



PALMETTO STATION

CONCEPT...

...TO REALITY



INTERMODAL TERMINAL FEASIBILITY STUDY EXECUTIVE SUMMARY



MIAMI-DADE
METROPOLITAN
PLANNING
ORGANIZATION

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JACOBS



PALMETTO STATION

INTRODUCTION AND STUDY OBJECTIVES

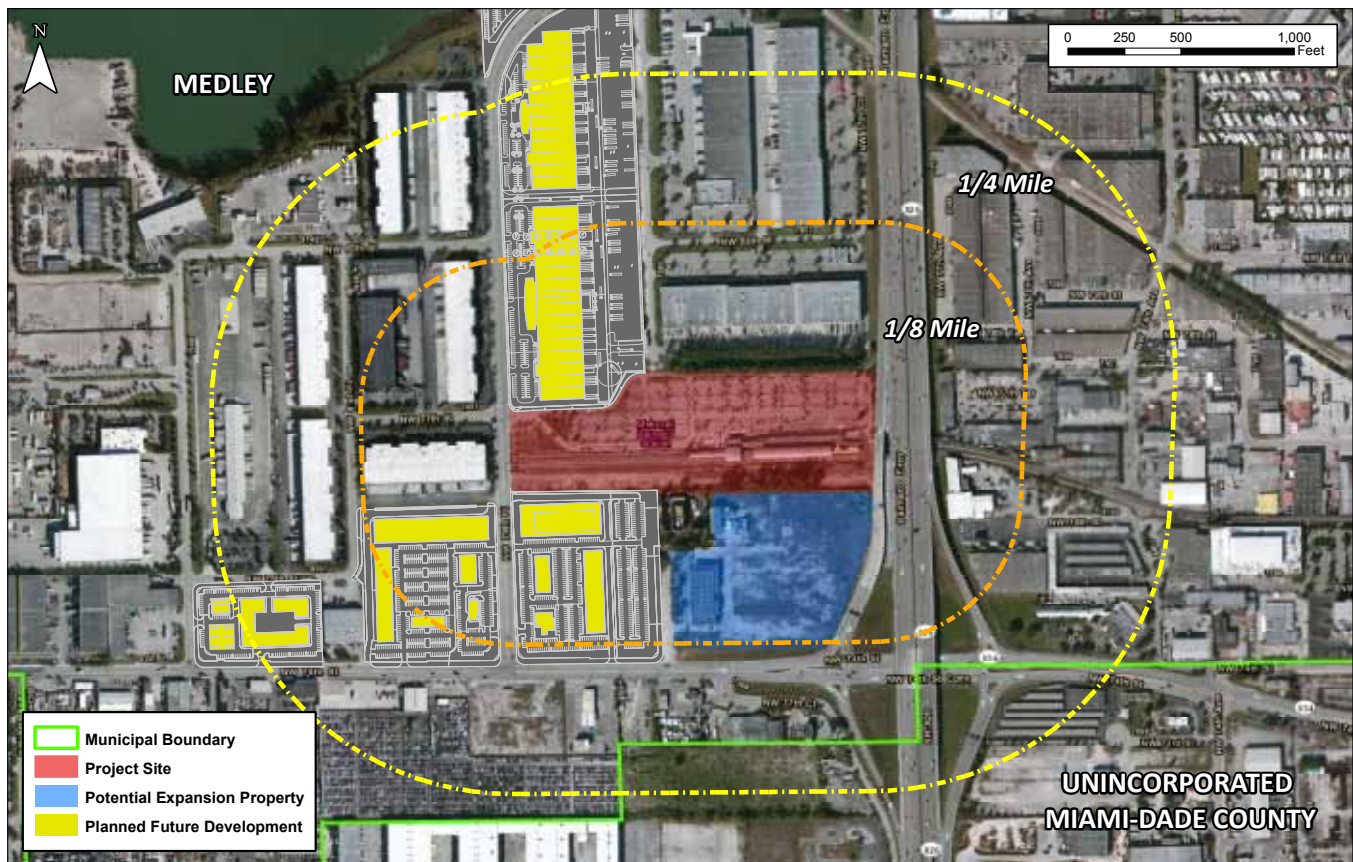
Jacobs was selected by the Miami-Dade Metropolitan Planning Organization (MPO) to prepare this study to evaluate the feasibility of establishing a centralized multimodal/intermodal transportation terminal facility located at the Palmetto Metrorail Station. The Metrorail 'Green' line currently terminates at the Palmetto Station which is located just west of SR-826/Palmetto Expressway and north of NW 74th Street. The major objectives of the Palmetto Station Intermodal Terminal Feasibility Study 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 study included three general phases:

- I. Baseline Assessment and Inventory** - Data collection and analysis to develop the project's planning parameters.
- II. Design Consideration** - Detailed gathering of building and site components necessary to make it successful.
- III. Development Plan Options and Recommendations** - Determine and validate the best site configuration for intermodal facility.



