PRELIMINARY ENGINEERING REPORT

Volume 1 of 2

SR 826/Palmetto Expressway Express Lanes
Project Development and Environment (PD&E) Study

Miami-Dade County, Florida

Financial Project ID Number: 432639-1-22-02
ETDM Number: 14308

DRAFT

OCTOBER 2019

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

PROFESSIONAL ENGINEER CERTIFICATION

PRELIMINARY ENGINEERING REPORT

Project: SR 826/Palmetto Expressway Express Lanes
Project Development and Environment Study
ETDM Number: 14308
Financial Project ID: 432639-1-22-02
Federal Aid Project Number: D617-027

This preliminary engineering report contains engineering information that fulfills the purpose and need for the SR 826 Project Development & Environment Study from US 1/SR 5 to SR 836/Dolphin Expressway in Miami-Dade, Florida. I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

I hereby certify that I am a registered professional engineer in the State of Florida practicing with The Corradino Group, and that I have prepared or approved the evaluation, findings, opinions, conclusions or technical advice for this project.

This item has been digitally signed and sealed by *Mike Ciscar P.E.* on the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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1.0 Project Summary

1.1 Project Description

The Florida Department of Transportation (FDOT) District Six is performing a Project Development and Environment (PD&E) Study for SR 826 (Palmetto Expressway) from US 1 (SR 5) to SR 836 (Dolphin Expressway), a distance of approximately seven miles (see ***Figure 1.1***). The PD&E Study is proposing corridor improvements that will add highway and interchange capacity with the implementation of an express lanes system and interchange improvements. The project is located in Miami-Dade County, Florida and is contained within unincorporated Miami-Dade.

The PD&E Study evaluated the following potential types of improvements:

- Implementation of dynamically priced express lanes.
- Access and ramp connections to and from the express lanes (ingress and egress access points).
- Interchange improvements – Modification of existing entrance and exit ramps serving the interchanges within the project limits.
- Intersection improvements – Widening and turn lane modifications along the crossing roadways to facilitate the ramp modifications and improve the access and operation of the corridors upstream and downstream from the interchanges.

SR 826, between US 1 and SR 874 (Don Shula Expressway), consists primarily of six travel lanes (three lanes in each direction). Between SR 874 and SR 836, the corridor consists primarily of ten travel lanes (five lanes in each direction) and two undesignated High Occupancy Vehicle (HOV) lanes (one in each direction). This segment of SR 826 is functionally classified as a Divided Urban Principal Arterial Expressway and has a posted speed limit of 55 miles per hour. The access management classification for this corridor is Class 1.2, Freeway in an existing urbanized area with limited access.

There are ten existing interchanges within the project limits. Eight of the ten interchanges provide connection to arterial/collector facilities. The other two are major system-to-system interchanges (SR 826 with SR 874 and SR 826 with SR 836). These system-to-system interchanges provide a connection between major expressways, which services and distributes traffic originating from or destined to the north, south, east, and west portions of Miami-Dade County.

Figure 1.1 – Project Location Map

1.2 Purpose and Need of the Project

The overall goals and objectives of this PD&E Study are described below:

- Evaluate the implementation of an express lanes system that will improve safety, capacity, operations, regional express lane network connectivity, expressway/interchange access, mobility and emergency evacuation.
- Identify the appropriate express lanes typical section that, combined with strategic ingress and egress locations, will service the users of the area and achieve the Purpose and Need.
- Provide relief from existing and projected traffic congestion.
- Improve the safety of the SR 826 mainline corridor by addressing speed differentials and lane weaving deficiencies between interchanges.
- Support the optimal operations of the existing roadway network.
- Maintain consistency with the current SR 826 Express Lanes Project, from SR 836 to I-75, and local projects.
- Prioritize the proposed improvements based on the area needs (short-term vs. long-term), logical segmentation and funding.

The need for this project is to add capacity to the SR 826 corridor to meet future transportation demand, improve travel time reliability and to provide long-term mobility options. Other considerations for the Purpose and Need of this project include safety, system linkage, freight movement and emergency evacuation. The primary and secondary needs for the project are discussed in further detail below.

Capacity – The project traverses four of the six transportation planning areas (Central, Northwest, South, and West) as identified within the Miami-Dade Transportation Planning Organization (TPO) 2040 Long Range Transportation Plan. The greatest population and employment growth between the years 2010 and 2040 within Miami-Dade County is expected to occur within the South transportation planning area. Population within this area is projected to increase by 49.6% while employment is projected to increase by 64.5%. The other three transportation planning areas are also anticipated to grow modestly between this

same period. Population within Central is projected to increase by 27.9% and employment by 32.5%. Population within Northwest is projected to increase by 20% and employment by 41.9%. Population within West is projected to increase by 12.5% and employment by 42.5%. The projected growth in the area will result in a significant increase in travel demand and further deteriorate the conditions of the already congested SR 826 corridor.

