST AND IMPLEMENTATION ASSUMPTIONS

Simple Bus Stop

The capital cost estimate for construction of a simple bus stop is $10,000. This estimate was derived from the US DOT Bus Lifecycle Cost Model.[1] The proposed new fixed-guideway route from Polk City to Lakeland will require approximately eight new bus stops. Construction of all bus stops will be completed in 2024, prior to route implementation in 2025.

Park and Ride Facilities

The capital cost estimate for construction of a pork-and-ride facility is $700,000. The proposed feeder route to the future Poinciana SunRail station is associated with five park-and-ride facilities, three of which are budgeted for construction in the financial plan of this TDP.

An existing park-and-ride facility in Winter Haven at the bus terminal off NW 6th Street and the planned pork-and-ride facility for the proposed SunRail station in Poinciana should both be utilized as cost-effective alternatives to constructing new facilities. Feeder bus drop-offs and pick-ups at the Poinciana station will need to be integrated into the operational planning for the station area. In addition, potential use of the Poinciana station parking facility by residents of Polk County will require negotiations with Osceola County.

As mentioned, three additional pork-and-ride facilities must be constructed in Polk County along US 17/92 to support the SunRail feeder route. Construction is estimated to be completed in phases, one pork-and-ride facility per year starting in 2018, prior to route implementation in 2021.

[1] Bus Lifecycle Cost Model User Guide for Federal Land Management Agencies, pg. 20. Accessed at <https://ntl.bts.gov/lib/44000/44200/44244/Bus_Lifecycle_Cost_Model_User_s_Guide.pdf>

East Polk Transit Maintenance Facility

The cost of a very small maintenance and storage facility to serve fleet buses in East Polk County was estimated using the NCHRP Research Results Digest 397: Independent Cost Estimates for Design and Construction of Transit Facilities in Rural and Small Urban Areas, published in December 2015. This TRB Research Document website includes a pricing tool that can be used to estimate the cost of various sized maintenance, operations, and storage facilities. We assumed a 7,500-sq. ft. facility for maintenance and storage, which estimated construction costs at $1,569,000 and design cost at $238,000. For purposes of this TDP, an estimated cost of $2 million ($266 per square foot) was deemed appropriate.

Downtown Lakeland Intermodal Center

The cost estimate for construction, design and engineering for the proposed Downtown Lakeland Intermodal Center was developed using the BuildingJournal.com online construction estimating tool, which of course does not include a specific building category of transit terminal, but does include several categories that may be reflective of transit transfer center. It was assumed that the enclosed building area would amount to 12,500-sq. ft., which is the approximate size of the existing Downtown Lakeland Bus Terminal building footprint.

The online cost estimator provides the following cost estimates for 12,500-sq. ft. buildings of distinct types located in central Florida (Tampa):

Building Type	Cost Estimate
Community Center	$1.179 million
Auto Soles Building	$0.899 million
Bank	$1.415 million
Fire Station 1 story	$1.258 million
Parking Garage	$0.448 million
Police Station	$1.642 million

A simple average of the cost estimate for these six building types would yield an estimated construction cost of $1.140 million. Allowing for design services and other contingencies, an estimate of $1.5 million was estimated for inclusion in this TDP. If a 5,000-sq. ft. administrative office facility was added, the cost might be expected to increase by $417,000. Allowing for this inclusion would increase the cost estimate to $1.9 million.

Transit Signal Priority Infrastructure

Capital asset estimates for transit signal priority were developed using the Central Lakeland Transit Signal Priority Feasibility Study, which was undertaken to determine the effectiveness of a transit signal priority system on three state highway corridors in the City of Lakeland, SR 37, SR 33, and US 98. It was shown that the transit travel times could be improved along all three state highway corridors if the overall signalization system was optimized through retiming and TSP was implemented. There are 41 signalized intersections within the study limits of which 17 were recommended for implementation.

The estimated cost to optimize the existing signal systems on Route 1, specifically SR 37, 35, 700, and US 98 (Florida Ave), is $373, 000.00. The estimated cost to optimize the existing signal systems on Route 3, specifically SR 33 (Lakeland Hills Blvd), is $94,000.00. The estimated cost to implement a GPS-based TSP system on both routes is $348,614.10. It should be noted that these costs were estimated in 2015 and the actual cost at implementation could vary due to inflation.

The acquisition of TSP infrastructure will take place in the year prior to implementation of route-level service improvements. TSP technology for fleet vehicles serving Route 3 is assumed to be acquired in 2021, a year prior to implementation of route-level service improvements in 2022. The GPS-based TSP technology for both routes is estimated to be acquired in 2021 as well. Finally, acquisition of TSP technology for fleet vehicles serving Route 1 was assumed for 2024, a year prior to implementation of route-level service improvements in 2025.

RATIONALE FOR VEHICLE REPLACEMENT AND EXPANSION PLAN

The vehicle expansion plan was developed for routes with improved service frequency and new service (service expansions) using the following methodology:

- The number of vehicles required to maintain existing fixed-route guideway service was developed as a function of a vehicle's useful life and acquisition year.
- The number of vehicles required to improve existing fixed-route guideway service was developed as a function of improved service frequency and existing route length.
    - The vehicle need for routes with improved service frequency is the difference between the number of vehicles required to meet existing service frequency and the number of vehicles required to meet improved service frequency.
- The number of vehicles required to implement new fixed-route guideway service (service expansion) was developed as a function of new service frequency and new route length.
    - The vehicle need for new service (service expansion) is the number of vehicles needed to meet new service frequency.
- The replacement of vehicles acquired for service improvements and service expansions is scheduled when the vehicle has accumulated 500,000 miles, per FTA guidance on useful life of rolling stock.[2]
- Vehicle acquisition for service improvements and service expansions is expected to take place one year prior to implementation of route-level service improvements or service expansions. This assumption is replicated from the 2016 TDP Annual Update.

RATIONALE FOR REVENUE ASSUMPTIONS

The ten-year revenue budget was developed using the following assumptions and information:

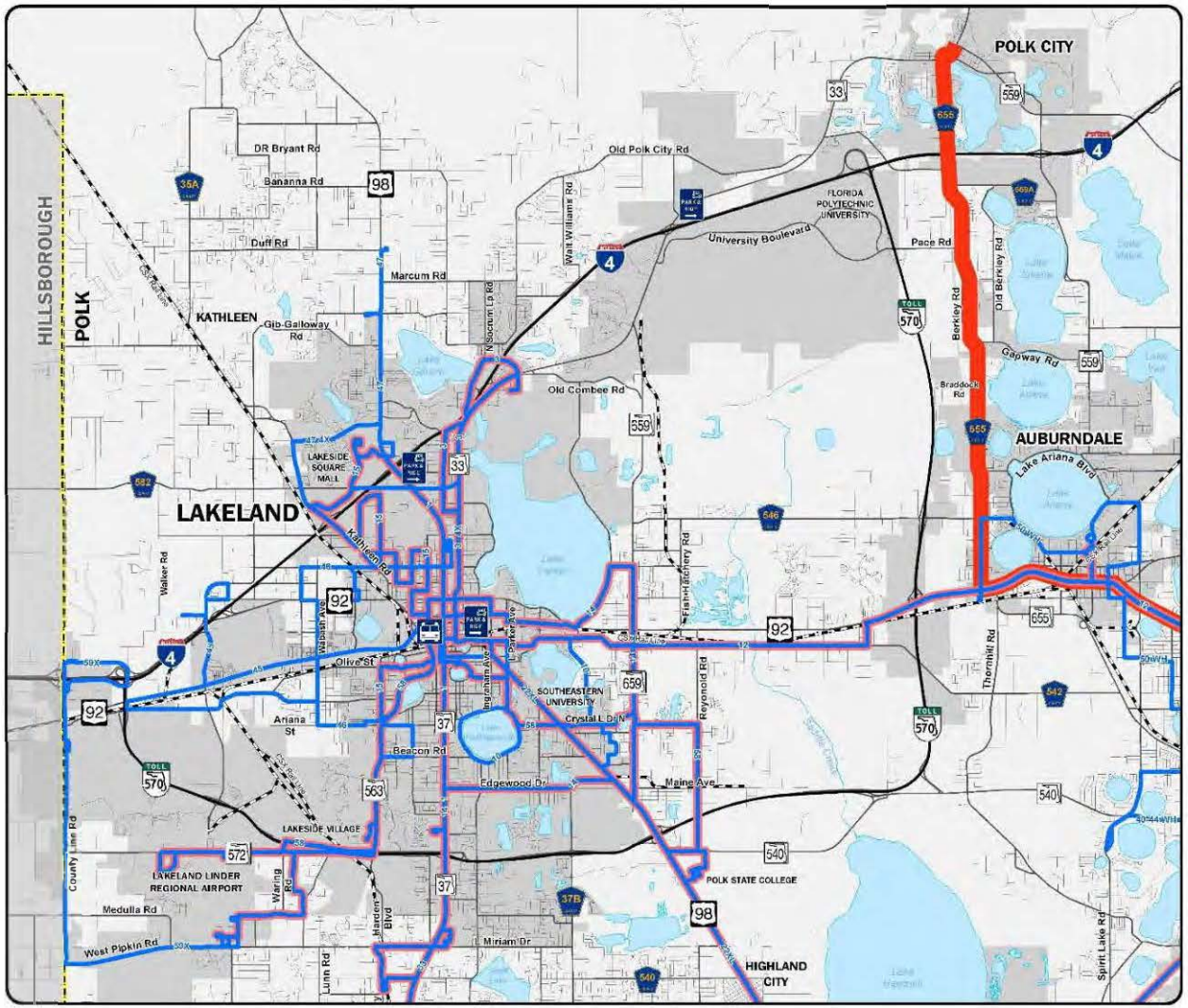
- Projected 5307 grant funding estimated based on the recently approved FAST Act.
    - The FAST Act modified existing MAP-21 legislation, amending 5307 grant requirements to include demand response and ADA in the "100-bus rule" provision, which allows

[2] U.S. Department of Transportation (USDOT) Federal Transit Administration (FTA). "Grant Management Requirements". FTA C 5010.1D, November 2008.

small transit agencies operating fewer than 100 vehicles during their peak period of operation to use between 50 and 75 percent of their 5307 awards towards operations.

