



# Planning Technical Advisory Committee Meeting (PTAC)

## REGULAR MEETING AGENDA

March 17, 2010  
10:30 a.m.

South Florida Regional Transportation Authority  
Boardroom  
800 NW 33<sup>rd</sup> Street  
Pompano Beach, Florida 33064  
*www.sfrta.fl.gov*

FOR FURTHER INFORMATION CALL JOSEPH QUINTY AT (954) 788-7928

### Members

Maria Batista, Miami-Dade Transit  
Michael Busha, Treasure Coast Regional Planning Council  
William Cross, South Florida Regional Transportation Authority  
Carolyn Dekle, South Florida Regional Planning Council  
Jose Luis Mesa, Miami-Dade Metropolitan Planning Organization  
Barney McCoy, Broward County Transit  
Gustavo Schmidt, Florida Department of Transportation, District IV  
Phil Steinmiller, Florida Department of Transportation, District VI  
Greg Stuart, Broward Metropolitan Planning Organization  
Fred Stubbs, Palm Tran  
Jeff Weidner, FDOT, District IV  
Randy Whitfield, Chairman, Palm Beach Metropolitan Planning Organization

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**Directions to SFRTA: I-95 to Copans Road. Go west on Copans to North Andrews Avenue Ext. and turn right. Go straight to Center Port Circle, which is NW 33rd Street, and turn right. SFRTA's offices are in the building to the right. The SFRTA offices are also accessible by taking the train to the Pompano Beach Station. The SFRTA building is southeast of the station. Parking is available across the street from SFRTA's offices, at the Pompano Beach Station.**

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**PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)**  
**MEETING OF MARCH 17, 2010**

The meeting will convene at 10:30 a.m., and will be held in the Boardroom of the South Florida Regional Transportation Authority, Administrative Offices, 800 NW 33<sup>rd</sup> Street, Suite 100, Pompano Beach, FL 33064.

**CALL TO ORDER**

**PLEDGE OF ALLEGIANCE**

**AGENDA APPROVAL** – Additions, Deletions, Revisions

**DISCUSSION ITEMS**

**MATTERS BY THE PUBLIC** – Persons wishing to address the Committee are requested to complete an “Appearance Card” and will be limited to three (3) minutes. Please see the Minutes Clerk prior to the meeting.

<b>CONSENT AGENDA</b>
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Those matters included under the Consent Agenda are self-explanatory and are not expected to require review or discussion. Items will be enacted by one motion in the form listed below. If discussion is desired by any PTAC Member, however, that item may be removed from the Consent Agenda and considered separately.
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C1 – MOTION TO APPROVE: Minutes of PTAC Meeting of February 17, 2010

<b>REGULAR AGENDA</b>
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Those matters included under the Regular Agenda differ from the Consent Agenda in that items will be voted on individually. In addition, presentations will be made on each motion, if so desired.
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R1 – MOTION TO ENDORSE: Recommended Ranking and Funding Levels for JARC and NF Programs Grant Applications

<b>INFORMATION / PRESENTATION ITEMS</b>
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Action not required, provided for information purposes only.
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I1 – INFORMATION: SFRTA Shuttle Bus Service and Financial Assessment, Phase 2

I2 – INFORMATION: Tri-Rail Parking Management Study

**OTHER BUSINESS:**

OB1 – Rail-Volution 2010, Call for Proposals

OB2 – APTA 2010 Multimodal Operations Planning Workshop, Call for Presentations

PTAC MEMBER COMMENTS

MEETING ATTENDANCE SUMMARY – Enclosed

NEXT MEETING DATE – April 21, 2010

ADJOURNMENT

In accordance with the Americans with Disabilities Act and Section 286.26, Florida Statutes, persons with disabilities needing special accommodation to participate in this proceeding, must at least 48 hours prior to the meeting, provide a written request directed to the Executive Office at 800 NW 33<sup>rd</sup> Street, Suite 100, Pompano Beach, Florida, or telephone (954) 942-RAIL (7245) for assistance; if hearing impaired, telephone (800) 273-7545 (TTY) for assistance.

Any person who decides to appeal any decision made by the Board of Directors for the South Florida Regional Transportation with respect to any matter considered at this meeting or hearing, will need a record of the proceedings, and that, for such purpose, he/she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

Persons wishing to address the Board are requested to complete an “Appearance Card” and will be limited to three (3) minutes. Please see the Minutes Clerk prior to the meeting.

# **DRAFT**

## **MINUTES**

### **SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC) MEETING FEBRUARY 17, 2010**

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The Planning Technical Advisory Committee (PTAC) meeting was held at 10:30 a.m. on Wednesday, February 17, 2010 in the Boardroom of the South Florida Regional Transportation Authority (SFRTA), Administrative Offices located at 800 NW 33<sup>rd</sup> Street, Suite 100, Pompano Beach, Florida 33064.

#### **COMMITTEE MEMBERS PRESENT:**

Mr. Larry Allen, South Florida Regional Planning Council (RPC)  
Mr. William Cross, South Florida Regional Transportation Authority (SFRTA)  
Ms. Kim Delaney, Treasure Coast RPC  
Mr. Wilson Fernandez, Miami-Dade Metropolitan Planning Organization (MPO)  
Mr. John Garcia, Miami-Dade Transit (MDT)  
Ms. Amie Goddeau, Florida Department of Transportation (FDOT), District IV  
Mr. Joseph Quinty, SFRTA  
Mr. Jonathan Roberson, Broward County Transit (BCT)  
Mr. Greg Stuart, Broward MPO  
Mr. Fred Stubbs, Palm Tran  
Mr. Jeff Weidner, FDOT District IV  
Mr. Randy Whitfield, Palm Beach MPO, Chairman  
Mr. Enrique Zelaya, Broward MPO

#### **ALSO PRESENT:**

Mr. Steve Anderson, SFRTA  
Mr. Bill Ball, Tindale-Oliver  
Mr. David Bjorneboe, FDOT District 6  
Ms. Robyn Chiarelli, FDOT District 4  
Ms. Khalilah Ffrench, FDOT District 4  
Ms. Sabrina Glenn, South Florida Commuter Services  
Mr. Michael Moore, Gannett Fleming  
Mr. Joel Rey, Tindale-Oliver  
Ms. Cindi Ritzler, SFRTA  
Mr. Jim Udvardy, South Florida Commuter Services  
Mr. Joseph Yesbeck, Jacobs  
Ms. Natalie Yesbeck, SFRTA  
Ms. Lynda Westin, SFRTA  
Mr. Ravi Wijesundera, Kimley-Horn  
Mr. Eric Zahn, SFRTA

#### **CALL TO ORDER**

The Chair called the meeting to order at 10:50 a.m.

**ROLL CALL**

The Chair requested the roll call.

**PLEDGE OF ALLEGIANCE**

**AGENDA APPROVAL** – Additions, Deletions, Revisions

A motion was made by Ms. Kim Delaney to approve the agenda. The motion was seconded by Mr. Fred Stubbs. The motion was called to a vote and carried unanimously.

**DISCUSSION ITEMS**

**MATTERS BY THE PUBLIC** – None

**CONSENT AGENDA**  
Those matters included under the Consent Agenda are self-explanatory and are not expected to require review or discussion. Items will be enacted by one motion in the form listed below. If discussion is desired by any Committee Member, however, that item may be removed from the Consent Agenda and considered separately.

**C1 – MOTION TO APPROVE:** Minutes of Planning Technical Advisory Committee Meeting of January 20, 2010.

A motion was made by Ms. Delaney to approve the meeting minutes. The motion was seconded by Mr. Stubbs. The motion was called to a vote and carried unanimously.

**REGULAR AGENDA**  
Those matters included under the Regular Agenda differ from the Consent Agenda in that items will be voted on individually. In addition, presentations will be made on each motion, if so desired.

No items.

**INFORMATION / PRESENTATION ITEMS**  
Action not required, provided for information purposes only.

**II. - INFORMATION:** SFRTA Shuttle Bus Service & Financial Assessment, Phase 2

Mr. Joel Rey of Tindale-Oliver gave presentation on this item. He mentioned the study’s goal being to identify opportunities to provide new service, implement service modifications, and potentially discontinue low performing routes. Mr. Rey noted that the first two technical memorandums of the Phase 2 effort have been completed. He said that the technical memorandums address key components of the SFRTA shuttle bus program, including development of performance measures and identifying existing and potential future funding sources, with the thought of building partnerships with municipal or private entities. Mr. Rey mentioned that an equity evaluation will be conducted for any of the proposed route modifications. He then went through some of the potential recurring performance measures, including annual ridership, annual revenue miles, annual passenger miles, average weekday daily

ridership, annual operating cost, riders per revenue hour, and operating cost per trip. He also proposed some periodic performance measures, including transit supportive area coverage, potential duplication of existing transit routes, and parking supply/demand by station. Mr. Rey showed two potential new shuttle routes (one in Palm Beach County and one in Miami-Dade County) and shared how they would fare with these various performance measures. He also reviewed the existing shuttle funding sources and 16 potential new funding sources, which are a mix of federal, state, local, and private. The federal Job Access Reverse Commute (JARC) and New Freedom (NF) programs were mentioned as one of the potential new funding sources. Mr. Rey stated that the study's next step would be to complete the service assessment task by end of this month, develop the service & financial plan and draft overall final report by March. He said that the study's final report and equity evaluation will be completed in April.

Mr. Wilson Fernandez mentioned that Miami-Dade Transit and the MPO are looking into reorganizing bus routes near the future Miami Intermodal Center (MIC) to connect with the MIC when completed. He said one by-product of this effort could be the rerouting of the MDT Route 36, which could make the Koger Shuttle obsolete and potentially free up those Koger Shuttle funds. Mr. Fernandez also asked about the Miami-Dade shuttle route shown in the presentation, which generally serves areas west of the MIC along the Dolphin Expressway corridor. Discussion ensued about this route, with mention that the Dolphin Mall has a transit hub on its premises that could be served by such a shuttle. Mr. Fernandez also asked if any SFRTA shuttle would be able to run on the shoulders of expressways, which some MDT bus routes have been doing as part of their operations in recent years. Mr. Jeff Weidner commented that one of the proposed 595 Express bus routes in Broward County might be able to replace the existing South Florida Education Center shuttle and free up those shuttle funds in the future. Discussion then took place on the details of how the JARC and NF programs could be used for shuttles. Mr. William Cross stated that SFRTA views the JARC and NF program as a potential way to fund a two-year demonstration for some new shuttle routes. He expressed a desire to discuss the potential new routes in depth with PTAC members at upcoming meetings.

Mr. Joseph Quinty requested that the agenda be reordered to allow for agenda item I4, the Job Access Reverse Commute (JARC) and New Freedom (NF) Programs agenda item to come next, since it is related to issues raised during the Shuttle Bus Service and Financial Assessment discussion. Chairman Whitfield and the committee agreed to this request, and JARC and NF Programs agenda item then began as item I2.

## **12. - INFORMATION: Job Access Reverse Commute (JARC) and New Freedom (NF) Programs**

Ms. Natalie Yesbeck of SFRTA staff gave an update on the progress of the current Job Access Reverse Commute (JARC) and New Freedom (NF) cycle. She mentioned that a conference call for all potential JARC and NF applicants was held on January 28, 2010 with representatives from the Federal Transit Administration (FTA) and United We Ride participating. Ms. Yesbeck reminded the committee that the application deadline for the current JARC and NF funding cycle is February 19, 2010 at 12:00 noon. She noted that the PTAC will rank JARC and NF applications and make recommendations for approval at its March 17 meeting. These recommendations would then go to the SFRTA Governing Board for their approval at their meeting on April 23.

Chairman Whitfield asked PTAC members which of their agencies would be submitting JARC and NF applications. Miami-Dade Transit, Palm Tran, and indicated yes, while Mr. Jonathan Roberson stated that he was not sure if Broward County Transit would be submitting. Ms. Yesbeck commented that the City of West Palm Beach, the City of Opa-Locka and Fort Lauderdale TMA are other entities who have said they are likely to submit applications. Ms. Yesbeck then clarified that approximately \$7 million is

available for the JARC program and approximately \$3.5 million for the New Freedom program, with the funds technically being fiscal year 2008-09. Mr. Roberson commented that local match could be a challenge for the JARC and NF applicants, with the possibility of \$220 million in state block grants being cut.

### **13. - INFORMATION: Broward Boulevard Transit Study**

Mr. Joseph Quinty of SFRTA staff gave a presentation on the Broward Boulevard Transit Study, which is evaluating premium transit possibilities along Broward Boulevard between SR 7/US 441 and Downtown Fort Lauderdale. Mr. Quinty explained that the study is a partnership among Broward County Transit, Broward MPO, FDOT, and SFRTA. He noted that the study is an effort to build upon the transit emphasis of the recently adopted Broward MPO Long Range Transportation Plan (LRTP) and work towards quickly implementing a demonstration transit project. Mr. Quinty provided traffic volumes, transit ridership, and other corridor background information from the study's data collection phase. He pointed out that some key corridor attributes are connections with BCT's Route 18 (along SR 7/US 441, Broward's highest volume bus route), the Fort Lauderdale Tri-Rail/Amtrak Station, the Broward Boulevard Park-and-Ride facility at Interstate 95, Broward Central Terminal, and Downtown Fort Lauderdale. Mr. Quinty also gave an overview of the Broward Boulevard Transit Corridor Workshop, which was an all-morning event held on February 5 and attended by over 50 agency representatives. He explained that the workshop included summaries of the bus rapid transit (BRT) and streetcar transit modes, along with information on transit signal priority. Feedback from individual meetings with corridor stakeholder agencies was also part of the workshop. Mr. Quinty then showed some of the slides and graphics from the workshop presentations. He also announced that the powerpoint presentations given at the workshop were about to be made available online at <http://www.sfrta.fl.gov/planning.html>. Mr. Quinty noted that funding for future Broward Boulevard transit project phases has been made available by FDOT, and that a more detailed planning study will begin on July 1. He mentioned that a similar study is also underway for the Oakland Park Boulevard corridor.

Ms. Amie Goddeau commented that FDOT District 4 would like to similarly have at least one east-west corridor in Palm Beach County undergo this type of transit study. Mr. David Bjerneboe asked for clarification of future project funding. Ms. Goddeau stated that the next phase of planning for the Broward Boulevard study is funded and that design funds are available in FY 2011. Mr. Larry Allen commented that the Riverbend DRI within the study area includes some proposed transportation improvements, and that the DRI plans should be examined to see if any of these could be compatible with the transit study

### **14. - INFORMATION: SFRTA Northern Layover and Maintenance Facility Study**

Mr. Quinty stated that this was a quick informational item that SFRTA staff wanted to get on the committee's radar. He said that for many years, the lack of a major layover and maintenance facility at the northern end of the Tri-Rail service area has caused operational challenges. He noted that SFRTA currently operates a layover and light maintenance facility adjacent to the West Palm Beach station, but it does not have sufficient area to expand storage or maintenance operations. Mr. Quinty stated that 14 new railcars will be coming in the next year and there is strong interest in exercising a favorable contract option to add 10 additional railcars after that. He also noted that SFRTA is looking to add new locomotives to the Tri-Rail fleet, although many of these would replace older equipment currently in service. Mr. Quinty commented that the prospect of this additional equipment will result in both short-term and long-term needs being examined as part of the Northern Layover and Maintenance Facility Study. He said that coordination with the South Florida East Coast Corridor (SFECC) study will be part of the long-range

evaluation. He also stated that the Northern Layover and Maintenance Study is just underway and is expected to last eight or nine months. Mr. Quinty anticipated an update on the study to be presented to the PTAC in either late spring or early summer.

**OTHER BUSINESS:**

None.

**SFRTA EXECUTIVE DIRECT OR REPORTS/COMMENTS**

None.

**PTAC MEMBER COMMENTS**

None.

**ADJOURNMENT**

The meeting was adjourned at 12:07 pm.