Safety – According to the FDOT Crash Analysis Reporting System there were a total of 2,531 crashes along the corridor within the project limits between the years 2011 and 2013, of which 1,522 (60.1%) were rear-end crashes and 259 (10.2%) were fixed object crashes. These types of crashes can be attributed to the heavy levels of congestion and operational weaving conditions within the project area. The majority of the total crashes occurred between milepost 5.7 and 6.8 (between SW 24th Street and north of Flagler Street), resulting in 811 injuries and one fatality.

Safety along the corridor will be enhanced with the construction of the express lanes. Implementing express lanes will improve mobility, reduce congestion and provide additional travel options along the corridor. Diverting some of the future traffic volumes from the general use lanes to the express lanes, will help increase gaps along the general use lanes providing more space for vehicles entering SR 826. The express lanes will also help reduce tailgating and improve traffic flow while separating long distance trips from local trips. Separating these trips will reduce weaving and sideswipe crashes. The express lanes will also create added capacity helping the corridor to operate more efficiently during emergency evacuation events.

System Linkage – SR 826 connects southern Miami-Dade County to northern Miami-Dade County and serves as a feeder route to the County's busiest east-west transportation corridor, SR 836. The SR 826 corridor provides system-level connections to I-75, Florida's Turnpike, SR 874, and SR 836. In addition, SR 826 is designated as a Strategic Intermodal System (SIS) facility. The section of SR 826 from US 1 to SR 836 serves the major western Miami-Dade County growth areas along SW 8th Street, SW 40th Street and the Dadeland South area. The corridor also provides access to Miami International Airport north and east of SR 836 and to the Dadeland Mall at SW 88th Street. This SR 826 southern segment (from US 1 to SR 836) is the final segment of a larger express lanes project for the SR 826 corridor. The northern segment, which extends from SR 836 to I-75, is already under

construction. When complete, this regional system will greatly improve capacity, safety, connectivity and peak-hour travel times.

Freight – SR 826 is an integral component of the regional freight network carrying over 10,000 trucks a day according to the 2014 Miami-Dade County Freight Plan Update. The addition of express lanes along SR 826 would create a more efficient roadway network, improving traffic flow in the general use lanes. While trucks are not allowed in express lanes, the enhanced traffic conditions along SR 826 would aid in the movement and delivery of freight.

Emergency Evacuation – In accordance with the Miami-Dade's Comprehensive Development Master Plan, SR 826 is listed as a local evacuation route in Miami-Dade County. This corridor is critical in facilitating traffic movement during emergency evacuation periods as it connects to other major arterials and highways of the state evacuation route network. Increasing the capacity of the SR 826 corridor will reduce evacuation times needed for residents of Miami-Dade County during emergency and hurricane evacuations.

1.3 Commitments

FDOT has made a series of commitments and recommendations during the PD&E Study pertaining to the SR 826 Express Lane project. The following section summarizes the commitments and recommendations that will be adhered to during future transportation phases.

1. Prior to commencing construction activities, the FDOT is committed to re-surveying the project corridor for features that could serve as potential roosting habitat and signs of the Florida bonneted bat. If any signs of the Florida bonneted bat are observed, the FDOT is committed to reinitiating consultation with the FWS to determine the appropriate course of action.

2. During the construction phase of this project, the FDOT's contractor will adhere to the most recent version of the Florida Fish and Wildlife Conservation Commission's Standard Manatee Conditions for In-Water Work to minimize the potential for adverse effects.

3. During the construction phase of this project, the FDOT's contractor will employ the most recent version of the U.S. Fish and Wildlife Service's Standard Protection Measures for the Eastern Indigo Snake to minimize the potential for adverse effects.

4. In compliance with the applicable provisions of Chapters 83-365 of the Laws of Florida designating portions of Sunset Drive as a State Historic Highway, any trees to be removed will be replaced and/or relocated with a similar type tree of equivalent size within the limits of the designated historic highway section of Sunset Drive. The tree disposition plan will be developed during final design phase of the project.

5. Four publicly-owned parks exist adjacent to the project corridor: Tropical Park, Humble Mini Park, Veterans Wayside Park, and South Dade Trail Mini Park. FDOT's contractor will not stage materials or make temporary use of these parks during construction.

6. Construction noise and vibration impacts to the project corridor will be minimized by adherence to the controls listed in the latest edition of the FDOT's Standard Specifications for Road and Bridge Construction.

7. FDOT will continue to coordinate with Miami-Dade Expressway Authority (MDX) the approach and process to modify the connections to and from SR 874 and SR 836 in and out of SR 826.

8. FDOT will continue to coordinate with Miami-Dade Transit (MDT) the approach and process to connect the SR 826 express lanes system to the US 1 Busway Corridor. The coordination will also include discussing strategies to enforce the use of the bus only lanes and the access in and out of the express lanes system.

Commitments may be revised or updated after the public hearing process.

