



DORAL TROLLEY

SMART PLAN COORDINATION STUDY | EXECUTIVE SUMMARY



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EXECUTIVE

SUMMARY

RECOMMENDED ALTERNATIVE: HUB & SPOKE

DORAL TROLLEY ACTION PLAN

In 2002, Miami-Dade County approved a half penny local surtax with the purpose of constructing the People's Transportation Plan (PTP). This plan intended to bring premium transit services to the County. In 2016, the County's Transportation Planning Organization (TPO) voted unanimously to advance six (6) of the PTP's rapid transit corridors. This new development of the PTP has been labeled the SMART Plan and includes a network of Bus Express Rapid Transit (BERT) service in addition to the rapid transit corridors. A renewed effort to implement mass transit in the County comes at a crucial time when Florida has become the third most populous state, with Miami-Dade being the most populous county and part of the Country's fourth largest urbanized metro area.

The County's growth is exacerbating the need for mobility options as congestion becomes more widespread and intense throughout the thirty-four municipalities and unincorporated areas of the County. The Federal Highway Administration (FHWA) estimates the annual cost of congestion to motorists in urban areas at approximately \$7 billion. Not only does congestion represent a significant cost and economic burden to the citizens of Miami-Dade, it also hinders the County's ability to keep growing and enhancing the well-being of its residents.

The County has devised a strategy around the SMART Plan's six (6) premium corridors serving as the main options for regional mobility. This strategy requires local services to provide short-to-medium distance trips to feed riders into the primary corridors that mobilize customers locally and regionally. This is where systems such as the Doral Trolley System (DTS) have been established to support the County's transit system. By enhancing the local circulators, new premium transit services can be connected, coordinated, and synchronized to develop an efficient distribution network.

With the understanding that sustainable growth requires diverse transportation solutions that are nimble to change, this study aims to analyze and evaluate the existing DTS to recommend modification, enhancement, and/or expansion solutions to better serve the City and the County. This study also aims to define target travel markets and connect the DTS with other existing and planned municipal, County, and regional transit services. This will be accomplished through meeting the following objectives:

- Address Title VI of the Civil Rights Act of 1964 regarding nondiscriminatory transportation for all customers and potential customers of the DTS
- Integrate the Strategic Miami Area Rapid Transit (SMART) Plan and University Transit Management Association (UTMA) services with the DTS
- Develop a comprehensive design guideline for transit stop infrastructure and amenities

This study begins with an analysis of the existing trolley system. This analysis looks at the trolley's management and organizational structure, operating and maintenance cost, ridership, sociocultural and economic characteristics, and existing connectivity to County transit with the intention of understanding how well the current systems meet the City's needs. Supplemented with field reviews, peer system analysis, and coordination with multiple stakeholders, additional insights supplemented the existing system review and were used to develop a comprehensive list of issues and opportunities.

This study proceeds to developed six (6) trolley routing alternatives with the intent of fixing identified issues and exploiting available opportunities. These alternatives are then ranked based on different metrics, including: total walkshed coverage, average route length, total major origin-destination parts connected, average accessible major origin-destination points per route, intrasystem transfer points and connecting routes, total annual projected ridership (15-minute headways 7 days a week), and total annual opening year cost. Based on the proposed alternative scoring and trade-offs, one (1) alternative is recommended for implementation.

In addition to the routing alternative recommendation, this study looks at providing other policy, stakeholder, and systemwide recommendations. In sum, all recommendations are prioritized and organized in an Action Plan based on ease of implementation and logical sequencing. The Action Plan outlines a "road map" for implementing recommendations resulting from this study. The plan lists steps to be accomplished by the City of Doral staff and elected officials. Overall, the plan outlines needed coordination, agreements or amendments, project development phases, and formal actions by government committees.



RECOMMENDED ALTERNATIVE: HUB & SPOKE

The recommended trolley routing alternative draws inspiration from Delta Airlines and its revolutionary hub and spoke model pioneered in 1955. This alternative modifies Routes 1 by making it shorter and limiting its travel path to the southern area of the City. Route 2 is transformed into a more linear corridor to improve the routes efficiency by serving the commercial and retail developments along Doral Boulevard and NW 87th Avenue while being anchored by two logical terminals, Miami-Dade College West Campus and the Palmetto Metrorail Station. Route 3 remains mostly unchanged with the exception of a new proposed service to the City's annexed area of Lest Tern Lake (Section 6, Township 53 South, Range 40). The Hub & Spoke alternative keeps Route 4/FIU Route unchanged. In addition, the recommended alternative adds two (2) new routes that supplement Route 1 and 3 by providing one-way service in the opposite direction (see new Dark Blue and Orange routes). The Light Blue Route travels counterclockwise while the Dark Blue Route travels clockwise. This operation mimics the Green Route and the Orange Route, which travel counterclockwise and clockwise respectively. The Yellow Route and Purple Route have one-way linear operations.

The most significant benefit of the Hub & Spoke alternative is that four (4) routes were developed to intersect at a centralized hub in the vicinity of Downtown Doral. From this major transfer point passengers are able to access any location within the City. This simplifies trip planning because riders can be guaranteed most routes lead to the central hub. Passengers also have increased flexibility because the central hub may provide convenient multimodal access by allowing drop off/pick-up, extended parking times, and enhanced bicycle/pedestrian connectivity. This allows for most transfers to occur in a highly active and functional place as opposed to on intersections and along corridors.

The central hub can also be collocated or integrated with a mixed-use development. By creating transit-oriented development within the surroundings of the hub, increased synergies can be achieved by providing more foot traffic to commercial developments and increasing ridership to the DTS. Having one central hub also creates branding/naming right opportunities for additional revenues and help orient riders through placemaking with public art, wayfinding and monuments. One disadvantage with this alternative is that sometimes, if riders miss the central hub, they will need to backtrack to be able to transfer to other routes.

Table 1 and **Table 2** summarize the estimated benefits of the recommended alternative.