- All revenue sources in FY 2017 will continue to be available through FY 2026.
- Federal 5307 grants to Citrus Connection were administered to two transit service providers: LAMTD and Polk County Transit Authority.
- An initiative to increase fare shares among cities within the transit service area is in progress.
- Farebox recovery ratio for fixed-route bus service is currently at 14%. It should be noted that the farebox reported does not include the routes operated in the northeast portion of Polk County that are operated by Lynx through contract with the transit agency. If these routes were included the current farebox ratio would be higher and more in line with the industry standard. Citrus Connection has identified and is working towards a farebox recovery goal of 20% of cost in the next three years. Farebox recovery revenue projections have been adjusted to include increases in both FY 2017 and FY 2018 to reach the recovery goal.
- All other revenue projections are based on FY 2016 funded revenues, adjusted for inflation. Opportunities and strategies for increased revenue generation are discussed further in Appendix B.
- Full implementation of the MyRide Plan will require an increase in local funding. Opportunities and strategies for increased revenue generation are discussed further in Appendix B.

APPENDIX G: PUBLIC WORKSHOP MATERIALS AND FEEDBACK



My Ride

Existing and Planned Transit Services Lakeland Area

Legend

Existing Transit Service

- Existing Transit Route
- Flex Service
- Park & Ride/Transit Super Stop
- Transit Terminal

2026 Planned Transit Services

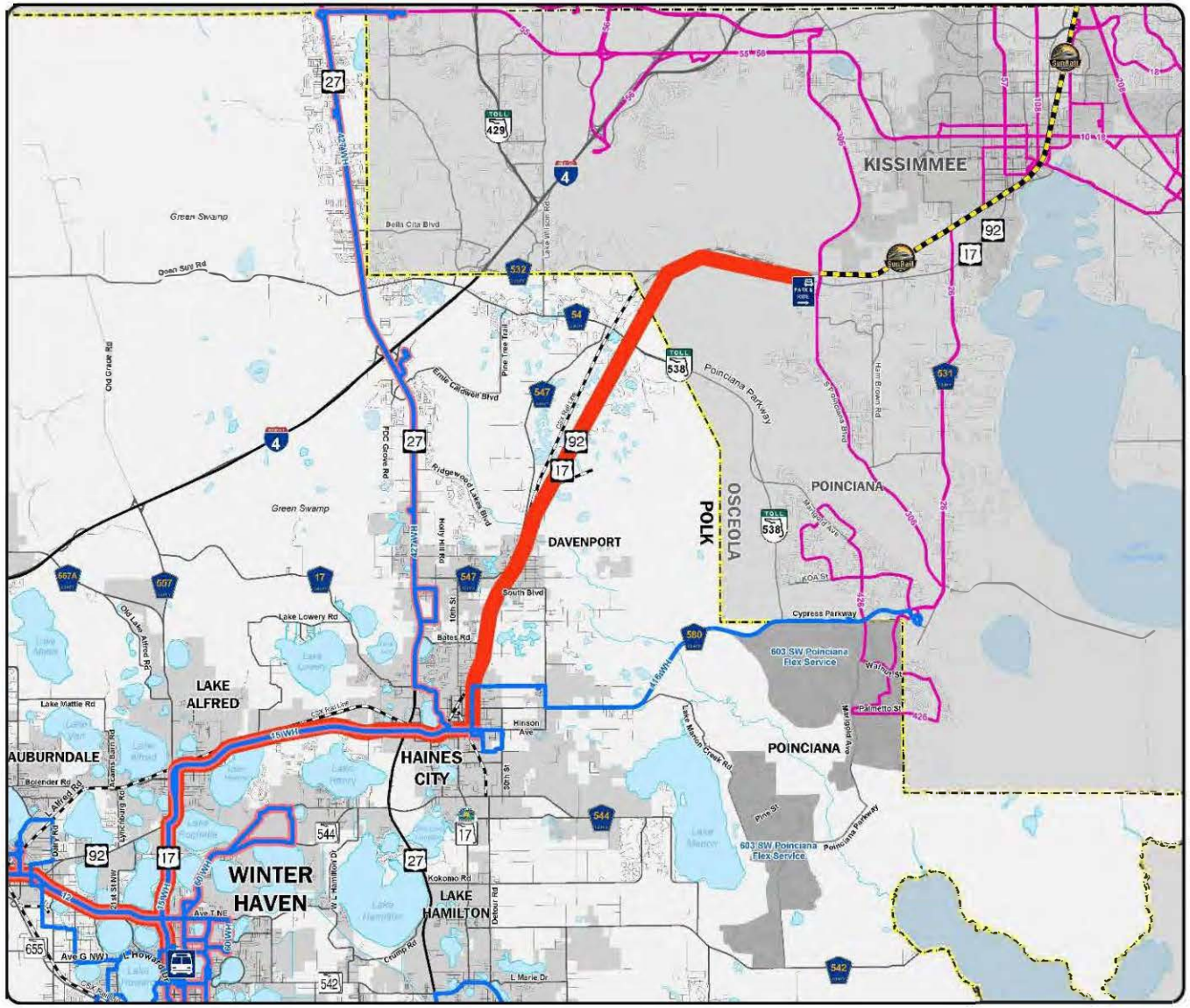
- Enhanced Bus-Service (Select Existing Routes)
- New Routes (Winter Haven - Polk City & Winter Haven - SunRail Poinciana Station)

Other Map Features

- Municipalities
- Railroad

Polk Transportation Planning Organization

DRAFT
July 6, 2017



My Ride

Existing and Planned Transit Services Northeast Polk County

Legend

Existing Transit Service

- Existing Transit Route
- Flex Service
- Park & Ride/Transit Super Stop
- Transit Terminal

2026 Planned Transit Services

- Enhanced Bus Service (Select Existing Routes)
- New Routes (Winter Haven - Polk City & Winter Haven - SunRail Poinciana Station)

Other Map Features

- SunRail (Existing & Planned Service)
- LYNX Bus Fixed-Route (Existing)
- Municipalities

Polk Transportation Planning Organization

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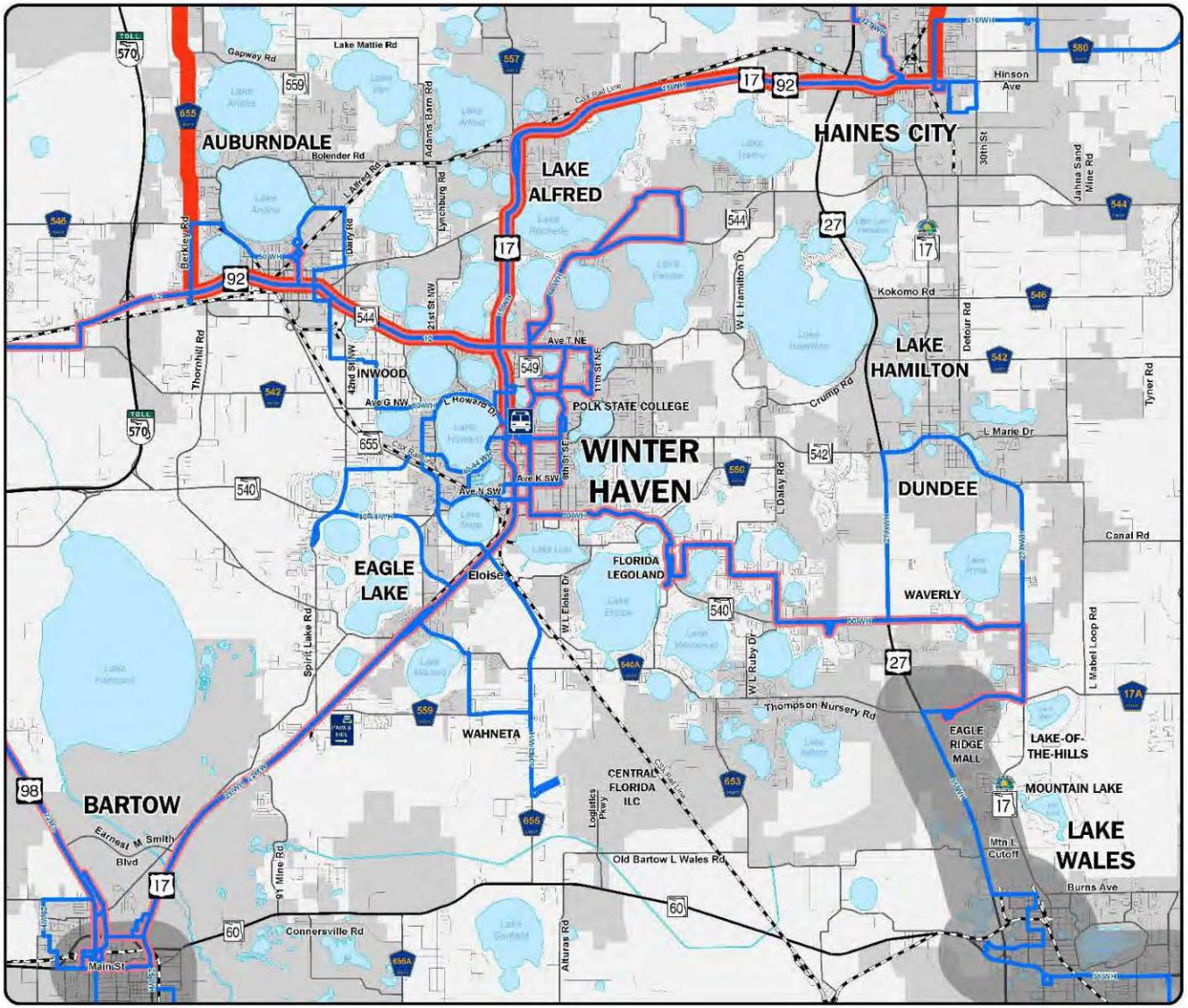
July 6, 2017



