



# **Pinellas Suncoast Transit Authority Community Bus Plan**

**FINAL REPORT**

JANUARY 2014

Prepared by:



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# EXECUTIVE SUMMARY

## OVERVIEW

In August 2012, PSTA commissioned the *Community Bus Plan (Bus Plan)* to identify the public transportation needs of Pinellas County (County). The *Bus Plan* included the following objectives:

- Evaluate PSTA's current bus transit system;
- Complete a detailed market, ridership, and operational review;
- Solicit feedback from elected officials, community stakeholders, the general public, PSTA bus riders, and PSTA Board and staff;
- Supplement work completed on the bus network created as part of the *Pinellas Alternatives Analysis*;
- Develop a scalable plan that can be implemented based on available resources in a financially sustainable manner; and
- Provide the basis for the bus element of the *Greenlight Pinellas Plan*.

The *Community Bus Plan* team engaged the PSTA board as well as a wide variety of stakeholders to develop three goals for PSTA:

- **Build Transit Constituency** – Broaden PSTA's market penetration to attract more choice riders, increase the use of transit for more trip purposes, and support overall community mobility.
- **Improve Transit Competitiveness** – Create a transit network that is competitive with personal vehicle travel for the trip purpose needs of Pinellas County residents and visitors.
- **Build Financial Sustainability** – Use resources effectively and increase ridership by building efficiency into an integrated transit network, focusing resources where transit is most competitive and can create the greatest return, and maintaining performance and productivity standards.

As a result, the *Community Bus Plan* was developed to be dynamic and scalable with three primary scenarios:

- **Optimal** – A network designed to provide highly-performing and cost-effective transit service in an unconstrained financial scenario.
- **New Revenue** – A network designed to carry forward the design and service levels of the Optimal Scenario within the financial constraints of a potential countywide one-percent sales tax as the local funding source for transit.
- **No New Revenue** – A pair of network design alternatives that explore how to best create a streamlined transit system with the stricter financial constraints of PSTA's existing property tax-based local revenue stream.
  - *Core Preservation Alternative* – A network featuring reduced coverage with stronger investment in a core network of PSTA's highest-performing routes serving the greatest number of passengers.

- *Coverage Preservation Alternative* – A network that distributes service investment more evenly across the service area with reduced focus on the core network.

This summary describes the planning process for the *Community Bus Plan* and its results in two primary sections:

- **Existing Conditions** – This section addresses the market analysis and service analysis findings in the context of the County’s population demographics and travel patterns today, and how the population and travel patterns are expected to change in the future. The service analysis presents how the system is currently used by riders, the performance of the individual routes, provides additional context by evaluating the performance of each route in the PSTA system as well as the network as a whole.
- **Community Bus Plan** – This section describes the goals set for the development of the plan, how those goals were informed by the findings of the market and service analyses, and the future of public transit in Pinellas County under three different financial scenarios.

## PROJECT BACKGROUND AND PROCESS

The Pinellas *Community Bus Plan* was initiated to better shape Pinellas County’s bus service to its communities, linking together the County’s residents, businesses, education and social institutions, as well as shopping, entertainment, and tourist destinations. This has been a collaborative effort, engaging elected officials, community stakeholders, and the general public in addition to PSTA bus riders, staff, and Board to identify the best bus network for Pinellas County. The result is a thorough, phased plan that can be scaled to suit a variety of funding scenarios.

The *Community Bus Plan* comes at a time of unprecedented growth in PSTA ridership. PSTA has experienced a 20 percent increase in ridership between 2007 and 2012 despite \$40 million in budget cuts due to the recession and decreased property values that led to increased fares and reductions in service. PSTA lacks the necessary financial resources to meaningfully increase service to relieve the overcrowding experienced on heavily traveled routes and to provide the service the public is demanding, including greater frequency and more evening, weekend, and regional service. In response to these challenges, the *Community Bus Plan* seeks to find the most optimal distribution of resources to not only meet the needs of Pinellas County today, but to help develop and grow County bus service into the future.

In 2012, a collaborative working group of partner agencies including the Florida Department of Transportation (FDOT), the Pinellas County Metropolitan Planning Organization (MPO), PSTA, and the Tampa Bay Area Regional Transportation Authority (TBARTA) completed the *Pinellas Alternatives Analysis (AA)*. The *Pinellas AA* examined the viability of a major capital investment in transit for Pinellas County, adding detail to the work previously completed in the *TBARTA Master Plan* adopted in May of 2009 and the *2035 MPO Long Range Transportation Plan* adopted in December 2009. The AA determined that the link connecting the major activity centers of downtown St. Petersburg, Greater Gateway, and downtown Clearwater with a future connection to Hillsborough County via the Howard Frankland Bridge is critical to the region’s success and should be served by local passenger rail. To fund transit expansion for the benefit of Pinellas County residents, including both the *Bus Plan* recommendations contained here and the future rail line, PSTA has recommended a change in the local funding source for transit and has requested that the County schedule a referendum for November 2014. With the passage of the referendum, PSTA would eliminate the property tax it currently levies in favor of a one-percent Charter County and Regional Transportation System Surtax.

## EXISTING CONDITIONS

The *Community Bus Plan* recommendations are based on a comprehensive transit market assessment and consumer research, in addition to a detailed analysis of ridership and service and operating performance. The results of these efforts comprise the Existing Conditions findings.

## MARKET CHARACTERISTICS

Pinellas County is the most densely populated County in the State of Florida, with St. Petersburg and Clearwater forming two of the three major cities of the Tampa Bay region. Both cities have downtowns that are centers of jobs and commerce for the region. The Greater Gateway area located at the western base of the Howard Frankland Bridge is the largest employment center in the County and also has the largest potential for future job growth. The Greater Gateway area combined with the Westshore Business District on the east side of the Howard Frankland Bridge form the largest employment center south of Atlanta, GA. Pinellas County also features other areas of dense development and activity centers of various sizes within its 24 cities and the unincorporated areas.

**Residential Development** – The residential population of the County is generally dispersed, with higher concentrations in South St. Petersburg and Clearwater. In particular, the Central Avenue and 4<sup>th</sup> Street corridors in St. Petersburg and the Seminole Boulevard/Missouri Avenue corridor through Seminole, Largo, and Clearwater feature some of the County's most uniformly dense residential areas. Not surprisingly, the transit lines serving these corridors exhibit some of the highest ridership in the PSTA system. Demographically, the densest residential areas of the County are also the areas where lower-income households and zero-vehicle households are most prevalent, making transit a critical public service for those areas.

**Employment** – Employment is dense in a number of areas. Downtown St. Petersburg, downtown Clearwater, and the Greater Gateway area house the greatest concentrations of employment. Corridors with significant employment include Ulmerton Road, US 19, E Bay Drive, and Gulf-to-Bay Boulevard. Routes serving the primary employment centers and corridors are also very high-performing relative to the PSTA system as a whole; with the exception of certain areas within the Greater Gateway that currently have a less transit oriented style of development.

**Future Growth** – The densest areas of the County are expected to grow denser, while the remainder of the County is expected to see little, if any changes in density. Major existing commercial centers in the County such as downtown St. Petersburg, downtown Clearwater, Greater Gateway, Pinellas Park, Largo, and Oldsmar are expected to see gains in employment density. Smaller areas along major mixed-use corridors are also expected to see additional employment densification. While residential intensification is anticipated, it is expected to occur primarily in transit oriented development locations at future passenger rail station areas and along rapid bus corridors.

**Passenger Demographics** – PSTA's current customers are a diverse group, with many being reliant upon transit for their transportation needs. According to the on-board passenger survey (October 2012), 50 percent of passengers earn less than \$15,000 per year, 33 percent of passengers have access to a private vehicle, and 70 percent ride transit at least five days per week. Sixty-eight percent of passengers are currently employed, and 21 percent of passengers are students. Without transit, 28 percent of passengers would not make their trip at all. In contrast, trolley service appealed strongly to a broader tourist demographic, with 50 percent of trolley passengers residing in Pinellas County less than one month per year (to the systemwide four percent) and 47 percent earning more than \$50,000 per year.

Density and a mix of land uses are strong factors toward determining the success of transit. Prioritizing investment in corridors exhibiting these factors is the most reliable way to ensure long-term growth and success in public transit mobility, including broadening the market segments using transit on a regular basis.

### SERVICE PERFORMANCE

Within its current financial constraints, PSTA operates an effective and efficient bus network, as evidenced by its steadily growing ridership figures. However, the analysis summarized below demonstrates how the network can take advantage of its strengths today as well as better serve Pinellas County with quality service in the future.

**Transit Network Overview** – PSTA directly operates 37 fixed routes across its service area. Of these routes, 33 are local services, two are commuter express routes to Tampa, and two are specially-branded trolley routes that serve Gulf Boulevard and St. Petersburg's Central Avenue corridor. PSTA also provides funding toward more recreationally-focused trolley services in downtown St. Petersburg, Clearwater Beach, and coastal communities in northern Pinellas County in partnership with local communities. Frequencies are generally modest, with the majority of routes operating on half-hourly or hourly headways and a select number of higher-ridership routes operating with 15 to 20 minute headways during peak periods.

**Ridership Evaluation** – Routes 19, 18, 52, 4, and 59 are PSTA's strongest routes, together comprising nearly half of total system ridership. These routes serve corridors with higher densities and a good distribution of residential and employment centers.

As the two most densely populated areas of the County, the volume of boarding activity is greatest in downtown St. Petersburg and downtown Clearwater, as well as Pinellas County's major shopping centers, many of which serve PSTA as transfer centers. Boarding activity on the weekend follows similar patterns, but with fewer overall boardings; however, the beach trolley route along Gulf Boulevard features boarding activity on weekends matching that of weekdays. Midday ridership makes up a significant portion of total system weekday boardings, nearly matching the combined ridership of both peak periods, suggesting an opportunity for productive higher all-day service levels.

**Service Performance & Productivity** – Service productivity varies substantially among individual routes because of variable density and market types across the County and the long distances operated by many routes, such as Route 19. Routes operating along denser mixed-use corridors with more historically transit-friendly demographic factors produce PSTA's strongest route segments, namely St. Petersburg's Central Avenue and 4th Street as well as the east-west routes serving downtown Clearwater. Route segments serving less densely populated, more strongly auto-oriented areas do not perform as well.

**Service Quality & Customer Experience** – PSTA's current transit service allocation priority favors service coverage over service attractiveness, maximizing the geographic area its route network serves around Pinellas County with mostly low-frequency routes. Since the two most important factors in generating additional transit ridership are reducing the passenger wait time (higher service frequency) and reducing travel delay on the bus, the service coverage priority combined with a limited budget restrict PSTA's ability to attract more discretionary market segments. At present, PSTA has seven routes that operate with frequencies of 20 minutes or better during weekday peak periods, decreasing to two routes off-peak. The system average weekday operating speed of 17 mph, when accounting for dwell time, is high by national standards. Even with the higher speeds, given the relatively long average trip length of over five miles for weekday local service, developing more frequent transit options with reduced delay would improve system attractiveness.

## COMMUNITY BUS PLAN

### BUS PLAN GOALS

The *Community Bus Plan* team engaged the PSTA Board as well as external stakeholders to develop goals for PSTA and public mobility in Pinellas County and a framework to convert those goals into reality through the Bus Plan. This collaboration produced the following set of goals: build a strong transit constituency in Pinellas County, increase the competitiveness of transit as a transportation mode within the County, and build ongoing financial sustainability for PSTA.

#### BUILD TRANSIT CONSTITUENCY

- **Broaden Market Penetration** – PSTA should deliver a bus system that will prove successful in attracting “choice riders” as well as increasing the use of transit beyond the commuting period into other kinds of trips. Furthermore, residents and visitors alike should feel comfortable with and compelled to consider Pinellas County’s transit system for their travel needs.
- **Support Community Mobility** – The PSTA bus network should strive to meet as many community travel and mobility needs as possible, and should represent a critical component of the County’s sustainability initiatives. The network should integrate with community bicycle and pedestrian plans to provide Pinellas County with a complete set of multimodal transportation options and greater connectivity between modes.
- **Match Services to Markets** – Enhanced service along key corridors, the development and maintenance of a transit network that can be competitive with other travel modes, and recognition of the importance of the passenger experience are all crucial to long-term transit success in the County.

#### IMPROVE TRANSIT COMPETITIVENESS

- **Create Spontaneous Use** – Create a frequent all-week network of high-performing routes to anchor the PSTA system, offer spontaneous-use service to as many riders as possible, and promote transit as a viable component of the County’s infrastructure.
- **Faster Travel Times** – Streamline routes by reducing unproductive deviations and delay while implementing speed improvement technologies and strategies to key routes.
- **Focus Service Investment** – Invest in key corridors, focus service on major activity centers, and leverage capital investments to improve the customer experience.

#### BUILD FINANCIAL SUSTAINABILITY

- **Use Resources Effectively** – Establish performance and productivity standards and design efficiency into the route network to ensure the continued performance and fiscal sustainability of the PSTA system.
- **Grow Ridership** – Focus resources where transit is most competitive to deliver improved service on the system’s highest ridership routes, while simultaneously increasing the return on investment through farebox recovery.
- **Strengthen Transit Constituency** – Build a strong transit constituency within Pinellas County and the greater Tampa Bay area to increase support for further investment in transit mobility and the development of sustainable transit communities.

## GUIDING PRINCIPLES

Based on the goals established for the *Bus Plan*, the following are the guiding principles that support the plan's development:

- **Create a Strong Frequent Network** – 15 minute or better service on the system's highest performing, highest ridership routes maximize mobility and allows for connections to other routes without the need for timed transfers.
- **Create Efficient Grid Network** – Minimizes the need for resources to be tied up in serving hubs away from the main corridor, instead allowing for easy connections to frequent services and allowing additional resources to be reinvested in frequency and service elsewhere in the system.
- **Improve Overall Span of Service on Evenings and Weekends** – Additional evening and weekend service allows for transit to be a more compelling option for those employed outside of traditional working hours as well as for non-work travel.

Using these goals and guiding principles, as well as feedback from community stakeholders across the County, a framework was established to guide the *Community Bus Plan* development. This framework includes a number of bus network concepts that translate the community ideals into a cost-effective transit system under various funding scenarios.

## SCENARIOS

The *Community Bus Plan* was developed to be dynamic and applicable over a range of financial situations. Three scenarios were developed:

- **Optimal** – A network designed to provide highly-performing and cost-effective transit service in an unconstrained financial scenario.
- **New Revenue** – A network designed to carry forward the design and service levels of the Optimal Scenario within the financial constraints of a potential countywide one-percent sales tax as the local funding source for transit.
- **No New Revenue** – A pair of network design alternatives that explore how to best create a streamlined transit system with the stricter financial constraints of PSTA's existing property tax-based local revenue stream.
  - *Core Preservation Alternative* – A network featuring reduced coverage with stronger investment in a core network of PSTA's highest-performing routes serving the greatest number of passengers.
  - *Coverage Preservation Alternative* – A network that distributes service investment more evenly across the service area with reduced focus on the core network.

### OPTIMAL SCENARIO

The Optimal Scenario is how the transit system for Pinellas County would be designed to meet current and future mobility needs based on the market assessment, consumer research, and transit service analysis together with extensive stakeholder and community outreach. The Optimal Scenario does not have specific financial constraints. However, it was designed to be grounded in reality rather than in a 'blue sky' approach. Additionally, it would be

## PSTA COMMUNITY BUS PLAN – FINAL REPORT EXECUTIVE SUMMARY

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expected to achieve financial performance levels meeting or exceeding today's levels. The Optimal Scenario represents the ultimate goal for PSTA transit service to meet Pinellas County's current and future needs (see Map 1).

This scenario was a combination of top-down and bottom-up planning following transit industry planning and service design best practices. With over half of today's jobs and residents within a quick walk of a "spontaneous use," this scenario provides levels of service and regional route coverage that would allow an overwhelming majority of the County to have access to fast and reliable transit via a high-frequency transit line. The Optimal Scenario network is developed around a hierarchy of bus service tiers:

- The **Core** tier is composed of PSTA's highest performing and highest ridership routes operating along dense mixed-use corridors serving major regional and community travel markets. This tier receives the highest levels of service in the system, including Rapid Bus upgrades to decrease travel time and increase passenger convenience and service reliability.
- The **Frequent Local** tier includes higher-performing routes in areas of the County well suited for transit that have exhibited more locally-focused travel. This tier has the highest frequency of any of the local tiers.
- The **Supporting Local** tier includes local routes designed to provide access to communities further removed from the frequent network and to extend the reach of the core network into more residential areas of the County.
- The **Trolley** network focuses on serving major tourist and entertainment destinations around the County, but also acts to further extend the everyday reach of the network for area residents and employees.
- The **Connector** tier carries forward the success of PSTA's North County Connector service with "flex route" service in less dense areas that are more challenging to serve with fixed route bus services.
- The **Community Circulator** network provides service tailored to fit the mobility needs of specific communities and neighborhoods of the County while offering connectivity to the broader PSTA network.
- The **Regional Express** tier directly links Pinellas County with Tampa's downtown and Westshore Area while also making connections to Tampa International Airport.

Instead of designing every route to tie into a major downtown or hub destination, the Optimal Scenario emphasizes the speed and efficiency offered by an urban-style grid network. By allocating resources to more locally-focused routes that intersect and providing convenient connections, the optimal network decreases travel time from Point A to Point B. It also reallocates the resources saved toward increased frequencies on most routes. This reduces the time spent waiting for a bus and the time spent riding the bus, and turns the bus network into a series of complementary connections similar to the roadway network of neighborhood, collector and arterial streets.

Table 1 below illustrates the difference in service levels between the baseline PSTA network and the Optimal Scenario network.

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**Table 1: Service Comparison between PSTA Baseline and the Community Bus Plan's Optimal Scenario**

Tier	Core Network			Frequent Local			Supporting Local			Trolleys		
Corridors/Areas Served	Central Ave., 4th St., Gulf to Bay Blvd., Seminole Blvd., 49th St., US 19			Park Blvd., Betty Ln./Main St. Dunedin, 66th St., 7th Ave. S, 9th Ave. S, 15th Ave. S			Other inland - 5th Ave. N, 22nd Ave. N, 30th Ave. N, etc.			Gulf Blvd., Central Ave., Clearwater Beach, coastal Tarpon Springs/Palm Harbor/Dunedin, Safety Harbor		
	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service
Baseline	7	15 to 30 min, 5:30 am to 12 am	30 to 60 min, 5:30 am to 11:30 pm Sat / 7 am - 7 pm Sun	5	30 min, 5:30 am to 12 am	60 min, 5:30 am to 11:30 pm Sat / 7 am - 7 pm Sun	19	30 to 60 min, 5:30 am to 9 pm	60 min, 5:30 am to 11:30 pm Sat / 7 am - 7 pm Sun	4	15 to 30 min all day, 5 am - 11 pm	30 to 60 min, 7 am - 10 pm Sat / 8 am - 7 pm Sun
Optimal	7	10 min all day, 5 am - mid	15 min, 6 am - mid Sat / 7 am - 10 pm Sun	5	15 min all day, 5 am - mid	15 min, 6 am - mid Sat / 7 am - 10 pm Sun	17	30 min all day, 5 am - 11 pm	30 min, 6 am - 11 pm Sat / 7 am - 9 pm Sun	5	10 to 30 min all day, 5 am - mid	10 to 30 min, 6 am - mid Sat / 7 am - 10 pm Sun

Tier	Community Circulators			Connector Routes			Express Routes			Total Routes	Annual Revenue Hours	Annual Revenue Miles
Corridors/Areas Served	Downtown St. Petersburg, Pinellas Park, Seminole, Gateway/Carillon			Oldsmar-Tampa, Dunedin-Palm Harbor, East Lake			Westshore/Downtown Tampa					
	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service			
Baseline	(no distinct tier)			3	60 min all day, 6 am - 6 pm	-	2	30 min peak/120 off-peak, 5:30 am - 8 pm	-	40	635,020	9,070,541
Optimal	5	15 to 30 min all day, 6 am - 10 pm	15 to 30 min, 6 am - 10 pm Sat & Sun	3	30 min peak/60 off-peak, 5 am - 11 pm	60 min, 6 am - 11 pm Sat / 7 am - 7 pm Sun	5	15 min peak/30 off-peak (NCX/MBX 30 min peak only), 5 am - mid	30 min (NCX/MBX no service), 6 am - 10 pm Sat / 7 am - 8 pm Sun	47	1,491,200	21,118,200

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Map 1: Optimal scenario fixed-route network, December 2013 proposal



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### NEW REVENUE SCENARIO

The challenge posed for the New Revenue Scenario was to develop a system that would offer the benefits of the Optimal Network while fitting within the budget set by the proposed sales tax-based local revenue stream. The New Revenue network includes the same proposed fixed-route bus lines and similar levels of service as the Optimal Scenario. To address the revenue constraints, the differences between the Optimal Scenario network and the New Revenue Scenario network are limited to the following service adjustments:

- Service spans on non-Core routes are reduced.
- Core frequencies are increased to 15 minutes from 10 minutes.
- Many Supporting Local route frequencies are increased to 60 minutes from 30 minutes.
- Some Supporting Local and Community routes no longer offer weekend service.
- The Shore Acres/Snell Isle Circulator is no longer funded.

Ultimately, the New Revenue Scenario afforded by the proposed sales tax-based local revenue stream allows PSTA to offer a level of service that closely matches that envisioned in the Optimal Scenario.

Table 2 below illustrates the difference in service levels between the baseline PSTA network and the New Revenue Scenario network.

**Table 2: Service comparison between Baseline PSTA service and the Community Bus Plan's New Revenue Scenario**

Tier	Core Network			Frequent Local			Supporting Local			Trolleys		
Corridors/Areas Served	Central Ave., 4th St., Gulf to Bay Blvd., Seminole Blvd., 49th St., US 19			Park Blvd., Betty Ln./Main St. Dunedin, 66th St., 7th Ave. S, 9th Ave. S, 15th Ave. S			Other inland - 5th Ave. N, 22nd Ave. N, 30th Ave. N, etc.			Gulf Blvd., Central Ave., Clearwater Beach, coastal Tarpon Springs/Palm Harbor/Dunedin, Safety Harbor		
	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service
Baseline	7	15 to 30 min, 5:30 am to 12 am	30 to 60 min, 5:30 am to 11:30 pm Sat / 7 am - 7 pm Sun	5	30 min, 5:30 am to 12 am	60 min, 5:30 am to 11:30 pm Sat / 7 am - 7 pm Sun	19	30 to 60 min, 5:30 am to 9 pm	60 min, 5:30 am to 11:30 pm Sat / 7 am - 7 pm Sun	4	15 to 30 min all day, 5 am - 11 pm	30 to 60 min, 7 am - 10 pm Sat / 8 am - 7 pm Sun
New Revenue	7	15 min all day, 5 am - mid	15 min, 6 am - mid Sat / 7 am - 9 pm Sun	5	15 min all day, 5 am - mid	30 min, 6 am - mid Sat / 7 am - 10 pm Sun	17	30 min all day, 5 am - 11 pm	60 min, 6 am - 11 pm Sat / 7 am - 9 pm Sun	5	15 to 30 min all day, 5 am - mid	15 to 30 min, 6 am - mid Sat / 7 am - 9 pm Sun

Tier	Community Circulators			Connector Routes			Express Routes			Total Routes	Annual Revenue Hours	Annual Revenue Miles
Corridors/Areas Served	Downtown St. Petersburg, Pinellas Park, Seminole, Gateway/Carillon			Oldsmar-Tampa, Dunedin-Palm Harbor, East Lake			Westshore/Downtown Tampa					
	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service			
Baseline	(no distinct tier)			3	60 min all day, 6 am - 6 pm	-	2	30 min peak/120 off peak, 5:30 am - 8 pm	-	40	635,020	9,070,541
New Revenue	4	15 to 30 min all day, 6 am - 10 pm	-	3	30 min peak/60 off-peak, 5 am - 11 pm	60 min, 6 am - 11 pm Sat / 7 am - 7 pm Sun	5	30 min peak/60 off-peak (300X/NCX/MBX 60 min peak only), 5 am - 11 pm	60 min (300X/NCX/MBX no service), 6 am - 11 pm Sat / 7 am - 9 pm Sun	46	1,067,000	14,813,000

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Map 2: New Revenue scenario fixed-route network, December 2013 proposal



### **NO NEW REVENUE SCENARIO**

To address the possibility of an unsuccessful transit funding referendum, the principles behind the Optimal Scenario network were applied with the stricter financial constraints of the existing ad valorem tax currently being levied by PSTA. Because of the limited available funding in this scenario, significant tradeoffs had to be considered, the most prominent of which were whether a strong and frequent core or broad regional coverage would take precedence. The “Core Preservation” and “Coverage Preservation” alternatives were created to illustrate the most diverse options among a wide spectrum of possible solutions between these two “bookends.” (see Map 2).

### **CORE PRESERVATION ALTERNATIVE**

The Core Preservation alternative maintains the core and frequent local network of the New Revenue Scenario, allowing the highest-performing transit corridors in the County to receive the levels of service necessary to function to their fullest potential. While this strategy strengthens the transit backbone of the system and improves services for the majority of PSTA’s existing transit passengers, it comes at the cost of geographic coverage of connecting local services. Frequencies on connecting routes would be reduced and the lowest-performing routes discontinued.

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Map 3: No New Revenue Core Preservation scenario fixed-route network, December 2013 proposal



**COVERAGE PRESERVATION ALTERNATIVE**

In the Coverage Preservation alternative, service along the identified frequent network is reduced to 30 minute levels to permit continued coverage across as much of the County's land area as possible. This would prevent people within the existing PSTA service area from losing routes close to their homes and places of employment, but would come at the cost of the quality of service provided to the County, with the County's highest-performing routes receiving substantial reductions in service that could likely result in significant overcrowding in the coming years.

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Map 4: No New Revenue Coverage Preservation scenario fixed-route network, December 2013 proposal



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Table 3 below illustrates the difference in service levels between the baseline PSTA network and the No New Revenue scenario network proposals.

