
Tri-Rail Parking and Circulation Study

Executive Summary

Prepared for:

South Florida Regional Transportation Authority

Prepared by:

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Introduction

The Tri-Rail Parking and Circulation Study was conducted to identify existing and future parking needs at Tri-Rail stations and to develop a staged parking improvement implementation plan. As ridership growth occurs, adequate capacity and efficient circulation for all modes used to access stations must be provided. Understanding future parking needs is also important as SFRTA seeks to negotiate future land use opportunities at some of its stations.

Field observations were conducted during July and August 2006 at the eighteen (18) Tri-Rail Stations in Palm Beach, Broward, and Miami-Dade Counties. Highest parking utilization, arrivals by mode throughout the peak period, and an inventory of the passenger amenities in each parking area were documented. Parking demand at each station extending to 2025 was estimated. Illustrative conceptual design improvements that address parking needs and deficiencies were developed. The final products of this effort are a list of system-wide recommendations and a staged improvement program detailing specific projects.

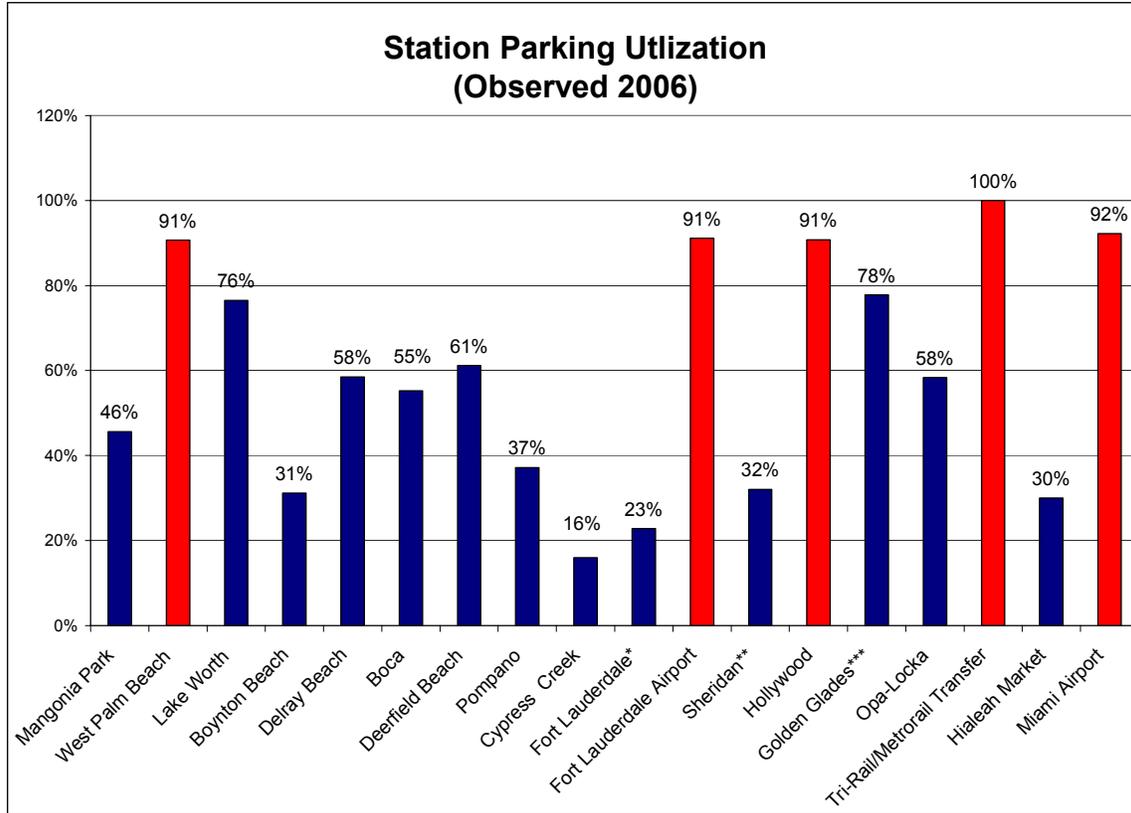
The primary priorities and recommendations of this study are:

- Increase parking capacity through additional surface and structured parking
- Reduce conflicts by separating circulation and providing dedicated space to all modes
- Improve station area wayfinding, amenities, and maintenance
- Enhance access to stations and connections to surrounding uses

Section 1: Observed Parking Utilization, Circulation and Amenities

Figure 1 below shows the percentage of parking spaces utilized at the end of the AM peak period. (The AM peak period was the most active timeframe observed.) The utilization rates were calculated from the total number of marked parking spaces counted during the field observations and the observed parking usage.