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY  
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)  
MEETING: MARCH 17, 2010

AGENDA ITEM REPORT

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Consent     Regular     Public Hearing

RECOMMENDED RANKING AND FUNDING LEVELS FOR JOB ACCESS REVERSE  
COMMUTE (JARC) AND NEW FREEDOM (NF) PROGRAMS  
GRANT APPLICATIONS

REQUESTED ACTION:

MOTION TO ENDORSE: Recommended Ranking and Funding Levels for JARC and NF Programs Grant Applications

SUMMARY EXPLANATION AND BACKGROUND:

In early 2009, the SFRTA agreed to become the designated recipient of the region's JARC and NF Federal Transit Administration (FTA) program funds. Work began later in 2009 on the current JARC and NF funding cycle, which is the second cycle to be administered by SFRTA. JARC and NF information has been shared with interested parties at numerous PTAC meetings, on the SFRTA website, and via a teleconference (with the Federal Transit Administration, United We Ride, and potential JARC/NF applicants) held on January 28, 2010. The deadline to submit applications (to SFRTA) in order to receive JARC and NF funds was February 19, 2010 at 12 noon.

SFRTA received 11 JARC and 11 NF applications. Three were not received by the deadline and therefore are not eligible for consideration. All applications were shared with PTAC members (via e-mail and a ftp site link) on Friday, March 5, 2010. All of the projects were evaluated to see if they are compliant with FTA guidelines. Only those applications found in compliance were considered for funding. Staff then developed a set of draft scores for the remaining seven JARC and five NF applications. These scores were based on the scoring criteria distributed to the PTAC at previous meetings. This information will assist the committee in its evaluation of the JARC and NF projects, which will take place as part of the PTAC meeting on March 17, 2010.

It is requested that the committee take action and endorse recommended ranking and funding levels for the JARC and NF grant applications. A final ranking of the JARC and NF grant applications will be approved by the SFRTA Governing Board at its meeting on April 23, 2010.

EXHIBITS ATTACHED: Selection Criteria  
DRAFT Recommended Grant Applications Scoring Matrix  
DRAFT Staff Review of FTA Compliance

Tracking No. \_\_\_\_\_  
Page 2

AGENDA ITEM NO. R1

PTAC Action:

Approved: \_\_\_\_\_ Yes \_\_\_\_\_ No

Vote: \_\_\_\_\_ Unanimous

Amended Motion:

## JARC and New Freedom Grant Application Scoring Criteria

CRITERIA	POINTS
<b>Project Need, Goals, and Objectives</b>	<b>35</b>
Is the project consistent with and derived from the Coordinated Public Transit Human Services Transportation Plan (Coordinated Plan)?	10
Does the project establish, preserve or improve mobility for a targeted population?	10
Will a majority of the service area's targeted population be served by the project?	10
Does the project also help meet transportation needs outside the targeted population?	5
<b>Coordination/Program Outreach</b>	<b>20</b>
Does the applicant identify opportunities to coordinate with available transportation operators in the project area?	5
Does the applicant's public involvement component exhibit early and continuous outreach?	5
Does the project involve collaboration by at least one other group not including the entity providing the matching funds?	5
Does the application include a letter(s) of support from the involved entities?	5
<b>Project Implementation</b>	<b>10</b>
Does the applicant's implementation plan demonstrate the agency's ability to complete the project within the allotted timeframe?	5
Does the agency have a clearly defined marketing plan?	5
<b>Management Capability</b>	<b>10</b>
Does the agency display experience and resources available in providing existing services for the targeted population?	5
Does the applicant demonstrate the ability to comply with all FTA certifications and assurances?	5
<b>Fiscal Capability</b>	<b>15</b>
Did the applicant submit letters of commitment or other proof of the availability of matching funds?	5
Does the project leverage resources?	5
Does the applicant provide methods to sustain service after the grant period?	5
<b>Program Effectiveness and Performance Indicators</b>	<b>10</b>
Is there a quantifiable methodology identified to measure and evaluate the impact of the project in meeting its identified goals?	5
Does the project contain innovative ideas that could be applied elsewhere?	5
<b>TOTAL</b>	<b>100</b>

## Draft Staff Review

## Job Access and Reverse Commute (JARC) Applications Evaluation Worksheet

Criteria	Points (Total 100)	City of Opa-Locka	City of West Palm Beach - Downtown Commuter Circulator	Miami-Dade Transit	South Florida Regional Transportation Authority - New Shuttle Bus Routes	South Florida Regional Transportation Authority - Transit Voucher Program	South Florida Regional Transportation Authority - Opa-Locka Shuttle	Palm Tran - Route 94 FAU Tri-Rail Connector
<b>Project Needs, Goals, and Objectives</b>	<b>35</b>	<b>35</b>	<b>15</b>	<b>35</b>	<b>35</b>	<b>30</b>	<b>35</b>	<b>15</b>
Consistency with TDSP	10	10	10	10	10	10	10	0
Establish, preserve, or improve mobility for target population	10	10	0	10	10	10	10	10
Majority of service area's target population served	10	10	0	10	10	10	10	0
Help serve transportation needs outside of target population	5	5	5	5	5	0	5	5
<b>Coordination/Program Outreach</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>15</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>
Opportunities to coordinate with available transportation services in the area identified	5	5	5	5	5	5	5	5
Public involvement plan identifies early and continuous outreach	5	5	5	5	5	5	5	5
Involve collaboration by at least one other group not including the entity providing the matching funds	5	5	5	5	5	5	5	5
Letters of support from involved entities included	5	5	5	0	5	5	5	5
<b>Project Implementation</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>5</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
Demonstrates the ability to complete the project within the allotted timeframe	5	5	5	0	5	5	5	5
Clearly defined marketing plan presented	5	5	5	5	5	5	5	5
<b>Management Capability</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
Display experience and resources available in providing existing services for the targeted population	5	5	5	5	5	5	5	5
Demonstrate the ability to comply with all FTA certifications and assurances	5	5	5	5	5	5	5	5
<b>Fiscal Capability</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>15</b>
Letters of commitment or proof of the availability of matching funds provided	5	5	5	5	5	5	5	5
Project leverage resources	5	5	5	0	0	0	0	5
Provide methods to sustain service after the grant period	5	5	5	5	5	5	5	5
<b>Program Effectiveness and Performance Indicators</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>
Quantifiable methodology identified to measure and evaluate the impact of the project in meeting its identified goals	5	5	5	5	5	5	5	5
Contain innovative ideas that could be applied elsewhere	5	0	0	0	0	0	0	0
<b>Total Score (out of 100)</b>		<b>95</b>	<b>75</b>	<b>80</b>	<b>90</b>	<b>85</b>	<b>90</b>	<b>75</b>

Draft Staff Review  
**New Freedom Grant Applications Evaluation Worksheet**

Criteria	Points (Total 100)	Tropical Transportation - Tropical On-Demand Transportation	Broward County Transit - Fixed -Route Digital Signage	Broward County Transit - Paratransit to Fixed Route Gap Remediation and Mobility Manager	Housing Authority of City of FTL - Mobility Management Plan and Bus Pass Program	Mae Volen Senior Center - Volen Community On-Demand Service
<b>Project Needs, Goals, and Objectives</b>	<b>35</b>	<b>35</b>	<b>35</b>	<b>20</b>	<b>30</b>	<b>30</b>
Consistency with TDSP	10	10	10	10	10	10
Establish, preserve, or improve mobility for target population	10	10	10	10	10	10
Majority of service area's target population served	10	10	10	0	10	10
Help serve transportation needs outside of target population	5	5	5	0	0	0
<b>Coordination/Program Outreach</b>	<b>20</b>	<b>15</b>	<b>15</b>	<b>10</b>	<b>20</b>	<b>15</b>
Opportunities to coordinate with available transportation services in the area identified	5	0	0	0	5	0
Public involvement plan identifies early and continuous outreach	5	5	5	5	5	5
Involve collaboration by at least one other group not including the entity providing the matching funds	5	5	5	5	5	5
Letters of support from involved entities included	5	5	5	0	5	5
<b>Project Implementation</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
Demonstrates the ability to complete the project within the allotted timeframe	5	5	5	5	5	5
Clearly defined marketing plan presented	5	5	5	5	5	5
<b>Management Capability</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
Display experience and resources available in providing existing services for the targeted population	5	5	5	5	5	5
Demonstrate the ability to comply with all FTA certifications and assurances	5	5	5	5	5	5
<b>Fiscal Capability</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>10</b>	<b>15</b>	<b>15</b>
Letters of commitment or proof of the availability of matching funds provided	5	5	5	5	5	5
Project leverage resources	5	5	5	5	5	5
Provide methods to sustain service after the grant period	5	5	5	0	5	5
<b>Program Effectiveness and Performance Indicators</b>	<b>10</b>	<b>5</b>	<b>10</b>	<b>0</b>	<b>5</b>	<b>5</b>
Quantifiable methodology identified to measure and evaluate the impact of the project in meeting its identified goals	5	5	5	0	5	5
Contain innovative ideas that could be applied elsewhere	5	0	5	0	0	0
<b>Total Score (out of 100)</b>		<b>90</b>	<b>95</b>	<b>60</b>	<b>90</b>	<b>85</b>

## Summary Findings of SFRTA Review of JARC and New Freedom Grant Applications for FTA Compliance

All applications were screened by SFRTA staff to ensure compliance with FTA program guidelines. Only those applications found in compliance were considered for funding.

### JARC

Project	FTA Compliant?
City of Opa-Locka: Circulator	Yes
SFRTA: Opa-Locka Shuttle	Yes
SFRTA: New Shuttle Routes	Yes
SFRTA: Voucher	Yes
MDT: Bus Routes	Yes
Palm Tran: Route 94	Yes
City of WPB: Circulator	Yes
BCT: Digital Signage	No
BCT: ADA Compliance	No

### New Freedom

Project	FTA Compliant?
BCT: Digital Signage	Yes
Mae Volen: Community Coach	Yes
Tropical Non-Medical: On-Demand Transportation	Yes
BCT: Gap Remediation	Yes
FLL Housing Authority: Mobility Management & Bus Pass	Only the Mobility Management Plan is eligible
BCT: ADA Compliance	No
Robert Winchester	No
East Coast Taxi: Accessible & Underserved Outreach	No
MDT: Voucher Payment	No
MDT: Functional Assessment Center	No

Note: The three applications received after the deadline are not eligible for consideration.

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY  
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)  
MEETING: FEBRUARY 17, 2010

INFORMATION ITEM REPORT

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Information Item

Presentation

SFRTA SHUTTLE BUS SERVICE AND FINANCIAL ASSESSMENT, PHASE 2

SUMMARY EXPLANATION AND BACKGROUND:

The South Florida Regional Transportation Authority (SFRTA) currently contracts for the operation of 15 shuttle bus routes to provide feeder bus service to and from Tri-Rail stations. FDOT District 4 staff, in consultation with SFRTA staff, funded the “SFRTA Shuttle Bus Service & Financial Assessment, Phase 1: Fiscal Year 2009/10.” One of the conclusions of the Phase 1 effort was the need for a Phase 2, which has the goal of “identifying opportunities to provide new service, implement service modifications, and potentially discontinue low performing routes.”

Following up on recent presentations to the PTAC, a progress update will be provided at the March 17 meeting. The study has developed performance measures, assessed funding sources, and developed existing and new shuttle route evaluation criteria. A prioritization process has been developed and applied to the existing shuttle bus routes as well as 16 potential new shuttle bus routes. This process includes multi-tiered evaluation matrixes which prioritize both existing and new shuttle routes. The evaluation criteria, preliminary ranking, and recommended routes to be considered for modification/elimination will be presented, with PTAC feedback and direction sought. The attached presentation slides contain much of this information.

EXHIBITS ATTACHED: Shuttle Bus Service and Financial Assessment Slideshow

# SFRTA Shuttle Bus Service & Financial Assessment

## Phase II



Presentation to PTAC  
March 17, 2010



### *Project Goals*

- Identify Low-performing Routes
- Identify Opportunities to Provide New Service
- Build Partnerships
- Implement Service Modifications

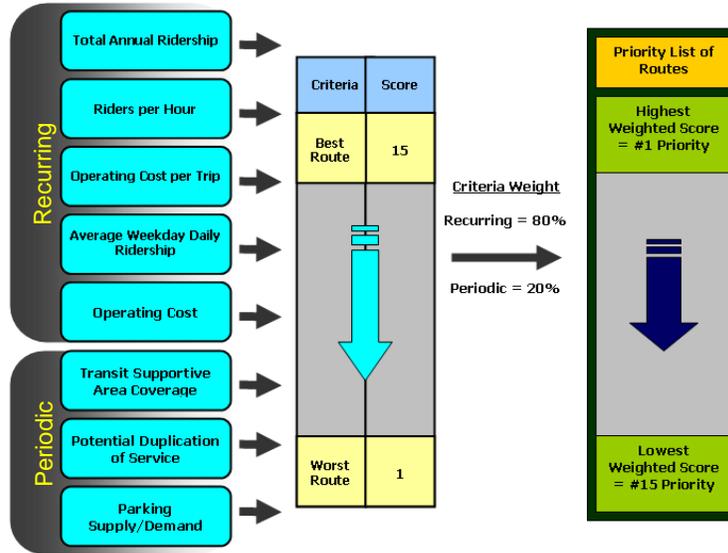
## *Project Scope*

- Develop Performance Measures
  - Assess Funding Sources
  - Assess Existing Shuttle Bus Services
    - Assess Potential New Shuttle Bus Services
    - Develop Service & Financial Plan
    - Conduct Equity Evaluation
- } Ongoing

## *Today's Presentation*

- Existing Service Assessment
- New Service Assessment
- Service & Financial Plan

## Existing Service Assessment



## Existing Service Assessment

Rank	Shuttle Bus Route	Criteria <sup>a</sup>														Total Weighted Score		
		Recurring Performance Measures (Weight = 80%)							Periodic Performance Measures (Weight = 20%)									
		Annual Ridership	Average Weekday Daily Ridership	Annual Operating Cost	Riders per Hour	Operating Cost per Trip	Potential Duplication of Service	Transit Supportive Area Coverage	Parking Utilization by Station	Score	Score	Score	Score	Score	Score			
1	SFEC - Davis Campus Shuttle	42,520	11	247.1	11	\$95,000	14	17.85	12	\$1.52	13	29%	9	22%	10	8%	12	35
2	Palm Tran Route 94	114,005	13	450.6	13	\$161,000	9	16.19	10	\$1.41	14	10%	13	20%	9	61%	7	53
4	Miami Airport Shuttle	199,496	15	728.0	15	\$408,000	3	35.15	15	\$2.05	12	100%	1	2%	3	91%	15	52
3	Fort Lauderdale International Airport Circulator	42,817	10	169.2	10	\$111,320	13	21.15	14	\$2.60	11	0%	15	1%	2	8%	12	52
5	Fort Lauderdale International Airport Shuttle - FLA 1	167,799	14	556.9	14	\$777,332	1	17.14	11	\$4.63	10	10%	13	2%	3	8%	12	46
6	Roger Shuttle	29,601	8	117.0	8	\$150,000	10	18.97	13	\$5.07	9	97%	3	15%	6	63%	11	42
7	Fort Lauderdale Shuttle - FL 1	77,231	12	305.3	12	\$452,140	2	11.31	9	\$5.85	8	42%	6	66%	15	25%	1	39
8	Boca Center Shuttle - BR 1	14,246	2	56.3	2	\$11,320	15	7.04	6	\$0.79	15	100%	1	0%	1	61%	7	34
9	Cypress Creek Shuttle 2	33,621	9	132.9	9	\$242,840	6	7.14	7	\$7.22	5	29%	9	19%	7	33%	3	33
10	Deerfield Beach Shuttle 2	15,903	3	62.9	3	\$114,400	11	8.67	8	\$7.19	6	20%	12	53%	13	63%	9	32
11	Cypress Creek Shuttle 3	25,769	6	101.9	6	\$182,000	8	7.02	5	\$7.06	7	45%	5	7%	5	33%	3	28
12	Pompano Beach Shuttle	26,090	7	103.1	7	\$274,620	4	5.50	3	\$10.53	3	30%	8	29%	12	29%	2	24
13	Sheridan Street Shuttle - SS 1	11,702	1	46.3	1	\$114,400	11	6.85	4	\$9.78	4	71%	4	26%	11	33%	6	21
14	Deerfield Beach Shuttle 1	17,066	4	67.5	4	\$232,440	7	4.57	2	\$13.62	2	22%	11	19%	7	63%	9	21
15	Cypress Creek Shuttle 1	17,498	5	69.2	5	\$246,480	5	3.76	1	\$14.09	1	32%	7	54%	14	33%	3	18