**Table 3: Service comparison between PSTA Baseline service and the Community Bus Plan's No New Revenue scenarios**

Tier		Core Network			Frequent Local			Supporting Local			Trolleys		
Corridors/Areas Served		Central Ave., 4th St, Gulf to Bay Blvd., Seminole Blvd., 49th St., US 19			Park Blvd., Betty Ln./Main St. Dunedin, 66th St., 7th Ave. S, 9th Ave. S, 15th Ave. S			Other Inland - 5th Ave. N, 22nd Ave. N, 30th Ave. N, etc.			Gulf Blvd., Central Ave., Clearwater Beach, coastal Tarpon Springs/Palm Harbor/Dunedin, Safety Harbor		
		Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service
Baseline		7	15 to 30 min, 5:30 am to 12 am	30 to 60 min, 5:30 am to 11:30 pm Sat / 7 am - 7 pm Sun	5	30 min, 5:30 am to 12 am	60 min, 5:30 am to 11:30 pm Sat / 7 am 7 pm Sun	19	30 to 60 min, 5:30 am to 9 pm	60 min, 5:30 am to 11:30 pm Sat / 7 am 7 pm Sun	4	15 to 30 min all day, 5 am - 11 pm	30 to 60 min, 7 am - 10 pm Sat / 8 am - 7 pm Sun
No New Revenue	Core	6	15 min all day, 5 am - 10 pm	60 min, 7 am - 9 pm Sat / 8 am - 7 pm Sun	5	30 min all day, 6 am - 9 pm	60 min, 7 am - 9 pm Sat only	7	60 min all day, 6 am - 9 pm	60 min, 7 am - 9 pm Sat only	4	15 to 30 min all day, 5 am - 11 pm	30 to 60 min, 7 am - 10 pm Sat / 8 am - 7 pm Sun
	Coverage	6	30 min all day, 5 am - 10 pm	60 min, 7 am - 9 pm Sat / 8 am - 7 pm Sun	5	30 min all day, 6 am - 9 pm	60 min, 7 am - 9 pm Sat only	17	60 min all day, 6 am - 9 pm	60 min, 7 am - 9 pm Sat only	4	30 min all day, 5 am - 11 pm	30 to 60 min, 7 am - 10 pm Sat / 8 am - 7 pm Sun

Tier		Community Circulators			Connector Routes			Express Routes			Total Routes	Annual Revenue Hours	Annual Revenue Miles
Corridors/Areas Served		Downtown St. Petersburg, Pinellas Park, Seminole, Gateway/Carillon			Oldsmar-Tampa, Dunedin-Palm Harbor, East Lake			Westshore/Downtown Tampa					
		Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service	Number of routes	Weekday Service	Weekend Service			
Baseline		(no distinct tier)			3	60 min all day, 6 am - 6 pm	-	2	30 min peak/120 off peak, 5:30 am - 8 pm	-	40	635,020	9,070,541
No New Revenue	Core	1	60 min all day, 6 am - 10 pm	-	3	60 min all day, 6 am - 6 pm	-	2	60 min all day (300X 60 min peak only), 6 am - 9 pm	-	28	513,800	6,423,100
	Coverage	3	60 min all day, 6 am - 10 pm	-	3	60 min all day, 6 am - 6 pm	-	2	60 min all day (300X 60 min peak only), 6 am - 9 pm	-	40		

### IMPLEMENTATION

Each *Community Bus Plan* scenario was designed to minimize interruption to the current passenger experience during implementation. In particular, the New Revenue Scenario was carefully developed to ensure that the phased implementation would begin as soon as PSTA begins receiving the new proposed sales tax funding, following the successful passage of the referendum in 2014, to provide immediate benefits to passengers, while staying within the anticipated annual budget.

The *Community Bus Plan* is a central component of the *Greenlight Pinellas Plan*, offering both immediate and long-term benefits to mobility supplement to the development of light rail transit in Pinellas County which will provide a fast, frequent, and dependable countywide transit network, with potential for even stronger regional connections in the future.

Under the New Revenue scenario, improvements would be phased according to the following schedule:

- **Year 1**, following the receipt of new revenue:
  - Increase service span (hours of service) and weekend service across the system.
  - Commence environmental, design, and engineering studies for the first phase of Core Rapid Bus network expansion.
- **Year 2:**
  - Procure capital assets (vehicles, shelters, etc.) to support further system expansion.
  - Begin construction and vehicle procurement on first phase of Core Rapid Bus lines.
  - Begin environmental, design and engineering studies on the second phase Core Rapid bus corridors.
- **Year 3:**
  - Introduce service on first phase of Core Rapid routes serving Central Avenue, 49<sup>th</sup> Street/East Bay Drive, and Gulf-to-Bay Boulevard.
  - Expand Regional Express service including connections to Tampa from North County via Oldsmar and McMullen Booth Road, Clearwater via SR60, and downtown St. Petersburg.
  - Revise route alignments and add frequency on the Frequent Local routes and local trolleys.
  - Continue design and engineering studies and begin capital procurement and construction on the second phase Core Rapid bus corridors.
- **Years 4-6:**
  - Add frequency to the Supporting Local and Connector tiers with some revised alignments to better focus service on interoperability with the frequent network for overall system efficiency.
  - Continue design and engineering studies, capital procurement, and construction on the second phase Core Rapid bus corridors.
  - Implement Core Rapid Service on Phase 2 of Core Rapid Routes serving 4<sup>th</sup> Street N/Ulmerton Road, US 19, and Seminole Boulevard.

This phasing of the *Community Bus Plan* allows for some of the most desired bus benefits to be introduced as soon as is financially possible. A phasic approach also sets the stage for the rapid expansion of a robust fast and frequent bus network, in addition to seamlessly integrating the proposed passenger rail system.

## CONCLUSION

The *Community Bus Plan* thoroughly evaluated the needs of the County and the service it receives in order to fully understand how transit in Pinellas County can be as effective as possible for all of the County's residents. The *Bus Plan's* findings indicate that a strong core network that offers fast and frequent service to the County's best transit corridors, combined with a thorough local and community bus transit network as proposed within the New Revenue Scenario, would result in a substantially stronger system. In turn, the proposed system could offer existing passengers significantly improved service while providing an even more compelling alternative to private auto travel.

# COMMUNITY BUS PLAN INTRODUCTION

## OVERVIEW

In August 2012, PSTA commissioned the *Community Bus Plan* to identify the public transportation needs of Pinellas County. The Bus Plan included the following objectives:

- Evaluate PSTA's current bus transit system.
- Complete a detailed market, ridership, and operational review.
- Solicit feedback from elected officials, community stakeholders, the general public, PSTA bus riders, and PSTA Board and staff.
- Supplement work completed on the bus network created as part of the *Pinellas Alternatives Analysis*.
- Develop a scalable plan that can be implemented based on available resources in a financially sustainable manner.
- Provide the basis for the bus element of the *Greenlight Pinellas Plan*.

The *Community Bus Plan* team engaged the PSTA board as well as a wide variety of stakeholders to develop three goals for PSTA:

- **Build Transit Constituency** – Broaden PSTA's market penetration to attract more choice riders, increase the use of transit for more trip purposes, and support overall community mobility.
- **Improve Transit Competitiveness** – Create a transit network that is competitive with personal vehicle travel for the trip purpose needs of Pinellas County residents and visitors.
- **Build Financial Sustainability** – Use resources effectively and increase ridership by building efficiency into an integrated transit network, focusing resources where transit is most competitive and can create the greatest return, and maintaining performance and productivity standards.

As a result, the *Community Bus Plan* was developed to be dynamic and scalable with three primary scenarios:

- **Optimal** – A network designed to provide highly-performing and cost-effective transit service in an unconstrained financial scenario.
- **New Revenue** – A network designed to carry forward the design and service levels of the Optimal Scenario within the financial constraints of a potential countywide one-percent sales tax as the local funding source for transit.
- **No New Revenue** – A pair of network design alternatives that explore how to best create a streamlined transit system with the stricter financial constraints of PSTA's existing property tax-based local revenue stream.
  - *Core Preservation Alternative* – A network featuring reduced coverage with stronger investment in a core network of PSTA's highest-performing routes serving the greatest number of passengers.
  - *Coverage Preservation Alternative* – A network that distributes service investment more evenly across the service area with reduced focus on the core network.

The *Community Bus Plan* comes at a time of unprecedented growth in PSTA ridership – PSTA has experienced a 20 percent increase in ridership between 2007 and 2012 despite \$40 million in budget cuts due to the recession and

decreased property values that led to increased fares and reductions in service. PSTA lacks the necessary financial resources to meaningfully increase service to relieve the overcrowding experienced on heavily traveled routes and to provide the service the public is demanding, including greater frequency and more evening, weekend, and regional service. In response to these challenges, the *Community Bus Plan* seeks to find the most optimal distribution of resources to not only meet the needs of Pinellas County today, but to help develop and grow bus service into the future.

## STUDY APPROACH AND METHODOLOGY

The Bus Plan was scoped to undertake a series of tasks aimed at providing a comprehensive understanding of the existing PSTA transit system and the travel market it operates within, providing the basis for designing a new system plan.

The following elements informed the creation of goals and guiding principles for the planning and development of an enhanced, restructured PSTA system based on the productive use of resources.

1. **Previous Studies:** Reviewed previous and other current studies relevant to the PSTA transit system as part of the baseline information for the Bus Plan.
2. **Market Assessment:** Analyzed the PSTA service area characteristics including population, employment, land use, demographics, future development/redevelopment, travel patterns, and the profile of existing PSTA riders to determine where transit is most successful now (and needs to be enhanced) or has the potential to be successful.
3. **Service Evaluation:** Examined existing PSTA service performance in terms of ridership, productivity, efficiency, reliability, speed, and quality. Evaluating service performance allows for a financially-sustainable service planning process.
4. **PSTA Service Delivery Review:** Identified opportunities to improve the efficiency and effectiveness of the agency's transit service delivery.
5. **Outreach:** Engaged stakeholders and the community to share study findings and plans and solicit comments. Extensive stakeholder involvement ensures that PSTA builds public ownership in both the process and the recommendations of the Bus Plan. Key stakeholder groups include PSTA customers and advocacy groups, community groups, business groups, city and County officials and staff, as well as residents and visitors to Pinellas County.

## PSTA TODAY

The Pinellas Suncoast Transit Authority (PSTA) provides multi-faceted transportation service throughout Pinellas County as well as regional service to Tampa and Hillsborough County. As of October 2013, the PSTA system consists of the following transit services:

- 43 bus routes including 33 Local routes, 2 directly-operated Trolley routes, 3 contracted Trolley routes, 3 North County Connector routes, and 2 Regional Express routes serving approximately 5,100 stops across a 243 square mile service area.
- Contracted DART paratransit service.

## **PSTA COMMUNITY BUS PLAN – FINAL REPORT**

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According to 2012 NTD data, PSTA utilizes 205 fixed-route peak vehicles and operates about 620,760 annual revenue vehicle hours, supporting approximately 14.2 million annual passenger boardings. PSTA's FY 2013 counts show record annual ridership of 14.48 million passenger boardings.

## PREVIOUS STUDIES

Highlighted below are some of the most prominent previous studies that contributed to the visioning process for the *Community Bus Plan*. A full summary of relevant planning studies can be found in the Appendix.

### PINELLAS ALTERNATIVES ANALYSIS

The *Pinellas Alternatives Analysis* was funded and managed through a collaborative working group of partner agencies including the Florida Department of Transportation (FDOT), the Pinellas County Metropolitan Planning Organization (MPO), PSTA, and the Tampa Bay Area Regional Transportation Authority (TBARTA). The study sought to determine what type of premium transit investment would be most beneficial for the future needs of Pinellas County. High-frequency fixed guideway transit was deemed necessary for the needs of the County, with light rail being the preferred alternative. The preferred alignment connects downtown St. Petersburg, Pinellas Park, the Greater Gateway area, Largo and downtown Clearwater, with a future connection to the Westshore Business District and Downtown Tampa via the Howard Frankland Bridge. This alignment was selected because it serves the County's three largest employment areas and other existing or planned transit supportive communities. As a result, it has the potential to attract new development opportunities, stimulate a stronger economy, promote and protect communities and the environment, and serve a higher number of transit riders.

### PINELLAS COUNTY BUS RAPID TRANSIT CONCEPT PLAN

The Pinellas County MPO, in partnership with PSTA, developed a conceptual enhanced bus network for Pinellas County in 2009. Using data from PSTA's *2008 Transit Development Plan* (TDP), enhanced bus service was proposed for the ten most highly-performing routes. Depending on the market, enhanced bus service included premium mixed-traffic/exclusive lanes, regional connectors, premium trolley services, limited stop connectors, or commuter express routes. Specifications for enhanced bus service frequencies were established and a variety of infrastructure upgrades were suggested.

### CLEARWATER BEACH TO DOWNTOWN CLEARWATER EVALUATION OF TRANSIT ALTERNATIVES

The Clearwater Beach to Downtown Clearwater Evaluation of Transit Alternatives study determined that a daily market for travel across the causeway exists and identified a preferred alternative for making that connection and for downtown circulation. The preferred alternative included a bus only lane in the median on the Memorial Bridge and on the south side of the existing traffic lanes on the causeway to Clearwater Beach.

### HOWARD FRANKLAND BRIDGE STUDY

As a parallel effort to the *Project Development and Environment* (PD&E) study evaluating replacement options for the northbound span of the Howard Frankland Bridge connecting Pinellas County with Hillsborough County, FDOT is conducting a transit service evaluation. Improved transit connectivity across this heavily traveled regional transportation corridor is considered vital to serve current and future travel demand and connect two of the largest employment centers on either side of Tampa Bay. In October 2013, FDOT confirmed plans to include a substructure enhancement to the bridge replacement that would be able to support transit up to and including

light rail. Transit enhancements are not yet funded in the work program and would require additional evaluation and coordination with FDOT and Hillsborough County.

# MARKET ASSESSMENT

## OVERVIEW

The market assessment of PSTA's service area is a key component of the *Pinellas Community Bus Plan* and delivers a full, detailed overview of current and future population characteristics, land use, and trip generators. This data provides the foundation of how to best tailor service to the needs of Pinellas County and ensures that PSTA will not only be prepared to actively respond to the County's changing needs, but will be a reliable partner in the growth and economic vitality of Pinellas County and the region.

More specifically, this assessment addresses:

- **Community Profile:** What are the overall market characteristics of Pinellas County? Where is growth forecasted for Pinellas County?
- **Rider Profile:** Who rides PSTA bus service and how do they use the system today?
- **Travel Patterns:** What are the region's overall travel patterns, and how do PSTA ridership patterns compare?
- **Major Destinations:** What are the region's key generators of travel (employment, education, retail/commercial, medical, recreation, tourism, etc.)?

## COMMUNITY PROFILE

Existing and future population and employment densities and various demographic characteristics were reviewed to develop a community profile and identify transit supportive areas where transit is likely to thrive. These include dense areas with higher populations of college-aged students, minority and low income people, seniors, youth, and zero vehicle households.

Key data sources for profiling PSTA's service area include the 2010 US Census as well as population and employment projections provided by the Pinellas County MPO.

## POPULATION & EMPLOYMENT DENSITY (CURRENT AND FUTURE)

**Countywide:** The population of Pinellas County is widely distributed, with densities being slightly greater within close proximity to established downtown areas (particularly St. Petersburg and Clearwater) and considerably greater along the geographically constrained Gulf of Mexico barrier islands. Employment is dense closer to downtown areas and along major corridors like US 19, Central Avenue, and Ulmerton Road. The Greater Gateway area is also a major employment center for the region. Map 5 shows best available data on population and employment densities.

The development patterns on a countywide level are primarily suburban in nature, featuring a large number of single-family homes and automobile-oriented commercial development set back from the roadway with a large amount of available free parking. These types of developments are also zoned to maintain a separation of residential space and commercial space, ensuring that homes are far enough removed from destinations such as offices and supermarkets that the use of a private motor vehicle becomes the most attractive means of transportation. This style of land use makes transit use less attractive in comparison as trip distances are much

longer than those in denser, more urbanized areas and transit passengers will likely need to walk a much greater distance between the transit stop and the doorways of their origins and destinations.

**ST. PETERSBURG:** St. Petersburg is the largest city in Pinellas County, featuring a variety of development patterns. It has a strong downtown core with high employment concentration. Consistently high employment densities can also be found along the Central Avenue and 4<sup>th</sup> Street Corridors, and in the Greater Gateway area. Residential densities surrounding the downtown area are above-average for the County, with some of the highest density just north of the downtown core between 4th Street North and 16th Street North. Projections indicate that both residential and employment density will increase downtown and in the Gateway area by 2035, with the remainder of the city showing little significant changes in density.

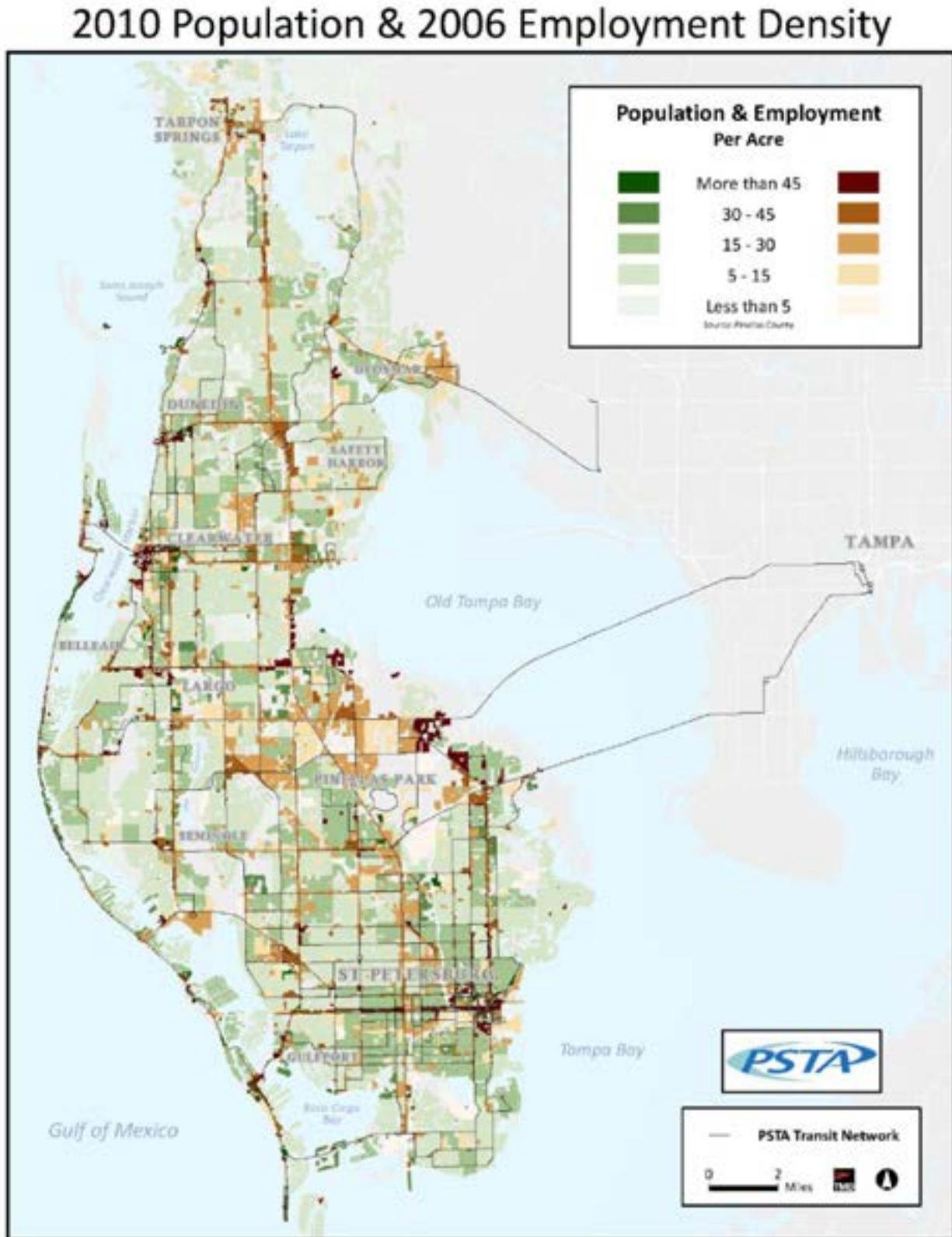
**CLEARWATER:** Residential density is greatest just outside the downtown core, with high concentrations of population extending east along Drew Street. The heaviest employment densities can be found in the downtown core of Clearwater bordered by Drew Street, Chestnut Street, Martin Luther King, Jr. Avenue, and Clearwater Harbor. The US 19 corridor through Clearwater supports many jobs, but is dispersed along the corridor. In addition, a notable stretch of lower-density commercial activity extends across the city along Chestnut Street and Gulf-to-Bay Boulevard. Employment and residential densities are also very high in Clearwater Beach, particularly around the Clearwater Memorial Causeway. Downtown Clearwater is expected to see increased employment density into 2035, with population density remaining largely the same.

**OTHER ACTIVITY CENTERS:** Outside of the larger Pinellas County downtowns of St. Petersburg and Clearwater, there are a number of smaller downtown areas across the County exhibiting particularly high levels of density. Unlike with the major cities, these areas tend to stand alone rather than anchoring major corridors. In particular, Largo, Oldsmar, Dunedin, Palm Harbor, Safety Harbor, and Tarpon Springs have notable concentrations of commercial activity in their downtowns.

**GULF COAST:** While making up a far smaller portion of the county's land area, the barrier islands along the Gulf of Mexico exhibit some of the most consistently high residential and employment densities. Coupled with the geographic constraints of the coast, these densities are largely attributable to the strong tourism appeal of the area rather than to the professional and retail development along the other major corridors across the County.

**MAJOR CORRIDORS:** Outside of the major downtown areas of the county, employment densities follow a far more linear and corridor-centered distribution than population densities. In addition to the St. Petersburg and Clearwater corridors mentioned previously, US 19 along the entire length of the County as well as East/West Bay Drive, Ulmerton Road, Bryan Dairy Road, and Park Boulevard corridors across the center of the County also support consistently high levels of employment along their lengths. Residential development is mostly confined to low-density neighborhoods adjacent to these corridors, but a small increase in residential density is forecast along many of these corridors in the central part of the County into 2035. All of these corridors receive service by one or more PSTA routes.

Map 5: 2010/2006 Population and Employment Density (Source: 2010 US Census, Pinellas County)



## POPULATION DEMOGRAPHIC CHARACTERISTICS

A review of key US Census 2010 population characteristics helped identify densities of population segments more oriented towards transit use. These include:

- College-Aged Population
- Minority Population
- Low Income Population
- Senior Population
- Youth Population
- Zero Vehicle Households

A collection of market demographic maps can be found in the Appendix of this report.

**College-Aged:** This group includes people between the ages of 18 and 24, representing 7.3 percent of Pinellas County's population in the 2010 US Census. Students typically have lower levels of income and are much less likely to own their own vehicle, making them more likely to seek alternative means for personal mobility. Limited on-campus parking and transit pass programs can also be used to incentivize transit use. The highest densities of college-aged populations are present around Downtown St. Petersburg in the area of University of South Florida - St. Petersburg. Higher densities are also present in the tracts around Eckerd College.

**Minority Population:** The segment of the population identified as a racial minority in the US Census. 23.1 percent of Pinellas County residents were listed as a racial minority in the 2010 US Census. Title VI of the federal Civil Rights Act of 1964 requires that transit agencies as recipients of federal financial assistance take into consideration the needs of minority and low income communities when planning service. Pinellas County's minority population is represented in the greatest densities in southern portions of St. Petersburg. Densities are also greater around Downtown Clearwater relative to the County as a whole.

**Low Income Population:** People with an annual income at or below the federal poverty threshold are in this category. 13.1 percent of Pinellas County residents fell into this category in the 2008-2012 American Community Survey 5-year estimates conducted by the US Census Bureau. This segment of the population is among the most likely to be dependent on transit due to the high costs of private vehicle ownership. Pinellas County has low income populations scattered throughout the County, with the greatest densities toward the St. Petersburg and Clearwater city centers.

**Senior Population:** This group, for this study is defined as persons aged 65 and over. In the 2010 US Census, 21.2 percent of Pinellas County residents fell into this category. Seniors are more likely to be transit-dependent due to a variety of factors ranging from a lack of willingness or inability to drive to the financial constraints imposed by a fixed income. Senior citizens are located throughout Pinellas County, with some of the greatest densities found along the barrier islands, and denser tracts scattered around the County in areas like Dunedin, Seminole, Gulfport, and Pinellas Park. Some of the tracts with the greatest densities are located in closer proximity to the US 19 corridor.

**Youth Population:** For this study this demographic is defined as persons 10 to 17 years of age – 8.5 percent of the Pinellas County population in the 2010 US Census. Youth residents are typically middle school and high school students able to independently utilize public transit as a means for daily travel needs. While Pinellas County Schools provides transportation with its own bus fleet to most public schools, there may be demand within the youth segment for transit service to fundamental, charter, and private schools, employment, and recreational

activities. Pinellas County does not have any Census tracts that feature especially strong youth population densities.

**Zero-Vehicle Households:** This group is substantially more likely to rely on public transportation for purposes of mobility than households with one or more vehicles. Densities of zero-vehicle households are low across Pinellas County, but slightly higher densities can be seen in downtown St. Petersburg. Notably, many of the tracts showing higher densities in Gulfport, Seminole, and Largo coincide with tracts indicating a higher density of senior citizens.

## RIDER PROFILE

A systemwide on-board survey was conducted as part of this study in October 2012. The objective of the survey was to examine general travel behavior and demographic characteristics of existing PSTA riders. Surveys were distributed to customers across the full spectrum of PSTA services, and over 11,000 responses were completed.

The survey posed questions to passengers designed to assess passengers' demographics and travel activity, as well as opinions on service and desired service improvements that will be discussed in later sections of this report. Data was collected from passengers across all local routes, express routes, and trolleys.

The full report on the on-board survey, including details on methodology as well as results, can be found in the Appendix.

## PASSENGER DEMOGRAPHICS

Demographic characteristics for all of PSTA's fixed route passenger ridership is presented and explained below in Table 4.

Analyzing the data in Table 4 indicates that PSTA's average rider is a working-age, full-time-employed full-year resident without access to a car or a valid driver's license. Familiarity with the system is likely to be high due to use of the system five or more days per week. Relative to the County's demographics, the average PSTA passenger has a lower income and is more likely to be a member of a racial minority.