My Ride

Existing and Planned Transit Services Winter Haven Area

Legend

Existing Transit Service

- Existing Transit Route
- Flex Service
- Park & Ride/Transit Super Stop
- Transit Terminal

2026 Planned Transit Services

- Enhanced Bus-Service (Select Existing Routes)
- New Routes (Winter Haven - Polk City & Winter Haven - SunRail Poinciana Station)

Other Map Features

- Municipalities
- Railroad

Polk Transportation Planning Organization

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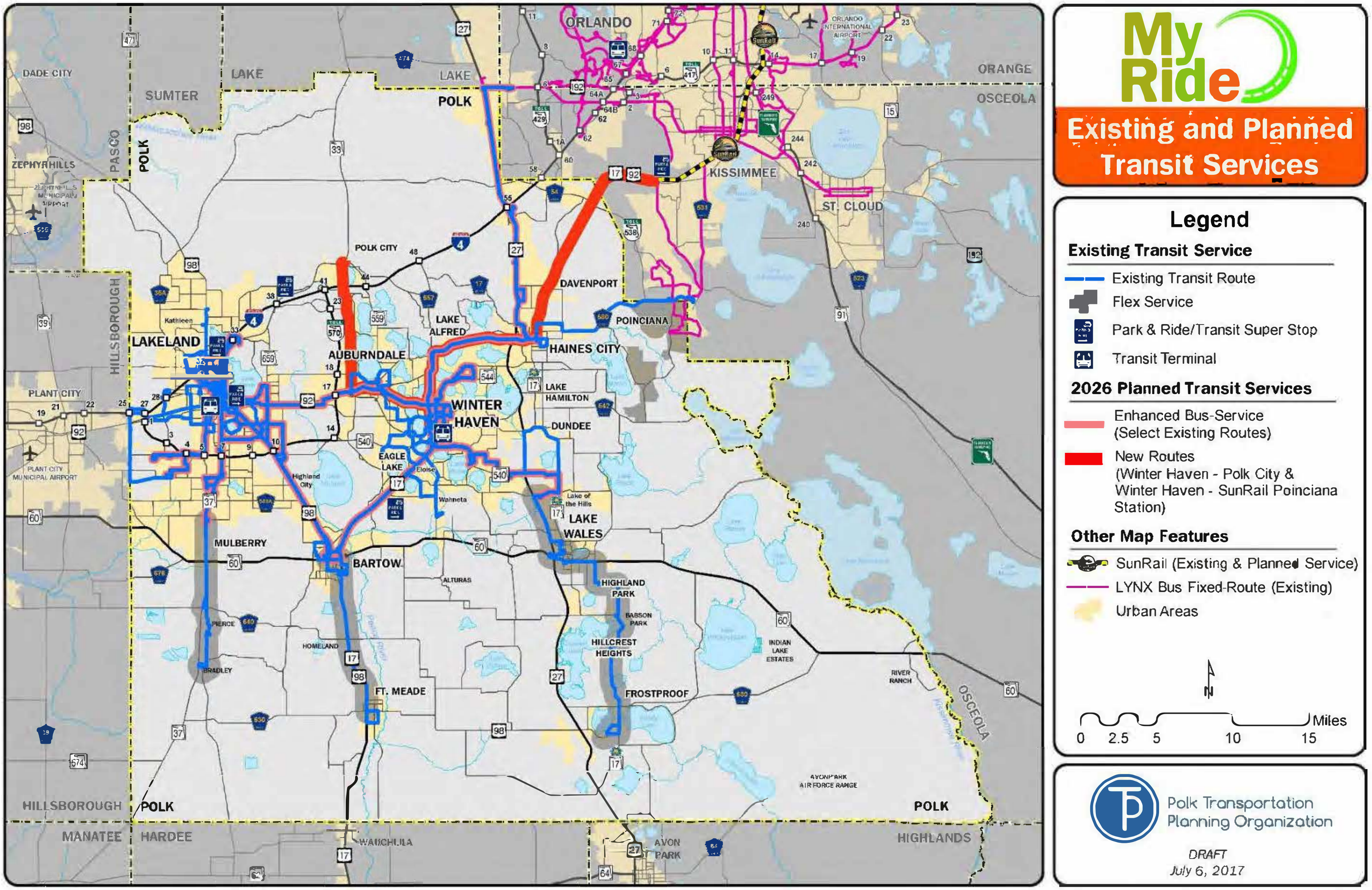
ORLANDO
KISSIMMEE
ST. CLOUD
ORANGE
OSCEOLA
LAKE
SUMTER
DADE CITY
ZEPHYRHILLS
PASCO
POLK
HILLSBOROUGH
PLANT CITY
PLANT CITY MUNICIPAL AIRPORT
POLK CITY
DAVENPORT
POINCIANA
HAINES CITY
LAKE ALFRED
AUBURNDALE
LAKELAND
Kathleen
WINTER HAVEN
LAKE HAMILTON
DUNDEE
EAGLE LAKE
Eloise
Highland City
Wahneta
Lake of the Hills
LAKE WALES
MULBERRY
BARTOW
ALTURAS
HIGHLAND PARK
BABSON PARK
HILLCREST HEIGHTS
PIERCE
HOMELAND
BRADLEY
FT. MEADE
FROSTPROOF
INDIAN LAKE ESTATES
RIVER RANCH
AVON PARK AIR FORCE RANGE
MANATEE
HARDEE
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Other Map Features
SunRail (Existing & Planned Service)
LYNX Bus Fixed-Route (Existing)
Urban Areas
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Polk Transportation Planning Organization
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July 6, 2017

APPENDIX H:
LAKELAND AREA MASS TRANSIT DISTRICT (LAMTD) BUS TRANSIT SYSTEM SAFETY PROGRAM (SSPP)
Last Update: February 2017

SSPP Document Activity Log

Date	Activity (Review/Update/Addendum/ Adoption/Distribution)	Concerned Person (Signature)	Remarks
3/14/2012	Board approval	Dean Kirkland	
2/13/2013	Board approval	Dean Kirkland	
2/13/2014	Board approval	Dean Kirkland	
2/11/2015	Board approval	Dean Kirkland	
2/09/2016	Board approval	Dean Kirkland	
2/09/2017	Board approval	Patricia Graves	

SSPP Document Activity Log
(Continued)

Date	Activity (Review/Update/Addendum/ Adoption/Distribution)	Concerned Person (Signature)	Remarks

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(Continued)

Appendices

1.0 Certification

BUS TRANSIT SYSTEM

ANNUAL SAFETY CERTIFICATION AND ADOPTION

Date: 2/9/2017
Name: Lakeland Area Mass Transit District
d.b.a Citrus Connection

Address: 1212 George Jenkins Blvd.
Lakeland, Florida 33815

In accordance with Florida Statue 341.061, the bus system named above hereby adopts and certifies to the following:

1. The adoption of a System Safety Program Plan in accordance, at a minimum, with the established Florida Department Of Transportation safety standards set forth in Rule 14-90, Florida Administrative Code, for calendar year 2017

2. Compliance with adopted standards of the System Safety Program Plan (SSPP), for calendar year 2016

3. Performance of safety inspections on all buses operated in accordance with Rule 14-90.009, for calendar year 2016

Signature: _____

Name: Commissioner George Linsey
Title: Chairman of the Board of Directors, Lakeland Area Mass Transit District

Signature: _____

Name: Tom Phillips
Title: Executive Director, Lakeland Area Mass Transit District

2.0 Management Safety Commitment and Policy Statement

Lakeland Area Mass Transit District is committed to providing safe, secure, clean, reliable, and efficient transportation services to the patrons. This policy statement serves to express management's commitment to and involvement in providing and maintaining a safe and secure transit system.

Section 341.041, Florida Statutes (F.S.); Section 334.044(2), F.S.; and Section 341.061(2)(a), F.S., requires the establishment of minimum equipment and operational safety standards for all governmentally owned bus transit systems; privately owned or operated bus transit systems operating in this state which are financed wholly or partly by state funds; all bus transit systems created pursuant to Chapter 427, F.S.; and all privately owned or operated bus transit systems under contract with any of the aforementioned systems. Safety standards for bus transit systems are provided by Rule Chapter 14-90, Florida Administrative Code (F.A.C.), hereinafter referred to as Rule 14-90. Bus transit systems are required to develop, adopt, and comply with a System Safety Program Plan (SSPP), which meets or exceeds, the established safety standards set forth in Rule 14-90.

In the interest of safety and security, and in order to comply with the statutory requirements, Lakeland Area Mass Transit District has developed and adopted this System Safety Program Plan (SSPP) that complies with established safety standards set forth in Rule 14-90. The SSPP is intended to document all policies, functions, responsibilities, etc. of the agency necessary to achieve a high degree of system safety and applies to all areas of the transportation system, including procurement, administration, operations, maintenance, etc.

