PALMETTO STATION

CONCEPT... ...TO REALITY

INTERMODAL TERMINAL FEASIBILITY STUDY

MIAMI-DADE METROPOLITAN PLANNING ORGANIZATION

DECEMBER 2014

JACOBS

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INTRODUCTION AND STUDY OBJECTIVES

FUTURE MULTI-MODAL NEEDS

Jacobs was selected by the Miami-Dade Metropolitan Planning Organization (MPO) to prepare this study to evaluate the feasibility of establishing a centralized multimodal/intermodal transportation terminal facility located at the Palmetto Metrorail Station. The Metrorail 'Green' line currently terminates at the Palmetto Station which is located just west of SR-826/Palmetto Expressway and north of NW 74th Street. This NW end of the Metrorail transit station is ideally situated to serve as a major intermodal terminal. Such a facility could also serve to support the proposed Regional Managed Lane Network (RMLN) proposed on the Palmetto Expressway, since it will serve as a major transfer point for express bus routes and ridesharing.

This study was conducted therefore in an attempt to develop a feasible proposal to integrate all transportation modes and services within a single multimodal facility, including Metrorail, express and local bus transit, municipal transit, bicycle and pedestrian facilities, auto short-term and long-term parking, commercial and office areas, as well as other uses that may support a new state-of-the-art intermodal transportation facility. A key measure of success for the MPO in moving this region of South Florida forward was to ensure this study clearly communicated the 'vision' for this type of development opportunity to partner agencies, and to the general public. Succinctly stated, the major objectives of the Palmetto Station Intermodal Terminal Feasibility Study, utilizing a multi-disciplinary team, working with the MPO and its partners, were to:

1) Establish the feasibility of developing an intermodal terminal facility at the existing station site, and conduct an evaluation to make a recommendation for a market supported preferred development program; and,
2) Explore conceptual development scenarios for an integrated facility, including the use of visualization tools, the financial feasibility of the mixed-use facility, and ultimately resulting in development and construction recommendations, along with a 'next steps' action plan.

PROJECT APPROACH

The overall intention of the project approach taken for the Palmetto Station Intermodal Terminal Feasibility Study was to reflect the MPO's and the Stakeholders' strategic transportation vision for the greater community. Included in the study's planning process and framework were 'benchmark' criteria to facilitate an integrated intermodal facility that accommodates not only motorized vehicular travel, but pedestrians, bicycles and the possibility of incorporating other exciting, complimentary, supportive mixed-use facilities and spaces.

The study included three general phases, which were sub-divided into separate individual work phases to meet the general objectives outlined above, as well as the scope of work required by the MPO's issued Task Work Order. These were as follows:

I. Baseline Assessment and Inventory

This phase commenced with MPO and Study Advisory Committee (SAC) formation and included clarification of the project scope, program, vision, goals and objectives. Then baseline data collection and analysis procedures were conducted to develop an understanding of the project planning parameters, previous planning studies as well as accomplishment of an exhaustive inventory of existing assets and conditions in the study area. This phase also included a literature research step to identify other national examples of best practices in the study, planning and development of intermodal terminal facilities similar in scope and/or size that could be implemented in Miami-Dade County at this location.

Aerial view of the study area.

II. Design Considerations

Utilizing the validated vision, goals and needs of the project as well as the detailed data gathered and analyzed in the first phase, the major effort for this second phase of work was geared towards a logical and fact-driven definition of the building and site components necessary to make the project a success. The completion of this process will result in an appropriate preliminary development program for the intermodal facility, and a strategy for integrating it with the existing local urban and regional context. A Preliminary economic and market analysis was included in this phase to ensure the approach and program were realistic based on current local and regional real estate demands.

III. Development Plan Options and Recommendations

An evaluation of the site development options was conducted in this final phase of work to evaluate, determine and validate the highest and best site for the intermodal facility. A variety of site development concepts was explored, evaluated and the preferred course of action was selected through a collaborative process. This preferred course of action was augmented and supported by traffic analysis and economic/financial funding implications. The final site development concept was then detailed with phasing identified, and provided in a visual format easily understood by public and non-design stakeholders. This phase concluded the study with final recommendations and 'next step' action items which outlines general strategies to move the project towards future implementation.

STUDY COORDINATION AND DELIVERABLES

In coordination with the MPO and the project Manager (PM) for this Task Work order, a Study Advisory Committee (SAC) was formed at commencement of the study to include representatives of the Miami-Dade Transit (MDT), the Florida Department of Transportation (FDOT), Broward County Transit (BCT), Miami-Dade Public Works (PW) and Regulatory & Economic Resources (RER) Departments, and the Town of Medley among others. The SAC participated throughout the study by attending periodically scheduled meetings to discuss relevant issues regarding the development and progress review of the study. Feedback from the SAC was also solicited via e-mail and 'WebEx' format teleconference where specific comments or data was required.

The directory of the SAC members is provided in the chart on the next page for reference, followed by a summary list of the project study meetings and events. The attendance list for each of the SAC meetings is included in the Appendix.

Recognizing that there were already significant and long-term input initiatives pertaining to this area of the County and the Town of Medley, including the Palmetto Expressway Regional Managed Lanes Network (RMLN) study as well as others, it was our intention to absorb and build upon these in the SAC sessions, infusing the "lessons learned" and/or evolved out of those into this process and move forward in an informed and sensitive manner.

At the completion of the study, the final results were presented with recommendations of this study to the SAC and other MPO committees. The final outcome of this study's comprehensive team approach was to develop a final feasibility report that will be a unified and agency supported solution that meets the needs, goals, and objectives of the transit users and the surrounding community, with the supporting 'roadmap' on how to move towards a future intermodal terminal implementation. The study 'deliverables' include twenty (25) copies of this Final Report, and a Power Point Presentation with the highlights of the study. Electronic copies of these items were also submitted in CD format to be posted in the MPO Website and for further reproduction and distribution. All of these materials are additionally available in PDF format for distribution and use to the general public in this universally available and readable file type.

STUDY ADVISORY COMMITTEE

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PROJECT MEETINGS AND HISTORY OF EVENTS LISTS

December 31, 2014	Delivery of Final Report – Project Completion
December 8, 2014	Transportation Planning Committee (TPC) meeting – Final presentation
September 16, 2014	SAC Meeting / Presentation #5 – Final Development Concept & Financial Feasibility Review
September 16, 2014	Technical Memorandum issued – Financial Feasibility Analysis
July 24, 2014	Project MDT Review Meeting – Final Architectural Conceptual Approach review, terminal needs & strategy discussion for project completion
July 10, 2014	SAC Meeting/Presentation #4 – Alternative Concepts & Analysis Review
April 22, 2014	Project PM / MDT Review Meeting – Kickoff of Architectural Conceptual Alternatives phase & strategy discussion for project progress work
April 7, 2014	SAC Meeting/Presentation #3 – Market Analysis & Basis of Programming
April 7, 2014	Technical Memorandum issued – Real Estate, Demographics and Market Analysis
February 18, 2014	SAC Meeting/Presentation #2 – Baseline Assessment & Inventory
February 17, 2014	Technical Memorandum issued – Traffic, Transit and Access Analysis
September 24, 2013	SAC Meeting/Presentation #1 – Study overview, purpose & approach; Study area boundary; SAC role and input needed; Study methodology
July 24, 2013	Project PM Review Meeting – Project Status & pre-SAC strategy discussion
May 17, 2013	NTP for TWO #GPC V-10

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LITERATURE RESEARCH OF COMPARABLE PROJECTS

The benchmarking of other similar intermodal facilities was an important step in the first phase of work on this study. By developing a point of reference in which to measure the Miami-Dade facility against, it was possible to establish standards that proved valuable in our evaluation of the conceptual development alternatives. This task commenced with a literature research step to identify other national examples of best practices in the study, planning and development of intermodal terminals similar in scope and/or size that could be implemented in Miami-Dade County. Further, this benchmarking process helped identify opportunities and set achievable goals using real-world paradigms by showing where other intermodal programming approaches have been successfully studied and implemented.

As part of this task studies conducted in the past by Miami-Dade Transit (MDT) and the MPO, pertinent ordinances and regulations for taxis and jitneys, requirements for ADA, bicycle and pedestrian facilities, among other available information were all reviewed. The Town of Medley land use and zoning regulations were analyzed to create a reference of the likely development regulations that would be applicable to the future project. These are referenced in the Study Appendix. Through the completion of this task, specific projects, concepts, strategies, state-of-the-art technologies and physical improvements that could integrate well with the existing transportation modes/systems in Miami-Dade County (Metrobus, Metrorail, taxis and jitneys) were identified. Where these benchmark sites integrated bicycle and pedestrian improvements, parking garages for private cars and bicycles, commercial and office areas, and any other recreational alternative to attract more visitors, the analysis proceeded to evaluate how a similar strategy might work in this specific study location.

The detailed summary of the Literature Research conducted includes evaluations of the identified example intermodal projects and strategies. These were then used as the basis for programming in the subsequent Preliminary Programming stage, preparation of the Site Conceptual Development Alternatives, and the Final Recommendations.

Study conducted by Miami-Dade Transit on surrounding resources of transit connections.

LITERATURE RESEARCH AND DATA GATHERING CHECKLIST

TASK 2: Literature Research (Benchmarking) **Best Practices/Similar Intermodal Terminal Examples/Related Studies:**			
Intermodal Terminals:		**Local Ordinances and Regulations:**	
X	Completed Projects (Facilities and/or Configurations)	X	Local Land Use and Zoning
X	Planning Concepts (Operational or Programmatic)	NA	Taxis and Jitney (registration, license, operation)
X	Stategies (Planning and/or Implementation)	X	ADA/Accessibility
X	Technologies	X	Bicycle circulation
		X	Pedestrian facilitation
Transportation Modes to be integrated:		**Previous or Related Studies**	
X	Rail	X	FDOT Regional Managed Lanes Network (RMLN)
X	Express and Local Bus/Intercity Shuttle (Trolley)	X	X (BCT) MDT and BCT - Near future expansion and LRMP's
NA	Taxis and Jitneys	X	M-D Regional Strategic Plan(s)
X	Bicycle	X	Medley - Economic Strategies and /or area studies
X	Pedestrian (including Kiss & Ride	X	x (BCT) Other adjacent Municipal strategies or initiatives?
X	Parking Garages		

KEY:	X	X	NA
	RECEIVED	NOT RECEIVED	NOT AVAILABLE

LITERATURE RESEARCH AND DATA GATHERING CHECKLIST - continued

TASK 3: Data Gathering **TRANSIT DATA:**										
		Sources:	MDT	BCT	FDOT	Medley	MD-RER	MD-PW&WM	MPO	Other
Bus System(s) - MDT & BCT										
Existing	Future									
X		Number of types of routes serving the Station	X	X						
X		Route Maps	X	X						
X		Route lengths	X	X						
X		Travel time and speed	X	X						
X		Ridership per route	X	X						
X		Headways	X	X						
X		Service hours	X	X						
X		Buses in service (peak and off-peak)	X	X						
X		Passengers boardings and alightings by route	X	X						
X		Average number of passengers served for each route by:	X	X						
X		by: Time of Day	X	X						
X		by: Day of Week	X	X						
X		I-95 and I-595 Express Bus Service Data, for reference only	X	X						
Metrorail Trains (at Palmetto Station):										
X		Metrorail daily ridership	X							
X		Trains in service (peak and off-peak)	X							
X		Passenger boardings and alightings by train	NA							
Palmetto Station Data:										
X		Passenger bus-to-bus transfers	NA							
X		Passenger bus-to-rail transfers	NA							
X		Passenger load "in Station" during peak and off peak periods	NA							
X		Number of bus bays (currently and projected need) and configurations	X							

LITERATURE RESEARCH AND DATA GATHERING CHECKLIST - continued

TASK 3: Data Gathering - continued **TRANSIT DATA:**									
	Sources:	MDT	BCT	FDOT	Medley	MD-RER	MD-PW&WM	MPO	Other
Roadway Data:									
Existing									
X	Surrounding Streets Traffic Volumes			X	X		X		
X	Surrounding Streets Vehicle Mix - Including Truck Traffic			X	X		X		
X	Surrounding Streets Level of Service (LOS)			X	X		X		
X	Surrounding Streets Configuration			X	X		X		
X	Surrounding Streets Jurisdiction			X	X		X		
X	Surrounding Streets Cross Section			X	X		X		
X	Location of Traffic Signals AND Signal Timings Data			X			X		
X	Location of Utilities			X	X		X		X
X	Accessibility to the Terminal Area	X							
X	FDOT - RMLN / Detailed Program and Plans Information (available)			X					
X	SR-826 Managed Lanes/Potential Direct Ramp Access Plans or Study			X					
X	ROW Availability (adjacent State, County, and Local Jurisdictions)			X	X		X		

LITERATURE RESEARCH AND DATA GATHERING CHECKLIST - continued

TASK 3: Data Gathering - continued **TRANSIT DATA:**									
	Sources:	MDT	BCT	FDOT	Medley	MD-RER	MD-PW&WM	MPO	Other
Miscellaneous and Site Data (Palmetto Station):									
X	Number of carpools - South FL Commuter Services								X
X	Number of vanpools - South Florida VanPool Program							X	X
X	Number of and types of parking spaces (capacity)	X							
X	Parking utilization rates	X							
NA	Park & Ride Facitilities (nearby)								
X	Number of "intercity" or "community" buses (if any)	X	X		X	X			
NA	Number of taxi companies (if any)					X			
NA	Number of taxis visiting the site by peak day and time (if available)					X			
NA	Number of jitney routes (if any)					X			
X	Bicycle and Pedestrian facilities located near the station							X	
X	Future Regional "Freight" projects - Rail and/or Truck			X		X	X	X	X
X	Future Commercial and Industrial Developments				X	X			X
X	Multiple municipalities surrounding the existing site				X	X			X

LITERATURE RESEARCH CASE STUDIES

Carrollton Intermodal Center

Carrollton, Texas

- Completed Master Planning in 2009
- Connects DART to Regional Commuter Rail (Cotton Belt & BNSF transfer point) and Denton County Transportation System (Bus)
- Signature 'Union Station' style compact TOD design approach
- Resulting in a 'true urban center' for Carrollton
- Initial phase 400 space garage (bus terminal)
- Design criteria detail future development, parking access and infrastructure needs
- $581M construction costs

Doraville Station (MARTA)

Atlanta, Georgia

A MIXED-USE DEVELOPMENT PROJECT

This true "Georgia Smart Growth Development" is one of the most highly anticipated and sought after venture in the region in over a decade.

- 165-Acre Site in Atlanta, GA
- Doraville project located on old General Motors site
- Infill, transit-oriented development with focus on Retail, Commercial, Office and Housing
- Dramatic freeway (I-285) frontage with unobstructed visibility at grade

Potential for public sponsored financing could include funding through **Georgia's Tax Allocation District** (TAD) program as well as other sources such as infrastructure development bonds, employment incentive grants and other smart growth initiatives.

Potential Yield

- 0.5 – 1.0 million sf Class A Office
- 0.5 – 1.0 million sf Research Space
- 150,000 – 200,000 sf Retail
- 1,000 – 2,000 Housing Units
- 14 acres of Park Space

LITERATURE RESEARCH CASE STUDIES - continued

St. Louis Shaw Park Avenue Transit Center

Clayton, Missouri

- Completed 2003
- Metrolink Pedestrian Bridge
- Police sub-station integrated
- 1,200 space garage (above, with Park & Ride)
- Compact design
- High visibility / cutting edge design (landmark)

Greenville Intermodal Transportation Center

Greenville, North Carolina

Metro Solutions

Downtown Houston, Texas

DATA GATHERING AND ANALYSIS

This task involved the acquisition and review of relevant transportation related data that was utilized in the analysis phase of the project. Existing transit and highway data necessary to conduct the study was collected including the following items by category:

A. **Transit** - The data collected in this sub-task served to determine the required capacity of the proposed facility for MDT and BCT buses, which included:
- Number and types of routes servicing the Palmetto Station
- Route alignments
- Route lengths
- Travel times and speed
- Headways
- Service hours
- Buses and Trains in service (peak and off-peak)
- Passenger movement by route and/or service
- Passengers' load during peak and off peak periods
- Bus Bays and configurations

B. **Roadway** - The data collected in this sub-task served to determine the current facility access accommodations and conditions including traffic flow, circulation and capacity to and around the Palmetto Station. The following is a list of the data that was collected:
- Traffic volume and mix along the streets in the adjacent area to the proposed facility
- Level of Service (LOS)
- Street configuration and jurisdiction
- Cross sections
- Location of traffic signals and utilities
- Accessibility to the terminal area

C. **Miscellaneous information** - This information assisted in developing the other elements of the proposed facility, and included:
- Number of Carpools & vanpools
- Number and Types of Parking spaces, utilization and use/purpose by type
- Number of Carpools & vanpools
- Number of Intercity Buses
- Number of Taxi companies and number of taxis servicing Palmetto Station
- Number of jitney routes and number of jitney-vans
- Bicycle and Pedestrian facilities located near the Palmetto Station
- Any other useful information to assist in the development of the study

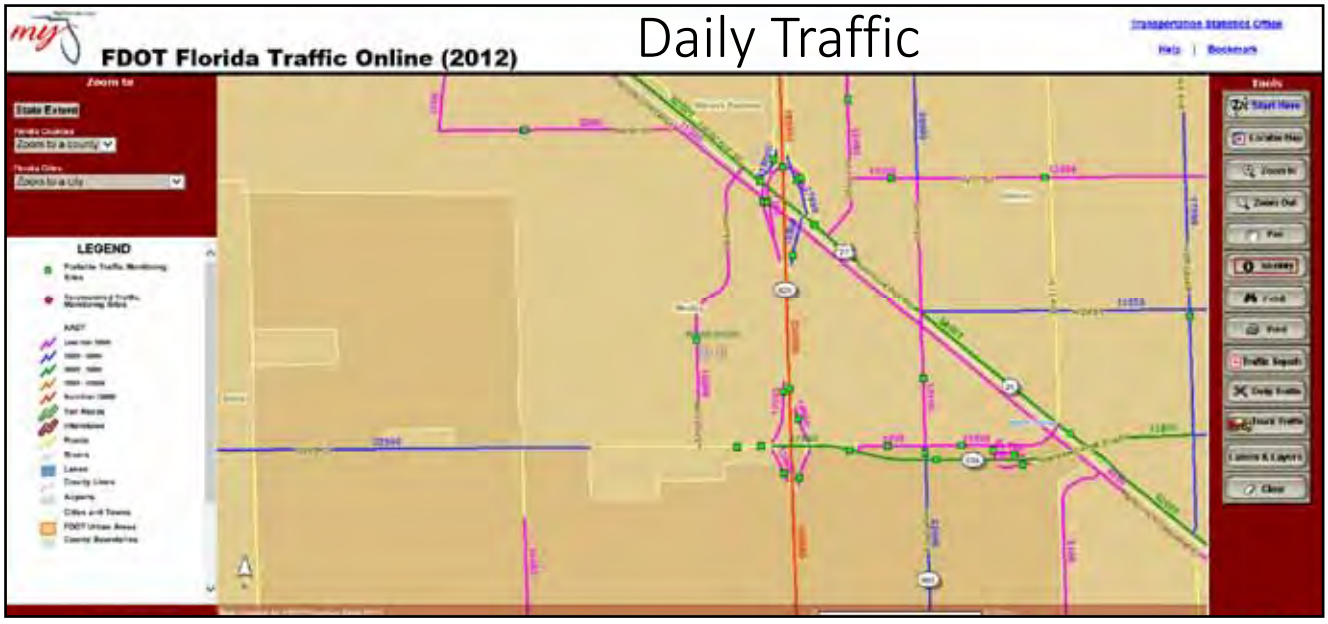
TASK EXECUTION

The task began by coordinating with MPO and the SAC on defining the study area limits, then with MDT regarding the existing transit routes servicing the Palmetto Station. Specifically documented were the route alignment, lengths, and published travel times. Additionally documented were the headways (by time of day), the service hours and the number of buses in service during the peak and off-peak hours, and the average number of passengers served by time of day and day of week for each route within the study area. This transit data was summarized in the project's second technical SAC presentation with raw data included in the appendix of this report.

Roadway data was also obtained for the project study area. The Town of Medley, Miami-Dade County, and the Florida Department of Transportation were contacted regarding the availability of traffic data on the subject roadways within the study area. At a minimum, daily (Annual Average Daily Traffic Volumes) and peak hour traffic volumes for the most recent available year were obtained for the roadway links and documented in tabular and graphical format. Additionally collected were historical traffic counts for the purposes of documenting growth (or decline) trends, heavy vehicle percentages, peak hour factors, and directional distributions. With that available information, it was possible to document the current roadway link and intersection Levels of Service (LOS). The roadway configuration (i.e. number and type of lanes, presence of sidewalks, etc.), jurisdiction and signal locations was documented and field verified. This roadway related information was also summarized in the project's second technical SAC presentation with raw data included in the appendix of this report.

Other information such as taxi and jitney companies servicing the downtown area was obtained from readily available resources. Bicycle and pedestrian facility information (e.g. sidewalks, bicycle lanes, multi–use shared paths, etc.) was obtained from the City and the County and documented in graphical format. This information was also included in the project's second technical SAC presentation.

All of the data collected and documented in the above focus areas was utilized in the following Access & Traffic Analysis and Site development programming tasks, as well as analyzed in coordination with the Economic and Market Analysis, to determine the ultimate capacities necessary for a facility of this type. Secondarily the impacts of the project on the surrounding site contextual development patterns, for both existing conditions and future impacts, were summarized at the completion of this task, to inform the feasibility analysis and conceptual approach processes that followed.



Example of daily traffic analysis conducted by Florida Department of Transportation

ACCESS AND TRAFFIC IMPACT ANALYSIS

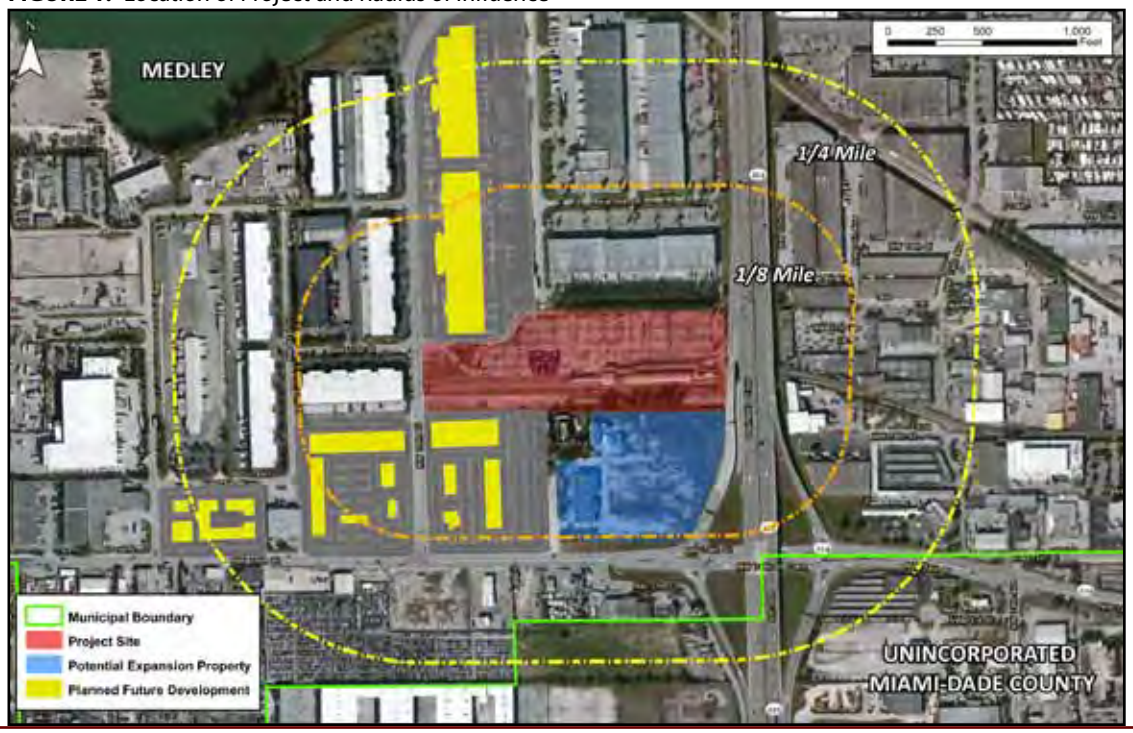
To evaluate the feasibility of implementing a new intermodal facility in conjunction with the existing Palmetto Station terminal, the data collected in the first phase of the study was used to document and analyze the relative traffic, transit, and access characteristics. As envisioned in the original scope of work for this study, this analysis was conducted within the defined study area to determine the best access to the proposed intermodal terminal. This generally included:

a. Field inspections to identify critical impact areas
b. Analyze traffic and transit impacts of the existing traffic circulation patterns
c. Analyze the impacts for the bicycle and pedestrian circulation patterns
d. Identify pros and cons of any roadway network modifications
e. Evaluate the proposed future direct access ramps from/to the Palmetto Expressway (SR-836), as considered in the RMLN by FDOT

The facility as proposed is to complement the Palmetto MetroRail Station located at the northern (western) terminus of the MetroRail line in the Town of Medley, Florida. It would ideally consist of mixed uses which may include office, personal and professional services, hotel, and/or light industrial with associated retail space.

With the approval of the Study Advisory Committee (SAC) for this project, a radius of one-quarter mile was established as the influence area for this facility. Thereby the existing and proposed traffic conditions were assessed for the external roadways within the radius, as well as access to and from the facility. The project site is generally bounded by SR 826/ Palmetto Expressway to the east, NW 79th Avenue to the west, NW 77th Street to the north, and offset from NW 74th Street to the south. **Figure 1** shows the location of the project and radius of influence for the traffic analysis.

FIGURE 1: Location of Project and Radius of Influence



Task Execution

Using the data collected in previous task as a starting point, and then conducting the necessary field work, a thorough traffic analysis was developed to determine the impacts of implementing this project. In general, evaluations necessary to reach this decision point focused on modifying the site's internal circulation network to improve access, capacity and safety, but additionally considered projected impacts to off-site public roadways, potential use for the 'transit only' restricted areas, as well as the concurrent increase in traffic volumes (near and long-term) that would be generated with the concurrent development of a single intermodal terminal facility, as well as the potential new mixed-use opportunities.

It was imperative for the analysis work under this task to consider ALL modes of transportation including bicycle and pedestrian. The potential impacts on the surrounding off-site roadway network were also considered where on-site changes could affect their operational characteristics, especially when and where access modifications are possible. The existing transportation network (roadways, transit routes, sidewalks, bicycle paths, etc.) were analyzed from an operational standpoint and the existing levels of service were documented. The impact of the proposed street modifications and proposed future RMLN direct access ramps from/to the Palmetto Expressway (SR-836) were secondarily addressed in terms of altered traffic and transit patterns. These altered patterns will be assigned to the on-site and off-site street network and the resulting traffic / transit volumes were analyzed. Specific areas of projected congestion and failing levels of service were noted and potential mitigation solutions recommended. The following sections summarize the analysis and findings, with the Appendix containing the full data reports utilized. All of this data and analysis was presented for SAC feedback at our 2nd meeting led by the MPO and the consultant.

EXISTING CONDITIONS

Access and Trip Generation Characteristics

Access to the site is provided via a signalized intersection with NW 79th Avenue and NW 77th Street. Ingress to the site is provided via two lanes that merge into one approximately 150 feet from the intersection. Similarly, egress from the site is provided via a shared through/right-turn lane and a left-turn lane of approximately 150 feet. A one-way drive circulates around the perimeter of the parking lot inclusive of a drop-off area in front of the station for kiss-n-ride passengers. We performed a field review to identify existing travel patterns, circulation, and related characteristics of the site.