## PSTA COMMUNITY BUS PLAN – FINAL REPORT

Table 4: PSTA Fixed Route Rider Profile, On-Board Survey, October 2012

Survey Topic	Key Findings	Responses	Fixed-Route Services	Pinellas Co.
<b>Gender</b>	Gender distribution of PSTA riders is nearly equal.	Female	<b>51%</b>	52%
		Male	<b>49%</b>	48%
<b>Age</b>	The majority of PSTA riders are of the working-age population.	Under 15	<b>1%</b>	14%
		16 - 24	<b>18%</b>	11%
		25 - 34	<b>22%</b>	11%
		35 - 44	<b>18%</b>	12%
		45 - 54	<b>22%</b>	16%
		55 - 64	<b>14%</b>	15%
		65 - 74	<b>4%</b>	10%
		75 and over	<b>1%</b>	11%
<b>Income</b>	The majority of PSTA riders are of lower income levels.	Less than \$5,000	<b>22%</b>	<i>(Not directly comparable)</i>
		\$5,000 - \$9,999	<b>13%</b>	
		\$10,000 - \$14,999	<b>15%</b>	
		\$15,000 - \$19,999	<b>11%</b>	
		\$20,000 - \$24,999	<b>11%</b>	
		\$25,000 - \$29,999	<b>9%</b>	
		\$30,000 - \$39,999	<b>8%</b>	
		\$40,000 - \$49,999	<b>4%</b>	
<b>Employment Status</b>	Most PSTA riders are currently employed either full-time or part-time.	\$50,000 or greater	<b>7%</b>	
		Full-time	<b>48%</b>	<i>(Not directly comparable)</i>
		Part-time	<b>20%</b>	
		Not currently employed	<b>23%</b>	
<b>Educational Status</b>	Most PSTA riders are not currently students.	Retired	<b>9%</b>	
		Not a student	<b>80%</b>	81%
		K - 12 student	<b>5%</b>	13%
<b>Ride Frequency</b>	Most PSTA riders use transit five or more days a week.	College/tech student	<b>16%</b>	6%
		1 day/week	<b>3%</b>	-
		2 days/week	<b>5%</b>	
		3 days/week	<b>8%</b>	
		4 days/week	<b>9%</b>	
		5 days/week	<b>25%</b>	
		6 days/week	<b>17%</b>	
		7 days/week	<b>28%</b>	
<b>County Residency</b>	A large majority of PSTA riders reside in Pinellas County for most of the year.	Once a month or less	<b>3%</b>	
		First time	<b>1%</b>	-
		6 - 12 months	<b>89%</b>	
<b>Operating Vehicles in Household</b>	A majority of PSTA riders do not have access to a vehicle.	1 - 6 months	<b>7%</b>	
		Less than one month	<b>4%</b>	-
		None	<b>67%</b>	
		One	<b>22%</b>	
<b>Licensed Drivers</b>	Most PSTA riders do not have a driver's license.	Two	<b>8%</b>	
		Three or more	<b>3%</b>	
<b>Ethnicity</b>	A majority of PSTA riders identify as white, although PSTA riders are more diverse overall than Pinellas County.	Yes	<b>43%</b>	-
		No	<b>57%</b>	
		White	<b>54%</b>	77%
		Black	<b>30%</b>	10%
		Hispanic	<b>10%</b>	8%
		Asian	<b>1%</b>	3%
		Native American	<b>1%</b>	0%
		Other	<b>3%</b>	2%

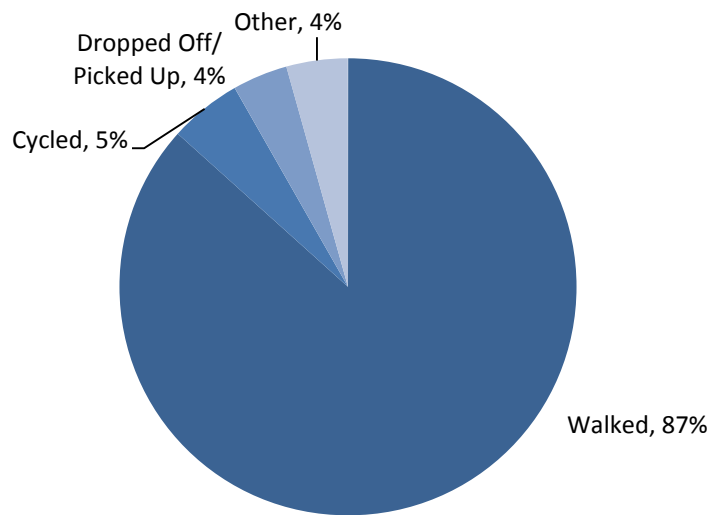
## PASSENGER TRAVEL ACTIVITY

### SERVICE ACCESS

Eighty-five (85) percent of passengers walk to their origin bus stop. Passengers who cycled to their origin stop made up 5.3 percent of the total while passengers who were dropped off made up 5.2 percent. At the destination stop, 88.3 percent walked to their final destination, 4.9 percent cycled, and 2.6 percent were picked up (see Figure 1).

Figure 1: Service Access

### Service Access (Origin & Destination)



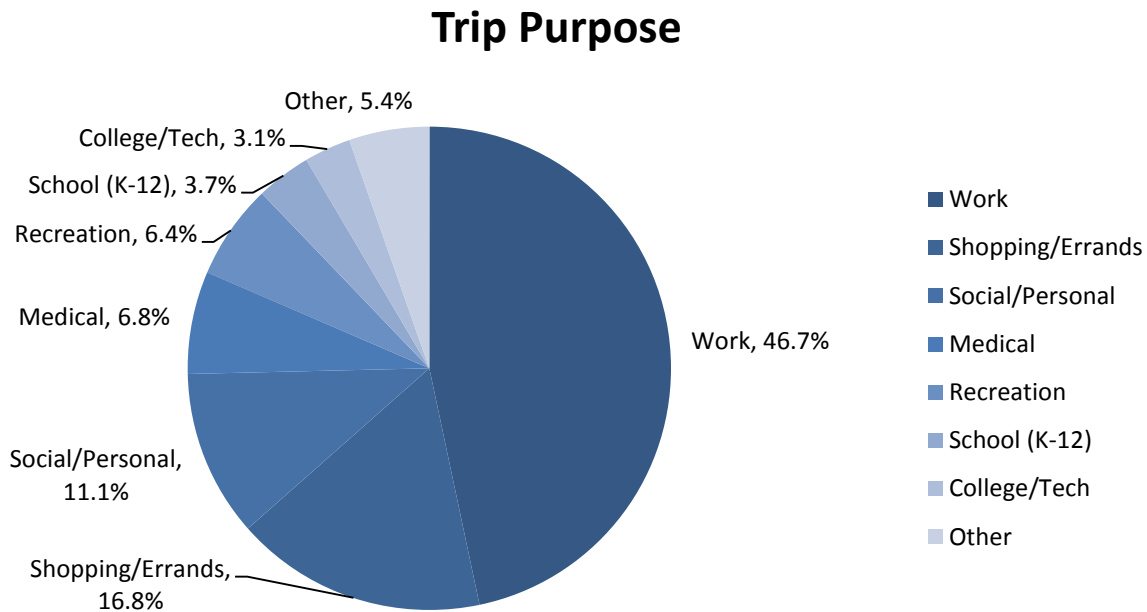
Approximately 45 percent of passengers board two or more buses to complete their trip.

If the bus were no longer a viable travel option, 27.6 percent of passengers would not make the trip at all – the largest single response. 18.7 percent would get a ride from someone else, 16.6 percent would walk, 12.5 percent would take a taxi, and 12 percent would cycle. Only 10.3 percent of passengers would drive instead.

### TRIP PURPOSE

The largest category of home-based trips was to and from places of employment at 46.7 percent of origins and 31.8 percent of destinations. Shopping and errands composed 8.9 percent of origins and 11.5 percent of destinations (see Figure 2).

Figure 2: Non-Home Based Trip Purpose (Origin)



## TROLLEYS

Trolleys have unique passenger demographics and travel patterns compared to the PSTA system average. Surveys conducted on St. Petersburg's Downtown Looper and the Jolley Trolley services in Clearwater Beach and North County showed the following significant differences (see Table 5):

- Trolley passengers showed similar age and gender distributions, but 47.2 percent earned over \$50,000 annually (to PSTA's systemwide 7 percent) and 81.1 percent of passengers identified as white (to PSTA's systemwide 54 percent). 50.3 percent of trolley passengers resided in Pinellas County for less than one month a year.
- Recreational trips were the largest single trip category at 38 percent and 44 percent of non-home trip origins and destinations, respectively. Social trips were a respective 11.7 percent and 16.7 percent of origins and destinations while shopping trips and errands were a respective 9.3 percent and 8.7 percent.
- If the trolley was not available, 34.1 percent of passengers would drive instead. 25.5 percent of passengers would walk, and 15.7 percent would not consider making their trip at all.

Table 5: PSTA Trolley Rider Profile, October 2012

Survey Topic	Key Findings	Responses	Trolleys
Gender	Gender distribution of PSTA Trolley riders is nearly equal.	Female	56%
		Male	44%
Age	More seniors ride the Trolley service compared to PSTA fixed-route.	Under 15	2%
		16 - 24	9%
		25 - 34	17%
		35 - 44	13%
		45 - 54	22%
		55 - 64	17%
		65 - 74	16%
		75 and over	4%
Income	Trolley Riders have a higher household income.	Less than \$5,000	6%
		\$5,000 - \$9,999	4%
		\$10,000 - \$14,999	8%
		\$15,000 - \$19,999	7%
		\$20,000 - \$24,999	7%
		\$25,000 - \$29,999	6%
		\$30,000 - \$39,999	7%
		\$40,000 - \$49,999	8%
		\$50,000 or greater	47%
Educational Status	Most PSTA Trolley riders are not currently students.	Not a student	89%
		K - 12 student	4%
		College/tech student	7%
County Residency	Half the Trolley riders reside in the County less than 6 months of the year.	6 - 12 months	50%
		1 - 6 months	9%
		Less than one month	41%
Ethnicity	Most Trolley riders identify as white.	White	81%
		Black	7%
		Hispanic	8%
		Asian	2%
		Native American	1%
		Other	1%

## TRAVEL PATTERNS

To provide the best possible transit service to the communities being served, it is important to analyze travel patterns for both existing transit passengers but also people using other travel modes. This ensures that the provision of transit service will mirror the travel needs of the service area as accurately as possible and position transit as a more compelling travel option. This analysis uses a wide array of data, including results from the on-board survey conducted in October 2012 as well as data from the *US Census American Community Survey (2011)* and the Pinellas County MPO. Together this data provides the most accurate picture of both intra-County and inter-County travel patterns across a variety of travel modes possible. Maps 4-7 illustrate trip volumes by vehicle and year are shown at the end of the section.

### PRESENT & FUTURE TRIP DISTRIBUTION

#### **2006 Private Vehicle Trips (Maps 6-7)**

The majority of all Pinellas County private vehicle trips take place within the county. For context, data from the *2008 American Community Survey* collected over a similar period showed over 40,000 people traveled from Pinellas County to Hillsborough County for work every day, with nearly 30,000 people making the same trip from Hillsborough County to Pinellas County. In addition, while over 7,000 people commuted daily from Pinellas County to Pasco County for work, over 30,000 people commute into Pinellas County from Pasco County. Within the county, most private vehicle trips remain within the origin zone with considerably fewer longer-distance trips. This is due to the fact that most people choose destinations for personal travel like shopping and entertainment that are closer to home for non-work trips. With respect to employment-based travel, the proportion of travel between zones increases, with particularly strong links indicated between downtown St. Petersburg and the Greater Gateway area, Pinellas Park, and Gulfport, between Seminole and Largo and between eastern and western Clearwater.

#### **2035 Private Vehicle Trips (Maps 8-9)**

With respect to both employment and general private vehicle trips, the distribution of trips is projected to remain similar to 2006 with slight increases in activity both within and between zones, with the majority of activity continuing to take place in the greater St. Petersburg area. The patterns are similar for employment-centered trips, with a notable exception being a substantial increase in trips between the Seminole and the Pinellas Park areas.

#### **2006 Transit Trips (Maps 10-11)**

While the number of transit trips is substantially lower both within and between zones, it is evident that transit is used slightly more for trips between zones than within zones, with the zone containing downtown and southern St. Petersburg being an exception. This stands in contrast with private vehicle travel, which features a far larger proportion of trips within zones. The largest number of journeys across zones can be seen connecting the southernmost St. Petersburg zone with Gulfport, Pinellas Park, and the Gateway area. Transit travel demand across County lines is far smaller, with fewer than 400 daily trips between each neighboring travel zone.

#### **2035 Transit Trips (Maps 12-13)**

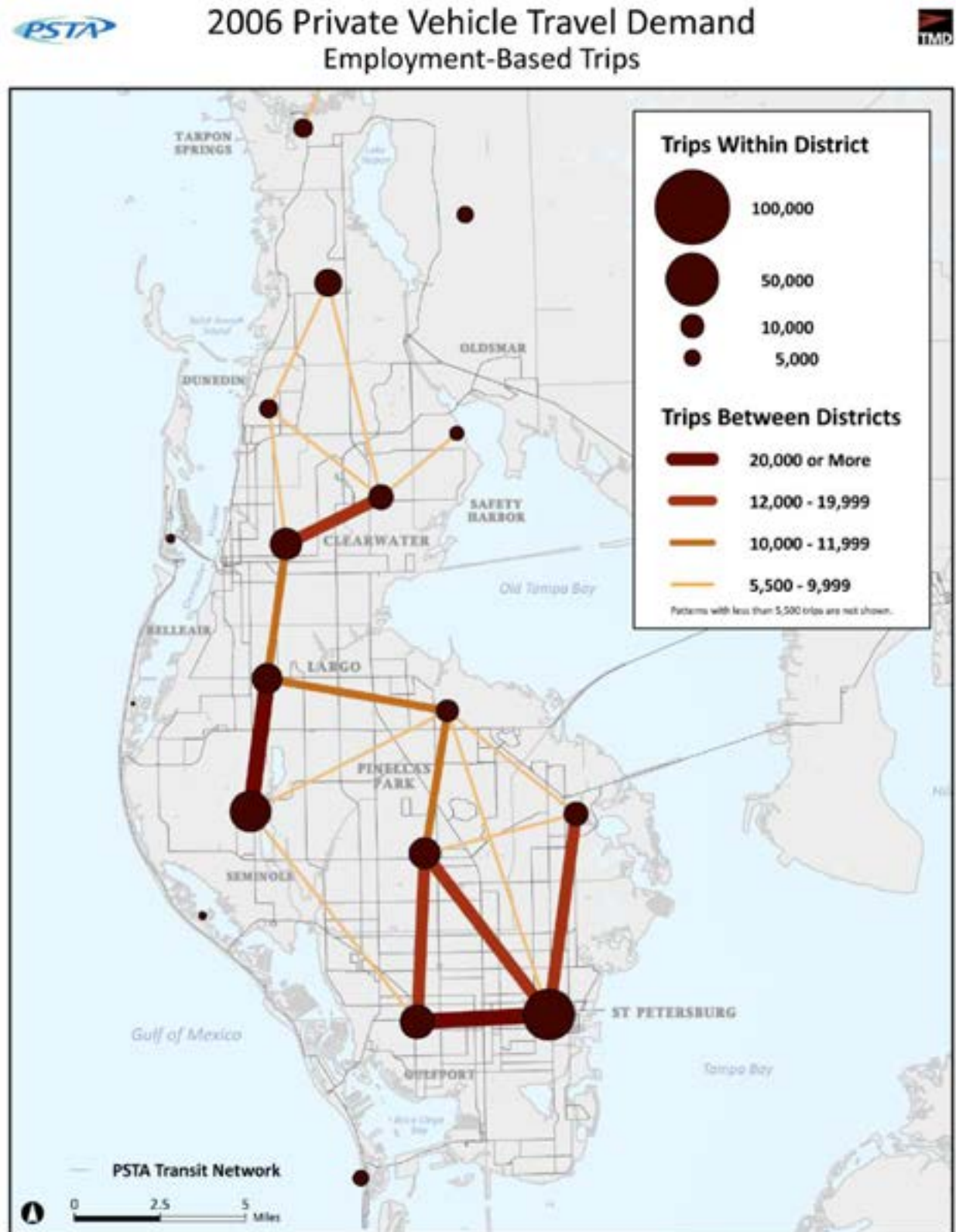
The trend within the county leading up to the year 2035 is projected to see a somewhat evenly distributed increase in transit journeys both within and between zones.

There are a number of evident general trends from this data. Foremost is that despite the proximity of Pinellas County to Hillsborough and Pasco Counties, the majority of private vehicle trips are internal to the county. Most people commuting to the large employment areas of downtown Clearwater, downtown St. Petersburg, and the Greater Gateway area also live within the County. With multiple employment and activity centers and residential areas spread throughout the County, there are few prominent travel patterns. Instead many areas show interconnectedness to other areas. Transit travel patterns show a similar interconnectedness around the County, with travel occurring from many places to many places.

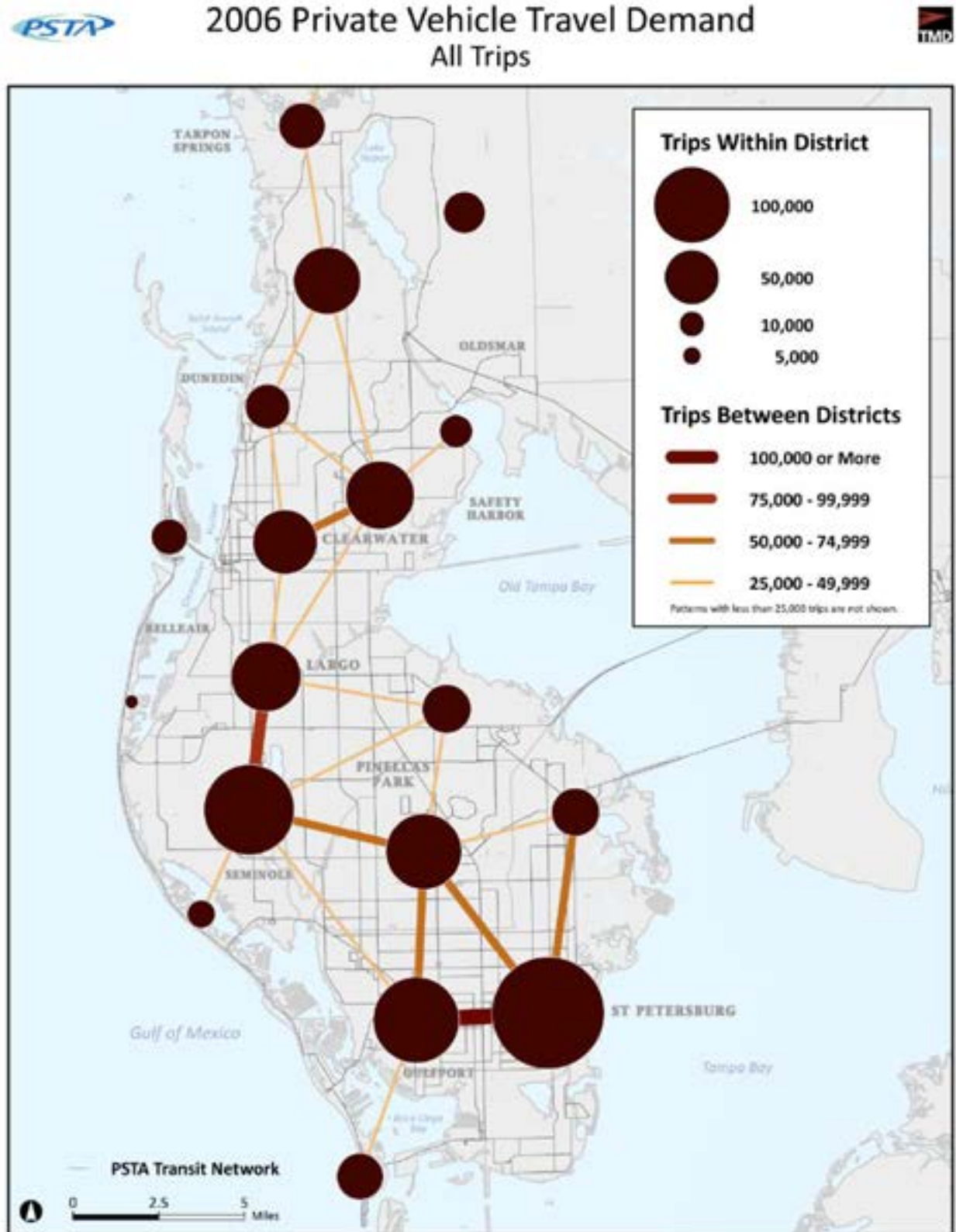
### **CENSUS JOURNEY TO WORK – ORIGINS & DESTINATIONS**

The majority of Pinellas County residents both live and work in Pinellas County, with 63.7 percent of residents in the workforce remaining within the County. However, many Pinellas County residents travel outside of the County for work, with 14.6 percent of employed Pinellas County residents commuting to Hillsborough County. In addition to its own residents, Pinellas County employs many people from neighboring areas, most notably Pasco and Hillsborough Counties. This indicates that a strong inter-County transportation network is important to Pinellas County and the region's economic prosperity.

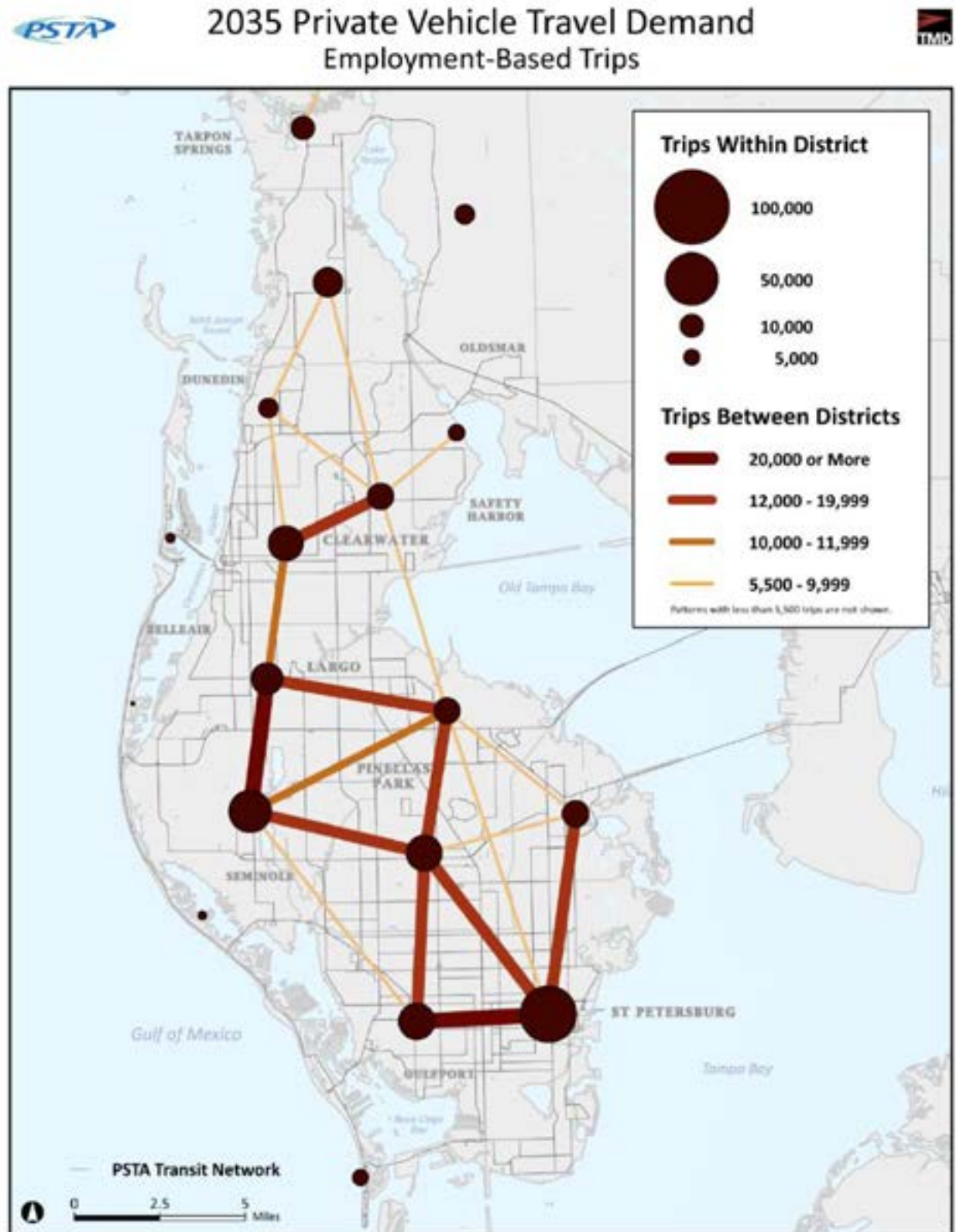
Map 6: 2006 Private Vehicle Travel, Employment-Based Trips (Source: 2012 Tampa Bay Regional Planning Model, Pinellas MPO)



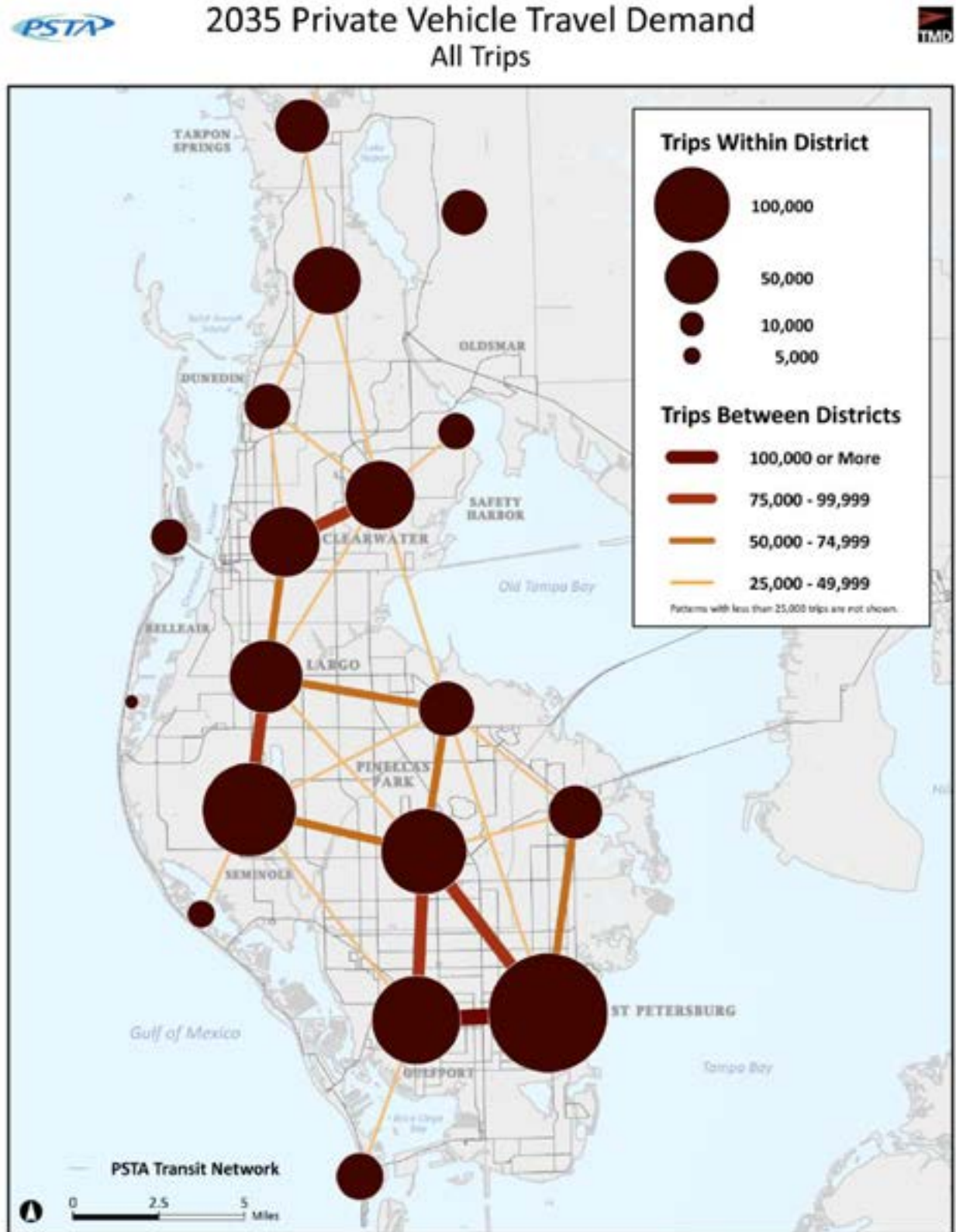
Map 7: 2006 Private Vehicle Travel, All Trips (Source: 2012 Tampa Bay Regional Planning Model, Pinellas MPO)