Figure 1: Station Parking Utilization Rates



*Only includes parking on south side of Broward Blvd.

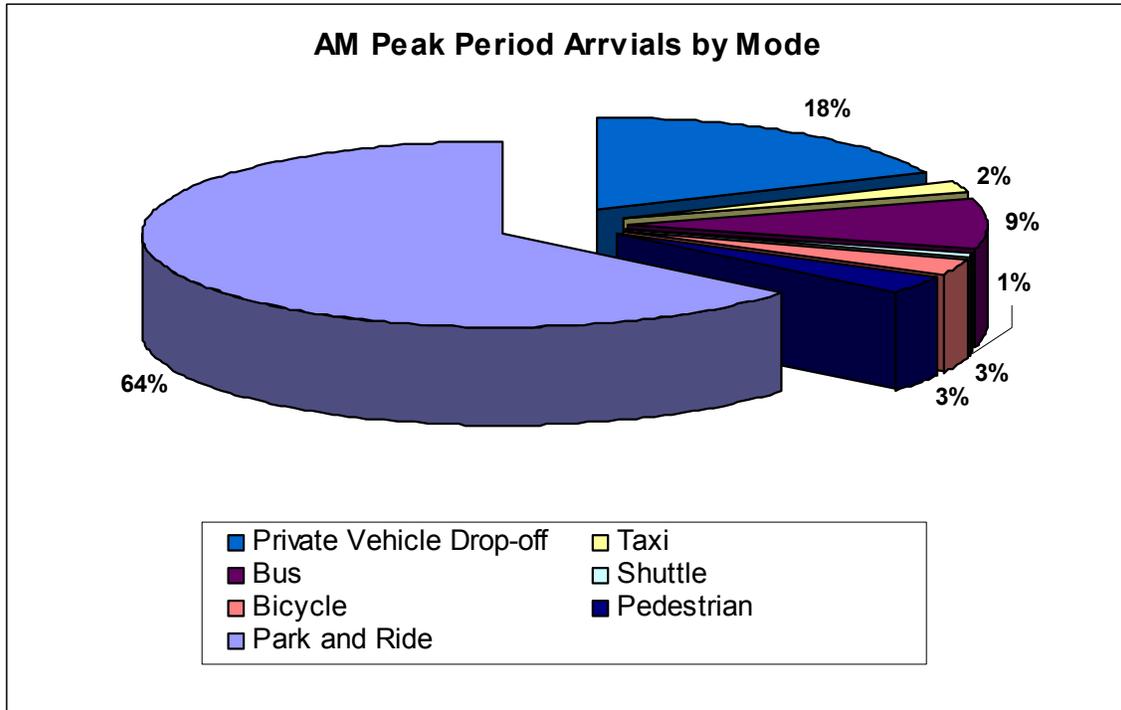
**Includes Primary, South, and East lots

***Includes parking facility closest to station.

Station Arrivals

Figure 2 below shows the breakdown of the modes used by Tri-Rail customers when arriving at stations during the AM peak period. The largest percent of arrivals per mode identified was driving to the station, parking, and then boarding the train, shown as “Park and Ride.”¹

Figure 2: AM Peak Period Station Arrivals by Mode



¹ The percentage arrivals by mode above do not include Cypress Creek, Tri-Rail/Metrorail Transfer, and Lake Worth Stations where the location of the station platform in relation to the parking lot made it difficult to avoid duplication of counts between modes.



Inventories

The passenger amenities inventoried at each station included bicycle racks (40 system-wide), bus shelters (34 system-wide), ticket machines (45 system-wide), station crossing bridges, pedestrian signals, and passenger waiting areas. At many stations the amenities are insufficient to meet current or anticipated demand. Accessibility to each station was also noted including the presence or absence of Tri-Rail Drop-off/Pick-up locations (sometimes referred to as “Kiss and Ride”) and crosswalk, sidewalk, and pedestrian connections at each station. At certain locations signage is deficient or misleading, critical links in the pedestrian and bicycle network are missing and other improvements are needed. The minimum and maximum walking distances from particular parking areas to the station platforms are excessive and create a barrier to Tri-Rail customers. The deficiencies identified during the field observations are summarized in the categories listed below.