1.4 Alternatives Analysis Summary

The objective of this PD&E Study is to evaluate alternatives that will address existing and projected operating deficiencies along this section of SR 826. In order to keep up with the growing traffic demand within the study area, three alternatives (Alternatives 1, 2 and 3) were considered, including a No-Build Alternative that maintains the existing roadway configuration and any other planned improvements along the corridor. All three alternatives propose to add express lanes (extend to the south) along this segment of SR 826 with access points at selected locations to enter and exit the express lanes system. The express lanes will be buffer-separated from the general use lanes with express lane markers, matching the same design of the express lanes project to the north. All three alternatives propose interchange, intersection and crossing roadway improvements to support the optimal operations of the SR 826 corridor.

Alternative 1 proposes one express lane in each direction between SW 56th Street and SR 874 and two express lanes in each direction between SR 874 and SR 836. The express lanes system will begin and end one lane on SR 874 and one lane south of SW 56th Street (southern limits). The express lanes will be constructed along SR 826 with major widening to the outside, approximately 10-32 feet, with a new set of bridge overpasses crossing over SR 874. This concept proposes four express lanes access points, which includes a SR 836 ramp flyover system-to-system connecting the SR 826 northbound/southbound express lanes with SR 836 eastbound/westbound median-to-median (see ***Figure 1.2***).

Alternative 2 proposes one express lane in each direction between US 1 and SR 874 and two express lanes between SR 874 and SR 836. The express lanes system will begin and end one lane on SR 874 and one lane north of US 1 (southern limits). The express lanes will be constructed along SR 826 with major widening to the outside, approximately 10-36 feet, with a new set of bridge overpasses crossing over SR 874. This concept proposes four express lanes access points, which includes a SR 836 ramp flyover system-to-system connecting the SR 826 northbound/southbound express lanes with SR 836 eastbound/westbound median-to-median (see ***Figure 1.3***).

Alternative 3 proposes one express lane in each direction between US 1 and SR 874 and two express lanes between SR 874 and SR 836, one at-grade and one elevated. The express lanes will be constructed along SR 826 with major widening to the outside, approximately 10-36 feet, with a new set of bridge overpasses crossing over SR 874. The elevated express lanes will be located along the median and the at-grade express lanes will be located between the median and the general use lanes. This concept proposes four express lanes access points. In this concept the elevated express lanes will only service traffic between SR 874 and SR 836 to and from the east. The elevated express lanes will not have any access with the at-grade express lanes or the SR 826 general use lanes. The objective of the elevated express lanes concept is to bypass the SR 826 corridor between SR 874 and SR 836, which is the main origin and destination pattern of the area. The SR 836 connection will be a ramp flyover system-to-system connecting the SR 826 northbound/southbound express lanes with SR 836 eastbound/westbound median-to-median (see ***Figure 1.4***).

Figure 1.2 – Alternative 1 Schematic Line Diagram

Figure 1.3 – Alternative 2 Schematic Line Diagram

Figure 1.4 – Alternative 3 Schematic Line Diagram

The evaluation methodology used in this study involved a combination of both comparative qualitative and quantitative analyses to determine a preferred alternative, which focused on engineering, socio-economic, environmental and project cost. The key components of the alternatives analysis were purpose and need, travel demand forecasting, geometrics, right of way impacts, construction cost and operational analysis. The alternatives analysis was geared to determine which capacity improvements were necessary to improve traffic operations, safety, transit, system linkage, regional connectivity, freight, interchange access and emergency evacuation. Alternative 2 was selected as the preferred alternative based on the alternatives alignment analysis and the evaluation results documented in this report.

1.5 Description of Preferred Alternative

The preferred alternative proposes one express lane in each direction between US 1 and SR 874 and two express lanes between SR 874 and SR 836. The express lanes system will begin and end one lane on SR 874 and one lane north of US 1(see ***Figure 1.5***). The preferred alternative proposes four express lane access points, which includes a SR 836 ramp flyover system-to-system connecting SR 826 northbound to SR 836 eastbound and SR 836 westbound to SR 826 southbound median-to-median. The express lanes will have a direct connection with the Miami-Dade Transit (MDT) US 1 South Miami-Dade Busway Corridor. This connection is included as an unfunded project in the Miami-Dade Draft 2045 Long Range Transportation Plan (LRTP) and as a Priority III project in the FY 2019-2028 Transit Development Plan (TDP).

