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**SFRTA**  
MOVING OUR REGION  
**FORWARD**



# *Southeast Florida Regional Climate Change Compact*

**Transportation Workshop  
April 29, 2015**

# Today's Presentation

- Introduction to SFRTA
- Regional Transportation Overview
- West Palm Beach Case Study

# What is SFRTA?

- Created by the legislature in 2003, with the help of the business community.
- Operator of Tri-Rail since 1989.
- Primary Goals:
  - Bringing Federal transportation funds to South Florida.
  - Planning, building and operating premium rail transit service within the region.

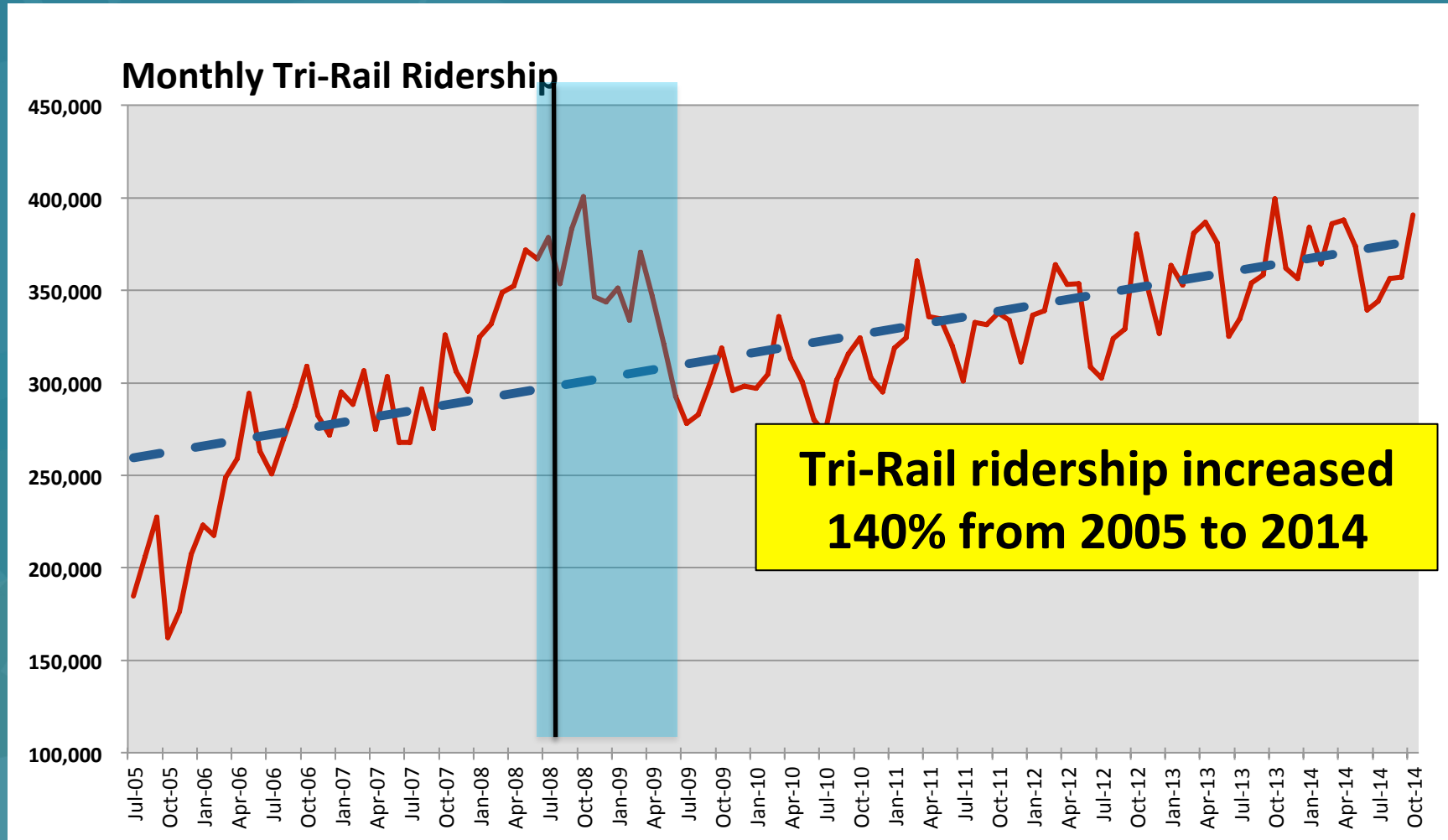


# Current Tri-Rail Service



- 72 mile system, 18 stations
- 50 trains per weekday
  - Peak- 20 & 30 minutes
  - Off Peak- 60 minutes
- Hourly weekend service since March 2013
- Primarily choice riders, suburban market

# Tri-Rail Ridership Growth



# Common Goals



**400 Cars = 8 Buses = 1 Commuter Train**

# Common Goals



## Public Transportation is Green

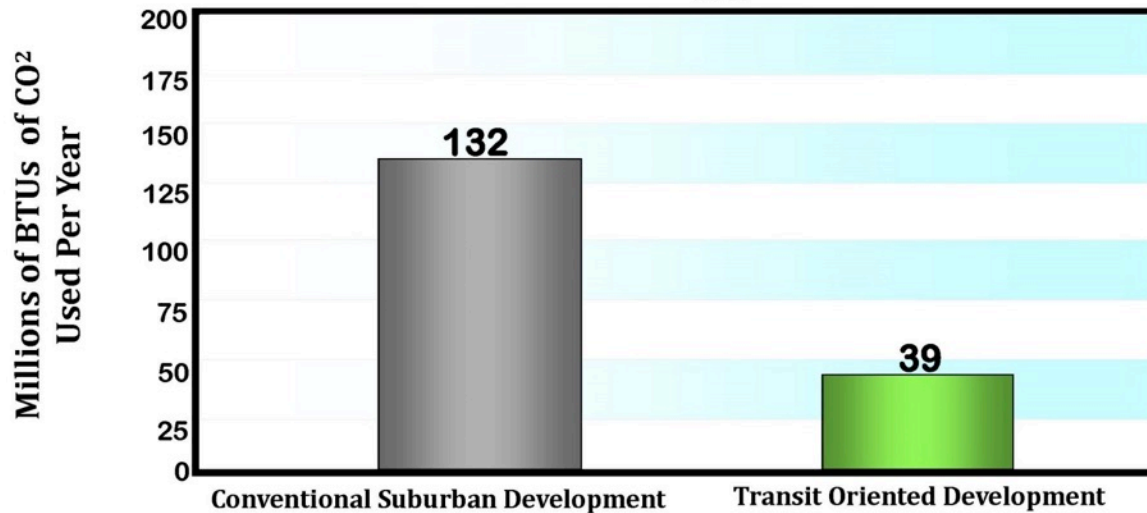


A fully occupied train car is **fifteen times** more fuel efficient than a single occupant car.