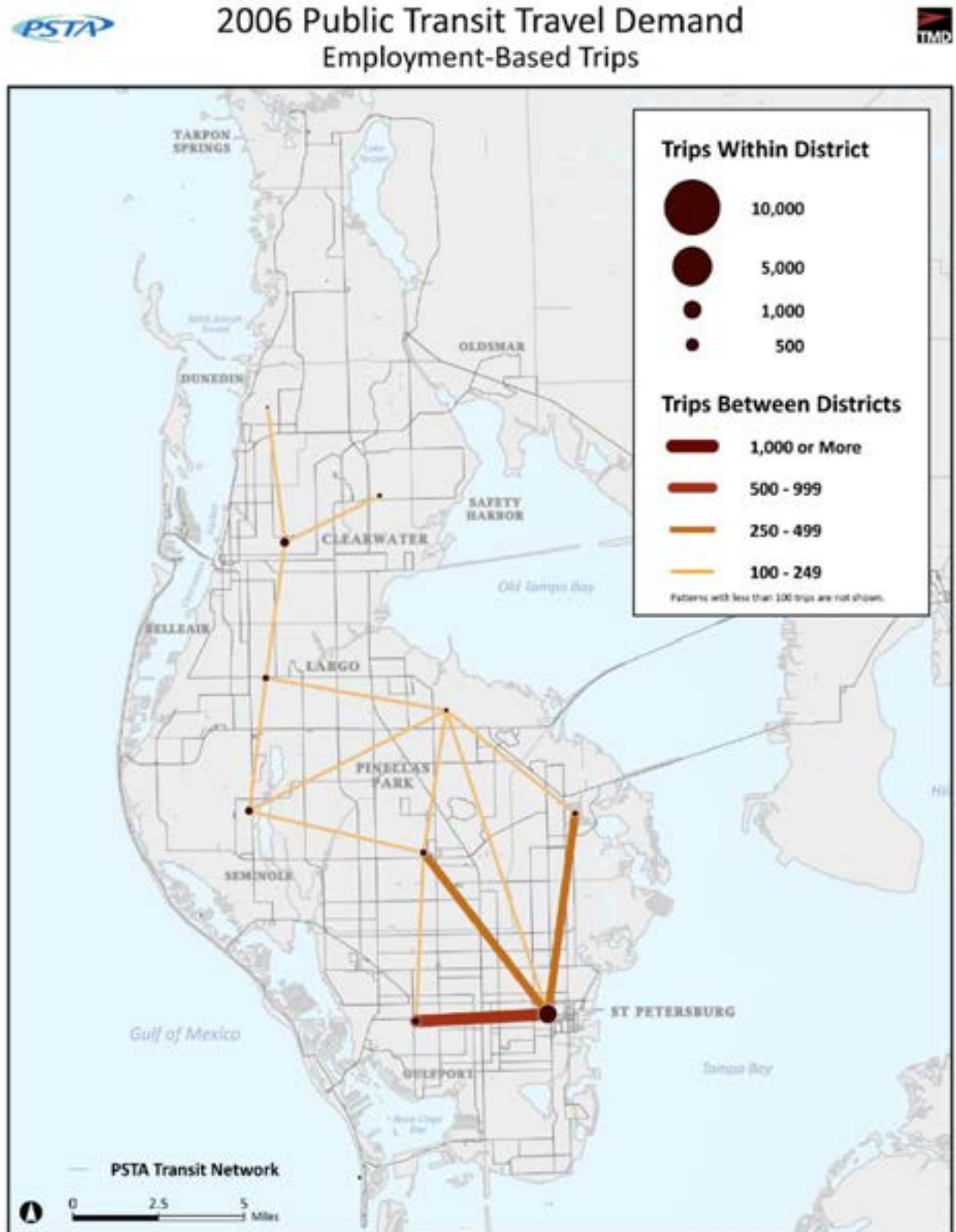
Map 8: 2035 Private Vehicle Travel, Employment-Based Trips (Source: 2012 Tampa Bay Regional Planning Model, Pinellas MPO)



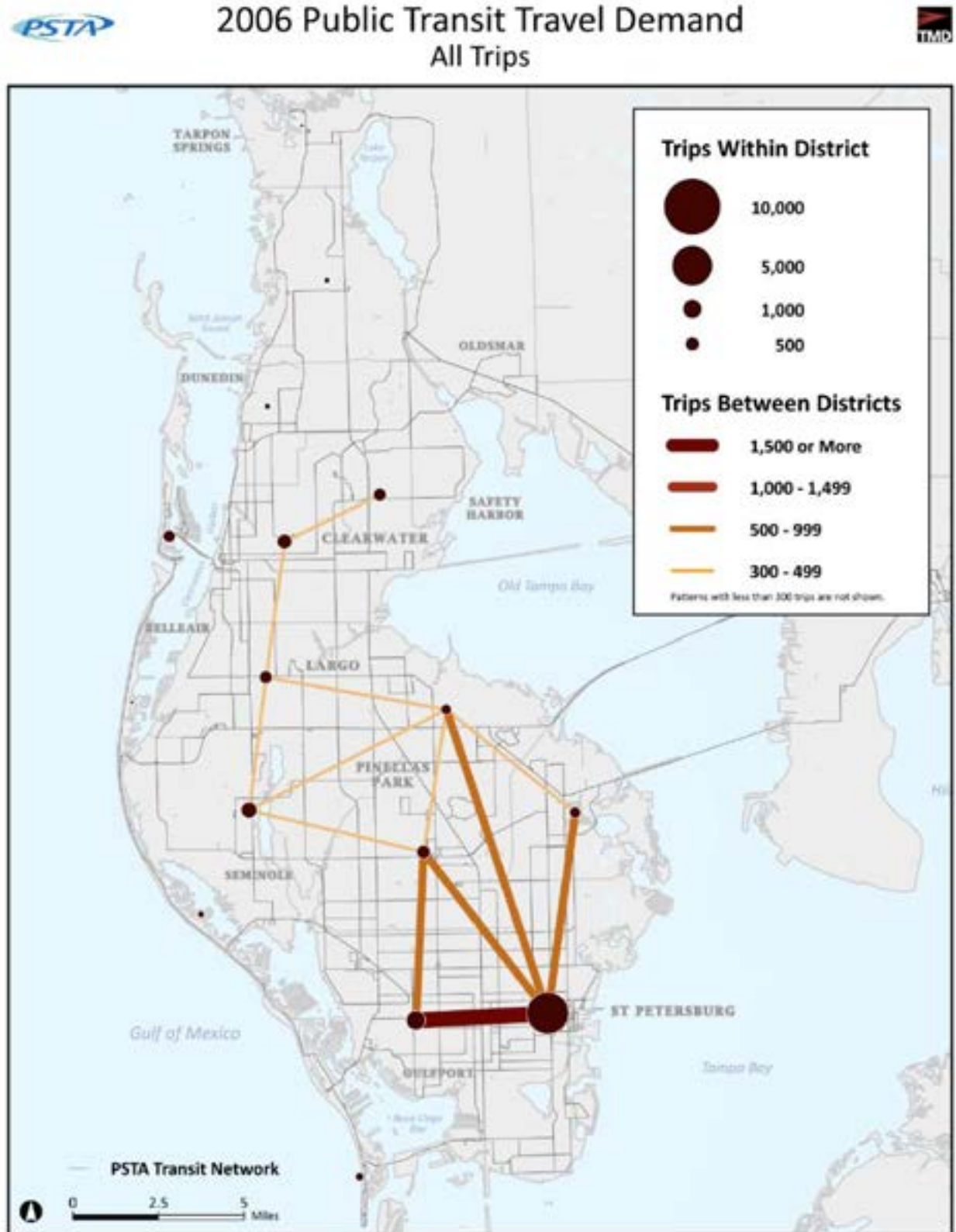
Map 9: 2035 Private Vehicle Travel, All Trips (Source: 2012 Tampa Bay Regional Planning Model, Pinellas MPO)



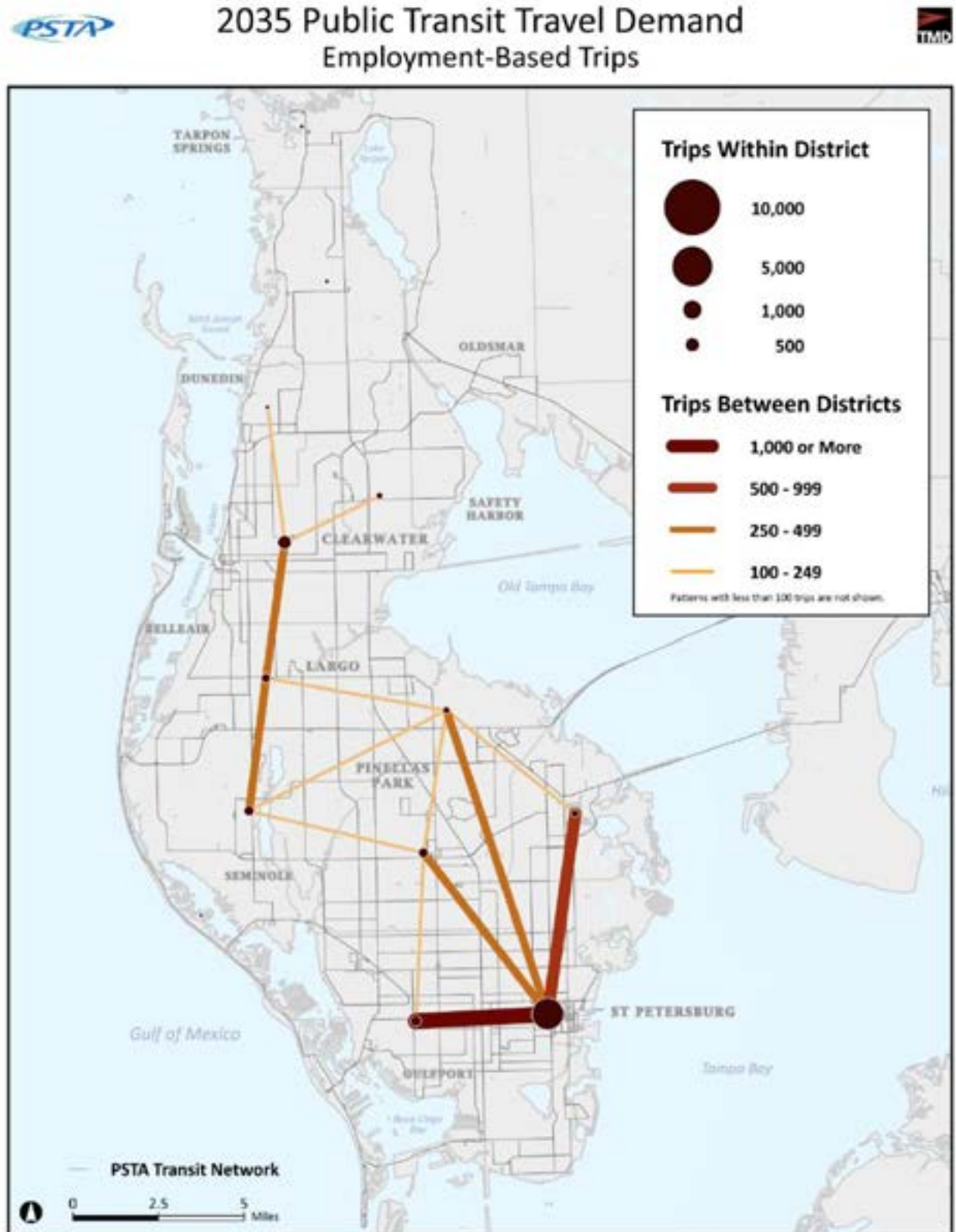
Map 10: 2006 Transit Travel, Employment-Based Trips (Source: 2012 Tampa Bay Regional Planning Model, Pinellas MPO)



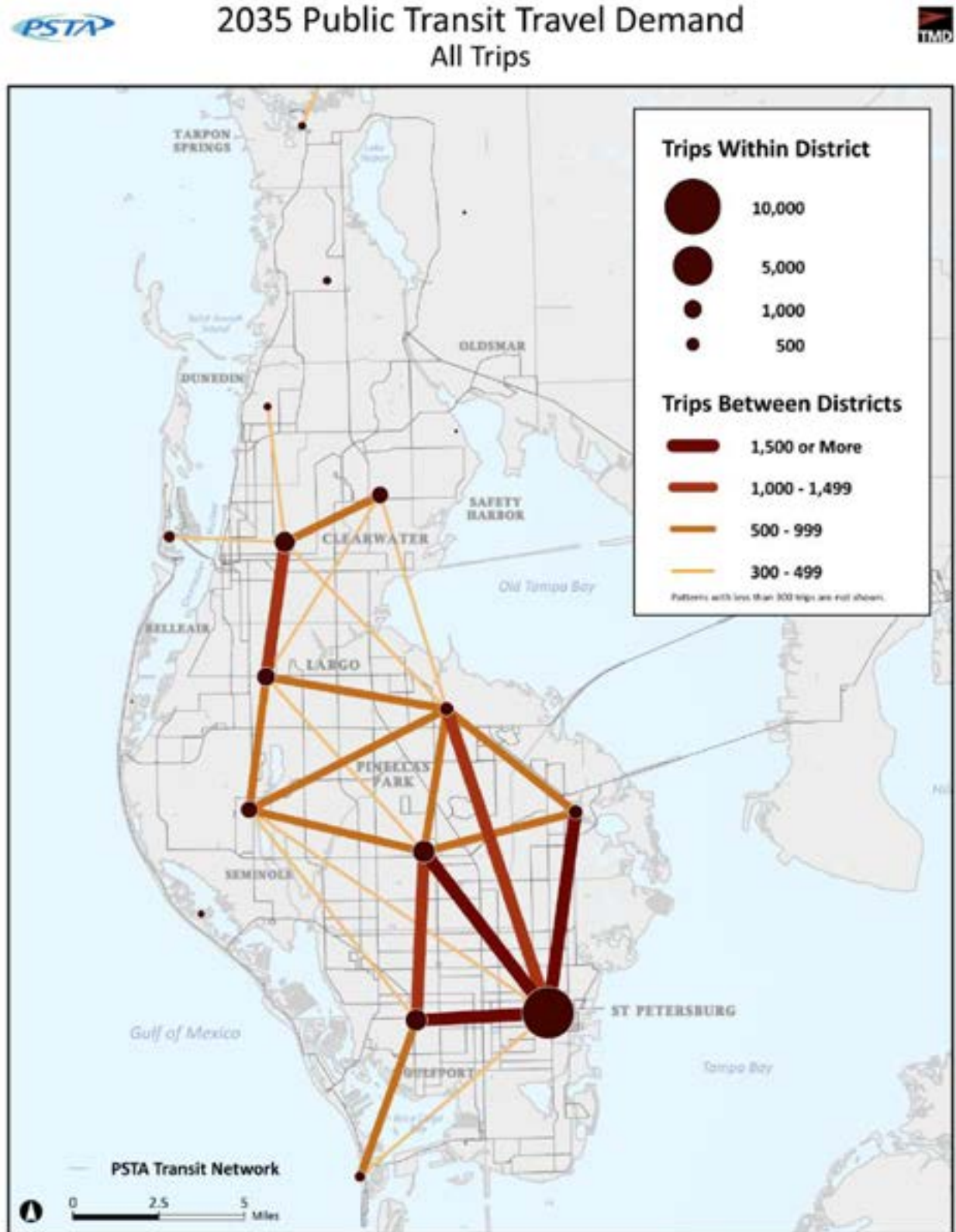
Map 11: 2006 Transit Travel, All Trips (Source: 2012 Tampa Bay Regional Planning Model, Pinellas MPO)



Map 12: 2035 Transit Travel, Employment-Based Trips (Source: 2012 Tampa Bay Regional Planning Model, Pinellas MPO)



Map 13: 2035 Transit Travel, All Trips (Source: 2012 Tampa Bay Regional Planning Model, Pinellas MPO)



## **MAJOR DESTINATIONS**

Major destinations for any region include:

- Employment
- Education
- Medical and social services
- Shopping
- Tourism/recreation

In Pinellas County, key destinations are concentrated in and near downtown St. Petersburg, Clearwater, Greater Gateway and along the beaches.

## **EMPLOYMENT**

Every major employment center and every major employer in Pinellas County is currently served by PSTA. The greatest employment densities in Pinellas County can be found in downtown St. Petersburg and Clearwater, as well as in the Greater Gateway area. While Gateway has slightly lower densities and great dispersion of population and employment than found in the county's downtown areas, it is home to many of the county's largest employers, with many other large employers extending inland along Ulmerton Road and Bryan Dairy Road. The Home Shopping Network, Fidelity Information Services, Tech Data, and Jabil Circuit all have campuses with over 1,000 employees located within the Gateway area.

## **EDUCATION**

### **COLLEGES AND UNIVERSITIES**

College students are typically a transit dependent group, as students have limited access to automobiles. Students most commonly utilize transit when traveling to and from school and also when making work, shopping, or entertainment related trips.

Pinellas County is home to a number of institutions of higher education. St. Petersburg College is the largest, with 64,904 enrolled students across its 12 campus centers and online. USF St. Petersburg has approximately 6,000 enrolled students, and with only 457 residential students it attracts a strong commuter student population. Also notable are Eckerd College in St. Petersburg, the Stetson University College of Law in Gulfport, and Clearwater Christian College. As an incentive, PSTA offers a fare discount to students over the age of 18 in possession of a PSTA-issued Adult Student Photo ID card.

### **HIGH & MIDDLE SCHOOLS**

High school and middle school trips provide opportunities for substantial PSTA ridership growth. The Pinellas County School District has over 100,000 K-12 students enrolled across 141 schools located around the County as of the 2012-13 academic year. PSTA offers a discounted youth fare to people under the age of 18 in possession of a student ID card, government-issued ID, or a PSTA-issued youth photo ID card. Additionally, the PSTA Platinum Pass is available for riders under the age of 18, offering unlimited boardings over seven days for \$12.50.

### MEDICAL & SOCIAL SERVICES

PSTA serves the majority of medical facilities and social service providers, ensuring access to critical lifeline services, particularly for low-income and senior populations. Pinellas County has located offices of its Health & Human Services and Veterans Affairs in close proximity to both downtown St. Petersburg and central Clearwater, and all locations receive relatively frequent service from multiple routes. In addition, Pinellas County has many hospitals, most of which are located in downtown St. Petersburg and Clearwater. Every hospital in the County receives service from at least one PSTA route.

### SHOPPING

Pinellas County has many shopping destinations, including the two major regional malls of Westfield Countryside in Clearwater and Tyrone Square Mall in St. Petersburg. PSTA serves every large shopping center in Pinellas County, many of which double as PSTA transfer centers.

### TOURISM

The Pinellas County Convention and Visitors Bureau reports that more than 13 million people visit Pinellas County annually, including more than 5 million overnight visitors. The County's warm climate and many beaches are key attractions, in addition to Major League Baseball's Spring Training in Clearwater and Dunedin, the Tampa Bay Rays, numerous museums, the Clearwater Marine Aquarium, and many unique Main Street communities and towns throughout the County.

A great deal of investment has occurred in the beach communities to better capitalize on the strong tourism appeal. According to Pinellas County Economic Development, Madeira Beach has emphasized the assets of its town center through the adoption of mixed-use zoning to better enable redevelopment. Treasure Island is also seeking to attract higher-end retail and mixed-use development with an aim of attracting growth to its denser, more walkable community. The Gulf Boulevard corridor itself has been the recipient of investment in the form of streetscape and safety improvements that enhance the pedestrian experience. These improvements coupled with the dense, tourism-oriented environment along Gulf Boulevard make transit appealing for visitors.

To serve this market and the beach communities, the Clearwater Jolley Trolley and the Suncoast Beach Trolley offer high frequencies and service spans that extend later on weekend evenings. Connections between the barrier islands and the county's inland population centers are strong as well, highlighted by the Central Avenue Trolley extending to Pass-A-Grille from downtown St. Petersburg.

## **KEY MARKET FINDINGS**

### **LAND USE**

Pinellas County features a generally even level of well-correlated population and employment densities across much of the county, with denser development occurring closer to downtown St. Petersburg and Clearwater as well as along the Gulf Coast's barrier islands. Growth follows a strong linear and auto-centric pattern typical of much of the postwar United States, and future growth is predicted to see modest increases in density while retaining the same general form. The Pinellas Planning Council and many of the local governments are taking steps to encourage denser mixed-use redevelopment in the downtown areas and other activity centers, particularly those identified as future passenger rail station areas and those along rapid bus corridors. Resulting changes in land use policies would allow Pinellas County to redevelop in a manner that encourages sustainable population growth and more economic development opportunities, while also protecting natural resources and existing stable communities from development.

### **POPULATION & EMPLOYMENT**

Pinellas County is a region experiencing slow but steady growth, and features a significant portion of the population that could be considered transit-dependent, including seniors, residents with lower incomes, and residents without access to a car. Census tract analysis indicates that these residents are located in many places across the county, with higher concentrations outside downtown St. Petersburg and downtown Clearwater. A significant majority of Pinellas County residents are employed within the county, indicating potential for PSTA to expand its reach among commuters.

### **TRAVEL PATTERNS**

Travel patterns show very high levels of mobility both within and between different parts of Pinellas County for both private vehicle and transit travel. The great level of similarity in these patterns indicates a great deal of potential for growth in transit's modal share in trips across the County. There is also a significant amount of travel to destinations in Tampa and other areas of Hillsborough County and Pasco County as well with further growth anticipated.

### **KEY DESTINATIONS**

Key travel destinations are dispersed rather widely throughout the County. There is a greater concentration of businesses and medical facilities in the downtown areas of St. Petersburg and Clearwater, and in the centrally-located Greater Gateway Area, where many of Pinellas County's largest employers are located in larger campuses. There is a strong market for tourism and recreation along with its associated employment along the barrier islands to the west.

# SERVICE ASSESSMENT

## OVERVIEW

The Service Evaluation is a key component of the *Community Bus Plan*. While the market assessment provides the context for the system's operations, the service assessment examines how the system interacts with its market. For this analysis, a sample of PSTA's total route activity was collected from its on-board automatic passenger counters and analyzed along a number of different performance metrics.

This evaluation includes key findings both at a system and individual route level in four major sections:

- The **Transit Network Overview** section examines the PSTA network as it exists today.
- The **Ridership Evaluation** section analyzes ridership trends on an individual route basis and on a systemwide basis.
- The **Service Performance and Productivity** section expands upon the ridership evaluation by examining the efficiency of PSTA's service network relative to its ridership.
- Finally, the **Service Quality and Customer Experience** section views the system's performance from the customer's perspective, evaluating individual route wait times, travel times, and on-time performance among other metrics to gauge route and system performance.

This analysis contributed to the *Community Bus Plan* by highlighting the key strengths and challenges of PSTA's service, and provided an important basis for discussion on how to approach future service needs.

## PSTA NETWORK OVERVIEW

### SERVICE DESCRIPTION

PSTA operates 43 fixed routes across its service area. Of these routes, 33 are local services, two are commuter express routes to Tampa, two are specially-branded trolley services serving Gulf Boulevard and St. Petersburg's Central Avenue corridor, and three are recently-introduced "Connector" flex routes in Northern Pinellas County. PSTA also provides funding toward more recreationally-focused trolley services in downtown St. Petersburg, Clearwater Beach, and to coastal communities in northern Pinellas County in partnership with local communities (see Map 14).

### LOCAL ROUTES

PSTA's local routes are traditional bus services serving all stops along most major corridors. Local service is comprehensive and covers nearly the entire County, from Tarpon Springs and Oldsmar to Pass-a-Grille. PSTA operates weekday service from about 5:00 AM until about 12:30 AM, with most routes starting service around 5:30 AM and ending around 8:00 PM. Frequencies are generally modest, with the majority of routes operating on half-hourly or hourly headways and a select number of higher-ridership routes operating with 15 to 20 minute headways during peak periods.

### EXPRESS ROUTES

PSTA operates two commuter-express routes on weekdays connecting park-and-ride lots in the central part of the county with downtown Tampa, complemented by a third transbay route operated by HART connecting the northern portion of the county around Clearwater with Tampa and Hillsborough County. These routes are operated using coach-style vehicles and feature 30 minute peak period headways.

### “CONNECTOR” FLEX ROUTES

PSTA recently introduced three “North County Connector” flex routes to the northern part of the County, serving origins and destinations within 3/4 mile of routes operating in Dunedin, Clearwater, Palm Harbor, East Lake, and Oldsmar. The Connector routes feature hourly headways and service spans between 8:00 AM and 7:00 PM on weekdays, with select additional service on Saturdays.

### TROLLEYS

Trolley services available in the prominent tourism areas extend service beyond PSTA’s traditional spans by providing evening and weekend service. By doing so, the trolleys can better capture the tourism market, while also serving hospitality industry employees and local residents.

In St. Petersburg, PSTA directly operates the Central Avenue Trolley, which extends from the St. Petersburg Pier along Central Avenue to St. Pete Beach and Pass-a-Grille. To discourage short car trips around downtown, it charges no fare traveling from the Pier to Baywalk, a 50 cent fare for passengers alighting from Baywalk to Grand Central Station, and the full \$2 PSTA fare for passengers alighting farther west. The Suncoast Beach Trolley, operated by PSTA, connects St. Pete Beach to Clearwater with service along Gulf Boulevard.

The Clearwater Jolley Trolley is an independent trolley service operating two routes. The Clearwater Beach Route provides daily service between downtown Clearwater and Clearwater Beach, and the Coastal Route provides Friday to Sunday service from Clearwater Beach to Tarpon Springs. These routes serve many popular tourist destinations with a particular focus on weekend and evening service. The Jolley Trolley receives funding from many Clearwater Beach businesses as well as from PSTA, and its fare system is fully interoperable with PSTA’s system.

The Downtown Looper, which operates in a loop pattern connecting many of the more popular downtown St. Petersburg destinations, is operated by the Downtown St. Petersburg Partnership. The Downtown Looper operates using leased PSTA vehicles and charges a flat 50 cent fare.

## PSTA COMMUNITY BUS PLAN – FINAL REPORT

Map 14: PSTA Transit Network 2013



## **RIDERSHIP EVALUATION**

A key element of understanding how customers currently use the PSTA system is the distribution of ridership across the network by time of day, service type, route and geographic distribution.