Figure 1.5 – Preferred Alternative Schematic Line Diagram

The preferred alternative roadway typical section between US 1 and SR 874 will consist primarily of six 12-foot wide general use lanes (three lanes in each direction) with 12-foot wide auxiliary lanes at selected locations, two 12-foot wide express lanes (one lane in each direction), 12-foot wide paved inside and outside shoulders, a 2-foot wide median barrier wall, 4-foot wide buffer with express lane markers, and outside barrier walls. Between SR 874 and SR 836 the corridor will consist primarily of ten 11-foot to 12-foot wide general use lanes (five lanes in the northbound direction and five lanes in the southbound direction) with 11-foot 12-foot wide auxiliary lanes at selected locations, four 11-foot to 12-foot wide express lanes (two lanes in each direction), 10-foot to 12-foot wide inside and outside shoulders, a 2-foot wide median barrier wall, 2-foot to 4-foot wide buffer with express lane markers, and outside barrier walls. The two express lanes along this section of SR 826 will be implemented by converting the existing inside lane (undesignated HOV lane) to an express lane and by adding a second express lane through widening. The two typical sections for SR 826 are depicted in ***Figure 1.6*** and ***Figure 1.7.*** The express lanes will be constructed along SR 826 with major widening to the outside, approximately 10-36 feet, with a new set of bridge overpasses crossing over SR 874. Eleven-foot wide lanes are being proposed north of SW 8th Street in order to avoid significant linear right of way impacts to numerous residential, industrial and major retail sites. The reduction of lane width will also avoid the reconstruction of the recently completed SR 826/SR 836 Interchange, which is a multi-level system to system interchange. Eleven-foot wide lanes currently exist on this section of the corridor.

Figure 1.6 – Preferred Alternative Roadway Typical Section between US 1 and SR 874

Figure 1.7 – Preferred Alternative Roadway Typical Section between SR 874 and SR 836

As part of the preferred alternative 13 new bridges are anticipated to be added, 20 bridges are anticipated to be widened, and 8 are anticipated to be removed.

The preferred alternative proposes interchange improvements to all ten interchanges. The improvements will vary from minor to major capacity enhancements.

The preferred alternative is also proposing intersection widening and/or turn lane modifications along the crossing roadways to facilitate the ramp modifications and improve the access and operation of the corridors upstream and downstream from the interchanges (see ***Figure 1.8***).

FDOT

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
FPID No.: 432639-1-22-02
ETDM No.: 14308

PREFERRED ALTERNATIVE
LANE GEOMETRY AND CONFIGURATION

FIGURE 1.8

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

826

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PREFERRED ALTERNATIVE
LANE GEOMETRY AND CONFIGURATION

FIGURE 1.8

The total cost estimate for the preferred alternative is approximately $683.5 million. As shown in ***Table 1.1***.

Table 1.1 – Total Cost Estimate

Category	Cost
Construction Cost	$375.5 million
Maintenance of Traffic (10%)	$37.5 million
Mobilization (8%)	$33.0 million
Project Unknown (12%)	$53.5 million
Utilities	$12.5 million
Environmental	$15.5 million
Design (8%)	$34.4 million
Right of Way	$78.6 million
Construction Engineering and Inspection (10%)	$43.0 million
Total Cost Estimate	$683.5 million

Alternative 2 is the best alternative to address the purpose and need for the project. Therefore, this alternative is the most prudent when compared with the other build alternatives for the following reasons:

- **System Linkage –** Alternative 2 will match the planned improvements for the adjacent projects south and north of the project limits. The MDT project to the south is reconfiguring and optimizing the operations of the US 1 Busway corridor including a potential Bus Rapid Transit route connecting to the SR 826 express lanes. The FDOT project to the north is constructing tolled express lanes from SR 836 to I-75 and is currently designing tolled express lanes from I-75 to I-95. Alternative 2 will provide a seamless express lanes system connection between US 1, I-75 and I-95 making the use of the express lanes more attractive within Miami-Dade County and across the county line with Broward County.

- **Regional Network Connectivity –** Alternative 2 is consistent with the FDOT Regional Managed Lanes Concept vision of having a series of express lanes systems along SR 826, I-75, I-95, I-595, and Florida's Turnpike.

- **Transit Envelope –** Alternative 2 will create an opportunity for a Bus Rapid Transit service operating within the express lanes system that will connect with the rest of the express lanes network. This transit service could have potential scheduled stops to other park-and-ride lots within the County. The additional capacity along the corridor will provide opportunities for transit expansions along the crossing roadways and along the SR 826 general use lanes.

- **Evacuation Route –** In the case of an evacuation event, SR 826 will have additional lanes between US 1 and SR 836 with Alternative 2. The additional lanes will make the corridor more effective during emergency evacuation events and emergency response.

- **Safety –** Alternative 2 will be able to separate long trips (especially from SR 874 and SR 836) from short trips with the use of the express lanes. Separating traffic from the general use lanes will alleviate traffic congestion approaching the interchanges, reduce weaving maneuvers within interchange segments and maximize throughput along the corridor. Alternative 2 is anticipated to reduce crashes related to heavy congestion, weaving maneuvers, speed differentials and interchange access.