Table 1: Estimated Benefits

	EXISTING	HUB & SPOKE
TOTAL WALKSHED COVERAGE (SQ. MILES)	6.40	16.00
AVERAGE ROUTE LENGTH (MILES)	18.10	19.78
TOTAL MAJOR O-D CONNECTED	56.00	67.00
AVERAGE ACCESSIBLE MAJOR O-D PER ROUTE	14.00	13.40
SUMPRODUCT OF INTRASYS-TEM MAJOR TRANSFER POINTS AND CONNECTING ROUTES	29.00	45.00

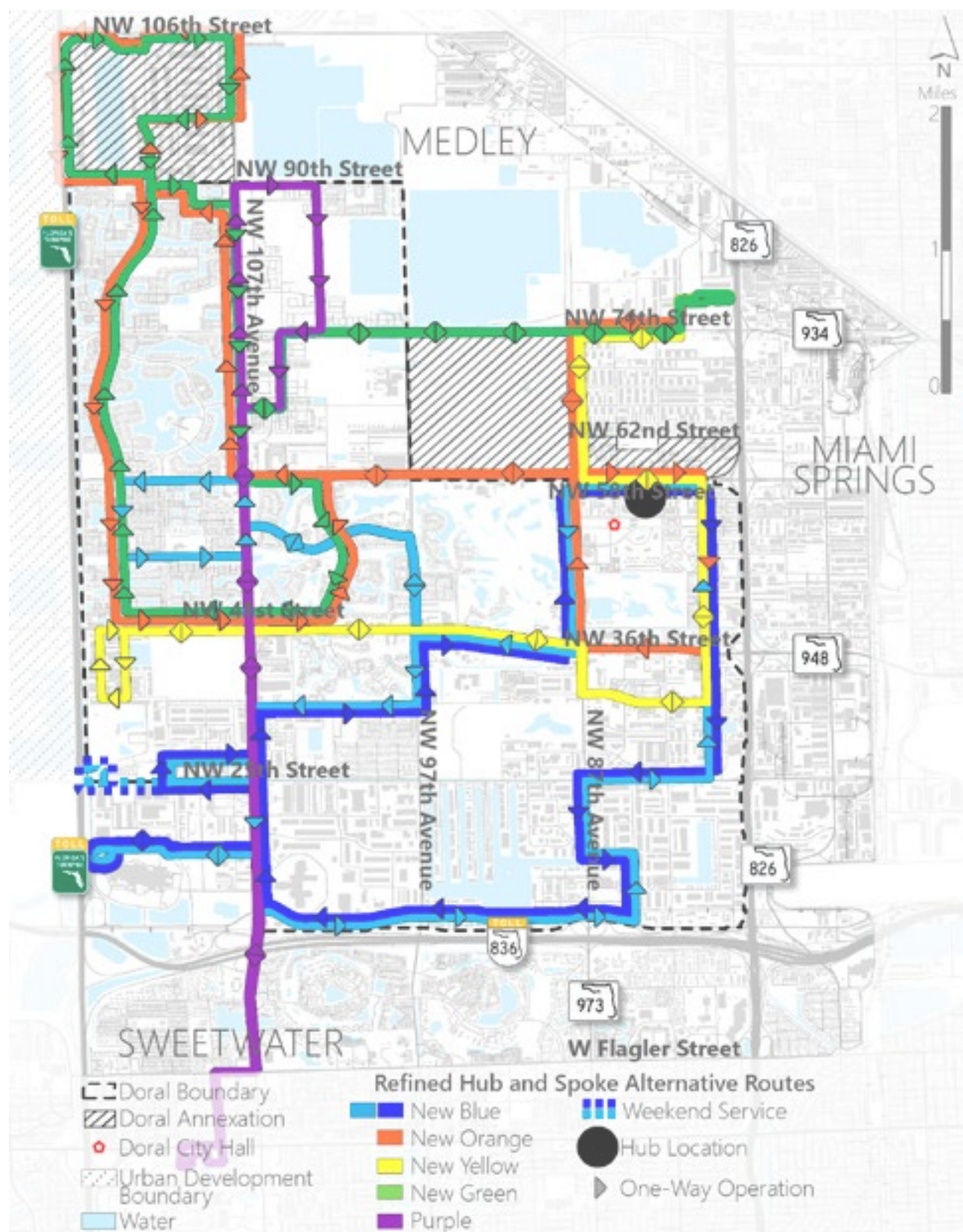
Table 2: Estimated Cost Per Rider (Option 2)

	EXISTING	HUB & SPOKE
TOTAL ANNUAL OPENING YEAR COST (15-MIN. HEADWAYS)	\$2,625,440.00	\$13,074,660.00
TOTAL ANNUAL PROJECTED RIDERSHIP (15-MIN. HEADWAYS)	728,428	1,042,300
COST PER RIDER	\$3.60	\$12.54
Δ IN COST PER RIDER	-	\$8.94

Different headway options analyzed:

- 1 Operating the proposed routing alternative with the existing vehicle fleet and determining the feasible headways for each route.
- 2 Expanding the vehicle fleet to operate the proposed routes with the same, or similar, headways as existing routes.
- 3 Expanding the vehicle fleet to operate the proposed routes with 15-minute headways.

Figure 1: Hub & Spoke Alternative



RECOMMENDED ALTERNATIVE: HUB & SPOKE

The Hub & Spoke Alternative connects the following major locations and routes (see colored circles).