In order to estimate the number of vehicle trips that currently access the site, parking data from Miami-Dade Transit (MDT) was compiled and analyzed. The information regarding the Palmetto Station from the Metrorail Parking Patronage Summary reports from September 2012 to August 2013 are summarized in **Table 1**.

According to the data shown in Table 1, an average of 321 parking spaces was occupied on an average weekday basis from September 2012 to August 2013.

TABLE 1: Metrorail Parking Patronage Summary for Palmetto Station

DATE	AVERAGE WEEKDAY OCCUPANCY	
	Number of Spaces	Percent Occupany
September 12	308	44%
October 12	314	45%
November 12	315	45%
December 12	290	41%
January 13	308	44%
February 13	329	47%
March 13	331	47%
April 13	347	50%
May 13	354	51%
June 13	339	48%
July 13	306	44%
August 13	313	45%
Average	**321**	**46%**

NOTE: Palmetto Station parking lot capacity = 700 spaces
Source: MDT (2013)

In addition to the 321 vehicles that park in the lot, vehicles are assumed to access the site to transport kiss-n-ride passengers. Also, MDT Route 87 runs from and to the Palmetto Metrorail Station approximately 25 times per day. Doral Trolley Routes 2 and 3 also stop at the Palmetto Station. **Table 2** and **Table 3** summarize the ridership and boardings and alightings at the Station for Route 87, respectively (Trolley ridership was not available).

Because traffic counts were not available to determine the number of vehicles currently accessing the site, the *Trip Generation Manual* (9th Edition) published by the Institute of Transportation Engineers (ITE) was referenced. It should be noted that the survey data available for this land use (#093 Light Rail Transit Station with Parking) has a small sample size, however because of the lack of further information, the data was used. If the trip generation characteristics of the site do not coincide with the surveys documented in the Manual, the results will be affected accordingly. **Table 4** contains a summary estimate of the existing trip generation characteristics of the site. The relevant excerpts from the Trip Generation Manual are included in **Attachment A**.

According to the data contained in the Manual, the existing site is estimated to generate approximately 1,255 trips on an average weekday, of which 366 and 427 occur during the AM and PM peak hour, respectively.

TABLE 2: Route 87 Average Ridership by Month

Month	Average Weekday	Average Saturday	Average Sunday	Total Monthly
September 12	2,176	766	487	48,095
October 12	2,194	865	441	55,690
November 12	2,120	860	513	50,525
December 12	2,086	729	486	48,282
January 13	2,136	719	461	52,175
February 13	2,294	783	493	50,978
March 13	2,131	781	559	51,446
April 13	2,213	766	533	53,881
May 13	2,151	765	486	52,818
June 13	2,066	741	449	47,274
July 13	1,984	702	457	48,745
August 13	2,090	718	484	51,513
Annual Average	**2,137**	**766**	**487**	**50,952**

Source: MDT (2013)

TABLE 3: Route 87 Palmetto Metrorail Station Boardings and Alighting by Month

MONTH	AVERAGE WEEKDAY	
	Alightings	Boardings
October 12	90	205
November 12	117	122
December 12	112	117
January 13	86	63
February 13	131	90
March 13	142	116
April 13	180	169
May 13	172	173
June 13	175	138
July 13	163	200
August 13	170	168
September 13	181	180
Annual Average	**143**	**145**

Source: MDT (2013)

TABLE 4: Existing Trip Generation Summary for Palmetto Metrorail Station

Land Use	Independent Variable	Daily	(PM) Peak Hour
93 Light Rail Transit Station w/Parking	321 Occupied Spaces	1,255	427

Source: ITE *Trip Generation Manual* (9th Edition)

Surrounding Roadway Characteristics

According to 2010 Census information from the United States Census Bureau, the project site is located within the Miami urbanized area. As such, the surrounding roadway classifications and level of service thresholds are defined based upon the Urbanized Areas designation as contained in the *2012 FDOT Quality/Level of Service Handbook Tables*.

NW 74th Street is an east-west arterial that provides 2 lanes in each direction and a two-way left-turn lane within the general study area. West of SR 826/Palmetto Expressway, it is located within the jurisdiction of the Town of Medley with a posted speed of 40 mph,which classifies it as a Class I signalized arterial.

NW 79th Avenue is a north-south collector roadway that also provides 2 lanes in each direction and a two-way left-turn lane. Within the study area, NW 79th Avenue runs from NW 74th Street and connects to Okeechobee Road, north of the project site. It is located within the Town of Medley and has a posted speed of 35 mph, which classifies it as a Class II signalized arterial.

SR 826/Palmetto Expressway borders the east side of the site. SR 826 is classified as an urban principal arterial - other freeways and expressways. Within the area, the posted speed limit is 55 mph and it provides ten (10) lanes throughout the area (five lanes Northbound and five lanes Southbound) plus a single auxiliary lane in each direction both to the north and south of the NW 74th Street interchange.

Volume

The Florida Department of Transportation (FDOT) maintains several traffic count stations within the area. A snapshot of these station locations was taken from FDOT Florida Traffic Online (2012) and contained in **Figure 2**.

Specifically, Annual Average Daily Traffic (AADT), vehicle classification and synopsis reports were extracted from the stations whenever available.

Besides AADT volumes, the AADT reports include the design traffic factors (K, D, and T factors). **Table 5** contains a summary of this information from the traffic count stations located within the one-quarter mile radius of the project site and the extracted reports are included in **Attachment B** of the Appendix.

FIGURE 2: FDOT Florida Traffic Online Count Stations within Study Area

TABLE 5: AADT Volumes and Design Traffic Factors

SITE (County 87)	DESCRIPTION	AADT	K FACTOR	D FACTOR	T FACTOR
0573	SR 826/Palmetto Expressway, 1000' N NW 74 St	203,000	8.0	65.6	7.9
2540	SR 934/NW 74 St, 200' W NW 74 Ave	47,500	9.0	65.6	10.2
6246	Ramp from NW 74 St to SB SR 826, 500' S of NW 74 St.	13,000	9.0	—	6.3
6247	Ramp from SB SR 826 to NW 74 St, 200' S of SR 826	12,500	9.0	—	6.3
6248	Ramp from NB SR 826 to NW 74 St, 150' N of SR 826	14,500	9.0	—	6.3
6249	Ramp from NW 74 St to NB SR 826, 500' N of NW 74 St	14,000	9.0	—	6.3
8334	NW 74 St, 200' W of SR 826	16,900	9.0	55.7	16.0
8335	NW 74 St, 200' W of SR 826	7,300	9.0	55.7	16.0
8658	NW 79 Ave, 200' N of NW 80 St	10,800	9.0	59.7	16.0

Source: FDOT Florida Traffic Online (2012)

The synopsis reports include more detail showing volumes by direction in 15-minute intervals. The volume profiles from the synopsis reports were graphed and are also contained in Attachment B. The synopsis output reports are also included.

From review of the volume profiles included in Attachment B, the general study area does not necessarily peak during typical AM and PM peak hours. Along NW 74th Street near NW 79th Avenue, the volumes remain relatively steady throughout the day which is more typical of industrial, rural areas. Along NW 79th Avenue, there is some directional peaking in the southbound direction during the AM peak period (around 8 AM) and in the northbound direction (around 5 PM) during the PM peak period (around 5 PM).The traffic patterns at this location are more representative of directional commuter trips showing vehicles traveling from Okeechobee Road in the morning and to Okeechobee Road in the afternoon.

Level of Service

Existing levels of service were determined at the count locations previously identified. The FODT Quality/ Level of Service Tables was referenced to determine LOS on a daily and peak hour basis. The LOS results are summarized in **Table 6 and Table 7** on a daily and peak hour basis, respectively.

TABLE 6: Level of Service - Daily

SITE (County 87)	Description	Facility	Class	Lanes	DAILY									
					Default Service Volumes			Adjustment to Service Volumes		Adjusted Service Volumes			AADT	LOS
					LOS C	LOS D	LOS E			LOS C	LOS D	LOS E		
2540	SR 934/NW 74 St, 200'W NW 74 Ave	Arterial	I	6LD	58,400	59,900	—	Right - turn lanes	5%	61,320	62,895	—	47,500	C
8334	NW 74 St, 200'W of NW 77 Ct	Arterial	I	4L	37,900	39,800	—	Non-State	-10%	34,110	35,820	—	16,900	C
8335	NW 74 St, 200'W of SR 826	Arterial	I	4L	37,900	39,800	—	Non-State	-10%	34,110	35,820	—	7,300	C
8658	NW 79 Ave, 200' N of NW 80 St	Arterial	II	4L	14,500	32,400	33,800	Non-State	-10%	13,050	29,160	—	10,800	C

Source: FDOT Quality/Level of Service Tables and Florida Traffic Online (2012)

TABLE 7: Level of Service - Peak Hour

SITE (County 87)	Description	Facility	Class	Lanes	PEAK HOUR TWO-WAY									
					Default Service Volumes			Adjustment to Service Volumes		Adjusted Threshold Volumes			VOLUME	LOS
					LOS C	LOS D	LOS E			LOS C	LOS D	LOS E		
2540	SR 934/NW 74 St, 200'W NW 74 Ave	Arterial	I	6LD	5,250	5,390	—	Right - turn lanes	5%	5,513	5,660	—	3,309	C
8334	NW 74 St, 200'W of NW 77 Ct	Arterial	I	4L	3,420	3,580	—	Non-State	-10%	3,078	3,222	—	1,399	C
8335	NW 74 St, 200'W of SR 826	Arterial	I	4L	3,420	3,580	—	Non-State	-10%	3,078	3,222	—	568	C
8658	NW 79 Ave, 200' N of NW 80 St	Arterial	II	4L	1,310	2,920	3,040	Non-State	-10%	1,179	2,628	2,736	1,153	C

Source: FDOT Quality/Level of Service Tables and Florida Traffic Online (2012)

As shown in Tables 4 and 5, NW 74th Street and NW 79th Avenue are currently operating under adequate levels of service within the immediate study area.

FUTURE CONDITIONS

Access and Trip Generation Characteristics

The Palmetto Intermodal Terminal Facility is proposed to consist of mixed uses which may include office, hotel, and/or light industrial with associate retail space. A likely development scenario was determined to be the following:

- Office space = 561,857 SF
- Hotel = 445 rooms with a total of 338,200 SF
- Industrial space = 165,000 SF
- Retail showroom = 24,750 SF

The *Trip Generation Manual* (9th Edition) published by ITE was referenced to estimate the trip generation characteristics of the likely proposed development scenario. Internal capture rates observed for multi-use sites as contained in the ITE *Trip Generation Handbook* (2nd Edition) were also used. In addition, a five percent Transportation Impact Factor reduction was used as contained in the ITE *Trip Generation Handbook* for light industrial and commercial developments with a minimum FAR of 1 per gross acre within 0.25 mile of a transit center and light rail station with direct, safe connections. The 5% vehicle trip reduction factor is a conservative estimate considering the development is proposed to be located adjacent/adjoining to the station; however, this is considered to be the best information available at this time for this level of analyses. A summary of the additional proposed trip generation for the site is included in **Table 8**, and the relevant excerpts from the ITE references are included in **Attachment C**.

TABLE 8: Trip Generation Summary - Palmetto Intermodal Terminal Facility (Additional Trips)

LAND USE	UNIT	DAILY	(PM) PEAK HOUR
710 Office	561,857 SF	6,197	837
310 Hotel	445 rooms	3,969	312
110 General Light Industrial	165,000 SF	1,150	160
890 Furniture Store (Retail Showroom)	24,750 SF	125	11
Sub-Total		11,441	1,320
Transportation Impact Factor (-5%)		(572)	(66)
Internal Capture		(120)	(10)
Net Total		**10,749**	**1,244**

Source: ITE *Trip Generation Manual* (9th Edition), ITE *Trip Generation Manual* (2nd Edition)

To estimate the future access volume from/to the Palmetto Station site, the trip generation estimated for the existing facility (see Table 2) was used as a base. Then, the new external trips anticipated from the proposed intermodal facility (Table 6) were added to obtain a total proposed trip generation to/from the site. **Table 9** summarizes the total vehicle trips anticipated to access the site with the Palmetto Intermodal Terminal Facility in place.

TABLE 9: Trip Generation Summary - Palmetto Intermodal Terminal Facility (Total Trips)

LAND USE	UNIT	DAILY	(PM) PEAK HOUR
EXISTING			
93 Light Rail Transit Station w/Parking	321 occupied spaces	1,255	427
PROPOSED			
710 Office	561,857 SF	6,197	837
310 Hotel	445 rooms	3,969	312
110 General Light Industrial	165,000 SF	1,150	160
890 Furniture Store (Retail Showroom)	24,750 SF	125	11
Sub-Total		12,696	1,320
Transportation Impact Factor (-5% of additional trips)		(572)	(66)
Internal Capture		(120)	(10)
Net Total		**12,004**	**1,244**

Source: ITE *Trip Generation Manual* (9th Edition)

As shown in Table 9, with the Palmetto Intermodal Terminal Facility in place, the site is anticipated to generate 12,576 trips on a daily basis, of which 1,737 are anticipated to occur during the peak hour.

Volume

Aside from the proposed development on-site, there are several committed developments in the immediate surrounding area (see Figure 1 for the general location of these developments). In order to assess the future operating conditions on NW 79th Avenue, which provides direct access to the Palmetto Station, the committed developments were segmented by either being north or south of FDOT Station #878658, which is located on NW 79th Avenue 200 feet north of NW 80th Street.

The following shows the comprehensive development plans for committed developments proposed to be located south of FDOT Station #878658:

- Retail space (Shopping Center) = 214,890 SF
- Gas Station = 24 vehicle fueling positions
- Warehousing = 980,920 SF

Similarly, the following committed developments are proposed to be located north of FDOT Station #878658:

- Office space = 132,000 SF
- Warehousing = 151,240 SF

Once again the *Trip Generation Manual* was referenced to determine the amount of trips anticipated with the committed developments in the area. **Table 10** summarizes the proposed trip generation associated with the committed development.

TABLE 10: Trip Generation Summary - Committed Developmements in Study Area

LAND USE	UNIT	DAILY	(PM) PEAK HOUR
SOUTH OF FDOT STATION #878658			
820 Shopping Center	214,890 SF	9,176	797
946 Gasoline/Service Station with Convenience Market and Car Wash	24 Vehicle fueling positions	3,668	333
150 Warehousing	980,920 SF	3,492	314
Sub-Total		**16,336**	**1,444**
NORTH OF FDOT STATION #878658			
710 Office	132,000 SF	1,456	197
150 Warehousing	151,240 SF	538	48
Sub-Total		**1,994**	**245**

Source: Town of Medley and ITE *Trip Generation Manual* (9th Edition)

Trip Distribution

In order to estimate the future travel pattern of the anticipated trips in the study area, the Directional Trip Distribution Report from the Miami-Dade 2035 Long Range Transportation Plan (LRTP) was referenced. According to the Traffic Analysis Zone (TAZ) structure of the Miami-Dade model used to generate the output of this report, the study area, which includes the project site as well as the area where the committed developments are proposed to be located, is located within TAZ 679. The directional distribution of TAZ 679 is summarized in **Table 11**.

TABLE 11: Directional Trip Distribution for TAZ 679

CARDINAL DIRECTION	PERCENTAGE
NNE	20%
ENE	10%
ESE	14%
SSE	17%
SSW	22%
WSW	3%
WNW	2%
NNW	12%
TOTAL	**100%**

Source: *Directional Trip Distribution Report,* Miami-Dade 2035 LRTP (October 2009)

Traffic Assignment

Using the preceding information, future traffic volumes were determined for FDOT Station #878658 on NW 79th Avenue. NW 79th Avenue provides signalized access to NW 74th Street in the south and connects to Okeechobee Road in the north, and therefore is anticipated to be an attractive thoroughfare for the trips generated from/to the committed developments in the area, as well as providing direct access to the Palmetto Intermodal Terminal Facility.

For the committed development trips, the trips associated with the developments south of FDOT Station #878658 were assigned to the station location using the "north" trip distribution percentages (see Table 10) defined as WNW, NNW, NNE, and ENE, totaling 44%. The trips associated with the developments north of the FDOT Station were assigned to the station location using the "south" trip distribution percentages defined as WSW, SSW, SSE, and ESE, totaling 56%. It should be noted that in assigning the total North and South percentages, respectively, it is assumed that all new trips will use NW 79th Avenue. The calculation of the committed development trips for FDOT Station #878658 is summarized in **Table 12**.

TABLE 12: Committed Development Trips at FDOT Station #878658

	DAILY			
	Total Development Trips	Direction	Percentage	Trips
From South Developments	16,336	North	44%	7,188
From North Developments	19,994	South	56%	11,197
TOTAL				**18,384**
	PEAK HOUR			
	Total Development Trips	Direction	Percentage	Trips
From South Developments	1,444	North	44%	635
From North Developments	245	South	56%	137
TOTAL				**773**

Source: Town of Medley, ITE *Directional Trip Generation Manual* (9th Edition), and *Directional Trip Distribution Report,* Miami-Dade 2035 LRTP (October 2009)

Because committed trip information is being used to project the future traffic volume on NW 79th Avenue, a linear annual growth rate of 1% was determined to be sufficient to project the 2012 baseline volumes to year 2025 (anticipated build-out date for the facility). Once the 2025 baseline volumes were determined, trips from the committed developments, and then finally the project trips were added on top. **Table 13** summarizes the future (Year 2025) volumes anticipated at FDOT Station #878658.

As shown in Table 13, the total background volumes projected at the Station location is 30,675 on a daily basis and 1,259 during the peak hour. With the Palmetto Intermodal Terminal Facility in place, and assuming the same access to the site, the total volumes would be 41,996 on a daily basis and 2,569 during the peak hour.

TABLE 13: Future (Year 2025) Volumes at FDOT Station #878658

	DAILY	PEAK HOUR
Existing (Year 2012)	**10,800**	427
Year 2025 W/Background Growth (1% annual)	12,291	486
Committed Development Trips	18,384	773
Total Background Volume	**30,675**	**1,259**
Project Trips (new trips only)	10,749	1,244
Total Volume w/Project	**41,424**	**2,503**

Source: FDOT, Town of Medley and ITE *Trip Generation Manual* (9th Edition), and *Directional Trip Distribution Report*, Miami-Dade 2035 LRTP (October 2009)

Level of Service

Similarly to existing conditions analyses, future levels of service were determined for the FDOT Station #878658 location using the FDOT Quality/Level of Service Tables. The LOS results are summarized in **Table 14** on a daily and peak hour basis, respectively.

TABLE 14: Future (Year 2025) Levels of Service at FDOT Station #878658

	DAILY				
	Adjusted Service Volumes				
Scenario	LOS C	LOS D	LOS E	Volume	LOS
Background (w/o Project)	13,050	29,160	30,420	30,675	F
Total (w/Project)				41,996	F
	PEAK HOUR				
	Adjusted Service Volumes				
Scenario	LOS C	LOS D	LOS E	Volume	LOS
Background (w/o Project)	1,179	2,628	2,736	1,259	D
Total (w/Project)				2,569	D

Source: 2012 FDOT Quality/Level of Service Tables

As shown in Table 14, NW 79th Avenue is anticipated to operate under failing levels of service on a daily basis; however, during the peak hour sufficient capacity is available to absorb the background growth, trips associated with the committed developments, and the additional trips anticipated with the Palmetto Intermodal Terminal Facility.

It should be noted that the future conditions analysis presented herein may not account for the full considerations of use of the existing or proposed transit facilities. More detailed analyses will be necessary to obtain such information.

Additionally, due to the number of committed projects anticipated in the area, failing levels of service are also anticipated at other surrounding roadways within the area.

FUTURE IMPROVEMENTS AND RECOMMENDATIONS

In the near future, NW 74th Street will be widened to a six-lane divided roadway from NW 87th Avenue to SR 826. The widening will create additional throughput capacity between SR 826 and the study area, and provide sidewalks and bicycle facilities.

As part of the Palmetto Intermodal Terminal Facility, a ramp is being considered to provide access from the SR 826 SB off-ramp directly to the site. The ramp would provide additional access to the site, alleviating NW 79th Avenue to a small degree. However, the construction of the ramp would only improve the ingress access to the site, and therefore alleviate the surrounding roadways to the degree of rerouting some of the vehicles entering the site from NW 79th Avenue to the new ramp facility. A more detailed study could be performed once a concept is developed.

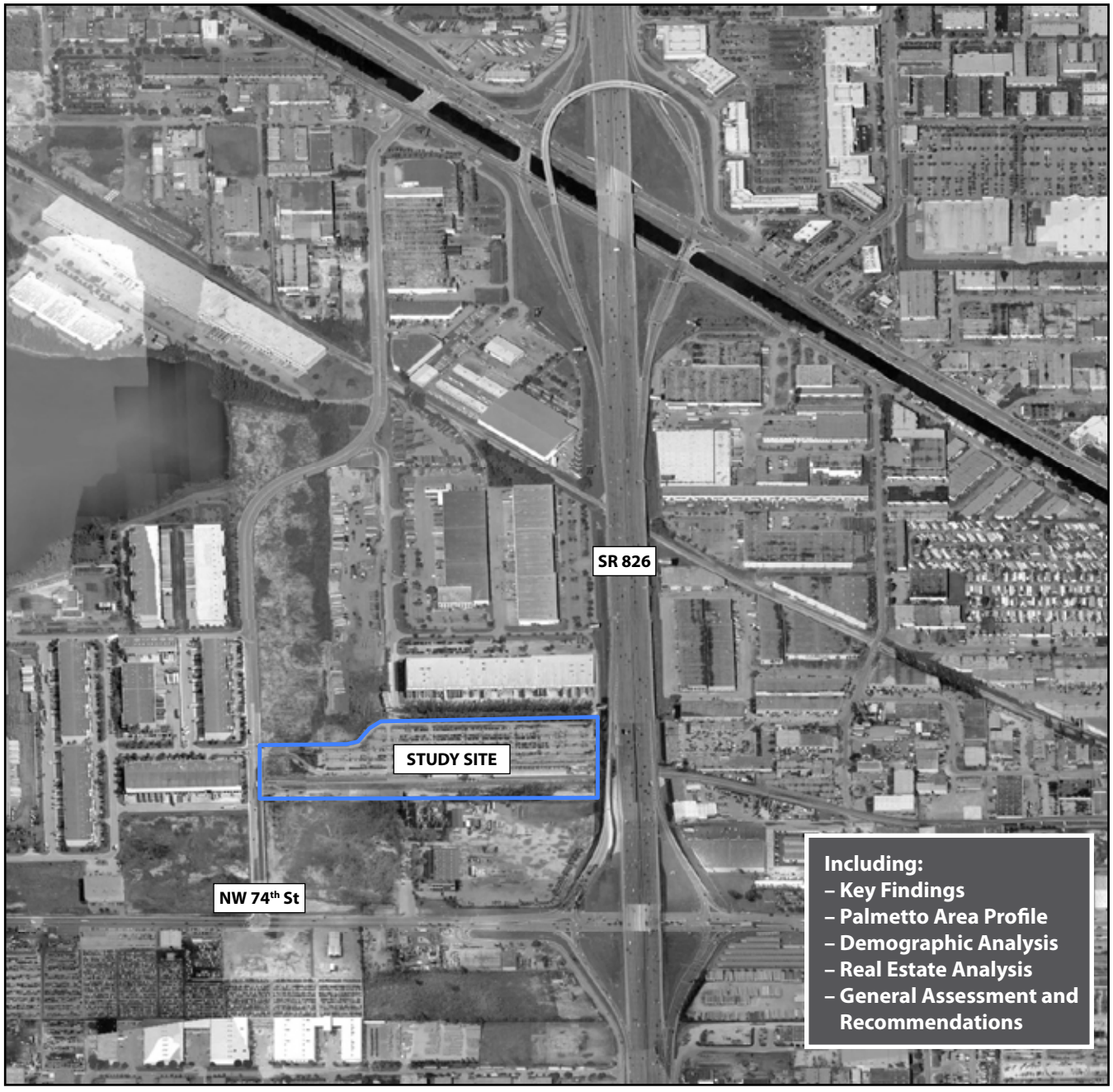
There are no anticipated impacts to pedestrian and bicycle facilities at this time however, mitigation measures could incorporate better facilities to separate pedestrians and bicyclists from the vehicular travel way.

To reduce the vehicle trips in the area, the feasibility of a circulator route may be conducted. Also, further studies may be necessary to analyze the impacts to the signalized intersections along NW 79thAvenue, namely at NW 74th Street, the access to/from the site, and at Okeechobee Road. Turn lane improvements, additional lanes, or signal upgrades may be necessary.

With the proposed conditions and assumptions as contained in the study, an additional lane along NW 79th Avenue is warranted. However, if vehicle trips could be reduced by other measures, such as a circulator route for the area and/or a direct access ramp from SR 826, widening may not be necessary.

REAL ESTATE, DEMOGRAPHIC AND MARKET ANALYSIS

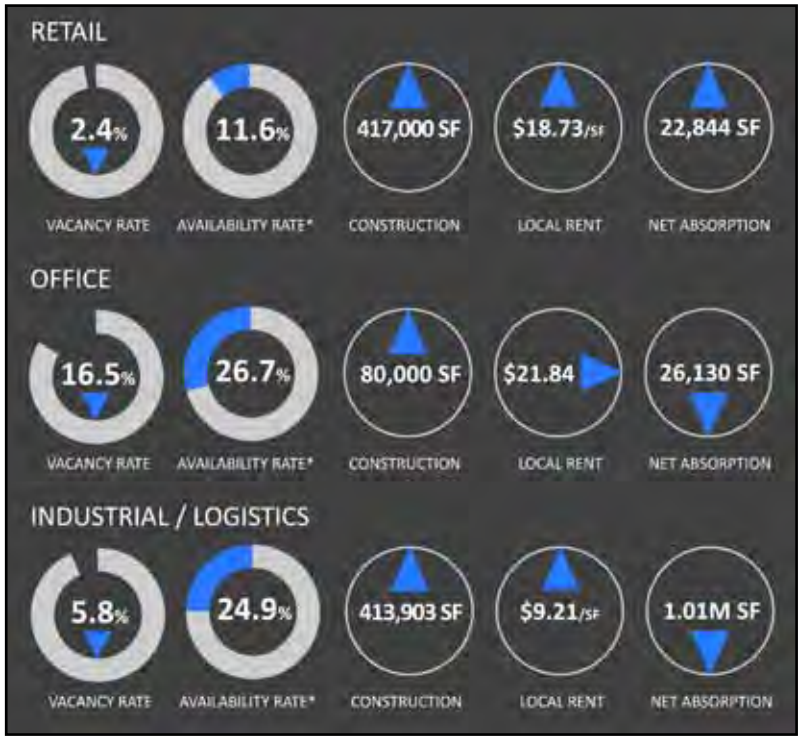
Metrorail - Palmetto Station, Medley. Florida
Multi-modal/Intermodal Transit Oriented Design Intent
March 2014 - CBRE, Costar and ESRI Data Sources



KEY FINDINGS

GENERAL OBSERVATIONS

Site located in a thriving suburban business and industrial center; within 10-minute drive from large residential areas; less than 7 miles from Miami Airport (a gateway economic hub); undersupplied local retail market; shows fair potential for retail/office use but needs major planning/design, infrastructure and access overhaul.



REAL ESTATE MARKET DASHBOARD

Landlord Favorable Conditions

Miami-Dade County including Doral/Medley retail market is in a state of revival. Vacancy rates are down while absorption and rents are up. Local market undersupplied in terms of certain key categories.