Lakeland Area Mass Transit District management is responsible for maintaining a coordinated safety system in order to identify and prevent unsafe acts and conditions that present a potential danger or threat to public safety. Management has responsibility for maintaining and implementing the SSPP and complying with the policies, procedures, and standards included in this document. All departments, personnel, and contract service operators are charged with the responsibility of adhering to this SSPP. Any violation of safety and security practices is subject to appropriate administrative action. Management is ultimately responsible for enforcing the SSPP and maintaining a safe and secure system.

3.0 System Safety Goals and SSPP

Lakeland Area Mass Transit District has established the following goals for the system safety program:

- Achieve a high standard of system safety in all areas of the transportation system
- Develop and implement a comprehensive, systematic, and coordinated program to identify, assess, and control all safety hazards
- Develop and maintain a high level of safety awareness among all employees through pre-employment screening and systematic training and testing programs
- Establish safety standards for contract service operators and ensure compliance
- Ensure that system safety is integrated with daily operations through operational standards and procedures, vehicle maintenance, inspections, record keeping, audits, quality assurance and quality control
- Ensure that all vehicles and equipment operated by the agency meet established safety standards
- Maintain a formal process for event investigation, emergency preparedness and response, and handling security threats
- Ensure a drug free workplace
- Comply with all regulatory requirements.
- Develop a marketing program to promote safety and security internally and externally to all our customers.
- Maintain a safety and security committee to ensure cohesive procedures within the organization

The purpose of this SSPP document is to:

- Establish and document system safety policies and procedures in compliance with Rule 14-90
- Establish a coordinated and documented process to implement the SSPP during the operations of the system in order to achieve system safety goals
- Identify and delegate safety functions and responsibilities to units and personnel within the organization and contract service operators
- Facilitate internal and external safety audits to identify, track, and resolve safety program deficiencies.

In accordance with Rule 14-90 (included in Appendix A), the SSPP addresses the following safety elements and requirements:

- Safety policies and responsibilities
- Vehicle and equipment standards and procurement criteria

- Operational standards and procedures
- Bus driver and employee selection
- Driving requirements
- Bus driver and employee training
- Vehicle maintenance
- Investigations of events
- Hazard identification and resolution
- Equipment for transporting wheelchairs
- Safety data acquisition and analysis
- Wireless communication plan and procedure

3.1 SSPP Control and Update Procedures

Lakeland Area Mass Transit District management will review the SSPP annually, update the document as necessary, and implement the changes within a timeframe that will allow the agency to timely submit the annual self-certification of compliance to the Florida Department of Transportation (FDOT). Necessary updates outside the annual update window will be handled as SSPP addendums which will be incorporated in the body of the SSPP during subsequent annual update.

All proposed changes will be documented by the management as proposed SSPP addendums and distributed to all affected parties including employees .All parties must comment within one weeks of the issuance of the proposed changes unless otherwise specified. Following the approval of any modifications to the SSPP by the Executive Director the management staff will distribute the SSPP addendum to all affected parties, with a cover memo highlighting the changes. All parties receiving the updates are required to sign for its receipt and acknowledge their responsibility in implementing the changes. Management will document and retain the proof of SSPP receipt by all employees during initial hire and subsequent updates. Agency's governing board will adopt the SSPP annually a copy of the adopted SSPP will be distributed to all employees. A copy of the adopted SSPP will also be forwarded to the FDOT District Office. Document reviews of the SSPP by the local agency, any subsequent updates, and addendums, adoption, and distribution activities will be documented in the SSPP Document Activity Log included in this document.

4.0 Security Program Plan (SSP)

In accordance with Rule 14-90, Lakeland Area Mass Transit District has adopted, and implemented a Security program Plan (SSP), which covers the security portion of the system safety program. The SSP contains information about prevention, mitigation, preparedness, response, recovery, and associated organizational responsibilities.

The SPP addresses the following hazard and security elements and requirements:

- Security policies, goals, and objectives
- Organization, roles, and responsibilities
- Emergency management processes and procedures for mitigation, preparedness, response, and recovery
- Procedures for investigation of events described under subsection 14-90.004(5), F.A.C.
- Procedures for the establishment of interfaces with emergency response organizations
- Procedures for interagency coordination with local law enforcement jurisdictions
- Requirements for private contract transit providers that engage in continuous or recurring transportation services for compensation as a result of a contractual agreement with the bus transit system.
- Procedures for SPP maintenance and distribution.

The SPP has been adopted separately from the SSPP. Bus transit systems are prohibited by Section 119.071(3) (2), Florida Statutes, from publicly disclosing the SPP, as applicable under any circumstance. The document is maintained in a secure location by the management and access to the document is restricted to select agency personnel and appropriate FDOT personnel exercising oversight in this area. On-site access to the SPP is granted to regulatory authorities (FDOT, FTA, etc.) on as-needed basis.

Select portions of the SPP may be shared with employees depending on their job responsibilities.

5.0 System Description

History:
On December 2, 1982 the first district operated bus pulled out of the downtown Lakeland Area Mass Transit District (Citrus Connection) depot. Today's fleet of 38 buses and 15 Handy buses cover more than 7,500 miles daily. Lakeland Area Mass Transit District(LAMTD) picks up and delivers approximately 5,000 people to work, play, school and other destinations every day. It provides specialized transportation for citizens who are unable to use regular service.

The service boundaries have expanded numerous times and grown to 20 routes serving from Duff Road in North Lakeland to Bradley and from Clark Road to John Carroll Road. In 2011 we had a major route reduction with service cuts, presently we operate 16, fixed routes in the district and we contract with the Board of County Commissioners to Operate and additional 11 routes through Polk County. Para transit service was started with one Handy Bus in 1985 to provide door-to-door service to persons with disabilities that may prevent them from using the fixed route buses; there are now 12 Para transit (PT Connect) routes within the Lakeland Area Mass Transit District. September 2015 the Board of County Commissioners contracted with the Lakeland Area Mass Transit District to operate fixed route and para transit service in the Winter Haven Area , the BoCC also contracted with LAMTD to provide Transportation Disadvantage services (TD)in Polk County as the Community Transportation Coordinator.
LAMTD provides approximately 1, 304808 fixed route trips annually and 88,809 for paratransit trips and the demand is for even more bus service. The history of public transportation in the Lakeland and surrounding area over the past 30 years has been a constant stretch to meet the needs of the community.

Lakeland Area Mass Transit is governed by a Board of Directors. This Board of Directors is currently made up of two active Polk County Commissioners and three City of Lakeland Commissioners. The Board governs all financial and legal oversight of the transit District.

LAMTD has helped to make the Lakeland area a more livable community while cutting back our reliance on foreign oil and minimizing the stress associated with commuting.

Our Mission
We strive to be a superior provider of transportation services that contribute to the economic growth and quality of life for the communities we serve.

Our Vision
Effectively connecting people with their world through expanded, environmentally friendly service with full support of the communities we serve.

Services Provided and Jurisdiction:
We provide non-emergency transportation (NET) services for state and federal programs, consistent with the requirements of various FDOT and FTA grant requirements.

System Profile (1/6/2017):

Total Number of drivers: 86
Full-time: 85
Part-time: 1
Volunteers: 0
Number of operational buses: 87

Buses W/C accessible 87
Number of Type I buses (>22' length): 09Type II buses (<22' length): 87

Dispatch Location(s):
1290 Golfview Blvd, Bartow Fl.
1212 George Jenkins Blvd.

Maintenance Locations: 1212 George Jenkins Blvd, Lakeland, Fl. 33815

Community Transportation Coordinator (CTC): Yes __ No ___X__
CTC Operator: Yes X No
CTC Name: Board of County Commissioners

Providers and Contacts

5.1 N/A

6.0 Organization Structure and System Safety Responsibilities

Management has the overall responsibility of safe and secure operations of Lakeland Area Mass Transit District and contract service operators. Each employee is required to carry out specific system safety responsibilities, depending on his/her position, in compliance with the SSPP. The organization information provided below describes each position and the reporting structure; the table in the following page shows system safety responsibilities of each position.

6.1 Lakeland Area Mass Transit District- Organization Chart

6.2 Lakeland Area Mass Transit District System Safety Responsibilities by Position

System Safety Task	Frequency	Management Responsibility by Position						Staff Responsibility by Position			
		Exec. Dir	HR DIR	CFO	DIR. MARKETING	Safety Security Specialist	DIR Maint	SUP. FACILITIES	Manager, /PARA	DIR. Fixed Route services	TEAM
Oversee and assure SSPP and HSP/SPP compliance	Daily	X	X	X	X	X	X	X	X	X	X
Random inspections of Departments for safety compliance (pre-trip inspections, driver files, maintenance records, etc.)	Annually/ As needed		X			X	X		X	X	
SSPP and HSP/SPP review, maintenance, and distribution	Annual/ As needed					X					
Intra-agency coordination and safety meetings	Annually		X			X	X	X	X	X	X
Inter-agency coordination (FDOT, law enforcement, emergency response organizations, etc.)	As needed	X	X	X	X	X	X	X	X	X	X
Facility inspection	Semi annually					X	X	X			
Employee safety training and testing and record keeping	Initial hire/ Quarterly		X			X	X		X	X	
Drug free workplace policy	Initial hire/ Quarterly		X								
Driver license validity check and record maintenance	Initial hire/ Quarterly		X								
Administrative/Human Resource	As needed		X								
Safety and security data acquisition and analysis	On an ongoing basis		X			X	X	X	X	X	X
Medical examination of drivers and record keeping	Initial hire/ biennium		X								
Vehicle and equipment procurement	As needed	X		X		X	X		X		X
Pre-trip inspections and record keeping	Daily					X	X		X	X	X
Vehicle maintenance and record keeping	Daily						X				
Annual safety inspections and record keeping	Annual						X				

Event investigation and record keeping	As needed		X			X	X		X	X	X
Investigate safety complaints	As needed	X	X	X	X	X	X	X	X	X	X
Pre-employment screening	Initial hire		X								
Employee time recording and maintenance	Daily	X	X	X	X	X	X	X	X	X	
Internal safety audits	Annual/As needed					X					
Facilitate external safety audits	As needed					X	X	X			
Records maintenance, retention, and distribution	Daily/As needed	X	X	X	X	X					
Hazard identification and resolution	Daily	X	X	X	X	X	X	X	X	X	X
Compliance with SSPP	Daily	X	X	X	X	X	X	X	X	X	X
Self-certification of safety compliance	Annual					X					

6.3 System Safety Responsibilities of Contract Service Operator(s)

Lakeland Area Mass Transit District has no contract service providers(after LAMTD assumes the role of the CTC, there may be contracted services)

7.0 Qualification and Selection of Driver

Lakeland Area Mass Transit District management is responsible for ensuring that the following minimum standards are met when hiring new drivers.