- Downtown Doral Central Trolley Hub ●●●●●
- Dolphin Station ●●
- Dolphin Mall ●●
- Miami International Mall ●●●●
- Gold Coast Beverage Distributors ●●
- Walmart ●●
- Sam's Club ●●
- Jackson West Hospital ●●
- CityPlace Doral ●●
- Renaissance Middle Charter School ●
- Univision
 - NW 30th Terrace ●
 - NW 41st Street/NW 36th Street ●●●●
- Carnival Cruise Line ●
- Federal Reserve Bank of Atlanta ●●●●
- West Coast University ●●●●
- Miami-Dade Fire Rescue Headquarters ●●●●
- Publix Supermarket
 - NW 41st Street and NW 97th Avenue ●●
 - NW 58th Street and NW 107th Avenue ●●●●●
 - NW 53rd Terrace and NW 84th Avenue ●●●●
 - NW 74th Street and NW 107th Avenue ●●●●
- Winn-Dixie Supermarket
 - NW 41st Street and NW 107th Avenue ●●●●
- Sedano's Supermarket
 - NW 58th Street and NW 107th Avenue ●●
- Nicklaus Children's Doral Outpatient Center ●
- Perry Ellis International ●●●●
- Doral Academy Preparatory ●●
- Our Lady of Guadalupe Catholic Church ●●
- Miami-Dade College West ●
- Shelton Academy ●●●●
- John I Smith K-8 Center ●
- John I Smith Middle School ●
- Eugenia B. K-8 Center ●●
- Divine Savior Academy ●●
- Downtown Doral Charter Elementary and Upper School ●●●●●
- Downtown Doral office complex ●●●●●
- Palmetto Metrorail Station ●●
- Doral International Math & Science Academy ●●●●
- Dr. Rolando Espinosa K-8 Center ●●
- Ronald W. Reagan Doral Senior High School ●●●●●
- Medley Lakeside Retirement Park ●●
- Ryder Supply Chain Solutions ●●
- FIU Engineering Center ●
- FIU Modesto A. Maidique campus ●



RECOMMENDED ALTERNATIVE: HUB & SPOKE

The study team recommends implementing the Hub & Spoke routing alternative with Option 2 headway service which expands the vehicle fleet to operate the proposed routes with the same, or similar, headways as existing routes.

While this refined alternative still maintains routes that are over 30% outside of the City Boundary, this alternative can be modified to not serve the northern annexation block and, therefore, remain in compliance with the interlocal agreement until that block is annexed (i.e. the Green Route will become 15.75-miles long with 28% outside of the City Boundary and the Orange Route will become 19.65-miles long with 23% outside of the City Boundary). Furthermore, the depicted dashed lines of the Blue Route and Red Route are proposed to only operate on weekends to serve the Our Lady of Guadalupe Catholic Church. **Table 3** through **Table 5** present the assumptions and characteristics of the refined Hub & Spoke Alternative.

Overall, this alternative is expected to provide benefits beyond the small change in ridership estimated. Given the central hub and increased integration with Miami-Dade County transit services, this alternative is likely to have a compounding effect that benefits the entire regional transit system. Furthermore, note that ridership projections and cost estimates were conservatively calculated and true figures may vary given real conditions. With collected travel time data from practice runs, the City will be able to further refine the proposed routes, Hours of Operations and cost estimates.

In addition, the recommended alternative requires the development of a central hub and an expanded vehicle fleet. Hence, two of the following recommendations detail these requirements. The central hub is key to the success of this alternative. However, the City may phase the expansion of its fleet by first providing the new route services. The City can then examine how to best improve headways to the recommended option by adding vehicles to critical routes. Note that the Blue and Red Routes and Green and Orange Routes work in conjunction. Therefore, it is recommended frequencies are improved simultaneously until the desired headways are achieved.

Lastly, the start and end location for each vehicle are proposed based the total cycles a vehicle is able to complete within the proposed timeframe. Most vehicles are recommended to end their operations at either the Palmetto Metrorail Station or the central hub (i.e. Doral Central). These two (2) facilities have sufficient capacity to accommodate the vehicles before they deadhead back to the maintenance facility. Moreover, these facilities are (or will be in the case of the central hub) publicly-owned and are located close to Doral City Hall. This provides increased oversight and coordination potential.