# Common Goals



## Transit-Oriented Development (TOD) Is More Energy Efficient





# Common Challenge

**Table 2: Regional Emissions by Sector (MMTCO<sub>2</sub>e)**

Sector	2005	2006	2007	2008	2009	Five Yr Avg
Residential	19,963,638	19,989,441	18,685,833	18,186,886	18,237,990	19,012,757
Commercial	17,884,892	18,212,352	17,356,620	17,314,930	17,083,809	17,570,521
Industrial	1,075,979	1,103,572	961,883	888,111	811,016	968,112
Transportation	30,793,879	30,853,046	30,373,200	29,300,926	28,784,969	30,021,204
Totals	69,718,390	70,158,412	67,377,537	65,690,854	64,917,785	67,572,596

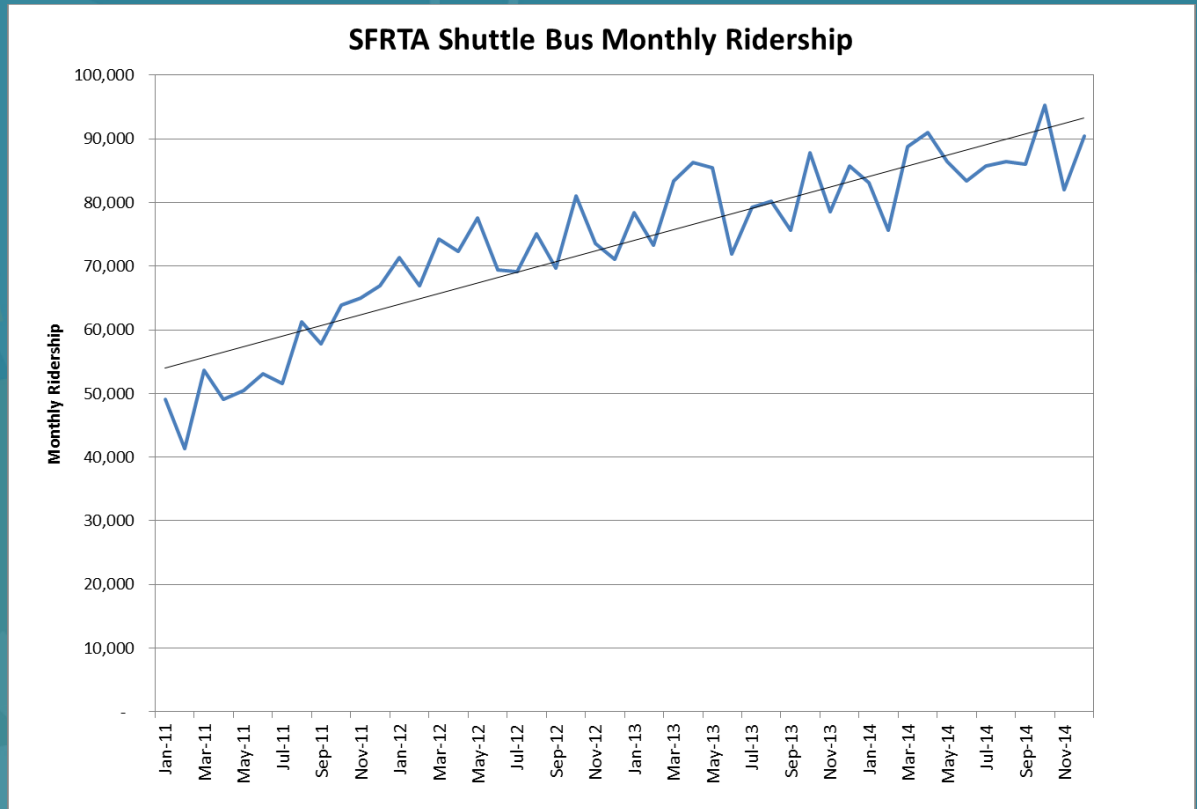
Source: Southeast Florida Regional Climate Action Plan

# Regional Climate Action Plan Goal

**SP-31(a) Improve connections among Tri-Rail and county transit service, municipal trolley and community shuttle bus services....**

# SFRTA Shuttle Bus

Over the past three years, monthly ridership has nearly doubled from approximately 45,000 to over 90,000.

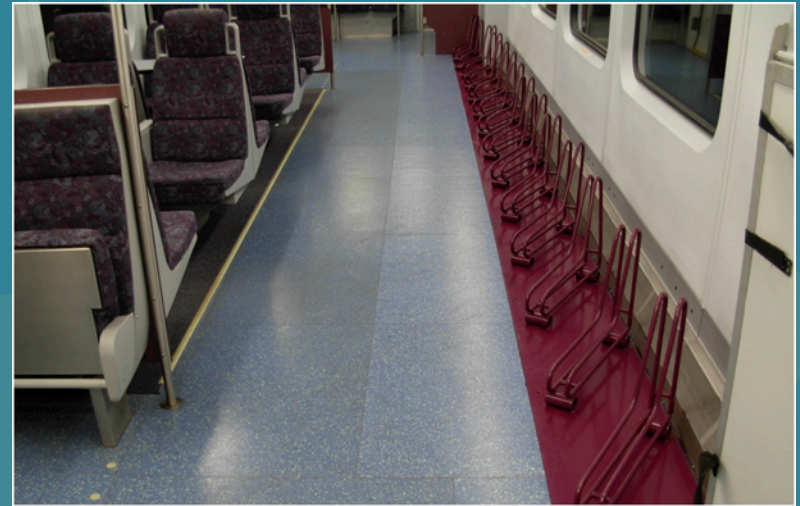


# Regional Climate Action Plan Goal

**SP-19 Focus transportation investments and service expansions on projects and strategies contributing to green house gas emissions reductions and enhancing resilience to climate change.**

# Meeting the Expectations of Millennials

- Greater use of bicycles and shuttle buses to/from stations
  - Dedicated bicycle railcars
  - Bicycle lockers at stations
- Wi-Fi
  - Onboard
  - At stations
- Real-time information
  - Smartphone app
  - Website