Primary Findings

- **Park and Ride Lots:** Some lots are currently experiencing park and ride demand at or approaching capacity. Immediate and near-term capacity needs exist due to recent and anticipated service increases.
- **Signage:** Although probably due in part to recent hurricanes, missing signage including wayfinding signs, bus stop locations, and parking information is common. There is also inconsistent use of signage designating spaces and circulation system-wide.
- **Maintenance:** The majority of parking lots have faded or poor striping, which can exacerbate conflicts between modes. Several stations also have overgrowth of grass, shrubs, etc., blocking pedestrian pathways. Potholes, possibly indicating poor drainage, can be found at many stations.
- **Drop-off/pick-up areas:** Buses, cars, and taxis often attempt to utilize the same spaces to drop-off/pick-up passengers. Others lack a designated location altogether. Kiss-and-Ride designated areas are used haphazardly, and are highly underutilized due to their inconvenient location or lack of signage.
- **Multi-Modal Infrastructure:** Connecting sidewalks from parking lots to the station with Americans with Disabilities Act (ADA) accessible ramps, more benches, and additional shelters with seating areas would improve the functionality of the stations. There are an inconsistent number/placement of racks and a lack of lockers except at the Boca Raton Station. Some sidewalk links that could facilitate better access to the stations are missing.
- **Other Issues:** Some lots may be used as free parking by people who do not take Tri-Rail trains. This behavior is suspected at Fort Lauderdale Airport, Miami Airport and Tri-Rail/Metrorail Transfer. Further investigation is necessary to determine the level of abuse. SFRTA operations staff also indicated some customers may be leaving vehicles or bicycles parked overnight at stations.

Section 2: Parking Projections

The development of future parking demand projections was based on historical ridership, parking trends, and the regional planning model. The projections are reflective of future ridership, population, and economic growth forecasts in the three counties where Tri-Rail operates. Three different future growth scenarios were used to develop parking projections over four horizon years through 2025:

- Moderate: Slower residential growth, moderate gas prices, and no significant transit development
- Moderate-High: Some additional premium transit service supporting Tri-Rail
- High: Significant additional premium transit service supporting Tri-Rail, aggressive residential growth, and high gas prices

Summary of Future Parking Needs

SFRTA staff and the consultant agreed after examination of all scenarios, to use Moderate-High growth estimates to project future parking needs for the Tri-Rail system. This methodology represents a middle-of-the-road approach and is the basis for the resulting number of new parking spaces that should be provided at stations over the next 20 years to address the anticipated growth in demand. The intermediate estimates were felt to be most reflective of the likely population growth and transportation conditions in South Florida over the next ten to twenty years. **Figure 3** shows graphically the growth in system-wide parking demand into the future, compared with existing parking demand and current (2006) supply. Demand at each station is show in **Table 1**. Distance and differences among stations lead to a general inability to satisfy demand at one location with available spaces at another station.