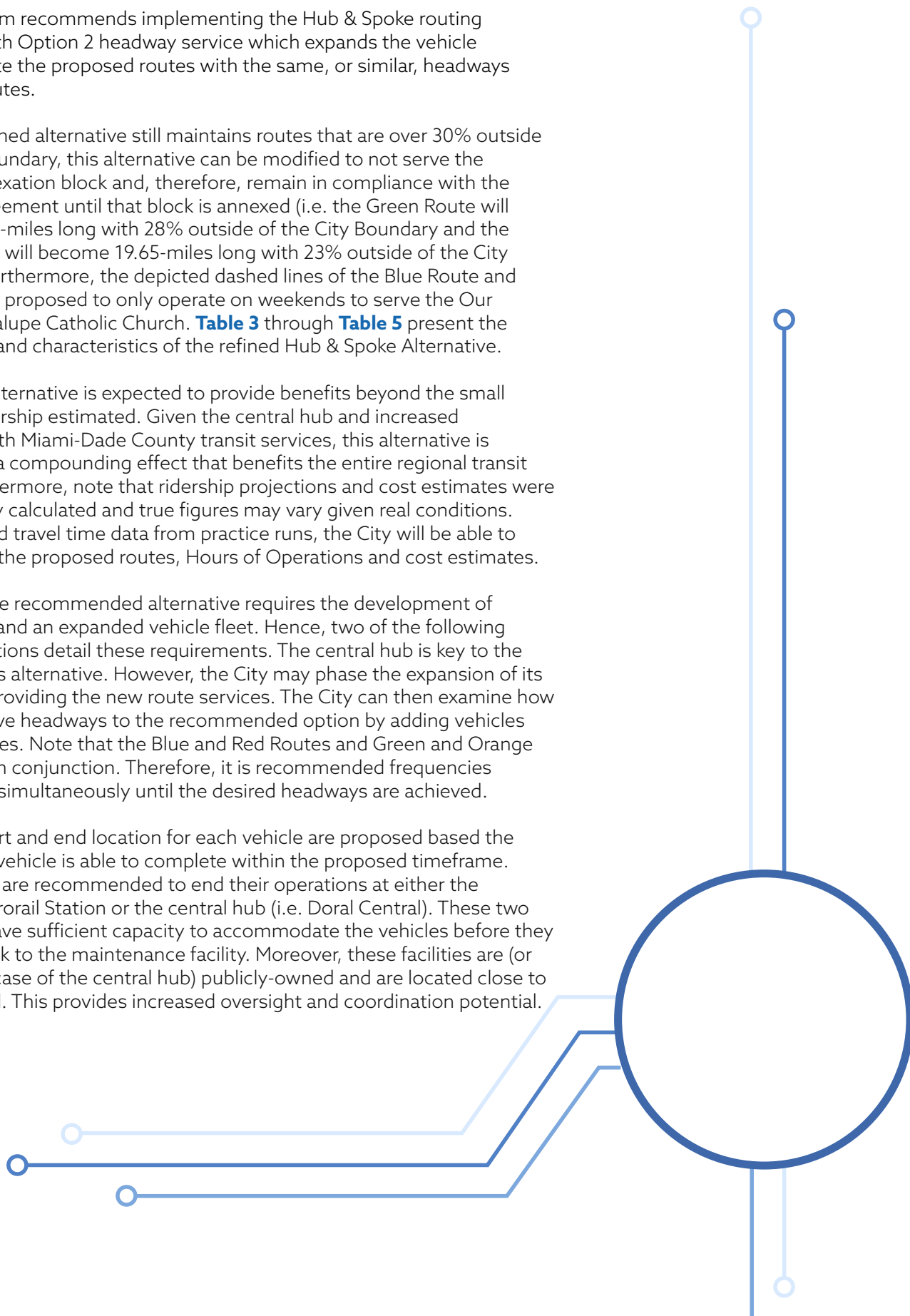


Table 3: Projected Annual Ridership for Option 2

ALTERNATIVE	WEEKDAY RIDERSHIP	SATURDAY RIDERSHIP	SUNDAY RIDERSHIP	TOTAL ANNUAL RIDERSHIP	CHANGE IN RIDERSHIP
Existing	673,358	42,107	12,963	728,428	
Hub & Spoke	936,700	81,400	24,200	1,042,300	313,872

Table 4: Projected Opening Year Cost for Option 2

ALTERNATIVE	TOTAL O&M COST	TOTAL IT MAINTENANCE COST	TOTAL CAPITAL COST	TOTAL OPENING YEAR COST	CHANGE IN OPENING YEAR COST
Existing	\$2,588,000.00	\$37,440.00	\$0.00	\$2,625,440.00	
Hub & Spoke	\$10,763,000.00	\$56,160.00	\$2,255,500.00	\$13,074,660.00	\$10,449,220.00

Table 5: Hub & Spoke Proposed Hours of Operations by Vehicle

DAY	ROUTE	BLOCK	START LOCATION	END LOCATION	START TIME	END TIME	SPAN OF SERVICE
WEEKDAY	Blue A	1	Dolphin Mall	Doral Central	5:00 AM	9:30 PM	16.5
		2	Dolphin Mall	Doral Central	5:30 AM	10:00 PM	16.5
		3	Dolphin Mall	Doral Central	6:00 AM	10:30 PM	16.5
		4	Dolphin Mall	Doral Central	6:30 AM	11:00 PM	16.5
	Blue B	1	Doral Central	Doral Central	5:00 AM	9:00 PM	16
		2	Doral Central	Doral Central	5:30 AM	9:30 PM	16
		3	Doral Central	Doral Central	6:00 AM	10:00 PM	16
		4	Doral Central	Doral Central	6:30 AM	10:30 PM	16
	Orange	1	Palmetto Metrorail Station	Palmetto Metrorail Station	6:00 AM	9:50 PM	15.83
		2	Palmetto Metrorail Station	Palmetto Metrorail Station	6:30 AM	10:20 PM	15.83
		3	Miami-Dade College West Campus	Palmetto Metrorail Station	6:00 AM	9:05 PM	15.08
		4	Miami-Dade College West Campus	Palmetto Metrorail Station	6:30 AM	9:35 PM	15.08
	Yellow	1	Doral Central	Doral Central	5:30 AM	9:30 PM	16
		2	Doral Central	Doral Central	6:00 AM	10:00 PM	16
		3	Ronald Reagan Senior High	Palmetto Metrorail Station	5:30 AM	8:30 PM	15
		4	Ronald Reagan Senior High	Palmetto Metrorail Station	6:00 AM	9:00 PM	15
	Green	1	Palmetto Metrorail Station	Palmetto Metrorail Station	5:30 AM	10:10 PM	16.67
		2	Palmetto Metrorail Station	Palmetto Metrorail Station	6:00 AM	10:40 PM	16.67
		3	Eugenia B. Thomas K-8 Center	Palmetto Metrorail Station	5:30 AM	9:20 PM	15.83
		4	Eugenia B. Thomas K-8 Center	Palmetto Metrorail Station	6:00 AM	9:50 PM	15.83
	Purple/FIU	1	FIU Modesto A. Maidique campus	FIU Modesto A. Maidique campus	5:00 AM	10:20 PM	17.33
		2	FIU Modesto A. Maidique campus	FIU Modesto A. Maidique campus	5:40 AM	11:00 PM	17.33
		3	Ronald Reagan Senior High	FIU Modesto A. Maidique campus	5:00 AM	9:40 PM	16.67
		4	Ronald Reagan Senior High	FIU Modesto A. Maidique campus	5:40 AM	10:20 PM	16.67

RECOMMENDED ALTERNATIVE: HUB & SPOKE

Table 5: Hub & Spoke Proposed Hours of Operations by Vehicle (Continued)