Bike car now in use on  
Altamonte Commuter Express (ACE)  
system in California



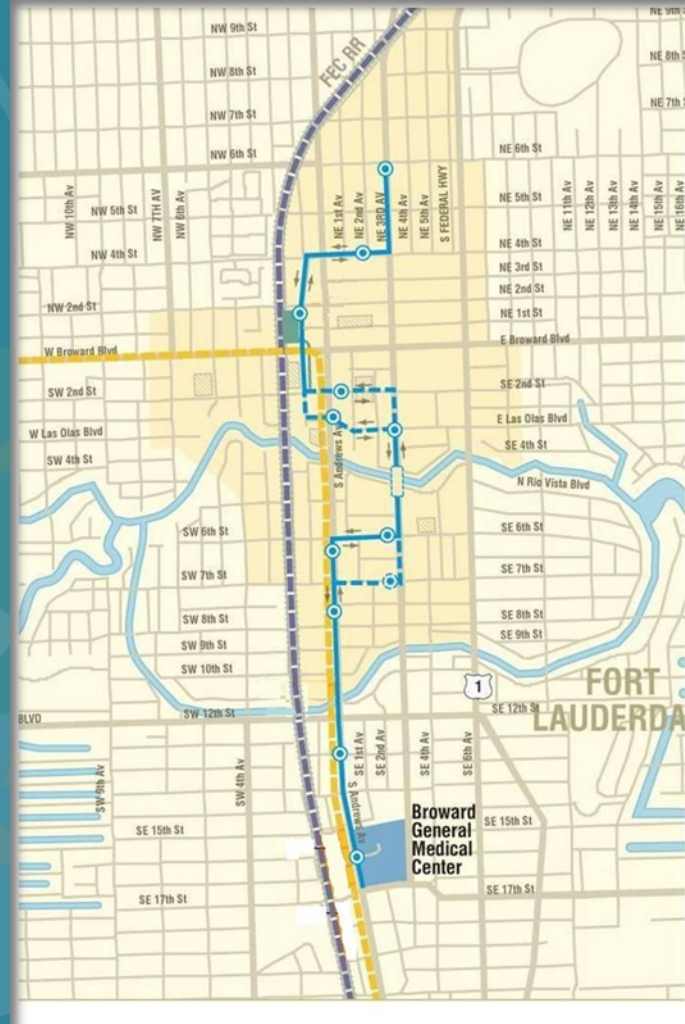
# Now Serving Miami International Airport

- New MIA service began on April 5, 2015
- Metrorail connection is operational
- MIA Mover is operational
- Amtrak service is the next step



# WAVE Streetcar Project Sponsor

- 2.74 mile, 10 station streetcar system.
- Multi-party partnership. SFRTA lead agency.
- Broward County will be the operator.
- Engineering plans are being developed for the first phase.

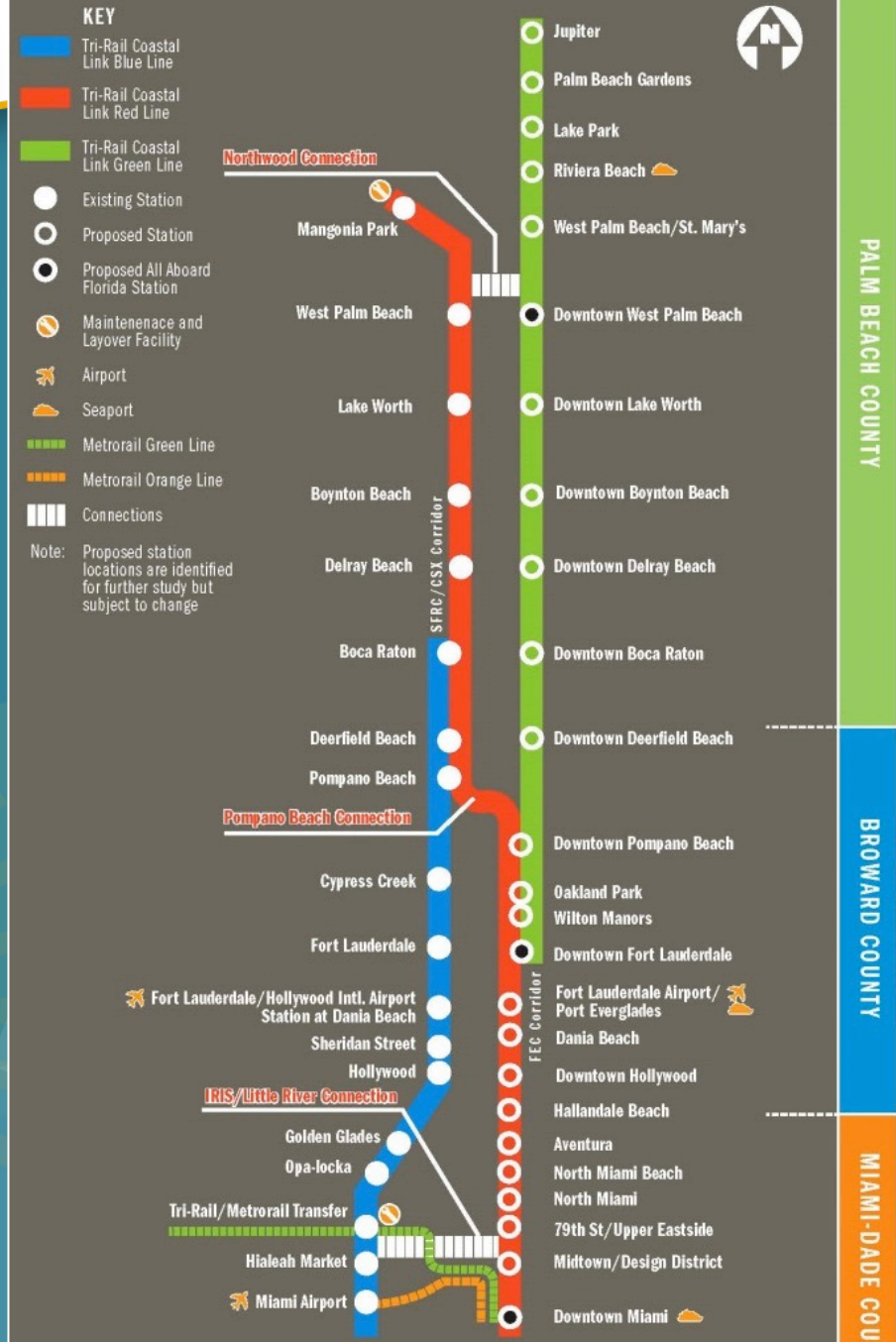


# Tri-Rail Coastal Link

Getting Southeast Florida to Work



- 80+ miles of new commuter rail service on FEC Railway corridor
  - Downtown Miami to Jupiter
  - Fully integrated expansion of Tri-Rail
- 20 to 25 new stations linking dozens of municipalities and major destinations
- Will share existing and new tracks with FEC freight and the planned All Aboard Florida (AAF) inter-city service
  - Three co-located stations with AAF
- Strong ridership potential
- Extensive economic development
- Projected opening in FY 2020-21





# Tri-Rail Coastal Link

Getting Southeast Florida to Work



## Local & Regional Benefits - Mobility



- Improved travel times for the region's residents, employees and visitors

- Tri-Rail Coastal Link travel times:

- Palm Beach Gardens-WPB – 15 min
- WPB-Downtown Delray Bch – 22 min
- Boca Raton-Fort Lauderdale – 34 min
- Fort Lauderdale-Hollywood – 14 min
- FLL Airport-Downtown Miami – 45 min
- Aventura-Downtown Miami – 29 min
- Midtown-Downtown Miami – 7 min



# TRCL and AAF Rail Projects

## Tri-Rail Coastal Link – Commuter Rail Service

- **Commuter Passenger Rail**  
- 25+ round-trip trains per day
- **Commuters and local travelers**
- **Miami to Jupiter**
- **85 miles with potential for phased implementation**
- **Fully integrated extension of Tri-Rail system**
- **Station spacing at 2-5 miles**
- **Mix of public funding sources to be pursued**



## All Aboard Florida – Intercity Passenger Rail Service

- **Inter-city Passenger Rail**  
- 16 round-trip trains per day
- **Tourists and regional travelers**
- **240 miles from Miami to Orlando**
- **3 Stations in Tri-County area**
- **Privately funded**