Tenant Favorable Conditions

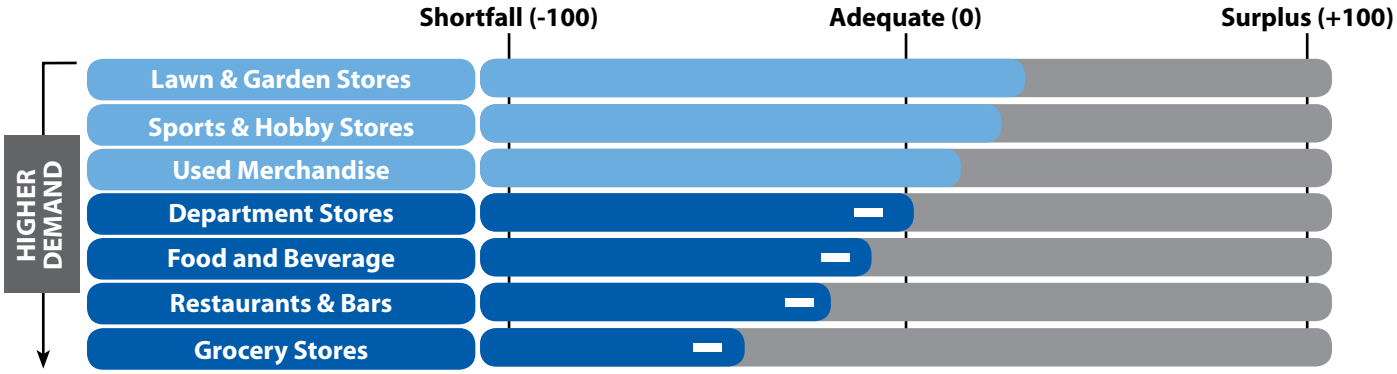
With improving employment numbers, office market (Class A & B) outlook for 2014 is improving. Doral/Medley/Airport area has seen lower vacancy but reduced absorption over 2012.

Tenant Favorable Conditions

While Medley industrial sector is performing fairly well, but local area is overbuilt with high availability rates. Industrial/warehouse space may not be ideal for Palmetto due to redundancy and land use factors.

RETAIL MARKET GAP (UNMET CONSUMER NEEDS)

The graph below for the study area highlights retail surpluses and shortfalls. It identifies supply/demand for some key categories such as grocery stores, restaurants, department stores, etc. that are currently in demand.



**Total Availability Rate is not the same as Vacancy Rate. It is the amount of office space available to be leased and includes – vacant space, vacant/occupied space available for sublet and space coming available from downsizing/departing tenants within next quarter.*

DEMOGRAPHIC & MARKET PROFILE

Businesses: 2,397
Within a 1-mile or 20-min. walk.

20,494
People employed within 1-mile.

Households: 11,607
Total households in study area.

Population: 33,058
Within a 10-min. peak hour drive.

$33,468
Average household income.

42.6 Years
Median age.

94.5%
People of Hispanic origin.

91.2%
Race & Enthnicity: White alone.

60% above age 35 Years
Majority population in 2018.

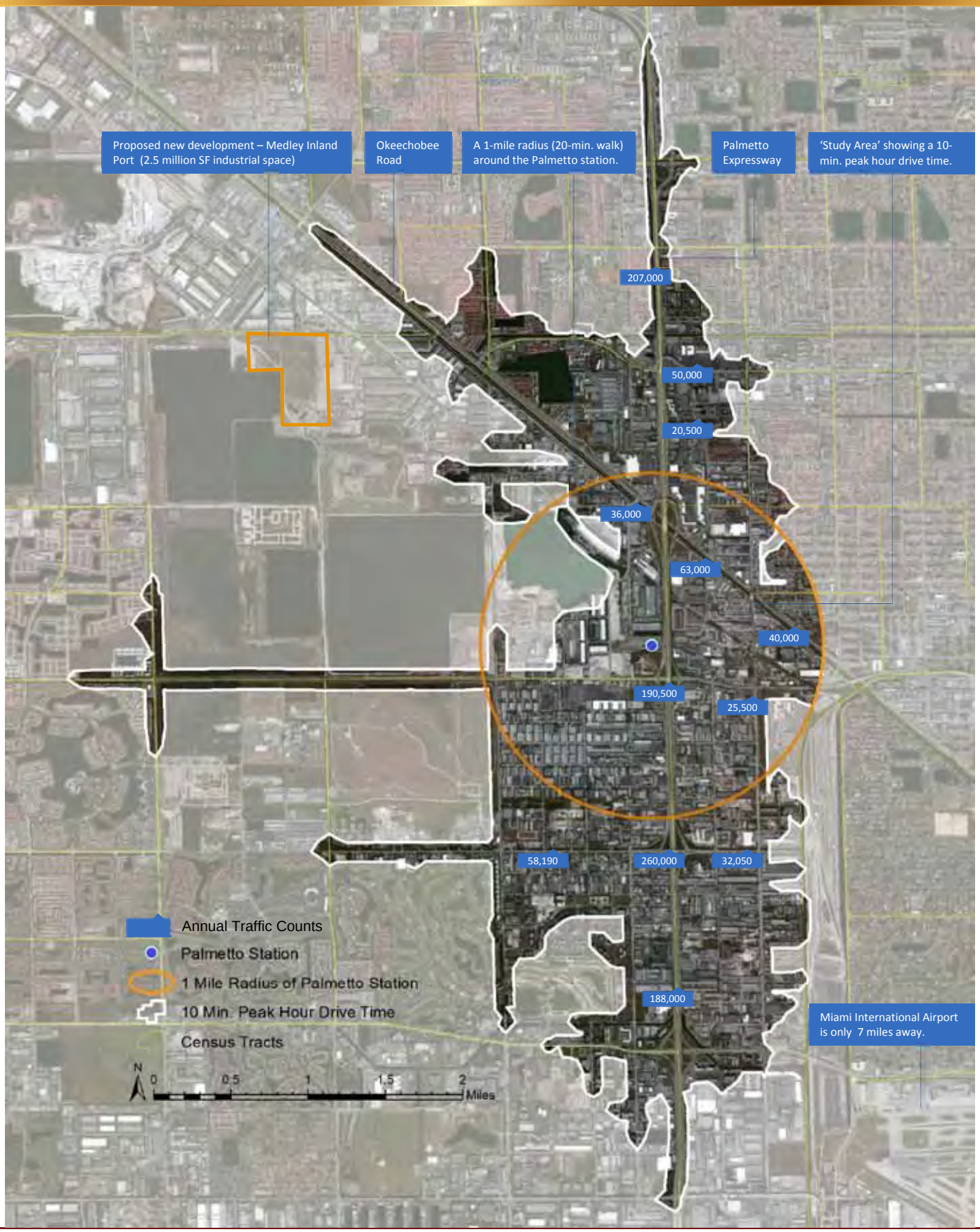
RETAIL TENDENCIES: Above average propensity to shop at clothing/apparel, fine jewelry and electronic stores.

OTHER CONSUMER ATTRIBUTES

RECOMMENDATIONS

1. Development should attract tenants by leveraging the transit rider market and bringing in new customer base from the local employment/residential areas. Symbiotically, project must encourage increased ridership.
2. Palmetto TOD must be planned in concert with local community - Address issues such as area master plan, pedestrian, public infrastructure, transit ridership and involve community, business and government leaders.
3. It is critical that the local developers and real estate investors are consulted before development footprint/ program is finalized.
4. Develop architecturally significant building & transit gateway that has the ability to become a local landmark.
5. Retail + Offices - Phased/incremental development with a 90,000 SF in Phase 1 and 75,000 SF in Phase 2.

PROPOSED PROGRAM	PHASE 1 (2015-2020)	PHASE 2 (2020-2025)
Infrastructure Upgrade		
Retail Development	55,000 SF	55,000 SF
Office Development	35,000 SF	35,000 SF
PHASE TOTAL	90,000 SF	90,000 SF


Proposed new development – Medley Inland Port (2.5 million SF industrial space)
Okeechobee Road
A 1-mile radius (20-min. walk) around the Palmetto station.
Palmetto Expressway
'Study Area' showing a 10-min. peak hour drive time.
207,000
50,000
20,500
36,000
63,000
40,000
190,500
25,500
58,190
260,000
32,050
188,000
Annual Traffic Counts
Palmetto Station
1 Mile Radius of Palmetto Station
10 Min. Peak Hour Drive Time
Census Tracts
N
0
0.5
1
1.5
2
Miles
Miami International Airport is only 7 miles away.

PALMETTO AREA PROFILE - AN OVERVIEW

The general characteristic of the built environment and local neighborhood around the Palmetto Metrorail station is that of a low-rise, suburban, industrial land use. Although there are several housing developments within a couple miles east of the Palmetto Expressway, the predominant usage is industrial, commercial and logistics type functions.

Study Area - In order to better understand the local demographics, real estate market and the general conditions surrounding the Palmetto station, a **10-minute, peak hour, drive area** was outlined (see the map on the left). This organic shape forms the **'Study Area'** and a geographic basis for the market analysis. It shows that people within the highlighted area can drive to the Palmetto Metrorail station (shown in blue dot) **under 10 minutes in peak hour** traffic. The extents of the area increase slightly during non-peak hours. This approach is a relatively comprehensive way to define the target market **without causing overlap with other transit stations east of Palmetto**.

Households, Businesses and Employment - The 2013 population for the study area is **33,058 from 11,607 households**. The station also seems to be at the center of a thriving commercial center. In terms of a 1-mile radius (a 20-minute walk) from the station, there are **2,397 businesses with 20,494 employees**. Majority of businesses are light industrial, warehousing, logistics, retail and automotive parts related establishments. Some of the largest employers are Global Equipment, Seaboard Marine, HJ Foundation, Quirch Foods and Automatic Coil-Manutech with a total of 1,750 employees. While some use the Metrorail system, a majority of the people employed here travel daily by car.

5 Largest Employment Sectors		5 Largest Employers	Employees
Wholesale Trade	14.1%	Global Equipment	450
Retail & Services	10.9% - 14.1%	Seaboard Marine	400
Transportation and Warehousing	10.6% - 11.0%	HJ Foundation	300
Manufacturing	10.2%	Quirich Foods	300
Government/Public Administration	9.3%	Automatic Coil-Manutech	300

Vehicle Usage & Traffic – Within the map to the left, relatively high annual traffic counts are evident and confirmed along the Palmetto Expressway, Okeechobee Road and major cross streets. In terms of Vehicle Miles Traveled (VMT) the immediate vicinity around the station could be classified as a **high VMT and employment place** (see discussion in the 'General Assessment & Recommendations' section, page 9). While the residential population regularly uses the Palmetto station, due to inadequate pedestrian access and poor infrastructure, very few actually walk to the station.

Site Location, Opportunities & Challenges – The proximity of the site to a large employment, and to a lesser degree, a residential base is a strong positive. Miami International Airport, center of a huge economic hub, is only 6-7 miles away. However, the site location in relation to its immediate surroundings is somewhat of a limiting factor. Visibility and access from the east is restricted by the expressway and **pedestrian linkages are non-existent**. Properties to the west are underdeveloped and those to the north and south do not appear to be conducive for a transit-oriented development.

The following sections of this report elaborate on the latent real estate and demographic potential for the area and illustrate that a 'right-sized', well-planned and appealing scheme could potentially help Palmetto transform into a successful intermodal/multimodal center in the near future.

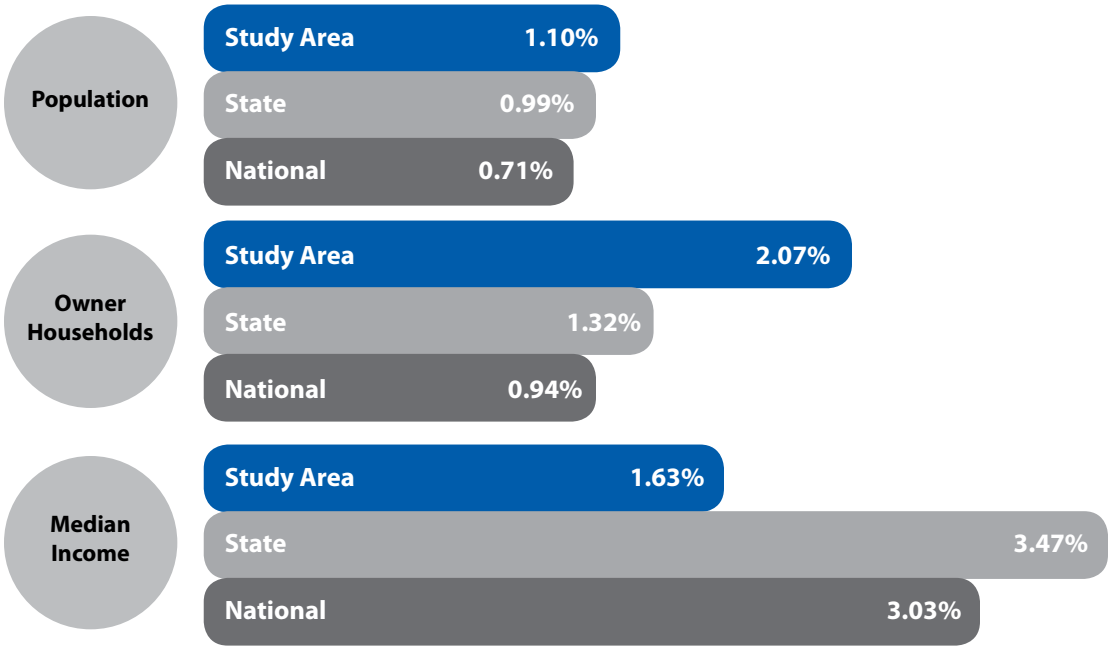
DEMOGRAPHIC ANALYSIS - MARKET POTENTIAL

A majority of the population described in this section resides east of the Palmetto Expressway in a radius of 1 to 2 miles from the station.

Based on the 2010 Census, the 2013 projected population for the area is 33,058 with a **median age of 42.6 years** and **average household income of $34,468**. The HH income is nearly **$13,000 less than the national average** of $51,000 in 2013. There are 11,607 households where the average household size is **under 3 people**. The residential areas are primarily middle class neighborhoods with nearly 34% of the homes valued under $100,000. In terms of home ownership, **41% own while the remaining 59% rent**.

The table below enumerates the demographic profile for the study area showing population and projected growth numbers:

Summary	Census 2010	2013	2018
Population	**32,224**	**33,058**	**34,910**
Households	11,255	11,607	12,315
Families	8,291	8,499	8,971
Average Household Size	2.81	2.79	2.78
Owner Occupied Housing Units	4,613	4,313	4,778
Renter Occupied Housing Units	6,642	7,294	7,537
Median Age	**41.8**	**42.6**	**43.6**
Average Household Income		**$34,468**	**$38,665**
Per Capita Income		$12,212	$13,709
Median Home Value		**$118,853**	**$150,134**

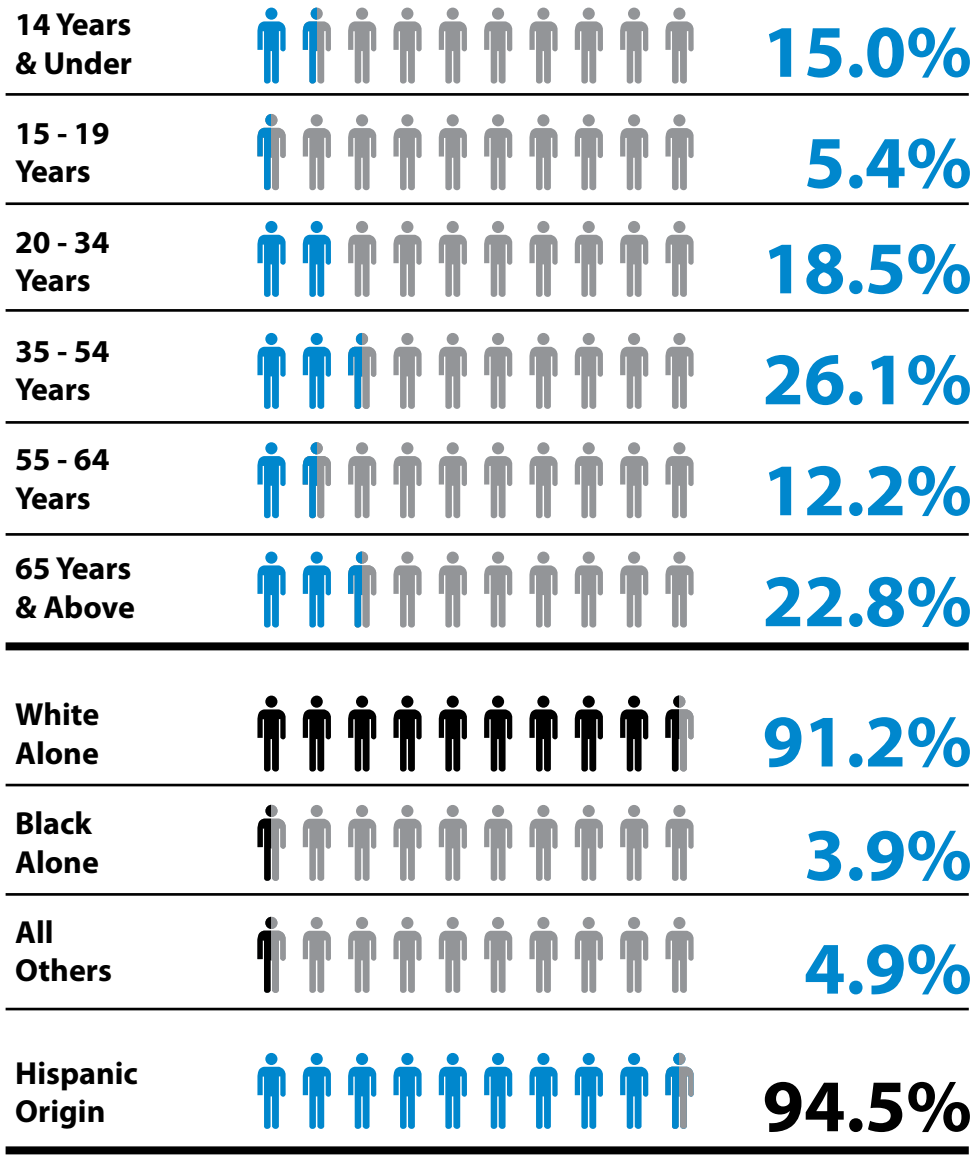


Above: Growth Rates (2013 – 2018) for Population, Households and Income. ESRI.

POPULATION BY AGE, RACE AND ETHNICITY

Year 2018 Population - The census projection for the study area forecasts a predominantly older population in 2018 (see table below). More than 60% of the total 34,910 people will be above the age of 35 years, whereas only 20% will be under the age of 20. The data further points at an **aging population with median age increasing from 42.6 years in 2013 to 43.6 years in 2018**. In terms of race and ethnicity, the population through 2018 remains **predominantly of Hispanic origin** (32,978 of 34,910). In the 2010 census, nearly 94% called themselves Hispanic while 91% categorized themselves as white.

Based on these findings, it can be highlighted that the majority study population is not only older and aging, but will continue to remain homogeneous in terms of race and ethnicity.



Above: Age, Race and Ethnicity Distribution for year 2018 (projected). ESRI.

MARKET POTENTIAL AND CONSUMER BEHAVIOR

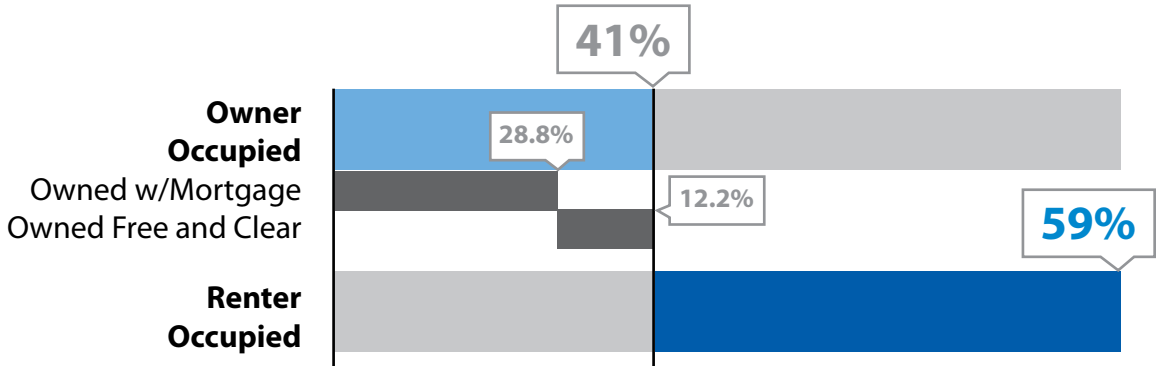
The typical consumer in the study area shows high propensity to travel more than 15 to 20 miles to shop for occasional articles such as clothing, electronics, shoes, etc. While they travel far less shopping for everyday articles, the willingness to travel longer distances maybe due to a dearth of adequate facilities near their home base (lack of grocery stores, restaurants and malls).

The statistics show that 25% of the population (including several households) in focus does not own or lease a car. With 80% of the population above the age of 20, this would mean that almost **6,600 people could potentially have a use for mass transit**. When compared to the national average, these consumers show high market potential for items such as apparel, fine jewelry, electronics and higher inclination to visit fast food and drive-in restaurants.

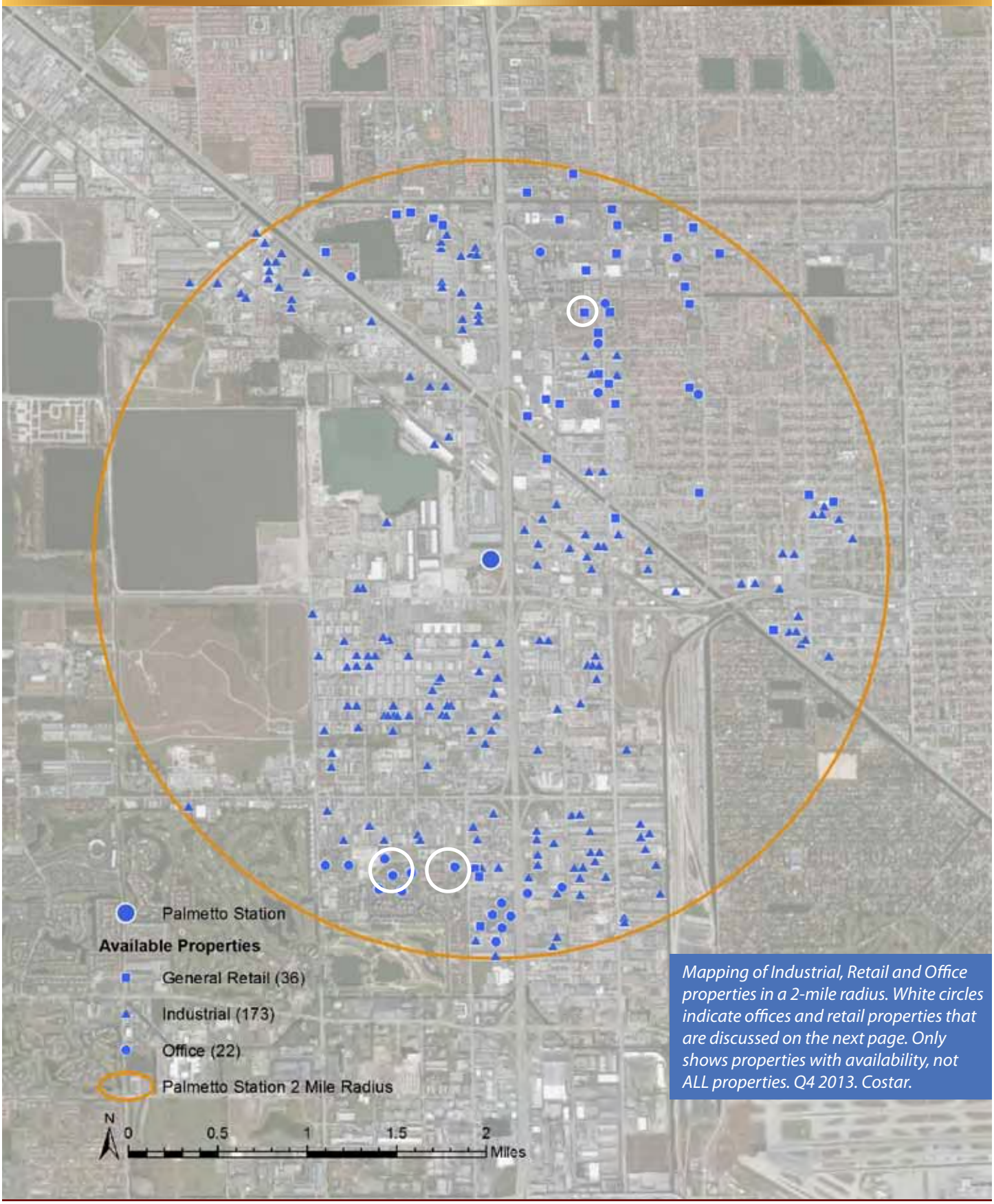
Consumer Behavior	Percent	2013 Population
Do not Own/Lease a Car	**25.0%**	**8,265**
Domestic Travel in last 12 months	30.5%	10,083
Went to Fast Food Restaurant (6 months)	84.2%	27,835
Went to Family Restaurant (6 months)	59.6%	19,703

Market Potential (Above National Average)	Percent Above Average
Apparel and Clothing	25.0%
Fine Jewelry	16.0%
Shopping at Convenience Stores	10.0%
Fast Food and Drive-in Restaurants	7.0%
Electronics (TVs, CDs, etc.)	40.0%

Above: Market Potential is based on nationwide index that measures the relative likelihood of the adults in the specified trade area to exhibit certain consumer behavior or purchasing patterns. ESRI, Dun & Bradstreet.



Above: 2010 Owner vs. Renter Occupied Households (total 11,255 HH). ESRI.



Mapping of Industrial, Retail and Office properties in a 2-mile radius. White circles indicate offices and retail properties that are discussed on the next page. Only shows properties with availability, not ALL properties. Q4 2013. Costar.

REAL ESTATE ANALYSIS - OUTLOOK AND PERFORMANCE

This section focuses on the real estate market specific to retail, office/commercial, industrial and logistics uses. The residential and hospitality markets have not been addressed since they may not be ideally suited for the type of site and TOD project being planned at Palmetto.

PROPERTY INVENTORY

The map on the left and table below shows all available properties* within a 2-mile radius from the station. In total, 36 retail and general retail, 22 office (Class A, B and C) and 173 industrial/logistics (Class A, B and C) type properties are available as of Q1 2014. Only 2 industrial and 6 office properties are classified as Class A. All remainder office and industrial facilities are Class B and C.

In terms of space inventory, retail has the least amount of vacancy/availability (215,706 SF). There is around 330,322 SF of office and 1.87 million SF of industrial space available. Both industrial and office properties have relatively high availability rates* (26.7% and 24.9% respectively). The data from Costar also shows that there is hardly any difference in vacancy rates between Class A, B and C properties. Lease and rent rates for offices are highest at $21.84/SF followed by retail at $18.73. Rents for industrial/logistics at $9.21 is the same as the larger area of Airport, Doral and Medley.

The availability of the retail properties are concentrated to north and east of Okeechobee Road whereas the office properties are generally located to the south and north of the station site along the freeway. The only available properties that are close to the site are industrial/warehousing properties. This goes to show that there is relatively less interest amongst office and retail investors to develop in the immediate vicinity of the station.