- Must possess a valid Florida driving license of appropriate class.
- Criminal background check (with local law enforcement and the Florida Department of Law Enforcement) and driving records check including, but not limited to, the following items:

    - Driving records
    - Instant Social Security Number validations
    - Instant identification of applicant's county of residence for the past seven years
    - County felony criminal history checks for up to three counties per applicant and other criminal records checks
    - Employment reference checks
    - Personal reference check
    - Workers' Compensation claims

- Complete employment application.
- Successful completion of pre-employment physical including an eye examination and drug screening test.
- Signed acknowledgement of receipt and agreement to comply with drug-free workplace policy.
- Signed acknowledgment of receipt and agreement to comply with SSPP.
- Successful completion of required orientation, training and testing to demonstrate and ensure adequate skills and capabilities to safely operate each type of bus or bus combination before driving on a street or highway unsupervised.
- Signed acknowledgment of receipt and compliance with the following written operational and safety procedures ***before*** driving on a street or highway unsupervised:

    - Communication and handling of unsafe conditions, security threats, and emergencies.
    - Familiarization and operation of safety and emergency equipment, wheelchair lift equipment, and restraining devices.
    - Application and compliance with all applicable federal and state laws, rules and regulations.
    - Communications- Cellular and electronic devises policy
    - Drug free work place Policy

- Drivers are required to write and submit a daily bus inspection report pursuant to Rule 14-90.006, F.A.C.
- Personnel licensed and authorized by the bus transit system to drive, move, or road test a bus in order to perform repairs or maintenance services when it has been determined that such temporary

operation does not create unsafe operating conditions or create a hazard to public safety are not bound to the following two provisions**:**

- Training and testing to demonstrate and ensure adequate skills and capabilities to safely operate each type of bus or bus combination before driving on a street or highway unsupervised.
- Bus transit systems shall provide written operational and safety procedures to all bus drivers before driving on streets or highways unsupervised.

Noncompliance with any regulatory or agency specific requirement may result in an employee administrative action up to and including termination of employment. It is the policy of Lakeland Area Mass Transit District. to screen applicants to eliminate those that pose a safety or security threat to the agency or who would not be capable of carrying out agency safety and security policies.

8.0 Driver Safety Training and Testing

All employees and drivers of Lakeland Area Mass Transit District are required to complete all training and testing requirements to demonstrate and ensure adequate skills and capabilities to safely operate each type of bus or bus combination before driving on a street or highway unsupervised. A Certified Trainer is responsible for conducting and documenting all training and testing activities utilizing a certification process. Noncompliance with any regulatory or agency specific guideline or requirement may result in suspension or termination of employment. This section of the SSPP discusses the training and testing programs to be administered by Human resources or the Training Department

8.1 Initial Driver Training and Testing

Upon hire and prior to being placed into road service, all drivers are required to complete training and testing in the following areas:

1. Bus transit system safety and operational policies and procedures.
2. Operational bus and equipment inspections.
3. Bus equipment familiarization.
4. Radio procedures
5. Basic operations and maneuvering.
6. Boarding and alighting passengers.
7. Operation of wheelchair lift and other special equipment.
8. Defensive driving.
9. Passenger assistance and securement.
10. Handling of emergencies and security threats.
11. Security and threat awareness.
12. Driving conditions.
13. Use of electronic devices, consistent with LAMTD Electronic Device Policy.
14. Blood borne pathogens and other occupational exposure to health hazards.
15. Substance abuse policy.

In addition, new drivers are required to successfully undergo a road test with an experienced driver. A new-hire check-off list must be completed to ensure the employee has received all required Rule 14-90, FAC (and those identified in this SSPP) training and information before

After successful completion of each training and testing module, LAMTD is required to document the satisfactory completion of each of their employee's training and maintain the training records. Certificates of completion issued are be maintained in the driver files for a minimum of 4 years.

All newly hired employees are also provided instructional training in the following areas :

- General rules: General rules of the agency including employee conduct codes.
- Customer service: Covers expectations of employees when dealing with the public; includes instruction on how and to whom to report security incidents, and types of individuals or situations to be aware of and report.
- Fare handling: Covers fare collection procedures and provides instruction in dealing with fare disputes, conflict resolution, and notification of security personnel.
- Radio procedures: Provides instruction on radio procedure for both routine and emergency radio traffic. Includes instruction on reporting crimes, suspicious acts, and potentially hazardous situations.

LAMTD has developed and maintains an Operator Development Training Program that may be used for new hire training and testing of employees. This manual provides extensive coverage of all areas noted above.

8.2 On-Going/Refresher Training and Testing

On-going/refresher training and testing sessions will be conducted a minimum of every two years. The drivers are required to attend training and testing in all areas specified by Rule 14-90, at least once every two years. All training and testing activities are to be recorded and retained in files for a minimum of four years.

8.3 Remedial Training and Testing

Lakeland Area Mass Transit District requires remedial training for drivers who have been involved in a Preventable accident or have developed unsafe driving behaviour or other driving problems. Other causes for remedial training may include persistent customer complaints, supervisor recommendations, or a result of ongoing evaluations. Depending on the circumstances, trained personnel will determine the appropriate remedial training and testing, the results of which will also be documented and retained in files.

8.4 NIMS Training

The National Incident Management System (NIMS) provides a consistent nationwide template to enable all government, private-sector, and nongovernmental organizations to work together during domestic incidents (http://www.fema.gov/emergency/nims/). The NIMS system requires that transit agencies comply with a number of specific activities to ensure personnel who will be conducting activities in response to emergencies use the standard Incident Command System (ICS).

Lakeland Area Mass Transit District SPP requires that some management staff take available NIMS training to understand this requirement and to coordinate regularly with outside organizations to prepare for coordinated responses to incidents.

9.0 Records Management

LAMTD is responsible for implementing a record management program that includes maintenance, retention, distribution, and safe disposal of all safety and security records of the agency in compliance with state and federal regulations.

LAMTD annually reviews and updates the SSPP and SPP as needed, to ensure compliance with Rule 14-90, FAC. Revisions and updates will be communicated with employees, contractors, and regulatory agencies as they occur or as deemed necessary by the management, depending on the nature of the revision or update. The SPP is considered a confidential document and will be retained in a secure location by management.

Lakeland Area Mass Transit District will ensure the maintenance and retention of the following records for at least four years:

- Records of bus driver background checks and qualifications.
- Detailed descriptions of training administered and completed by each bus driver.
- A record of each bus driver's duty status which will include total days worked, on-duty hours, driving hours, and time of reporting on and off duty each day.
- Records of preventive maintenance, regular maintenance, inspections, lubrication, and repairs performed for each bus.
- Records of annual safety inspections and documentation of any required corrective actions.
- Completed and signed Medical Examination Certificate (FDOT Form 725-030-11) confirming that biennial medical examinations have been conducted for each driver.

In addition, LAMTD will retain records of daily bus inspections and any corrective action documentation for a minimum of two weeks.

10.0 Drug and Alcohol Program

Lakeland Area Mass Transit District has established a Zero Tolerance Substance Abuse Policy Statement in accordance with 49 C.F.R. Part 32 and a substance abuse management and testing program in accordance with 49 C.F.R. Parts 40 and 655, October 2009, a copy of which is included in Appendix A. - Anyone in violation of this substance abuse policy is subject to termination.

11.0 Vehicle Maintenance Program

LAMTD provides a maintenance plan, LAMTD ensure that the maintenance programs is consistent with Section 14-90.004(3)(h). LAMTD vehicle maintenance program ensures that all buses operated, and all parts and accessories on such buses, including those specified in Section 14-90.007, FAC, and any additional parts and accessories which may affect safety of operation, including frame and frame assemblies, suspension systems, axles and attaching parts, wheels and rims, and steering systems, are regularly and systematically inspected, maintained, and lubricated to standards that meet or exceed the bus manufacturer's recommendations and requirements. LAMTD is responsible for ensuring that the Maintenance Plan implemented and that all vehicles operated are regularly and systematically inspected, maintained, and lubricated according to the agency's Maintenance Plan and Preventative Maintenance Guidelines (included in Appendix B and Appendix C, respectively).