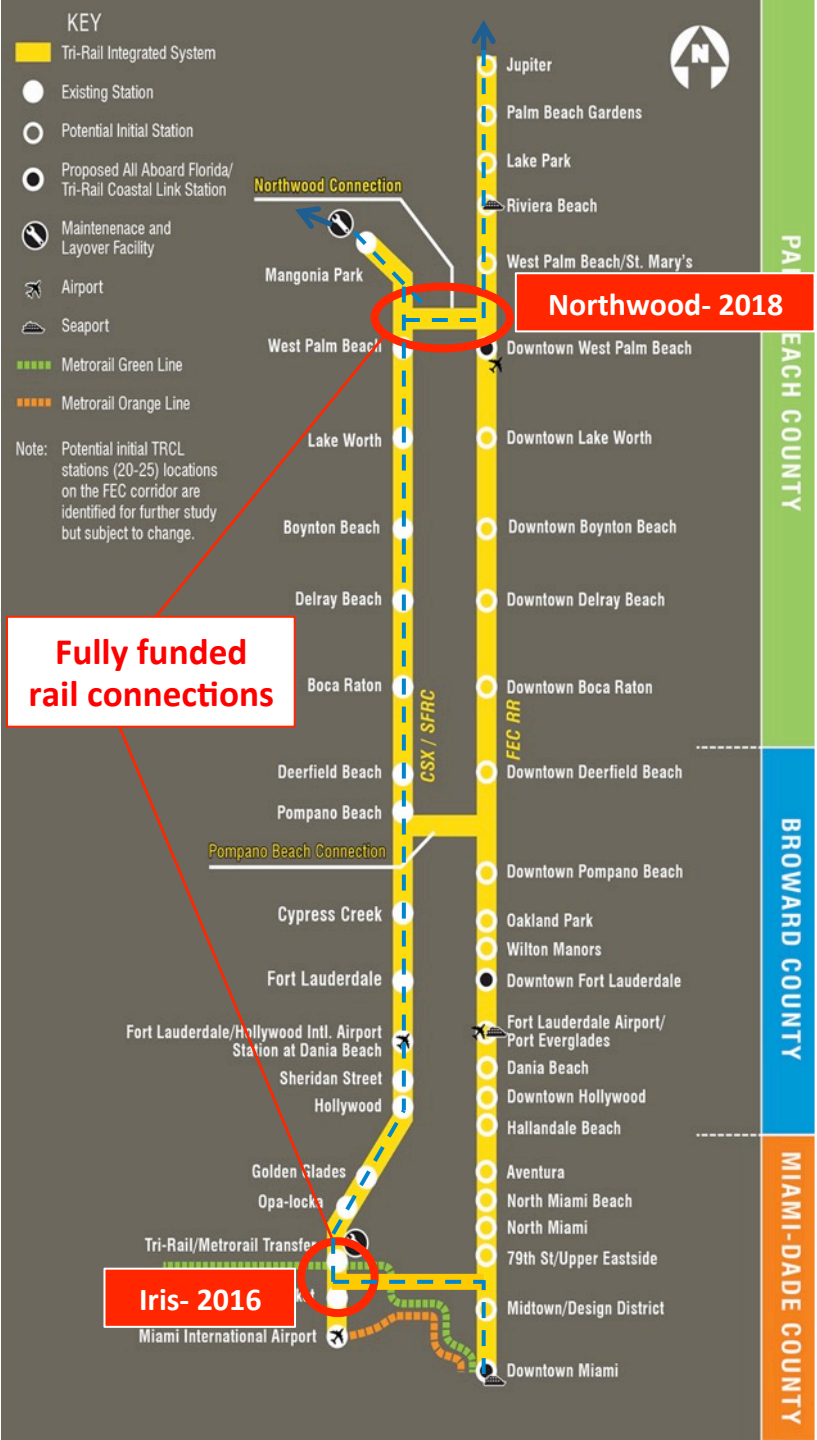


Ongoing coordination between the two projects



# CSX-FEC Rail Connections

- Key east-west rail connections between Tri-Rail/CSX & FEC
  - Allow for an integrated freight & passenger rail network
- USDOT TIGER V grant award
  - Multi-agency public-private partnership
  - \$47.2 M total cost
    - TIGER- \$13.7 M
    - FDOT- \$29 M
    - CSX- \$1 M
    - FEC- \$1 M
    - SFRTA- \$2.5 M
  - Opens opportunities for near-term Tri-Rail expansion



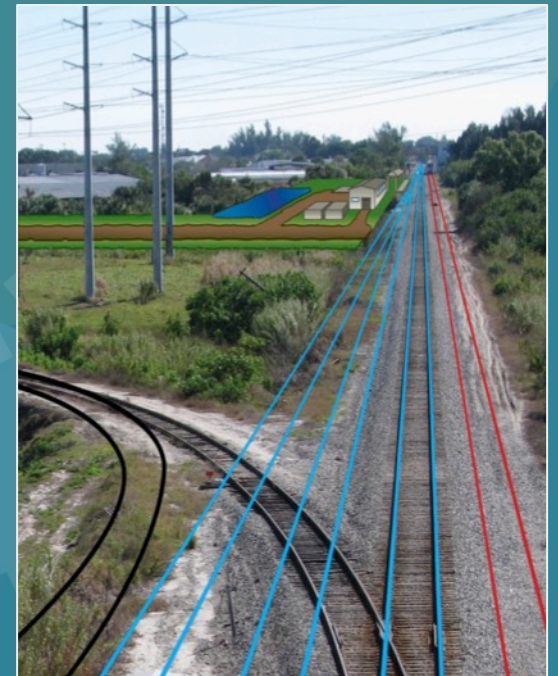


# FEC and new Tri-Rail locomotive at USDOT TIGER Grant Award Ceremony – Sep 13, 2013



# New Northern Layover Facility

- More efficient end-of-line location
- Adds greatly needed train storage capacity
  - Existing Tri-Rail system
  - Planned FEC Corridor Expansion
- Federal environmental clearance received in late 2013
- Key funding support from Palm Beach MPO



# New Palm Beach County Tri-Rail Stations

- Strong local and MPO desire for two new stations (on existing line)
  - Palm Beach International Airport
  - Boca Town Center area
- Further analysis and approvals required
- Boca Town Center station is partially funded in TIP