RETAIL (37 Properties)	**Rentable Building Area (SF)**	**Total Available Space (SF)**	**Average Weighted Rent**	**Total Availability***
SUB-TOTAL	1,865,603	215,706	$18.73	11.6%
OFFICE (22 Properties)	**Rentable Building Area**	**Total Available Space (SF)**	**Average Weighted Rent**	**Total Availability***
SUB-TOTAL	1,236,178	330,322	$21.84	26.7%
INDUSTRIAL/LOGISTICS (173 Properties)	**Rentable Building Area**	**Total Available Space (SF)**	**Average Weighted Rent**	**Total Availability***
SUB-TOTAL	7,525,799	1,876,166	$9.21	24.9%
TOTAL	**10,627,580**	**2,422,194**		

Above: Summary of property inventory within 2 miles of Palmetto station. Costar.
*Only shows available properties. Total Availability Rate is not the same as Vacancy Rate. Availability rate is the amount of space available to be leased and includes: vacant space, vacant space available for sublet, occupied space available for sublet and also includes space coming available from downsizing or departing tenants within the next quarter.

OFFICE (22 Properties)	Building Address	Building Class	Rentable Building Area	Total Available Space (SF)
Dawson	8240 NW 52nd Ter	A	112,726	40,381
Trenton Building	8300 NW 53rd St	A	91,512	37,290
8333 Downtown Doral	8333 NW 53rd St	A	150,000	33,635
7950 Professional Center	7950 NW 53rd St	A	68,742	22,280
Davenport	8200 NW 52nd Ter	A	79,000	13,478
Spokane	8350 NW 52nd Ter	A	92,815	13,447
Palmetto West Park	7791 NW 46th St	B	108,668	67,531
Hialeah Medical Plaza	3700-3750 W 16th Ave	B	41,891	22,876
Building F	7765-7769 NW 48th St	B	43,301	20,936
Celis Building	1275 W 47th Pl	B	63,634	14,000
Monterey Building	8410 NW 53rd Ter	B	35,282	6,289
Charleston	8600 NW 53rd Ter	B	36,633	5,676
Building B	7715-7719 NW 48th St	B	42,614	3,268
Building D	7735-7743 NW 48th St	B	28,384	1,680
5050 NW 74th Ave		B	9,505	1,400
4445 W 16th Ave		B	39,167	1,266
Building H	7785 NW 48th St	B	56,960	924
4160 W 16th Ave		B	25,000	824
8433 W Okeechobee Rd		C	6,500	6,500
Palmetto Doral Business	7655-7669 NW 50th St	C	9,488	5,000
Palm Springs Center	1840 W 49th St	C	70,506	4,558
3700 W 12th Ave		C	23,850	7,083
SUB-TOTAL			**1,236,178**	**330,322**

OFFICE PROPERTY WITHIN 2 MILES -
The table above lists all the available office properties within a radius of 2 miles. While there are 6 Class A offices, the majority of the are Class B. There seems to be little difference between vacancy rates for Class A vs. B.

Top Photo: Class A Offices on 8333 NW 53rd Street, Doral, FL

Bottom Photo: Class B Offices on 7791 NW 46th St, Doral, FL

RETAIL (37 Properties)	**Building Address**	**Rentable Building Area**	**Total Available Space (SF)**
Medley Plaza	8471 - 8601 NW South	9,955	9,200
8030 - 8050 NW 103rd St		93,361	7,000
7911 NW 72nd Ave		73,406	5,525
5006 - 5024 W 12th Ave		5,034	4,300
Poinciana Plaza	1230 - 1258 W 44th Pl	10,065	3,120
1545 W 49th St		23,191	2,340
Bella Vista Plaza	3960 W 16th Ave	68,400	2,000
1305 W 49th St		9,795	1,630
Hialeah Pharmacy	791 W 29th St	1,600	1,600
Rubio Plaza	692 W 29th St	7,754	1,575
3825 W 16th Ave		11,397	677
Flamingo Park Plaza	4410 W 16th Ave	149,041	25,049
Westland Promenade	3580 W 18th Ave	185,859	23,756
Hialeah Speedway Target	3665 - 3695 W 18th Ave	6,000	6,000
Westland Promenade	3505 - 3595 NW 20th	42,457	2,634
Westland Shopping Plaza	5301 W 20th Ave	60,000	23,720
Palm Springs Mile	1000 - 1170 W 49th St	69,200	14,745
NAPA Shopping Center	1598 W 37th St	59,600	10,500
Ready Shopping Center	3850 W 12th Ave	68,837	9,325
Westland Exec. Sq.	1575 W 49th St	14,400	5,300
Westland Plaza	5360 W 16th Ave	90,000	2,400
1579 - 1585 W 49th St		58,480	2,400
79 Shops	4701 NW 79th Ave	24,977	1,880
Coconut Square	4351 - 4399 W 16th Ave	28,760	1,500
Twin Towers	4516 - 4578 W 12th Ave	38,309	750
Westland Commons	1700 W 49th St	250,000	21,550
Westland Mall	1675 W 49th St	231,085	2,592
1815 - 1855 W Okeechobee		33,021	6,000
El Centro	8004 - 8018 NW 103rd	12,007	4,900
Los Pinos Plaza	4202 - 4246 W 16th Ave	17,124	2,550
8100 - 8196 NW 103rd St		17,714	2,200
Portofino Shopping Center	2900 W 12th Ave	30,423	2,100
Doral Shopping Plaza	5201 - 5237 NW 79th	11,784	1,600
10103-10119 W		6,887	1,400
8202 - 8280 NW 103rd St		30,000	1,138
Doral Shopping Center	7860 - 7890 NW 52nd	15,680	750
SUB-TOTAL		**1,865,603**	**215,706**

RETAIL PROPERTY WITHIN 2 MILES -
The table above lists all the available retail properties within a radius of 2 miles.

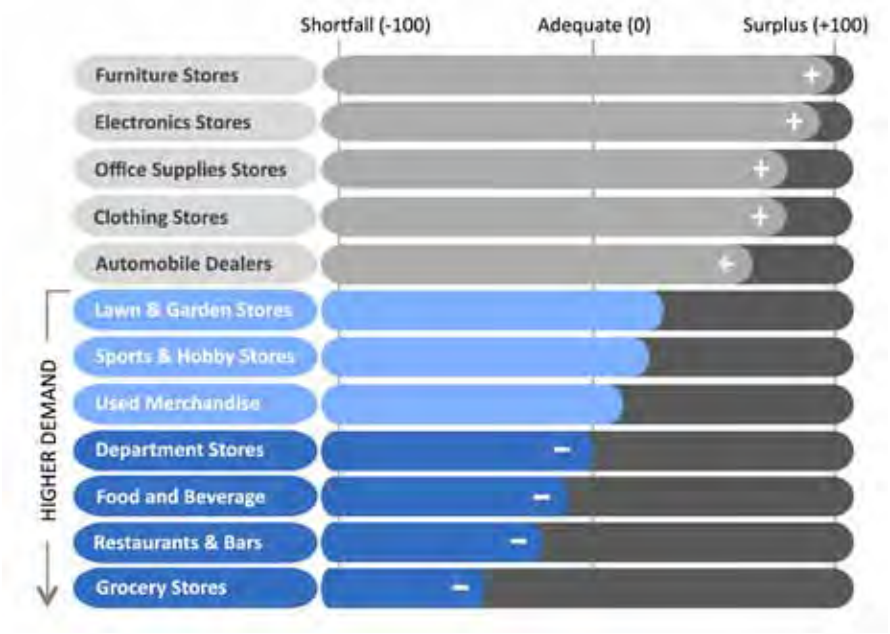
Photo: Flamingo Park Plaza retail center on 4410 W 16th Avenue, Hialeah, FL

RETAIL MARKET OUTLOOK

The retail market in the immediate vicinity of the Palmetto station and the area west of the Expressway is nearly non-existent and may provide an opening for the cautious investor. Larger areas of Doral, Medley and Miami-Dade County have seen a revival of the retail market since 2011-12 and there is no reason to believe that a small but successful retail model cannot be sustained at Palmetto.

Retail Market Gap – The data analysis reveals some clear market gaps in the form of **unmet consumer needs** in the area. There are few big box retailers and even fewer department stores, supermarkets and groceries. Residents tend to drive longer than average distances to shop for everyday articles. Other areas where there is a shortfall in supply are eating places, restaurants and bars. Data from *Dun & Bradstreet* further elaborate that despite having the desire and the means; the local residents are forced to travel further east and north to visit family restaurants and food/beverage establishments.

The supply and demand graph below highlights retail surpluses and shortfalls. It also identifies some key opportunity areas for development in the near future:



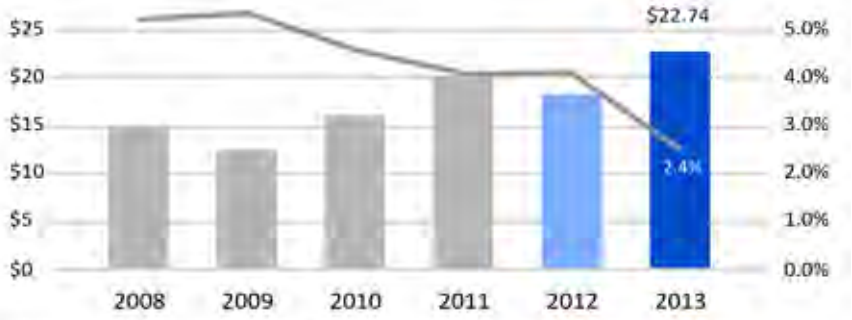
Above: The Retail Shortfall/Surplus or Supply/Demand Factor presents a snapshot of retail opportunity for the study area. This is a measure of the relationship between retail supply and demand that ranges from -100 (total shortfall) to +100 (total surplus). Typically, any category that falls below 0 (or adequate) is deemed to be in demand. ESRI, Dun & Bradstreet.

Historic Performance (Doral/Medley Area) – In terms of market performance, retail development in the Doral and Medley area have experienced mixed to good results in the past 5 years.

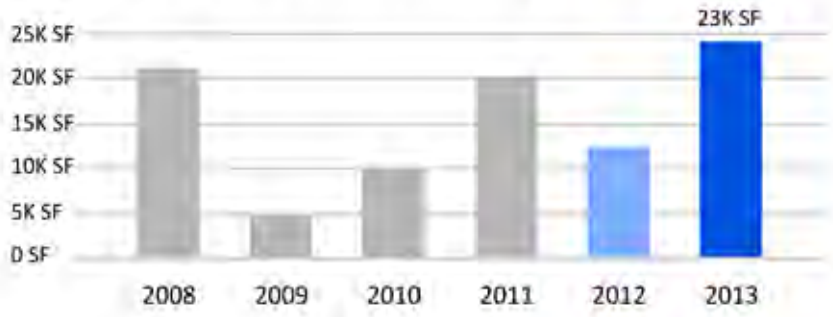
As of the 4th Quarter of 2013, **vacancy rates are down (2.4%), whereas average lease rates ($22.74), construction and absorption rates are all up**. These are all good sign for the retail market.

However, it should be noted that these numbers refer to a larger area of Doral/Medley and not specific to the immediate study area. Some of the site challenges for the Palmetto station would still need to be overcome in order for it to be attractive to retail investors. On the plus side, the site's proximity to Miami International Airport, a major economic driver, and a huge commercial/residential area could be seen as a strong positive especially with the potential of future intermodal/multimodal linkage.

Doral/Medley Retail Performance	**Q4 2013**
Total Building SF	1.72 Million
Direct Vacancy Rate	2.40%
Net Absorption 2013 (SF)	22,844
Under Construction (SF)	417,000
Average Lease Rate	$22.74



Above: Average Asking Lease Rate (bars) and Vacancy Rates (line) for Retail. CBRE.



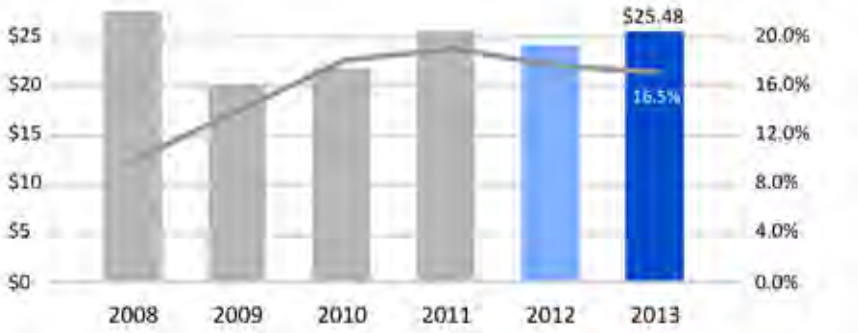
Above: Net Absorption Rate for Retail. CBRE Research. Doral/Medley shows that in 2013 a net positive total of 22,844 SF was successfully leased/rented. CBRE.

OFFICE AND COMMERCIAL MARKET OUTLOOK

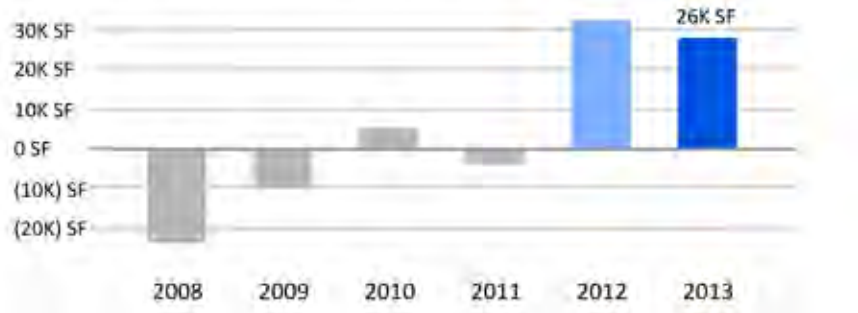
As a primary determinant of demand for office space, office employment increased year-over-year by 0.7% in Q4 2013. This is particularly important since office employment has declined for the last five years in the region.

Historic Performance (Doral/Medley/Airport Area) - The extensive office market around Miami Airport and Doral area has seen increase in **net absorption, increased construction and new inventory in 2013**. The general outlook is improving and very positive. At 16.5%, vacancy rates are lower compared to the area immediately close to the Palmetto station. Class A offices have seen increasing demand and have out-performed Class B and C in terms of net absorption.

Doral/Medley/Airport Office Performance	**Q4 2013**
Total Building SF	9.80 Million
Direct Vacancy Rate	16.50%
Net Absorption 2013 (SF)	26,130
Under Construction (SF)	80,000
Average Lease Rate	$25.48



Above: Average Asking Lease Rate (bars) and Vacancy Rates (line) for Retail. CBRE.



Above: Net Absorption Rate for Retail. CBRE Research. Doral/Medley/Airport shows that in 2013 a net positive total of 26,130 SF was successfully leased/rented. CBRE.

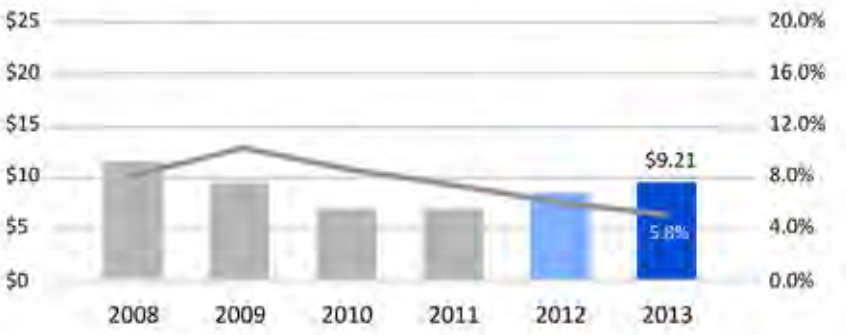
INDUSTRIAL AND LOGISTICS MARKET OUTLOOK

Industrial product continues to be the most valuable and mainstay commodity in the Medley, Doral and Airport areas. Vacancy is expected to continue to decline as current tenants expand and new tenants enter the market. Numerous large tenants will be taking occupancy in the coming quarters, further reducing absorption.

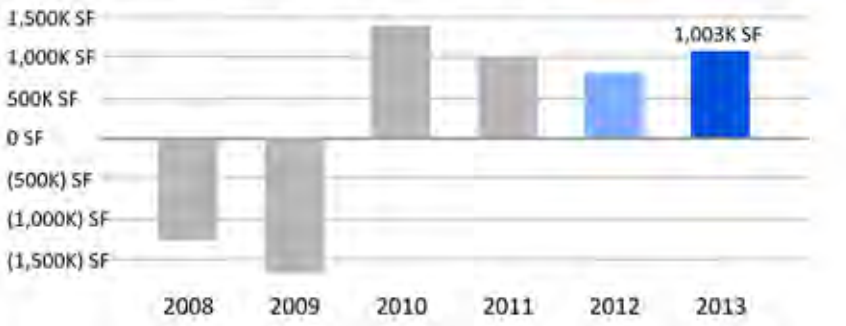
While Medley industrial sector is performing fairly well, the immediate area is overbuilt with high availability of Class A, B & C space. Industrial/logistics space, thereby, may not be currently ideal for Palmetto due to the said redundancy factors. Furthermore, prospective office/retail tenants at the proposed Palmetto project may be averse to industrial use within the development.

Historic Performance (Doral/Medley Area):

Doral/Medley/Airport Industrial/Logistics Performance	**Q4 2013**
Total Building SF	55.48 Million
Direct Vacancy Rate	5.80%
Net Absorption 2013 (SF)	1,003,300
Under Construction (SF)	413,903
Average Lease Rate	$9.21



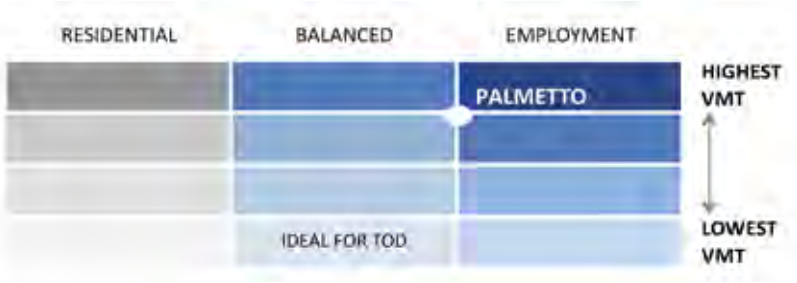
Above: Average Asking Lease Rate (bars) and Vacancy Rates (line) for Retail. CBRE.



Above: Net Absorption Rate for Retail. CBRE Research. Doral/Medley/Airport shows that in 2013 a net positive total of 1 million SF was successfully leased/rented. CBRE.

GENERAL ASSESSMENT AND RECOMMENDATIONS

PALMETTO STATION TOD TYPOLOGY



The **Performance-Based TOD Typology** is a planning tool that has been developed by the **Center for Transit-Oriented Development**. The typology creates distinct place types by identifying the number of miles the typical household within each transit zone will travel in a year and whether the area is primarily residential, employment, or a balance of the two. Understanding where an individual transit zone sits in this spectrum, or how all of the transit zones in a region compare to one another can make it easier for stakeholders to identify strategies to **reduce VMT or to take advantage of existing low VMT places**.

Based on this tool and the current assessment of the local area around the Palmetto Metrorail station, it is fair to say that the Palmetto project would be classified as a **High Vehicle Miles Traveled and High Employment Place** (see diagram above).

Implications – The immediate implication of the High VMT classification for the stakeholders is to consider a reduction of vehicle use in the area. While this may be easier said than done, there are some measures that could be implemented gradually over time and within the realm of the Palmetto TOD project scope. These **'planning prerequisites'** are also themes that need to be addressed at the city and community level. Below are some examples:

A Successful Transit Oriented Development at Palmetto - Some Prerequisities
1. Coordinate with city and community planners to develop a local master plan if one does not exist already
2. Develop clear and safe pedestrian and bicycle routes/pathways that connect the Palmetto Station to residential areas, public places, retail and business establishments
3. Involve local government, community and business leaders on a regular basis
4. Implement public-oriented planning and design ideas at the Palmetto Station that are appealing to residents and local business employees

RECOMMENDATIONS

The following recommendations, development footprint and optimal use proposals are an independent and unbiased assessment based simply on the market conditions presented in this report.

1. **Primary goal for stakeholders is to attract tenants by leveraging the transit rider market and bringing in a new customer base from local employment and residential areas.**
2. Palmetto TOD must be planned in concert with local community by addressing issues such as area master plan, pedestrian, public infrastructure, transit ridership and by involving **community, business and local government leaders**. It is key that the TOD project has a positive impact on the local area/community.
3. It is critical the **local developers and real estate investors are consulted** before development footprint/program is finalized.
4. It is also important to develop **architecturally significant building(s) and an intermodal/multimodal station** that has the ability to become a local landmark. Retail and Office tenants will like to be associated with buildings that stand out.
5. Opting for a **phased and incremental development** starting cautiously in Phase 1 and gaining momentum based on market absorption are approaches the stakeholders need to consider.

Development Footprint – While the proposed program presented below is contingent upon detailed market research, it does take into consideration **all known upcoming retail/office projects** in the area. The initial market analysis presented herein indicates that between 2015 and 2020 (phase 1), the market shows potential to absorb up to **55,000 SF of retail and 35,000 SF of Class A office space**. Contingent on Phase 1 performance, stakeholders could plan another **40,000 SF of retail and 35,000 SF of Class A&B office space** in Phase 2 (2020 and beyond). In summary, the program feasible at this site is a **90,000 SF development in Phase 1 (2015-20) and 75,000 SF built-up area in Phase 2 (2020-25)**. The table below presents the program and phasing approach:

PROPOSED PROGRAM	PHASE 1 (2015-2020)	PHASE 2 (2020-2025)
Infrastructure Upgrade		
Retail Development	55,000 SF	40,000 SF
Shops/Restaurants/Bars	20,000 SF	20,000 SF
Shops and Stores	35,000 SF	20,000 SF
Office Development	35,000 SF	35,000 SF
Class A Offices	35,000 SF	20,000 SF
Class B Offices		15K SF
PHASE TOTAL	90,000 SF	75,000 SF

ADDITIONAL DEVELOPMENT AND IMPLEMENTATION IDEAS

Public Spaces and Amenities

A. The development should appeal to Metrorail riders, residents and people employed at local businesses. Users should be encouraged to **stay and use the amenities** rather than just transitioning through.

B. Stakeholders should plan public-oriented facilities at the station that are thoughtfully designed with adequate amenities (**plazas, food courts with restrooms, entertainment areas**).

C. As listed under the planning prerequisites, pedestrian, bicycle pathways, public plazas should be interconnected with transit areas and retail areas. These linkages should eventually be extended to nearby residential and commercial hotspots.

Retail Space

A. Based on the market gap mentioned earlier, provision for **convenience store, grocery and departmental store** type function could help attract the public on a regular basis.

B. Explore possibility of **family and dine-in restaurants** within the development in addition to a food court.

C. Plan on contracting a few **anchor tenants** (typically larger commercial establishments/department stores and retailers).

Managing and Marketing the Development – Office and Retail

A. Fully leverage the station's ridership and accessibility factors to attract prospective tenants.

B. Offer **negotiable lease terms and structures**, including options for early termination. Alternatives may include 3-year, 5-year or longer terms based on negotiated rent structure.

C. Depending on market situation, offer **short-term leases to attract tenants** and provide them the option to switch later to long-term lease at a reasonable, lower than market rent.

D. Provide the option of **'build-to-suit'** leases for tenants with long-term leases. Add option for ownership (if possible) at term end.

E. Depending on demand, provide attractive **moving allowances**, which may include free initial monthly rent and/or free parking.

F. Have provisions to **support future growth** for tenant. Contiguous space is an ideal solution but have other options where spaces can be easily connected and accessed by user.

G. Provide options to cover tenant costs for interior and exterior **building signage**. Provide free or cost effective marketing tools for tenants.

CONCEPTUAL APPROACH AND PROGRAMMING

To proceed with the development of three (3) conceptual approaches for the development and construction of the intermodal facility, the study intent focused on six (6) key approach objectives. These approaches considered:

- All site developments necessary at ground level
- Construction of multi-level / multi-floor buildings attached or adjacent to the existing Metrorail terminal
- Direct connection ramp(s) for access to and from the Palmetto Expressway (SR 826)
- Connectivity and integration of new development with existing transportation services
- Incorporation of commercial and commuter services along with other complimentary retail uses
- Provision of parking spaces to replace the existing parking spaces and provide for future use expansion(s)

With MDT's insight and rather than focus solely on the existing Palmetto Station site, the study design team agreed to tackle the options utilizing both the existing site for the initial phase(s), and then with the addition of the MDT Expansion site for the final phases contemplated. This potential addition site was identified early on in the study by MDT, with initial funding now secured though FDOT for future acquisition. This site lies directly south of the Palmetto Station, and the configuration is depicted below.

This is an 11.33 acre site also located in the jurisdiction of the Town of Medley. While it offers some potential development advantages when considered in conjunction with the existing Palmetto Station site, there are also other characteristics and limitations that were recognized during the study;

- Advantage of another site access location in closer proximity to the SR826/74th Street interchange (but could have turning movement restrictions).
- Vehicular cross-access to existing Palmetto Station site not likely due to Metrorail line limitations.
- Best potential for additional/expansion 'Park & Ride' parking lot expansion at this location.
- Additional area to accommodate a direct Palmetto Expressway access via future RMLN ramp to HEFT lanes.

For the development of the Preliminary Alternative Concepts this site was included in three (3) of the four (4) studies.

Task Execution

Considering the current economic climate of uncertainty and potential limited stability, the conceptual development studies were given comprehensive thought, particularly essential as the program was leading to a large-scale capital project, with multi-year phasing expected. The potential impact on the existing built private properties surrounding it, as well as the local economy in Medley and the adjacent communities, was carefully analyzed using the real estate and market analysis data generated in the previous section. This investigation drove the programming as each alternative was explored, so that the approach was useful, organized and prioritized to best suit the ultimate project goals and objectives. The ideal project program evolved and became evident through this stage of the study, and was clearly understood and supported by each of SAC members.

The study design team in consultation with the ultimate user's representatives, and other 'problem solving specialists', worked together with the SAC to define the goals, identify the special constraints, and establish the requirements of the project. An interactive analysis process was used to focus the effort so that all relevant information was considered and critical issues were addressed. The results were a consensus-based decision, based on a comprehensive analysis, which was formulated on a thorough determination of the minimum program requirements, as well as a potential broader program to enhance the market potential for such an intermodal site.

The overall work in this phase of the study was conducted in 3 generalized steps as described in the sections that follow.

STEP 1: BASIS OF PROGRAMMING (OPERATIONAL ANALYSIS AND SPACE PLANNING)

The basis of programming and design established the feasible development program for a facility of this type, and was confirmed in coordination with the real estate and market analysis work. An initial project development program provided for near-term development of a proposed 'Phase 1', to be followed by later full build-out for future needs associated with the serving transit systems growing ridership projections. Involvement of the key operational representatives was critical and included the following criteria:

- Articulation of the facility vision, goals and supporting potential uses.
- Definition of space needs and functional requirements that the site must support.
- Development of space standards that are driven by existing people metrics and their functional needs.
- Calculation of optimum area requirements per function for each use.
- Confirmation of the optimized relationship between each use.
- Design criteria 'minimums' for development of the conceptual architectural & site plans, as well as future design work for the new intermodal terminal beyond / following this study.

The original program for the new Palmetto Station intermodal downtown terminal as provided by MDT included:

MDT Palmetto Intermodal Terminal/ Park-and-Ride Requirements

Property located along NW 74th Street and the Palmetto Expressway (SR 826), and adjacent to the Palmetto Metrorail Station, is in a strategic location for an intermodal transit terminal with a park-and-ride facility. SR 826 is proposed to have Express Lanes with Express Bus Service, which would support the Regional Managed Lanes Network (RMLN).

This transit terminal would support a future SR 826 Express Bus Service project as well as other potential Express Bus routes. This terminal also connects the largest employment areas in the county. It will also connect to the Miami Intermodal Center, a major intermodal transportation hub.