A full sample of ridership and operating performance data covering all PSTA-operated routes, times, and days of the week was collected using PSTA's on-board automatic passenger counting system between February and June of 2012. Daily boardings across the system for the sample period averaged as follows:

- 51,000 passengers per weekday
- 33,200 passengers on Saturday
- 16,600 passengers on Sunday

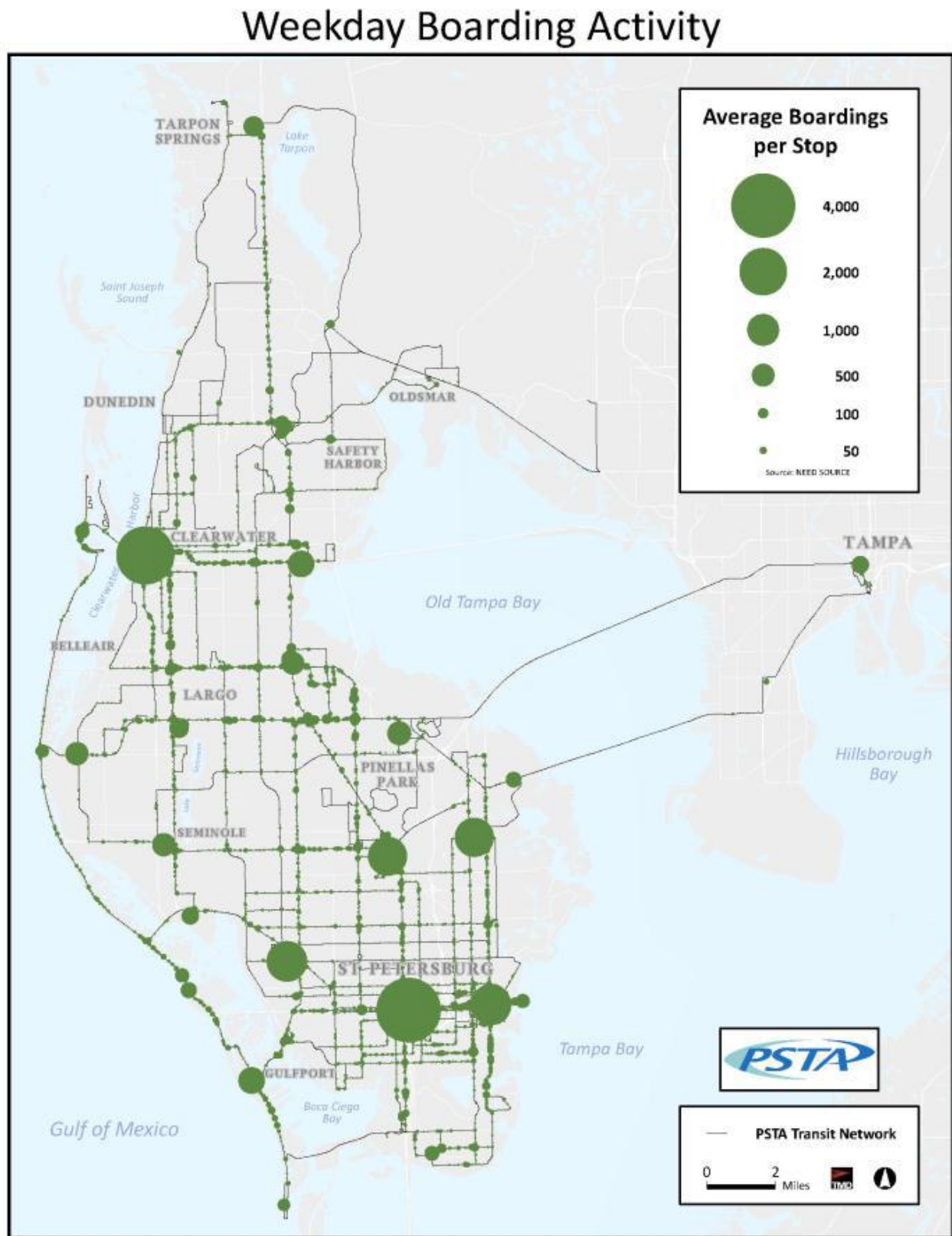
### **RIDERSHIP BY STOP**

The average number of weekday boardings by stop across the PSTA system is shown in Map 15. The circle sizes represent the amount of boarding activity at the stop on an average weekday, with larger circles indicating a higher number of boardings.

As the two most densely populated areas of the County, the volume of boarding activity was greatest in downtown St. Petersburg and downtown Clearwater, particularly around St. Petersburg's Williams Park and Clearwater's Park Street Terminal. There was also a high amount of activity at Pinellas County's major shopping centers, most of which also serve as transfer stations between PSTA routes, as well as PSTA's transfer facilities on Central Avenue and 34th Street.

Boarding activity on the weekend follows similar patterns with a somewhat stronger proportional emphasis on transfer stations than on weekdays. An important exception is Gulf Boulevard, where boarding activity was just as strong on weekends as on weekdays. See the Appendix for detailed ridership maps of Saturday and Sunday service.

Map 15: Weekday Boarding Activity (Source: PSTA Passenger Counts, 2/2012-6/2012)



## RIDERSHIP BY TIME PERIOD

Four specific time periods were used for this analysis:

- AM Peak: 6:00 AM – 8:59 AM
- Midday: 9:00 AM – 2:59 PM
- PM Peak: 3:00 PM – 5:59 PM
- Evening: 6:00 PM – 5:59 AM

**Figure 3: Weekday Passenger Boardings by Time Period**

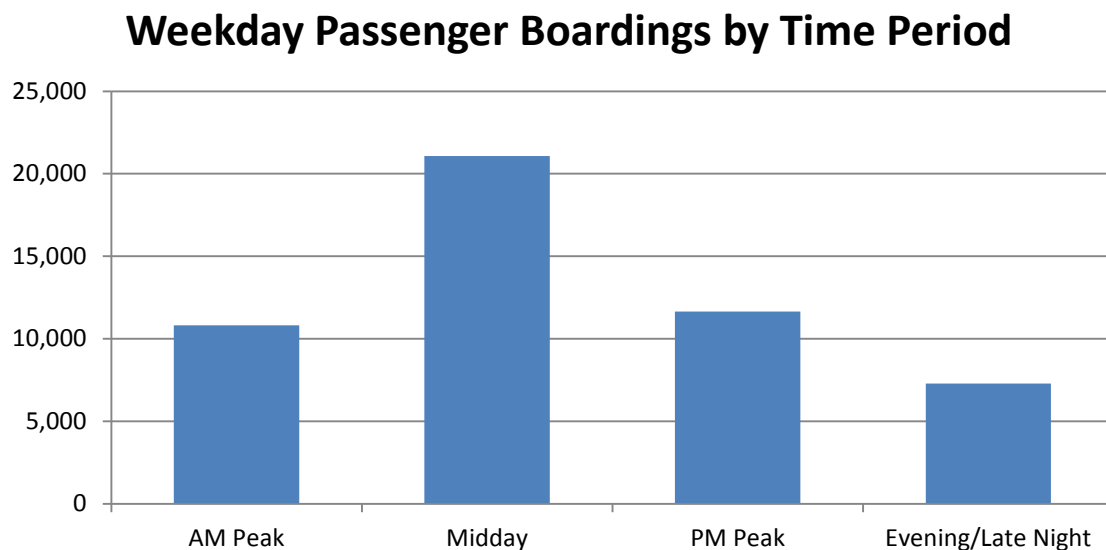


Figure 3 illustrates the distribution of ridership by time period across the system on the average weekday. PSTA ridership demonstrated consistency in both peak travel periods, a notable level of midday boardings, and an evening period with a lower intensity of boarding activity. Midday ridership was the strongest at 21,082 passenger boardings, the AM Peak generated 10,819 boardings, the PM peak generated 11,656 boardings, and the evening period generated 7,293 boardings. These temporal trends indicate strong levels of all-day ridership, rather than ridership centered around a morning and evening commute.

## RIDERSHIP BY ROUTE

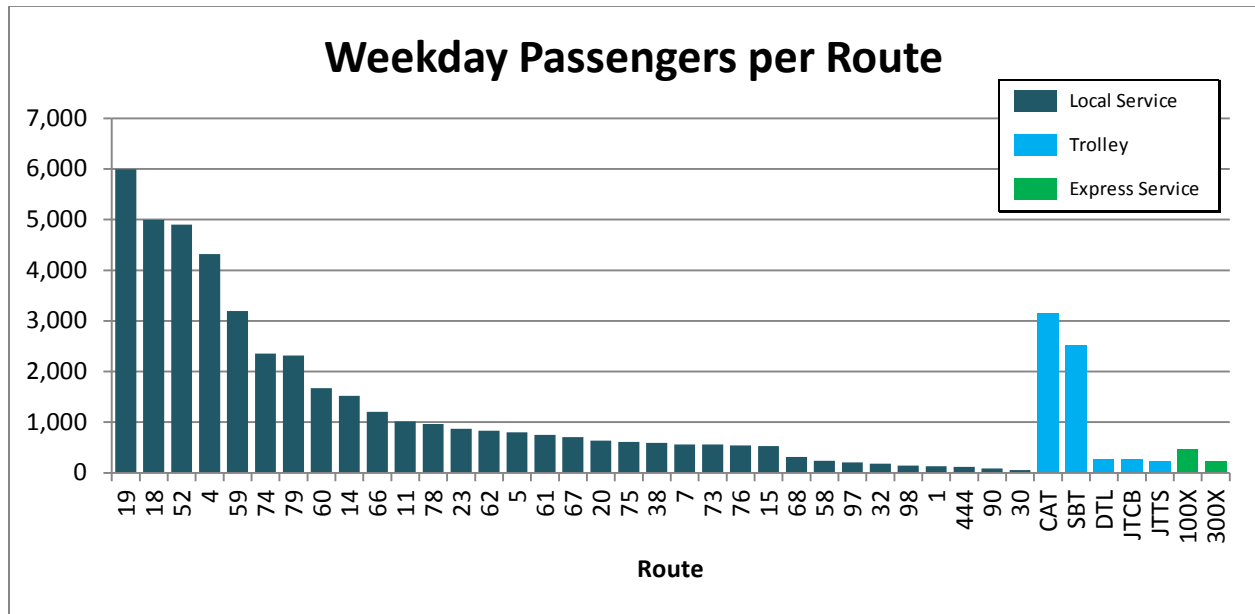
### ROUTE LEVEL

Figure 4 illustrates the distribution of weekday system ridership by route. By passenger boardings, Routes 19, 18, 52, 4, and 59 were strongest, together composing nearly half of all system ridership. There were reasonably strong patterns dictating the amount of ridership a route generates. Route 19's long coverage area and its service to many of the County's major shopping centers and transfer points were contributing factors to its high ridership, generating 5,991 daily boardings. Routes 18 and 52 connect Clearwater to St. Petersburg, and serve many medical facilities, large shopping centers, and social service providers in between. Route 4 performed well by providing service along St. Petersburg's 4th Street, which features a high level of development density along its length.

## PSTA COMMUNITY BUS PLAN – FINAL REPORT

While the rankings did not change substantially for weekend ridership by route, the most prominent difference was the relative strength of the trolleys compared to regular local service. While larger ridership decreases are typical among the local routes, the Suncoast Beach Trolley ridership increased by 253 passenger boardings on Saturday and the Central Avenue Trolley only fell by 160 boardings. On Sunday, the trolleys were the strongest services operated across the entire system.

**Figure 4: Weekday Passengers per Route**



## KEY CORRIDORS

In addition to connectivity between major destinations, strong performance was seen on routes serving mixed use development corridors with higher densities (see Table 6). Of the aforementioned routes, Route 19 serves the prominent US Highway 19 corridor, with Route 18 serving Seminole Boulevard and Route 52 serving East Bay Drive. The Central Avenue Trolley serves the densely developed Central Avenue corridor.

Most often in transit development, longer routes tend to have sections that perform very well in addition to sections that perform poorly. It is useful to analyze ridership by route segment to determine which route sections are performing the strongest. The three highest-performing performing segments are within Routes 4, 18 and 60.

Table 6: Key Route Segments by Boarding Activity

Route	Segment	Weekday Boardings
4	Williams Park to Gateway Mall	1,756
18	Largo Mall to Park Street Terminal	1,709
60	Park Street Terminal to Clearwater Mall	1,547
19	Grand Central Station to Shoppes at Park Place	1,485
4	39 <sup>th</sup> Avenue S & 6 <sup>th</sup> Street S to Williams Park	1,230
52	PSTA Facility to US 19	1,207
19	Westfield Countryside to Tarpon Mall	1,185
59	Largo Mall to PSTA Facility	1,150
CAT	Grand Central Station to Williams Park	1,020
18	Grand Central Station to Williams Park	978

## HOW CUSTOMERS USE THE PSTA SYSTEM

### AVERAGE PASSENGER TRIP LENGTH

The average passenger journey length is 5.2 miles for weekday local service, increasing slightly to 5.4 miles on Saturday and 5.7 miles on Sunday. The weekday-only express service to Tampa has a longer than average trip length of 12.4 miles. Trolley service, on the other hand, sees average trip lengths of only 4.2 miles on weekdays, 4.6 miles on Saturdays, and 4.7 miles on Sundays (see Table 7). All of these longer average trip lengths are not surprising given the relatively infrequent level of service across the network; higher frequencies invite shorter trip making.

Trip length varies considerably by route, with routes serving less dense areas in the northern parts of Pinellas County like Routes 19, 62, and 66 having longer average trip lengths. Conversely, Route 32 serving downtown St. Petersburg and Route 60 serving central Clearwater have short average trip lengths.

Table 7: Average Passenger Trip Length by Transit Mode and Day Type

Service Type	Average Passenger Trip Length by Service and Day		
	Weekday	Saturday	Sunday
Local	5.2	5.4	5.7
Trolley	4.2	4.6	4.7
Express	12.4	(N/A)	(N/A)

### TRANSFER ACTIVITY

The following table shows the most frequent transfer combinations for passenger survey respondents making two and three transfers. Note that records reflecting two-transfer activity with less than 5 counts and records reflecting three-transfer activity with less than 2 counts were excluded from the table below (see Table 8).

Table 8: PSTA Transfer Activity

# of Transfers	Transfer Combination	Number of Counts
<b>One Transfer</b>	Route 52 to Route 19	93
	Route 18 to Route 59	68
	Route 4 to Route 59	62
	Suncoast Beach Trolley to Central Avenue Trolley	52
	Route 52 to Route 18	52
	Route 60 to Route 19	51
	Route 14 to Route 19	48
	Route 19 to Central Avenue Trolley	48
	Route 4 to Central Avenue Trolley	47
	Route 66 to Route 52	44
<b>Two Transfers</b>	Route 4 to Route 74 to Route 19	12
	Route 19 to Route 74 to Route 4	8
	Suncoast Beach Trolley to Route 60 to Route 19	7
	Route 4 to Route 18 to Route 19	6
	Route 18 to Route 60 to Route 19	6
	Route 11 to Route 20 to Route 4	5
	Route 4 to Route 59 to Route 79	5
	Route 75 to Route 79 to Central Avenue Trolley	5
<b>Three Transfers</b>	Route 5 to Route 7 to Route 11 to Route 4	2
	Route 15 to Route 5 to Route 59 to Route 32	2
	Suncoast Beach Trolley to Route 68 to Route 18 to Route 74	2
	Route 11 to Route 4 to Central Avenue Trolley to Route 79	2
	Route 66 to Route 61 to Route 18 to Route 59	2
	Route 5 to Central Avenue Trolley to Route 20 to Route 7	2
	Route 66 to Route 19 to Route 78 to Route 60	2

Several general conclusions about PSTA transfer activity can be drawn based on the results of the transfer analysis:

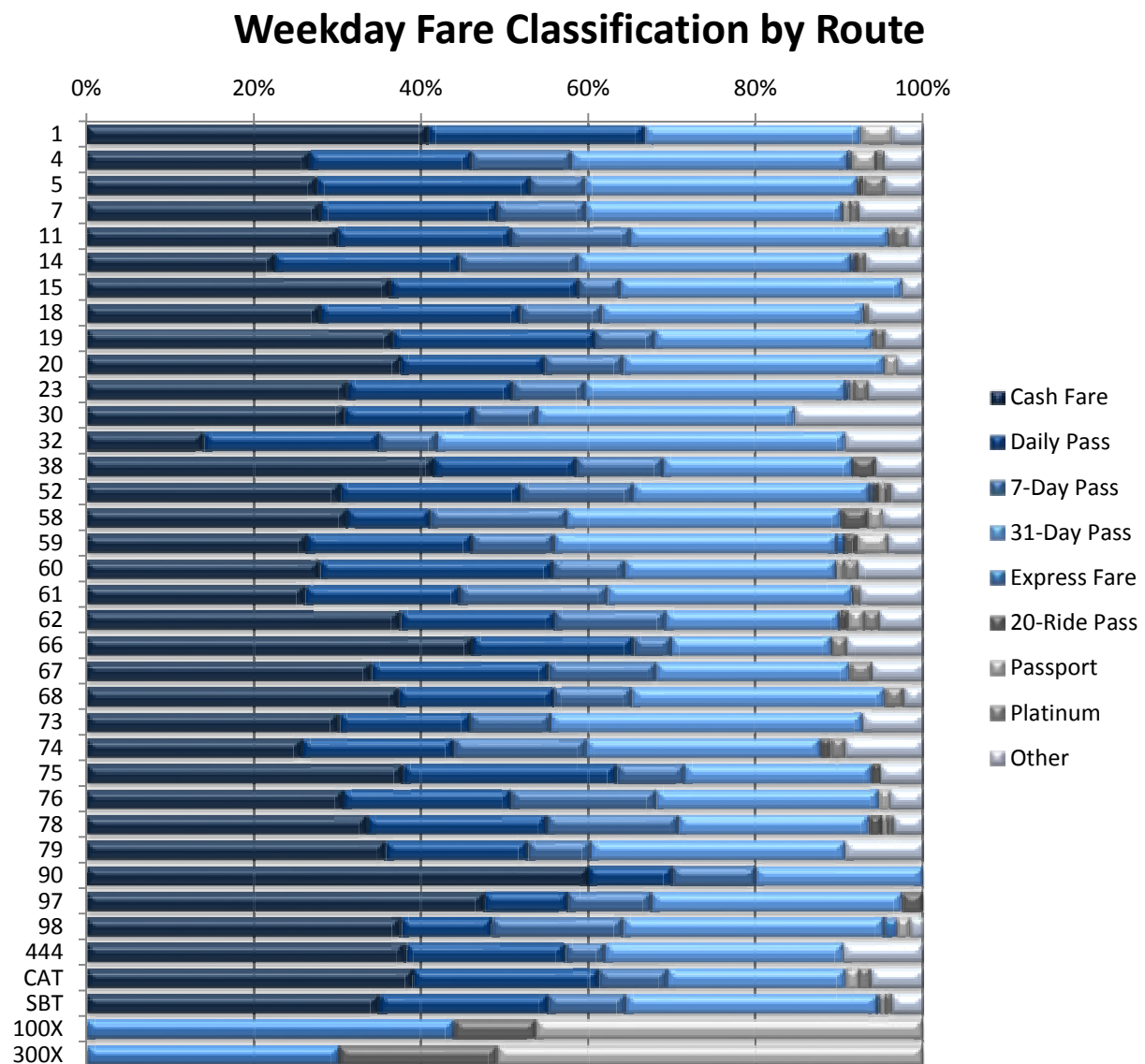
- The five PSTA routes that experience the largest volume of transfer activity include Routes 4, 18, 19, Central Avenue Trolley, and 52.
- The top five route combinations that experience the highest volume of one-transfer activity for weekday, Saturday, and Sunday service include:
  - Route 19 and Route 52 (93)
  - Route 18 and Route 59 (68)
  - Route 4 and Route 59 (62)
  - Suncoast Beach Trolley to Central Avenue Trolley (52)
  - Route 52 and Route 18 (52)

In the absence of the ability to schedule timed transfers, maintaining high service frequencies on routes exhibiting the greatest amounts of transfer activity is the most effective way to reduce passenger wait time and decrease total passenger travel time and increase network connectivity.

## FARE CLASSIFICATION

PSTA routes receive a relatively even distribution of fare types, with cash fares and 31-day pass use being strongest. Increased use of multi-day fare passes is generally indicative of reliable frequent use of the system (see Figure 5).

Figure 5: Fare Classification



## SERVICE PERFORMANCE

The performance of PSTA's system was evaluated using a number of measures designed to gauge levels of productivity and financial effectiveness. Assessment of service performance provides an opportunity to evaluate routes and gain a better understanding of their individual function within the system. Findings from the service performance analysis were used to identify opportunities for route restructuring and investment, and provide a broader understanding of how transit currently functions in Pinellas County.

- **Productivity:** Measures route level service effectiveness using the following metrics.
  - **Passenger Boardings per Revenue Vehicle Hour:** The number of unlinked passenger boardings (ridership) generated per revenue hour of service operated. This measure shows ridership generated per unit of service provided by PSTA.
  - **Passenger Miles per Revenue Hour:** Similar to the previous metric, but adds the influence of passenger trip lengths. This is a typically productivity measure used by airlines because it allows productivity comparison across types of services and trips.

Both metrics are useful since examining raw ridership figures alone does not necessarily provide an accurate assessment, depending on a route's distance and turnover rate. Higher productivity routes are frequently the best candidates for further service investment.

- **Financial Effectiveness:** Compares passenger farebox revenue (operating revenue) with operating cost using the following metrics:
  - **Farebox Recovery Ratio:** Ratio of operating revenue to operating costs. Subsidized services have farebox recovery ratios below 100 percent, while profitable services are over 100 percent. This measure is also referred to as the operating ratio.
  - **Net Subsidy per Passenger Boarding:** Measures the average passenger fare less the operating cost per unlinked passenger boarding. This metric indicates the amount of public subsidy necessary to support each passenger trip.

Together, these metrics address how well a route's revenues offset its costs. It is important to note that these values do not necessarily indicate the efficiency of a system as a whole due to revenues from other sources such as advertising and other external community funding.

## SERVICE PRODUCTIVITY

### PASSENGER BOARDINGS PER REVENUE HOUR

On the whole, system-wide productivity is moderate at 25.9 passenger boardings per revenue hour, with higher passenger boardings per revenue hour along shorter, denser routes, most notably Route 60 in Clearwater. There is a rather high level of variation from the system average, with east-west routes serving the city centers performing noticeably better in this metric than longer distance commuter-focused routes (see Figure 6 and Map 16).

**Table 9: Passenger Boardings per Revenue Hour by Mode Type**

	Weekday Passenger Boardings	Revenue Vehicle Hours	Passenger Boardings per Revenue Vehicle Hour
<b>Local</b>	43,927	1,680	26.2
<b>Trolley</b>	6,422	250	25.7
<b>Express</b>	680	40	16.9
<b>All Routes</b>	<b>51,029</b>	<b>1,970</b>	<b>25.9</b>

Figure 6 illustrates weekday route performance. The two clear leaders in local service passenger boardings per revenue hour are both Clearwater-centric routes operating east to west. Not only do Route 60 and 78 operate in rather dense corridors, but their routes are relatively short as well, making for a very high rate of boardings per hour. Weekend performance across the system does not show any substantial variation from weekday performance (see Appendix for individual route performance).

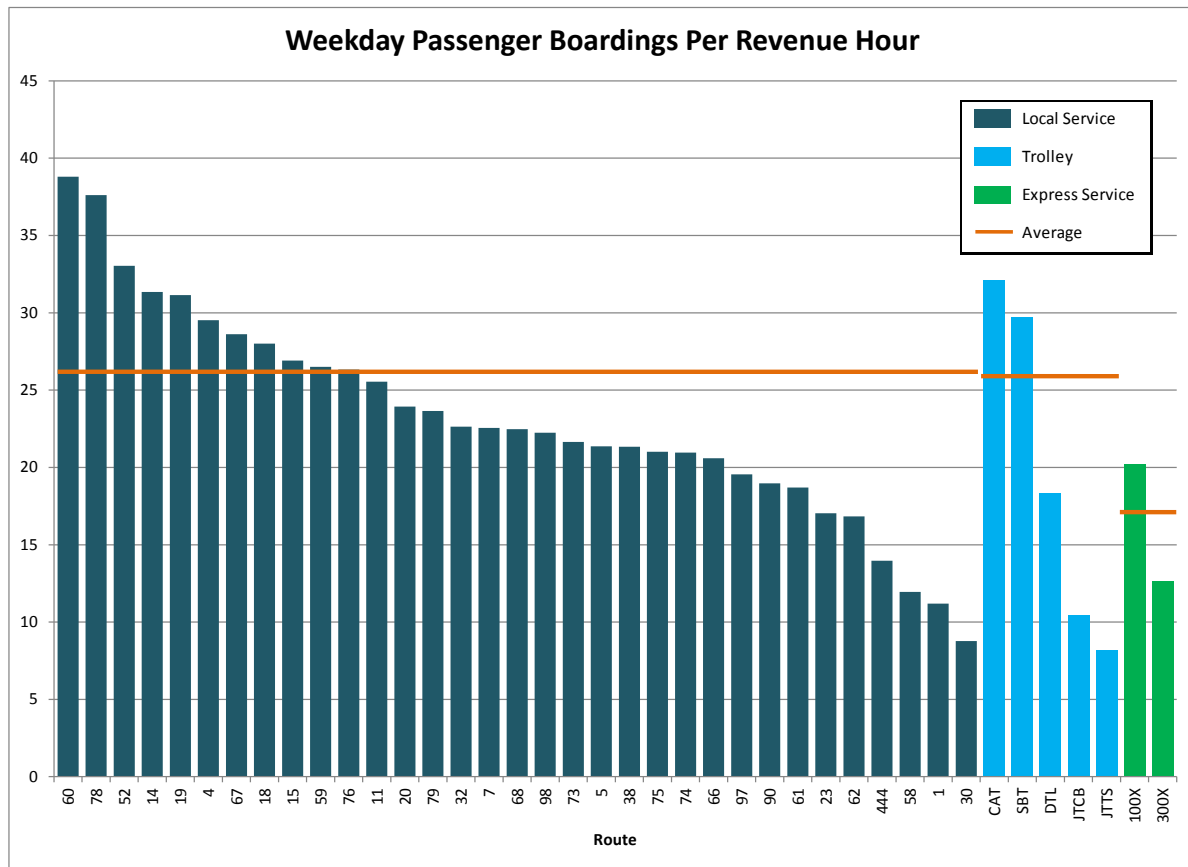
When viewed on a finer scale, service productivity varies substantially within individual routes because of the variances in density and market type across the County and the long distances operated by many routes like Route 19. Routes operating along denser mixed-use corridors with more historically transit-friendly demographic factors produce PSTA's strongest route segments, namely St. Petersburg's Central Avenue and 4th Street as well as the east-west routes serving downtown Clearwater. In contrast, route segments around less densely populated, more strongly auto-oriented areas perform poorly in comparison. An example of this are segments of routes serving the Carillon Business Park in the Gateway area, where all but one route operates with fewer than 20 passenger boardings per revenue hour in its vicinity.

While in some instances it is important to continue to operate poorly-performing routes to maintain transportation connectivity for certain communities, a substantial amount of cost savings can be achieved by switching to smaller vehicles or by operating a flex service in these areas similar to those recently implemented in North County.