- **Traffic Operations –** Express lanes between US 1 and SR 836 will provide superior, consistent and dependable travel times, particularly during peak travel periods. More efficient use of the existing facility is accomplished by encouraging transit and carpools to use the express lanes. Encouraging transit and carpools will reduce the number of cars in the road during peak travel periods. Through the use of dynamic pricing, FDOT can manage the amount of traffic in the express lanes and maintain free-flowing speeds even when the general use lanes are congested. Motorists who choose to use the express lanes will benefit from faster and reliable travel times. With more reliable travel speeds, transit agencies can enhance transit service along the entire corridor. Long trip motorists that commute daily between US 1 and SR 836 will benefit from using the express lanes by improving their travel time during peak travel periods. While trucks are not allowed in express lanes, the enhanced traffic conditions along SR 826 would aid in the movement and delivery of freight. Alternative 2 provides the most

locations with LOS D or better throughout the corridor when compared against the other build alternatives.

- **Capacity –** Alternative 2 adds corridor capacity between US 1 and SR 836. The proposed improvements recommended along the corridor will process 10% more traffic on average than the No-Build Alternative, which is higher than the other build alternatives.

- **Project Cost and Schedule –** Alternative 2, when compared against Alternative 3, will cost significantly less with a shorter construction schedule and less complexed maintenance of traffic plan.

Based on the evaluation conducted and documented in this report, it is clear that Alternative 2 will meet the purpose and need of the project and the overall project objectives of this PD&E Study.

1.6 List of Technical Documents

Table 1.2 – List of Technical Documents

Technical Document	Date
Public Involvement:	
Public Involvement Plan	November 2017
Public Involvement Report Summary	TBD
Engineering:	
SR 826/Palmetto Expressway Express Lanes Feasibility Study Report	September 2016
Methodology Letter of Understanding	March 2018
Crash Analysis Report	August 2018
Traffic Data Collection Report	May 2019
Project Traffic Forecasting Memorandum	May 2019
Traffic Analysis Technical Memorandum	July 2019 (Draft)
Preliminary Engineering Report (PER)	August 2019 (Draft)
Systems Interchange Modification Report	August 2019 (Draft)
Location Hydraulics Report	August 2019 (Draft)
Drainage/Pond Siting Report	August 2019 (Draft)
Bridge Analysis Report (Appendix to PER)	August 2019 (Draft)
ITS Technical Memorandum	August 2019 (Draft)
Concept of Operations Memorandum	August 2019 (Draft)
Tolling Technical Site Memorandum	August 2019 (Draft)
Environmental:	
Categorical Exclusion Type II Report	August 2019 (Draft)
Section 4(f) Determination of Applicability	December 2018
Section 4(f) No Use Forms	January 2019
Water Quality Impact Evaluation (WQIE) Checklist	August 2019 (Draft)
Cultural Resource Assessment Report	September 2019 (Draft)
Section 106 Effects Case Study	November 2019 (Draft)
Noise Report Study	August 2019 (Draft)
Air Quality Technical Memorandum	August 2019 (Draft)
Contamination Screening Evaluation Report	July 2019 (Draft)
Conceptual Stage Relocation Plan	December 2018 (Draft)
Sociocultural Effects Technical Memorandum	August 2019 (Draft)
Natural Resources Evaluation (NRE)	July 2019 (Draft)

2.0 Existing Conditions

The methodology utilized for evaluating the existing conditions within the study area consisted of data gathering in the areas of roadway, bridge, and engineering characteristics. The existing conditions assessment began with the collection and review of all data pertaining to the existing facility through reviewing existing documents, conducting on-site inventories and collecting pertinent data that would serve as a basis for evaluation. The following sections describe the existing conditions within the study limits.

2.1 Roadway

SR 826, between US 1 and SR 874, consists of five to six 12-foot wide general use lanes (three lanes in the northbound direction and two to three lanes in the southbound direction) with 12-foot wide auxiliary lanes at selected locations, 11.5-foot to 13-foot wide paved outside shoulders, 11-foot wide paved inside shoulders, a 2-foot wide median barrier wall, and outside barrier walls. Between SR 874 and SR 836 the corridor consists primarily of twelve 11-foot to 14-foot wide general use lanes (six lanes in each direction), 8-foot to 10.5-foot wide outside shoulders, 11-foot wide paved inside shoulders, a 2-foot wide median barrier wall, and outside barrier walls. The two typical sections for SR 826 are depicted in ***Figure 2.1*** and ***Figure 2.2.*** There are no typical section changes from committed projects within the study area. However, FDOT is currently constructing a SR 826 project adding express lanes between SW 8th Street and I-75 (FPID# 432687-1-52-01), which partially overlaps with the PD&E Study limits. These improvements are expected to be open to traffic before the implementation of this project.

Bridge and structure features are documents in ***Section 2.22***.

Figure 2.1 – Existing Roadway Typical Section between US 1 and SR 874

Figure 2.2 – Existing Roadway Typical Section between SR 874 and SR 836

2.2 Right of Way

The existing limited access right of way varies within the study limits. The right of way is generally consistent throughout the corridor except at the interchanges, where it varies to accommodate entrance and exit ramps. ***Table 2.1*** summarizes the available right of way along the corridor.