Figure 3: Future Parking Demand – Moderate-High Growth

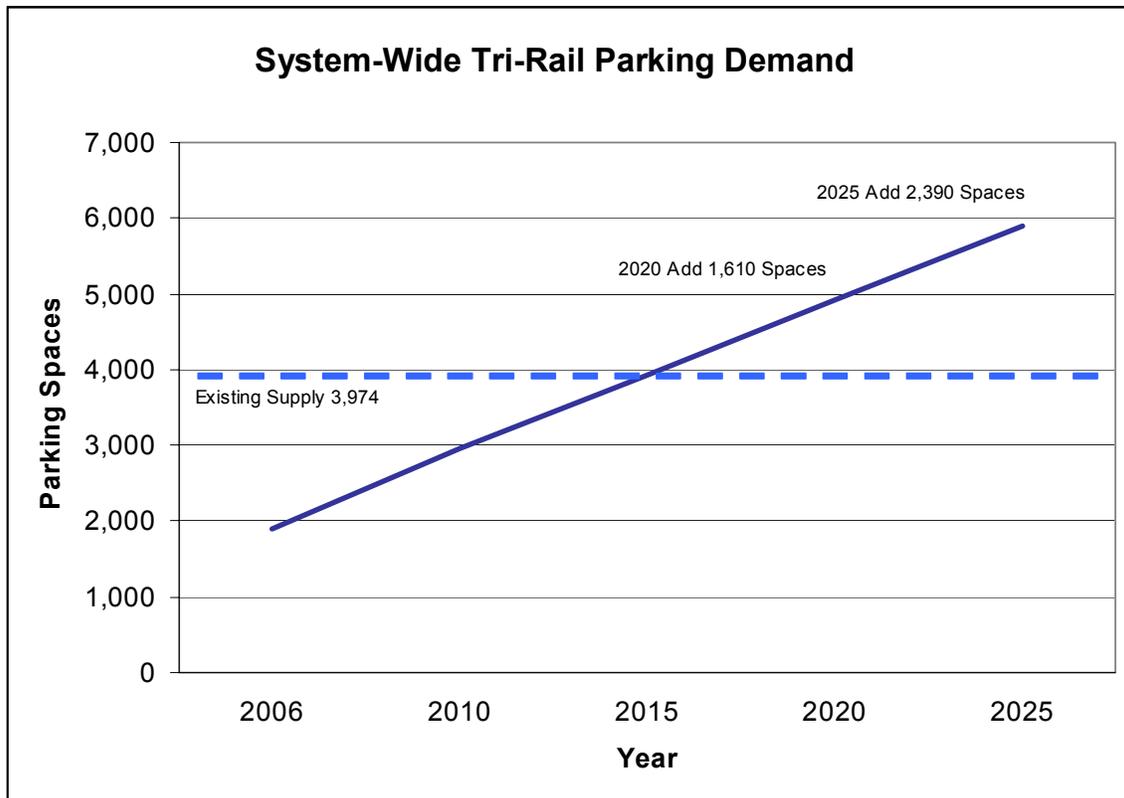


Table 1: Future Tri-Rail Parking Demand

Tri-Rail Future Parking Needs					
	2025 Demand	minus	Existing	equals	Need
Mangonia Park	465	-	274	=	191
West Palm Beach	380	-	139	=	241
Lake Worth	175	-	85	=	90
Boynton Beach	375	-	330	=	45
Delray Beach	215	-	130	=	85
Boca Raton	260	-	163	=	97
Deerfield Beach	405	-	255	=	150
Pompano Beach	295	-	272	=	23
Cypress Creek	250	-	556	=	0*
Fort Lauderdale	265	-	394	=	0*
Fort Lauderdale/Hollywood International Airport	585	-	180	=	405
Sheridan Street	445	-	475	=	0*
Hollywood	330	-	141	=	189
Golden Glades	505	-	216	=	289
Opa-Locka	155	-	72	=	83
Tri-Rail/Metrorail Transfer	115	-	41	=	74
Hialeah Market	80	-	70	=	10
Miami Airport	595	-	181	=	414
	5895		3974		2386

*Current capacity accommodates 2025 demand. Please note that the demand at these stations only represents Tri-Rail parking needs and does not include additional parking needs of carpools, bus riders, etc.

**Total is a sum of station needs and does not assume parking needs can be met with excess capacity at other stations.

Section 3: General Recommendations and Capital Improvements Program

The study recommendations are the result of a thorough review of professional and technical publications as well as numerous consultations between SFRTA staff, the consultant, FDOT, and other interested parties. The recommendations have been developed simultaneously with the SFRTA strategic planning process and an ongoing update of the agency's Transit Development Program. The program attempts to address issues identified in this study and to advance a rational approach to station area development. This program will provide for future intermodal access requirements in a way that matches and exceeds industry standards. Conceptual design options for each station were developed to illustrate the proposed course of action and are available in the main body of the study report. The following system-wide and station specific improvement recommendations represent distinct and innovative opportunities to improve the overall function of Tri-Rail stations. The following represent the final products of this study:

- System-wide policy and improvement recommendations
- Prioritized list of station improvements and associated costs (**Table 2**)²

System-Wide Policy and Improvement Recommendations

1. Secure SFRTA ownership or long-term use rights at all current Tri-Rail parking lots.
2. Secure agreements, obtain funding, and purchase additional properties needed for parking and circulation capacity expansion.
3. Correct identified circulation problems in accordance with the priority list. Separate traffic flows. Designate areas at each station for drop-off/pick-up and waiting.
4. Correct identified signage deficiencies. A comprehensive sign inventory is required to catalog the type and position of existing assets as well as needs for the future.
5. Address identified paint and striping needs. Use colored lanes and reflectors to identify separate traffic zones (bike, bus, drop-off, taxi, etc.).
6. Address identified pavement maintenance needs.
7. Correct identified lighting deficiencies. Use lighting that is pedestrian friendly and high-efficiency, as well as conforming to dark sky guidelines where adjacent properties may be impacted by glare.
8. Coordinate with local jurisdictions and adjacent property owners to improve identified access deficiencies and pedestrian hazards.
9. Purchase and install new bicycle racks at identified locations. Assess demand and maintenance oversight issues for placement of bicycle lockers at additional stations.

² Please note that these costs are provided as an estimate for planning purposes only and are based in year 2007 dollars. Kimley-Horn and Associates, Inc. has no control over the actions of jurisdictional agencies and is not a party to agreements between the client and others. Accordingly, professional opinions as to the status of permits and entitlements or the suitability for a specific purpose, and professional opinions as to the probability and timeframe for approvals, are made on the basis of professional experience and available data. Kimley-Horn does not guarantee that the outcome of permits and entitlements or suitability will not vary from its opinions. Because its opinions are based upon very limited site investigation and scope of services, Kimley-Horn does not guarantee that all issues affecting the site have been investigated.