11.1 Pre trip/ Post trip

System drivers are required to perform daily vehicle inspections prior to operating the assigned vehicle, during routes, and after all route schedules are completed. The pre-trip inspection includes an inspection of the following parts and devices to ascertain that they are in safe condition and in good working order:

- Service brakes
- Parking brakes
- Tires and wheels
- Steering
- Horn
- Lighting devices
- Windshield wipers
- Rear vision mirrors
- Passenger doors
- Exhaust system
- Equipment for transporting wheelchairs
- Safety, security, and emergency equipment
- Working speedometer

During the scheduled trips and at the end of the day, the operator will note any additional findings and submit the daily vehicle inspection forms. The process and forms to be utilized for daily vehicle inspections

is included in agency's preventative maintenance guidelines. The daily vehicle inspection forms must be complete with the operator's signature and a check in each box to document that the items are "OK" or a defect is noted in the comments section. If the driver finds any mechanical or other problems that could compromise the safety of the vehicle at any point, the drivers will immediately inform the Maintenance Department and the vehicle will not be scheduled for service until repaired. Failure to report deficiencies by drivers may result in an administrative action taken against the employee.

The Maintenance Department will review the daily inspections and document the corrective actions taken as a result of any deficiencies identified by the operator. Daily inspection records will be retained for a minimum of two weeks at the facility. Once defects are noted they will be prioritized and sorted into categories for repairs. Once a defect is noted on the inspection form and repaired, the documentation will be attached to the work/repair order and filed in the maintenance files.

11.2 Preventive Maintenance

A preventative maintenance schedule is implemented to inspect for safety hazards and to maintain vehicles in a manner conforming to safety regulations. Lakeland Area Mass Transit District will perform scheduled preventive maintenance on all vehicles at every 6,000-mile interval following the sequence "A"-"B"-"A"-"C", according to the agency's maintenance plan. As preventative maintenance inspections are scheduled by projected mileage, the agency will allow ±500 mile deviations in mileage interval, so long as the actual mileage interval meets the manufacturer's recommended maintenance schedule. Inspection "A" will be performed every 6,000 miles, inspection "B" will be performed every 12,000 miles, and inspection "C" will be performed every 24,000 miles on each vehicle. Safety inspections are part of the maintenance inspections and will be performed at least once every year with inspection type "C" on each vehicle. When a vehicle is due for an inspection, it will be taken out of service until the inspection is completed. This allows a series of repairs to be carried out while minimizing costs and optimizing the number of operational vehicles. If a vehicle is "down" for an extended period of time due to unavoidable circumstances, preventative maintenance will be temporarily suspended until the vehicle can be returned to service. However, the annual inspection will be conducted on all vehicles regardless of "up/down" status and/or mileage accrued.

Each vehicle will have a written record documenting preventive maintenance, regular maintenance, inspections, lubrication and repairs performed. Such records will be maintained for at least four years and include, at a minimum, the following information:

- Identification of the bus, the make, model, and license number or other means of positive identification and ownership
- Date, mileage, description, and each type of inspection, maintenance, lubrication, or repair performed
- If not owned by Lakeland Area Mass Transit District., the name of any person furnishing a bus
- The name and address of any entity or contractor performing an inspection, maintenance, lubrication, or repair

For tracking purposes, a maintenance log will be kept containing vehicle ID, make and type of vehicle, year, model, special equipment, inspections, maintenance and lubrication intervals, and date or mileage when services are due.

11.3 Bus Safety Inspections

Safety inspections are part of the maintenance inspections and are performed at least once every year on all buses. LAMTD Maintenance Supervisory personnel are responsible for ensuring that each individual performing a bus safety inspection is qualified as follows:

- Understands the requirements set forth in Rule 14-90, FAC and can identify defective components.
- Is knowledgeable of and has mastered the methods, procedures, tools, and equipment used when performing an inspection.
- Has at least one year of training and/or experience as a mechanic or inspector in vehicle maintenance and has sufficient general knowledge of buses owned and operated by the bus transit system to recognize deficiencies or mechanical defects.

Each bus receiving a safety inspection shall be checked for compliance with the requirements for safety devices and equipment as referenced or specified by Rule 14-90. Specific operable equipment and devices as required by Rule 14-90, FAC include the following as applicable to Type I and II buses:

- Horn
- Windshield wipers
- Mirrors
- Wiring and batteries
- Service and parking brakes
- Warning devices
- Directional signals
- Hazard warning signals
- Lighting systems and signaling devices
- Handrails and stanchions
- Standee line and warning
- Doors and brake interlock devices
- Step-wells and flooring
- Emergency exits
- Tires and wheels
- Suspension system
- Steering system
- Exhaust system
- Seat belts
- Safety equipment
- Equipment for transporting wheelchairs
- Working speedometer

A safety inspection report will be prepared by the individual(s) performing the inspection and will include the following:

- Identification of the individual(s) performing the inspection
- Identification of the bus transit system operating the bus
- The date of the inspection
- Identification of the bus inspected
- Identification of the equipment and devices inspected including the identification of equipment and devices found deficient or defective
- Identification of corrective action(s) for any deficient or defective items found and date(s) of completion of corrective action(s)

Records of annual safety inspections and documentation of any required corrective actions will be retained for a minimum of four years for compliance review.

12.0 Safety Data Acquisition & Analysis

Understanding safety data is an important step towards allocating important and scarce resources to implement safety program elements. Safety data relative to transit provider operations can be used to determine safety trends in system operation. The following data will be collected and retained by Lakeland Area Mass Transit District on an ongoing basis:

- Accident and incident data
- Maintenance data including daily vehicle inspection forms
- Passenger claims and complaints

The data will be analyzed by Lakeland Area Mass Transit District management both qualitatively and quantitatively for safety hazard identification, resolution and risk management purposes. The analysis results will be useful for identifying necessary actions to minimize safety risks. Analysis of safety data will also help improve system performance, not only in respect to safety, but also in overall delivery of service to the public.

13.0 Hazard Identification and Resolution

Hazard management is a mechanism by which hazards are identified, evaluated for potential impact on the operating system, and resolved in a manner acceptable to the management and regulatory agencies. The Lakeland Area Mass Transit District's hazard management consists of three primary components – hazard identification, hazard categorization, and hazard resolution.

13.1 Hazard Identification

By means of safety data acquisition and monitoring LAMTD is responsible for identifying any potential system hazards on an ongoing basis.

13.2 Hazard Categorization

Once the key system hazards have been identified, LAMTD will categorize the hazards based on severity and probability of occurrence.

13.3 Hazard Resolution

Once the hazards are identified and categorized, subsequent actions will be undertaken to resolve the issue and minimize risk associated with the identified hazard. LAMTD must eliminate all "unacceptable" hazards and take measures to minimize risk. The results of a hazard resolution process can be shared with agency staff and law enforcement agencies on an as needed basis for awareness and support.

14.0 Event Investigation

For the purpose of this SSPP, events are considered accidents or incidents that involve a transit vehicle or take place on Lakeland Area Mass Transit District controlled property. An "accident" is defined as an occurrence associated with the operation of a vehicle or its components that the Operator had enough control of the vehicle to prevent occurrence.

Any event involving a bus or taking place on property controlled by a transit system and resulting in a fatality, injury, or property damage will be investigated by Lakeland Area Mass Transit District. All events included but not limited to the following, will be investigated:

- A fatality, where an individual is confirmed dead within 30 days of a bus transit system related event, excluding suicides and deaths from illnesses.
- Injuries requiring immediate medical attention away from the scene for two or more individuals.
- Property damage to bus transit system buses, non-bus transit system vehicles, other bus system property or facilities, or any other property. Lakeland Area Mass Transit District will have the discretion to investigate events resulting in property damage less than $1,000.
- Evacuation of a bus due to a life safety event where there is imminent danger to passengers on the bus, excluding evacuations due to operational issues.

In case of all events, drivers are required to contact dispatch, who will in turn contact all other necessary people (as required) immediately. Trained accident investigator will be sent to the scene depending on the severity of the event, LAMTD investigates all events.. Each investigation will be documented in a final report that includes a description of the investigation activities, identified causal factors, and any identified corrective action plan. Each corrective action plan will identify the action to be taken by the bus transit system and the schedule for its implementation. LAMTD will monitor and track the implementation of each corrective action plan. Investigation reports, corrective action plans, and related supporting documentation will be maintained by contractor for a minimum of four years from the date of completion of the investigation.

15.0 Medical Exams for Bus Transit System Drivers

This section of the SSPP establishes the medical examination qualification standards for use by LAMTD. LAMTD is adopting the FDOT medical examination qualification standards, consistent with Section 14-90.0041, FAC.

Medical examination requirements include a pre-employment examination for applicants, an examination at least once every two years for existing drivers, and a return to duty examination for any driver prior to returning to duty after having been off duty for 90 or more days due to an illness, medical condition, or injury.

- Medical examinations will be performed and recorded according to FDOT Form Number 725-030-11, Medical Examination Report for Bus Transit System Driver, Rev. 9/10, included in Appendix E.
- Medical examinations will be performed by a Doctor of Medicine or Osteopathy, Physician Assistant, or Advanced Registered Nurse Practitioner licensed or certified by the State of Florida. If medical examinations are performed by a Physician Assistant or Advanced Registered Nurse Practitioner, they must be performed under the supervision or review of a Doctor of Medicine or Osteopathy.
- An ophthalmologist or optometrist licensed by the State of Florida may perform as much of the medical examination as it pertains to visual acuity, field of vision, and color recognition.
- Upon completion of the medical examination, the examiner shall complete, sign, and date the medical examination form and maintain the original at his or her office.
- Upon completion of the medical examination, the examiner shall complete, sign, and date the medical examination certificate and provide a copy..
- Upon completion of the medical examination the driver shall provide their driver license number, signature, and date on the medical examination certificate.
- Completed and signed medical examination certificate for each bus driver, dated within the past 24 months, will be maintained on file for a minimum of four years from the date of the examination.
- LAMTD will not allow a driver to operate a transit bus without having on file a completed medical examination certificate dated within the past 24 months.