Table 2.1 – Summary of Existing Right of Way

	Roadway Section	Right of Way Width (feet)
US 1	SW 104th Street – SR 826	118
SR 826	US 1 to SR 826 Northbound Ramp	154
	SR 826 to US 1 Southbound Ramp	147
	SW 88th Street – Sunset Drive	210
	Sunset Drive – Miller Drive	205
	Miller Drive – SR 874	350
	SR 874 – Bird Road	360
	Bird Road – Coral Way	317
	Coral Way – SW 8th Street	200
	SW 8th Street – Flagler Street	250
	Flagler Street – SR 836	460
SR 874	Miller Drive – SR 826	248

Source: FDOT ROW Survey

2.3 Roadway Classification and Context Classification

This segment of SR 826 is functionally classified as a Divided Urban Principal Arterial Expressway. The access management classification for this corridor is Class 1.2, Freeway in an existing urbanized area with limited access. Context classification is not applied to limited-access facilities.

2.4 Adjacent Land Use

This segment of SR 826 is located in the northern portion of Miami-Dade County, which is part of the Southeast Florida Region of Palm Beach, Broward and Miami-Dade Counties. No natural upland areas exist along the project corridor.

A total of 15 land use classifications were identified within the project study area. ***Table 2.2*** lists the acreage and percentage of each land use type within the

project study area. An aerial map depicting the generalized Florida Land Use, Cover and Forms Classification System (FLUCFCS) boundaries of the existing land uses is included as ***Figure 2.3***.

Table 2.2 – Existing Land Use/Vegetative Cover

FLUCFCS Classification	FLUCFCS Description	Acres	Percent
133	Multiple Dwelling Units - Low Rise	24.64	2.54%
140	Commercial and Services	76.25	7.85%
155	Other Light Industry	22.17	2.28%
1411	Shopping Centers	34.4	3.54%
111	Fixed Single Family Units	297.75	30.64%
530	Reservoirs	17.58	1.81%
185	Parks and Zoos	20.15	2.07%
148	Cemeteries	18.99	1.95%
170	Institutional	8.79	0.90%
171	Educational Facilities	9.8	1.01%
134	Multiple Dwelling Units - High Rise	38.58	3.97%
812	Railroads and Railyards	1.55	0.16%
814	Roads and Highways	372.64	38.34%
190	Open Land	2.73	0.28%
510	Streams and Waterways	25.82	2.66%
Total Land Use/Vegetative Cover		**971.84**	**100%**

Source: [1] FDOT, FLUCFCS (Third edition), 1999.

Figure 2.3 – Existing Land Use

2.5 Access Management Classification

The SR 826 access management classification is Class 1.2, Freeway in an existing urbanized area with limited access.

2.6 Design and Posted Speeds

The design and posted speeds for SR 826 are 60 miles per hour (mph) and 55 mph.

2.7 Vertical and Horizontal Alignment

The SR 826 existing geometric elements information was obtained from the as-built plans provided by the FDOT and from the project survey.

2.7.1 Cross Sections

The existing typical pavement cross slope of the corridor is consistent throughout the study limits except for the segments within horizontal curves, where the superelevation rates range from reverse crown (RC) to 0.098.

2.7.2 Horizontal Alignment

The existing horizontal alignment was reviewed and evaluated in order to identify the existing geometric characteristics along the corridor. The evaluation also verified if the existing facility meets the current design standards for horizontal curves and sight distance. The design elements reviewed during the evaluation of the existing horizontal alignment conditions included curve radius, curve length, stopping sight distance (SSD), and superelevation of the roadway surface.

The mainline alignments contain horizontal curves within the study limits. The SR 826 mainline horizontal alignment, including the northern terminus of SR 874 (Don Shula Expressway), meets AASHTO and FDOT criteria for 60 MPH limited access "Freeway and Expressways", except for the following locations and criteria:

- Stopping sight distance along the connector ramp from northbound US-1 to northbound SR 826 (AASHTO/FDOT criterium: 305 feet; existing: 227 feet). The posted speed of this ramp along the subject curve is 35 MPH, the design speed is 40 MPH. The deficiency occurs along the left-side barrier/bridge railing from near station 13+00 to 18+00.

- Stopping sight distance along the connector ramp from southbound SR 826 to southbound US 1 (AASHTO/FDOT criterium: 425 feet; existing: 349 feet). The posted speed of this ramp along the subject curve is 45mph, the design speed is 50mph. The deficiency occurs along the right-side bridge railing from near station 20+00 to 16+00.
- Curve length southbound SR 826 just south of SW 88th Street (FDOT criterium: 900 feet; existing: 785 feet)
- Curve length northbound SR 826 at the SR 874 interchange, just south of the railway (FDOT criterium: 900 feet; existing: 808 feet).
- Curve length northbound SR 826 at the SR 874 interchange, north of the railway (FDOT Criterium: 900 feet; existing: 528 feet).
- Stopping sight distance northbound SR 826 at the SR 874 interchange, north of the railway (AASHTO/FDOT criterium: 570 feet; existing 553 feet). The deficiency occurs along the left-side barrier from near station 2130+50 to 2133+00.
- Stopping sight distance northbound SR 874 to northbound SR 826 within the interchange (AASHTO/FDOT criterium: 570 feet; existing: 523 feet). The deficiency occurs along the left-side barrier from near station 71+00 to 82+00.
- Curve length northbound and southbound SR 826 between SW 24th Street and SW 8th Street (FDOT criterium: 900 feet; existing: 727 feet).
- Curve length southbound SR 826 just north of the SR 874 interchange (FDOT Criterium: 900 feet; existing: 725 feet).