Map 16: Weekday Passenger Boardings per Revenue Hour (Source: PSTA Passenger Counts, 2/2012-6/2012)



Figure 6: Weekday Passenger Boardings per Revenue Hour



## PASSENGER MILES PER REVENUE HOUR

Instead of examining how many passengers board per revenue hour, this metric measures service consumption per revenue hour (airlines use this type of measure in assessing route performance). Viewing passenger ridership as a function of distance rather than boardings alone allows for comparison of different types of service. For instance, longer-distance routes are now presented using a transit analogue for the Vehicle Miles Traveled (VMTs) metric measured for other modes. Express routes perform especially well here due to their longer passenger distance and lower passenger turnover as shown in Table 10:

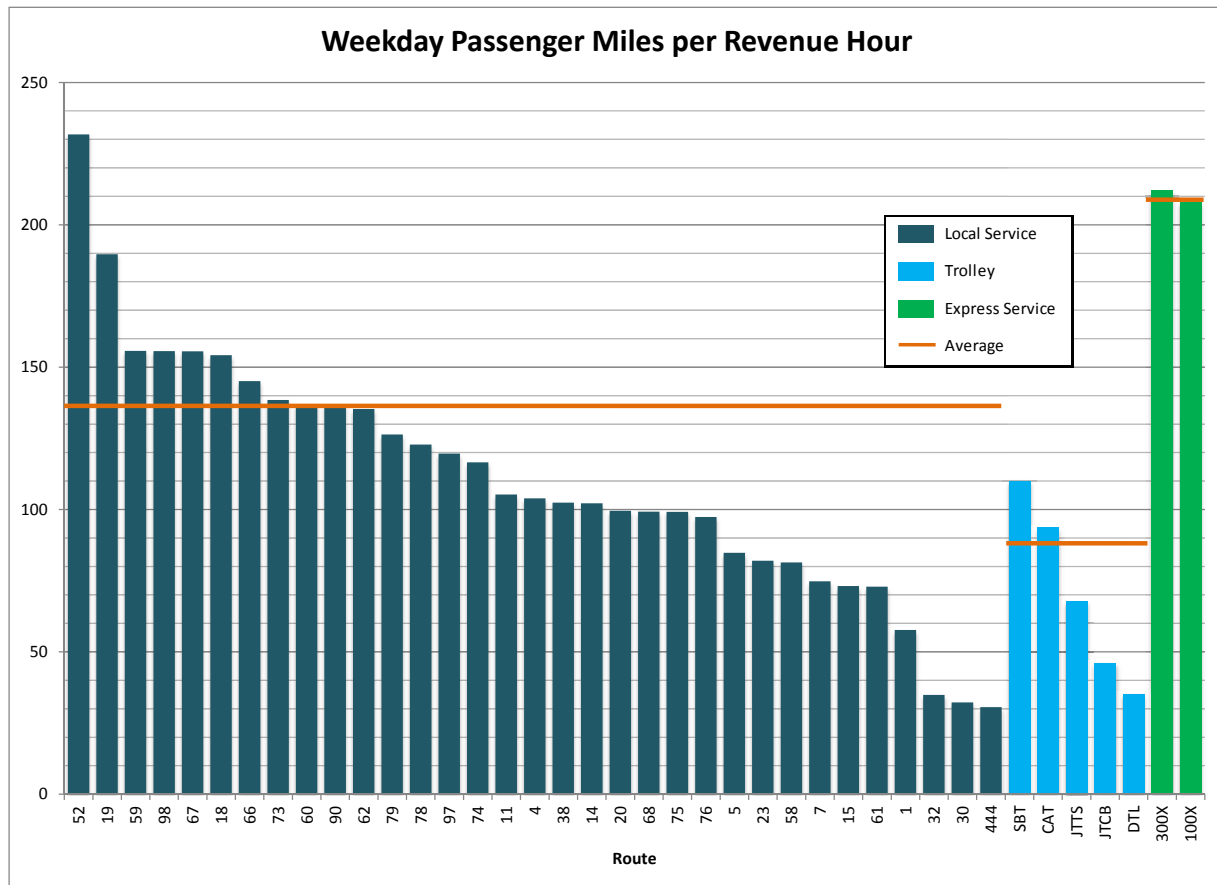
Table 10: Weekday Passenger Miles per Revenue Hour

	Passenger Miles	Revenue Hours	Passenger Miles per Revenue Hour
<b>Local</b>	229,989	1,680	136.9
<b>Trolley</b>	22,013	250	88.2
<b>Express</b>	8,456	40	209.7
<b>All Routes</b>	<b>260,458</b>	<b>1,970</b>	<b>132.2</b>

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The longer routes are among the most efficient under this metric, with the Clearwater-to-St. Petersburg Route 52 and the St. Petersburg-to-Tarpon Springs Route 19 carrying the greatest number of passengers the farthest for every hour the routes are in service (higher value in removing other mode VMTs). Despite their lower number of passenger boardings, the two Tampa express routes are also system leaders in passenger miles. Weekend performance among the local services and trolleys decreases slightly in spite of the slight increase in average trip length due to a lower overall number of passenger boardings (see Figure 7).

**Figure 7: Weekday Passenger Miles per Revenue Hour**



## FINANCIAL EFFECTIVENESS

### FAREBOX RECOVERY

Farebox recovery is very closely linked to the passenger boardings per revenue hour metric. The greater the number of fare-paying passengers that board every revenue hour, the less subsidy is required to support operation. At 32 percent, PSTA has a weekday farebox recovery ratio on par with those of other systems of its market area and scale. Route 60 is the system leader in farebox recovery, while the Jolley Trolley Coastal Route only receives six percent of its operating costs back in revenues. Weekend farebox recovery is lower due to the lower level of ridership relative to service provided (see Figure 8 and Map 17).

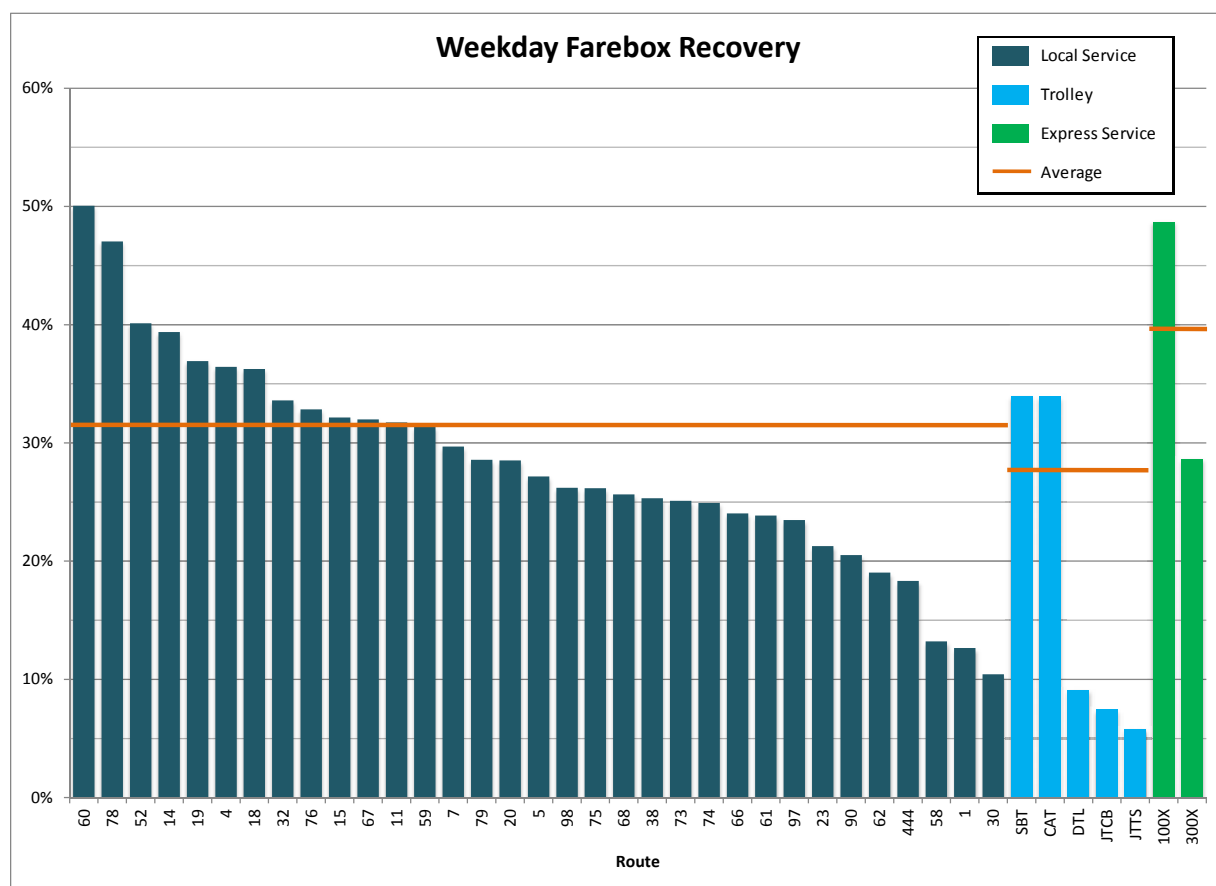
These values have been calculated using values for the average fare paid for both local and express services and operating cost information based on the FY 2012 operating budget. The local route average fare was \$1.06 as a

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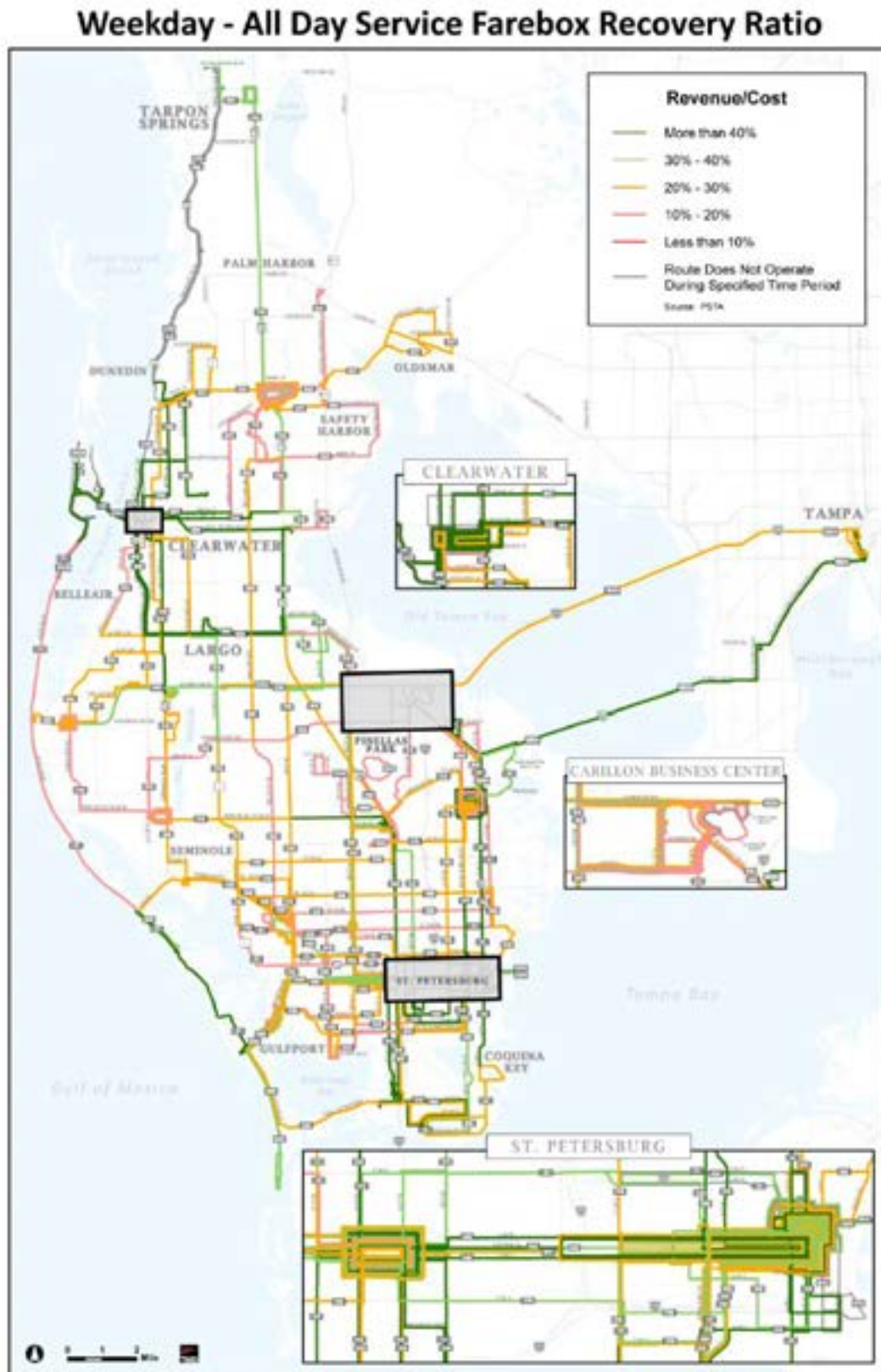
result of a variety of discounted fare options for seniors, youth, and frequent commuters. The longer-distance express routes had an average fare of \$2.52. The trolley services both operated by PSTA directly and privately with PSTA assistance feature different fare policies, with the average fare per boarding calculated from PSTA revenue data to be \$0.45 for St. Petersburg's Downtown Looper, \$0.51 for Clearwater's Jolley Trolley, \$0.83 for the Central Avenue Trolley, and \$1.19 for the Suncoast Beach Trolley.

The farebox recovery ratio for each route when viewed by segment indicates that route financial efficiency grows greater with closer proximity to the densest areas of the County (see Map 17). Route segments serving the Park Street Terminal and Williams Park perform considerably better than more inland route segments serving less dense areas such as those found in Pinellas Park, Seminole, and Largo. With the exception of the unserved areas of Belleair Beach and Belleair Shore, the Suncoast Beach Trolley displays one of the greatest farebox recovery levels in the system. Inland routes serving areas with a smaller proportion of commercial activity like Route 30 and more isolated commercial developments like Route 58 performed poorly when compared to the rest of the system. Routes with a lower than average system farebox recovery ratio warrant review in order to improve individual route performance.

**Figure 8: Weekday Farebox Recovery**



Map 17: Farebox Recovery (Source: PSTA Passenger Counts, 2/2012-6/2012)



### NET SUBSIDY PER PASSENGER BOARDING

The subsidy per passenger boarding metric more clearly highlights the spending levels required to operate service as a function of passenger boardings. More productive routes require a smaller investment than less productive routes. The amount of the subsidy is inversely proportional to the farebox recovery ratio.

PSTA's weekday per-passenger subsidy averaged \$2.31 across the system, with the express services requiring an average \$3.86 contribution per passenger boarding compared to \$2.27 for local services. Route 60 had the lowest subsidy per boarding, requiring an additional \$1.06 per passenger, while Route 30 required an additional \$9.10 per passenger to defray its operating costs. As with the farebox recovery ratio, performance diminished somewhat on the weekends compared to weekday values due to a lower overall number of boardings per revenue service hour.

The subsidy per passenger boarding performance map shown below reflects the findings shown in the earlier farebox recovery ratio map, namely that routes in denser areas require a smaller subsidy for every passenger boarding than routes serving less dense areas. The Clearwater and downtown St. Petersburg routes are again the best performers, while Route 58 across the central area of the County, Route 66 through Palm Harbor, and Route 62 along Coast Boulevard in Safety Harbor require substantial subsidies relative to the passenger boardings through those areas (see Map 18).

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Map 18: Subsidy per Boarding (Source: PSTA Passenger Counts, 2/2012-6/2012)



## SERVICE QUALITY/CUSTOMER EXPERIENCE

While it is naturally beneficial to transit agencies to maintain an efficient transit system from the perspectives of ridership and cost, it is equally important to maintain a system that provides a high-quality ridership experience for its customers. To that end, this section presents a number of service quality metrics:

- **Passenger Wait Time** – Service Frequency
- **Travel Time** – Operating speed
- **Service Reliability** – On-time performance
- **Access to Service** – Stop spacing and coverage

These metrics all measure factors that affect a customer's perception of service quality, and it is critical to ensure that passengers can expect a satisfactory transit experience to continue to make gains in ridership.

PSTA's current transit investments lean toward favoring breadth over depth, maximizing the service area coverage, with most routes operating at relatively low frequencies. While this approach is important in providing service to as many Pinellas County residents and businesses as possible, it results in incrementally higher operating costs with lower fare revenue levels to offset them. With respect to the shape of the network, PSTA aims to strike a balance between efficient, grid-like service along corridors and connecting service at a number of hubs across the County, generally located at shopping centers featuring bus shelters and, increasingly, real-time bus arrival time displays. Generally, a grid-like network is most efficient when transfers are timed to occur at intersections instead of deviating to transfer stations; current PSTA service frequencies are not high enough to guarantee timely transfers at individual intersections.

## PASSENGER WAIT TIME (FREQUENCY)

Service frequency has a direct relationship with the amount of time a customer spends at a stop waiting for service. Increasing service frequencies results in shorter wait times, increasing customer confidence in the service provided.

Frequencies of ten or fewer minutes are considered to be the cornerstone for spontaneous transit use, allowing for customers to simply arrive at a stop at their own convenience. This level of spontaneity decreases as frequencies increase, with only half of passengers arriving randomly with 15 minute frequencies and considerably fewer with longer frequencies. Furthermore, total passenger travel time is a sum of both a passenger's wait time and vehicle travel time, so any steps taken toward minimizing wait time will result in an improved perception of transit as an efficient mode of travel (see Figures 9, 10 and Map 19).<sup>1</sup>

At present, PSTA has seven routes that operate with frequencies of 20 or fewer minutes during weekday peak periods decreasing to two routes off-peak. Eighteen routes operate with frequencies greater than 30 minutes to 60 minutes during peak periods, while three routes offer peak frequencies in excess of 60 minutes. Increasing frequencies along major ridership corridors would likely do much to improve customer satisfaction with service.

Figure 9: Frequency Levels

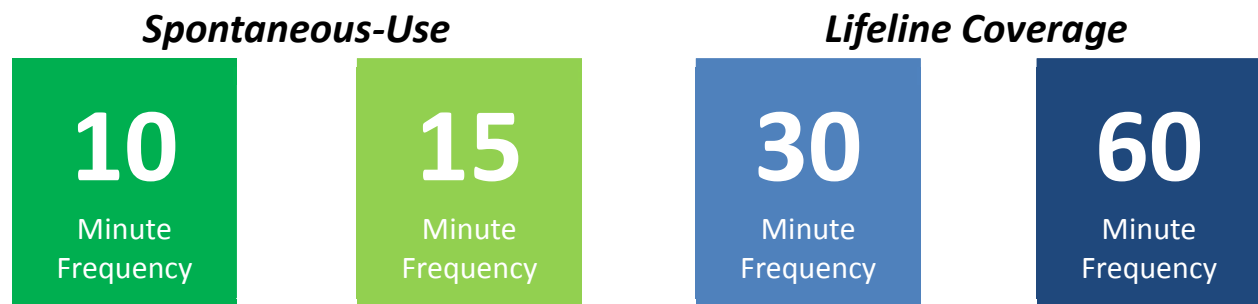
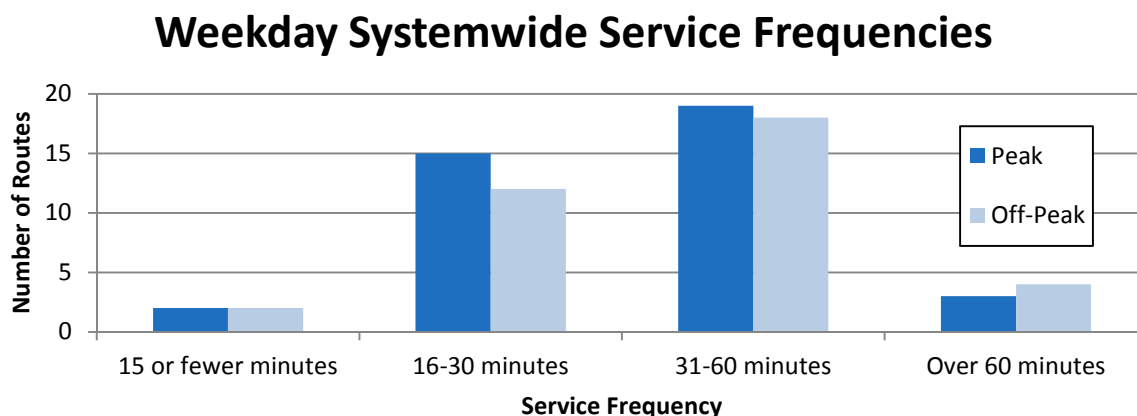
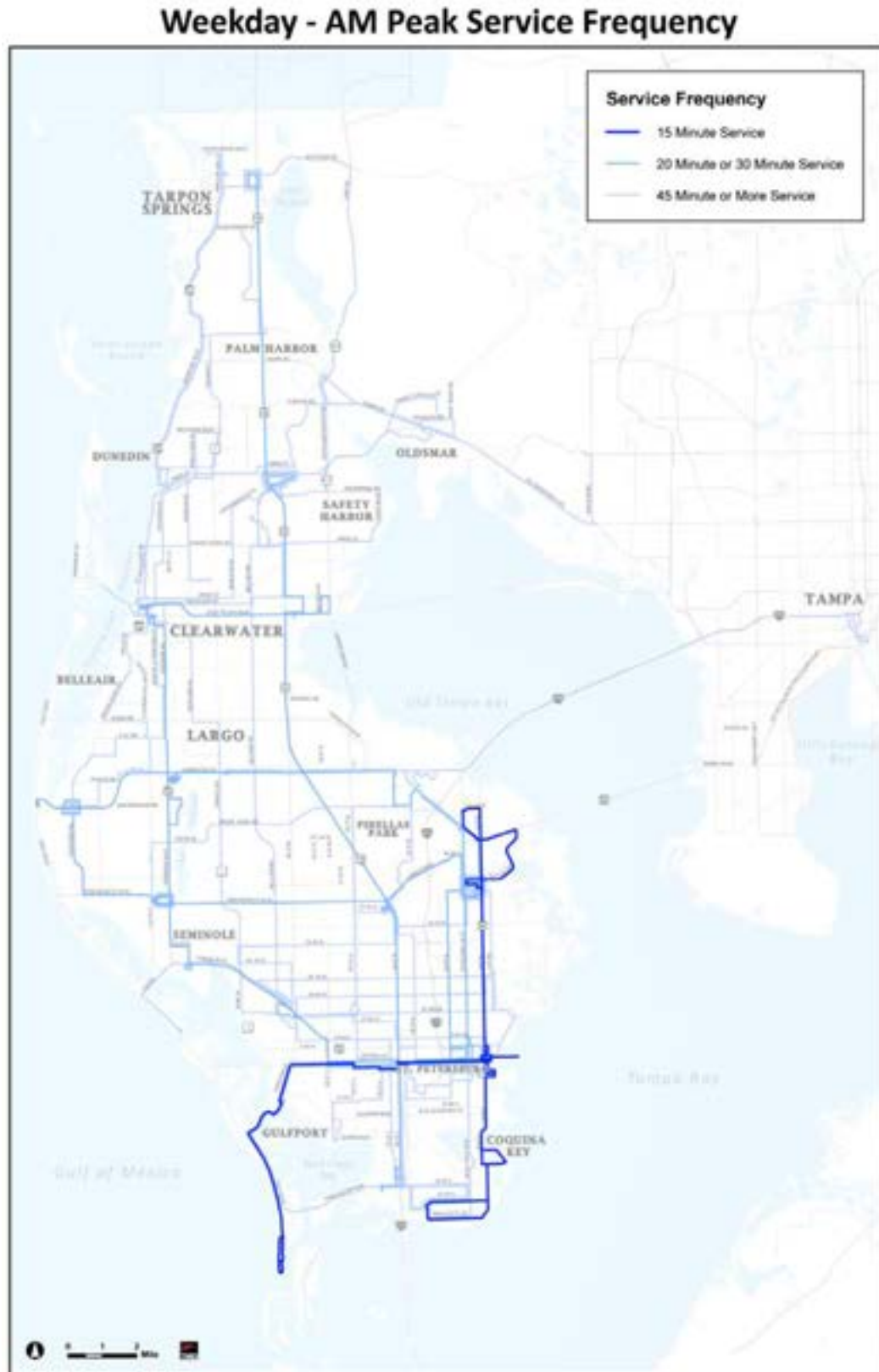


Figure 10: Weekday Systemwide Service Frequencies



<sup>1</sup> While new smart phone apps providing real-time transit schedule information allow customers to time their arrivals, they do not address the limited times that transit travel is possible with infrequent service and the reliability issue with street transfer waits.

Map 19: Weekday AM Peak Service Frequency

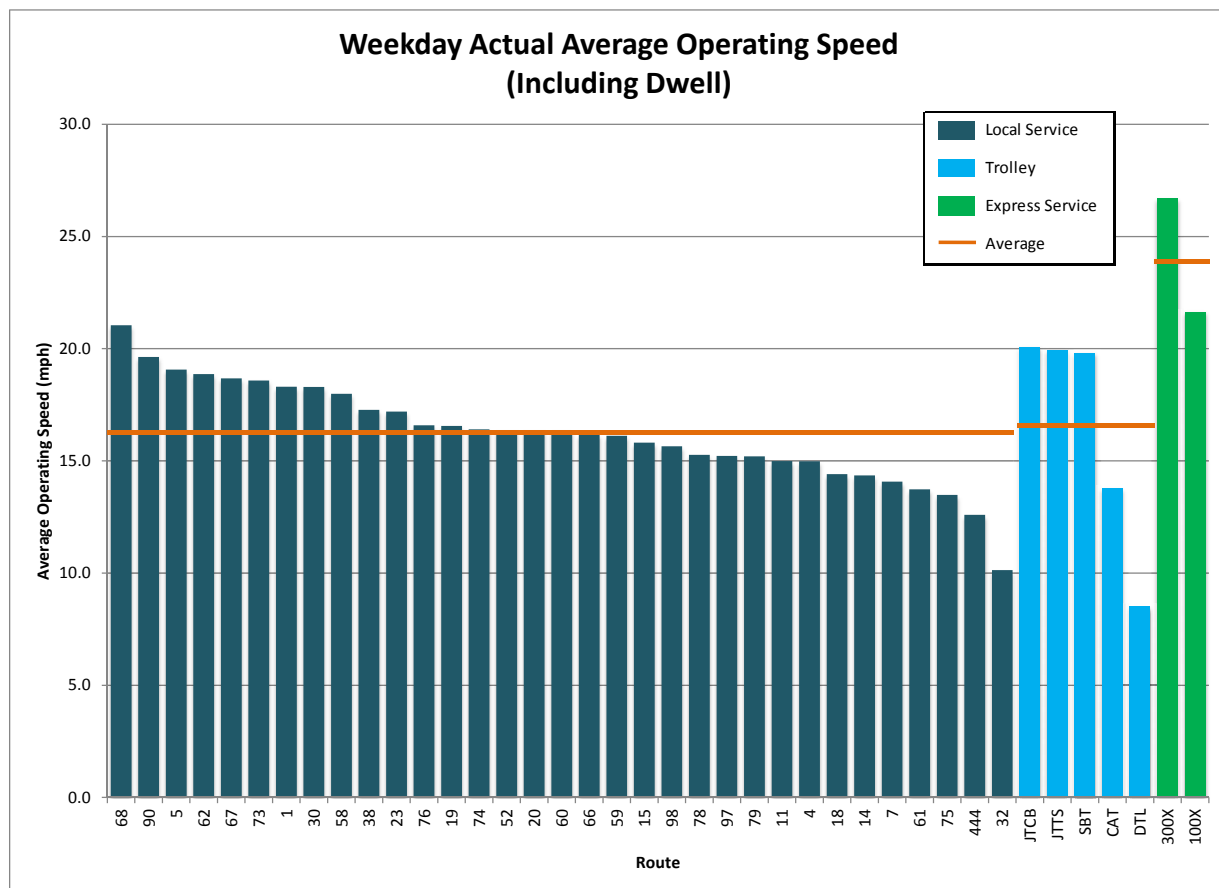


## TRAVEL TIME

Operating speeds make up another sizeable portion of the customer’s overall travel time. Since research shows that travel delays are perceived at an exaggerated rate across all modes, customer satisfaction is strongly influenced by reduced operating speeds due to delay, in turn decreasing short and long term ridership.

The system average weekday operating speed when accounting for dwell time was a high 16.7 mph, with local routes averaging 16.2 mph, trolleys averaging 16.4 mph, and express routes averaging 24.2 mph. Locally, this speed can be largely attributed to the area’s lower density, allowing for buses to travel longer between stops. The express routes are among the strongest performers in the system with respect to operating speed due to their longer-distance, limited-stop operation, but the Gulf Boulevard routes also perform considerably greater than the system average, with the Suncoast Beach Trolley and Routes 68 and 90 being the three fastest locally-oriented routes. There was a high level of consistency in operating speed as well, with Route 32 and the Downtown Looper in denser, higher-traffic St. Petersburg being among the only significant underperformers (see Figure 11).