# Palm Beach MPO Support for SFRTA/Tri-Rail

**Jupiter Tri-Rail Extension**  
(LRTP Cost Feasible Plan - \$125M)

**New Northern Layover Facility**  
(TIP - \$36M)

**V.A. Medical Center Tri-Rail Extension**  
(LRTP Cost Feasible Plan - \$63M)

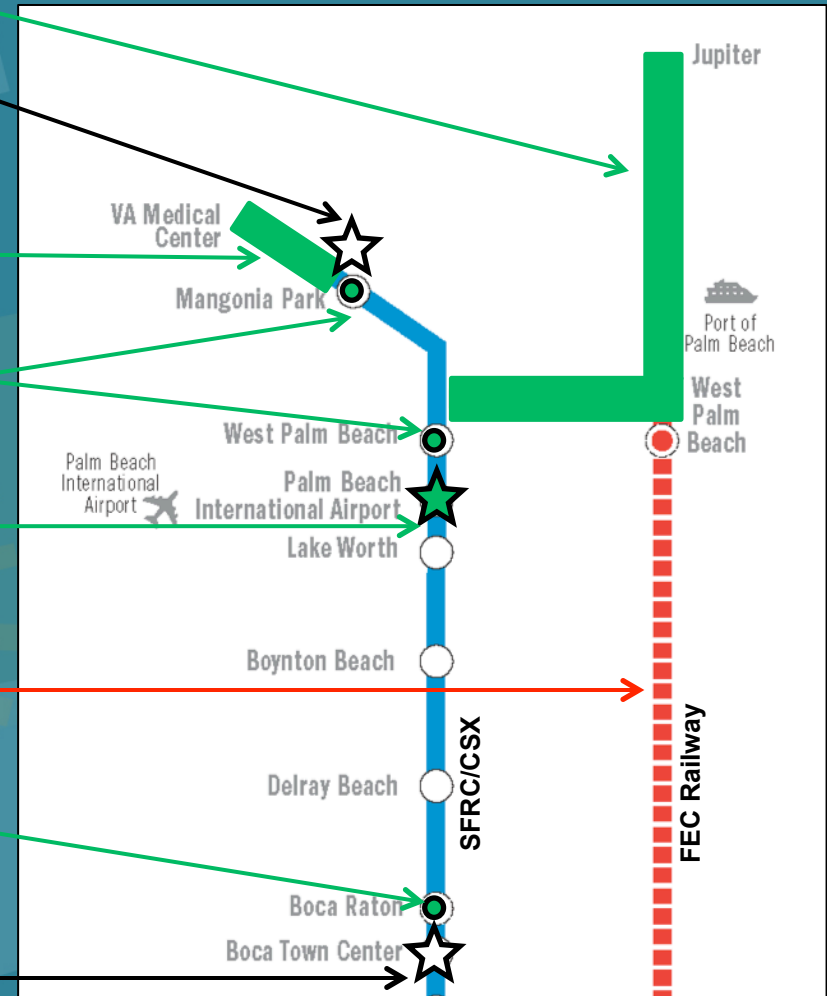
**Park & Ride Expansions**  
(LRTP Cost Feasible Plan - \$10M, \$15M)

**New Palm Beach International Airport Station**  
(LRTP Cost Feasible Plan - \$22M)

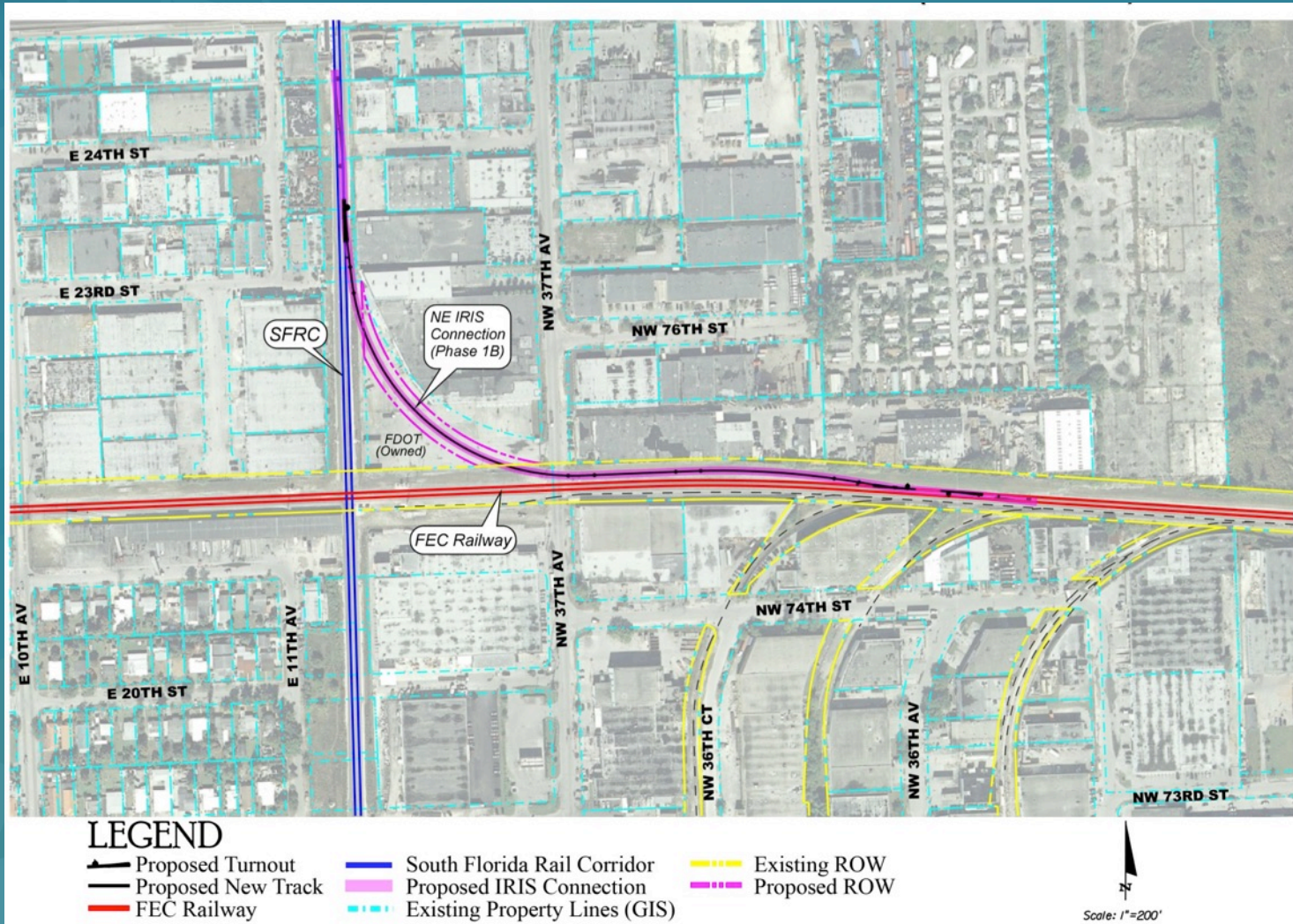
**Full Tri-Rail Coastal Link Project**  
(LRTP Desires Plan)