10. Identify one staff person at SFRTA responsible for overseeing parking and circulation issues.
11. Where demand exceeds capacity and space is available, use temporary gravel lots until permanent parking can be constructed.
12. Incorporate minimum design standards and preference options for all parking and circulation components into SFRTA's station design guidelines.
13. Conduct nighttime counts and station surveys to observe and document overnight auto and bicycle parking activity. Develop a policy for overnight parking and security at Tri-Rail stations.
14. Designate and sign a minimum of two spaces at each station for staff and security agent use.
15. Secure long-term agreements with other entities that use station parking (Amtrak, Greyhound, FDOT, CSX, etc.).
16. Collect and review bi-annual FDOT counts of all station park and ride facilities. Recalculate parking demand projections at five-year intervals in advance of major TDP updates.
17. Ensure all joint development and TOD proposals include preservation of required parking capacity for Tri-Rail patrons, as well as efficient and safe circulation elements. Identify and pursue potential shared-use parking opportunities with off-peak uses in adjacent developments.
18. Examine potential methods to shift parking demand to alternate locations and modes.
19. Design and implement a trial program of permit-guaranteed parking or a payment system where parking is constrained or suspected of being abused.
20. Examine Intelligent Transportation Systems (ITS) applications and technology that might help customers identify available parking and reduce delays in station access. Coordinate efforts with FDOT, SFCS, and media outlets.
21. Examine the potential for installation of parking canopies on SFRTA lots that incorporate solar power equipment to provide shade while generating electricity and revenue.
22. Examine the potential for placement of short-term rental vehicles at Tri-Rail stations. Proven car-sharing and bicycle rental vendors should be invited to submit proposals.
23. Examine the potential usefulness and cost of rubber sidewalks at Tri-Rail stations.
24. Work with local jurisdictions, FDOT, and the corresponding Metropolitan Planning Organizations (MPOs) to add designated bike lanes on roadways that approach Tri-Rail stations.
25. Work with partner agencies to obtain funding.