Requirements:

- Reserve on-site space for future direct full access ramps connecting the SR 826 managed lanes to the park-and-ride/transit terminal. Direct access ramps would be open for both buses and automobiles.
- Provide illuminated gateway features and illuminated monument signs at all entrances
- Maintain and improve local street access
- Provide "available parking spaces sign" along with vehicle detection equipment that keeps a running count of the vehicles entering and exiting the parking facility
- Provide sidewalks and bicycle lanes that connect to adjacent sidewalks and bicycle lanes
- Separate access for automobiles and buses to avoid mixing of automobile and bus traffic
- Provide at least 12 articulated shallow sawtooth bus bays (concrete pavement)
- Provide 6 layover bus bays
- Include a comfort station (break lounge) at the transit hub
- Provide a transit hub with passenger waiting areas, ticket vending machines and retail component
- Provide a minimum of 1,000 long-term parking spaces (including ADA, stroller, and carpool/vanpool preferential parking) (similar to GG; unless modeling shows a need for more)
- Provide additional short-term parking spaces (2-5% of long-term) at a 45 degree angle adjacent to drop off and pick up areas
- Provide kiss-and-ride/drop-off/pick-up area
- Provide continuous covered walkways connecting the transit hub to bus waiting areas
- Provide real-time bus arrival information at each bus bay
- Provide designated parking area for persons transporting young children and strollers
- Provide designated parking areas for bicycles and motorcycles (racks and lockers) (provide approximately 5% of automobile parking spaces per current MDC ordinance update being by Regulatory and Economic Resources (RER) Department
- Provide a designated parking area to accommodate carpools and vanpools (for 3 passengers or more) near the ADA parking area
- Provide electric vehicle charging stations
- Identify space and location to support potential bikesharing programs
- The layout of parking areas in regard to closeness to a transfer terminal should be given in order of 1) bicycle parking, 2) accessible parking, 3) stroller parking, 4) motorcycle parking 5) carpool and vanpool parking, 6) Kiss-and-Ride, passenger drop off and pick up areas, 7) short-term parking, and 8) long-term parking

MDT Palmetto Intermodal Terminal/ Park-and-Ride Requirements

- The maximum reasonable walking distance is 1,000 feet. Longer walking distances may necessitate consideration of additional loading zones (could be longer if site has retail uses)
- Large parking lots should be subdivided into sections to reduce the scale, walkways and landscaping may be used for this purpose. However, vehicular movement from each section to the next shall not be restricted
- Indicate number of parking spaces in each parking area
- Generally, no more than 30 spaces should be provided without raised islands at end of rows (a cross aisle to move to exits or other parking spaces or to bypass disabled vehicles)
- Provide guide signs along SR 826 and HEFT as well as trailblazer/wayfinding signs along arterial and local street network
- Motorcycle spaces shall be four feet wide by eight feet long. Where exposed to sunlight, the paving for motorcycle spaces shall be concrete
- Ninety degree parking is preferred and should be used wherever possible
- Parking spaces shall be a minimum of 9 feet by 20 feet minimum, two-way driving aisles 24 feet wide
- All parking areas shall be designed to permit ease of maintenance
- Dead end lanes should be avoided even if this results in fewer spaces being provided
- Because of budget constraints and potential increase in demand, the proposed parking area should be designed to accommodate parking garages in the future to meet 2040 potential parking demand. As demand continues to grow the surface lots can be converted into parking garages with retail components
- Kiss-and-ride area shall be oriented to the direction of travel to enhance maneuvering and to provide safe and direct access for patrons to the covered pedestrian waiting area
- Bus lanes shall be a minimum of 20 feet wide to allow buses in motion to pass stopped buses
- Minimum turning radii shall be 50 feet outside dimension with 3.1 feet allowance for the front overhang of buses
- All bus areas must be concrete pavement, no asphalt pavement
- Provide a continuous landscaped buffer that includes a continuous hedge and trees consisting of Florida native landscaping appropriate for planting along property lines
- Provide proper levels of illumination throughout the site including passenger waiting areas, covered walkway and parking areas to improve safety and security
- Provide ornamental fencing on the perimeter and in other on-site areas as needed to channel or restrict entry or exit of people, vehicles or equipment.
- Provide direct differentiated pedestrian paths with no level changes throughout

The final facility program was refined through the SAC process, enlarging it somewhat to accommodate additional program elements that were considered integral to an intermodal terminal by the team. This formed the basis of the Site Development Concept Alternatives prepared in the following task, and led to the final selected Scheme, which was designed to meet these program requirements. The chart below captures that program.

INITIAL DEVELOPMENT PROGRAM

Minimum Transit Needs:

- Provide at least 12 articulated shallow saw-tooth style bus bays (in concrete pavement)
- Provide 6 layover bus bays
- Include separate access and circulation routes for busses and automobiles
- Bus lanes shall be a minimum of 20 feet wide to allow buses in motion to pass those in stopped positions
- Include a comfort station (MDT employee break lounge) at the transit hub
- Implement a 'transit hub' design with passenger waiting areas, ticket vending machines and retail support uses
- Provide continuous covered walkways connecting the transit hub to bus waiting areas
- Bus routes should have minimum turning radii of 50 foot outside and 3.1 feet allowance for bus front overhang

Site Improvements:

- Provide a minimum of 1,000 long-term parking spaces
- Provide additional short-term parking spaces (2-5% of long-term) adjacent to drop off and pick up areas
- Ninety degree parking is preferred and should be used wherever possible
- Parking spaces shall be a minimum of 9 feet by 20 feet minimum with two-way drive aisles 24 feet wide
- Include a separate 'Kiss-and-Ride' drop-off/pick-up area
- Kiss-and-ride area shall be oriented to the direction of travel
- Reserve on-site space for future direct full access ramp(s) connecting the SR 826
- Direct access ramps would be open for both buses and automobiles
- Maintain and improve local street access; provide alternate location(s) if possible
- Provide on-site sidewalks and bicycle lanes that connect to adjacent sidewalks and bicycle lanes
- Provide designated parking areas for bicycles and motorcycles
- Motorcycle spaces shall be four feet wide by eight feet long and paving shall be concrete
- Identify space and location to support potential bike-sharing programs
- Provide electric vehicle charging stations
- Ensure the maximum reasonable walking distance is 1,000 feet
- Provide a continuous landscaped buffer consisting of Florida native landscaping
- Provide ornamental fencing on the perimeter
- Include fencing in other circulation areas as needed to channel/restrict access of people/vehicles/equipment
- Provide direct differentiated pedestrian paths with no level changes throughout

STEP 2: ARCHITECTURAL STUDIES

Utilizing the outcome of the Programming (Step 1) as a 'Preliminary Basis for Design', the study progressed towards the development and refinement of an initial preliminary facility spatial program to allocate minimum building square footages, circulation, and relationship/adjacency criteria in alternative plans and conceptual illustrations format. Massing layouts to confirm simple facility functions were prepared for use in site planning. These diagrams were produced at scale, and typically included information to address orientation of the facilities, as well as the necessary access and circulation relationships to the site. These were reviewed and approved by MPO for use in the subsequent planning and facility design process.

Facility Design Issues: Intermodal facilities require a unique design response due to the high number of patrons, transfers between modes and the participation of multiple stakeholders. In addition to accommodating the needs of transit riders, the primary design goal for any transit improvement project should be the enhancement of the image of public transportation within the community. A positive community image will result in the enhancement of ridership potential through facilities that provide passenger comfort, safety and convenience in an easily understood environment. The creation of a positive experience for the passenger requires effectively integrating the functional elements of the system, site specific context and a "transit friendliness factor" for the facility. The primary issues with regards to design for the passengers include:

- Passenger Mode Transfers
- Passenger Security
- Passenger Safety
- Passenger Comfort
- Maintenance and Vandalism
- Accessibility
- Employee Security
- Code and Standards Compliance
- Wayfinding / Pedestrian Linkage

The facility must also be designed in response to the context of the environment both within the architectural and urban design framework. In other words it must "fit into" the context of this western Miami-Dade area and present an image that the community and visitors will relate to. Massing, scale, materials, signage and amenities must take their clues from the surrounding environment and history of the area. While these components can be incorporated into a design that preserves the history and character of area, the design can also incorporate contemporary materials and forms resulting in a new 'landmark' facility standard for the area.

Based on the above process Jacobs will prepare 'Preliminary Conceptual Design' alternatives for the facilities on the preferred massing diagram, in conjunction with the site planning effort described below. They shall be based on the approved Preliminary Basis for Design, and will be refined to respond to the specific site conditions such as the probable building location, site circulation, environmental criteria and local zoning regulations.

The other significant group of factors that were considered in the facility design directly related to '*Intermodal Hubs'*, can be summarized as follows:

Characteristics that define them are as follows:

- Exhibits high forecast boardings and alightings within the future 2035 transit network;
- An area surrounded by higher density mixed use developments including active commercial areas, and has allowance for transit oriented development (TOD) in the local Future Land Use Plan; and
- Provide connections for at least one or more high capacity (fixed guideway) transit lines.

Strategies for intermodal Hubs include:

- Enclosed shelters for travelers;
- Real-time passenger information systems;
- Unique architecture and signage;
- Surface or structured parking as appropriate;
- Integration with surrounding development;
- Pedestrian linkage improvements with a half-mile radius;
- Bicycle linkage improvements within a two-mile radius;
- Restrooms and community spaces as appropriate;
- Public art;
- Access priority to bike/pedestrian and transit patrons over other modes;
- Secure and weather protected waiting areas;
- Accommodations for potential bike share/car share programs;
- Pre-board ticketing options and Jitney/Taxi bays.

STEP 3: SITE PLAN DEVELOPMENT

Completing this stage of the study, the conceptual alternative site layouts were developed to explore the maximum build-out potential, establishing the appropriate use relationships, and connectivity patterns for efficient site function. The plans assumed alternative scenarios that included the private property acquisition as identified by MDT, for facility placement on the existing site to accommodate expansion even if it was not possible to define the exact time-frame for the longer-term development phase(s). After an understanding of site-specific existing conditions was achieved for the potential expansion parcel, a series of development options were created and applied indicating placement of facilities, with links to interior and exterior transit functions (and other adjacent contextual uses) designed as needed. These development options considered the most logical alternatives for the arrangement of facilities and functions, all three meeting the minimum program requirements, but strategically addressing different schedule and phasing scenarios. Specific issues that were addressed during the site development planning stage include:

- Utilization of shared facilities for transit operations, passenger ticketing/waiting, support space and parking
- Efficiency of bus operations/movements and berthing
- Integration of fixed route bus operations with safe access from other modes including intercity bus, pedestrian, bicycle and private vehicle drop-off
- Development of a realistic phasing plan for terminal and parking expansion that will not disrupt operations in the future.
- Identification and promotion of retail and joint development opportunities
- Pedestrian and circulator linkages to nearby destinations and activity nodes
- Business/Neighborhood impacts and with regard to traffic, noise and vibration, visual intrusion and aesthetics.
- Confirming Zoning approvals by the County and/or adjacent Cities (Medley) and integration with future land use plans.
- Coordination with governing agencies regulations with jurisdiction including Accessibility Standards, (ADAAG/TAS)

At the completion of these 3 phases of the Conceptual Approach the SAC met to review a presentation of the process, discussed the evolution of the design scenarios, and how we arrived at the final 3 alternatives. These were then be carried forward through the subsequent evaluation process, leading to a preferred alternative and development of the preferred final conceptual design as outlined in Task 7 that follows.

The Concept Alternatives that were developed and reviewed during this task are provided on the following pages. Each also includes the Proposed Development Program Phasing and Program Objectives provided for that design. All share common components that were 'base line' criteria established by the MDT requirements. In particular, MDT operations and facilities remain on the ground floor at the existing Palmetto Station, as well as the associated access and circulation needs of bike and pedestrian users. The mixed-use, multi-floor logical development opportunities above the terminal operations were supported by the Preliminary Economic & Market Analysis. The overall development patterns facilitate connectivity of existing transportation/transit infrastructure through public open space and 'green' space integration. And lastly, provisions for separated private vehicle (including taxi, jitney and public parking) circulation from transit activity and circulation was considered a 'benchmark' with the existing terminal demand for continued operation during development.

01 MPO PALMETTO STATION INTERMODAL TERMINAL-ALTERNATE 1

SCALE: 1"=100'

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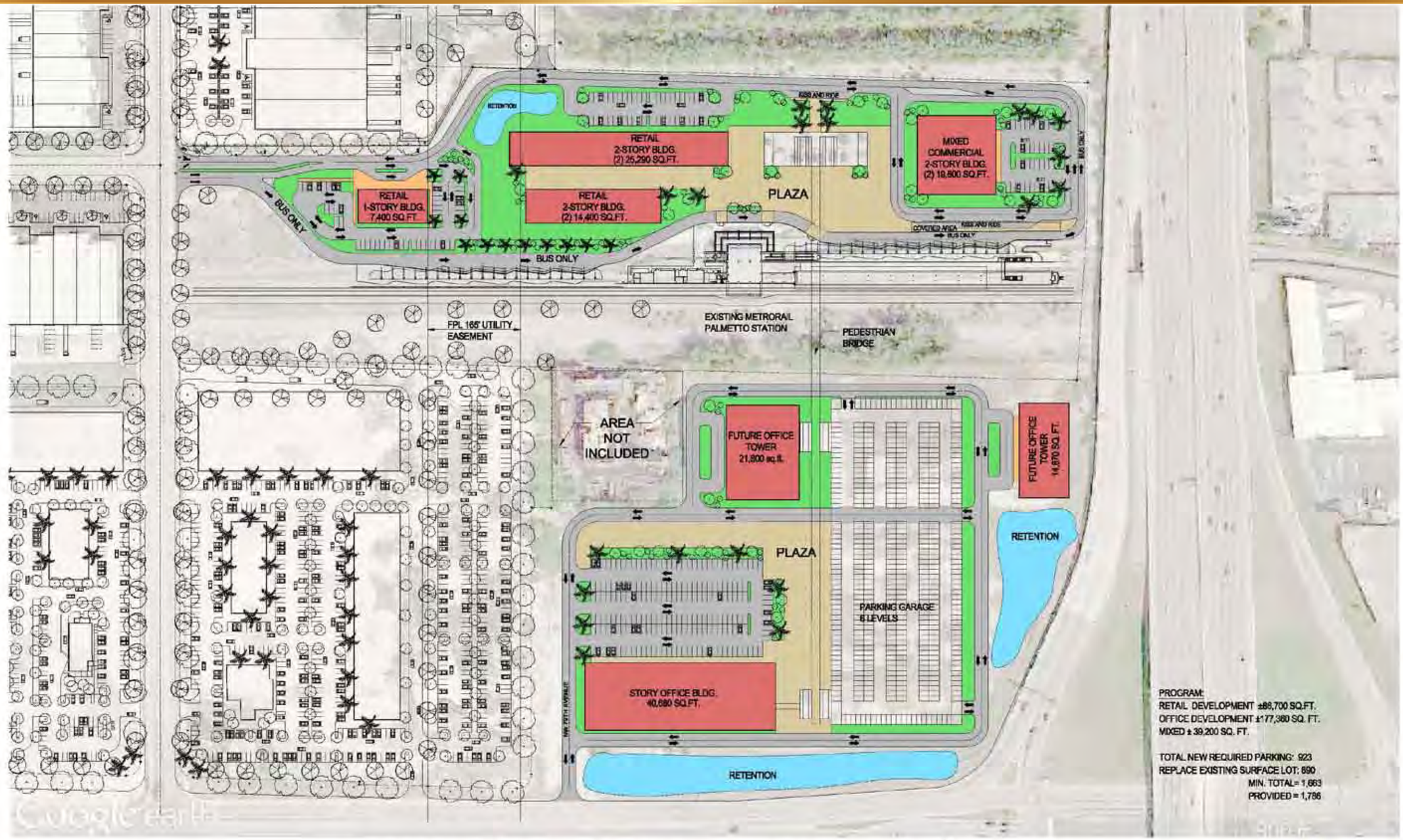
JACOBS

07.10.2014



01 MPO PALMETTO STATION INTERMODAL TERMINAL-ALTERNATE 2
SCALE: 1"=150'

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07.10.2014

01 MPO PALMETTO STATION INTERMODAL TERMINAL-ALTERNATE 2-B
SCALE: 1"=150'

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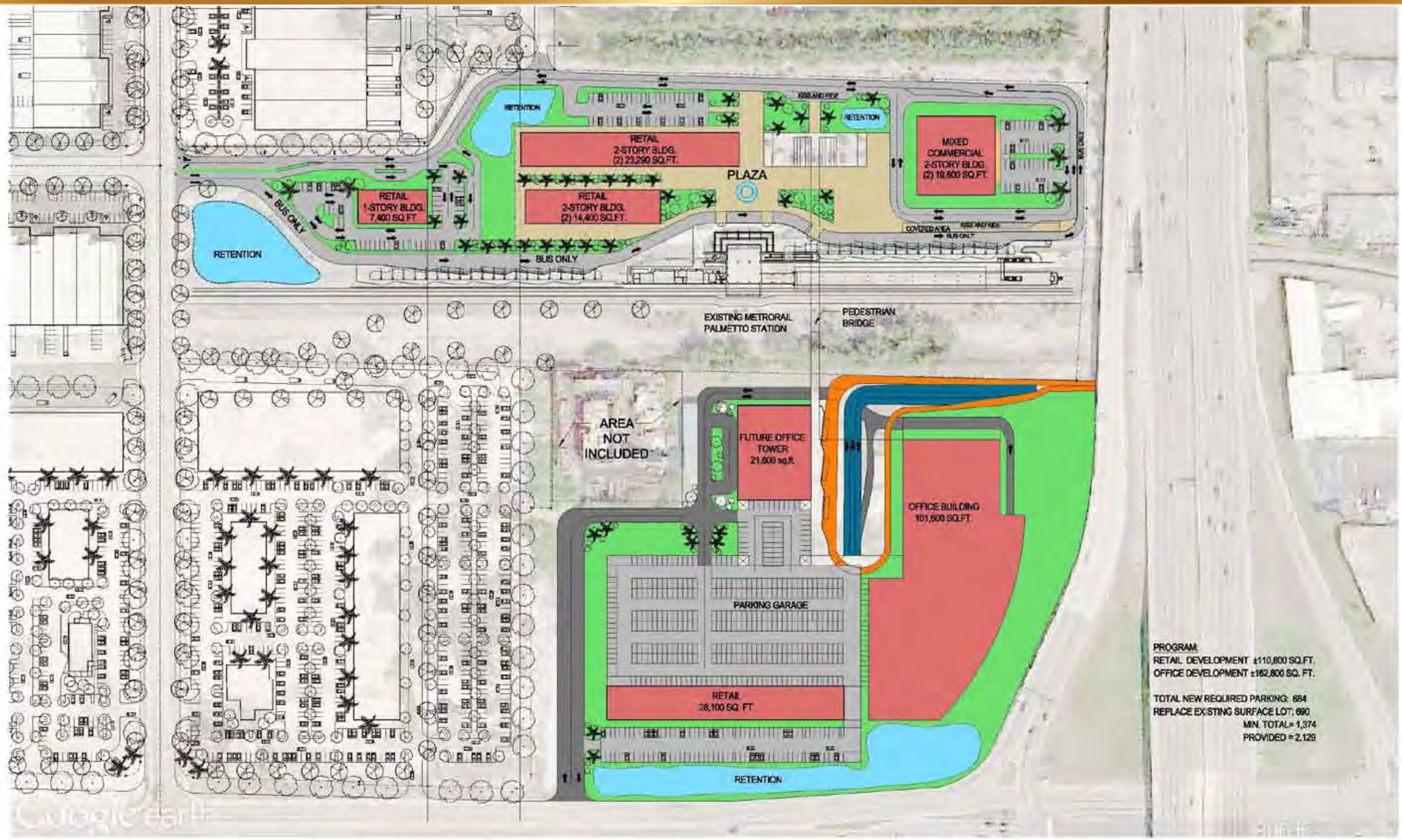
07.10.2014



01 MPO PALMETTO STATION INTERMODAL TERMINAL-ALTERNATE 3

SCALE: 1"=150'

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07.10.2014

EVALUATION AND FINAL SITE DEVELOPMENT CONFIGURATION

As the conceptual design alternatives of the proposed facility were developed, the minimum conceptual design factors that were included for evaluation purposes fall into the general categories and are listed as follows, but were not necessarily limited to:

- **Roadways** - Access to the intermodal terminal, roadway improvements necessary to alleviate traffic congestion, and the traffic circulation plan.
- **Transit** - Transit service changes to accommodate MDT and BCT routes, parking/layover for buses, passenger waiting areas and a transit circulation plan.
- **Facility** – Type(s), connectivity and accessibility to Metrorail, parking garage, commercial and retail space, office space, recreational space, common grounds, 'Kiss and Ride' and loading area(s).
- **Amenities** - Passenger information, restrooms, telephones, Internet access, etc.
- **Other Transportation Modes** - Areas for taxis and jitneys, benches and shelters.
- **Non-Motorized** - Bicycle and pedestrian accessibility, bicycle racks and lockers, sidewalks, pedestrian crossings or bridge, Bicycle/Pedestrian circulation plan.
- **Miscellaneous** - Economic impact to the adjacent area, aesthetic design, landscaping, ADA compliance, lighting, safety and security, technology, signage, advertisement & marketing.

Task Execution

After a preferred architectural program and alternative site configurations were developed and finalized through the work in the Conceptual Approach task, the study proceeded next with a logical evaluation process leading to the development of a Final Site Development Configuration package. This process allowed for the evaluation of the multiple site criteria/features against those identified and outlined in Conceptual Approach, but additionally include new potential significant evaluation criteria identified by MDT during the stage. These were unique to this site, including both the existing and expansion parcels, which were not evident at project commencement, and were utilized as applicable and appropriate for evaluation purposes.

This final site development concept and the feature options were presented to the MPO and SAC in meeting / work session No. 5 to receive feedback and modify the plans accordingly for ultimate feasibility evaluation. This phase included illustrative drawings and plan graphic models depicting the ultimate 'build-out' of the Multi-modal (Intermodal) Facility, the relationship to adjacent transportation and transit modes, circulation, infrastructure, parking elements, site amenities, mixed-use and all other listed elements. The plans also addressed the parameters for a phased implementation, surrounding community interface, pertinent regulations, and strategies to develop the property balanced with projected operations and funding priorities. Using a sustainable and innovative approach for site evaluations Jacobs developed, the MPO & SAC prioritized evaluation & selection criteria that comprehensively addressed the physical, human and business environments.

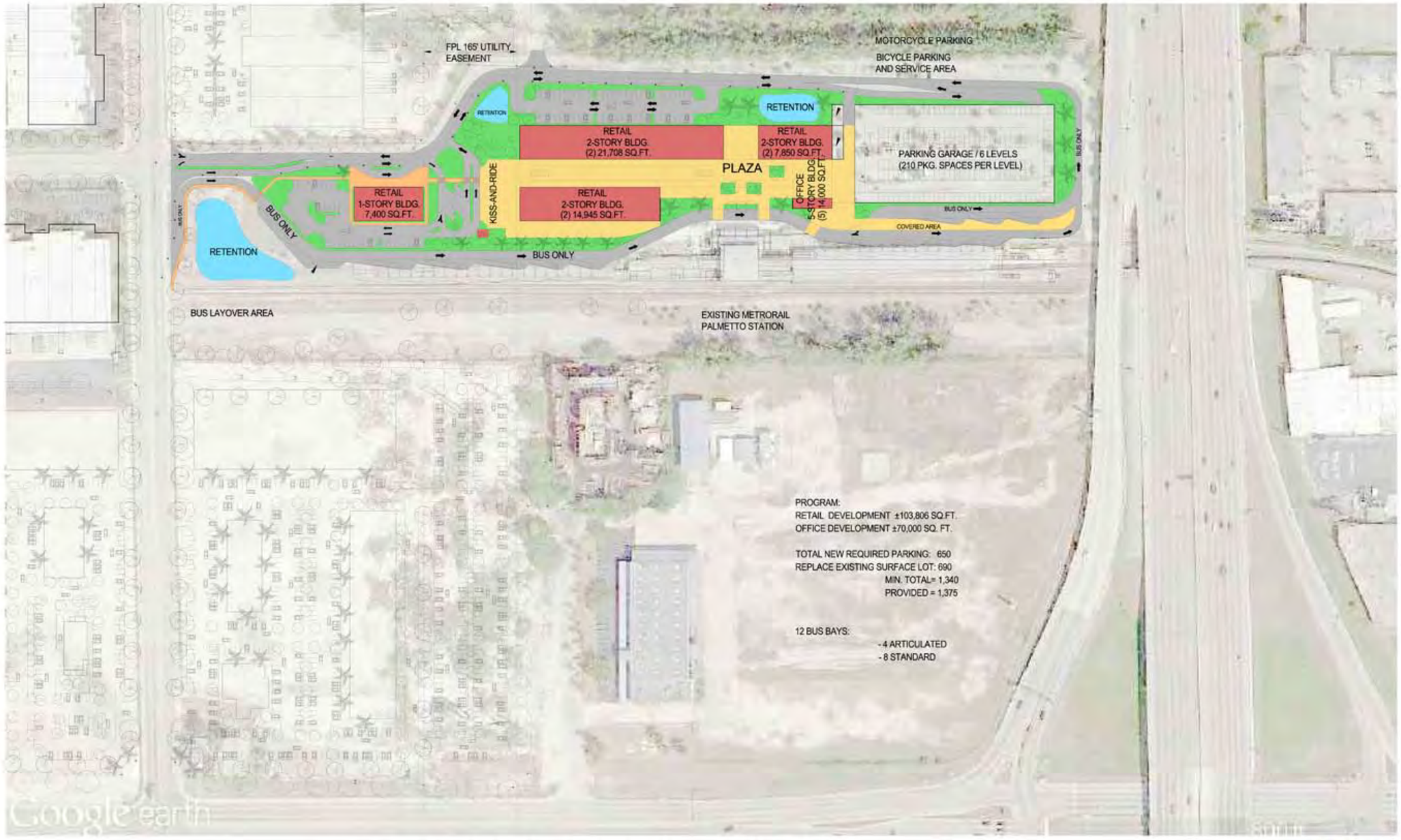
The detailed site evaluation for this project considered the following selection criteria steps, but was adapted and refined as approved during the work under this task jointly with the MPO & SAC for specific applicability to the final concept:

1. Identify the 'best' site concept selection criteria applicable to this study
   - Efficient utilization of the property to meet the preferred program requirements
   - Location based criteria including minimum distance or maximum distance from other operations, public services, roads, or other development, etc.
   - Characteristics of aesthetics including use associations/conflicts, visual buffers, natural conditions that affect construction can be easily addressed
   - All transportation and transit related movements are accommodated
   - Environmental constraints are respected
   - Security and safety concerns are addressed
   - Utility and infrastructure requirements could be realistically planned to meet development demands
2. Determine effectiveness in meeting the Development Program
   - Size, number, and types of buildings is logical for the program
   - Parking requirements are met, through all phases
   - Security requirements including requirements for access security, standoffs and setbacks, etc.
   - Flexibility/adaptability to changing economic conditions & transit plans
3. Determine suitability, pros and cons, significant constraints for each use component
4. Evaluate site via SAC consensus (of above criteria) to confirm 'preferred final conceptual site design'

FINAL SITE DEVELOPMENT CONFIGURATION

Based upon the conclusions of the evaluation process for the conceptual options, Jacobs then worked closely with the MPO to refine the final conceptual design for the proposed facility. An important component of any successful transit-oriented project is a careful and targeted market and demographic analysis to determine the volume, type and behaviors of the potential users to accurately identify viable potential uses. This should be supported by an economic analysis of potential revenue, as part of an approach for redevelopment projects in urban areas to ensure an energized, vibrant and activated pedestrian development. This is why the work under Task 5 (Market Analysis), and Task 8 (Financial Feasibility) were integrated into the evaluation process under this task. Working collaboratively, this Final Site Design and features options contained therein were 'benchmarked' to the evaluation criteria that were created from the goals and objectives developed in the earlier phases of the study. The result was the Final Preferred Facility and Conceptual Site Plan that is logical and defensible, upon which the MPO can realistically develop 'next step' strategies to get the project approved, funded and implemented. The product of this Task will be utilized for the completion of the final tasks of this project, leading towards our final set of Recommendations, and the concurrent Action Plan.