**Park & Ride Expansion**  
(LRTP Cost Feasible Plan - \$11M)

**New Boca Town Center Area Station**  
(TIP - \$18M)



# Iris Rail Connection

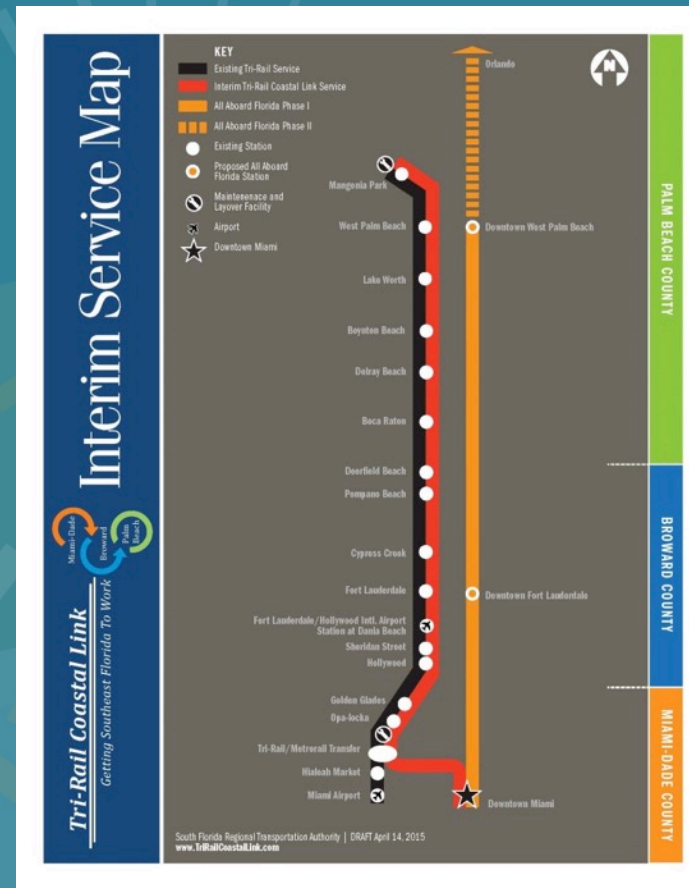


Currently under design, construction to be completed by early 2016



# Initiating Tri-Rail Downtown Miami Link

- Partnership with FEC Railroad
- 26 direct weekday trains to Downtown Miami
- Service as early as Dec 2016
- Discussions now taking place with elected officials and various agencies



# All Aboard Florida & Tri-Rail Downtown Miami Coordination

Tri-Rail

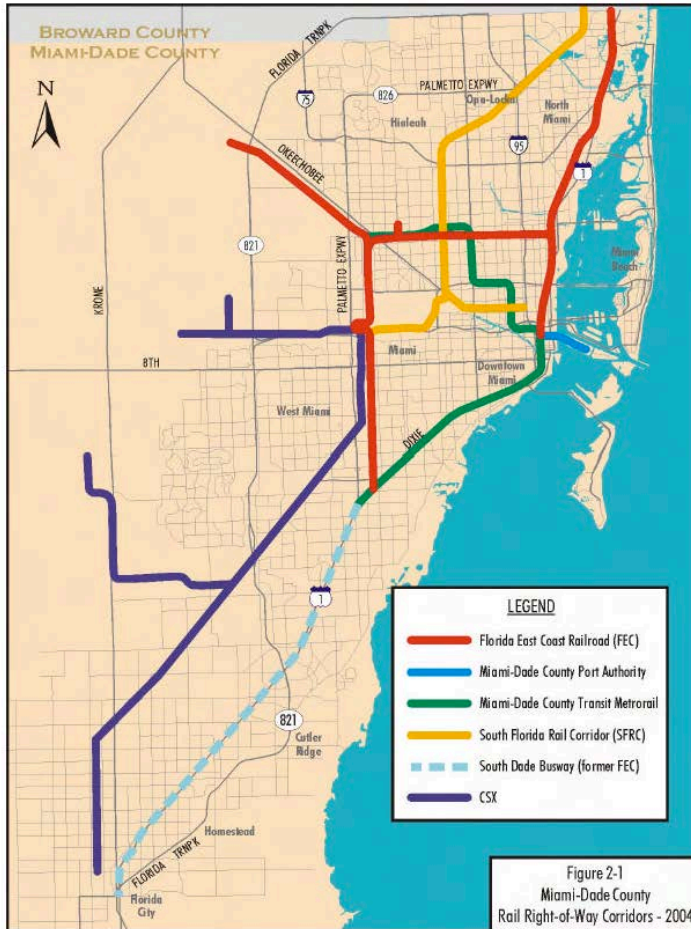
All Aboard Florida



Cross section of the proposed "MiamiCentral" Station in Downtown Miami

# MiamiCentral Station & Transit Oriented Development





# Miami Opportunities

Source: Miami-Dade MPO's Rail Convertability Study (2004)

# West Palm Beach Case Study

## Downtown West Palm Beach Historic Growth and Transit Patterns

Source: Treasure Coast Regional Planning Council

April 2015

Downtown Growth	2005	2014	DELTA
Residential Units	3,772 dwelling units	6,444 dwelling units	+ 2,652 dwelling units (+70%)
Non-Residential Square Footage	9,307,247 SF	10,128,464 SF	+ 821,217 Square Feet (+8%)

Roadway Volumes	2005 ADT	2013 ADT	DELTA (2005-2013)
Dixie Highway (Monroe - Belvedere)	21,348 Average Daily Trips	17,638 Average Daily Trips	-17.4 %
Dixie Highway (Belvedere-Okeechobee)	18,761 Average Daily Trips	16,559 Average Daily Trips	-11.7 %
Olive Avenue (Monroe - Belvedere)	8,907 Average Daily Trips	3,624 Average Daily Trips	-59.3 %
Olive Avenue (Belvedere-Okeechobee)	14,435 Average Daily Trips	3,190 Average Daily Trips	-77.9 %

Delta Matrix	DELTA (2005-2013)
Residential Units	+ 70 %
Non-Residential SF	+8 %
Tri-Rail Ridership	+140 %
Palm Tran Ridership	+30 % (for key downtown Routes 1, 2, 31, 40, 43)
Trolley Ridership	2014 - Yellow Line (Clematis-CityPlace) = 447,000 riders 2014 - Green Line (Commuter Circulator) = 135,772 riders TOTAL 2014 Ridership = 582,000 riders (+ 65% since 2005)

# Regional Climate Action Plan Goal

**SP-21 Support effective planning and implementation of transit oriented developments....**

# Regional Climate Action Plan Goal

**SP-23(a) Identify potential future land use map and other comprehensive plan changes at the local level.**

# Regional Climate Action Plan Goal

**SP-22 Introduce a new activity-based regional travel demand forecast model to directly simulate individual trip making and mode choice behaviors.**



# Regional Climate Action Plan Goal

**SP-31(c) Develop planning strategies to address planning for the “First and Last Mile” of transit trips, which act as barriers for commuters....**