## Existing Service Assessment

Rank	Route	Annual Ridership	Annual Operating Cost	Annual Cost per Rider	Annual Cost per Hour	Annual Cost per Mile	Annual Cost per Trip
1	SFEC - Davie Campus Shuttle	62,520	\$95,000	\$1.52	\$17.95	\$1.52	\$1.52
2	Palm Tran Route 94	114,005	\$161,000	\$1.41	\$16.19	\$1.41	\$1.41

Rank	Shuttle Bus Route	Criteria <sup>1</sup>									
		Recurring Performance Measures (Weight = 80%)									
		Annual Ridership		Average Weekday Daily Ridership		Annual Operating Cost		Riders per Hour		Operating Cost per Trip	
		Score	Score	Score	Score	Score	Score	Score	Score		
1	SFEC - Davie Campus Shuttle	62,520	11	247.1	11	\$95,000	14	17.95	12	\$1.52	13
2	Palm Tran Route 94	114,005	13	450.6	13	\$161,000	9	16.19	10	\$1.41	14

## Existing Service Priority Ranking

Route	Weighted Score	Rank
SFEC Davie Campus Shuttle	55	1
Palm Tran Route 94	53	2
Miami Airport Shuttle	52	3
Fort Lauderdale Airport Circulator	52	4
Fort Lauderdale Airport Shuttle	46	5
Koger Shuttle	42	6
Fort Lauderdale Shuttle	39	7
Boca Center Shuttle	34	8
Cypress Creek Shuttle 2	33	9
Deerfield Beach Shuttle 2	32	10
Cypress Creek Shuttle 3	28	11
Pompano Beach Shuttle	24	12
Sheridan Street Shuttle	21	13
Deerfield Beach Shuttle 1	21	14
Cypress Creek Shuttle 1	18	15

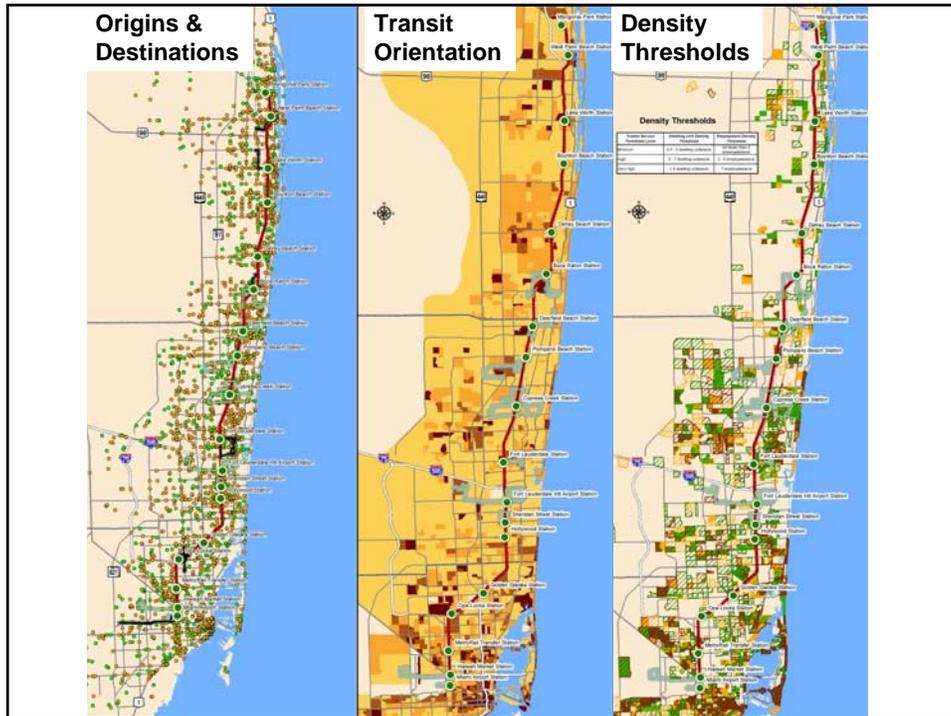
## Existing Route Priorities

Priority Rank	Shuttle Bus Route	Annual Operating Cost	Riders Per Hour	In 5-Year Plan?	Comments
1	SFEC -- Davie-Campus Shuttle	\$190,000	18.0	Yes	
2	Palm-Tran Route 94	\$322,000	16.2	Yes	
3	Miami Airport Shuttle	\$408,000	35.2	Yes	
4	Fort Lauderdale Airport Circulator	\$111,320	21.2	Yes	
5	Fort Lauderdale Airport Shuttle -- FLA 1	\$777,332	17.1	Yes	
6	Koger Shuttle	\$150,000	19.0	Yes	
7	Fort Lauderdale Shuttle -- FL 1	\$452,140	11.3	Yes	
8	Boca Center Shuttle -- BR 1	\$111,320	7.0	Yes	
9	Cypress Creek Shuttle 2	\$242,840	7.1	Yes	
10	Deerfield Beach Shuttle 2	\$114,400	8.7	Yes	
11	Cypress Creek Shuttle 3	\$182,000	7.0	Yes	
12	Pompano Beach Shuttle	\$274,820	5.5	No	Consider route modification or possibly discontinue. Routes do not meet minimum productivity threshold of riders per hour= 7.
13	Sheridan Street Shuttle -- SS 1	\$114,400	6.9	No	
14	Deerfield Beach Shuttle 1	\$232,440	4.6	No	
15	Cypress Creek Shuttle 1	\$246,480	3.8	No	

Below 7 Riders per Hour Min. Threshold

## New Service Assessment - Ongoing

- Needs Assessment
  - 2008 SFRTA TDP
  - Employer & Staff Interviews
  - Rider Suggestions/Input
  - Station Parking Demand
  - Rider O-D Data Analysis
  - Transit Supportive Variables Analysis
  - PTAC Input



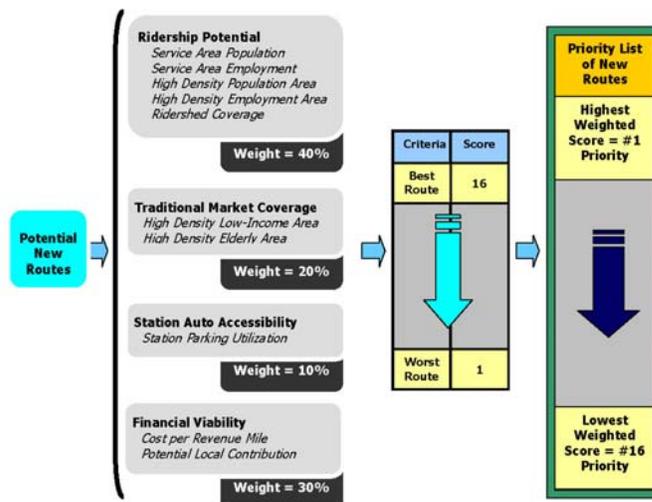
## *New Service Assessment*

- Develop Service Alternatives
  - 16 new routes being tested
- Define Service Characteristics
- Estimate New Route Costs
- Assess & Prioritize Route Alternatives

## New Service Assessment Criteria

- 4 Criteria
  - Ridership Potential
  - Traditional Market Coverage
  - Station Auto Accessibility
  - Financial Viability
- 10 Measures

## New Service Assessment Process



# New Service Assessment Process

Rank	Shuttle Route	Criteria & Measures													Total Weighted Score							
		Ridership Potential (weight = 40%)					Traditional Market Coverage (weight = 20%)		Station Auto Accessibility (weight = 10%)		Financial Viability (weight = 30%)											
		Total Service Area Population	Total Service Area Employment	High Density Population Area	High Density Employment Area	Ridenshed Coverage	High Density Elderly Population Area	High Density Low Income Population Area	Station Parking Utilization	Cost per Revenue Mile	Potential Local Contributions % of Op. Cost											
		Weight = 20%	Weight = 20%	Weight = 20%	Weight = 20%	Weight = 20%	Weight = 50%	Weight = 50%	Weight = 100%	Weight = 50%	Weight = 50%											
		Score	Score	Score	Score	Score	Score	Score	Score	Score	Score	Score	Score									
1	Opa-Locke Station - South	10,563	9	3,683	6	12%	11	12%	8	100%	3	8%	8	47%	15	89%	15	\$3.32	7	25%	16	10.21
2	Ft. Lauderdale Airport Station - Broward Admin, Mall	13,716	14	7,235	16	0%	1	9%	6	79%	1	13%	14	21%	8	84%	13	\$2.99	14	0%	1	8.79
3	Lake Worth Station - School Board/PECC	10,700	10	4,779	11	23%	14	14%	12	100%	3	0%	1	34%	13	72%	9	\$2.90	15	0%	1	8.70
4	West Palm Beach Station - Jog Road	12,257	13	4,980	12	0%	1	0%	1	100%	3	40%	16	71%	16	71%	6	\$3.11	13	0%	1	8.30
5	Ft. Lauderdale Station - Broward Admin, Mall	14,437	15	6,730	15	3%	8	13%	10	100%	3	21%	15	9%	5	25%	1	\$3.13	11	0%	1	7.98
6	Miami Airport Station - FDOT District 6	11,151	11	4,729	10	9%	9	13%	9	89%	2	8%	9	8%	4	91%	16	\$3.13	10	0%	1	7.83
7	Lake Worth Station - School Board/SFWM	12,213	12	4,956	13	14%	12	9%	7	100%	3	0%	1	23%	11	72%	9	\$3.11	12	0%	1	7.81
8	Lake Worth Station - Downtown/Beach	6,788	5	2,915	4	39%	16	35%	15	100%	3	12%	12	30%	12	72%	9	\$3.84	3	0%	1	7.34
9	Hollywood Station - Downtown	8,728	8	4,346	8	34%	15	59%	16	100%	3	0%	1	30%	14	73%	12	\$3.94	2	0%	1	7.15
10	West Palm Beach Station - Airport	4,400	2	1,917	2	0%	1	0%	1	100%	3	12%	11	22%	10	71%	6	\$2.80	16	0%	1	5.97
11	Boca Raton Station - Downtown	8,635	7	4,463	9	0%	1	0%	5	100%	3	13%	13	22%	9	61%	4	\$3.19	8	0%	1	5.95
12	Ft. Lauderdale Station - Downtown	15,495	16	6,249	14	23%	13	31%	14	100%	3	0%	1	16%	6	25%	1	\$4.95	1	0%	1	5.90
13	Ft. Lauderdale Airport Station - Hard Rock Casino	7,756	6	3,962	7	9%	9	20%	13	100%	3	0%	1	2%	3	84%	13	\$3.35	6	0%	1	5.79
14	West Palm Beach Station - School Board/SFWM	6,398	4	2,204	3	0%	1	0%	4	100%	3	8%	10	16%	7	71%	6	\$3.15	9	0%	1	5.00
15	Ft. Lauderdale Station - Hospital	5,583	3	3,229	5	0%	1	14%	11	100%	3	0%	1	0%	1	25%	1	\$3.71	4	0%	1	2.89
16	Boca Raton Station - Pen Corp	1,203	1	530	1	0%	1	0%	1	100%	3	0%	1	0%	1	61%	4	\$3.63	5	0%	1	2.06

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# New Service Assessment Process



Rank	Shuttle Route	Criteria & Measures													Total Weighted Score							
		Ridership Potential (weight = 40%)					Traditional Market Coverage (weight = 20%)		Financial Viability (weight = 30%)													
		Total Service Area Population	Total Service Area Employment	High Density Population Area	High Density Employment Area	Ridenshed Coverage	High Density Elderly Population Area	High Density Low Income Population Area	Station Parking Utilization	Cost per Revenue Mile	Potential Local Contributions % of Op. Cost											
		Weight = 20%	Weight = 20%	Weight = 20%	Weight = 20%	Weight = 20%	Weight = 50%	Weight = 50%	Weight = 100%	Weight = 50%	Weight = 50%											
		Score	Score	Score	Score	Score	Score	Score	Score	Score	Score	Score	Score									
1	Opa-Locke Station - South	10,563	9	3,683	6	12%	11	12%	8	100%	3	8%	8	47%	15	89%	15	\$3.32	7	25%	16	10.21
2	Ft. Lauderdale Airport Station - Broward Admin, Mall	13,716	14	7,235	16	0%	1	9%	6	79%	1	13%	14	21%	8	84%	13	\$2.99	14	0%	1	8.79

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## Service & Financial Plan - Ongoing

- Service Plan
  - Existing & New Service Priorities
  - 5-Year Plan
- Financial Plan
  - Costs & Revenues
  - Surplus/Shortfall
- Waiting on JARC/NF Results
- Waiting on Board adoption of Operating Budget

## 5-Year Service Plan

Tri-Rail Station	Shuttle Bus Route	Existing or New Route	Service Type	Daily Service Span (hours)	Days of Service
West Palm Beach	West Palm Beach Station - Jog Road	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
	West Palm Beach Station - School Board/SFWM	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
	West Palm Beach Station - Airport	New	All Week	15-ukday & 16-wkend	Monday - Sunday
Lake Worth Station	Lake Worth Station - School Board/SFWM	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
	Lake Worth Station - School Board/SFWM	New	Weekday	14	Monday - Friday
	Lake Worth Station - Downtown/Beach	New	All Week	19-ukday & 16-wkend	Monday - Sunday
Boca Raton	Palm Tran Route 94	Existing	Weekday	14.25	Monday - Friday
	Boca Center Shuttle - BR 1	Existing	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
	Boca Raton Station - Downtown	New	All Week	18-ukday & 15-wkend	Monday - Sunday
	Boca Raton Station - Pen Carp	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
Deerfield Beach	Deerfield Beach Shuttle 1	Eliminated	n/a	n/a	n/a
	Deerfield Beach Shuttle 2	Existing	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
Pompano Beach	Pompano Beach Shuttle	Eliminated	n/a	n/a	n/a
Cypress Creek	Cypress Creek Shuttle 2	Existing	Weekday - Peak Hours	5 (AM) & 4 (PM)	Monday - Friday
	Cypress Creek Shuttle 3	Existing	Weekday - Peak Hours	5 (AM) & 4 (PM)	Monday - Friday
	Cypress Creek Shuttle 7	Eliminated	n/a	n/a	n/a
FL Lauderdale Station	Fort Lauderdale Shuttle - FL 1	Existing	Weekday	17	Monday - Friday
	FL Lauderdale Station - Broward Admin./Mall	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
	FL Lauderdale Station - Downtown	New	Weekend	15	Saturday - Sunday
	FL Lauderdale Station - Hospital	New	Weekday	14	Monday - Friday
Fort Lauderdale International Airport	SFEC - Davis Campus Shuttle	Existing	Weekday	14	Monday - Friday
	Fort Lauderdale Airport Circulator	Existing	Weekday	8	Monday - Friday
	Fort Lauderdale Airport Shuttle - FLA 1	Existing	All Week	18	Monday - Sunday
	FL Lauderdale Airport Station - Broward Admin./Mall	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
	FL Lauderdale Airport Station - Hard Rock Casino	New	All Week	18-ukday & 14-wkend	Monday - Sunday
Sheridan Street	Sheridan Street Shuttle - SS 1	Eliminated	n/a	n/a	n/a
Hollywood	Hollywood Station - Downtown	New	All Week	19-ukday & 15-wkend	Monday - Sunday
Opa Locka	Opa-Locka Station - South	New	Weekday	13	Monday - Friday
Hialeah Market	Koger Shuttle	Existing	Weekday - Peak Hours	3 (AM) & 3 (PM)	Monday - Friday
Miami Airport	Miami Airport Shuttle	Existing	All Week	18	Monday - Sunday
	Miami Airport Station - FDOT District 6	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday

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## 5-Year Service Plan

Tri-Rail Station	Shuttle Bus	Existing New #	Service Type	Daily Service Span (hours)	Days of Service
West Palm Beach Station	West Palm Beach Station - Jog Road	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
West Palm Beach Station	West Palm Beach Station - School Board/SFWMMD	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
West Palm Beach Station	West Palm Beach Station - Airport	New	All Week	18-wkday & 16-wkend	Monday - Sunday

Tri-Rail Station	Shuttle Bus Route	Existing or New Route	Service Type	Daily Service Span (hours)	Days of Service
West Palm Beach	West Palm Beach Station - Jog Road	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
West Palm Beach	West Palm Beach Station - School Board/SFWMMD	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
West Palm Beach	West Palm Beach Station - Airport	New	All Week	18-wkday & 16-wkend	Monday - Sunday