Table 2: Tri-Rail Station Parking and Circulation Improvements Program

< 2010		2010-2015		2015-2020		> 2020	
project	cost	project	cost	project	cost	project	cost
Mangonia Park (274 Existing Spaces)							
Landscaping maintenance required	Part of existing station maintenance costs	Improve circulation elements as shown in conceptual plan, adding an additional 94 surface spaces for 368 total spaces.	\$ 1,340,000	Drop-off/pick-up on NE side of SFRC	TBD (Note: Right-of-Way costs not included.)	Construct parking garage (provide at least 465 total spaces)	\$ 3,730,000
Acquire property or long-term lease for existing station parking and circulation	TBD (Note: Right-of-Way costs not included.)	Add bicycle racks (4) and bicycle lockers (6)	\$ 19,500				
		Add benches (12) and shelters (10)	\$ 455,000				
West Palm Beach (139 Existing Spaces)							
Provide 140 temporary parking spaces at future Palm Tran Bus Transfer Facility adjacent to station for 279 total parking spaces.*	\$ 99,000	Improve circulation elements as shown in conceptual plan, including one-way movement pattern, resulting in loss of 51 parking spaces for 228 total parking spaces	\$ 1,900,000	Add 291 parking spaces in garage at location of temporary parking lot for a total of 379 spaces.	\$ 5,440,000	Pedestrian/bicycle overpass connection to crossing bridge from garage	\$ 772,000
Shift unutilized spaces from signed employee parking to signed Tri-Rail parking (Signage)	\$ 1,000	Add bicycle improvements including additional racks (4) and bicycle lockers (6), and restriping for bike lanes on Tamarind	\$ 134,500	Provide traffic signal at Datura St. and Tamarind	\$ 373,500		
Monitor "no parking" areas more frequently, discourage taxi cabs blocking drop-off and bus bays	Part of existing station maintenance costs	Pedestrian improvements including crosswalks on Tamarind, possible pedestrian countdown signal, and sidewalks improvements (including to Bayvan St.)	\$ 313,000				
		Add shelters (13) and benches (13)	\$ 587,000				
Lake Worth (85 Existing Spaces)							
Secure long-term agreement to continue use of temporary parking lot west of station	TBD	Add shelters (4) and benches (2)	\$ 177,500			Examine options for additional parking spaces on parcel situated between station and temporary lot	TBD (Note: Right-of-Way costs not included.)
Recover approximately 161 surface parking spaces under I-95 per FDOT plans for a total of 246 spaces.	Coordinate with FDOT plans	Add bicycle racks (4) and bicycle lockers (6)	\$ 19,500				
Create bus pull-off locations on Lake Worth Rd. Add crosswalks and pedestrian countdown signals on Lake Worth Rd.	\$ 68,000						
Boynton Beach (330 Existing Spaces)							
Improve Kiss-and-Ride signage	\$ 5,000	Improve circulation elements as shown in conceptual plan, resulting in a loss of 44 parking spaces for 286 total parking spaces.	\$ 2,335,000	Additional minimum of 89 spaces in surface lot expansion for a total of at least 375 total spaces. (Additional spaces can be added by extending surface parking on SFRTA owned property.)	\$ 275,500		
		Add shelters (11) and benches (6)	\$ 490,000				
		Add bicycle racks (4) and bicycle lockers (6)	\$ 19,500				
Delray Beach (130 Existing Spaces)							
Relocate formerly used bus shelter and add benches (7)	\$ 26,000	Improve circulation elements as shown in conceptual plan, including shelters (5), which will result in loss of 18 parking spaces for a total of 112 spaces.	\$ 990,500	Add sidewalk from station to Congress Ave.	\$ 123,000	Work with city, county and FDOT to provide pedestrian access from east side of I-95	TBD
Improve signage to station	\$ 5,000	Construct parking garage (provide at least 215 total spaces)	\$ 4,100,000				
Identify location for temporary parking while parking garage constructed	TBD	Bicycle racks (3) and bicycle lockers (6)	\$ 17,500				
Boca Raton (163 Existing Spaces)							
Designate locations for drop-offs/pick-ups by restriping/extending fire lane	\$ 12,450	Improve circulation elements as shown in short-term conceptual plan including 24 additional surface spaces for 187 total spaces	\$ 2,600,000	Add 236 spaces in parking garage, with 24 remaining surface spaces, for a total of 260 parking spaces (with no remaining temporary spaces)	\$ 5,050,000	Monitor FDOT construction program to ensure access of bike/pedestrian and shuttles, especially from FAU (east side of station).	NA
Correct signage for entering/exiting motorists from Congress and Yamato	\$ 2,500	Provide 50 temporary parking spaces in gravel lot for a total of 237 spaces. ¹	\$ 47,000				
		Add benches to existing shelters (8) and additional shelters in waiting areas (6)	\$ 273,900				
		Add bicycle racks (4) and bicycle lockers (6)	\$ 19,500				