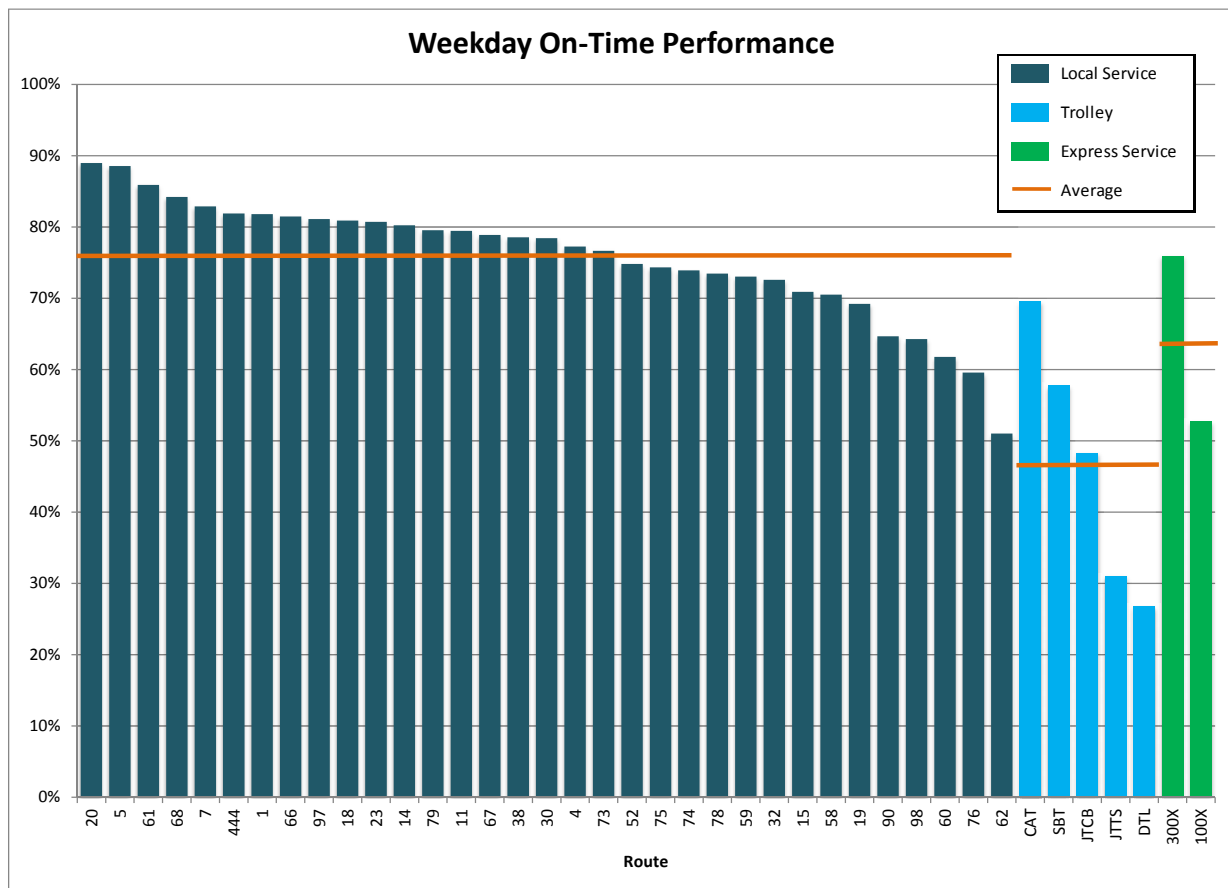
**Figure 11: Weekday Actual Operating Speed by Route**



## ON-TIME PERFORMANCE

Strong on-time performance builds customer confidence in the service reliability of a system. PSTA’s weekday systemwide on-time performance is 72 percent, which is defined as being no more than five minutes late to less than one minute early. Local routes feature the strongest rate of schedule adherence at 76 percent, while express routes average 64 percent and the trolleys 47 percent. Schedule adherence issues are generally manifested through a combination of early or delayed departures, inconsistent line pacing, issues with the calibration of segment running times, and a lack of a round overall trip cycle time (see Figure 12).

**Figure 12: Weekday On-Time Performance**



## KEY SERVICE FINDINGS

As with any system of its size, PSTA has a number of routes that perform very well and a number that perform less well. By increasing investment in its best-performing routes while examining alternative means of providing mobility along its poorer performing routes, PSTA can move into the future with continued increases in ridership and increased operational efficiencies while remaining a responsible steward of taxpayer resources.

Key observations from this analysis are the following:

- The majority of system ridership continues to be generated by PSTA’s local routes, carrying 86 percent of weekday ridership. Trolley services are responsible for 13 percent of weekday ridership while express services make up only one percent.
- PSTA’s “core network” of just seven routes (Routes 4, 18, 19, 52, 60, and the Central Avenue and Suncoast Beach Trolleys) is responsible for 71 percent of the system’s ridership.
- 48 percent of PSTA trips start in St. Petersburg, while 19 percent of trips start in Clearwater.
- Midday ridership is nearly equal to the total ridership for the morning and evening peak periods, suggesting demand for all-day service. It is likely that increased midday frequencies along higher-performing routes would increase ridership.
- Average trip length is over five miles on weekdays, indicating potential appeal for limited-stop service along major corridors. Increased frequencies will lead to more short distance transit travel with higher cost effective seat turnover.
- A wide variety of fare types are received regularly, with cash fares and 31-day passes being the most frequent methods of payment. The high proportion of cash fares may indicate a greater market for daily passes given their smaller relative share.
- Transfer activity is very well-distributed thanks to the large geographical size of the service area. The Central Avenue Station and Park Street Terminal lead the system in passenger boarding activity.
- Very few routes operate with frequencies conducive to spontaneous use. Increasing frequencies along strong transit corridors is a reliable way to increase ridership and customer satisfaction.

# STAKEHOLDER OUTREACH

## INTRODUCTION

The PSTA 2040 Bus Transit Plan Public Involvement Plan was a tiered and staged outreach process. By providing accessible information to stakeholders and the general public, a more cohesive, grassroots approach was developed. Information was provided and split into four phases:

- Project introduction.
- Share findings, development strategies and goals.
- Share draft recommendations.
- Share final recommendations.

Public engagement is essential for the creation and improvement of a transit plan. Thus, a series of meetings and information sessions were hosted throughout the County. Activities that presented information to various community groups included one-on-one interviews with PSTA board members, Stakeholder Committee meetings, newsletter and project website, general public outreach, as well as a Speakers Bureau. The ultimate purpose of these outreach methods was to increase public engagement and sense of ownership. A list of all outreach events is included in the Appendix.

## PSTA BOARD OF DIRECTORS INTERVIEWS

One-on-one interviews with board members were undertaken in September 2012 and included Jeff Danner, Wengay Newton, Julie Bujalski, Bill Jonson, Deborah Kynes, Darden Rice, Neil Brickfield, Ken Welch, and Mark Deighton. As members of the PSTA Board, these representatives are a reflection of the agency as well as different parts of PSTA's service areas. Four key themes emerged from the interviews and were used for the development of project goals and objectives:

1. **Support Existing and Future Market Needs** – The network needs to be responsive to the travel needs of the County today and into the future for transit to be a competitive travel mode.
2. **Build on the Success of the Trolleys** – The unique product offered by the trolley services has exceeded expectations.
3. **Match Service to Market Demand (Flexible Services)** – Parts of the County are difficult to successfully serve with fixed-route transit; continued expansion of the flexible Connector service and more locally-focused community circulator services could better meet the needs of these areas.
4. **Improve the Current Bus Network** – PSTA's existing resources should be better distributed according to the demand for transit across Pinellas County.

## KEY THEMES

### SUPPORTING EXISTING AND FUTURE MARKET NEEDS

PSTA is a strong organization with a forward-thinking vision. To continue meeting the needs of Pinellas County it is necessary to give consideration to how its service interacts with the community. The bus transit system has

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considerable potential to better meet the needs of today's residents and visitors while also addressing the projected growth and future development of the County. Transit options and the network should respond to the specific needs of various markets through more focused outreach and partnering. There was a specific emphasis on targeting young professionals looking for a more urban lifestyle. Attracting younger generations to use alternative modes of transportation provides the potential to encourage smarter growth and regional investment.

### **TROLLEYS**

Trolleys are one of the more successful recent additions to the transit network that board members agree upon. Trolleys' success is credited to their simple, convenient, fun, and reliable service. They are fixed routes like PSTA's regular local transit services. However, it is necessary to recognize that a countywide integrated network of transit will be the key to success, and the integration of a trolley system will only succeed through strong community and agency relations along with connectivity to PSTA's other transit services.

### **FLEXIBLE OPTIONS**

Flexible services are viewed as a viable option to better serve areas of lower density in Pinellas County. An example mentioned several times was the North County Connector flex routes.

### **BUS SERVICE**

One of the most pressing issues affecting board members and the general public alike is the need to improve current bus services. Empty buses are a common sight within Pinellas County, which is viewed as indicative of a lack of ridership and weak marketing strategies. There is potential to better serve areas of higher need while also seeking alternatives to increase choice ridership. As the bus transit system currently stands, board members raised concerns about slow and indirect bus lines. A lack of coordinated transfers inconveniences passengers with long wait times, and in rare instances leaves late-night passengers stranded. This inconvenience may push PSTA riders toward other modes of transportation.

## **STAKEHOLDER COMMITTEE**

The Stakeholder Committee meetings were held in order to further develop upon the suggestions and comments provided by the PSTA Board of Directors. A number of organizations were represented, including, but not limited to, the Sierra Club, TBARTA Advisory Board, PSTA Advisory Board, Pinellas County MPO, Tampa Bay Chamber of Commerce, Clearwater Planning Department, Pinellas Park Planning Department, St. Petersburg Planning and Transportation Departments, Worknet, and the Pinellas County Housing Authority.

Two Stakeholder Committee meetings were held during the project to gather input and to present findings. After a presentation on project updates, findings, and project goals, breakout sessions gave stakeholders the opportunity to voice concerns and suggestions to consider. In order to better facilitate the breakout sessions, stakeholders were divided into three groups and asked a series of questions. Questions included but were not limited to:

- What are PSTA's primary strengths? What does PSTA do well?
- How do you see PSTA's role in the Pinellas County service area? Which market area does PSTA serve well and which can they improve on?
- What is your perception of whether PSTA uses its resources wisely (cost effectively and efficiently)? What about the public's perception?

- What does “premium transit” mean to you? Do you think it would be a benefit to the community?
- How should PSTA balance investment in the network between frequent bus transit against providing greater transit coverage in the service area? Should PSTA focus only on areas where transit can generate significant ridership and revenue or should transit be spread evenly throughout the County?

Based on the responses, three key themes emerged:

1. **PSTA Offers Suitable Passenger Amenities** – Quality and availability of amenities such as shelters, signage, and bicycle racks were noted, but with an interest in seeing these amenities expanded.
2. **More Service Needed in North Pinellas County** – northern Pinellas County is viewed as receiving less service than central and southern Pinellas County.
3. **Need to Create “Premium Transit”** – Faster and more convenient options would add greatly to PSTA’s service.

## KEY THEMES

### AMENITIES

When asked what PSTA does well, stakeholders provided positive feedback on the accessibility of amenities such as shelters, bicycle racks, and signage. Stakeholders also suggested increasing signage (including real-time next trip information) and next-stop announcements along with ensuring the comfort of passengers at bus stops through the addition of additional bus shelters. Customer experience enhancement is one of the key components to increasing ridership and populating bus transit systems.

### SERVICE TO NORTH PINELLAS COUNTY

Stakeholders focused on the relative lack of service to northern Pinellas County and its connection to the rest of the County. Land use, demographic trends and passenger dependency are all contributing factors to the lower levels of service provided to North County. There is potential to increase ridership but specific market strategies will need to be executed in order to ensure that the creation of a more effective bus route reaches its maximum potential of use.

### PREMIUM TRANSIT

Stakeholders defined “premium transit” as fast and direct transit featuring efficient interconnectivity between transportation services and an improved contribution to air quality, safety and quality of life. As many stakeholders pointed out, current bus routes often meander, adding travel time and consequently becoming a less attractive method of transportation. A specific journey identified for improvement was travel between St. Petersburg and Clearwater. Routes should be streamlined wherever practical to provide more direct service across the County.

## NEWSLETTER AND PROJECT WEBSITE

The newsletter was used as a handout during meetings that provided information on the purpose of the study, development of the plan, plan components, and the informational website. The newsletter and website provided information on the planning process to the general public, passengers, board members, and other stakeholders.

## SPEAKERS BUREAU AND GENERAL PUBLIC OUTREACH

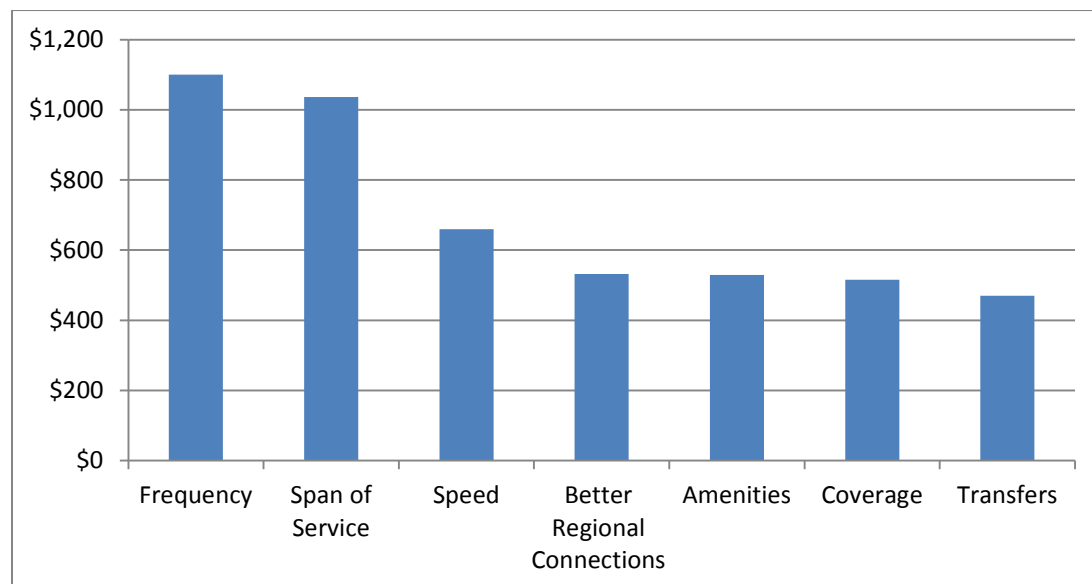
The objective of the Speakers Bureau was to provide an overview of the project to a broad range of groups using a presentation and question and answer format. Discussion at these meetings provided information on existing issues, challenges, needs, and opportunities for PSTA.

The outreach effort specific to the bus plan took place between the Fall of 2012 and Spring of 2013, and targeted groups that had significant interest in local and regional transportation initiatives and associated economic development opportunities. These included neighborhood associations, young professional and quality of life groups, government agencies, chambers of commerce, hospitality industry associations, universities, and colleges. Public outreach was also conducted with the general public, students, and current PSTA riders at community events, on college campuses, and at PSTA transfer centers.

As part of the speakers bureau and general public outreach, participants were asked to prioritize transit improvements by playing the “Get On Board!” transit game. The game consisted of distributing ten artificial dollars to each player and asking them to spend their ten dollars across seven different transit service improvements to which they would like to see resources dedicated. These improvements were service frequency, ease of transfers, span of service, service coverage, service speed, amenities, and regional connections. This would reveal each group’s preferences with respect to which aspects of transit service they would most like to see improved in the County.

More than 770 people participated in the “Get on Board!” game, letting PSTA know that the most desired improvement areas were service frequency and service span, followed by speed. Specific findings are shown in Figure 13.

**Figure 13: Get On Board Game Results**



## OUTREACH SUMMARY

The outreach efforts were successful in revealing opinions on the current state of transit service in Pinellas County as well as collecting a number of suggestions for improvement from people familiar with the system and its impact on the community. Overall, PSTA participated in 65 meetings and events and reached more than 3,300 residents, students, and business and community leaders.

Specific highlights include the following:

- Board members agree that PSTA operates good service, but feel that the system has potential to expand its role in the County. Improving community outreach efforts should help to achieve this goal.
- New partnerships and services with specific market and geographic focuses like the Jolley Trolley and North County Connector have been very successful, and there is a desire to see tailored services like these expanded upon, particularly in North County.
- PSTA is seen as providing quality amenities; however, stakeholders would like to see more signage and bus shelters to enhance the customer experience.
- More “premium transit” featuring fast, direct service is desired.
- Frequency and span of service are the most desired improvements for PSTA transit service, followed by speed.
- Bundling frequency and speed improvements alongside improvements to infrastructure and passenger amenities as part of a premium BRT or Rapid transit service is strongly supported by the community through feedback from the “Get On Board!” game.

PSTA continued to solicit comments on bus improvements after the Spring 2013 as part of the comprehensive *Greenlight Pinellas Plan* development, of which the bus plan is a component.

# SERVICE DEVELOPMENT FRAMEWORK

## PROCESS

The *Community Bus Plan* team engaged the PSTA Board as well as external stakeholders to develop goals for PSTA and public mobility in Pinellas County and a framework to convert those goals into reality through the Bus Plan. This collaboration produced the following set of goals: build a strong transit constituency in Pinellas County, increase the competitiveness of transit as a transportation mode within the County, and build ongoing financial sustainability for PSTA.

## BUS PLAN GOALS

### BUILD TRANSIT CONSTITUENCY

- **Broaden Market Penetration** – PSTA should deliver a bus system that will prove successful in attracting “choice riders” as well as increase the use of transit beyond the commuting period into other kinds of trips. Furthermore, residents and visitors alike should feel comfortable with and compelled to consider Pinellas County’s transit system for their travel needs.
- **Support Community Mobility** – The PSTA bus network should strive to meet as many community travel and mobility needs as possible, and should represent a critical component of the County’s sustainability initiatives. The network should integrate with community bicycle and pedestrian plans to provide Pinellas County with a complete set of multimodal transportation options and greater connectivity between modes.
- **Match Services to Markets** – Enhanced service along key corridors, the development and maintenance of a transit network that can be competitive with other travel modes, and recognition of the importance of the passenger experience are all crucial to long-term transit success in the County.

### IMPROVE TRANSIT COMPETITIVENESS

- **Create Spontaneous Use** – Create a frequent all-week network of high-performing routes to anchor the PSTA system, offer spontaneous-use service to as many riders as possible, and promote transit as a viable component of the County’s infrastructure.
- **Faster Travel Times** – Streamline routes by reducing unproductive deviations and delay while implementing speed improvement technologies and strategies to key routes.
- **Focus Service Investment** – Invest in key corridors, focus service on major activity centers, and leverage capital investments to improve the customer experience.

### BUILD FINANCIAL SUSTAINABILITY

- **Use Resources Effectively** – Establish performance and productivity standards and design efficiency into the route network to ensure the continued performance and fiscal sustainability of the PSTA system.
- **Grow Ridership** – Focus resources where transit is most competitive to deliver improved service on the system’s highest ridership routes, while also increasing the return on investment through farebox recovery.

- **Strengthen Transit Constituency** – Build a strong transit constituency within Pinellas County and the greater Tampa Bay area to increase support for further investment in transit mobility and the development of sustainable transit communities.

## GUIDING PRINCIPLES

Prior to development of specific service recommendations, a future vision for the PSTA system was developed to provide a framework for subsequent planning efforts. Using these goals, findings from the market and service analyses, and feedback from community stakeholders across the County, the *Community Bus Plan* team developed guiding principles for the evolution of the PSTA system at a regional, sub-regional, and community level. The framework focuses on sustainably growing system ridership within a constrained funding future while presenting transit system options for implementation with additional funding. The Principles build efficiency and effectiveness into the service restructuring plan to maximize mobility benefits from current funding and reduce dependency on external funding.

### CREATE A STRONG FREQUENT NETWORK

By creating a frequent network that places 15 minute or better service on the system's highest performing, highest ridership routes, mobility is maximized by allowing passengers to simply arrive at a bus stop without consulting a schedule; and, make connections to other routes without the need for timed transfers. This creates a spontaneous use network, the backbone of the most highly-performing transit systems, and will provide a more streamlined and easy-to-use system that has increased appeal to existing passengers and choice riders alike.

Additionally, routes with higher performance recover a greater share of their operating cost, thereby generating additional revenue for reinvestment. The continuation of low performance lifeline routes should follow and not restrict the success of high performance services. By placing additional investment in a frequent network consisting of routes already demonstrating success, the greatest number of riders will benefit while also maximizing PSTA's return on investment.

### CREATE EFFICIENT GRID NETWORK

To make the most efficient use of the mobility afforded by the frequent network, supporting local routes should no longer seek to provide service to a concentrated hub, but interface with the frequent network instead. This minimizes the need for resources to be tied up in serving hubs away from the main corridor, instead allowing for easy connections to frequent services and allowing additional resources to be reinvested in frequency and service elsewhere in the system. Local routes should also be optimized to serve the most linear routing possible without restricting coverage. Out of direction travel to serve specific developments increases travel time for passengers traveling through, and further ties up resources that could be used to improve frequency and benefit the greatest number of passengers.

### IMPROVE OVERALL SPAN OF SERVICE ON EVENINGS AND WEEKENDS

In order to further increase the usability of the system, service span on evenings and weekends should be increased. Shift workers that today would need a car or taxi to travel home from work due to the lack of evening service would instead be able to rely on transit to complete their journey. Additional weekend service would allow for transit to be a more compelling option for those employed on the weekends as well as for non-work travel,

allowing for shopping, entertainment, and social travel to be made without consulting a schedule and with the knowledge that transit would still be available for the return trip home later in the evening.

# BUS PLAN

## OVERVIEW

The *Community Bus Plan* was developed out of a combination of bottom-up and top-down planning, following a best practices industry approach. It was initiated as a clean-slate design exercise to optimize the delivery of transit for where people live, work, and play. In order to carry forward the goals set at the outset of the planning process, a number of network design features were built into the plan emphasizing a strong core of frequent routes and the streamlining of routes to minimize out-of-direction travel to off-corridor areas and distant hubs. This design allows for connections to be made quickly and easily to minimize travel time while maximizing passenger mileage for every invested hour of service. Network coverage will be maintained by optimized supporting local services as well as new community circulators.

This basic network design offers improved service frequencies to a vast majority of existing PSTA customers without major impact to network coverage. The full approach and each proposed network scenario will be outlined in detail in this section.

## STRATEGIES

The *Community Bus Plan* proposes the introduction of a number of key strategies that will best match the delivery of service to the rising levels of demand and the complex travel needs of Pinellas County.

## TRANSITIONING TO A GRID NETWORK

Instead of designing every route to tie into a major downtown destination in what is commonly referred to as a “hub-and-spoke” system, the *Bus Plan* emphasizes the speed and efficiency offered by an transit lifestyle grid network. By placing service investment into a network of routes that intersect, the proposed network decreases travel time from point A to point B by offering convenient connections. Resources can then be reallocated toward increasing frequencies on the most frequently traveled routes. This reduces the time spent waiting for a bus and the time spent riding the bus, transforming the bus network into a series of lines that can be used the same way one would use a street network with a car. Transit then becomes a more compelling choice for all types of trips, both short and long distance, and offers transit as a mobility lifestyle choice that supports the sustainable community development occurring in the County.

## STREAMLINING SERVICE

A priority of the Bus Plan was to maximize the efficiency of already highly-performing routes. At present, many PSTA routes deviate into shopping centers and apartment complexes away from the primary corridor. While this increases convenience for passengers boarding and alighting at those particular locations, deviations increase travel time for passengers traveling through on those routes, add expense in terms of revenue hours and miles, and negatively impact the customer experience. Certain situations see this out-of-direction travel preserved, such as travel to a transfer center resulting in high levels of passenger turnover, but this travel is minimized wherever possible to provide for the most efficient network possible.

## INCREASING FREQUENCIES

By reducing deviations and route overlap, and their associated operating expenses, resources become available to improve frequencies in key parts of the system. By increasing frequencies on these routes passenger wait times are decreased. With adequately frequent service, passengers are offered “spontaneous use” options that will permit them to arrive at a stop without having to consult a schedule. Service levels for core service ranged from 10 minutes (desired) to 15 minutes (minimum for spontaneous use attraction) for scenarios featuring increases in available revenue. Spontaneous use services form the backbone of the most successful transit systems and greatly increase passenger confidence in having a good transit experience every trip.

## SERVICE TIERS

The proposed *Community Bus Plan* network is composed of several distinct service tiers. This tier setup allows for levels of service to be clearly conveyed to passengers to allow them to more easily make travel decisions. The tier levels established include following:

- The **Core** tier is composed of PSTA’s highest performing and highest ridership routes operating along dense mixed-use corridors serving major regional and community travel markets. This tier receives the highest levels of service in the system, including Rapid Bus upgrades to decrease travel time and increase passenger convenience and service reliability.
- The **Frequent Local** tier includes higher-performing routes in areas of the County well suited for transit that have exhibited more locally-focused travel. This tier has the highest frequency of any of the local tiers.
- The **Supporting Local** tier includes local routes designed to provide access to communities further removed from the frequent network and to extend the reach of the core network into more residential areas of the County.
- The **Trolley** network focuses on serving major tourist and entertainment destinations around the County, but also acts to further extend the everyday reach of the network for area residents and employees.
- The **Connector** tier carries forward the success of PSTA’s North County Connector service with “flex route” service in less dense areas that are more challenging to serve with fixed route bus services.
- The **Community Circulator** network provides service tailored to fit the mobility needs of specific communities and neighborhoods of the County while offering connectivity to the broader PSTA network.
- The **Regional Express** tier directly links Pinellas County with Tampa’s downtown and Westshore Area while also making connections to Tampa International Airport.

## SERVICE PRODUCTS

To expand upon the tier concept of the Community Bus Plan, specific service products are tailored to provide a range of service options for different types of trips.

### RAPID BUS SERVICE

Bus Rapid Transit (BRT) and Rapid Bus service is being considered for the designated Core routes under the *Community Bus Plan*. BRT and Rapid Bus routes offer many amenities designed to significantly improve the passenger experience, as well as performance improvements that make bus service speeds competitive with rail, particularly over greater distances. By incorporating technologies such as transit signal priority and real-time information alongside operating improvements such as higher-frequency, limited-stop service to specific stations with level boarding, passengers are provided with a fast, reliable, and attractive transit service.

By adding BRT and Rapid Bus enhancements to the Bus Plan's Core routes, PSTA will have a transit network with a fast and reliable core offering premium transit to over half of existing passengers while providing an excellent network anchor to other local routes.

### FOCUSED COMMUNITY-LEVEL SERVICE

To complement the higher-end service of the BRT and Rapid lines, the *Community Bus Plan* includes an expansion of community circulation and flexible routes. These services target short distance travel markets that are more challenging to serve with traditional longer-distance fixed routes. Community routes provide a market-tailored product to better serve the customer while providing service otherwise not financially sustainable. These services will allow PSTA to provide a service that offers a greater level of convenience to passengers in more difficult-to-serve parts of the County that will complement the fixed-route transit network and expand mobility options across the County.

## SERVICE SCENARIOS

The *Community Bus Plan* is intended to be a flexible product that provides recommendations valid under a variety of possible future conditions for PSTA. In order to maximize the flexibility of the plan, three primary scenarios were developed:

- **Optimal** – A network designed to provide highly-performing and cost-effective transit service in an unconstrained financial scenario.
- **New Revenue** – A network designed to carry forward the design and service levels of the Optimal Scenario within the financial constraints of a potential countywide one-percent sales tax as the local funding source for transit.
- **No New Revenue** – A pair of network design alternatives that explore how to best create a streamlined transit system with the stricter financial constraints of PSTA's existing property tax-based local revenue stream.
  - *Core Preservation Alternative* – A network featuring reduced coverage with stronger investment in a core network of PSTA's highest-performing routes serving the greatest number of

passengers. *Coverage Preservation Alternative* – A network that distributes service investment more evenly across the service area with reduced focus on the core network.