The confirmed Final Site Development Configuration is provided on the following three (3) sheets, depicting progressively all three (3) phases of proposed development.



01 MPO PALMETTO STATION INTERMODAL TERMINAL-FINAL CONCEPT - PHASE 1
SCALE: 1"=150'

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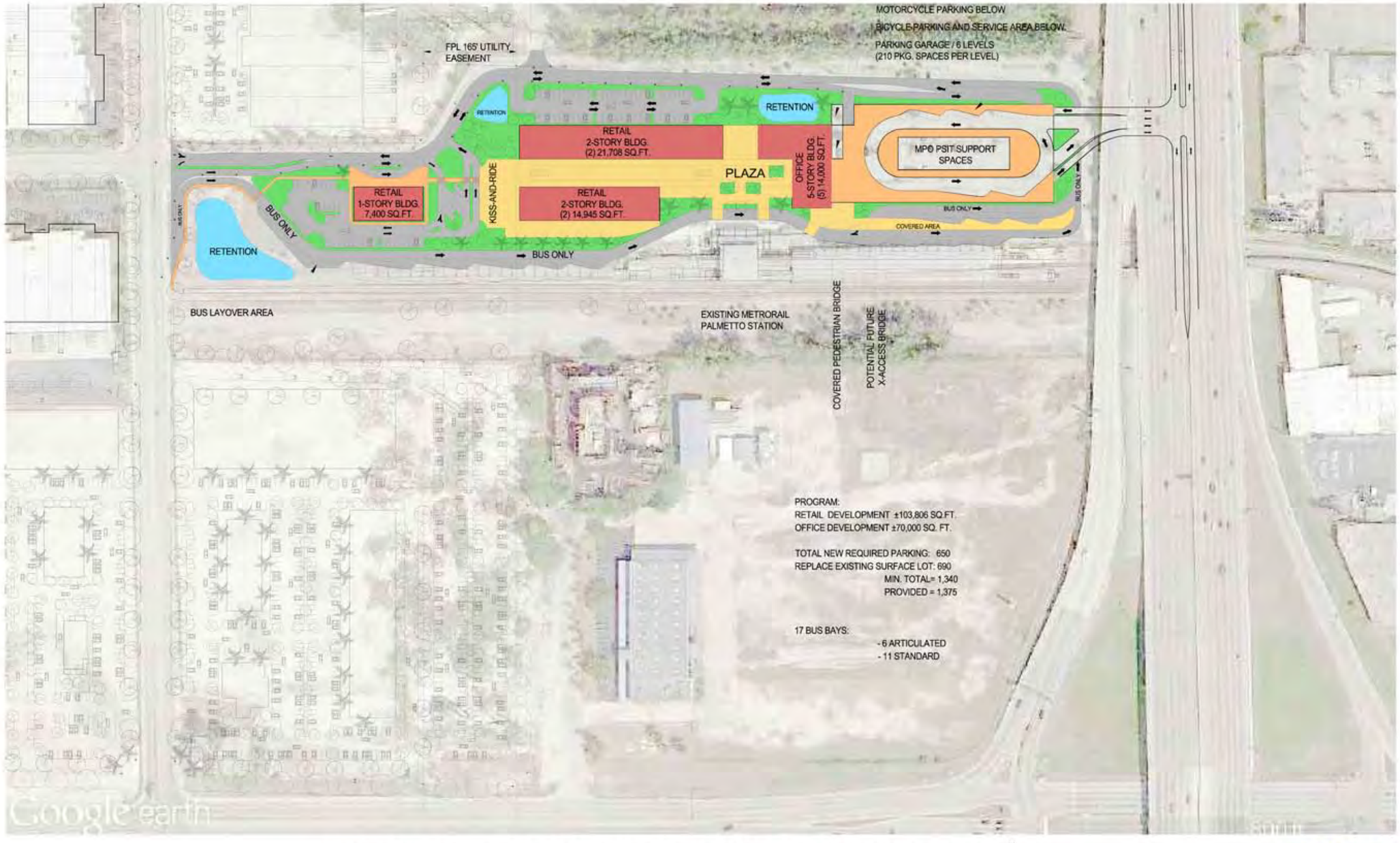
12.05.2014



01 MPO PALMETTO STATION INTERMODAL TERMINAL-FINAL CONCEPT_PHASE 2
SCALE: 1"=150'

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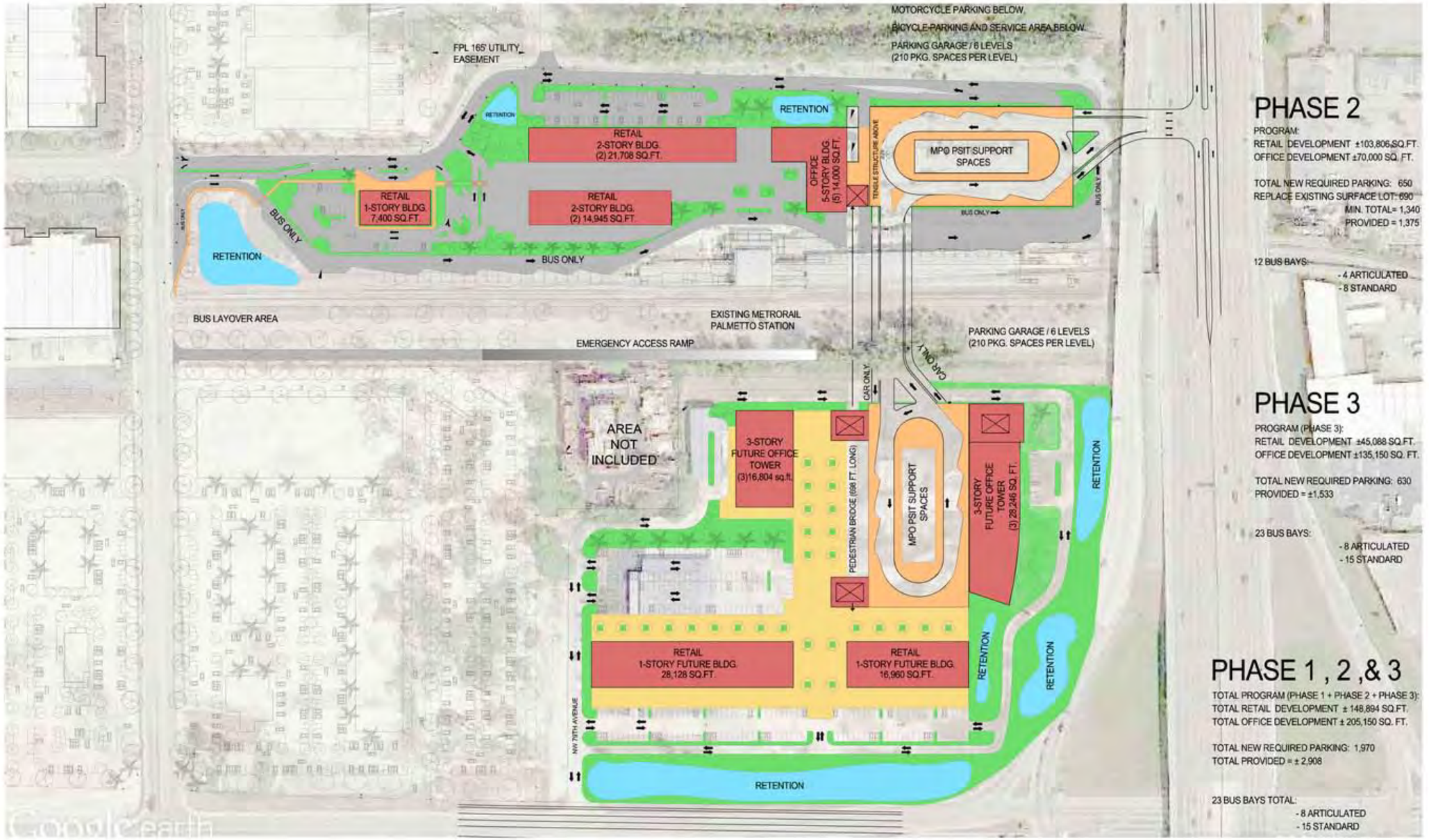
12.05.2014



01 MPO PALMETTO STATION INTERMODAL TERMINAL-FINAL CONCEPT_PHASE 3
SCALE: 1"=150'

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12.05.2014

When reviewing the final Palmetto Station Plans, reference the following design criteria provided by MDT. These outlines cover the list of Program Objectives integrated directly or schematically integrated into the Final Configuration:

MDT REQUIREMENTS INTEGRATED INTO THE FINAL CONCEPT:
Replaced exisiting lot in 6-level garage/accommodated new requirements.
1,375 spaces in 1st and 2nd Phases/1,533 spaces added in 3rd Phase.
Additional surface lot in Phase 3 convertible to garage if demand increases.
Ninety degree parking throughout/No 'dead-end' lanes.
Provided separate and easily accessible kiss-and-ride/drop-off/pick-up area.
Kiss-and-ride area oriented to the direction of travel.
Enhanced maneuvering, safe and direct access to the covered areas in Retail Plaza.
Continuous covered walkways connecting the transit hub to bus waiting areas.
Direct full access ramp to SR 826 managed lanes possible (Phase 2 and 3)
SR 826 Express Ramps open to both buses and automobiles, but with separate garage entry.
Improved local street access.
Separate access routes for automobiles and buses at main site entry.
Provided 12 shallow 'saw-tooth' bus bays in 1st Phase, 17 in Phase 2, and 23 in Phase 3.
Transit 'hub' approach with passenger service areas and retail components.

MDT REQUIREMENTS 'SCHEMATICALLY' INTEGRATED INTO FINAL CONCEPT:
Maximum reasonable walking distance of 1,000 feet (about 700' actually across bridge)
Limited us of large parking lots/can be subdivided into sections to reduce the scale.
Walkways and landscaping used for separations/vehicular movement control.
Bus lanes minimum of 20' wide to allow buses in motion to pass stopped buses.
Minimum turning radii utilized was 50 feet for outside dimensions
All vehicle parking spaces are minimum 9 feet by 20 with two-way driving aisles 24 feet wide.
Direct differentiated pedestrian paths with no level changes (except garages).
Appropriate sidewalks and bicycle lanes connecting adjacent sidewalks and bicycle lanes.
All bus areas indicated for concrete pavement.

MDT REQUIREMENTS THAT WILL NEED TO BE 'DETAILED' INTO NEXT DESIGN PHASE:
Reserved on-site space for future direct access ramps if timing is undetermined.
Indication of provisions for illuminated gateway features and monument signs at all entrances.
Provisions for a real-time "available parking spaces" signage system.
Indication of a new comfort station (break lounge) at the transit hub.
Separate and designated parking areas for: • Persons transporting young children and strollers, • Bicycles and motorcycles (racks and lockers), 5% of automobile parking spaces, • Carpools and vanpools (for 3 passengers or more) near the ADA parking area, • Electric vehicle charging stations.
Identify space and location to support potential bike-sharing programs.
Indication of trailblazer/way-finding signage system.
Illumination provisions throughout the site to enhance safety and security.
Ornamental fencing on the perimeter, other on-site areas as needed for safety.

Once and after the selected Final Development Program and Site Configuration were confirmed through the evaluation process, at the end of this task we prepared a single preferred Final Conceptual Design drawing to depict the structure(s) form and character for purposes of providing 3-D renderings as described below.

3-D CONCEPTUAL VISUALIZATION

Upon completion and the SAC concurrence on the Final Site Development Configuration package it was possible to utilize visualization techniques to show the proposed intermodal terminal facility as a three (3) dimensional illustration suitable for public presentation. In general this task is an opportunity to portray for a broad audience the proposed facility and associated surrounding development in the context of the existing environment. This allows for easy understanding of the illustrated development plan, with 'Before and After' illustrations showing the differences between the existing conditions and the proposed recommendations.

The following pages provide the final set of design visualization illustrations provided for this project. As rendered low-elevation perspectives they show the final configuration of the architectural site plan in photo-realistic representations/views. They illustrate the proposed facility, the on-site pedestrian & streetscape enhancements, and the adjacent sites development context for the intermodal project.

This is the 'existing' condition of the site and adjacent surroundings. The image is a view above the SW region of the site, looking NE towards S.R. 826 / Palmetto Expressway, across NW 74th Street.

The following view is the same view showing the fully rendered Final Site Development Configuration, including all three (3) phases proposed.

This illustration is the same view showing the fully rendered Final Site Development Configuration, including all three (3) phases proposed. It also provides contextual detail by adding the 'proposed' Lakeview Commerce Center parcels as currently approved by the Town of Medley, on the sites lying to the east of NW 79th Place, both North and South of the existing Palmetto Station site.

On the following pages are additional detail images of the development phases, and provided at their full size for detailed clarity.

3-D CONCEPTUAL VISUALIZATION

Proposed Palmetto Station Intermodal Terminal—All Phases

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North

3-D CONCEPTUAL VISUALIZATION

Proposed Palmetto Station Intermodal Terminal—Phases 1 & 2

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3-D CONCEPTUAL VISUALIZATION

Proposed Palmetto Station Intermodal Terminal— Phase 3

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AN INTEGRATED PRACTICE

FINANCIAL FEASIBILITY ANALYSIS

As the Final Site Development Concept was developed, the study proceeded concurrently with an analysis conducted to identify the following 'order of magnitude' financial aspects of the project in its' final configuration, and considering the potential phasing identified. This was completed in two general categories; costs and funding, as described in the following two report sub-sections.

A. Estimated Development Costs

This analysis evaluated the potential construction costs for both buildings and site improvements for the proposed facility. With current and on-going comprehensive roadway, transit, and public facility projects underway in our South Florida market area, it was possible to utilize 'real world' basis of cost estimation factors. Requesting data from the consultant's PM/CM group (Program Management/Construction Management) for recent projects as the key source for these estimation factors, it was possible to reference for comparison benchmark development costs for similar TOD facilities. Additionally recent large scale office and commercial facilities for both public and private clients that include significant structured parking components (garages), allowed for accurate integration of these potential alternate uses into the facility program costs. Lastly, the costs associated with off-site improvements in the surrounding area necessary to support the new facility were captured and identified. In summary, the Development Cost Estimate that follows was prepared including the five general categories:

- New Terminal facilities
- Parking garage(s)
- Proposed Office, Retail and Commercial facilities
- Necessary Roadway improvements
- Surrounding areas ancillary improvements

The following charts provide unit and summary costs that were estimated for the two (2) phases of the Final Site Development Concept provided in the previous section of the report.

This Phase 1 chart identifies...

MPO Palmetto Station Intermodal Terminal Order of Magnitude (Amounts in 2014 Dollars)				
Phase 1 - Existing Palmetto Station Lot				
Item	Unit Measure	Unit Cost ($2,014)	Phase 1	
			Quantity	Cost
Retail Development				**10,380,600**
2-Story Retail	Square Ft	100	103,806	10,380,600
Office Development				**7,700,000**
5-Story Office Tower	Square Ft	110	70,000	7,700,000
Parking Garage				**18,870,000**
6-Story Parking Garage (1,260 spaces)	Square Ft	51	370,000	18,870,000
Site Development Costs				**3,082,200**
MPO Palmetto Station Intermodal Terminal Plaza	Square Ft	15	62,000	930,000
Parking Lot	Per Car	8,000	115	920,000
Roadways (two lanes 24' wide)	Per LF	98	3,900	382,200
Landscaping (Lawns and Ground Cover, Site Irrigation, Tree Pits, etc.)	Square Ft	10	32,000	320,000
Site Utilities (Water Supply, Sanitary Sewer, Storm Sewer, and Site Lighting)	Square Ft	1	530,000	530,000
Subtotal Construction Cost				**40,032,200**
Design and Engineering	% of Constr	8.0%		3,202,576
Engineering Post-Design Services	% of Constr	4.0%		1,601,288
Construction Contigency	% of Constr	25.0%		10,008,050
Contractor General Conditions	% of Constr	10.0%		4,003,220
Contractor Profit and Overhead	% of Constr	15.0%		6,004,830
Grand Total				**64,852,164**

This Phase 2 chart identifies...

MPO Palmetto Station Intermodal Terminal Order of Magnitude (Amounts in 2014 Dollars)				
Phase 2 - SR 826 Direct Access Ramp and Roof Top Transit Center				
Item	Unit Measure	Unit Cost ($2,014)	Phase 1	
			Quantity	Cost
Retail Development				
2-Story Retail	Square Ft	100		
Office Development				**1,540,000**
Transit Center Support Offices and Amenities	Square Ft	110	14,000	1,540,000
Parking Garage				**2,232,000**
Roof Top Bus Parking	Square Ft	36	62,000	2,232,000
Site Development Costs				**45,000,000**
MPO Palmetto Station Intermodal Terminal Plaza	Square Ft	15		
Parking Lot (115 spaces)	Per Car	8,000		
Roadways (two lanes 24' wide)	Per LF	98		
Landscaping (Lawns and Ground Cover, Site Irrigation, Tree Pits, etc.)	Square Ft	10		
Site Utilities (Water Supply, Sanitary Sewer, Storm Sewer, and Site Lighting)	Square Ft	1		
SR 826 Direct Access Ramp to Garage	Lump Sum	1	45,000,000	45,000,000
Subtotal Construction Cost				**48,772,000**
Design and Engineering	% of Constr	8.0%		3,901,760
Engineering Post-Design Services	% of Constr	4.0%		1,950,880
Construction Contigency	% of Constr	25.0%		12,193,000
Contractor General Conditions	% of Constr	10.0%		4,877,200
Contractor Profit and Overhead	% of Constr	15.0%		7,315,800
Grand Total				**79,010,640**

This Phase 3 chart identifies...

MPO Palmetto Station Intermodal Terminal Order of Magnitude (Amounts in 2014 Dollars)				
Phase 3 - Adjacent Southern Lot (corner of Palmetto Expressway and NW 74th Street)				
Item	Unit Measure	Unit Cost ($2,014)	Phase 1	
			Quantity	Cost
Retail Development				**4,059,000**
1-Story Retail	Square Ft	90	45,100	4,059,000
Office Development				**14,866,500**
3-Story Office Tower	Square Ft	110	135,150	14,866,500
Parking Garage				**24,260,000**
6-Story Parking Garage (1,220 spaces)	Square Ft	51	360,000	18,360,000
Parking Garage Pedestrian Bridge Connector	Lump Sum	1	1,150,000	1,150,000
Parking Garage Vehicular Bridge Connector	Lump Sum	1	2,550,000	2,550,000
Emergency/Bus Access Ramp and Access Road	Lump Sum	1	2,200,000	2,200,000
Site Development Costs				**5,778,400**
Retail/Office Plaza	Square Ft	15	101,000	1,515,000
Parking Lot	Per Car	8,000	313	2,504,000
Roadways (two lanes 24' wide)	Per LF	98	2,800	274,400
Landscaping (Lawns and Ground Cover, Site Irrigation, Tree Pits, etc.)	Square Ft	10	85,000	850,000
Site Utilities (Water Supply, Sanitary Sewer, Storm Sewer, and Site Lighting)	Square Ft	1	635,000	635,000
Subtotal Construction Cost				**48,963,900**
Design and Engineering	% of Constr	8.0%		3,917,112
Engineering Post-Design Services	% of Constr	4.0%		1,958,556
Construction Contigency	% of Constr	25.0%		12,240,975
Contractor General Conditions	% of Constr	10.0%		4,896,390
Contractor Profit and Overhead	% of Constr	15.0%		7,344,585
Grand Total				**79,321,518**

B. Potential Funding and Financing Options

The need to identify available, alternate, and potential new funding sources for possible construction of this facility, including traditional federal/state/local sources, joint ventures and P-3 scenarios among others, is an important step to ensure the feasibility of the potential project. Success is always based in viable, real-world economic conditions, and as part of this study research was conducted and evaluated for the likely available public and private funding sources in a summary outline format, and related directly to the program proposed in the Conceptual Approach. These were categorized into six general areas:

- General Obligation Bonds
- Revenue Bonds
- Public-Private Partnership(s)
- Tax Increment Financing
- Private Activity Bonds
- State Infrastructure Bonds

To finance the construction of the Palmetto Station Intermodal Terminal and related infrastructure, Miami-Dade Transit (MDT) as the project sponsor needs to consider which in the range of multiple investment options for the Palmetto Station site suit their needs and operational limitations. The investment options are expected to cost in the range of $54 million to $57 million, as outlined in the Estimated Cost section above, and include retail space, an office tower, a 6-story parking garage, and related utilities, landscaping, parking lots, and roadways. A project of this magnitude may be financed in multiple ways and it is in MDT's interest to explore all these options. This section of the study provides a general overview, detailed characteristics (e.g., requirements for use, selection criteria, source, etc.), and implications for the Palmetto Station Intermodal Terminal for several viable financing options.

1. GENERAL OBLIGATION BONDS - OVERVIEW

General obligation (GO) bonds are debt obligations issued by public entities to finance capital projects that are secured by the full faith and credit of the issuing entity. GO bonds are not secured by a dedicated revenue source but rather by the issuing entity's pledge to repay both principal and interest using all of its available resources[1]. GO bonds are typically issued as tax-exempt securities by state or local governments to fund infrastructure projects that are beneficial to the public. These types of bonds can be attractive to investors due to the relatively low risk profile they exhibit and their tax-exempt status[2]. Consequently, they tend to be one of the more inexpensive means to finance public infrastructure projects.

KEY CHARACTERISTICS AND CONSIDERATION

GO bonds are a flexible financing tool available to governments and may be used to pay for an array of public infrastructure projects, such as schools, roads, bridges, or wastewater treatment plants, to name a few examples. Some key characteristics include:

- The issuance of GO bonds is typically governed by state or local law. In some jurisdictions, approval is needed from the legislature or local voters to issue new GO debt obligations[3].
- In general, GO bonds are not secured by any dedicated revenue source or property. If the issuer defaults on its payments, the bondholders have the right to sue the issuer to raise taxes in order to meet its principal and interest obligations[3].
- The tax-exempt nature of GO bonds is governed by the Internal Revenue Code.
- The terms associated with a particular GO bond issuance will depend on the economics of the project and debt market dynamics. Issuers financing projects with uncertain economic prospects may need credit assistance or may need to accept stringent debt covenants[4].
- The issuance of GO bonds can be complex and expensive, depending on the local laws and regulations and the complexity of the project. Transaction costs can be significant[5].

[1] In some instances, GO bonds may be secured by a specific revenue stream (e.g., property tax) but this is unusual.
[2] U.S. Department of Transportation, Federal Highway Administration, *Project Finance Primer*, pg. 9, September 2010.
[3] In U.S. Department of Treasury, Internal Revenue Service, *Introduction to Tax Exempt Bonds*, pg. A-7, updated March 2013.
[4] U.S. Environmental Protection Agency, *Infrastructure Financing Options for Transit-Oriented Development*, pg. 135, January 2013.
[5] Ibid.

IMPLICATIONS FOR PALMETTO STATION INTERMODAL TERMINAL

To utilize GO bonds to finance the Palmetto Station Intermodal Terminal project, Miami-Dade Transit will likely need to rely on the Miami-Dade County Government to issue and secure the debt with its full faith and credit. Miami-Dade County has the expertise and experience to sell GO bonds and has an existing policy to govern the issuance of long-term debt[6].

Miami-Dade County must follow a number of Florida laws and policies when issuing new debt. These requirements are outlined in the County's debt policy. A few of the more prominent policies state that the County must not[7]:

- Issue debt with a maturity of more than one year without first conducting a public referendum;
- Pledge any County asset as collateral for the debt;
- Issue debt to cover working capital requirements;
- Issue debt to benefit private interests;
- Issue debt with a maturity of more than 40 years;
- Leverage its credit on behalf of a third party for a purpose that does not benefit the public; and
- Issue debt through a means other than a competitive sale unless a conclusion is drawn that a competitive sale is not in the County's and public's best interest.

Before GO bonds can be considered as a serious option, the following questions need to be answered:

- Does Miami-Dade have the financial capacity to issue additional long-term debt needed for a $50 million-plus development project?
- What are the implications for Miami-Dade's credit rating and future projects, which may also rely on debt financing?
- Will the issuance of additional debt be embraced by the greater Miami-Dade community, including the voting public?

[6] Miami-Dade County, *Resolution Approving Comprehensive Debt Management Policy Guidelines*, http://www.miamidade.gov/finance/library/debt-policy.pdf, retrieved August 20, 2014.
[7] Ibid.

2. REVENUE BONDS - OVERVIEW

Revenue bonds are debt obligations issued by state, local, or other entities to finance revenue-generating capital projects. Revenue bonds are typically issued as tax-exempt securities – so long as they meet all applicable IRS regulations – and are secured by the revenues generated by the financed project. These revenues can come from tolls, user fees, parking fees, or lease payments. The amount of debt issued in a particular offering is limited by the amount of revenue the project is forecast to generate. If revenues fall short of debt repayment obligations, the issuer is usually not obligated to repay the debt. Consequently, revenue bonds are usually viewed by investors as having more default risk than general obligation bonds and therefore often represent a more expensive form of project finance[8].

Key Characteristics and Considerations

Revenue bonds are a good financing option for capital projects expected to generate steady streams of revenue. They are often used to fund toll roads but have been utilized to finance transit stations, parking lots and other revenue-generating pieces of infrastructure. Some key characteristics include:

- The issuance of revenue bonds is typically governed by state or local law.
- Revenue bonds are not backed by the full faith and credit of the issuing entity and are therefore riskier than other forms of municipal finance. For this reason, revenue bonds often carry higher interest rates.
- The issuance of revenue bonds can be complex as they often rely on the sophisticated and uncertain forecasting of future revenues. Transaction costs associated with revenue bonds can be higher than general obligation bonds but are still generally lower than other types of private financing[9].

Implications for Palmetto Station Intermodal Terminal

For MDT to utilize Revenue Bonds, it has to think critically about the following questions:

- What revenues are available to the agency to use to repay principal and interest expenses? If retail, office, and parking garage developments move forward at the Palmetto Station Intermodal Terminal site, then lease payments and parking fees could potentially be pledged to secure the debt.
- What sort of rental rates and parking fees will the new development be able to generate? The average lease rate for retail space in Miami-Dade County in 2013 was $35.04 per square foot (psf); for South Florida as a whole, it was $22.80 psf[10]. Average lease rates for office space in Miami-Dade County are highly dependent on location. For the County as a whole, Class A space leases for $35.82 psf; Class B leases for $25.52 psf; and Class C leases for $21.99 psf. In Hialeah / Miami Gardens, a community which is closer to the Palmetto Station Intermodal Terminal site, Class B space leases for $21.65 psf and Class C leases for $17.17 psf[11]. Rigorous financial analysis will need to be completed to determine if these rates are applicable to the Palmetto Station development and if these types of payments can support the issuance of $50 million in debt.

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[8] U.S. Department of Transportation, Federal Highway Administration, *Project Finance Primer*, pg. 10, September 2010.

[9] U.S. Environmental Protection Agency, *Infrastructure Financing Options for Transit-Oriented Development*, pg. 135, January 2013

[10] International Council of Shopping Centers, ICSC Florida Retail Report 2013, http://www.icsc.org/uploads/event_documents/2013_ICSC_Report_Interactive.pdf, retrieved August 21, 2014.