< 2010		2010-2015		2015-2020		> 2020	
project	cost	project	cost	project	cost	project	cost
Deerfield Beach (255 Existing Spaces)							
Improve signage from Hillsboro Blvd.	\$ 2,500	Improve circulation elements as shown in conceptual plan, resulting in loss of 46 existing spaces for a total of 209 total spaces.	\$ 3,200,000	Negotiate for use of additional surface parking at adjacent courthouse lot	TBD (Note: Right-of-Way costs not included.)	Potential crossing bridge (pedestrian/bicycle overpass) to facilitate safe movement at the south end of the platforms	\$ 2,000,000
Maintain spaces and coordinate access improvements with adjacent developments	NA	Construct parking garage (provide at least 405 total spaces)	\$ 3,660,000				
		Add bicycle racks (8) and bicycle lockers (6)	\$ 28,000				
		Add shelters (24) and benches (16)	\$ 1,100,000				
		Create sidewalk improvements	\$ 175,000				
Pompano Beach (272 Existing Spaces)							
Complete SFRTA planned access and parking improvements adjacent to west platform, adding 43 additional parking spaces for 315 total spaces	See existing SFRTA Plans	Complete identified sidewalk improvements around station	\$ 140,000	Improve circulation elements as shown in conceptual plan, including addition of twelve (12) parking spaces, for a total of 327 parking spaces	\$ 1,200,000		
				Add bicycle racks (4) and bicycle lockers (6)	\$ 19,500		
				Add benches (6) and shelters (8) in waiting areas	\$ 358,000		
Cypress Creek (556 Existing Spaces)							
Address maintenance needs in park-and-ride lot	Coordinate with FDOT	Construct sidewalk to Cypress Creek Rd. on west side of SFRC (does not include curb/gutter)	\$ 45,500	Examine options for pedestrian underpass or overpass of Andrews Ave. (shown as Options 1 and 2 on Conceptual Drawings)	\$ 7,000,000		
Improve pedestrian crossing of Andrews Ave. with striping, signage, pedestrian countdown signal and refuge island	\$ 75,500	Create 116 additional surface parking spaces and circulation elements on SFRTA owned land to the west of the station with access to Powerline Rd., for a total of 672 parking spaces	\$ 2,300,000	Maintain parking east of the station	NA		
				Add shelters (11) and benches (4)	\$ 486,000		
				Add bicycle racks (4) and bicycle lockers (6)	\$ 19,500		
Improve signage to better identify existing drop-off/pick-up area and disabled parking	\$ 5,000						
Fort Lauderdale (394 Existing Spaces)							
Shift Amtrak spaces to remote lot (signage), assigning all 394 spaces in lot to Tri-Rail	\$ 5,000	Improve circulation elements as shown in conceptual plan, including shelters (9), resulting in loss of 20 spaces for a total of 374 spaces.	\$ 1,900,000	Maintain parking spaces to meet demand and monitor progress of FDOT joint development plans and Central Broward E-W premium transit project	NA	Continue maintaining parking spaces to meet demand and monitor progress of FDOT joint development plans and Central Broward E-W premium transit project.	NA
Improve pedestrian crosswalk to remote lot	\$ 1,500	Add bicycle racks (4) and bicycle lockers (6)	\$ 19,500				
Improve signage directing traffic movements	\$ 5,000						
Add stop sign at station entrance at south end of lot	\$ 1,000						
Fort Lauderdale Airport at Dania Beach (180 Existing Spaces)							
Improve circulation elements as shown in conceptual plan, resulting in loss of 31 parking spaces, for 149 total spaces. (NOTE: Right-of-Way costs not included.)	\$ 929,000	Provide benches (4) and shelters (8) in waiting areas	\$ 355,000	Remove temporary overflow parking. Construct parking garage (provide at least 585 total spaces.) Maintain circulation underneath garage.	\$ 10,035,000	Crossing bridge from parking garage to east platform	\$ 2,660,000
Provide 115 temporary overflow parking spaces in gravel lot east of station for 264 total parking spaces ¹	\$ 87,000	Add bicycle racks (4) and bicycle lockers (6)	\$ 19,500	Potential for pay or permit parking for Tri-Rail customers	NA		
Improve signage directing people to station and east parking lot	\$ 5,000	Create pedestrian crosswalks on Gulfstream Way	\$ 10,000				
Improve pedestrian crossing at Griffin Rd. and I-95	\$ 3,000						