Station	Shuttle Bus	Existing New #	Service Type	Daily Service Span (hours)	Days of Service
Orlando	Orlando Cruise Shuttle - J	Existing	All Week	16	Monday - Friday
Titusville	Titusville Station - Titusville	Existing	Weekday	15	Monday - Friday
Titusville	Titusville Station - Boardwalk Hotel	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
Titusville	Titusville Station - Downtown	New	Weekend	15	Saturday - Sunday
Titusville	Titusville Station - Hospital	New	Weekday	14	Monday - Friday
Titusville	SPCC - South Campus Shuttle	Existing	Weekday	14	Monday - Friday
Titusville	Titusville Airport Circulator	Existing	Weekday	8	Monday - Friday
Titusville	Titusville Airport Shuttle - FLA 1	Existing	All Week	18	Monday - Sunday
Titusville	Titusville Airport Station - Boardwalk Hotel	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
Titusville	Titusville Airport Station - Boardwalk Hotel	New	All Week	18-wkday & 16-wkend	Monday - Sunday
Titusville	Titusville Airport Shuttle - 20 F	Existing	All Week	16	Monday - Friday
Titusville	Titusville Station - Downtown	New	All Week	15-wkday & 16-wkend	Monday - Sunday
Titusville	Titusville Station - South	New	Weekday	13	Monday - Friday
Titusville	Titusville Station - South	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
Titusville	Titusville Station - South	Existing	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday
Titusville	Titusville Station - South	Existing	All Week	18	Monday - Sunday
Titusville	Titusville Station - South	New	Weekday - Peak Hours	4 (AM) & 4 (PM)	Monday - Friday

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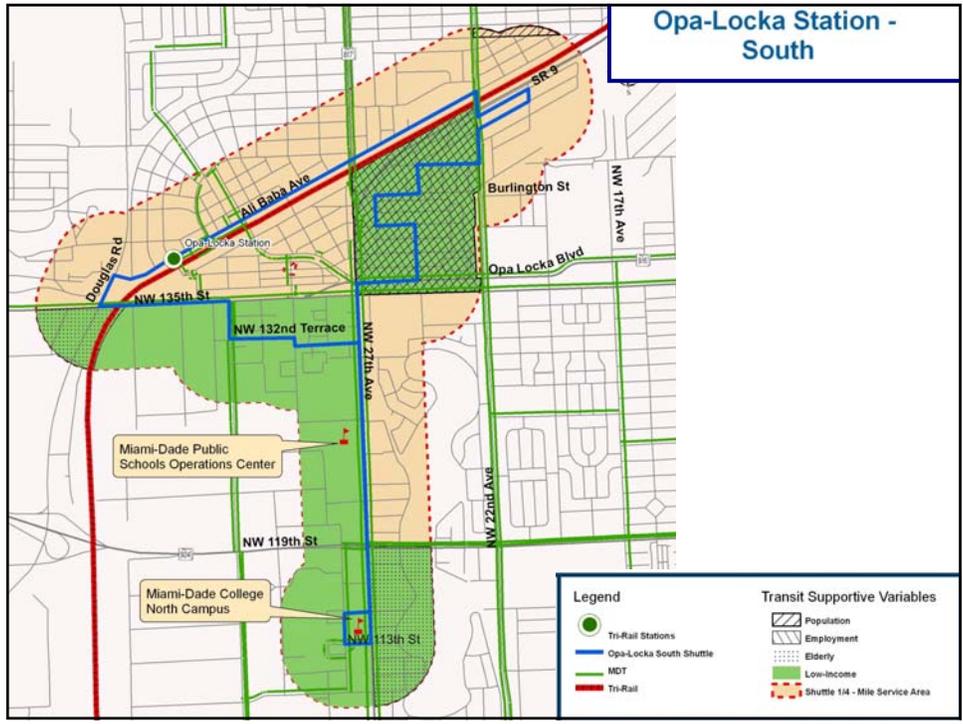
## Project Schedule

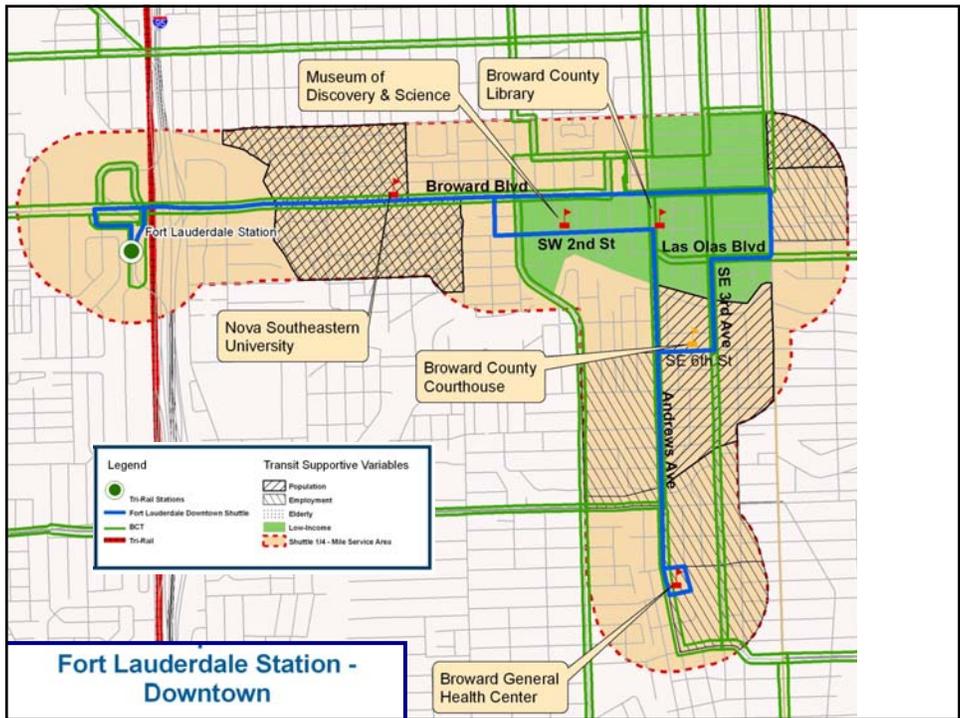
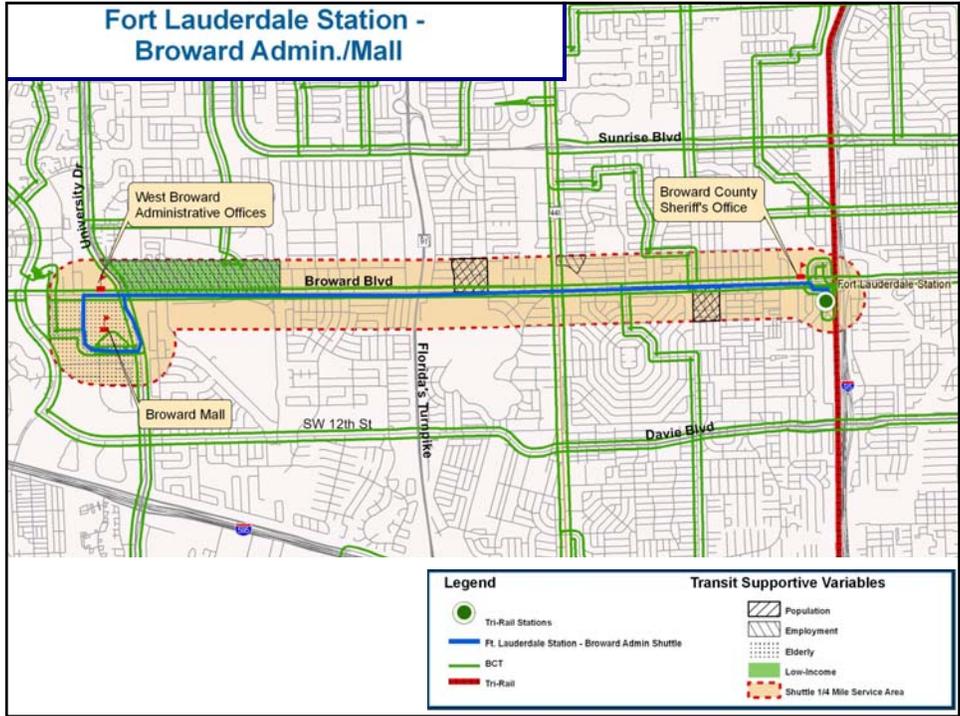
Tasks	Month						
	October	November	December	January	February	March	April
1 Develop Performance Measures		TM1					
2 Assess Existing and Potential Funding Sources				TM2			
3 Assess Existing and Potential Future Shuttle Bus Services			Telephone Interviews	Field Reviews	TM3		
4 Develop Service and Financial Plan (FY 2010/11 – FY 2014/15)						Draft	Final
5 Conduct Equity Evaluation of Proposed Service Modifications							TM4
6 Facilitate Meetings and Presentations	■		■		■	■	■

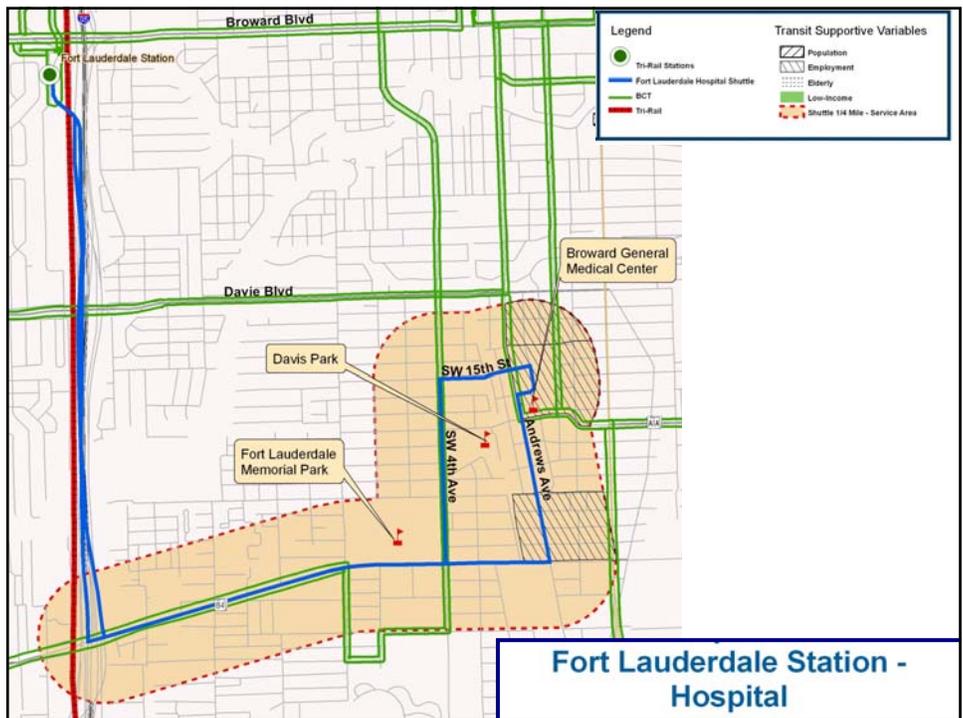
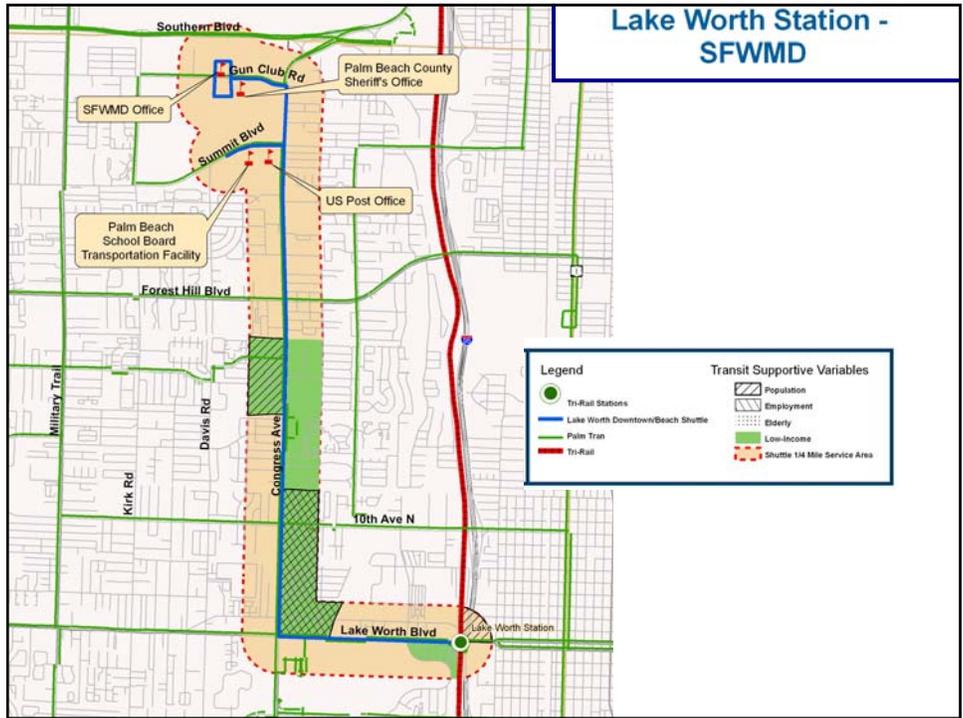
### *Next Steps*

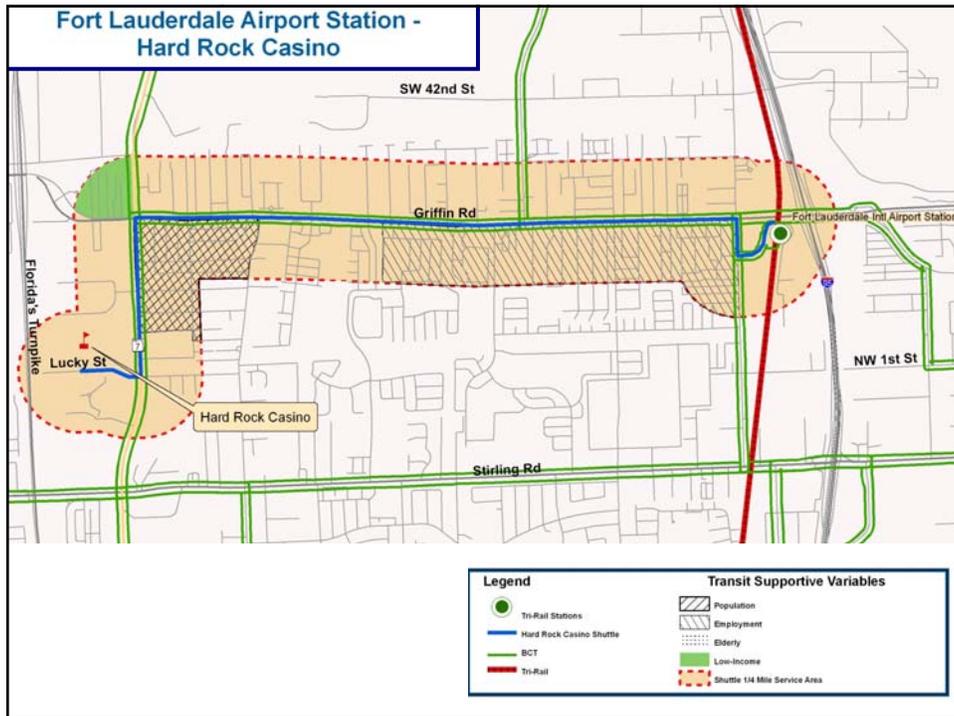
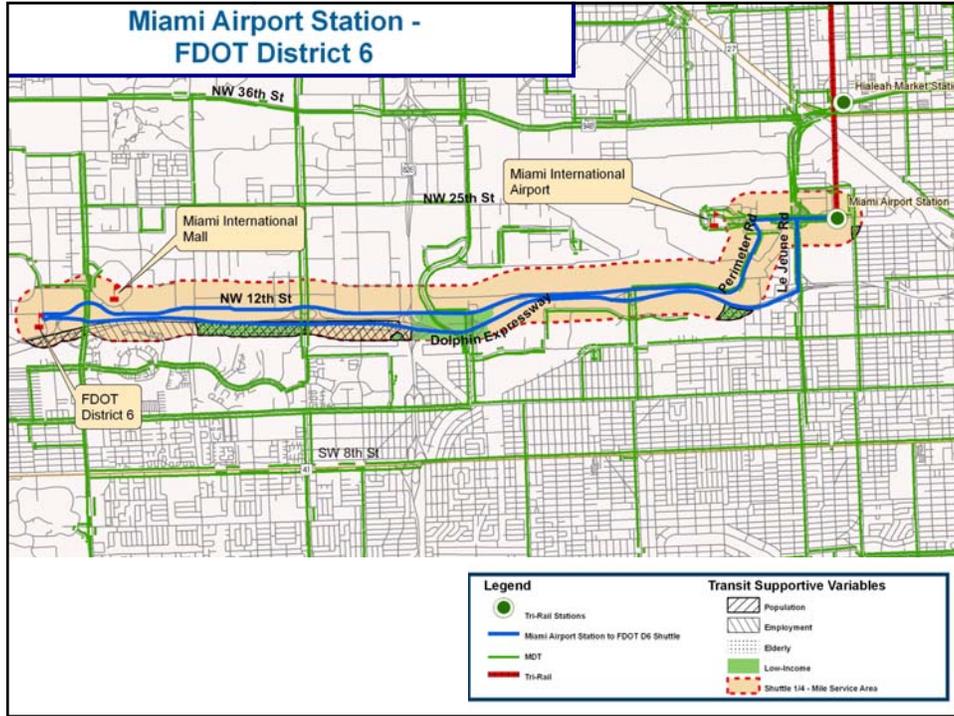
- SFRTA Board approves FY 2011 Operating Budget - **April**
- SFRTA Board awards JARC/NF Grants - **April**
- Conduct Equity Evaluation - **April**
- Finalize Service Plan - **April/May**
- Finalize Financial Plan - **April/May**
- PTAC - **May**