[11] Colliers International, *South Florida Commercial Real Estate Review, 2014 Mid-Year Review,* http://packages.colliersawf.com/2014Mid-YearMarketReport.pdf, retrieved August 21, 2014. Note no data for Class A space was available for the Hialeah area. Data for average parking fees in the Miami-Dade County area were not readily available.

3. PUBLIC PRIVATE PARTNERSHIPS - OVERVIEW

Public-private partnerships (P3s) "are contractual agreements formed between a public agency and a private sector entity that allow for greater private sector participation in the delivery and financing of transportation projects[12]."

P3s can take many different forms, but the arrangements typically require the private sector entity to take some responsibility for the design, construction, financing, operations, and maintenance of the transportation infrastructure project. P3s can be attractive to the public sector as they provide a means to transfer project risks to the private sector and reduce public funding requirements. For example, under a design-build-finance-operate-maintain P3 contract, the private sector partner provides the upfront funding and assumes the risk to design, build, operate, and maintain the transportation infrastructure project over an agreed upon time period. The private sector partner earns a return on its investment through the collection of revenues generated by the project or from availability payments received from the public sector. These types of contractual agreements are also sometimes called concession contracts.

Public-private partnerships come in many shapes and sizes and the MDT will need to think about the different P3 possibilities and how they meet the requirements of MDT and the travelling public. The primary P3 financing and project delivery methods are described on the next page in Table 1.

KEY CHARACTERISTICS AND CONSIDERATIONS

There are numerous characteristics of P3s and several considerations:

- The Miami-Dade Board of County Commissioners recently passed an ordinance to establish a P3 Program for the County. Will the ordinance provide MDT with the legal and policy tools it needs to complete a P3 deal for the Palmetto Station?
- If not, what is the willingness of Miami-Dade County government to provide for this project delivery method?

IMPLICATIONS FOR PALMETTO STATION INTERMODAL TERMINAL

If MDT decides to utilize a P3 to deliver the Palmetto Station Intermodal Terminal, it has to think through a number of issues, including:

- What P3 delivery model will work best for MDT? Each delivery model has its own pros and cons. MDT needs to consider these and determine if a P3 model works for the project.
- Will the Palmetto Station Intermodal Terminal project draw the interest of the private sector? Private investors will need to see a return on their investment if they are to become involved in the project. Will revenues from the project generate high enough returns? Or is MDT prepared to commit availability payments to a private sector partner for delivery of the project?
- Does MDT have the expertise to successfully structure a P3 deal? There are numerous examples of poorly executed P3s[13]. Can MDT create a P3 arrangement with properly aligned incentives to deliver value for both the public and private sectors?

[12] U.S. Department of Transportation, Federal Highway Administration, Innovative Project Delivery website: http://www.fhwa.dot.gov/ipd/p3/defined/
[13] The Mackinac Center for Public Policy, *Public-Private Partnerships: The Good, Bad and Ugly,* http://www.mackinac.org/20029, accessed August 22, 2014.

TABLE 15: P3 Project Delivery Model Definitions

P3 Model	Definition
Design-Bid-Build (DBB)[14]	In this project delivery model, the sector owner hires an architecture / design firm to design the project. The selected design firm produces construction plans and technical requirements for the project. The public entity then utilizes the design documents to create a proposal package on which construction firms bid. The public entity reviews the construction bids and selects the best one based on criteria such as cost and technical approach. The winning construction firm is then responsible for completing construction of the project based on the technical specifications created by the design firm. Financing is provided by the public entity. For some projects, the design firm will be available to answer questions from the construction firm and may help with some aspects of construction management or oversight. Once construction is complete, the public entity takes responsibility for operation and maintenance of the asset. This project delivery model effectively transfers construction risk from the public to the private sector.
Construction Manager at Risk (CMR)	In this project delivery model, a construction manager serves as an advisor during the design phase of a project and then acts as a general contractor during the construction phase of the project. Under these types of agreements, the construction manager usually guarantees the delivery of the asset for a fixed price and also provides the public entity with construction management advisory services, such as cost estimating, scheduling, budgeting, etc. Financing the project is the responsibility of the public entity. This project delivery model effectively transfers construction risk to the private sector. This project delivery model is similar to a DBB model but different in that the construction manager is also involved in the design of the project.
Design-Build (DB)	In this project delivery model, the public sector owner combines the design and construction services into one contract (usually for a fixed fee), which is awarded to a single private sector entity. The private sector entity is then responsible for design and construction on the project. The public sector owner is responsible for financing the project and takes responsibility for operation and maintenance of the asset once construction is complete. This project delivery model effectively transfers design and construction risk from the public sector to the private sector.
Design-Build-Operate-Maintain (DBOM)	In this project delivery model, the design, construction, operation, and maintenance activities are written into a single contract on which private sector entities may bid. Financing for the project is provided by the public entity. This project delivery model effectively transfers design, construction, operation, and maintenance risk from the public to the private sector.
Design-Build-Finance-Operate-Maintain (DBFOM)	In this project delivery model, the design, construction, financing, operation, and maintenance of the project are the responsibility of the private sector. All these activities are typically bundled into a single contract by the public sector owner and then bid on by various firms, consortiums, or joint ventures. While DBFOM project delivery models tend to vary from project to project, they usually are financed by debt that is backed by a stream of revenue generated by the project (e.g., tolls from a highway or bridge, user fees, etc.) or payments from the public sector to the private sector (e.g., availability payments). In some cases, the private sector entity will also make an equity investment. This project delivery model effectively transfers design, construction, financing, operation, and maintenance risk from the public to the private sector. In some instances, traffic and revenue risk is also transferred from the public to the private sector.

[14] NOTE: The DBB model is not traditional thought of as a P3 project delivery model but is described here to provide context for the other project delivery models.

4. TAX INCREMENT FINANCING - OVERVIEW

Tax increment financing (TIF) is an alternative funding mechanism that allows public entities to leverage public funds to encourage private sector development activities in a designated area known under Florida law as a Community Redevelopment Area (CRA). A TIF works in the following manner:

- Local jurisdictions are able, under the aegis of Florida law, to designate an area as a CRA when the area meets certain requirements, such as substandard transportation networks, insufficient parking, or an inadequate number of affordable housing units. The local jurisdiction must document these conditions or requirements in what is known as a Finding of Necessity. CRAs are administered by entities known as Community Redevelopment Agencies[15].
- The Community Redevelopment Agency is responsible for creating a Community Redevelopment Plan, which identifies the overall objectives of the CRA as well as the types of development projects planned for the area.
- Once a CRA is established, the TIF is a financing tool that allows the local jurisdiction to suspend the dollar value of all real properties in the CRA for tax purposes. This is sometimes known as the suspended or frozen value. Once this is established, the taxing authority continues to collect property taxes, but property taxes collected from increased property values are ultimately turned over to a fund governed by the Community Redevelopment Agency, which is able to devote the revenues to the redevelopment plan in the manner in which it chooses. Typically, this involves issuing a bond to pay for capital improvement and then making principal and interest payments with revenues from the increased property taxes received.

KEY CHARACTERISTICS AND CONSIDERATIONS

TIFs have several unique characteristics:

- With a TIF funding mechanism, a redevelopment area must be strictly defined and the following must be created: a Finding of Necessity; a Community Redevelopment Agency; and a Community Redevelopment Plan.
- There is no direct oversight from the State of Florida and no requirement for a public referendum or other approval.
- Forecasts of revenues from TIF projects tend to be highly uncertain as it is difficult to foresee how areas in need of redevelopment will evolve over time.

IMPLICATIONS FOR PALMETTO STATION INTERMODAL TERMINAL

- Will the MDT be able to work with Miami-Dade County to create the necessary legal and policy infrastructure to implement this type of funding?
- Will the funds generated from the TIF mechanism be enough to cover the $50 million plus cost of the project? And if TIF funds are not sufficient, is there a contingency plan to cover the shortfall in funds?
- Will the use of TIF funding be subject to political constraints? Will the County and the public agree to the use of this financing option if there is a perception that there is not enough oversight of the Community Redevelopment Agency or is there is a perception that the TIF effectively captures funding that could be used for other worthwhile investments (e.g., schools, roads, etc.)?

The purpose of the last 2 portions of this Financial Feasibility section are to identify and describe options to finance the construction of the Palmetto Station Intermodal Terminal and related infrastructure *if the public agency* will be receiving highway dollars, perhaps (in particular) for the direct access SR 826 ramp portion of the project.

[15] The Florida Redevelopment Association, *CRA General Information Brochure*, http://redevelopment.net/cra-resources/q-a-for-cras/, accessed August 20, 2014.

5. PRIVATE ACTIVITY BONDS - OVERVIEW

Private Activity Bonds (PABs) issued under the aegis of the Federal Highway Administration (FHWA) are tax-exempt debt obligations issued by public sector entities on behalf of private sector entities for the capital project that benefit the public. The bonds are repaid by the private sector entity, typically with revenues generated by the financed project.

PABs are unique in that the Internal Revenue Code generally prohibits the issuance of tax-exempt debt obligations to finance private activities but the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU) legislation created an exception for PABs. Under the SAFETEA-LU legislation, the FHWA can approve public entities to issue these unique bonds. The legislation established a $15 billion cap on the total value PABs that may be issued. While the FHWA has obligated almost 75 percent of this funding, President Obama has proposed lifting the cap but it is unclear if this proposal will become law in the near future[17].

KEY CHARACTERISTICS AND CONSIDERATIONS

Some key characteristics of PABs include:

- Public entities issuing PABs must also receive federal assistance under Title 23 or Title 49 and 95% of the proceeds from a PAB sale must be expended within 5 years of the issue date. If the funds are not expended, then the issuer must utilize the funds to redeem outstanding bonds within 90 days after the end of the 5 year period. Issuers may apply to the FHWA for an extension if there are extenuating circumstances[18].
- The average maturity of PABs must not surpass 120% of the average economic life of the facility financed by the bonds[19].
- While PABs are issued by public entities, the repayment of interest and principal is the responsibility of the private entity partner. If funds are not expended on eligible project expenses, the bonds may lose their tax-exempt status.
- Because PABs are designed to encourage private sector participation in the delivery of transportation infrastructure, only certain projects are eligible to receive this type of funding. These projects include: (1) surface transportation projects that receive Federal support under the legal authority of Title 23 of the U.S. Code; (2) international bridge or tunnel projects managed by an international organization approved by Federal or state law that receives support under the legal authority of Title 23 of the U.S. Code; and (3) projects that facilitate the movement of freight from truck or rail or vice versa and that also receive support under Title 23 of the U.S. Code[20].
- Most but not all of the PABs issued by public sector entities have been large. While the lowest approved issuance was approximately $20 million for a managed lane project in Colorado, the median amount for all PAB issuances to date is almost $400 million. The single largest PAB issuance to date was $677 million for the East End near Louisville, Kentucky. The PABs approved by FHWA but not issued are even larger, ranging from $350 million to $2 billion[21].

IMPLICATIONS FOR PALMETTO STATION INTERMODAL TERMINAL

While there are many implications for using PABs, the key question for MDT is will the Palmetto Station development be eligible for this type of financing? The majority of PABs approved by the FHWA have financed roads, bridges, and tunnels. One transit project (Maryland's Purple Line light rail project) and one intermodal project (the CenterPoint Intermodal Center in Illinois) have also accessed PABs but it is not entirely clear that the Palmetto Station development would meet the federal requirements for this type of financing. Given the uncertainty about its ability to receive approval from the FHWA to issue a PAB, will MDT have a private sector partner willing to work with it on this type of financing? If so, then how will the private sector partner repay the principal and interest on the debt? And how will the County and other important stakeholders view the merits of a PAB offering given the other financing options available? These questions will need to be answered before pursing this financing option in earnest.

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[17] America Road & Transportation Builders Association, *Analysis of the Obama Administration's FY 2014 Budget Proposal for Transportation*, pg. 2, April 2014

[18] U.S. Department of Transportation, Federal Highway Administration, *Private Activity Bonds (PABs)*, October 2012.

[19] Internal Revenue Service, Office of Tax Exempt Bonds, *Tax Exempt Private Activity Bonds Compliance Guide*, November, 2005.

[20] Ibid.

[21] U.S. Department of Transportation, Federal Highway Administration, Innovative Program Delivery website, http://www.fhwa.dot.gov/ipd/finance/tools_programs/federal_debt_financing/private_activity_bonds/#qualified, accessed August 14, 2014.

6. STATE INFRASTRUCTURE BANK - OVERVIEW

The State of Florida maintains a State Infrastructure Bank (SIB) capitalized with federal and state funds to invest in transportation and related infrastructure. Both public and private entities can access SIB funds through loans or credit enhancement assistance, provided they meet certain requirements.[22]

KEY CHARACTERISTICS AND CONSIDERATIONS

Some key characteristics of SIB assistance include:

- Access to federal funds in the SIB is limited to projects that meet the federal requirements stipulated in the Transportation Equity Act for the 21st Century (TEA-21). Projects must also be eligible for funding under Title 23 of the U.S. Code (USC) or Section 5302 in Title 49 USC.[23]
- Access to state funds is limited to transportation-related projects on the State Highway System or projects that facilitate higher levels of mobility in line with the requirements outlined in Section 339.55 of Florida public law. Projects that facilitate intermodal connections and generally improve mobility of people or freight are also considered eligible for state funds.[24]
- Assistance from the SIB does not occur in the form of grants. The SIB may make loans at market rates or below market rates. SIB loans or credit assistance may be subordinated to other investment grade project finance rated greater than "BBB".[25]
- The SIB Guidance for Federal / State document provided by the Florida Department of Transportation provides more guidelines on how to apply for SIB funds, how applications are evaluated, etc.[26]

IMPLICATIONS FOR PALMETTO STATION INTERMODAL TERMINAL

- Given the requirements enumerated above, does the Palmetto Station development project meet the requirements to access state or federal funds maintained by the Florida SIB?
- If the project is seeking a loan from the SIB, how will it repay the principal and interest on the loan? If MDT plans to use revenues from the development to secure a loan, revenue estimates must be current and certified.
- If the project seeks to repay a SIB loan with different types of funds (e.g., dedicated taxes or fees), then MDT will need to document where those funds will come from and what happens if cost overruns occur on the project.

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[22] Florida Department of Transportation, Office of the Comptroller, State Infrastructure Bank, http://www.dot.state.fl.us/officeofcomptroller/PFO/sibintro.shtm, retrieved on August 20, 2014.
[23] Ibid.
[24] Ibid.
[25] Ibid.
[26] Florida Department of Transportation, Office of Comptroller, *SIB Guidelines for Federal / State*, http://www.dot.state.fl.us/officeofcomptroller/PFO/SIB%20-%20Guidelines%20Federal-State.pdf, access on August 20, 2014.

POTENTIAL FUNDING AND FINANCING OPTIONS SUMMARY

The MDT must weigh the pros and cons of the different financing options, and the following summary offers an easy to compare evaluation for the options outlined in this section of the study.

Table 2 presents the high-level merits for each financing option.

TABLE 16: Pros and Cons of Financing Options

Financing Option	Pros	Cons
GO Bonds	• Tax-exempt GO bonds are likely the cheapest form of debt financing available to MDT • Standard structure of GO bonds may result in inexpensive issuance costs relative to other forms of debt • GO bonds may be issued for projects with no revenues	• There may be political constraints on the issuance of GO bonds as they will likely need to be approved in a referendum • Debt issuing entity is required to pay principal and interest on bonds regardless of financial situation because bonds are backed by the "full faith and credit" of the issuing authority • Amount of debt issuance may be limited by MDT or Miami-Dade County policies or covenants in existing trust agreements
Revenue Bonds	• MDT or Miami-Dade County may be able to service debt with lease payments and parking fee revenues, meaning the primary beneficiaries of the improvements are paying for the project • If revenues fall short of predictions, MDT or Miami-Dade County is not obligated to make payments from general funds or other sources	• Interest rate on debt may be higher than other forms of financing (e.g., GO bonds) due to risk of insufficient lease or parking revenue • Cost to issue debt may be higher due to complexity of forecasting revenues • Amount of debt issuance may be limited by MDT or Miami-Dade County policies or covenants in existing trust agreements
Private Activity Bonds	• Tax-exempt status of bonds may help attract private sector interest to project as it effectively lowers cost of capital for project • Private sector responsible for debt service payments	• Unclear if Palmetto Station Intermodal development is eligible for PABs given program requirements • Amount of debt issuance may be limited by MDT or Miami-Dade County policies or covenants in existing trust agreements • FHWA has already allocated almost 75 percent of funding for program • Requirement to expend 95 percent of funds in 5 years may prove challenging, depending on the project schedule • Depending on market conditions, PABs may be a more expensive form of project finance than traditional tax-exempt bonds[27]

[27] U.S. Department of Transportation, Federal Highway Administration, *Private Activity Bonds*, January 2012

Financing Option	Pros	Cons
State Infrastructure Bank	• Interest rate on debt may be below market rate, depending on FDOT decision • Access to funds may be less competitive than some federal programs	• Not clear if project is eligible for federal funds in the SIB • Amount of debt issuance may be limited by MDT or Miami-Dade County policies or covenants in existing trust agreements
Public-Private Partnerships Design-Bid-Build	• The DBB project delivery model has a long history of successfully delivering transportation infrastructure projects and is well understood by MDT staff. It provides a clear, fair procurement process for bidders. • Competition in awarding contracts to the architect / design and construction firms helps ensure the public sector owner is paying competitive market prices for these services. • The architect / design firm is impartial and acts in the best interest of the public sector owner. • The public sector owner has more control over the design of the project compared to other project delivery models.	• The DBB project delivery model may be longer in duration compared to other project delivery models as construction typically does not commence before the final design is completed. • The design / architecture firm may have a limited ability to assess the life cycle cost and schedule implications of a particular design, leading to higher life cycle costs and longer schedules for the project. • The lack of input from the construction firm during the design phase of the project may hamper constructability, leading to change order requests, higher construction costs, schedule delays, and legal disputes for which the public sector owner may be responsible for resolving. This characteristic of the DBB project delivery model can produce antagonistic relationships between the architecture / design firm, construction firm, and public sector owner. • The public sector owner retains design, financial, operations and maintenance, traffic and revenue risks. • The public sector owner needs to manage multiple contracts and maintain communications with multiple points of contact. • The DBB project delivery model does not attract private finance to a project.
Public-Private Partnerships Construction Manager at Risk	• Construction manager at risk can provide input to the design / architecture firm during the design phase of the project, leading to improved project constructability, fewer change orders, cost increases, schedule delays, and legal disputes. • The architect / design firm is impartial and acts in the best interest of the public sector owner. • Construction manager may be able to facilitate construction of some elements before design is complete, leading to a reduction in project duration. • The CMR project delivery model transfers construction risk to the private sector as the CMR typically holds all subcontracts during the construction phase of the project. • Depending on the contract details, the CMR may agree to construct the project below a guaranteed maximum price, effectively transferring financial risk to the private sector.	• The CMR project delivery model has less of a history than the DB project delivery model and requires more expertise from MDT staff. • The public sector owner retains design, financial, operations and maintenance, traffic and revenue risks. • The public sector owner needs to manage multiple contracts and maintain communications with multiple points of contact. • The DBB project delivery model does not attract private finance to a project. • The construction manager does not provide advisory services during construction as it is working “at risk”. • The construction manager may have a limited ability to assess the life cycle operations and maintenance costs and schedule implications of a particular design, leading to higher life cycle costs and longer schedules for the project.

Financing Option	Pros	Cons
Public-Private Partnerships Design-Build	• Analysis from a limited number of past projects has shown that the DB project delivery model is slightly cheaper and faster compared to the DBB project delivery model. • Input from the construction firm to the design / architecture firm during the design phase can improve the project constructability and lead to fewer change orders, cost increases, schedule delays, and legal disputes. • The public sector owner only has one contract to manage and can maintain one single point of contact to simplify communications. • The DBB project delivery model transfers design risk in addition to construction risk to the private sector.	• The DB project delivery model has less of a history than the DB project delivery model and requires more expertise from MDT staff in defining project goals, objectives and other technical requirements at the beginning of the project. • The public sector owner loses some control over the design of the project in a DBB project delivery model. Furthermore, the architecture / design firm no longer acts as an advocate for the public sector owner but instead has an incentive to be an advocate for the construction firm. • The architecture / design firm and construction firm have an incentive to complete the project quickly and cheaply. While this aligns with the interests of the public sector owner, it can in some instances lead to reduced quality of materials used and workmanship. • The public sector owner must be responsive to the architecture / design and construction firms and decisive in order to take advantage of the speed of the DBB project delivery model. This can be problematic if there are multiple decision makers or multiple public sector owners involved in a project. • The DBB project delivery model may not be appropriate for public sector owners looking for a specific or iconic project design. • The DB project delivery model does not attract private finance to a project.
Public-Private Partnerships Design-Build-Operate-Maintain	• Same pros as DB project delivery model plus: o The DBOM project delivery model provides the private sector an incentive to minimize all life cycle costs (capital and O&M) associated with the project. o The DBOM project delivery model transfers design, construction, and operations and maintenance risk to the private sector.	• Same cons as DB project delivery model plus: o The cost and complexity of taking over operations and maintenance of the project can be daunting if the private sector performance is unacceptable. o The DBOM project delivery model does not attract private finance and typically requires the public sector owner to commit financial resources to the private sector partner for a long period of time during the operations and maintenance phase of the project.

Financing Option	Pros	Cons
Public-Private Partnerships Design-Build-Operate-Finance-Maintain	• Same pros as the DB and DBOM project delivery models plus: o The DBFOM project delivery model attracts private capital, transferring most financial risk to the private sector. o Debt financing of the project by the private sector may bring more financial discipline to management of the project. o Structure of the DBFOM contract vehicle may provide more cost certainty to the public sector owner.	• Same cons as DB and DBOM project delivery models (except for ability to attract private capital) plus: o Cost of capital is likely higher for private sector. o Public sector owner may need to provide some sort of funding guaranteed in order for private sector partner to obtain financing.
Tax Increment Financing	• Used properly, a TIF project can revitalize an underdeveloped or blighted area, thereby encouraging economic growth and activity • A TIF deal represents a low risk form of financing from the perspective of the public entity	• There may be a lack of oversight with TIF as they do not require voter approval or state or federal oversight[28] • Financial returns are difficult to forecast with TIF, making it hard for the private sector to participate in TIF deals with confidence • TIF can crowd out funding for public services, such as schools, and other municipal services • The private sector may benefit disproportionately in a TIF deal

[28] The Florida Bar, The Florida Bar Journal, *Tax Increment Financing in Florida: A Tool for Local Government Revitalization, Renewal, and Redevelopment*, http://www.floridabar.org/divcom/jn/jnjournal01.nsf/Author/1CE037337866837085257305005 8A3D5, accessed August 20, 2014.

RECOMMENDATIONS AND ACTION PLAN

At the completion of this study the MPO and MDT sought to develop a set of Recommendations and the steps needed for the continued planning of the proposed intermodal facility as well as the associated roadway and other potential off-site improvements, based on the preferred Final Site Development Configuration. Furthering these recommendations, a project specific Action Plan was confirmed to move towards the implementation of the Recommendations in the future design phases, site development and construction of the Palmetto Station intermodal facility. This plan will includes generally the following items, among others provided in this final report section:

A. Modification of the traffic circulation, access and transit services.
B. Time (Phasing) schedule.
C. Estimated costs.
D. Funding sources.

Task Execution

Through the completion of the Study Tasks as described in this report, the results present a clear recognition that the programming and planning process Miami-Dade MPO had engaged in was critical to making the Palmetto Intermodal Terminal Facility a success. It brings the MPO's and MDT's vision in support of the Palmetto Express Lanes RMLN to fruition, integrating all transportation services onto one unified site a definite reality. From this study's perspective, successful design initiatives, regardless of the application, must achieve a 'balance' between function and context for both the local market and community aesthetic values. Balance defines the success of a project because a project that is purely functional, yet aesthetically and/or lacking community and market support, actually loses value. This study utilized all the critical analysis steps, SAC input and guidance, and the necessary professional disciplines to complete the appropriate aspects of the project study, incorporating this balanced approach into the final conceptual preferred configuration that was designed.

Based on the preparation, study and evaluation of all the various *"options, preferences and solutions"* in the project, it is appropriate to complete the study by answering the ultimate question; "How do we get there?" The following Recommendations and Action Plan summarizes the requested action items envisioned at commencement, which have now been confirmed through the study as the best approach to proceed forward with to the project's implementation strategies. These are logically based on the final validated intermodal facility concept.

The Action Plan was prepared as a summary following the collaborative process utilized during this study. The preferred strategy has been arrived at and supported by individual component implementation plans for each of the following categories. These are 'general' in context, and would be further detailed in the future typical preliminary and schematic design phases for the new facility. This would likely proceed after further funding agreements with FDOT have been finalized (including the expansion site acquisition), Miami-Dade County (and the Town of Medley) endorse the general project development concepts (confirming compliance with their land use and zoning regulations) and responsibility for individual action items can be agreed upon and assigned.

RECOMMENDATION AND ACTION PLAN ITEMS

The individual detailed components of this section include:

- Master program for all new facilities & site development components.
- Transit Modifications.
- Traffic Impacts Mitigation.
- Support this new facility provides to the Regional Managed Lane Network (RMLN).
- Preliminary Project Time Frame for; design phases, approvals & permitting, bidding and construction.
- Potential private partnership opportunities discovered during the Market Analysis and Financial Feasibility tasks.
- Funding strategies (by source) to support individually the components of full project implementation.
- Strategic management decisions (by agency/party) to support individually the components of full project implementation.

MASTER PROGRAM

The preferred Final Concept site development configuration for the new intermodal terminal that was developed, evaluated and vetted with the MPO, MDT and the SAC, and provides for the following facility characteristics at the existing Palmetto Station site in Phases 1 & 2, followed by the addition of the MDT identified 'expansion site' in Phase 3. The building facilities and site components included in this desired Scheme were aligned with the original Conceptual Approach and Program, and provide the following development opportunities to support and enhance the existing MDT operations at the Palmetto Station. These are 'gross square foot' (GSF) measurements, and exclude the common spaces that are operationally necessary for the intermodal terminal that would not be revenue generating.

PALMETTO STATION INTERMODAL TERMINAL - PREFERRED CONFIGURATION
Proposed Master Development Program and Phasing

			Parking Spaces (incl. HC)				Bus Bays		
	Office SF	**Retail SF**	Required	Provided	Surface	Garage	Standard	Artic.	Total
Phase 1 Development	70,000	103,800	1,340	1,375	115	1,260	8	4	12
Phase 2 Development	NA	NA	NA	NA	NA	NA	3	2	5
Phase 3 Development	135,150	45,100	1,320	1,545	285	1,260	4	2	6
Total	205,150	148,900	2,660	2,920	400	2,520	15	8	23
Current Market Demand	70,000	95,000	Recommended Target for Initial Phase of Development						
Difference	*135,150*	*53,900*	Future "Absorption" Target for Final Phase of Development						

This program captures the elements of on-site development components. The off-site improvements necessary in support of this development scenario are outlined in the Transit Modifications and Traffic Impacts Mitigation portions of the Recommendations.