Aerial View: Location of Project and Radius of Influence

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. Five (5) key sites were studied, and included:

- **Carrollton Intermodal Center** - Carrollton, Texas
- **Doraville Station (MARTA)** - Atlanta, Georgia
- **St. Louis Shaw Park Avenue Transit Center** - Clayton, Missouri
- **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:

- Transit** - The data collected in this sub-task served to determine the required capacity of the proposed facility for Miami-Dade Transit (MDT) and Broward County Transit (BCT) buses. This included number and types of routes servicing the Station, passenger movement by route and/or service, and the bus bays configurations.
- 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. In addition, traffic volume and mix along the streets in the adjacent area to the proposed facility was examined with cross sections, location of traffic signals, utilities, and general accessibility to the terminal area.
- Miscellaneous information** - This information assisted in developing the other elements of the proposed facility, and included the number and types of parking spaces, the number of carpools and vanpools, number of intercity buses, number of taxi companies servicing the Station, number of jitney-vans and their routes, bicycle and pedestrian facilities and other useful information to assist in the development of the study.



Carrollton Intermodal Center: Located in Carrollton, Texas is a national example of “best practices” offering similar scope and size.

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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:

- Field inspections to identify critical impact areas
- Analyze traffic and transit impacts of the existing traffic circulation patterns
- Analyze the impacts for the bicycle and pedestrian circulation patterns
- Identify pros and cons of any roadway network modifications
- 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.

FUTURE CONDITIONS

The *Trip Generation Manual* (9th Edition) published by ITE was referenced to estimate the trip generation characteristics of the likely proposed development scenario. The Trip Generation Summary Chart summarizes the total vehicle trips anticipated to access the site with the Palmetto Intermodal Terminal Facility in place. 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.

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

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)

REAL ESTATE, DEMOGRAPHIC AND MARKET ANALYSIS

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

DEMOGRAPHIC ANALYSIS - MARKET POTENTIAL

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**.

POPULATION BY AGE, RACE AND ETHNICITY

The census projection for the study area forecasts a predominantly older population in 2018. 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).

MARKET POTENTIAL AND CONSUMER BEHAVIOR

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**. 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.

REAL ESTATE ANALYSIS - OUTLOOK AND PERFORMANCE

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 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.

GENERAL ASSESSMENT AND 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 Transit-Oriented Development (TOD) must be planned with the local community by addressing issues such as area master plan, pedestrian, public infrastructure, transit ridership and 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. To develop an **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. **Phased and incremental development** in Phase 1 then allow to gain momentum based on market absorption.

PALMETTO STATION INTERMODAL TERMINAL FEASIBILITY STUDY

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						

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:

- 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)

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.

INTERACTIVE ANALYSIS PROCESS

The overall work in this phase of the study was conducted in 3 generalized steps:

STEP 1: Basis of Programming - The basis of the Site Development Concept Alternatives prepared in the following task, led to the final selected Scheme, which was designed to meet the Initial Development Program requirements.

STEP 2: Architectural Studies - Massing layouts to confirm facility functions were prepared for use in site planning.

STEP 3: Site Plan Development - Conceptual layouts were developed to explore maximum build-out potential.