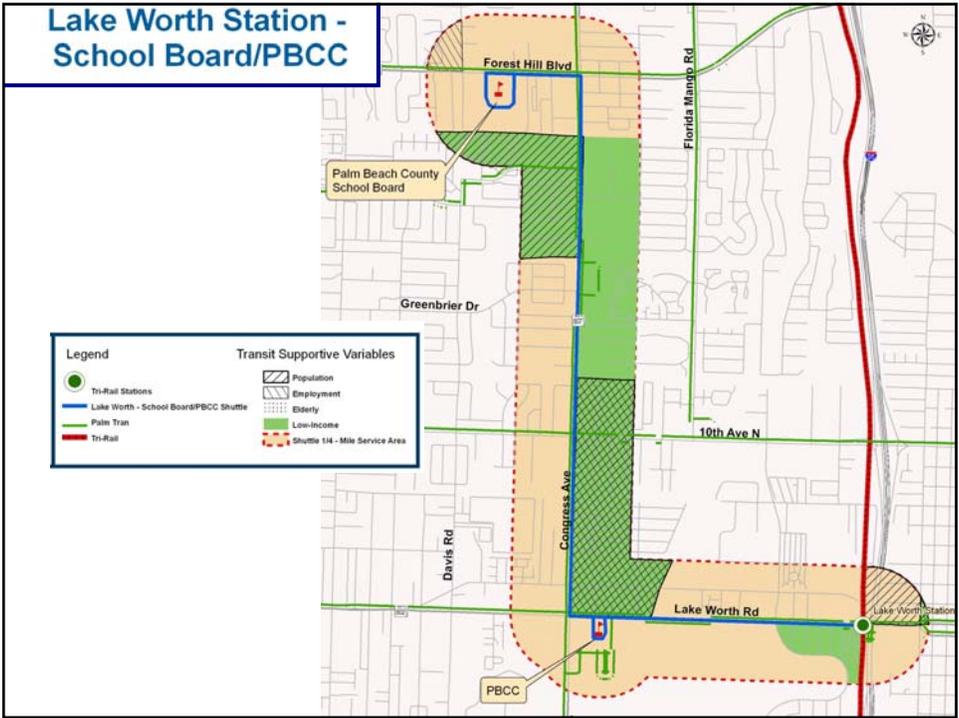
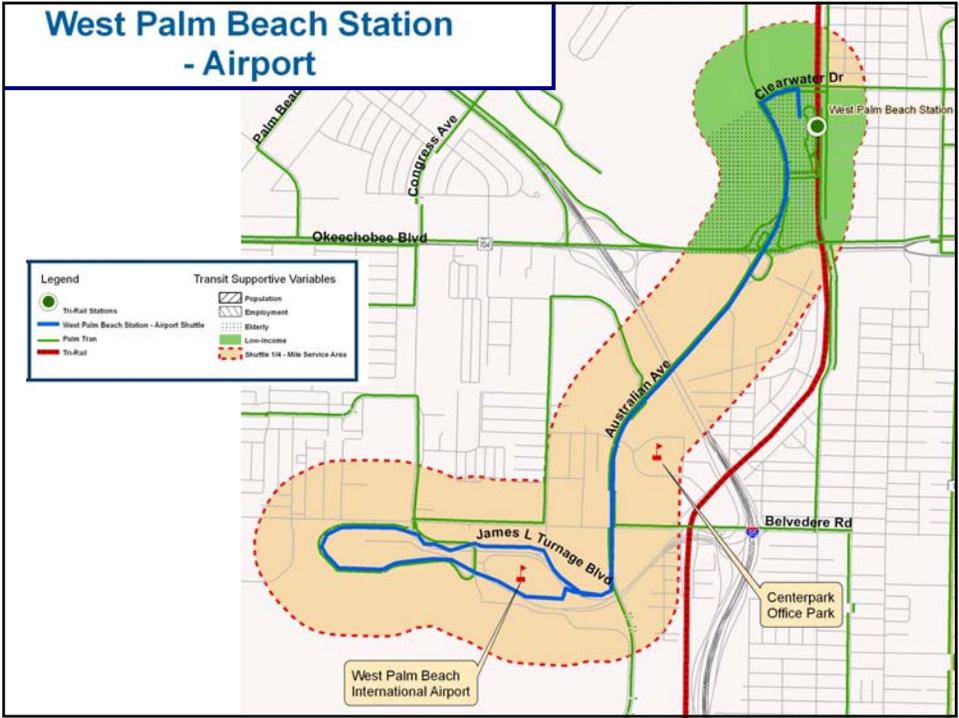
### *Questions/Comments*

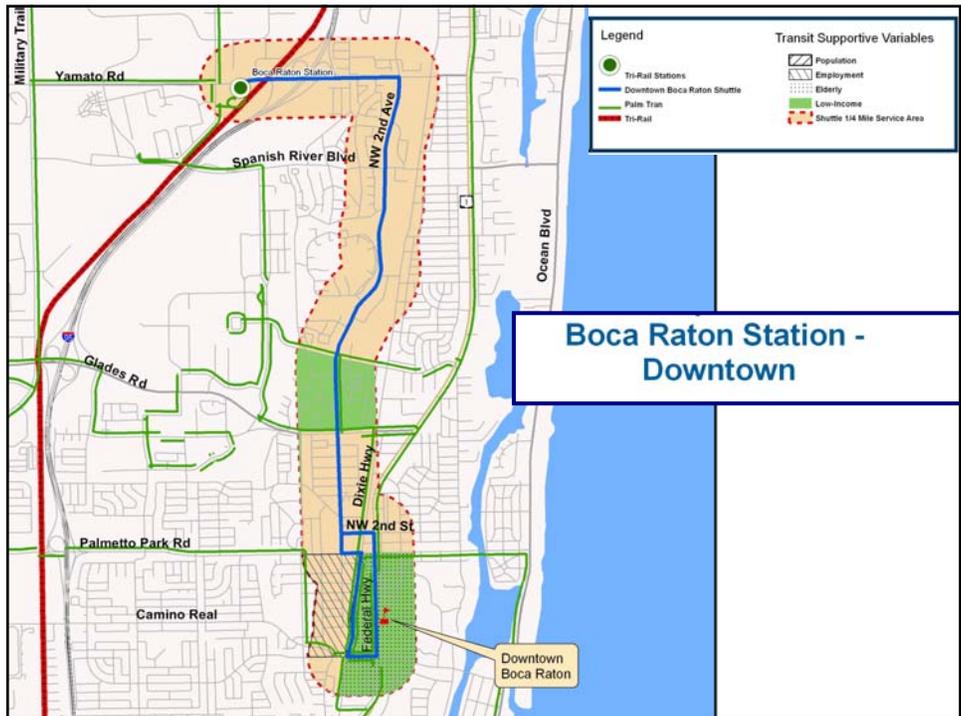
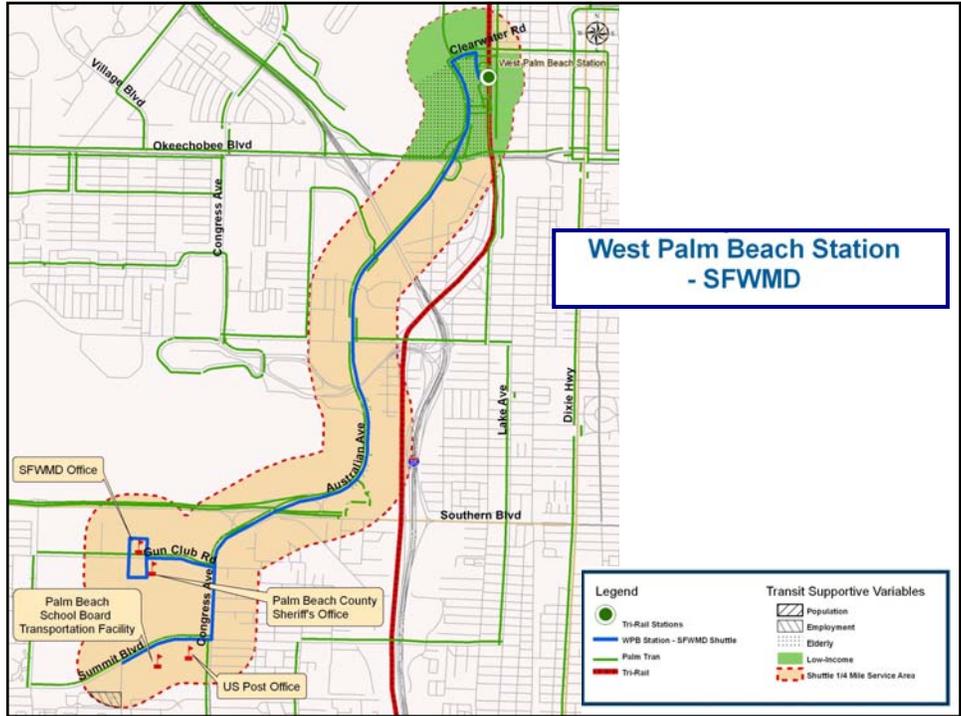


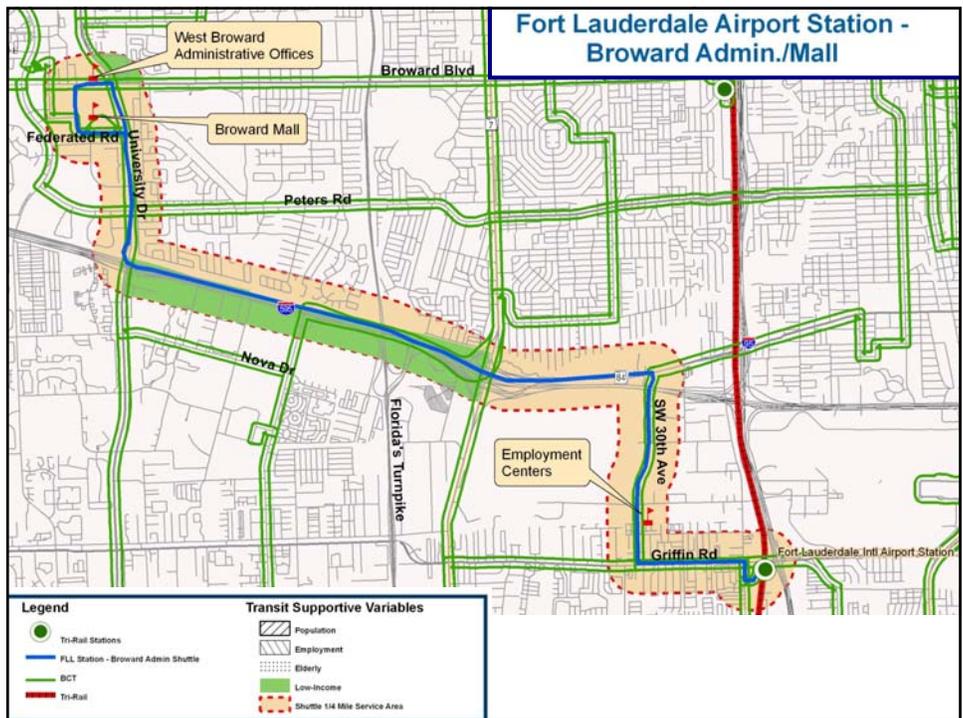
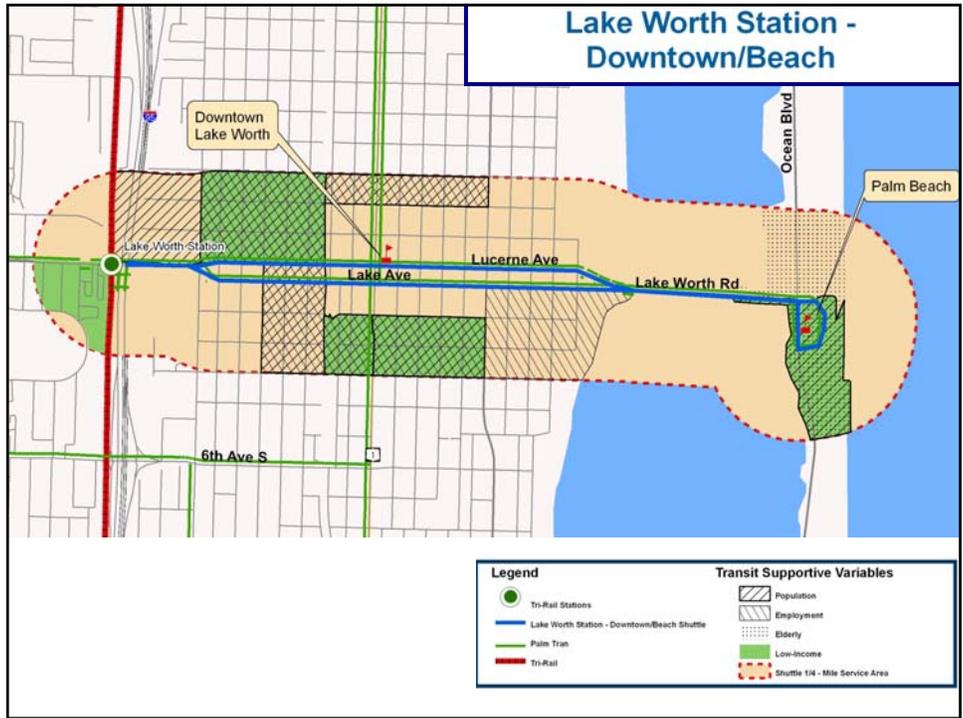