Table 2.3 and ***Table 2.4*** summarizes the geometric characteristics for the existing horizontal alignment. For location and stationing references see ***Appendix A***, Corridor Base Maps.

Table 2.3 – Existing Horizontal Alignment Geometric Characteristics

Location/ Adjacent Cross Road	Station	Radius of Curve (ft)	Length of Curve (ft)	Degree of Curve D	Deflection Angle Δ	Design Speed	Superelevation e	SSD Value	SSD Required for FDOT & AASHTO	Meets FDOT & AASHTO Criteria SSD
NB SR 826 South of SW 88th Street	PI 7+63.33 PC 4+64.65 PT 10+49.02	1,146	584	4° 59' 54"	29° 12' 33" (RT)	50	0.03 (Urban)	-	-	-
NB SR 826 South of SW 88th Street	PI 17+19.32 PC 13+50.39 PT 20+00.31	550	650	10° 25 '08"	67° 42' 53" (RT)	40	0.094	227	305	X
NB SR 826 South of SW 88th Street	PI 27+99.90 PC 23+06.81 PT 32+71.92	1,910	965	2° 59' 59"	28° 57' 00" (LT)	50	0.077	427	426	✓
NB SR 826 South of SW 88th Street	PI 41+76.18 PC 36+19.19 PT 47+12.00	2,292	1,093	2° 29' 59"	27° 19' 05" (RT)	55	0.058	>1000	-	-
SB SR 826 South of SW 88th Street	PI 15+17.44 PC 12+23.44 PT 18+06.21	1,786	583	3° 12' 27"	18° 41' 34" (LT)	50	0.058	349	425	X
SB SR 826 South of SW 88th Street	PI 43+51.96 PC 39+58.72 PT 47+43.96	5,730	785*	1° 00' 00"	7° 51' 08" (LT)	60	0.03	>900	570	✓
SR 826 South of SR 874	PI 2053+20.12 PC 2048+19.20 PT 2058+21.02	76,449	1,002	0° 04' 30"	0° 45' 03" (LT)	60	NC	-	-	-
SR 826 South of SR 874	PI 2087+91.06 PC 2082+19.92 PT 2093+62.12	39,370	1,142	0° 08' 44"	1° 39' 44" (LT)	60	NC	-	-	-
SR 826 South of SR 874	PI 2103+73.63 PC 2099+02.54 PT 2108+44.67	39,370	942	0° 08' 44"	1° 22' 16" (LT)	60	NC	-	-	-
SR 826 South of SR 874	PI 2113+10.71 PC 2108+44.67 PT 2117+76.67	29,953	932	0° 11' 29"	1° 46' 58" (RT)	60	NC	-	-	-
NB SR 826 South of SR 874	PI 2121+82.51 PC 2117+76.67 PT 2125+84.25	3,281	808*	1° 44' 46"	14° 06' 03" (RT)	60	0.05	645	570	✓
NB SR 826 South of SR 874	PI 2133+50.23 PC 2130+84.93 PT 2136+13.37	2,400	528*	2° 23' 14"	12° 36' 56" (LT)	60	0.065	553	570	X
NB SR 874 to NB SR 826 Within Interchange	PI 79+12.73 PC 71+60.88 PT 85+94.28	1,923	1,433	2° 58' 49"	42° 43' 05" (LT)	60	0.077	523	570	X
SR 826 South of Flagler Street	PI 117+63.63 PC 111+58.88 PT 123+64.18	5,910	1,205	0° 58' 10"	11° 41' 06" (LT)	60	0.03	911	570	✓
SR 826 South of Flagler Street	PI 134+31.91 PC 128+59.80 PT 139+99.14	5,037	1,139	1° 08' 15"	12° 57' 33" (RT)	60	0.032	877	570	✓
SR 826 South of Flagler Street	PI 142+37.67 PC 139+99.14 PT 144+76.14	12,467	477**	0° 27' 34"	2° 11' 32" (LT)	60	NC	-	-	-
SR 826 South of Flagler Street	PI 148+32.44 PC 144+76.14 PT 151+88.72	34,384	713**	0° 10' 00"	1° 11' 15" (LT)	60	NC	-	-	-
SR 826 South of Flagler Street	PI 161+24.26 PC 155+42.64 PT 167+05.59	21,480	1,163	0° 16' 00"	3° 06' 08" (RT)	60	NC	-	-	-
SR 826 South of Flagler Street	PI 192+19.97 PC 188+55.36 PT 195+82.39	3,822	727*	1° 29' 57"	10° 53' 59" (LT)	60	0.043	722	570	✓
SR 826 South of Flagler Street	PI 230+90.73 PC 228+99.15 PT 232+81.95	3,619	383(2)	1° 35' 00"	6° 03' 40" (LT)	60	0.046	-	-	-
NB SR 826 South NW 25th Street	PI 2253+01.36 PC 2245+18.03 PT 2260+83.51	16,370	1,565	0° 21' 00"	5° 28' 45" (RT)	60	NC	>1000	570	✓
NB SR 826 South NW 25th Street	PI 2277+67.15 PC 2263+20.12 PT 2292+05.19	14,947	2,885	0° 23' 00"	11° 03' 34" (LT)	60	NC	-	-	-
NB SR 826 South NW 25th Street	PI 2296+75.51 PC 2292+05.19 PT 2301+44.90	8,686	940	0° 39' 35"	6° 11' 55" (RT)	60	RC	-	-	-