DAY	ROUTE	BLOCK	START LOCATION	END LOCATION	START TIME	END TIME	SPAN OF SERVICE
SATURDAY	Blue	1	Dolphin Mall	Doral Central	5:00 AM	9:30 PM	16.5
		2	Dolphin Mall	Doral Central	5:30 AM	10:00 PM	16.5
		3	Dolphin Mall	Doral Central	6:00 AM	10:30 PM	16.5
		4	Dolphin Mall	Doral Central	6:30 AM	11:00 PM	16.5
		1	Doral Central	Doral Central	5:00 AM	9:00 PM	16
		2	Doral Central	Doral Central	5:30 AM	9:30 PM	16
		3	Doral Central	Doral Central	6:00 AM	10:00 PM	16
		4	Doral Central	Doral Central	6:30 AM	10:30 PM	16
	Orange	1	Palmetto Metrorail Station	Palmetto Metrorail Station	6:00 AM	9:50 PM	15.83
		2	Palmetto Metrorail Station	Palmetto Metrorail Station	6:30 AM	10:20 PM	15.83
		3	Miami-Dade College West Campus	Palmetto Metrorail Station	6:00 AM	9:05 PM	15.08
		4	Miami-Dade College West Campus	Palmetto Metrorail Station	6:30 AM	9:35 PM	15.08
	Yellow	1	Doral Central	Doral Central	5:30 AM	9:30 PM	16
		2	Doral Central	Doral Central	6:00 AM	10:00 PM	16
		3	Ronald Reagan Senior High	Palmetto Metrorail Station	5:30 AM	8:30 PM	15
		4	Ronald Reagan Senior High	Palmetto Metrorail Station	6:00 AM	9:00 PM	15
	Green	1	Palmetto Metrorail Station	Palmetto Metrorail Station	5:30 AM	10:10 PM	16.67
		2	Palmetto Metrorail Station	Palmetto Metrorail Station	6:00 AM	10:40 PM	16.67
		3	Eugenia B. Thomas K-8 Center	Palmetto Metrorail Station	5:30 AM	9:20 PM	15.83
		4	Eugenia B. Thomas K-8 Center	Palmetto Metrorail Station	6:00 AM	9:50 PM	15.83
SUNDAY	Orange	1	Dolphin Mall	Doral Central	5:00 AM	9:30 PM	16.5
		2	Dolphin Mall	Doral Central	5:30 AM	10:00 PM	16.5
	Green	1	Doral Central	Doral Central	5:00 AM	9:00 PM	16
		2	Doral Central	Doral Central	5:30 AM	9:30 PM	16
	Yellow	1	Palmetto Metrorail Station	Palmetto Metrorail Station	6:00 AM	9:50 PM	15.83
		2	Miami-Dade College West Campus	Palmetto Metrorail Station	6:00 AM	9:05 PM	15.08

The Hub & Spoke Alternative includes the development of a Downtown Doral trolley hub to serve as the central transfer point to most transit services in the City. This hub may be developed as a standalone facility or may be incorporated into the development of a building. In July 2019, the City concluded a citywide parking study and recommended the development of a parking garage within Downtown Doral. This development presents an excellent opportunity for designing the trolley hub on the first floor of the garage similar to the Dadeland Metrorail stations and the Aventura Mall Metrobus terminal. One proposed concept presented for the recommended parking garage locates the structure in a privately-owned parcel roughly bounded by NW 53rd Street to the south, NW 54th Street to the north, NW 52nd Terrace to the west, and NW 82nd Avenue to the east. The owner of this parcel, Codina Real Estate Management, has conceptualized an office building in this parcel and in the adjacent vacant parcels. This presents an opportunity for mixed-use development within these two parcels to accommodate all identified needs within Downtown Doral. The first floor of this development can accommodate street-level retail, the trolley central hub and the first floor of the parking garage. **Figure 2** illustrates a concept of the proposed development. **Table 6** lists the parking spaces accommodated per floor by the proposed concept. Additional parking may need to be included depending on the need of the office development and retail space.

The central transit hub building shall include the following passenger amenities:

- Climate controlled and exhaust free passenger waiting and seating area with ADA compliant seating
- Customer service area
- Ticket vending machines
- Wi-Fi
- Mobile phone charging stations
- Automated Teller Machine (ATM)
- Information kiosks, food and beverage vending machines
- Refrigerated water fountains
- Public restrooms
- Public pay phones
- Bus transit information screens
- Clocks

The transit hub may also include the following support facilities:

- Information Technology (IT) room
- Security office
- Janitor's room with mop and sink
- Mechanical room/AC closet
- Electrical room

Complimentary land uses with the transit hub include:

- Transit-related development
- Public service offices (utilities, police and fire substations, etc.)
- Concession/retail stores
- Daycare
- Quick service restaurants

Other recommendations of the study are summarized in the Action Plan.

RECOMMENDED ALTERNATIVE: HUB & SPOKE

Table 6: Recommended Mixed-Use Development Parking Space Distribution

LEVEL	PARKING SPACES		TOTAL PARKING SPACES	AREA (SQ. FT.)
	STANDARD	ADA		
6	121	0	121	51,730
5	121	0	121	51,730
4	121	0	121	51,730
3	113	4	117	51,730
2	113	4	117	51,730
1	95	4	99	48,658
TOTAL	563	10	696	307,308

Parking Efficiency = 441.4 Sq. Ft./Parking Space

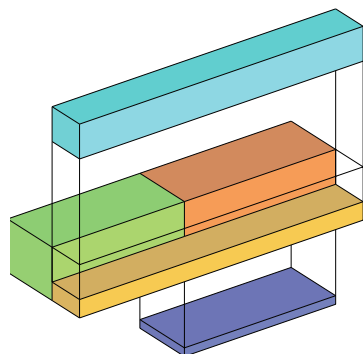
The conceptualized parking garage and Downtown Doral Central Trolley Hub were designed using the following standards:

- **Ramp Grade:** 5%
- **Ramp Length:** 210 ft
- **Floor Height:** 10.5 feet
- **Travel Lanes/Aisles:** 24 feet
- **Standard Parking Spaces:** 9 ft. by 20 ft. @ 90°
- **ADA Parking Spaces:** 12 ft. by 20 ft. with 6 ft. accessible aisle @ 90°
- **Stair Intermediate Landing:** 4 feet and 9 inches elevation from bottom floor with 1 feet floor depth
- **Stair Risers:** 18 risers at 6- and 1/3-inches height
- **Stair Risers:** 18 risers at 6- and 1/3-inches height
- **Stair Treads:** 9 @ 11 inches
- **Elevator Shaft:** 7 feet by 9 feet
- **Retail Space:** Approximately 45,820 sq. ft.
- **Residential/Office with Garage:** Approximately 60,055 sq. ft.
- **Terminal Platform:** 30 feet wide adjacent to retail space and 15 feet wide on flanks
- **Bus Layover:** 12 feet wide
- **Drop Off/Pick-up Area:** 10 feet wide



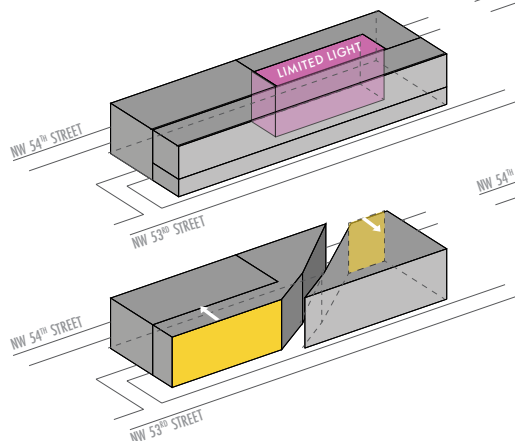
Figure 2 : Hub & Spoke Alternative Concept

PROGRAM SPACE



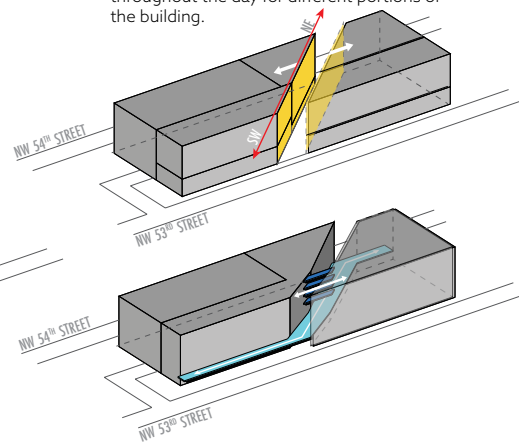
- NW 53rd Street Retail/Frontage Zone
- Residential Units
- Office Units
- Parking Garage
- Transit Hub

1 the conceptualization of the Doral Central's program space resulted in a rectangular mass that occupied the entirety of the two (2) parcels. Due to the nature of a mixed-use Transit-Oriented Development, some program space, primarily in the offices, would receive no natural light.



3 Portions of the north and south side of the building were recessed to increase sightlines of the opened channel for people passing by and to improve the view out of residential and office spaces.

2 A central channel travelling from the Southwest to the Northeast through the building was opened to maximize ambient light penetration throughout the day for different portions of the building.



4 A central platform and walkways were added for additional circulation through and across building channel. The first floor of the open channel gives Doral residents and visitors direct access from the south to the Transit Hub located on the NE quadrant of the building. On the second floor, the added platform provides increased space for retail and recreational activity to make the Doral Central a regional destination within Miami-Dade County.



DORAL TROLLEY ACTION PLAN

PRIORITY

01

RECOMMENDATION

Propose modifications to Miami-Dade DTPW Route 132 to access the MIC as opposed to the Hialeah Market Tri-Rail Station.

ACTION ITEMS

- Pass a resolution of the Mayor and the City Council urging Miami-Dade DTPW to implement the proposed route change in the short-term to create a new connection to the MIC from Downtown Doral. In the long-term, this route should operate from the proposed central hub and be included in the Better Bus Project
- Coordinate an ongoing dialogue with Miami-Dade DTPW staff

Asset

Metrobus Route

Estimated Capital Cost

\$0.00

Estimated O&M Cost

\$0.00

Items Included in Estimate

N/A

Stakeholders

- ① Miami-Dade County DTPW

DORAL TROLLEY ACTION PLAN

PRIORITY

02

RECOMMENDATION

Recommend the Miami-Dade CITT modifies the formula for distributing PTP funds for the Municipal Transportation Program to include population and employment densities as opposed to total population only.

ACTION ITEMS

- Pass a resolution of the Mayor and the City Council urging Miami-Dade CITT to modify the formula for distributing PTP funds for the Municipal Transportation Program to include population and employment densities as opposed to total population only to ensure each municipality within the County obtains a fair share of the available funding in terms of trips served

Asset

Policy

Estimated Capital Cost

\$0.00

Estimated O&M Cost

\$0.00

Items Included in Estimate

N/A

Stakeholders

- ① Miami-Dade County CITT

DORAL TROLLEY ACTION PLAN

PRIORITY

03

RECOMMENDATION

Support the prompt implementation of the Florida’s Turnpike North and South Bus Express Rapid Transit (BERT) and SR 836 Express Bus services and begin operation of the Dolphin Station transit terminal.

ACTION ITEMS

- Pass a resolution of the Mayor and the City Council urging Miami-Dade TPO, DTPW, and Expressway Authority, as well as Florida Turnpike Enterprise, to begin prompt implementation of the Florida’s Turnpike North and South Bus Express Rapid Transit (BERT) and SR 836 Express Bus services and begin operation of the Dolphin Station transit terminal

Asset

BERT Routes

Estimated Capital Cost

\$0.00

Estimated O&M Cost

\$0.00

Items Included in Estimate

N/A

Stakeholders

- ① Miami-Dade County TPO
- ② Miami-Dade County DTPW
- ③ Miami-Dade Expressway Authority
- ④ FDOT
- ⑤ Florida Turnpike Enterprise

DORAL TROLLEY ACTION PLAN

PRIORITY

04

RECOMMENDATION

Modify existing Doral Trolley routes, frequency, and schedule by implementing the Hub & Spoke routing alternative which modifies Routes 1, 2 and 3, adds a new Route 5, and maintains Route 4/FIU.