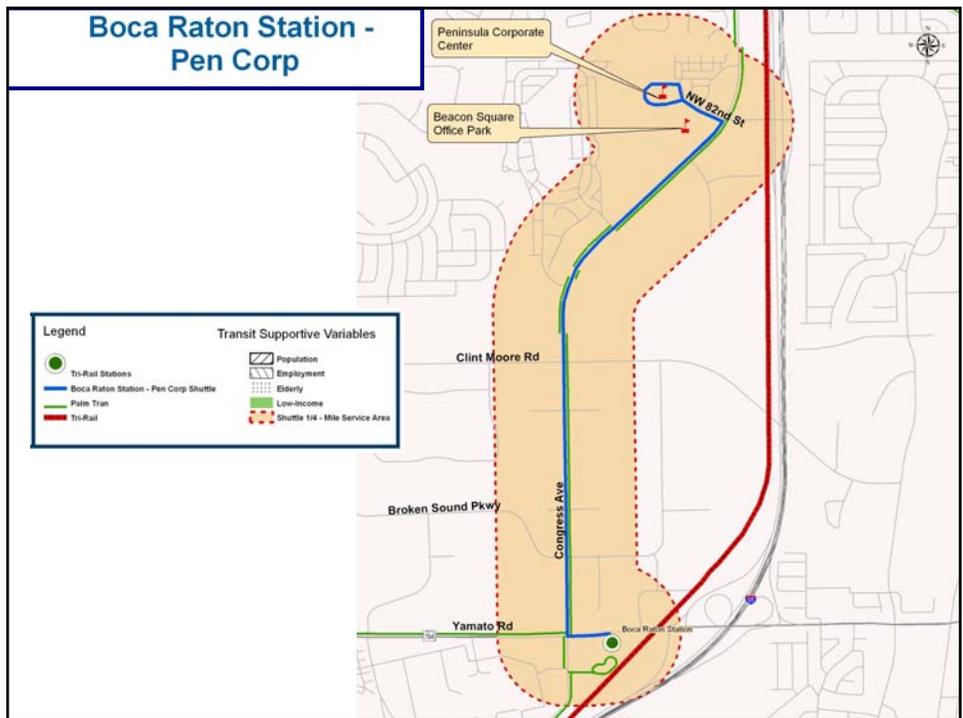
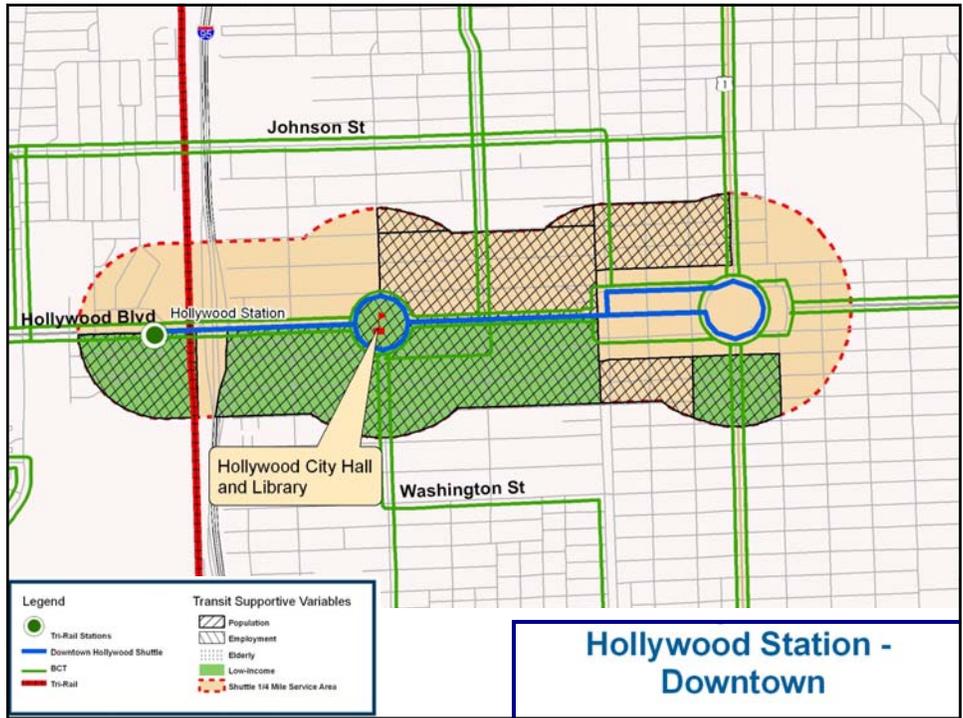












SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY  
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)  
MEETING: MARCH 17, 2010

INFORMATION ITEM REPORT

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Information Item                       Presentation

TRI-RAIL PARKING MANAGEMENT STUDY

SUMMARY EXPLANATION AND BACKGROUND:

In an effort to explore methods to effectively manage parking at Tri-Rail park-and-ride lots, the SFRTA seeks to evaluate parking management techniques and potential pay parking operations at Tri-Rail station park-and-ride lots. The goal of the Tri-Rail Parking Management Study is to evaluate the feasibility of implementing parking management techniques in an effort to more efficiently manage Tri-Rail park-and-ride lots and to assess potential impacts on ridership.

The Tri-Rail Parking Management Study has been previously presented to the PTAC at its meeting held during September, October, and December of 2009. Further study findings will be shared at the March 17, 2010 meeting, including the elasticity and financial model development process and their respective results. Outputs from these two models will be utilized to predict potential parking revenues if fees were to be charged for parking at Tri-Rail stations. Moving forward, the study will shift focus to non-parking fee oriented parking management strategies to be implemented in the interim rather than charging for parking.

EXHIBITS ATTACHED: Elasticity Model Development Memo

# Memorandum

TO: Greg Kyle and Mark Ledford, KHA

FROM: Krishnan Viswanathan and Jessica Vargas, CS

DATE: March 12, 2010

RE: Elasticity Model Development – Final Estimation - **DRAFT**

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This memo describes work performed by Cambridge Systematics (CS) to develop a parking elasticity model for the South Florida Regional Transportation Authority (SFRTA). The elasticity findings are then to be used in a separate modeling tool that will estimate the impact on ridership of introducing a parking fee at Tri-Rail stations.

Elasticity is a convenient, quantitative measure of travel demand response to price and service changes that influence demand. When considering demand for transportation, there are a number of elasticities of interest, including elasticities describing traveler response to changes in the overall amount of transit service, transit frequencies, transit fares, vehicular tolls, parking charges, and gasoline costs. The price elasticity of demand is loosely defined as the percentage change in quantity of commodity or service demand in response to a 1 percent change in price. For instance, a price elasticity of  $-0.3$  indicates that for a 1 percent increase (decrease) in the price of a good or service, there is a 0.3 percent decrease (increase) in the demand for that good or service.

As part of the elasticity model development, CS developed a series of models to estimate the determinants of Tri-Rail ridership. The models looked at the variables that determine transit ridership. Once variables that determine transit ridership were determined, the best model was used to estimate ridership impacts and elasticities of demand using the fare variable as a proxy for parking price. It was assumed that increasing the fare can determine rider sensitivity to parking price. The methodology employed to develop the models and the findings are summarized in the following sections.

## Literature Review

In order to determine the viability of elasticity estimates developed in this study, a literature search was done to ensure that any elasticity developed as part of this study are consistent with what is in the literature.

Kain and Liu conducted econometric analyses of factors influencing transit ridership for 184 systems over a 30-year period between 1960 and 1990.<sup>1</sup> Their findings indicate that the mean fare elasticities for ridership changes during the 1970 to 1980 and 1980 to 1990 periods, and the 1980 and 1990 cross-section models range from -0.34 to -0.44. In addition, Kain and Liu found the fare elasticity to be -0.23 and -0.48 for Houston and San Diego respectively when they estimated ridership using FY 1992 data.

For the Massachusetts Bay Transportation Authority (MBTA), an impact analysis conducted by the Boston MPO found that a fare increase of 19.5 percent results in a decrease of ridership of 4.6 percent.<sup>2</sup> For the Washington D.C. transit system (WMATA), Cambridge Systematics found the fare elasticity to be between -0.12 and -0.18.<sup>3</sup> In addition, David Gillen found that overall transit fare elasticity to be between -0.33 and -0.22.<sup>4</sup>

These studies provide the CS team with a context when developing the parking price elasticity model and allows to determine the performance of our model.

## Model Development

As part of the model development CS assembled the model input data for the FY2002 through FY2009 (through October) period and developed econometric models to forecast rail ridership. We then compared these model forecasts to actual SFRTA estimates of ridership.

Several types of variables were considered as determinants of Tri-Rail monthly ridership. Also, different variable specifications and functional forms were tested to identify the model specifications that provided the most intuitively appealing interpretation and statistical indications. Some variables such as downtown parking costs were explored, but didn't make the final set of variables because of limited data availability. Special events that do not occur on a regular basis, such as very large rallies/parades or unusual SFRTA service disruptions due to weather, were also examined. However, due to the limited ability to predict the month and year these events occur, it was decided not to include these types of special events in the final variables. The final set of explanatory variables tested in the models may be categorized into four groups.

### 1. *Demographic Variables*

- **South Florida Employment** - South Florida (Miami-Dade, Broward, and Palm Beach Counties) monthly employment estimates. Source: Moody's Economy.com.

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<sup>1</sup> Kain, J.F., Liu, Z. An econometric analysis of the determinants of transit ridership, 1960 to 1990. Report prepared for the US Department of Transportation, Transport System Center, Cambridge, Massachusetts, 1998.

<sup>2</sup> Central Transportation Planning Staff, Impact Analysis of a Potential MBTA Fare Increase in 2009, July 2009.

<sup>3</sup> Cambridge Systematics, WMATA Ridership and Revenue Budget Econometric Model, August 2009.

<sup>4</sup> David Gillen. "Peak Pricing Strategies in Transportation, Utilities, and Telecommunications: Lessons for Road Pricing," *Curbing Gridlock*, TRB (www.trb.org), pp. 115-151, 1994.

- **South Florida Population** - South Florida (Miami-Dade, Broward, and Palm Beach Counties) yearly population estimates. Source: Florida Legislature Office of Economic and Demographic Research and U.S. Census Bureau.

## 2. *Tri-Rail-Related Variables*

- **Tri-Rail Fare** - Average Tri-Rail fare per passenger (passenger revenue divided by passenger trips). Source: SFRTA.
- Service variables attempting to capture level-of-service characteristics that may impact ridership, including:
  - **Tri-Rail Hours** - This variable represents the total number of hours that vehicles travel while in revenue service during a month on the Tri-Rail system. Source: SFRTA and National Transit Database, <http://www.ntdprogram.gov/ntdprogram/>.
  - **Tri-Rail Miles** - This variable represents the total number of miles that vehicles travel while in revenue service during a month on the Tri-Rail system. Source: SFRTA and National Transit Database, <http://www.ntdprogram.gov/ntdprogram/>.

## 3. *Special Variables*

- **Gas Prices** - Average per gallon gas price for unleaded self-serve in South Florida. Source: U.S. Department of Energy, Energy Information Administration.

## 4. *Seasonal and Monthly Variables*

- **Seasonal** - This new dummy variable was created to account for ridership trends that vary by season. The season of the year variables are winter season (December through March), summer (June and July) and rest of year. Winter takes on the value of one if the month is December, January, February, or March. Summer takes on the value of one if the month is June, or July. It was decided to confine summer to June and July based on ridership data.
- **Monthly** - This new dummy variable captures differences in ridership by month of the year. The month of the year variable may be capturing events or seasonal attributes specific to that month. For example, the holiday season in December may contribute to days off of work or increased shopping trips, which would be captured in the December variable.

CS assembled these input variables for the FY2002 through FY2009 (through October) period, and developed an input database. SFRTA provided CS with monthly estimates of actual ridership and revenue for the rail system.

Because the outputs from the model (sometimes referred to as “backcasts”) reflect the actual estimates of the inputs, rather than forecasts of these inputs (as one would have to use if it were at the beginning of the forecast period), inaccuracies and difficulties in forecasting the inputs are controlled. The backcasts reflect the model results assuming near perfect understanding of the model inputs. One would never be able to forecast under these circumstances, but by looking at the backcasting results, we are able to measure the model’s validity without the inaccuracies in input forecasts.

## Weekday Ridership Models

In an iterative process to develop a best-fit model, three monthly ridership time-series regression models were developed for weekday Tri-Rail service. Models were developed by testing many of the variables in a variety of functional forms. Both monthly non-lagged and lagged (i.e., including the previous month values) versions of the fare and gas variables were tested (to account for rider behavior changes following a change in the input variable like gas price). For certain variables it was found that the lagged variables were better predictors of ridership, specifically the gas price and Tri-Rail fare; therefore, in the final specifications, these variables are lagged by one month as noted in the following specification tables. In addition, the presence of auto-correlation was tested for each model to determine if monthly ridership was correlated with the ridership of previous months. For all of the models, checks were made for auto-correlation (i.e. the variables were not linked and auto-correlating).

The monthly weekday Tri-Rail ridership time-series regression models were developed using Tri-Rail ridership data from FY 2003 to FY 2009. Natural logarithms were used to transform the dependent (ridership) and independent (sociodemographic characteristics, Tri-Rail characteristics, gas price) variables to account for the skewness in the distribution of the variables. The skewness is a measure of lack of symmetry or how different the dataset looks to the right and left of the center point. Overall, there were a number of variables that were consistently found to be insignificant within the model (i.e., population and seasonable variables; therefore, these variables are not required for forecasting the total monthly weekday Tri-Rail ridership. All of the service variables were tested in the model separately. Vehicle revenue miles were demonstrated to have a relationship to ridership; on the other hand, vehicle revenue hours were not included in the final specification due to concerns regarding data validity and timeliness.

The three total monthly weekday Tri-Rail ridership regression models are presented in Table 1, with all lagged variables noted. The variables, for the most part, were shown to be logically related to transit ridership, with the exception of the employment relationship in Model 3 (addressed below).

The first model was developed with only gas prices as the variable – which showed a positive correlation - but regression results were not favorable (adjusted R Square value of 0.4).

Hence, a second model is developed which included vehicle revenue miles and SFRTA fare and gas prices (which were lagged by one month). Results showed a strong positive correlation (shown by t-stat above 1.95) between vehicle revenue miles and ridership; a less robust negative correlation for fare (an increase in the Tri-Rail fare in the previous month is correlated with decreased ridership); and a still less robust but positive correlation between gas price and ridership.

A third model was developed which included the variables from Model 2, with the addition of South Florida employment numbers. For this model, results showed stronger correlations for revenue miles, fares and gas prices, but a reduction in ridership with an increase in employment – which appears counter-intuitive.

**Table 1. Total Monthly Weekday Ridership**

Variable	Model 1		Model 2		Model 3	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Constant	9.773	25.38	4.573	6.95	29.046	3.02
Natural log of vehicle revenue miles			0.7	8.59	0.708	9.04
Natural log of SFRTA fares (lagged one month)			-0.245	-1.75	-0.433	-2.83
Natural log of Gas prices (lagged one month)	0.476	6.81	0.039	0.56	0.188	2.11
Natural log of Employment					-1.721	-2.55
Number of Observations	70		70		70	
Adjusted R Square	0.4		0.71		0.73	

Figures 1 to 3 show the ridership numbers calculated by each model versus the actual Tri-Rail weekday ridership for the three models. Table 2 shows the average yearly ratio of actual Tri-Rail to modeled or estimated ridership results from the three models.

**Table 2. Ratio of Estimated Values to Actual Values**

Year	Average Weekday Ridership		
	Model 1	Model 2	Model 3
2003	1.03	1.02	1.05
2004	1.02	0.97	0.99
2005	1.17	1.03	1.01
2006	1.08	1.03	1.01
2007	1.02	1.08	1.04
2008	0.91	0.92	0.95
2009	0.85	1.01	1.01

Figures 4 to 6 show the ratios of modeled to observed ridership between 2003 and 2009 for the three models.

In summary, Model 1 regression results were low and Model 3 results in a reduction in ridership with an increase in employment – which is counter-intuitive. Thus, Model 2 was used to estimate Tri-Rail weekday ridership for the development of the parking elasticity model because the results show logical relationships between the variables (i.e., positive correlation between ridership and gas prices and revenue miles and negative correlation between ridership and fares).

### Fare as Proxy for Parking Fee

The focus groups conducted during the fall of 2009 found great reluctance on the part of respondents to pay for parking. Of the various parking fare structures proposed, the \$2.00 for four to 12 hours of parking was found to be the most tolerable to respondents. However, because the model estimation is done using data from 2003 to 2009 and parking was free at Tri-Rail stations during this period, introducing a parking fee of \$2.00 would have led to erroneous results and inability to interpret the results in a statistically coherent manner. In other words, there is no data or history to estimate how Tri-Rail riders have reacted to parking prices, but the weekday ridership model already takes into account how ridership correlates or responds to fare. Further, using a single value of \$2.00 introduces a lack of variability in the data, leading to erroneous results. In addition, revenue per passenger is based on real data and is therefore more policy responsive in the absence of a well-designed stated-preference survey, which would allow for isolation of parking price impacts. For all these reasons, increases in fare are used as a proxy for parking assuming that an increase in fare is an increase in the cost of riding Tri-Rail as it includes the cost of parking for riders who choose to drive and park their vehicles at Tri-Rail stations. The average revenue per passenger is \$2.13 and an increase of 100 percent in this fare, mimics the proposed \$2.00 daily parking fare. Model 2 was applied in increments of 10 percent up to 100 percent and the change in ridership was estimated. Table 3 shows the change in ridership as fare increases from 10 to 100 percent and a parking fare of \$2.00 results in a reduction of ridership of 15.6 percent, which is consistent with what was found in the literature.