16.0 Operating and Driving Requirements

LAMTD is responsible for overall compliance with all operating and driving requirements of the SSPP.

It is the responsibility of LAMTD to ensure that employees who perform driving and/or operational duties strictly adhere to the following requirements:

- Under no circumstances is a employee allowed to operate a vehicle without having the appropriate and valid driver's license in his or her possession.
- Employees are not permitted to drive a bus when his or her driver license has been suspended, cancelled, or revoked. An Employee who receives a notice that his or her license to operate a motor vehicle has been suspended, cancelled, or revoked is required to notify his or her supervisor of the contents of the notice immediately, if possible, otherwise no later than the end of the business day following the day he or she received the notice. Violation of this policy may result in disciplinary actions including termination of employment.
- Lakeland Area Mass Transit District will annually check Motor Vehicle Records (MVR) for drivers for investigating information on license suspensions, revocations, accidents, traffic violations, unpaid summons, etc. Lakeland Area Mass Transit District. May also check driver license status of each driver utilizing the Florida Department of Highway Safety and Motor Vehicles website - https://www6.hsmv.state.fl.us/DLCheck/main.jsp.
- Buses must be operated at all times in compliance with applicable traffic regulations, ordinances, and laws of the jurisdiction in which they are being operated.

- Rule 14-90, FAC defines “On Duty” and “Off Duty” status of drivers as follows -
    - “On Duty” means the status of the driver from the time he or she begins work, or is required to be in readiness to work, until the time the driver is relieved from work and all responsibility for performing work. “On Duty” includes all time spent by the driver as follows:
        - (a) Waiting to be dispatched at bus transit system terminals, facilities, or other private or public property, unless the driver has been completely relieved from duty by the bus transit system.
        - (b) Inspecting, servicing, or conditioning any vehicle.
        - (c) Driving.
        - (d) Remaining in readiness to operate a vehicle (stand-by).
        - (e) Repairing, obtaining assistance, or remaining in attendance in or about a disabled vehicle.
    - “Off-Duty” means any time the driver is not on duty, required to be in readiness to work, or under any responsibility to perform work. Such time shall not be counted towards the maximum allowed on-duty hours within a 24-hour period.
- Drivers are not permitted to drive more than 12 hours in a 24-hour period, or drive after having been on duty for 16 hours in a 24-hour period. A driver is not permitted to drive until the requirement of a minimum eight consecutive hours of off-duty time has been fulfilled. A driver’s work period begins from the time he or she first reports for duty to his or her employer. A driver is

permitted to exceed his or her regulated hours in order to reach a regularly established relief or dispatch point, provided the additional driving time does not exceed one hour.

- Drivers are not permitted to be on duty more than 72 hours in any period of seven consecutive days; however, any 24 consecutive hours of off duty time shall constitute the end of any such period of seven consecutive days. A driver who has reached the maximum 72 hours of on duty time during the seven consecutive days is required to have a minimum of 24 consecutive hours of off duty time prior to returning to on duty status.
- A driver is permitted to drive for more than the regulated hours for the safety and protection of the public when conditions such as adverse weather, disaster, security threat, a road or traffic condition, medical emergency, or an accident occur.
- Drivers are not permitted to drive a bus when his or her ability is impaired, or likely to be impaired, by fatigue, illness, or other causes, likely to create an unsafe condition.
- Drivers will not report for duty or operate any vehicle while under the influence of alcohol or any other substance, legal or illegal, that may impair driving ability. All employees are required to comply with agency's Substance Abuse Policy.
- Drivers are required to conduct daily vehicle inspections and reporting of all defects and deficiencies likely to affect safe operation or cause mechanical malfunctions.
- Drivers are required to immediately report any defect or deficiency that may affect safe operations or cause mechanical malfunctions. Any defect or deficiency found shall be properly documented on a Daily Vehicle Inspection (DVI) form and should be submitted to the Maintenance Department.
- Each maintenance department will review daily inspection reports and document corrective actions taken as a result of any deficiencies identified by daily inspections.
- A bus with any passenger doors in the open position will not be operated with passengers aboard. The doors will not be opened until the bus is stopped. A bus with any inoperable passenger door will not be operated with passengers aboard, except to move a bus to a safe location.
- Drivers will ensure that during darkness, interior lighting and lighting in stepwells on buses shall be sufficient for passengers to enter and exit safely. Adherence to pre-trip inspection requirements help insure the ability of this requirement to be met.
- Passengers will not be permitted in the stepwells of any bus while the bus is in motion, or to occupy an area forward of the standee line.
- Passengers will not be permitted to stand on buses not designed and constructed for that purpose.
- Buses will not be refueled in a closed building. No bus shall be fueled when passengers are being carried..
- Drivers are required to be properly secured to the driver's seat with a restraining belt at all times while the bus is in motion.
- Buses will not be left unattended with passengers aboard for longer than 15 minutes. The parking or holding brake device will be properly set at any time the bus is left unattended.
- Buses will not be left unattended in an unsafe condition with passengers aboard at any time.
- Drivers are prohibited from leaving keys in the vehicle for any reason at any time the bus is left unattended. Except during summer weather when clients are left on board while the driver exits to locate or deliver another client.

- Transit vehicles will not be used at any time for uses other than those that are authorized and permitted according to state and federal program requirements.

Noncompliance with these requirements may result in disciplinary actions, including termination of employment.

16.1 Wireless Communication

"Wireless communication device" means an electronic or electrical device capable of remote communication. Examples include cell phones, personal digital assistants (PDAs) and portable computers (commonly called laptop computers). "Personal wireless communications device" means an electronic or electrical device that was not provided by the bus transit system for business purposes. "Use of a wireless communication device" means use of a mobile telephone or other electronic or electrical device, hands-on or hands-free, to conduct an oral communication; to place or receive a telephone call; to send or read electronic mail or a text message; to play a game; to navigate the Internet; to play, view, or listen to a video; to play, view, or listen to a television broadcast; to play or listen to music; to execute a computational function, or to perform any other function that is not necessary for the health or safety of the person and that entails the risk of distracting the employee from a safety-critical task. Use of an electronic or electrical device that enhances the individual's physical ability to perform, such as a hearing aid, is not included in this definition.

LAMTD has developed and adopted an Electronic Device Policy on September 9, 2011. Lakeland Area Mass Transit District requires all employees adhere to the Communication policy ,the policy provides for the safe operation of the bus transit vehicle, ensuring that:

- Cellular phones, electronic devices and accessories to include a blue-tooth ear piece may be carried on the bus; however, these devices **may not be powered on or visible** during operation of the bus or in the act of performing a safety sensitive function. In addition, devices and accessories may not be carried onto the maintenance shop floor (levels 1 & 2).

- The use of all cellular phones and electronic devices (**non-district issued**), to include talking, texting, instant messaging or e-mailing while performing **any safety sensitive duty is strictly prohibited.** To use a cellular phone or electronic device you must be on an authorized break (for Bus Operators, this means the end of the line), and in a non-safety sensitive area.

- The use of bus radios (hand-held), MDTs, GPS and mobile computers to include staff and maintenance vehicle radios, to conduct District business is considered essential communication and is authorized communication equipment. All communications must be kept to an essential minimum; **the use of this communication must be at an authorized bus stop, in a parking lot and out of the flow of traffic.**

  EMERGENCY EXCEPTIONS:

  1. When involved in an accident/incident and moving the vehicle is not feasible.
  2. When the vehicle has a mechanical breakdown and the vehicle cannot be moved.
  3. When advised by Law enforcement that a vehicle cannot be moved.

4. When advised by supervisory personnel or the Call center dispatch that a vehicle cannot be moved.
5. When under duress.

Lakeland Area Mass Transit District requires all employees to follow its radio operating procedures. In addition, Lakeland Area Mass Transit District has developed a driver educational training and testing program on the proper use of a wireless communications device while in the performance of safety related duties and hazards associated with driving and utilizing these devices. The wireless communications device training and testing is included in the Distracting Driving Module contained within the LAMTD Operator Development program (which all drivers are required to complete upon hire, before driving on a street or highway unsupervised).

17.0 Vehicle Equipment Standards & Procurement Criteria

Lakeland Area Mass Transit District will attempt to procure vehicles utilizing the Transit Research-Inspection-Procurement Services (TRIPS) program, formerly known as the Florida Vehicle Procurement Program (FVPP), and other State Programs strictly adhering to the vehicle equipment standards and procurement criteria specified in 14-90.007.