ACTION ITEMS

- Through this study, the City of Doral held two (2) public and business stakeholder meetings on 3.28.19 and 6.19.19
- Next steps include, organize a Public Outreach Workshop and Public Hearing to inform citizens of route and schedule changes
- Pass a resolution of the Mayor and the City Council approving routing, frequency, and schedule changes as well as changes to the Interlocal Agreement with Miami-Dade County
- Pass a resolution of the Board of County Commissioners of Miami-Dade County approving routing, frequency, schedule, and Interlocal Agreement changes
- Conduct a test drives of the new routes to measure travel times, refine schedules, and determine headways (ideally 15 to 30 minutes)
- Implement the routing and schedule changes

Asset

Doral Trolley Routes

Estimated Capital Cost

\$0.00

Estimated O&M Cost

\$10,819,160.00

Items Included in Estimate

- ① Vendor O&M Fees
- ② IT Maintenance Fees
- ③ Capital Cost of New Vehicle

Stakeholders

- ① Miami-Dade County TPO
- ② Miami-Dade County DTPW
- ③ Miami-Dade County CITT

DORAL TROLLEY ACTION PLAN

PRIORITY

05

RECOMMENDATION

Design and construct a Downtown Doral Central Trolley Hub to serve the Doral Trolley, Miami-Dade DTPW metrobus, FreeBee, and potential future transit services.

ACTION ITEMS

- Perform a feasibility analysis to determine preliminary engineering, safety and security, traffic operations, ITS services, parking requirements and financial viability (i.e. available or required funding sources)
- Coordinate with stakeholders to determine political will and preliminary commitments
- Pass a resolution of the Mayor and the City Council approving the procurement and funding for the transit hub
- Depending on funding sources and anticipated services, resolutions from the Mayor and City Council as well as Board of County Commissioners (Miami-Dade) may be required to enter into a new Interlocal Agreements with corresponding stakeholders
- Select the most appropriate procurement and project delivery method (Design-Build, Design-Bid-Build, P3, etc.)
- Complete Preliminary Engineering phase
- Complete Construction phase
- Pass a resolution of the Mayor and the City Council approving the use of the facility and its amenities by Miami-Dade Transit staff
- Pass a resolution of the Board of County Commissioners of Miami-Dade County approving the use of the facility and its amenities by Miami-Dade Transit staff
- Begin facility operations and use by transit providers as well as implement new traffic operation, safety and security, and ITS plans

Asset

Real Estate

Estimated Capital Cost

\$300,000.00

Estimated O&M Cost

\$0.00

Items Included in Estimate

- ① Feasibility Analysis

Stakeholders

- ① Miami-Dade County TPO
- ② Miami-Dade County DTPW
- ③ Miami-Dade County CITT
- ④ Codina Partners

DORAL TROLLEY ACTION PLAN

PRIORITY

06

RECOMMENDATION

Recommend the East-West SMART Plan Rapid Transit Corridor PD&E Study team to consider a north-south extension on NW 87th Avenue to the proposed Downtown Doral Central Trolley Hub.

ACTION ITEMS

- Pass a resolution of the Mayor and the City Council urging Miami-Dade TPO and DTPW to consider a north-south extension of the East-West SMART Plan Rapid Transit Corridor on NW 87th Avenue to the proposed Downtown Doral Central Trolley Hub
- Coordinate with Miami-Dade TPO and DTPW staff to ensure the Central Trolley Hub is modeled appropriately as a park-and-ride (to obtain more accurate results in terms of ridership forecasts), to communicate the exponential multiplier effect provided by connecting multiple transit modes in Downtown Doral and to ensure the engineering and financial feasibility of the project

Asset

East-West SMART Plan
Rapid Transit Corridor

Estimated Capital Cost

\$0.00

Estimated O&M Cost

\$0.00

Items Included in Estimate

N/A

Stakeholders

- ① Miami-Dade County TPO
- ② Miami-Dade County DTPW
- ③ Miami-Dade County CITT
- ④ Codina Partners

DORAL TROLLEY ACTION PLAN

PRIORITY

07

RECOMMENDATION

Endorse a feasibility study to assess the viability of implementing transit priority treatments (i.e., queue jumps, transit approach lanes, transit signal priority) at intersections with high congestion within the City.

ACTION ITEMS

- Conduct a traffic engineering and planning study to analyze high congested intersections within the City and determine the viability of implementing transit priority treatments
- Pass a resolution of the Mayor and the City Council approving recommendations and finding improvements
- Select the most appropriate procurement and project delivery method
- Complete Preliminary Engineering phase
- Complete Construction phase

Asset

Roadway

Estimated Capital Cost

\$300,000.00

Estimated O&M Cost

\$0.00

Items Included in Estimate

① Traffic Operation and Preliminary Engineering Study Analysis

Stakeholders

- ① Miami-Dade County TPO
- ② Miami-Dade County DTPW
- ③ Miami-Dade County CITT
- ④ FDOT

DORAL TROLLEY ACTION PLAN

PRIORITY

08

RECOMMENDATION

Support the design and construction of the Palmetto Station Intermodal Terminal and inclusion of three (3) dedicated Doral Trolley bus bays, bus/trolley layover bay, wayfinding, trolley driver break room, wide platform with full cover canopy, sufficient seating and bicycle amenities, and appropriate lighting.