**Table 3. Model Sensitivity Results**

<b>Percent Increase in Fare from base to</b>	<b>Percent Change in Ridership</b>
10 percent	-2.3%
20 percent	-4.4%
30 percent	-6.2%
40 percent	-7.9%
50 percent	-9.5%
60 percent	-10.9%
70 percent	-12.2%
80 percent	-13.4%
90 percent	-14.6%
100 percent	-15.6%

## Elasticity Calculation

It should be noted here that for elasticity measures to be applicable, the transportation system change or built environment difference must be a relative one (as opposed to an absolute one). In other words, it must involve a quantifiable percentage increase, decrease, or difference in the system parameter of interest. For example, while elasticity measures can be used to describe the response to a change in the overall amount of transit service (like more frequent service between existing stations), they cannot be used to describe the response to introducing a new dimension of service like serving a new end station.

The most frequently used form of elasticity in transportation analysis is the arc elasticity.<sup>5</sup> An arc elasticity reflects the change in demand resulting from each 1% change in price, calculated in infinitesimally small increments. Arc elasticity is based on both the original and final values of demand and price or service. The arc elasticity function is included below:

$$E_p = \frac{\frac{Q_2 - Q_1}{(Q_1 + Q_2)/2}}{\frac{P_2 - P_1}{(P_1 + P_2)/2}}$$

where

Q2 = new demand; Q1 = original demand; P2 = new price/service; and P1 = original price/service.

A price elasticity of -0.3 indicates an 0.3 percent reduction (or increase) in demand in response to each one percent price increase (or decrease), calculated in infinitesimally small increments. (The order of the statement is not important, but the calculation in infinitesimally small increments is.) The negative sign signifies an inverse relationship between price and demand. In other words, it indicates that the effect operates in the opposite direction from the cause. For example, an increase in price results in a decrease in demand, and the corresponding elasticity is negative. An increase in service promotes an increase in demand, and the elasticity is positive.

The elasticity of the model is -0.25 and depending on the percent increase selected it ranges from -0.11 to -0.25, which is again consistent with the findings in the literature. Figure 7 shows the riders response to parking fares and the elasticity of the model.

## Summary

In summary, introducing a parking price of \$2.00 results in a reduction in ridership of 15.6 percent. This reduction is applicable only to the 46 percent of Tri-Rail riders who drove and parked at a station before getting on the train.<sup>6</sup> Literature research indicates that fare change

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<sup>5</sup> Litman, Todd, "Transportation Elasticities - How Prices and Other Factors Affect Travel Behavior", Victoria Transport Policy Institute, February 2010. (<http://www.vtpi.org/elasticities.pdf>)

<sup>6</sup> Gannett Fleming, 2008 Tri-Rail Transit On-board Survey, 2009.

effects typically stabilize in three months.<sup>7</sup> It is important to note that many other external factors like socio-economic conditions including employment and internal factors like service quantity and quality also have an impact on ridership levels in addition to changes in price.<sup>8</sup>

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<sup>7</sup> Kyte, M., Stoner, J., and Cryer, J., "A Time-Series Analysis of Public Transit Ridership in Portland, Oregon, 1971-1982." *Transportation Research -A*, Vol. 22A, No. 5, 1988.

<sup>8</sup> Taylor, B., Fink, C., "The Factors Influencing Transit Ridership: A Review and Analysis of the Ridership Literature". UCLA Department of Urban Planning Working Paper. <http://www.uctc.net/papers/681.pdf>