< 2010		2010-2015		2015-2020		> 2020	
project	cost	project	cost	project	cost	project	cost
Sheridan Street (475 Existing Spaces)							
Address maintenance issues identified	Coordinate with FDOT	Maintain parking to meet projected demand and coordinate circulation improvements with FDOT and developer of adjacent park and ride lot	NA	Monitor situation for an opportunity to provide access on west side of SFRC	NA	Continue monitoring situation for an opportunity to provide access on west side of SFRC	NA
Improve signage	\$ 5,000	Pedestrian connection to west platform	\$ 37,000				
Hollywood (141 Existing Spaces)							
Explore options for use of some Amtrak designated spaces as Tri-Rail spaces	NA	Improve circulation elements as shown in conceptual plan, resulting in loss of 67 spaces, for a resulting total of 74 spaces.	\$ 1,900,000	Work with city, county and FDOT to create an intermodal center with parking garage containing 256 spaces for Tri-Rail, east of I-95 and a possible pedestrian crossing bridge to connect with Tri-Rail station. (Cost does not include property acquisition or lot clearance.) Results in 330 total spaces (not including any shared spaces at planned Railroad Museum.)	\$ 9,500,000	Potential for pay or permit parking for Tri-Rail customers	TBD
Improve signage directing people to station	\$ 5,000	Work with city and county regarding possibility of shared parking with planned Railroad Museum north of station. Need to accommodate up to 67 spaces from potential circulation improvements and 50 additional spaces for parking demand, resulting in a 191 total parking spaces	TBD				
Provide pedestrian crosswalk and pedestrian countdown signals at Hollywood Blvd. and I-95 ramps	\$ 75,500	Provide benches (4) and shelters (8) in waiting areas	\$ 355,000				
		Add bicycle racks (4) and bicycle lockers (6)	\$ 195,000				
Golden Glades (216 Existing Spaces)							
Address identified maintenance needs	Coordinate with FDOT	Improve circulation elements as shown in conceptual plan, resulting in loss of 25 parking spaces, for a total of 191 spaces	\$ 1,231,000	Monitor FDOT joint development progress and maintain space for projected parking levels, including possible garage to provide a total of 505 spaces	\$ 9,500,000	Acquire property to provide access on west side of SFRC and potential parking facilities	TBD (Note: Right-of-Way costs not included.)
Improve signage	\$ 5,000	Add bicycle racks (4) and bicycle lockers (6)	\$ 19,500			Add pedestrian/bicycle crossing bridge to gain access on west side of SFRC	\$ 2,000,000
		Add shelters with seating (11)	\$ 546,000			Add sidewalk connections to provide access on west side of SFRC	\$ 35,000
Opa-Locka (72 Existing Spaces)							
Improve signage and directions on website	\$ 5,000	Improve circulation elements as shown in conceptual plan, resulting in loss of 4 parking spaces, for a total of 68 parking spaces	\$ 1,400,000	Acquire property to NE for additional 87 spaces of surface parking, resulting in a total of 180 parking spaces. (NOTE: Cost does not include lot clearance or Right-of-Way)	\$ 312,000	Work with city to create bike/pedestrian path on SE side of SFRC	NA
		Secure shared parking agreement with museum, for a minimum of 25 spaces, resulting in a total of 93 parking spaces	TBD				
		Add bicycle racks (4) and bicycle lockers (6)	\$ 19,500				
		Provide benches (4) and shelters (9) in waiting areas	\$ 400,000				
Tri-Rail / MetroRail Transfer (41 Existing Spaces)							
Add 40 parking spaces on SW lot owned by SFRTA for 81 total spaces. Implement gated access for Tri-Rail passengers only	\$ 191,000	Coordinate with Miami-Dade Transit and FDOT on potential bus transfer facility adjacent to station	NA	Improve circulation elements as shown in conceptual plan including east side access, drop-off/pick-up area, and 37 additional surface parking spaces on land owned by SFRTA on east side of station for a total of 118 spaces	\$ 1,700,000	Coordinate with Miami-Dade Transit regarding potential parking garage	NA
Encourage city to construct sidewalks between station and nearby residential areas	NA	Acquire property for construction of parking garage and circulation improvements	TBD (Note: Right-of-Way costs not included.)	Provide benches (4) and shelters (9) in waiting areas	\$ 400,000		
Improve nearby crosswalks and transfer connectivity of stations	\$ 2,000			Add bicycle racks (6) and bicycle lockers (6)	\$ 24,000		

< 2010		2010-2015		2015-2020		> 2020	
project	cost	project	cost	project	cost	project	cost
Hialeah Market (70 Existing Spaces)							
Improve signage	\$ 5,000	Improve circulation elements as shown in conceptual plan, for a loss of 32 spaces, with a resulting total of 38 spaces.	\$ 1,150,000	Provide pedestrian access and station crossing bridge from the east side of SFRC	\$ 2,040,000		
Improve pavement striping and address other identified maintenance needs	Part of existing station maintenance costs	Negotiate short term lease to accommodate shift of demand during MIC construction	TBD				
Provide more frequent monitoring by security personnel	NA	Add 122 spaces in short term lease described above (cost of gravel lot)*, for a total of 160 parking spaces	\$ 83,000				
		Provide benches (4) and shelters (9) in waiting areas	\$ 400,000			160	
		Add bicycle racks (6) and bicycle lockers (6)	\$ 24,000				
Miami Airport (181 Existing Spaces)							
Restripe disabled spaces	\$ 6,500	Pedestrian crosswalk	\$ 5,000	Monitor progress of MIC and preserve parking spaces	NA	Potential for pay or permit parking for Tri-Rail customers	NA
Install fencing to prohibit pedestrian crossing of SFRC	\$ 25,000						
Total Costs							
	\$ 2,163,450		\$ 37,136,400		\$ 53,856,000		\$ 11,197,000

Notes:
 *Includes cost of gravel only and does not include lot clearance or any required drainage costs.

NA= Not Applicable

TBD=To be determined

- Assumptions:
1. Kimley-Horn and Associates, Inc. has no control over the actions of jurisdictional agencies and is not a party to agreements between the client and others. Accordingly, professional opinions as to the status of permits and entitlements or the suitability for a specific purpose, and professional opinions as to the probability and timeframe for approvals, are made on the basis of professional experience and available data. Kimley-Horn does not guarantee that the outcome of permits and entitlements or suitability will not vary from its opinions. Because its opinions are based upon limited site investigation and scope of services, Kimley-Horn does not guarantee that all issues affecting the
 2. No code research has been done to determine the cost, feasibility and constructability of the project.
 3. Parking space dimensions are assumed to be 9 1/2' x 20'.
 4. Assumes that no materials will be reused.