- All buses procured and operated meet the following minimum standards, as applicable:
    a. The capability and strength to carry the maximum allowed load and not exceed the manufacturer's gross vehicle weight rating (GVWR), gross axle weighting, or tire rating.
    b. Structural integrity that mitigates or minimizes the adverse effects of collisions.
    c. Federal Motor Vehicle Safety Standards (FMVSS), 49 C.F.R. Part 571, Sections 102, 103, 104, 105, 108, 207, 209, 210, 217, 302, 403, and 404, October 1, 2008, hereby incorporated by reference.
- Proof of strength and structural integrity tests on new buses procured are submitted under the terms of the TRIPS vendor agreement with the Department.
- In addition, every bus operated by the agency are equipped as follows:
    - Mirrors. There shall be two exterior rear vision mirrors, one at each side. The mirrors shall be firmly attached to the outside of the bus and so located as to reflect to the driver a view of the highway to the rear along both sides of the vehicle. Each exterior rear vision mirror, on Type I buses shall have a minimum reflective surface of 50 square inches. Neither the mirror nor the mounting shall protrude farther than the widest part of the vehicle body except to the extent necessary to produce a field of view meeting or exceeding the requirements of this section. All Type I buses shall, in addition to the above requirements, be equipped with an inside rear vision mirror capable of giving the driver a clear view of seated and standing passengers. Buses having a passenger exit door that is located inconveniently for the driver's visual control shall be equipped with additional interior mirrors to enable the driver to view the passenger exit door. In lieu of interior mirrors, trailer buses and articulated buses may be equipped with closed circuit video systems or adult monitors in voice control with the driver.
    - Wiring and Batteries. Electrical wiring shall be maintained so as not to come in contact with moving parts, heated surfaces, or be subject to chafing or abrasion which may cause insulation to become worn. Every Type I bus manufactured on or after February 7, 1988, shall be equipped with a storage battery electrical power main disconnect switch. The disconnect switch shall be practicably located in an accessible location adjacent to or near to the battery and be legibly and permanently marked for identification. Every storage battery on a public-sector bus shall be mounted with proper restraint devices in a compartment which provides adequate ventilation and drainage.
    - Brake Interlock Systems. All Type I buses having a rear exit door shall be equipped with a rear exit door/brake interlock that automatically applies the brake upon driver activation of the rear exit door to the open position. Brake interlock application shall remain activated until deactivated by the driver and the rear exit door returns to the closed position. The rear exit door brake interlock on such buses shall be equipped with an identified override switch enabling emergency release of the brake interlock function. The override switch-shall not be located within reach of the seated driver. Air pressure application to the brake during

brake interlock operation, on buses equipped with rear exit door/brake interlock, shall be regulated at the equipment's original manufacturer's specifications.

- Standee Line and Warning. Every bus designed and constructed to allow standees shall be plainly marked with a line of contrasting color at least two inches wide, or be equipped with some other means to indicate that all passengers are prohibited from occupying a space forward of a perpendicular plane drawn through the rear of the driver's seat and perpendicular to the longitudinal axis of the bus. A sign shall be posted at or near the front of the bus stating that it is a violation for a bus to be operated with passengers occupying an area forward of the line.
- Handrails and Stanchions. Every bus designed and constructed to allow standees shall be equipped with overhead handrails for standee passengers. Overhead handrails shall be continuous, except for a gap at the rear exit door, and terminate into vertical stanchions or turn up into a ceiling fastener. Every Type I and Type II bus designed for carrying more than 16 passengers shall be equipped with handrails, stanchions, or bars at least 10 inches long and installed to permit safe on-board circulation, seating and standing assistance, and boarding and alighting by elderly and handicapped persons. Type I buses shall be equipped with a safety bar and panel directly behind each entry and exit step well.
- Flooring, Steps, and Thresholds. Flooring, steps, and thresholds on all buses shall have slip resistant surfaces without protruding or sharp edges, lips, or overhangs, in order to prevent tripping hazards. All step edges and thresholds shall have a band of color(s) running the full width of the step or edge which contrasts with the step tread and riser, either light-on-dark or dark-on-light.
- Doors. Power activated doors on all buses shall be equipped with a manual device designed to release door closing pressure.
- Emergency Exits. All buses shall have an emergency exit door, or in lieu thereof, shall be provided with emergency escape push-out windows. Each emergency escape window shall be in the form of a parallelogram with dimensions not less than 18" by 24", and each shall contain an area of not less than 432 square inches. There shall be a sufficient number of push-out or kick-out windows in each vehicle to provide a total escape area equivalent to 67 square inches per seat, including the driver's seat. No less than 40% of the total escape area shall be on one side of the vehicle. Emergency escape kick-out or push-out windows and emergency exit doors shall be conspicuously marked with a sign or light and shall always be kept in good working order so that they may be readily opened in an emergency. All such windows and doors shall not be obstructed either inside or outside so as to hinder escape. Buses equipped with an auxiliary door for emergency exit shall be equipped with an audible alarm and light indicating to the driver when a door is ajar or opened while the engine is running. Supplemental security locks operable by a key are prohibited on emergency exit doors unless these security locks are equipped and connected with an ignition interlock system or an audio visual alarm located in the driver's compartment. Any supplemental security lock system used on emergency exits shall be kept unlocked whenever a bus is in operation.
- Tires and Wheels. Tires shall be properly inflated in accordance with manufacturer's recommendations.
    i. No bus shall be operated with a tread groove pattern depth:
        1. Less than 4/32 (1/8) of an inch, measured at any point on a major tread groove for tires on the steering axle of all buses. The measurements shall not be made where tie bars, humps, or fillets are located.

2. Less than 2/32 (1/16) of an inch, measured at any point on a major tread groove for all other tires of all buses. The measurements shall not be made where tie bars, humps, or fillets are located.

ii. No bus shall be operated with recapped, re-grooved, or retreaded tires on the steering axle.

iii. Wheels shall be visibly free from cracks and distortions and shall not have missing, cracked, or broken mounting lugs.

- Suspension. The suspension system of all buses, including springs, air bags, and all other suspension parts, shall be free from cracks, leaks, or any other defect which may cause its impairment or failure to function properly.
- Steering and Front Axle. The steering system of all buses shall have no indication of leaks which would or may cause its impairment to function properly, and shall be free from cracks and excessive wear of components that may cause excessive free play or loose motion in the steering system or above normal effort in steering control.
- Seat Belts. Every bus shall be equipped with an adjustable driver's restraining belt in compliance with the requirements of FMVSS 209, "Seat Belt Assemblies" 49 C.F.R. 571.209-October 1, 2008, and FMVSS 210, "Seat Belt Assembly Anchorages" 49 C. F. R. 571.210 October 1,2008, hereby incorporated by reference.
- Safety Equipment. Every bus shall be equipped with one fully charged dry chemical or carbon dioxide fire extinguisher, having at least a 1A:BC rating and bearing the label of Underwriter's Laboratory, Inc. The fire extinguishers shall be maintained as follows:
  i. Each fire extinguisher shall be securely mounted on the bus in a conspicuous place or a clearly marked compartment and be readily accessible.
  ii. Each fire extinguisher shall be maintained in efficient operating condition and equipped with some means of determining if it is fully charged.
  iii. Every Type I bus shall be equipped with portable red reflector warning devices in compliance with Section 316.300, Florida Statutes.
- Persons with Disabilities. Buses used for the purpose of transporting individuals with disabilities shall meet the requirements set forth in 49 C.F.R. Part 38, October 1, 2008, hereby incorporated by reference, as well as the following:
  i. Installation of a wheelchair lift or ramp shall not cause the manufacturer's GVWR, gross axle weight rating, or tire rating to be exceeded.
  ii. Except in locations within 3 1/2 inches of the bus floor, all readily accessible exposed edges or other hazardous protrusions of parts of wheelchair lift assemblies or ramps that are located in the passenger compartment shall be padded with energy absorbing material to mitigate injury in normal use and in case of a collision. This requirement shall also apply to parts of the bus associated with the operation of the lift or ramp.
  iii. The controls for operating the lift shall be at a location where the bus driver or lift attendant has a full view, unobstructed by passengers, of the lift platform, its entrance and exit, and the wheelchair passenger, either directly or with partial assistance of mirrors. Lifts located entirely to the rear of the driver's seat shall not be operable from the driver's seat, but shall have an override control at the driver's position that can be activated to prevent the lift from being operated by the other controls (except for emergency manual operation upon power failure).
  iv. The installation of the wheelchair lift or ramp and its controls and the method of attachment in the bus body or chassis shall not diminish the structural integrity of the

bus nor cause a hazardous imbalance of the bus. No part of the assembly, when installed and stowed, shall extend laterally beyond the normal side contour of the bus or vertically beyond the lowest part of the rim of the wheel closest to the lift.

v. Each wheelchair lift or ramp assembly shall be legibly and permanently marked by the manufacturer or installer with the following information:
   1. The manufacturer's name and address.
   2. The month and year of manufacture.
   3. A certificate that the wheelchair lift or ramp securement devices, and their installation, conform to State of Florida requirements applicable to accessible buses.

- Wheelchairs. Wheelchair lifts, ramps, securement devices, and restraints shall be inspected and maintained as required by this rule chapter. Instructions for normal and emergency operation of the lift or ramp shall be carried or displayed in every bus.

Any additional text for Chapter 16.0 must be inserted above this point for formatting/page numbering purposes.

18.0 Bus Safety Inspections and Safety/Security Inspections and Reviews

LAMTD is responsible for the annual inspection of vehicles in accordance with Section 14.90.009. Inspections are completed by maintenance personnel or an ASE Master Certified Mechanic who is knowledgeable of and has mastered the methods, procedures, tools, and equipment used when performing an inspection. In addition, the inspectors used by subcontractors have had a least one year of training and/or experience as a mechanic or inspector in a vehicle maintenance program. Each year, LAMTD conducts their annual review to ensure complete inspections and properly documenting and maintain vehicle inspection reports.

LAMTD maintains records of these inspections, including reports and any corresponding corrective actions assigned to their contractors.

Lakeland Area Mass Transit District. will work closely with regulatory agencies (FDOT, FTA, etc.) when external audit notifications are received and allocate resources, as necessary, to facilitate the audits.

Appendices

- Appendix A: Substance Abuse Policy
- Appendix B: Maintenance Plan and Safety Manual
- Appendix C: System Security plan- To be viewed on Property to necessary viewers

Appendix A

Substance Abuse Policy

Appendix B
Maintenance Plan

Appendix C

System Security Plan

Furnished on request to necessary viewers

Appendix D

System Security Plan

Furnished on request to necessary viewers