TRANSIT MODIFICATIONS

The preferred Final Concept site development configuration for the new Palmetto Station intermodal terminal results in planned Transit requirements that support the development plan, and were incorporated into it. These were confirmed as capacity enhancement features during the SAC reviews, and affect the majority of site operations, excluding the Metrorail operations except for the station features that would be modified to accommodate the increased ridership demands. The following outline provides the planned Transit Modifications that are included and should be maintained in future phase project implementation phases should the project proceed:

- Provided a total of 12 articulated shallow 'saw-tooth' bus bays in 1st Phase.
- Provide alternate locations for Doral Trolley, and potential future Local Circulator (as described in Traffic Mitigation section)
- Bus lanes minimum of 20' wide to allow buses in motion to pass stopped buses.
- Minimum turning radii utilized was 50 feet for outside dimension.
- Separate access routes for buses at main site entry.
- All bus circulation areas should be provided with concrete pavement to the greatest extent possible to reduce maintenance requirements and enhance life cycle.
- Replace the majority of the existing vehicular surface parking spaces (690) into multi-level garage(s) to accommodate new separate bus circulation routes and other transit ridership supporting uses.
- Provided separate and easily accessible kiss-and-ride/drop-off/pick-up area.
- Continuous covered walkways connecting the transit hub to bus waiting areas.
- Direct full access ramp (T-Ramp) to SR 826 managed lanes possible (Phases 2 & 3).
  - These ramps should be open to both buses and private automobiles, but with separate garage entry.
- Provide separate Taxi and Jitney service areas (outside of bus circulation)

The following additional Transit Customer Service features should be planned to be provided at the modified terminal facility and maintained in future phase project implementation phases as well:

- Enhanced passenger waiting area with covered seating/benches throughout the public retail transit plaza(s)
- Ticket vending machine/kiosk areas at both the Metrorail and MDT bus stop locations (including the garage-top terminals
- Unified signage displays for 'Real-Time' transit tracking throughout the public retail transit plaza(s), including Video/Audio status panels
- Public restrooms with 'Self-Maintaining' and energy efficient features
- Public telephones and wi-fi accessibility throughout the public retail transit plaza(s)
- Provide a new comfort station (break lounge) at the transit hub for MDT staff.
- Security and Transit operations offices with cameras for monitoring all Terminal locations
- Expanded Customer Service counter
- Equipment Storage Room & Maintenance supply storage areas
- MDT reserved Staff Parking
- Bicycle Parking & Bicycle commuter station including lockers
- Landscaping & Fencing to direct pedestrian circulation and enhance security
- Lighting for 24 hour use and security
- Application of Crime Prevention through Environmental Design Principles (CPTED)

TRAFFIC IMPACTS MITIGATION

In the near future, NW 74th Street will be widened to a six-lane divided roadway from NW 87th Avenue to SR 826. The widening will create additional throughput capacity between SR 826 and the study area, and provide sidewalks and bicycle facilities along 74th Street which can easily be extended to access the intermodal site via necessary future improvements for NW 70th Avenue.

As part of the Palmetto Intermodal Terminal Facility, a 'T' ramp is being considered to provide access from a centered bi-directional SR 826 off-ramp directly to the site. The ramp would provide additional access to the site, alleviating NW 79th Avenue to a degree. However, the construction of the ramp would only improve the ingress access options to the site, and therefore only alleviate the surrounding roadways to the degree of vehicles that would be accounted for as normally utilizing SR 826 to 'commute' to the site. The rerouting then would reduce some of the vehicles entering the site from NW 79th Avenue, but not address the local accessing traffic that arrives from locations not logically utilizing SR 826 (and the new ramp facility) to access the planned intermodal facility. A more detailed traffic and access study should be performed once the development concept has evolved during subsequent preliminary design phases.

There are no anticipated immediate impacts to the existing pedestrian facilities along NW 79th Avenue, however as other modifications/expansions of NW 79th Avenue are implemented in the future, careful planning to restore and enhance these facilities will be necessary to ensure continued pedestrian accessibility is not degraded. With and no bicycle facilities existing at this time however along NW 79th Avenue, a key traffic mitigation measure could be to incorporate better facilities to separate bicycle routes from the vehicular travel lanes. The recommendation to include future facilities of this type should be considered as 'minimum' criteria for the necessary improvements to NW 79th Avenue. They would planned and implemented not just to improve access for non-vehicular travel to the intermodal facility, but to accommodate and mitigate the increased circulation along 79th as the planned other developments already approved by Medley are eventually developed. At a minimum the following improvements are recommended:

- Plan, design and implement dedicated separate bike lanes on both sides of NW 79th Avenue, from NW 74th Street all the way through to US 27/Okeechobee Road. This should be coordinated with the already planned NW 74th Street improvements.
- Maintain the dedicated sidewalks on both sides of NW 79th Avenue, from NW 74th Street through to US 27/ Okeechobee Road, with new appropriate signalized cross walks at;
  - NW 79th Avenue/NW 79th Place – this is tied to the new alternate access location route for the intermodal terminal on the north side of the site
  - NW 79th Avenue/NW South River Drive – none exists today
  - Revised signal at site entrance on NW 77th Street (as access improvements necessitate)
- Consider new dedicated sidewalks on both sides of the following local streets to improve pedestrian circulation for potential employment base ridership in the local industrial park;
  - NW 80th Street west to NW 82nd Place
  - NW 77th Street west to NW 81st Place
  - NW 81st and 82nd Place

No pedestrian or bicycle routes are necessary from the possible SR 826 T-ramp.

Signalization impacts will also need further studies to analyze the impacts to the signalized intersections along NW 79thAvenue, namely at NW 74th Street, NW 77th Street which is the current direct access to/from the site, and at Okeechobee Road. Turn lane improvements, additional lanes, or signal upgrades may be necessary. With the proposed conditions and assumptions as contained in the study, an additional lane along NW 79th Avenue is confirmed as warranted by the planned future developments approved in the area already by Medley, with critical importance as the Intermodal Terminal would be developed. However, if vehicle trips could be reduced by other measures, such as a circulator route for the area and/or a direct access ramp from SR 826, full widening may not be necessary for the initial phase.

To reduce the vehicle trips in the area, and further alleviate vehicle trips associated with direct access to the intermodal facility, the feasibility of a local transit circulator route should also be conducted. This was discussed in several SAC meetings, and the Market Analysis identifies key large employers in the local industrial park area that could benefit from more direct access for their employees to the Palmetto Station. The diagram/map below identifies the concept of this new service.

Local Circulator Option – The simple route map above illustrates a 4 mile loop contained inside the Medley Industrial park area north of NW 74th Street, west of the Palmetto, and south of Okeechobee Road.

This local bus route could be served by a smaller capacity vehicle, operate easily on a 15-20 minute cycle depending on the number of stops, and tie-into the Metrorail and Metrobus schedules at the Plametto Station. It could improve commuter options for the local employment base, and would operate in the 'self-contatined' local industrail park area. Of particular importance for the route could be a clear and direct connection extension to the future planned MGTP 'Inland Port' center potentially located off NW 93rd Steet/NW 87th Avenue.

At a minimum, and as identified in the Access and Traffic Impact Analysis section of this study, the following access improvements however should be implemented with the beginning development of the Palmetto Station site:

- Separate and dedicated right turn lanes for private vehicles and busses off NW 79th Avenue at NW 77th Street into the site entrance
- Furthermore, this new site entrance configuration should provide an immediate separation of bus traffic from private vehicles as they continue circulation on-site, allowing for increased MDT capacity, safety and security
- Development of a new alternate access location at the current terminus of NW 79th Place at the north boundary of the site
- Confirmed location and alignments of the future direct access routes for;
  - o SR 826 'T-Ramp'
  - o Cross-access between the existing Palmetto Station site and the potential future expansion site to the south
  - o Emergency Transit Vehicle access route from NW 79th Place, through FPL Utility easement/ROW to the elevated Bus terminal plazas (garage tops)
- Identification of the potential new access configuration, signalization and alignment provisions for the new Expansion site entrance off NW 74th Street at 79th Place

PRELIMINARY PROJECTS TIMEFRAME AND PHASING REQUIREMENTS

Key to the success of what would really be a new intermodal terminal even in the First phase of development would be a logical planning and construction staging sequence. This requires early and continued coordination between the project P3 partner and MDT to ensure all existing and early planned transit services can be maintained, as well as operating in a safe and efficient manner.

To envision the planning and development of the MDT and TOD intermodal facilities along with the associated other site improvements necessary, following key timing thresholds and phasing/staging sequences are recommended:

Phase 1 Development — Years: 2015 - 2020

The Schematic Design, Contract/Procurement and Funding stage would proceed simultaneously leading to the final P3 offering. This should take approximately 1 year to complete, before the Design-Build process commences.

- The First development phase must focus initially on the design and engineering to plan for relocation of the site circulation routes for both MDT and private vehicle access, and the new site entry configurations. A construction staging area must also be programmed to operate from throughout the First phase, or until the south expansion site can be acquired. Alternately an off-site staging area may be considered in the adjacent Utility easement area just south of the existing Metrorail line in lieu of the expansion site.
- The second step in the First phase will involve the design and engineering related to the construction of the new on-site multi-level Parking garage at the east end of the site. The new public retail transit plaza(s) cannot be constructed until the surface parking areas that currently serve the Metrorail transit terminal are relocated.
- The new Bus stop locations and covered pedestrian circulation routes on the south side of the new garage should also be developed at this stage of construction. These should be utilized to maintain access to the Metrorail terminal from the parking garage so the new public retail transit plaza(s) and surrounding retail buildings cans be isolated during their construction.

- As the Retail facilities are being developed later, the office tower at the west side of the parking garage that anchors the new public retail transit plaza(s) could be constructed as a 'shell' building with interior build-outs to follow as occupancy increases via evolving market demand.
- The single story free-standing retail building at the front of the site (west end) should be the final portion of development in the First phase. Alternately it could be easily rolled into Phase 2 development if the market demand for such a retail facility is delayed. If this were evident at the commencement of Phase 1, and/or the P3 contract were structured to allow it, this portion of the site may be ideal as a multi-phase construction staging area.

Phase 2 Development **Years: 2020 - 2025**

The second Phase of Development essentially relates to the approval and implementation of the proposed 'T-Ramp' under the SR 826 expansion under the RMLN program.

- It would provide for the direct connection of the Palmetto Station multi-level garage to a dedicated entry-exit ramp from SR 826.
- This Phase could also include the single story free-standing retail building at the front of the site (west end) should market demand for such a retail facility result in it being rolled into Phase 2.
- This Phase would require significant investment from the public sector agencies to construct the T-Ramp, but the on-site improvements would logically be developed under the P3 contract.
- As this Phase of improvements would commence after the completion of the Garage in Phase 1, the design for the Garage itself would have been facilitated to allow for the subsequent T-Ramp connection. The garage top would be reserved for the new bus transit stop plaza, with additional provisions for the lower level direct private vehicle access, as well as the future Phase 3 cross-parcel connection for pedestrian and vehicles across the Metrorail lines.
- It would likely be possible to determine during the First Phase if the T-Ramp will be eventually be developed, and if the potential becomes limited due to cost and other technical hurdles, then the Garage itself could be reconfigured during this Phase to swap the location of the bus terminal to the bottom level, and replace the top level with parking so there is no net functional loss. This would require some access, circulation and ramp adjustments on the bottom level. Additionally this alternative would require reassessment of the cross-parcel 'bridge' design, which should be determined before commencement of Phase 3.

REGIONAL MANAGED LANES NETWORK (RMLN) SUPPORT

The diagram shown on page 97 shows the enlarged detail from the Final Preferred Concept Plan of the proposed SR 826 'T-Ramp' and cross-parcel access bridge for pedestrian, bus and private vehicle circulation. This was based on the two images of "example" T-Ramp configurations (below) provided by MDT during the conceptual design stage.

- Ultimately, there 3 Phases of the development will provide a combined excess capacity of 950 spaces that would directly support the commuter use of the RMLN.
- These contribute to enhanced ridership facilitation therein for Metrorail and Metrobus.
- This would include the future planned Palmetto Express service, which is linked to the regional (Broward and Miami-Dade) commuter support, thereby providing another option for partial congestion relief.

Example of conceptional T-Ramp configuration – Provided by Miami-Dade Transit (MDT)

Second example of conceptional T-Ramp configuration – Provided by Miami-Dade Transit (MDT)

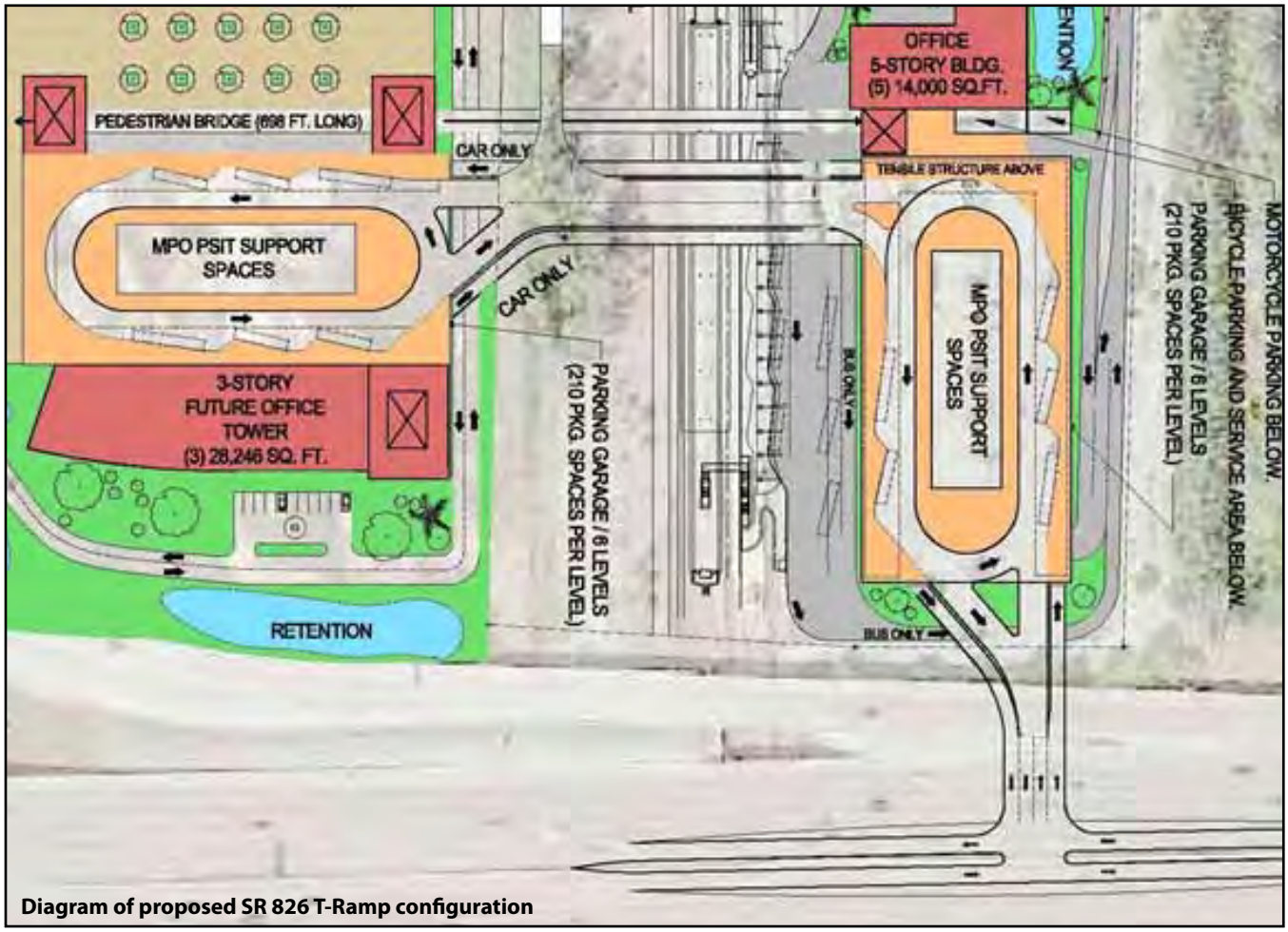

Diagram of proposed SR 826 T-Ramp configuration

Phase 3 Development — Years: 2025 - 2030+

Obviously the 3rd and Final Phase of development is contingent upon the successful site acquisition by Miami-Dade County and MDT. With the next portion funding from FDOT to pursue the purchase not likely until 2019 or later, the Phase 1 and Phase 2 developments will be well underway, and the 'known' joint site development coordination factors will be determined. The advantage of the 'expansion' site is that it can be planned and developed almost entirely independent of the two earlier phases, requiring only defined connection points for the vehicular and pedestrian bridges from Phase 2. As discussed in the Phase 2 outline above, should the SR 826 direct access T-Ramp never come to fruition, the garage in Phase 3 would be reprogrammed to allow for a ground floor bus terminal, but with a direct connection to the pedestrian bridge over to the Palmetto Station terminal.

- The initial step in this Final development phase must focus initially on the design and engineering to plan for the construction of a newly expanded traffic access connection to NW 74th Street. The ultimate plans for Phase 3 and the traffic warrants generated from this project will likely support full directional access, but an alternate 'rear' access route through the northern Utility easement ROW could be studied for better access and circulation to the site, as well as cross-access into the yet to be developed retail center directly west.
- A logical construction staging area for this phase could easily be programmed to operate from the portion of the site allocated for surface parking directly behind the SW single story Retail building, and the future 3-story Office Tower at the NW corner of the site.

- The second step in this Phase will involve the design and engineering related to the construction of the new on-site multi-level Parking garage, the attached Vehicular & Pedestrian Bridge, and the 3-story Office Tower on the east side of the site. As described in Phase 1, the office tower that 'anchors' the parking garage could be constructed as a 'shell' building with interior build-outs to follow as occupancy increases via evolving market demand.
- The next stage of this Phase would include the two frontage oriented single-story Retail buildings, and their public retail transit plaza(s) associated to connect them to the transit center hub. Careful design criteria should be in-place before a P3 offering to ensure these retail facilities maintain an orientation towards the transit service and avoid evolving into more 'strip' retail development serving only the NW 74th Street thoroughfare.
- The last stage of development in this Final 3rd Phase would be the future 3-story Office Tower at the NW corner of the site. This delay could ultimately benefit the entire expansion site by allowing for a location for a continuous multi-stage single construction staging area, and may even result in a second expansion should the materials testing facility directly to the west (out-parcel) would become available and permit an expanded development program.

POTENTIAL P-3 OPPORTUNITIES

As identified and discussed in the Financial Feasibility portion of this study, Public-Private Partnerships (P3's) are contractual agreements that could be formed between Miami-Dade County and a private sector entity that would allow for greater private sector participation in the delivery and financing of the desired intermodal project. P3s can take many different forms, but the preferred arrangement for this project would require the private sector entity to take the majority of responsibility for the design, construction, financing, operations, and maintenance of the non-transit facilities as well as the transportation infrastructure that serves the multiple uses of the project. P3's can be attractive to the public sector as they provide a means to transfer project risks to the private sector and reduce public funding requirements.

For example, under the preferred design-build-finance-operate-maintain P3 contract, the private sector partner would provide the upfront funding and assumes the risk to design, build, operate, and maintain the Intermodal project over an agreed upon time period. The private sector partner will earn the desired return on its investment through the collection of lease revenues generated by the project and/or from availability payments received from the County. This type of contractual agreement, also sometimes called a concession contract, would need to be developed in accordance with the County's existing P3 Program ordinance, following precedents set by other local and state-wide similar successful P3 experiences. Public-private partnerships come in many shapes and sizes and the MDT will need to define the provisions for a partnership related to this project and facility that best meet the requirements of MDT and the travelling public. The primary P3 financing and project delivery method, which was identified as the preferred approach in this study, is summarized below.

The Design-Build-Finance-Operate-Maintain Model (DBFOM) - In this preferred project delivery model that was identified in the study, the design, construction, financing, operation, and maintenance of the project are effectively the responsibility of the private sector. The transit portions of the project to remain in control and operation by MDT would be identified and excluded from the partnership where appropriate. Some 'seed' financing for the project could be provided by the County based on the property value equity. All these activities would be typically bundled into a single contract by the public sector owner and will then be bid on by various firms, consortiums, or joint ventures. While DBFOM project delivery models tend to vary from project to project, they usually are financed by debt that is backed by a stream of revenue generated by the project (e.g., leases, user fees, parking revenue, etc.) or payments from the public sector to the private sector (e.g., availability payments). It is also expected that the private sector entity will also make an equity investment based on the non-transit development value, to be determined as the final project schematic designs are completed. The County could undertake the preparation of 'bridging documents' to establish a baseline scope of development that would set the minimum value for such an investment. The full preparation of the DBFOM contract and ultimate public offering should be guided jointly by Miami-Dade County and MDT once the full development program is agreed upon, including the inclusion or exclusion of the potential Expansion site currently under study by the MDT.

FUNDING STRATEGIES

In this study, the Potential Funding and Financing Options were identified to focus on those alternates available and the potential new funding sources for possible construction of this facility. This included traditional federal/state/local sources, joint ventures and P-3 scenarios among others, is an important step to ensure the feasibility of the potential project. Recognizing that success is always based in viable, real-world economic conditions, and as part of this study research was conducted and evaluated for the likely available public and private funding sources in a summary outline format, and related directly to the program proposed in the Conceptual Approach. These were categorized into six (6) general areas:

- General Obligation Bonds
- Revenue Bonds
- Public-Private Partnership(s)
- Tax Increment Financing
- Private Activity Bonds
- State Infrastructure Bonds

To finance the construction of the Palmetto Station Intermodal Terminal and related infrastructure, Miami-Dade Transit (MDT) as the project sponsor needed to consider which in the range of multiple investment options for the Palmetto Station site suit their needs and operational limitations. The investment options are expected to cost in the range of $54 million to $57 million, as outlined in the Estimated Cost section, and include retail space, an office tower, 6-story parking garages, and related utilities, landscaping, parking lots, and roadways. A project of this magnitude may be financed in multiple ways and it was in MDT's interest to explore all these options. While ultimately the P3 option was identified as the preferred option, it was important to consider what alternative may be logical for 'seed' financing, and/or funding of the transit improvements portions of the project that would not be appropriate to include in the P3 contract.

STRATEGIC MANAGEMENT DECISIONS

The next phase of this project is expected to evolve towards a Public-Private Partnership (P3) with a selected master developer to be determined through a public offering. To help identify the general responsibilities and decision points that must be considered by Miami-Dade County, the MPO and MDT as the sponsoring agency for this New Intermodal Terminal Facility at the Palmetto Station, the following outline identifies some strategic steps that would be recommended to allow the project to proceed. These are organized by general priority, but many are likely to be conducted simultaneously.

- The County in cooperation with FDOT and MDT will need to develop a procurement procedure that would be legitimate, viable and withstand public scrutiny for partnership selection fairness and equity return.
- The minimum operational restrictions that limit transit impacts from the development activities throughout the construction period, and the life of the partners O&M contract will need to be fully prescribed for the P3 agreement.
- The County will need to study, confirm and earmark the maximum 'seed' funding sources used to initialize the project. The extent that these can be allocated to pay for 'off-site' improvement and utilities service capacity improvements that would limit the potential P3 partner pre-development soft costs will increase the attractiveness to the market and provide a more competitive offering climate.
- Additionally short-term and long-term capital budget impacts needs to be evaluated where there could be system expenditures for improvements that are not going to be included in the P3 offering and master agreement.
- The land use and zoning criteria limitations, as well as provisions for expedited development approvals, should be negotiated with the Town of Medley and the County. These incentives can be included in the P3 offering, as well as establishing the minimum guarantee of development extents allowed so that the private sector has a basis of risk comfort.
- The initial steps must proceed with the completion of draft development and operational agreements with a potential partner, and should confirm minimum delivery program criteria, maximum development schedules

including mid-term achievement thresholds, and potential incentives for benchmark bonuses.

- Bridging documents should be developed to illustrate such minimum in the site context, and identify non-negotiable physical limitations.
- The P3 partner will have its' own criteria and incentives for proceeding, which were not a study component of this project. That process could also result in potential 'reordering' of the stepped priorities, with the focus on an accelerated timeline to facilitate a Design-Build proposal, allowing the project to proceed simultaneously with a more defined market-driven schedule.
- Since the exact timing of the potential expansion parcel has yet to be confirmed, the draft agreement will need to provide a prescription for the partnership extension, as well as basis items for exclusion by either party.
- Initial proposals would seem to confirm the minimum criteria for development to be included in the future formalized agreement that was provided by the MDT representatives, but MDC Facilities Management division should be included to plan for the management of, and lead the strategic planning of the necessary publically owned facility modifications necessary to support the new terminal, and the related site improvements such as the access and off-site improvements.
- MDT has obviously been completely integrated into this study, and the expansion site funding negotiations currently underway with FDOT should proceed with diligence to further define a more accurate likely acquisition timeframe so the 'option criteria' can be incorporated into the P3 offering.
- MDT also needs to focus planning efforts on potential temporary route impacts that could occur during construction, as well as the future route realignments once the facilities are operational. This should include coordination with Doral on their local Trolley, as well as discussions with Medley to determine the feasibility and support for a new local industrial park area employment commuter shuttle.
- MDC Traffic Management division should be coordinating on the future roadway modifications required for the terminal, as well as the temporary construction phase circulation accommodations that will be necessary.
- MDC Public Works and the Town of Medley should be actively engaged to begin planning for the necessary utilities infrastructure modifications that may be necessary to provide for all Phases of the future development.
    - This will be particularly important with the necessary NW 79th Avenue/Place improvements necessary; a demand for level of service capacity enhancements based on already approved surrounding development, but will be necessary to support the future intermodal terminal market-based (non-transit) uses.
    - Secondarily important will be the criteria for access directly off NW 74th Street at the Phase 3 entrance. Every effort should be focused on identifying means to achieve full directional access in support of possible mass transit circulation options here.
- Miami Parking Authority, a potential operator of the new terminal garage(s), should be consulted to begin planning for its' future operational needs, as well as the construction phase access accommodations that could impact public parking operations and revenue. If these operation of these facilities would remain with the P3 partner, then the MPA can be a valuable resource in guiding the parking agreements necessary to ensure long-term commuter support.

SUMMARY AND CLOSING

The Final Recommendations & Action Plan are the culmination of the significant work undertaken throughout the planned, and then extended schedule that evolved under this Task Work Order project. This Final Report is intended to document the entire process; data collected and studied, feedback received, alternatives explored, evaluations completed, all ultimately leading to the completed and preferred Final conceptual site development scenario. This final section of the report was focused on presenting the results of the process, with final recommendations that clearly and succinctly define the path towards the ultimate development plan and implementation, should Miami-Dade County and MDT decide to proceed further. The outline presented for the process going forward into the next stages of design and construction were intended for general consideration. While they may not include all the detailed strategies and steps that could and should be evaluated by the County, MDT and the MPO as well as other County agencies that will need to be involved to undertake the unified planning and development process to follow in potential P3 partnership, the important 'comprehensive' steps have been provided to help guide the process utilizing this study as a benchmark planning guide.

To allow for an easy reference and public distribution of this study results, an associated Executive Summary document has been developed and provided to compliment the study Final Report, which summarizes the major components and findings achieved.

The presentation materials, primarily power-point files, that were utilized in each of the SAC meetings and the Final TPC presentation were also provided in digital and hard copy format to the MPO Project Manager for the project reference files.

The Appendix that closes out this Final Report (that follows) provides the more detailed study reference documents identified throughout the study. It is intended for background reference, and is presented in an order that follows the study progression.

APPENDIX

A: ITE TRIP GENERATION MANUAL (9TH EDITION) EXCERPTS FOR EXISTING CONDITIONS

B: VOLUME PROFILE GRAPHS/FDOT TRAFFIC COUNT STATION REPORTS

C: ITE TRIP GENERATION MANUAL (9th EDITION) AND
ITE TRIP GENERATION HANDBOOK (2ND EDITION) EXCERPTS FOR FUTURE CONDITIONS

D: DIRECTIONAL TRIP DISTRIBUTION REPORT/MIAMI-DADE 2035 LRTP EXCERPTS

E: MDT ROUTE 87 RIDERSHIP SUMMARY

F: ADJACENT "COMMITTED" DEVELOPMENT PLANS (MEDLEY)

G: SAC MEETINGS ATTENDANCE SHEETS

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