DRAFT

Scenario Evaluation Results Summary Table

Evaluation Criteria	2035 LRTP (Baseline)	Scenario 1: Mobility Management	Scenario 2: Linkages	Scenario 3: Multimodal
Vehicle Miles Travelled (VMT), Daily	65,355,000	62,925,000	61,293,000	64,655,000
Absolute Change from LRTP		(2,430,000)	(4,062,000)	(700,000)
Percent Change from LRTP		-4%	-6%	-1%
Vehicle Hours Travelled (VHT), Daily	2,778,000	2,649,000	2,428,000	2,723,000
Absolute Change from LRTP		(129,000)	(350,000)	(55,000)
Percent Change from LRTP		-5%	-13%	-2%
Average Annual Delay (hours)/Person	101	94	74	97
Absolute Change from LRTP		(7)	(27)	(4)
Percent Change from LRTP		-7%	-27%	-4%
Mode Split				
Single Occupant Vehicles (SOV)	5,780,000	5,415,000	5,675,029	5,725,000
SOV Percentage	53%	50%	53%	52%
High Occupancy Vehicles (HOV)	4,959,000	5,281,000	4,912,849	4,911,000
HOV Percentage	45%	48%	45%	45%
Transit	202,500	239,550	193,531	313,250
Transit Percentage	2%	2%	2%	3%
Transit Mode Share				
All Trip Purposes	2%	2%	2%	3%
Home Based Work Trips	5%	5%	4%	7%
Transit Boardings Change Compared to Baseline				
Total Transit		18%	-4%	55%
Home Based Work		12%	-10%	41%
Trip Length (miles)	8.3	8.3	7.9	8.3
Absolute Change from LRTP		0.0	-0.4	0.0
Percent Change from LRTP		0%	-5%	0%
Greenhouse Gas Emissions (CO2 lbs/day)	50,093,000	50,196,000	46,478,000	49,889,000
Absolute Change from LRTP		103,000	(3,615,000)	(204,000)
Percent Change from LRTP		0.2%	-7.2%	-0.4%
Energy Cost, US dollars in kilowatt hours	1,785	1,788	1,622	1,783
Absolute Change from LRTP		3	(163)	(2)
Percent Change from LRTP		0.2%	-9.1%	-0.1%
Commute Cost, US dollars				
Highway	\$8 - \$98	\$12 - \$127	\$8 - \$38	\$8 - \$98
Transit	\$50 - \$99	\$41 - \$99	\$50 - \$99	\$34 - \$71
Cost of Congestion/Lost Productivity, US \$	\$6,900,000	\$6,700,000	\$6,300,000	\$6,700,000
Absolute Change from LRTP		-\$200,000	-\$600,000	-\$200,000
Percent Change from LRTP		-3%	-9%	-3%

*Systemwide Inefficiency on all Routes*

# This is not a Fluke

## Miami-Dade MPO's Strategies for Integration of Sustainability and the Transportation System saw similar results.

# Takeaways

- New regional transit projects will help meet climate change goals
- Consistent transportation performance measures may help meet climate change goals.
- Land use changes combined with transit, bicycling and pedestrian facilities has a significant impact.
- Cities and Counties are key to maximizing the benefits of transit facilities.
- Keep at it - it is a long term project.



**SFRTA**  
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**FORWARD**

# Tri-Rail Coastal Link

Getting Southeast Florida to Work



## Market and Economic Analysis

- **\$1.4 Billion of Projected New Development Due to Tri-Rail Coastal Link**
  - \$580 Million of new residential development
    - 5,500 new residential units
  - \$850 Million of new commercial development
    - 8.3 Million square feet
  - \$18 Million of new tax revenue
- **Other Projected Economic Benefits**
  - \$630 Million of overall economic output
  - \$250 Million of labor income
  - 28,000 new permanent jobs



Source: Station Area Market & Economic Analysis Report, June 2013; SFRTA



## Tri-Rail + TRCL =

# Stronger Rail Connections

### • Existing Tri-Rail Strengths

- *Reliable rail service with minimal freight impacts*
- *Key market: long, inter-county work trips*
- *Good access to airports*
- *Plentiful park & ride access*

### • Existing Tri-Rail Constraints

- *No direct access to CBDs, denser residential areas and activity centers in eastern communities*
- *Heavy reliance on connecting transit services*
- *Economic development challenges due to industrial land uses and proximity to I-95*

### • Tri-Rail + TRCL = Stronger Connections

- *Directly connects Tri-Rail to CBDs and major activity centers*
- *Connects Tri-Rail park-and-rides to walk-accessible FEC attractions*
- *Connects to AAF, Metrorail, Metromover, WAVE Streetcar, and virtually every major bus route in the region*
- *Connects established areas with economic development opportunities*

# SFRC to FEC: The Region's Core

- The region's economic core
  - 1 million jobs
  - 1.5 million people
  - Multiple downtowns
  - 3 international airports & 3 seaports
  - Extensive rail, truck, and marine freight
- The region's transportation core
  - 3 million trips per day comprise 17% of the region's travel
  - Ridership growing on existing transit services
  - Roadways at capacity; limited opportunities for expansion



# *Tri-Rail*

## *Downtown Miami Link*

### Project Elements & Costs

- Rail infrastructure
  - Track & Signals
  - Grade crossing upgrades
    - Allowing for new Quiet Zones (on E-W segment)
  - Positive Train Control (PTC)
- Corridor access fee
  - Permanent perpetual easement
  - Iris Connection to Downtown Miami
- MiamiCentral Station
  - Tri-Rail section of the elevated station
  - Tri-Rail portion of shared station elements and supports