Figure 1. Weekday Tri-Rail Ridership: Estimated versus Observed – Model 1

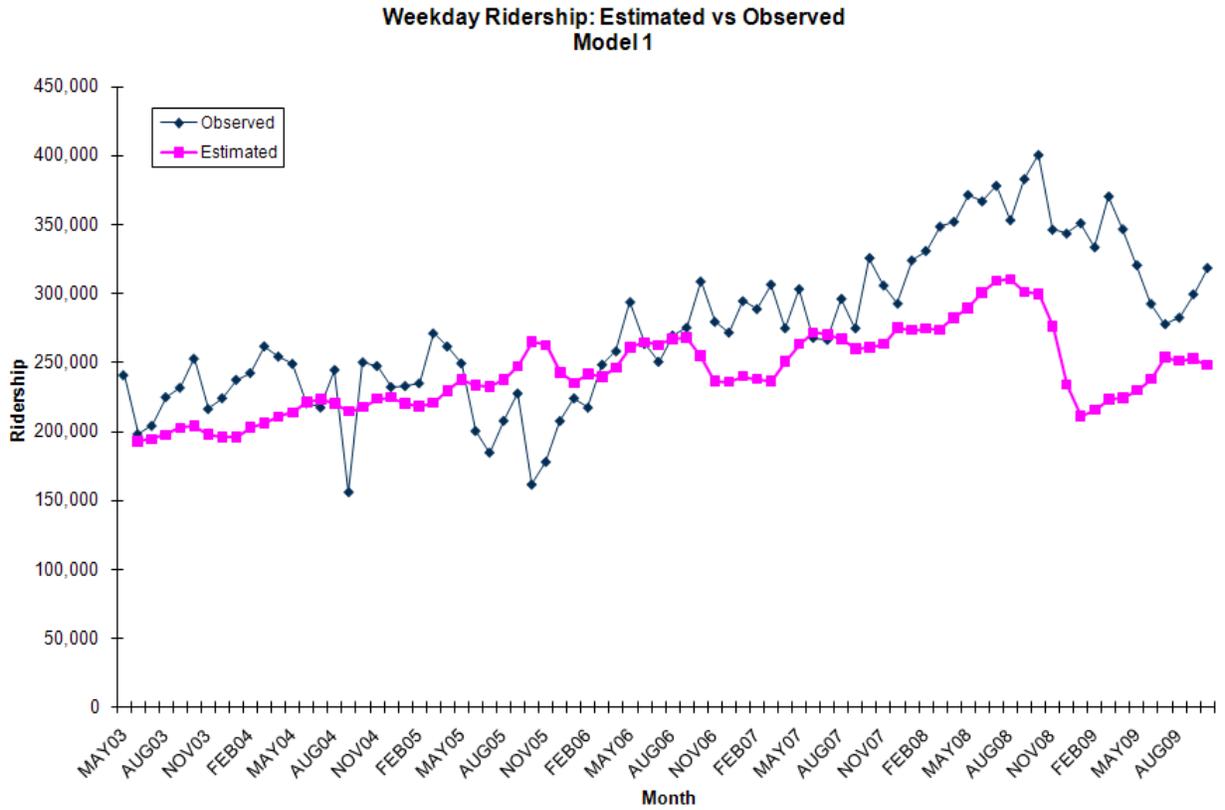


Figure 2. Weekday Tri-Rail Ridership: Estimated versus Observed – Model 2

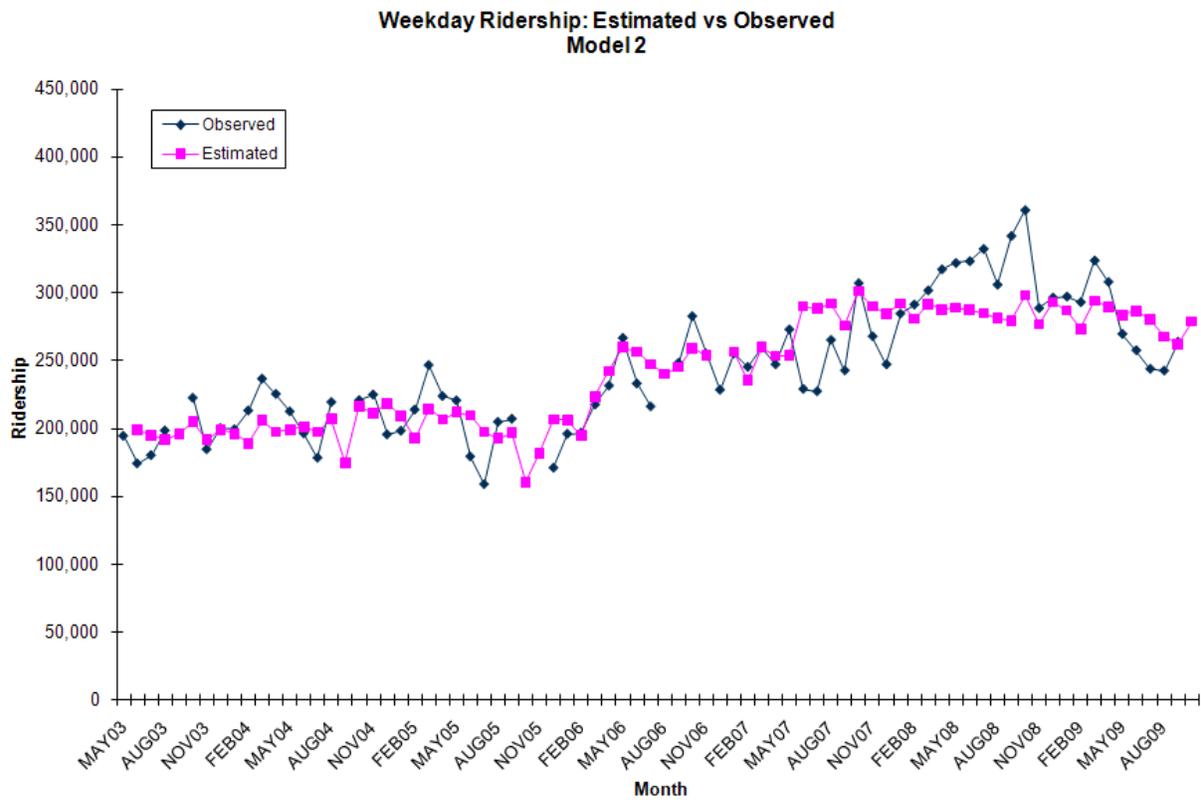


Figure 3. Weekday Tri-Rail Ridership: Estimated versus Observed – Model 3

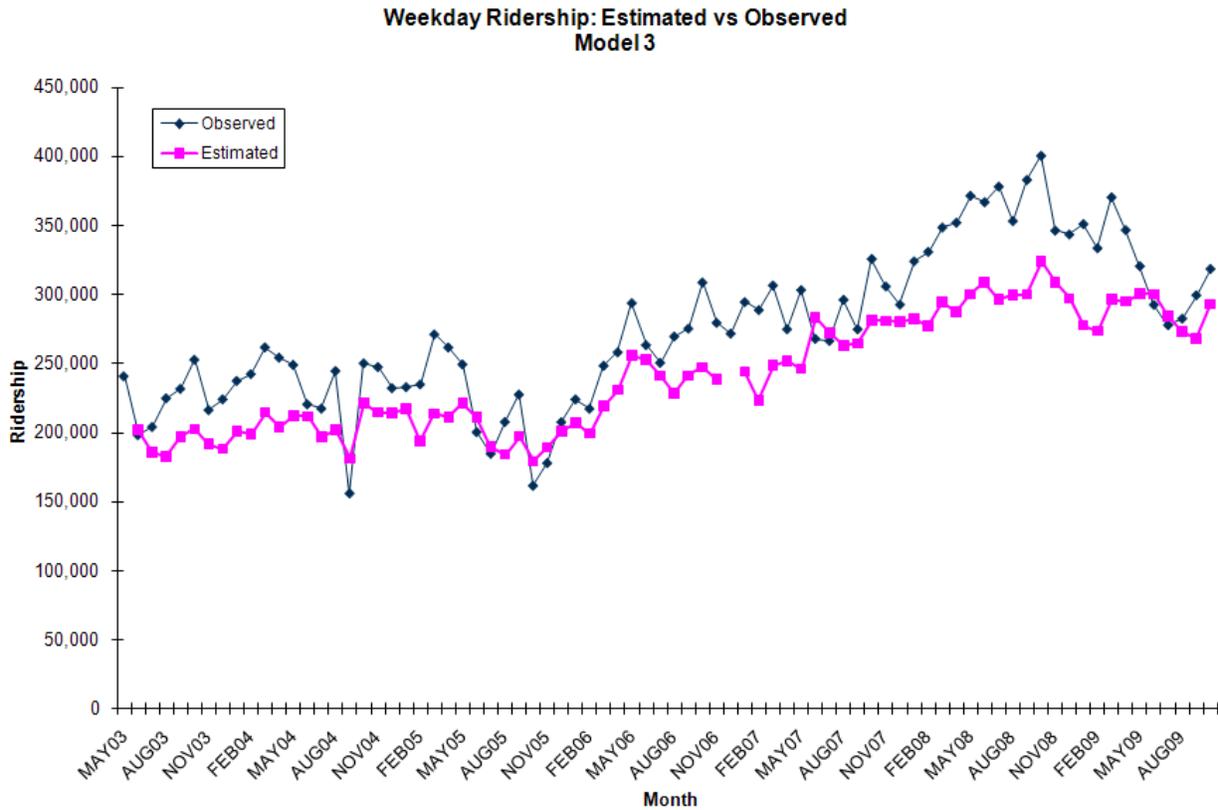


Figure 4. Average Weekday Tri-Rail Ridership Comparison - Model 1

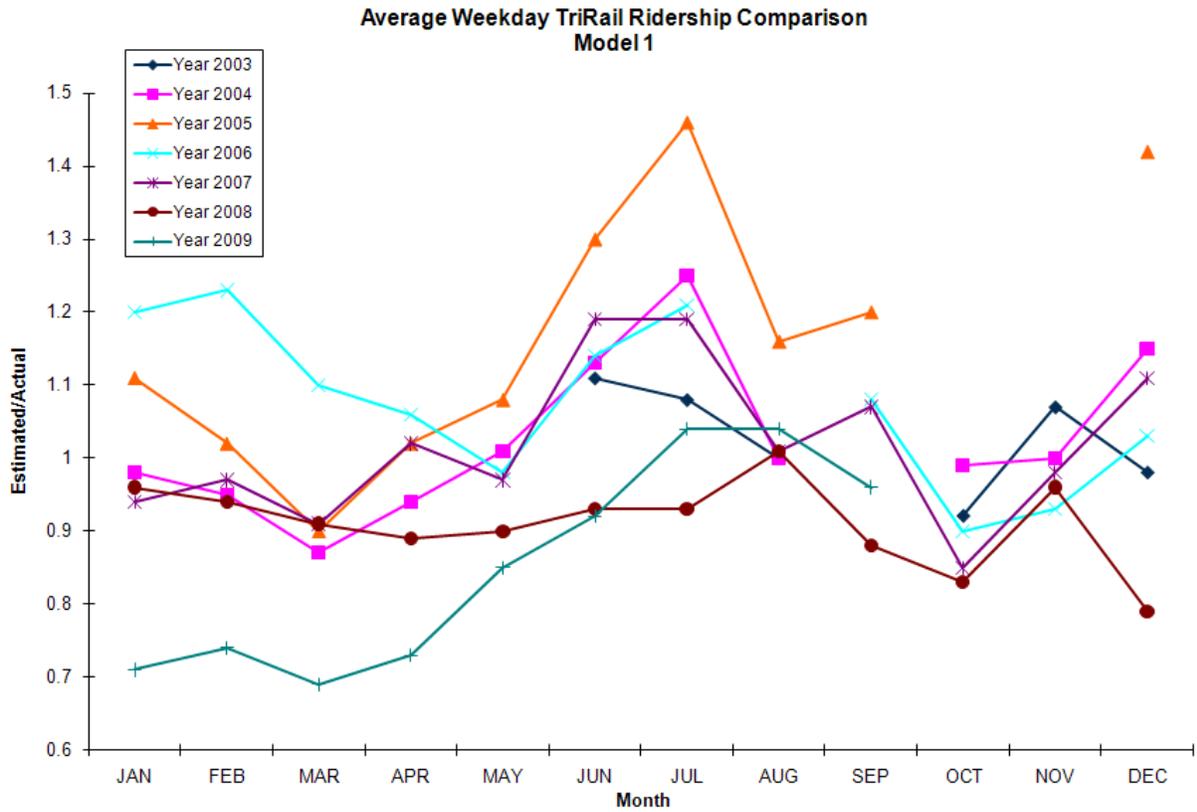


Figure 5. Average Weekday Tri-Rail Ridership Comparison - Model 2

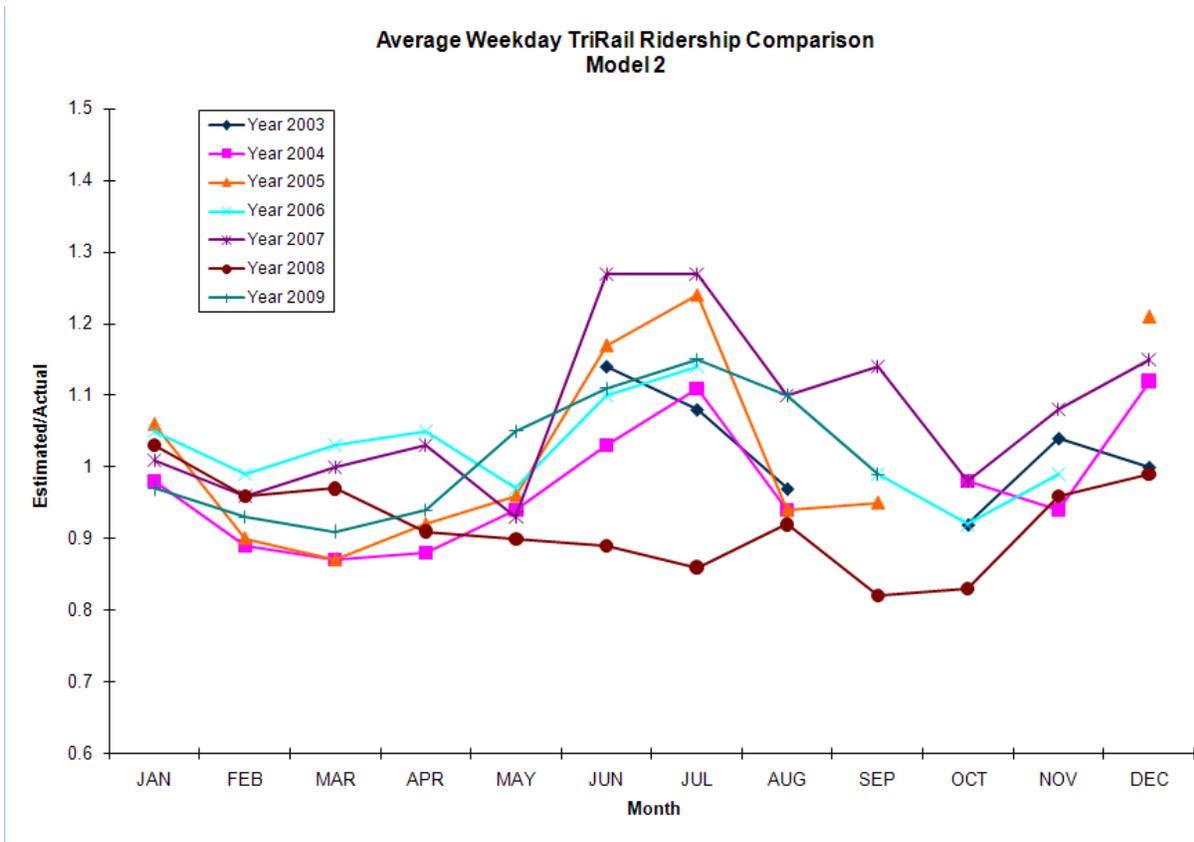


Figure 6. Average Weekday Tri-Rail Ridership Comparison - Model 3

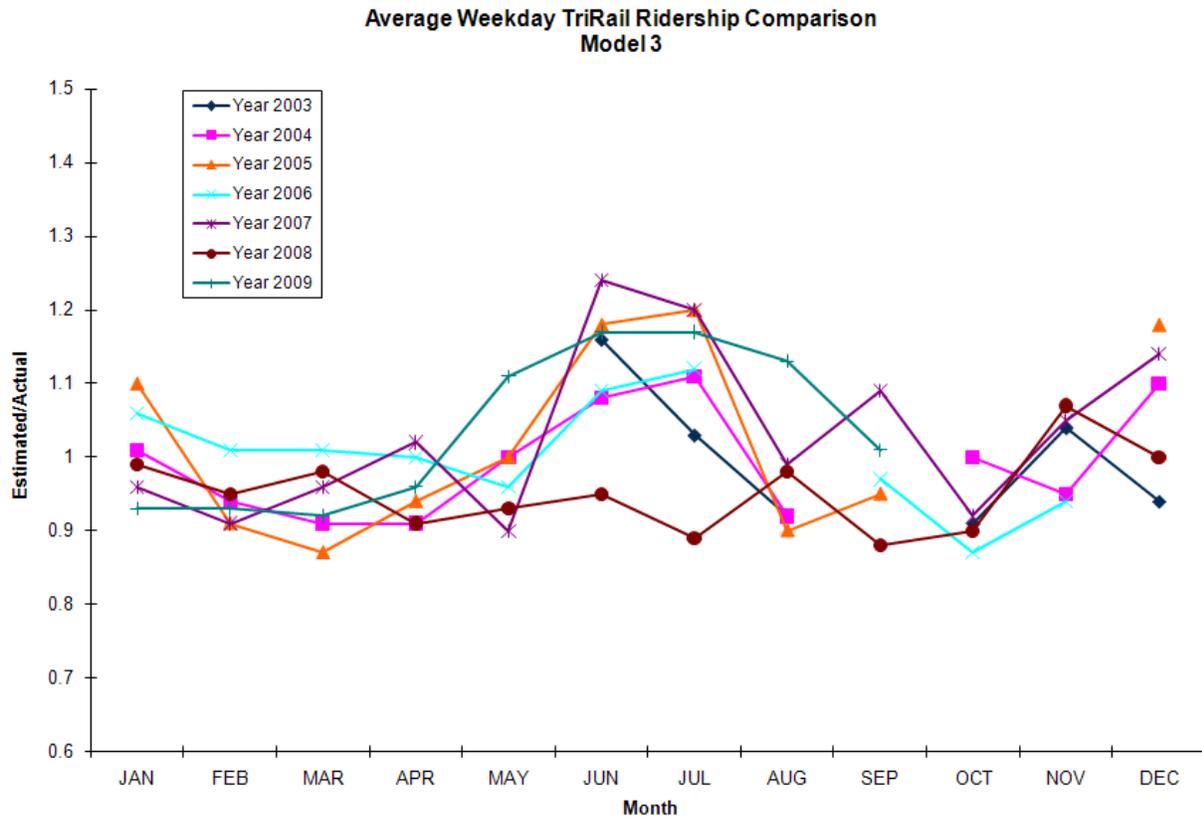
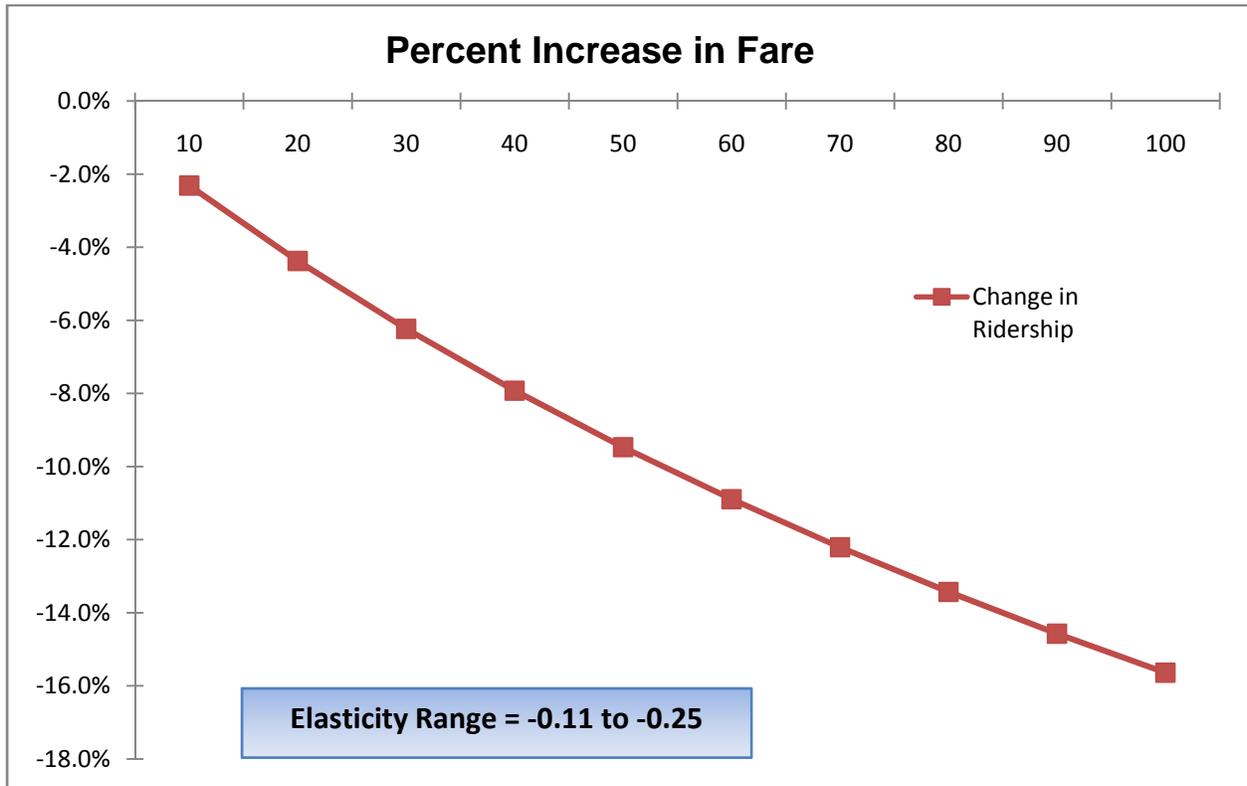


Figure 7. Sensitivity or Riders Response to Parking Fee (Fare Increase)



SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY  
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)  
MEETING: MARCH 17, 2010

OTHER BUSINESS

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RAIL-VOLUTION 2010  
CALL FOR PROPOSALS

Miami-Dade Transit and the South Florida Regional Transportation Authority served as co-hosts when the Rail-Volution Conference was held in Miami Beach in 2007. Rail-Volution has continued to be held in dynamic environments in subsequent years, with the 2010 conference taking place in Portland, Oregon. Rail-Volution 2010 is scheduled for October 18 through 21.

A call for proposals has been issued for Rail-Volution 2010. The attached flyer contains further details. The deadline to submit proposals is March 31.

EXHIBITS ATTACHED: Rail-Volution Call for Proposals Flyer



Building Livable Communities  
with Transit

**RAIL~VOLUTION 2010**  
**Building Livable Communities with Transit**  
**Portland, Oregon**  
**October 18 - 21, 2010**

## ***Call for Proposals***

Rail~Volution is a conference for passionate practitioners - people from all perspectives who believe in the role of land use and transit as equal partners in the quest for greater livability and greater communities.

Never before has Rail~Volution's mission of building livable communities with transit aligned so perfectly with the federal agenda. Thanks to President Obama's commitment to creating sustainable communities, we truly have the opportunity to work in partnership with policy makers at all levels to grow more livable places -- regardless of their size, shape, demographics, locations, or economies. These ground-breaking partnerships are setting the stage for the next decade at all levels, with commitments to transit resources, renewable energy, climate change, and sustainable housing and communities.

The success of the conference depends on the quality and diversity of presentations. Help enliven the discussion! Give us your ideas now!

**Proposal Deadline: March 31, 2010.**

This year's program includes three conference tracks, each with suggested topics for discussion. We are asking that you identify the track that best fits your proposal ideas.

The 2010 Conference tracks are:

- **Core Sessions:** An in-depth introduction to the principles that are the foundation for creating livable communities that respond to our economic, energy and environmental challenges.
- **Livable Communities:** Strategies for planning and financing livable communities in the next real estate cycle, with the goal of enhancing transit ridership and creating neighborhoods that meet the needs of today's changing society.
- **Partnering for Sustainable Communities:** A discussion of the power of partnerships to create and sustain economically vibrant, environmentally responsible, and socially diverse communities for future generations.

Please visit [www.railvolution.com/CallForProposals.asp](http://www.railvolution.com/CallForProposals.asp) to submit a proposal.

For information on sponsorships or the conference's trade show, please call 800.788.7077 or email [convene@aol.com](mailto:convene@aol.com).

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY  
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)  
MEETING: MARCH 17, 2010

OTHER BUSINESS

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APTA 2010 MULTIMODAL OPERATIONS PLANNING WORKSHOP  
CALL FOR PRESENTATIONS

The American Public Transportation Association (APTA) Multimodal Operations Planning Workshop was co-hosted by Miami-Dade Transit and the South Florida Regional Transportation Authority in 2008. This is one of APTA's smaller scale events, allowing for hands-on activity and extensive participant interaction. The 2010 Multimodal Operations Planning Workshop will be held in New York City on July 26 through 28 and hosted by MTA New York City Transit.

A call for presentations for the 2010 APTA Multimodal Operations Planning Workshop was issued earlier this month. The deadline for submitting presentation abstracts is Thursday, March 25. Please see the enclosed flyer for further details.

EXHIBITS ATTACHED: APTA Multimodal Operations Planning Workshop Flyer

## **CALL FOR PRESENTATIONS – 2010 MULTIMODAL OPERATIONS PLANNING WORKSHOP (MOPW), JULY 26-28, NEW YORK CITY, NY**

We cordially invite you to submit an abstract(s) to be considered for presentation at the American Public Transportation Association's (APTA) 2010 Multimodal Operations Planning Workshop. This workshop is APTA's meeting dedicated to promoting and advancing the work of America's professional public transportation planners and schedulers. It is an information sharing opportunity for both established professionals and individuals who are new to the field.

This year's event will be held at the Westin Times Square on July 26-28, in bustling New York City, New York. Our host this year will be MTA New York City Transit. We look forward to seeing all this system and city have to offer to our industry planners and schedulers.

The multimodal operations planning subcommittee has adopted "Telling Our Story" as this year's theme. Following is a list of topic areas where we plan to focus this year's workshop within that theme. If you have topic ideas outside these areas that you would like to have considered, please don't hesitate to submit them. We are looking for the latest information on best practices, successful projects, and knowledge transfer relating to all areas of transit planning and scheduling.

You may submit your abstracts by emailing them to APTA's Kevin Dow at [kdow@apta.com](mailto:kdow@apta.com). All abstract submittals will be acknowledged upon receipt. If you have questions about the conference or about abstract submittal, you can also contact Kevin directly at (202) 496-4831. **The deadline for submitting abstracts is Thursday, March 25.**

Abstracts can only be accepted from members of APTA. If your organization is not a member, you can request membership information by contacting Helene Brett at [hbrett@apta.com](mailto:hbrett@apta.com) or (202) 496-4837.

We look forward to hearing from you.

### **2010 Multimodal Operations Workshop** **Suggested Topic Areas**

#### **Performance Measures and Benchmarking**

Performance measurements and benchmarking are two ways that transit agencies tell their story—to management, their boards, and to the public. What performance measures do agencies use to track their service quality, reliability, and cost effectiveness? How are agencies successfully explaining these measures to the public? How are agencies benchmarking themselves against others in the United States and around the world, and what lessons can be learned?

#### **The Work That Goes into Planning a New Schedule**

Modeling, average speed calculations, traffic congestion analysis, census statistics, GPS data, and yes, riding the train or bus, all of these tools have been used to plan schedules. Have you

used a different method to calculate the running time of a new mode or new route? Was the method successful, or was it necessary to use a different method to re-calculate running time?

### **Better Coordination of Modes**

The train arrives at the station just a few minutes late, and much to the passengers' chagrin, the connecting buses have already left. What steps has your agency taken to ensure critical transfers are made? Were those measures enough? Where did the implemented solution work successfully, and where were other solutions called for?

### **Redesign of Routes to Accommodate User Needs**

"I would ride the bus if it went closer to my work, and I didn't have to transfer so many times!" What agency has not received this kind of comment? Has your agency worked with businesses or individuals to redesign a route or service to better suit the needs of the riders? Was it successful?

### **Using Transit to Attract Development**

It has been said that the best new developments have happened around a solid public transportation plan, rather than having transit be an afterthought. Transit-oriented development (TOD) has come of age in the public eye. Investments along transit corridors have renewed local business districts and revitalized communities. What examples can you bring that show how transit got involved early at the planning table with great results? What new areas are being developed as a result of transit's commitment to new lines of service?

### **Doing More With Less**

There is no question that transit agencies are tightening their belts across the board. We are asked to provide good levels of service despite budget cuts, layoffs and projected increasing deficits. What innovations has your agency adopted to deal with the shortfall? What techniques can planners and schedulers adopt that can save money and make service routes more effective? Where cuts have been necessary, how have you adapted to do more with less?