### OPTIMAL SCENARIO

The Optimal Scenario is how the transit system for Pinellas County would be designed to meet current and future mobility needs based on the market assessment, consumer research, and transit service analysis together with extensive stakeholder and community outreach. Designed to be grounded in reality, this scenario is expected to achieve financial performance levels that meet or exceed today's level. The Optimal Scenario represents the ultimate goal for PSTA transit service to meet Pinellas County's current and future needs.

This scenario provides levels of service and levels of regional route coverage that would allow an overwhelming majority of the County to have access to fast and reliable transit, with over half of today's county jobs and residents within a quick walk of a "spontaneous use", high-frequency transit line. The Optimal Scenario network is developed around a hierarchy of bus service types, with fast and frequent Core routes, Frequent Local routes operating every 15 minutes or less, Supporting Local routes connecting less-dense communities with the frequent transit network, and focused trolley and Community Connector services providing community mobility as well as connectivity into the countywide network.

Map 20: Optimal Scenario fixed-route network, December 2013 proposal



## PSTA COMMUNITY BUS PLAN – FINAL REPORT

Service is distributed according to tier:

**Table 11: Optimal Scenario Service Characteristics**

Tier	Corridors/Areas Served	Optimal	
<b>Core Network</b>	Central Ave., 4th St., Gulf to Bay Blvd., Seminole Blvd., 49th St., US 19	Number of routes	7
		Weekday Service	10 min all day, 5 am - mid
		Weekend Service	15 min, 6 am - mid Sat / 7 am - 10 pm Sun
<b>Frequent Local</b>	Park Blvd., Betty Ln./Main St. Dunedin, 66th St., 7th Ave. S, 9th Ave. S, 15th Ave. S	Number of routes	5
		Weekday Service	15 min all day, 5 am - mid
		Weekend Service	15 min, 6 am - mid Sat / 7 am - 10 pm Sun
<b>Supporting Local</b>	Other inland - 5th Ave. N, 22nd Ave. N, 30th Ave. N, etc.	Number of routes	17
		Weekday Service	30 min all day, 5 am - 11 pm
		Weekend Service	30 min, 6 am - 11 pm Sat / 7 am - 9 pm Sun
<b>Trolleys</b>	Gulf Blvd., Central Ave., Clearwater Beach, coastal Tarpon Springs/Palm Harbor/Dunedin, Safety Harbor	Number of routes	5
		Weekday Service	10 to 30 min all day, 5 am - mid
		Weekend Service	10 to 30 min, 6 am - mid Sat / 7 am - 10 pm Sun
<b>Connector Routes</b>	Oldsmar-Tampa, Dunedin-Palm Harbor, East Lake	Number of routes	3
		Weekday Service	30 min peak/60 off-peak, 5 am - 11 pm
		Weekend Service	60 min, 6 am - 11 pm Sat / 7 am - 7 pm Sun
<b>Community Circulators</b>	Downtown St. Petersburg, Pinellas Park, Seminole, Gateway/Carillon	Number of routes	5
		Weekday Service	15 to 30 min all day, 6 am - 10 pm
		Weekend Service	15 to 30 min, 6 am - 10 pm Sat & Sun
<b>Express Routes</b>	Westshore/Downtown Tampa	Number of routes	5
		Weekday Service	15 min peak/30 off-peak (NCX/MBX 30 min peak only), 5 am - mid
		Weekend Service	30 min (NCX/MBX no service), 6 am - 10 pm Sat / 7 am - 8 pm Sun

**Table 12: Optimal Scenario Service Statistics**

	Annual Service – Baseline PSTA Network		Annual Service – Optimal Scenario	
	Revenue Hours	Revenue Miles	Revenue Hours	Revenue Miles
<b>Annual Weekday</b>	520,090	7,386,417	1,134,900	16,173,900
<b>Annual Saturday</b>	72,200	1,042,560	182,100	2,554,200
<b>Annual Sunday</b>	42,729	641,564	174,200	2,390,100
<b>Total Annual</b>	<b><u>635,020</u></b>	<b><u>9,070,541</u></b>	<b><u>1,491,200</u></b>	<b><u>21,118,200</u></b>

## **NEW REVENUE SCENARIO**

The challenge posed by the New Revenue Scenario was to develop a system that would offer the benefits of the Optimal Network while fitting within the budget set by a change in local revenue source from the existing PSTA ad valorem property tax to the Transportation System Surtax. Ultimately, the New Revenue network assumed largely the same shape as the Optimal Scenario, with many of the same fixed-route bus lines and similar levels of service. To address the planned revenue constraints, the differences between the Optimal Scenario and the New Revenue Scenario are limited to the following service adjustments:

- Service spans on non-Core routes are reduced
- Core frequencies are increased to 15 minutes from 10 minutes
- Many Supporting Local route frequencies are increased to 60 minutes from 30 minutes
- Some Supporting Local and Community routes no longer offer weekend service
- The Shore Acres/Snell Isle Circulator is no longer funded

Ultimately, the New Revenue Scenario, afforded by the proposed sales tax-based local revenue stream allows PSTA to offer a level of service that closely matches that envisioned in the Optimal Scenario.

## PSTA COMMUNITY BUS PLAN – FINAL REPORT

Map 21: New Revenue Scenario fixed-route network, December 2013 proposal



## PSTA COMMUNITY BUS PLAN – FINAL REPORT

Service is distributed according to tier:

**Table 13: New Revenue Service Characteristics**

Tier	Corridors/Areas Served	New Revenue	
<b>Core Network</b>	Central Ave., 4th St., Gulf to Bay Blvd., Seminole Blvd., 49th St., US 19	Number of routes	7
		Weekday Service	15 min all day, 5 am - mid
		Weekend Service	15 min, 6 am - mid Sat / 7 am - 9 pm Sun
<b>Frequent Local</b>	Park Blvd., Betty Ln./Main St. Dunedin, 66th St., 7th Ave. S, 9th Ave. S, 15th Ave. S	Number of routes	5
		Weekday Service	15 min all day, 5 am - mid
		Weekend Service	30 min, 6 am - mid Sat / 7 am - 10 pm Sun
<b>Supporting Local</b>	Other inland - 5th Ave. N, 22nd Ave. N, 30th Ave. N, etc.	Number of routes	17
		Weekday Service	30 min all day, 5 am - 11 pm
		Weekend Service	60 min, 6 am - 11 pm Sat / 7 am - 9 pm Sun
<b>Trolleys</b>	Gulf Blvd., Central Ave., Clearwater Beach, coastal Tarpon Springs/Palm Harbor/Dunedin, Safety Harbor	Number of routes	5
		Weekday Service	15 to 30 min all day, 5 am - mid
		Weekend Service	15 to 30 min, 6 am - mid Sat / 7 am - 9 pm Sun
<b>Connector Routes</b>	Oldsmar-Tampa, Dunedin-Palm Harbor, East Lake	Number of routes	3
		Weekday Service	30 min peak/60 off-peak, 5 am - 11 pm
		Weekend Service	60 min, 6 am - 11 pm Sat / 7 am - 7 pm Sun
<b>Community Circulators</b>	Downtown St. Petersburg, Pinellas Park, Seminole, Gateway/Carillon	Number of routes	4
		Weekday Service	15 to 30 min all day, 6 am - 10 pm
		Weekend Service	-
<b>Express Routes</b>	Westshore/Downtown Tampa	Number of routes	5
		Weekday Service	30 min peak/60 off-peak (300X/NCX/MBX 60 min peak only), 5 am - 11 pm
		Weekend Service	60 min (300X/NCX/MBX no service), 6 am - 11 pm Sat / 7 am - 9 pm Sun

**Table 14: New Revenue Scenario Service Statistics**

Annual Service – Baseline PSTA Network			Annual Service – New Revenue Scenario	
	Revenue Hours	Revenue Miles	Revenue Hours	Revenue Miles
<b>Annual Weekday</b>	520,090	7,386,417	850,400	11,765,200
<b>Annual Saturday</b>	72,200	1,042,560	125,900	1,792,800
<b>Annual Sunday</b>	42,729	641,564	92,200	1,278,700
<b>Total Annual</b>	<b><u>635,020</u></b>	<b><u>9,070,541</u></b>	<b><u>1,068,500</u></b>	<b><u>14,836,700</u></b>

## **NO NEW REVENUE SCENARIO**

To address the possibility that the transit funding referendum is unsuccessful, the principles behind the Optimal Scenario network were applied with the stricter financial constraints of the existing revenue sources. Because of the limited available funding in this scenario, significant tradeoffs had to be considered, most prominent of which were whether a strong and frequent core or a broad regional coverage would take precedence. The “Core Preservation” and the “Coverage Preservation” alternatives were developed to illustrate the diverse range of what could be achieved among the wide spectrum of possible solutions between these two “bookend” options.

### **CORE ALTERNATIVE**

The Core Preservation alternative maintains the core and frequent local network of the New Revenue Scenario, allowing the highest-performing transit corridors in the County to receive the levels of service necessary to function to their fullest potential. While this strategy strengthens the transit backbone of the system and improves services for the majority of PSTA’s existing transit passengers, it comes at the cost of geographic coverage of connecting local services. Frequencies on connecting routes would be reduced and the lowest-performing routes discontinued.

Map 22: No New Revenue Scenario – Core Alternative fixed-route network, December 2013 proposal



## PSTA COMMUNITY BUS PLAN – FINAL REPORT

Service is distributed according to tier:

**Table 15: No New Revenue—Core Alternative Service Characteristics**

Tier	Corridors/Areas Served	No New Revenue - Core	
Core Network	Central Ave., 4th St., Gulf to Bay Blvd., Seminole Blvd., 49th St., US 19	Number of routes	6
		Weekday Service	15 min all day, 5 am - 10 pm
		Weekend Service	60 min, 7 am - 9 pm Sat / 8 am - 7 pm Sun
Frequent Local	Park Blvd., Betty Ln./Main St. Dunedin, 66th St., 7th Ave. S, 9th Ave. S, 15th Ave. S	Number of routes	5
		Weekday Service	30 min all day, 6 am - 9 pm
		Weekend Service	60 min, 7 am - 9 pm Sat only
Supporting Local	Other inland - 5th Ave. N, 22nd Ave. N, 30th Ave. N, etc.	Number of routes	7
		Weekday Service	60 min all day, 6 am - 9 pm
		Weekend Service	60 min, 7 am - 9 pm Sat only
Trolleys	Gulf Blvd., Central Ave., Clearwater Beach, coastal Tarpon Springs/Palm Harbor/Dunedin, Safety Harbor	Number of routes	4
		Weekday Service	15 to 30 min all day, 5 am - 11 pm
		Weekend Service	30 to 60 min, 7 am - 10 pm Sat / 8 am - 7 pm Sun
Connector Routes	Oldsmar-Tampa, Dunedin-Palm Harbor, East Lake	Number of routes	3
		Weekday Service	60 min all day, 6 am - 6 pm
		Weekend Service	-
Community Circulators	Downtown St. Petersburg, Pinellas Park, Seminole, Gateway/Carillon	Number of routes	1
		Weekday Service	60 min all day, 6 am - 10 pm
		Weekend Service	-
Express Routes	Westshore/Downtown Tampa	Number of routes	2
		Weekday Service	60 min all day (300X 60 min peak only), 6 am - 9 pm
		Weekend Service	-

**Table 16: No New Revenue—Core Alternative Service Statistics**

Annual Service – Baseline PSTA Network			Annual Service – No New Revenue Scenario	
	Revenue Hours	Revenue Miles	Revenue Hours	Revenue Miles
<b>Annual Weekday</b>	520,090	7,386,417	453,400	5,684,600
<b>Annual Saturday</b>	72,200	1,042,560	40,600	500,000
<b>Annual Sunday</b>	42,729	641,564	19,800	238,500
<b>Total Annual</b>	<b>635,020</b>	<b>9,070,541</b>	513,800	6,423,100

### COVERAGE PRESERVATION ALTERNATIVE

In the Coverage Preservation alternative, service along the identified frequent network is reduced to half-hour levels to permit continued coverage across as much of the County's land area as possible. This would prevent people within the existing PSTA service area from losing routes close to their homes and places of employment, but would come at the cost of the quality of service provided to the County, with the County's highest-performing routes receiving substantial reductions in service that could likely result in significant overcrowding in the coming years.

Map 23: No New Revenue – Coverage Alternative fixed-route network, December 2013 proposal



## PSTA COMMUNITY BUS PLAN – FINAL REPORT

Service is distributed according to tier:

**Table 17: No New Revenue—Coverage Alternative Service Characteristics**

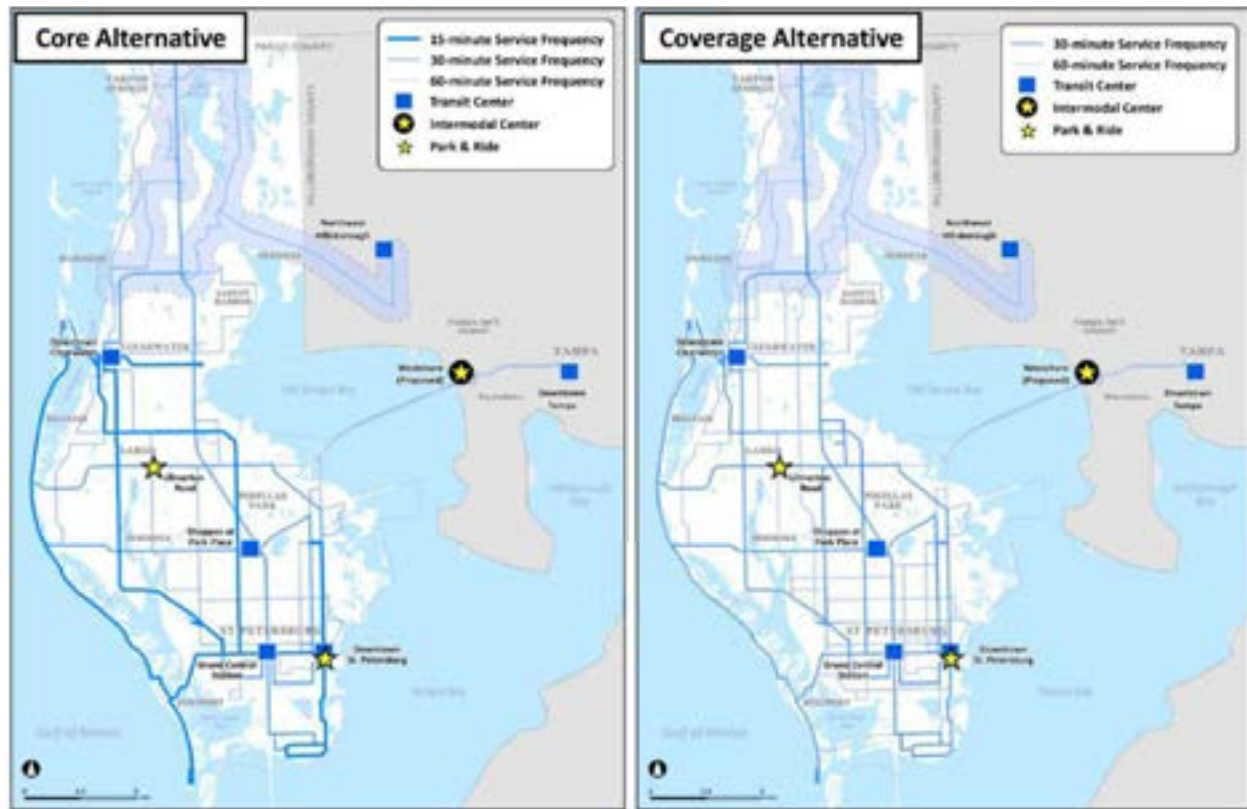
Tier	Corridors/Areas Served	No New Revenue Coverage	
Core Network	Central Ave., 4th St., Gulf to Bay Blvd., Seminole Blvd., 49th St., US 19	Number of routes	<b>6</b>
		Weekday Service	30 min all day, 5 am - 10 pm
		Weekend Service	60 min, 7 am - 9 pm Sat / 8 am - 7 pm Sun
Frequent Local	Park Blvd., Betty Ln./Main St. Dunedin, 66th St., 7th Ave. S, 9th Ave. S, 15th Ave. S	Number of routes	<b>5</b>
		Weekday Service	30 min all day, 6 am - 9 pm
		Weekend Service	60 min, 7 am - 9 pm Sat only
Supporting Local	Other inland - 5th Ave. N, 22nd Ave. N, 30th Ave. N, etc.	Number of routes	<b>17</b>
		Weekday Service	60 min all day, 6 am - 9 pm
		Weekend Service	60 min, 7 am - 9 pm Sat only
Trolleys	Gulf Blvd., Central Ave., Clearwater Beach, coastal Tarpon Springs/Palm Harbor/Dunedin, Safety Harbor	Number of routes	<b>4</b>
		Weekday Service	30 min all day, 5 am - 11 pm
		Weekend Service	30 to 60 min, 7 am - 10 pm Sat / 8 am - 7 pm Sun
Connector Routes	Oldsmar-Tampa, Dunedin-Palm Harbor, East Lake	Number of routes	<b>3</b>
		Weekday Service	60 min all day, 6 am - 6 pm
		Weekend Service	-
Community Circulators	Downtown St. Petersburg, Pinellas Park, Seminole, Gateway/Carillon	Number of routes	<b>3</b>
		Weekday Service	60 min all day, 6 am - 10 pm
		Weekend Service	-
Express Routes	Westshore/Downtown Tampa	Number of routes	<b>2</b>
		Weekday Service	60 min all day (300X 60 min peak only), 6 am - 9 pm
		Weekend Service	-

**Table 18: No New Revenue—Coverage Alternative Service Statistics**

Annual Service – Baseline PSTA Network			Annual Service – No New Revenue Scenario	
	Revenue Hours	Revenue Miles	Revenue Hours	Revenue Miles
<b>Annual Weekday</b>	520,090	7,386,417	453,400	5,684,600
<b>Annual Saturday</b>	72,200	1,042,560	40,600	500,000
<b>Annual Sunday</b>	42,729	641,564	19,800	238,500
<b>Total Annual</b>	<b><u>635,020</u></b>	<b><u>9,070,541</u></b>	513,800	6,423,100

## PSTA COMMUNITY BUS PLAN – FINAL REPORT

Map 24: No New Revenue Scenario Alternative Network Frequency Comparison, December 2013 proposal



# IMPLEMENTATION

## OVERVIEW

The *Community Bus Plan* was designed from the start to be a plan that could not only be sustainable in operation, but able to be implemented smoothly in phases. The New Revenue scenario was selected to receive additional study to verify its ability to be implemented under a variety of future economic conditions with the proposed one percent sales tax revenue stream. The *Community Bus Plan* team, in conjunction with the *Greenlight Pinellas Plan's* financial advisors, thoroughly analyzed the costs of incorporating the recommendations into PSTA's operations, the phasing necessary for an affordable and effective transition, the timeline needed for implementation of enhanced bus services, and the ultimate bus network coordination with the proposed light rail network.

## GREENLIGHT PINELLAS AND COMMUNITY BUS PLANS

The *Greenlight Pinellas Plan* is a complete transit vision for Pinellas County that incorporates both expanded bus service and rail service that is funded by a proposed one percent sales tax in Pinellas County, replacing the property tax that currently funds PSTA's operations. The *Community Bus Plan's* New Revenue scenario, having been developed to fit within the constraints of the sales tax revenue stream, forms the bus transit component of the *Greenlight Pinellas Plan*.

While both the New Revenue and No New Revenue scenarios imposed financial constraints to determine what amount of service could be realistically provided, in order to provide a greater understanding of how additional revenue from the one percent sales tax as proposed under the *Greenlight Pinellas Plan* would be spent, the New Revenue scenario's bus network and its associated costs have undergone further study to verify its ability to be implemented alongside the light rail network originally proposed under the Pinellas Alternatives Analysis study. The cost and implementation details outlined below were incorporated into the *Greenlight Pinellas Plan*, and have received thorough financial analysis including substantial stress testing.

## COSTS

With a proposed one percent sales tax for Pinellas County replacing the current ad valorem tax providing the local share for transit revenue, PSTA's budget will receive \$148.7M (2017\$) in annual tax revenue by fiscal year 2017, the first full fiscal year of sales tax revenue, forecasted to grow an additional three percent per year in subsequent years. This potential increase in revenue would be largely focused on the bus system in the early years of plan implementation and is projected to support a 65 percent increase in bus service by fiscal year 2021, relative to baseline service levels. This increase in service would be shown in the form of increased spans on evenings and weekends, increases in frequency around the system, particularly on middays and weekends, and in the introduction of new routes and service types.

Apart from the increased operating costs from increased service, increases in capital costs are necessary to support the service expansion. The largest Bus Plan costs come from the introduction of BRT and Rapid bus amenities to the Core network, in particular expenses associated with new stations, right-of-way enhancements, and corridor design and engineering studies. Further expenses are incurred through the construction of new multimodal transit facilities and revenue vehicle fleet expansion.

As part of the *Greenlight Pinellas Plan*, financial consultants from Ernst & Young Infrastructure Advisors, LLC performed thorough analysis and verification of the revenues and costs associated with the Bus Plan. This analysis included stress tests to determine whether investment would be possible under an array of revenue income scenarios based on regional economic forecasts. This research determined that the *Bus Plan* investment would be financially sustainable under every realistic long-term financial scenario.

## PHASING

The *Bus Plan* has been phased to be affordable within the constraints of new revenue sourced from the proposed sales tax as well as costs associated with the introduction of light rail to Pinellas County. It was an important consideration in planning the implementation of the *Bus Plan* to ensure that Pinellas County residents and visitors would see increases in service as quickly as reasonably possible while ensuring that the long-term maintenance of the system would not prove to be burdensome. These considerations guided development of the *Bus Plan* phasing plan.

The primary areas of improvement highlighted below include the following:

- **Immediate expansion of service spans on evenings and weekends:** While increased service spans bring increased operating costs through staffing and fuel, they do not require any additional vehicles in the bus fleet. Because these expansions can be implemented with the baseline fleet, they will be introduced immediately following the receipt of additional revenue for operations.
- **Introduction of rapid bus service:** PSTA will begin work on corridor studies for planning, environmental clearance, design, and construction in support of the introduction of BRT and Rapid Bus service on Core routes shortly after the receipt of additional revenue.
- **Increased Regional Express service:** New Regional Express routes will enter service following the receipt of new vehicles, including the new North County Express and 60X routes to Westshore and Downtown Tampa, as well as the new McMullen Booth Express between North County and the Greater Gateway area. Changes to Routes 100X and 300X to serve Westshore will be introduced at that time as well.
- **Increased frequencies and new alignments:** Certain new route alignments will be introduced alongside the initial BRT and Rapid Bus implementations, with increases in frequency along those routes simultaneously. Other routes with minimal or no changes to their alignments will receive frequency adjustments at the same time. Routes designed to work particularly closely with BRT and Rapid Bus routes introduced later will be implemented alongside their parent Core route instead of alongside the other local services.

Under the New Revenue scenario, improvements would be phased according to the following schedule:

- **Year 1**, following the receipt of new revenue:
  - Increase service span (hours of service) and weekend service across the system.
  - Commence environmental, design, and engineering studies for the first phase of Core Rapid Bus network expansion.
- **Year 2:**
  - Procure capital assets (vehicles, shelters, etc.) to support further system expansion.

- Begin construction and vehicle procurement on first phase of Core Rapid Bus lines.
- Begin environmental, design and engineering studies on the second phase Core Rapid bus corridors.
- **Year 3:**
  - Introduce service on first phase of Core Rapid routes serving Central Avenue, 49<sup>th</sup> Street/East Bay Drive, and Gulf-to-Bay Boulevard.
  - Expand Regional Express service including connections to Tampa from North County via Oldsmar and McMullen Booth Road, Clearwater via SR60, and downtown St. Petersburg.
  - Revise route alignments and add frequency on the Frequent Local routes and local trolleys.
  - Continue design and engineering studies and begin capital procurement and construction on the second phase Core Rapid bus corridors.
- **Years 4-6:**
  - Add frequency to the Supporting Local and Connector tiers with some revised alignments to better focus service on interoperability with the frequent network for overall system efficiency.
  - Continue design and engineering studies, capital procurement, and construction on the second phase Core Rapid bus corridors.
  - Implement Core Rapid Service on Phase 2 of Core Rapid Routes serving 4<sup>th</sup> Street N/Ulmerton Road, US 19, and Seminole Boulevard.

This phasing of the *Community Bus Plan* allows for some of the most desired bus benefits to be introduced as soon as is financially possible while setting the stage for rapid expansion of a robust fast and frequent bus network, in addition to seamless integration of the proposed passenger rail system.

A detailed guide for phased network implementation by service tier and route can be found in the Appendix.

## RAPID BUS

Upgrading the Core routes to BRT and Rapid Bus routes (within funding availability) will be necessary, with staggered phasing of improvements by route. The Central Avenue, 49<sup>th</sup> Street/East Bay Drive, and Gulf-to-Bay corridors are scheduled to begin operation in fiscal year 2018, with the 4<sup>th</sup> Street/Ulmerton Road corridor following in fiscal year 2019, the US 19 corridor in fiscal year 2020, and the Seminole Blvd. project in fiscal year 2021. The corridors with the highest priority will serve as anchors for the expanding PSTA network, with the East Bay Drive corridor in particular offering premium transit in advance of the parallel light rail alignment that will grow to complement the rail investment upon its completion. The remaining corridors will be phased in as quickly as available funding allows in order to complete PSTA's frequent network.

## COORDINATION WITH RAIL

The Bus Plan was designed to not only provide a strong bus network that could provide a high level of transit mobility for the County independently, but to also provide a foundation for and appropriate connections to the proposed light rail network. Bus routes were designed to serve every proposed light rail station to allow light rail customers to easily transfer to bus to complete their journeys, as well as for bus passengers to transfer to light rail

for longer-distance travel. For the same network development reasons, the implementation process was carefully coordinated as well.

The design, engineering, and construction process for the light rail system is scheduled to begin in fiscal year 2018, with operations scheduled to begin at the start of fiscal year 2024. While engineering studies and construction take place, the portion of the sales tax revenue allocated for light rail operations will be used to fund the capital costs associated with the expansion of the bus network. This allows for a robust BRT and Rapid Bus network to coexist with a strong light rail backbone for the County while ensuring that the maximum utility can be gained from any new revenue PSTA receives.

Once BRT, Rapid Bus, and light rail services begin operation, the completed network will offer rapid transit across the County that is intended to integrate seamlessly. The light rail alignment will offer direct connectivity between St. Petersburg, Greater Gateway, and Clearwater, while the intersecting bus network will allow for connecting north-south and east-west travel to carry passengers to their destination anywhere in the County.

# APPENDICES

- 1. Previous Studies Memo**
- 2. On-Board Survey Report**
- 3. Market Demographic Maps**
- 4. Route Level Performance Data and Boarding Activity Maps (SAS)**
- 5. System Boarding Activity Maps**
- 6. Route Level Performance Charts (Weekday, Saturday, Sunday)**
- 7. Phasing Plan by Route**
- 8. Scenario Investment Comparison**
- 9. New Revenue Scenario Route Network and Frequency Changes**
- 10. BRT Corridor Capital Estimates**
- 11. Geographical Impact Analysis Memo**
- 12. List of Outreach Events**