**\$19.3  
Million**

**\$1  
Million**

**\$48.6  
Million**



# Tri-Rail Downtown Miami Link

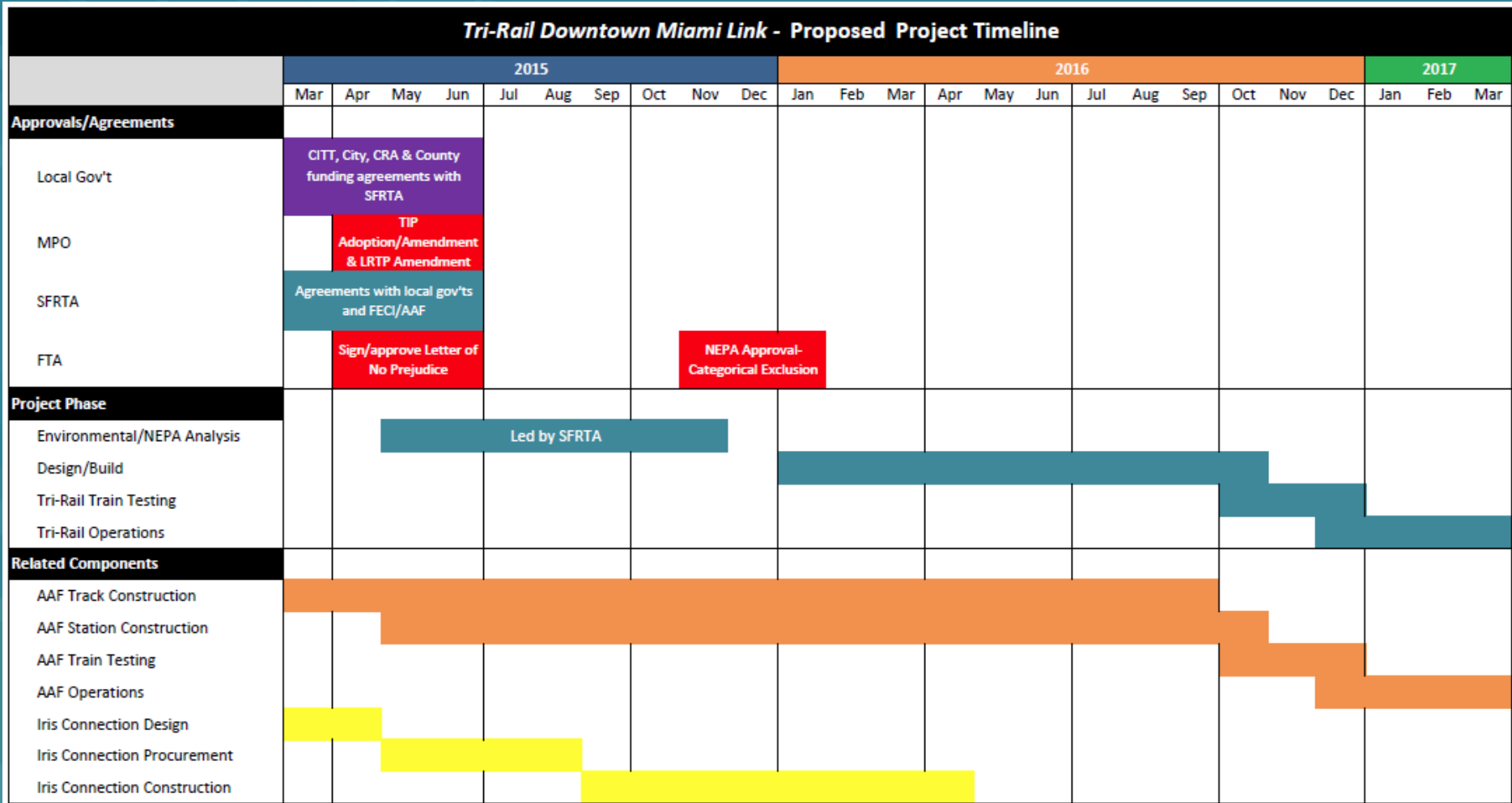
# Partner Commitments

## Draft Funding Framework as of 3/23/15

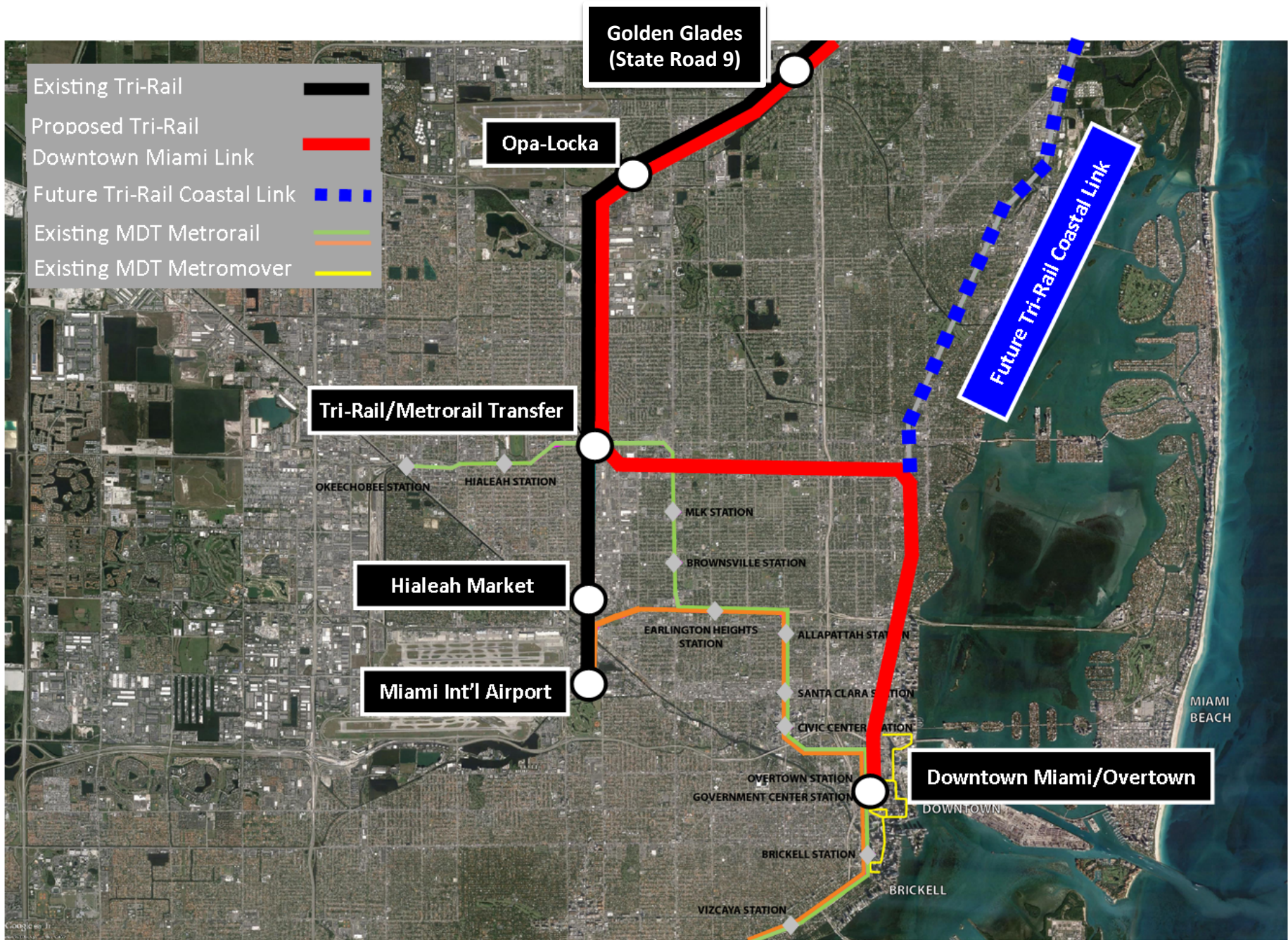
<u>Entity</u>	<u>Cost</u>	<u>% of TIF</u>	<u>% of Overall Cost of Project</u>
SEOPW CRA	\$ 39,064,890	33.63%	56.68%
Omni CRA	\$ 1,208,192	N/A	1.75%
City of Miami	\$ -	0.00%	0.00%
<b>Sub-Total for TIF Participants</b>	<b>\$ 40,273,082</b>		<b>58.43%</b>
Miami-Dade County	\$ 8,357,349	N/A	12.13%
Florida Department of Transportation (FDOT) <i>*Requested</i>	\$ 17,190,000	N/A	24.94%
South Florida Regional Transportation Authority (SFRTA)	\$ 3,100,000	N/A	4.50%
<b>Sub-Total Non-TIF Participants</b>	<b>\$ 28,647,349</b>		<b>41.57%</b>
<b>Total</b>	<b>\$ 68,920,431</b>		<b>100.00%</b>

# Tri-Rail Downtown Miami Link

# Proposed Project Timeline



# Tri-Rail Downtown Miami Link Route



# Tri-Rail Downtown Miami Link and Other Rail Expansion Opportunities