ACTION ITEMS

- Pass a resolution of the Mayor and the City Council urging Miami-Dade TPO and DTPW to proceed with the development of the 2014 proposed Palmetto Station Intermodal Terminal concept (2040 LRTP Priority III, Map ID 2 and 16; 2045 LRTP Table 7.1, Unfunded Projects) and include the City of Doral as an Elevated Stakeholder to ensure specific features accommodating the Doral Trolley are included
- Coordinate an ongoing dialogue with Miami-Dade TPO and DTPW staff

Asset

Palmetto Metrorail Station

Estimated Capital Cost

\$0.00

Estimated O&M Cost

\$0.00

Items Included in Estimate

N/A

Stakeholders

- ① Miami-Dade County TPO
- ② Miami-Dade County DTPW

DORAL TROLLEY ACTION PLAN

PRIORITY

09

RECOMMENDATION

Develop a comprehensive transit stop capital program to design and construct Superstops at high activity locations, add bus shelters, and maintain stop amenities and ADA compliance.

ACTION ITEMS

- Perform a feasibility analysis to determine the scope, engineering feasibility, safety and security plan, and financial feasibility (i.e. available or required funding sources) of the program
- Pass a resolution of the Mayor and the City Council approving the development of a Transit Stop capital program with funding collected through bonds, concurrency fees, surtax, or other sources such as advertising/transit branding rights
- Hire a consultant program management team or appoint internal program management team
- Design, construct, and oversee program development
- Monitor existing and constructed assets for life-cycle replacements, financial planning, and customer satisfaction

Asset

Trolley Stops

Estimated Capital Cost

\$0.00

Estimated O&M Cost

\$0.00

Items Included in Estimate

N/A

Stakeholders

- ① Miami-Dade County TPO
- ② Miami-Dade County DTPW
- ③ Miami-Dade County CITT

DORAL TROLLEY ACTION PLAN

PRIORITY

10

RECOMMENDATION

Replace Doral Trolley vehicle fleet with fuel-efficient, attractive, and sustainable vehicles.

ACTION ITEMS

- Coordinate meetings with vendors to obtain accurate quotes and specifications
- Perform a study to select the most appropriate technology and vehicle
- Strategize on procurement method and financial feasibility (i.e. direct City purchase, turn-key vendor, vendor buyback program, RFI, etc.)
- Pass a resolution of the Mayor and the City Council approving recommended vehicle and funding fleet replacement as well as changes to the Interlocal Agreement with Miami-Dade County
- Pass a resolution of the Board of County Commissioners of Miami-Dade County approving vehicle purchase as well as changes to the Interlocal Agreement with Miami-Dade County
- Acquire fleet replacement through the approved procurement process

Asset

Trolley Vehicles

Estimated Capital Cost

Varies

Estimated O&M Cost

Varies

Items Included in Estimate

N/A

Stakeholders

- ① Miami-Dade County TPO
- ② Miami-Dade County DTPW
- ③ Miami-Dade County CITT
- ④ O&M Vendor
- ⑤ Vehicle Manufacturer

DORAL TROLLEY ACTION PLAN

PRIORITY

11

RECOMMENDATION

Recommend a new overpass/underpass across SR 821/Homestead Extension of the Florida Turnpike between Telemundo Way and NW 117th Avenue in the City of Sweetwater.

ACTION ITEMS

- Coordinate with all listed stakeholders to gauge engineering need and political will to advance this recommendation
- Perform a feasibility analysis to determine the preliminary engineering, safety, traffic operations, ITS services, and financial feasibility of this recommendation
- Pass a resolution of the Mayor and the City Council in favor of this recommendation (most likely in favor of an amendment to the LRTP/ TIP/STIP), in favor of a resolution from the City of Sweetwater, or to enter into an agreement with stakeholders for the financing, design, or construction of this recommendation

Asset

Roadway

Estimated Capital Cost

\$0.00

Estimated O&M Cost

\$0.00

Items Included in Estimate

N/A

Stakeholders

- ① Miami-Dade County TPO
- ② Miami-Dade County DTPW
- ③ Florida Turnpike Enterprise
- ④ FDOT
- ⑤ City of Sweetwater
- ⑥ Prologis
- ⑦ Taubman Centers

DORAL TROLLEY ACTION PLAN

PRIORITY

12

RECOMMENDATION

Recommend Miami-Dade DTPW implements a unified transit tracking application with user-friendly design to track, plan, and estimate transit trips on all available modes (i.e. trolley, metrobus, Metrorail, Tri-Rail, Brightline, etc.)

ACTION ITEMS

- Coordinate with Miami-Dade TPO and DTPW staff to determine the feasibility of developing one integrated software application and unifying agreement for all available transit tracking softwares in the County
- Pass a resolution of the Mayor and the City Council in favor of a unified transit tracking application

Asset

Smartphone and Web Software Application

Estimated Capital Cost

\$0.00

Estimated O&M Cost

\$0.00

Items Included in Estimate

N/A

Stakeholders

- ① Miami-Dade County TPO
- ② Miami-Dade County DTPW
- ③ Miami-Dade County CITT

DORAL TROLLEY ACTION PLAN

PRIORITY
13

RECOMMENDATION

Develop a trolley storage and maintenance yard within the City of Doral.

Asset

Trolley Storage and Maintenance Yard

Estimated Capital Cost

\$0.00

ACTION ITEMS

- Coordinate with current trolley O&M vendor to gauge interest in developing a storage and maintenance yard within the City of Doral
- Determine potential parcels for the development of the storage and maintenance yard
- Pass a resolution of the Mayor and the City Council amending the Interlocal Agreement with Miami-Dade County to approve the new location of the trolley storage and maintenance yard, amend the Interlocal Agreement with Miami-Dade County, find the design and construction of the yard, and develop the facility
- Pass a resolution of the Board of County Commissioners of Miami-Dade County approving the amendment to the Interlocal Agreement with the City of Doral
- Procure General Contractor and A/E firm to design-construct yard (this may not be required if the City is able to enter into an agreement with vendor for the development of the yard)

Estimated O&M Cost

\$0.00

Items Included in Estimate

N/A

Stakeholders

- ① Miami-Dade County TPO
- ② Miami-Dade County CITT
- ③ O&M Vendor