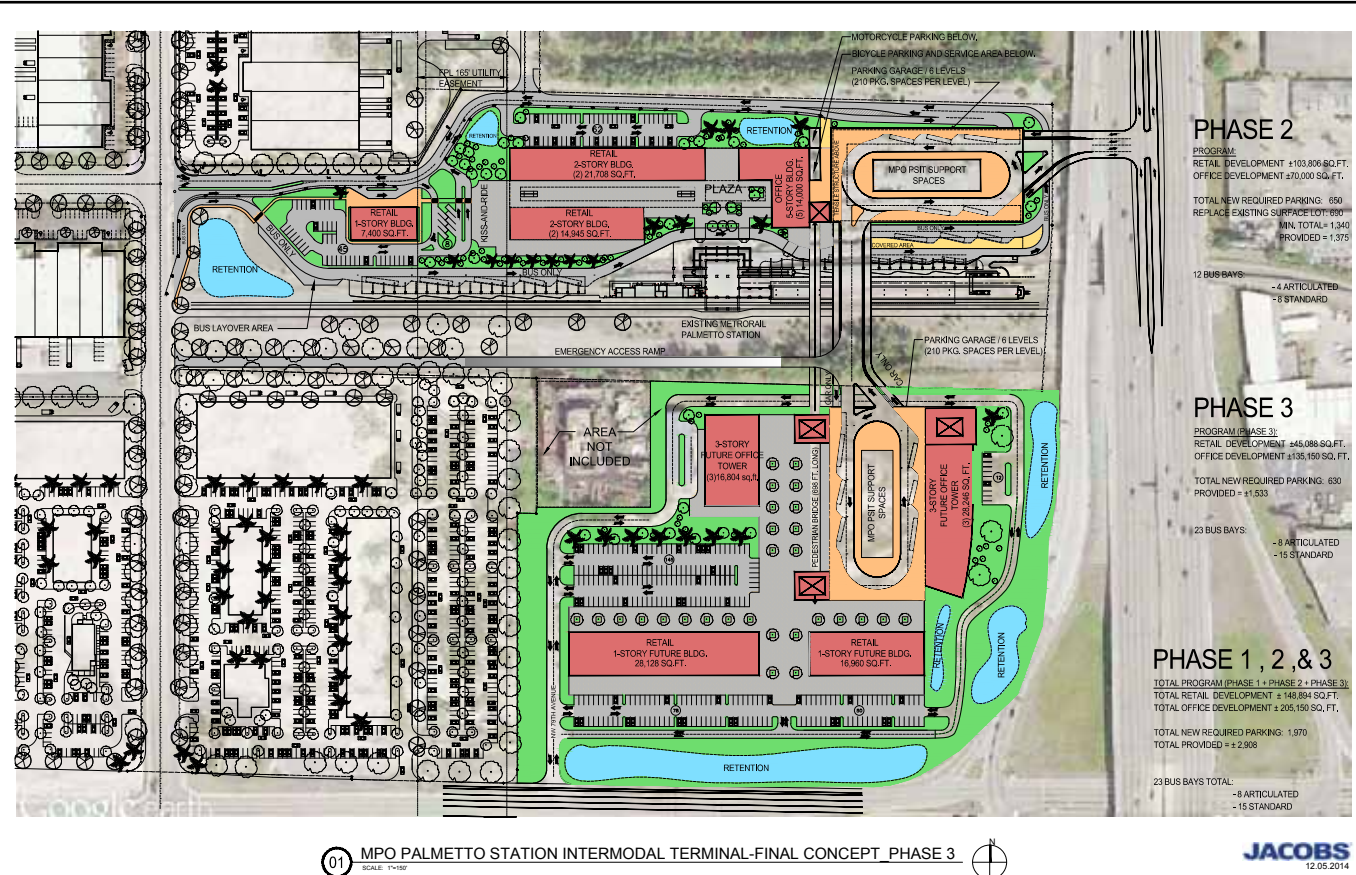
EVALUATION AND FINAL SITE DEVELOPMENT CONFIGURATION

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:

- **Roadways** - Access and roadway improvements necessary to alleviate traffic congestion..
- **Transit** - Transit service changes, parking/layover for buses, passenger waiting areas and a transit circulation plan.
- **Facility** - Type(s), connectivity and accessibility to Metrorail, parking, commercial, retail and office space.
- **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, facilities, circulation plan, sidewalks, and crossings.
- **Miscellaneous** - Economic impact to the adjacent area, aesthetic design, landscaping, ADA compliance, lighting, safety and security, technology, signage, advertisement & marketing.

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. 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.



Proposed MPO Palmetto Station Intermodal Terminal: All Phases Visualization

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FINANCIAL FEASIBILITY ANALYSIS

As the Final Site Development Concept was developed, the study proceeded concurrently with an analysis conducted to identify the financial aspects of the project and consider potential phasing identified. This was completed in two general categories; costs and funding.

A. Estimated Development Costs - The analysis evaluated the potential construction costs for both buildings and site improvements for the proposed facility. The investment options are expected to cost in the range of \$54 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.

B. Potential Funding and Financing Options - These were categorized into six general areas: General Obligation Bonds, Revenue Bonds, Public-Private Partnership(s), Tax Increment Financing, Private Activity Bonds and State Infrastructure Bonds. The purpose of the last two 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. Ultimately, the **Design-Build-Finance-Operate-Maintain Model (DBFOM)** was the 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.

RECOMMENDATIONS AND ACTION PLAN

At the completion of this study the MPO and MDT sought to develop a set of recommendations and 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 **Local Circulator Option** was presented to reduce traffic in the area, and further alleviate vehicle trips associated with direct access to the intermodal facility. The following phasing sequences were recommended:

Phase 1 Development: Years 2015-2020 - This phase would focus on the design and engineering plans for new site entry configurations and relocation site circulation routes for MDT and private vehicle access.

Phase 2 Development: Years 2020-2025 - Relates to the approval and implementation of the proposed T-Ramp under the SR 826 expansion.

Phase 3 Development: Years 2025-2030+ - Would focus on expanding traffic access to NW 74th Street, providing a direct connection to the pedestrian bridge over to the Palmetto Station terminal and on-site multi-level parking garage.



MPO Palmetto Station Intermodal Terminal: 3-D conceptual visualization at Phase 3 of the project.