Table 2.3 – Existing Horizontal Alignment Geometric Characteristics Continued

Location/ Adjacent Cross Road	Station	Radius of Curve (ft)	Length of Curve (ft)	Degree of Curve D	Deflection Angle Δ	Design Speed	Superelevation e	SSD Value	SSD Required for FDOT & AASHTO	Meets FDOT & AASHTO Criteria SSD
SB SR 26 South NW 25th Street	PI 3252+01.17 PC 3245+23.19 PT 3258+78.75	22,918	1,356	0° 15' 00"	3° 23' 20" (RT)	60	NC	-	-	-
SB SR 26 South NW 25th Street	PI 3265+03.06 PC 3258+78.75 PT 3271+27.05	22,918	1,248	0° 15' 00"	3° 07' 15" (LT)	60	NC	-	-	-
SB SR 26 South NW 25th Street	PI 3287+77.91 PC 3283+27.69 PT 3292+27.74	12,530	900	0° 27' 26"	4° 06' 56" (LT)	60	NC	-	-	-
SB SR 826 South NW 25th Street	PI 3296+77.93 PC 3292+27.74 PT 3301+27.69	12,000	900	0° 28' 39"	4° 17' 49" (RT)	60	NC	-	-	-
SB SR 826 at SR 874 Interchange	PI 704+73.69 PC 700+00.00 PT 709+47.31	29,964	947	0° 11' 28"	1° 48' 41" (RT)	60	NC	-	-	-
SB SR 826 at SR 874 Interchange	PI 713+10.36 PC 709+47.31 PT 716+72.09	4,921	725*	1° 09' 51"	8° 26' 18" (RT)	60	0.034	794	570	✓
SB SR 826 at SR 874 Interchange	PI 719+74.30 PC 719+44.50 PT 720+04.09	5,765	60(3)	0° 59' 38"	0° 35' 32" (LT)	60	0.03	>1000	-	-
SB SR 826 at SR 874 Interchange	PI 722+86.73 PC 720+04.09 PT 725+68.91	5,730	565*	1° 00' 00"	5° 38' 52" (LT)	60	0.03	>1000	-	-

Note: [1] Based on the location of the Point of intersection (PI)
[2] This curve is accompanied by two spirals; its effective length is longer (see **Table 2.4**)
[3] This curve is an extension of the 5730' radius curve with a baseline shift
* = Does not meet length requirement
** = These two large radius NC curves can be considered as a compound curve with a length of 1190'
\- = Not Applicable
NC = Normal Crown (0.02)
SSD = Stopping Sight Distance
✗ = Does not meet criteria
✓ = Meets required criteria

Table 2.4 – Existing Spiral Curve Characteristics

Location/ Adjacent Cross Road	Degree of Curve D	Ls (ft)	Lt (ft)	St (ft)	Xs (ft)	Ys (ft)	R (ft)	P (ft)	K (ft)	TS or CS	SC or ST
South of SW 8th Street	4° 22' 30"	350	233.4	116.73	349.8	8.9	2,291.83	2.23	174.97	207+11.89	210+61.89
South of SW 8th Street	4° 22' 30"	350	233.4	116.73	349.8	8.9	2,291.83	2.23	174.97	215+50.41	219+00.41
North of SW 8th Street	2° 58' 08"	375	375	125.03	374.9	6.48	3,618.68	1.62	187.48	225+24.18	228+99.18
North of SW 8th Street	2° 58' 08"	375	375	125.03	374.9	6.48	3,618.68	1.62	187.48	232+81.98	236+56.98

2.7.3 Vertical Alignment

The existing vertical alignment was reviewed and evaluated in order to identify the existing geometric characteristics along the corridor. The evaluation also verified if the existing facilities meet the current design standards for vertical curves and sight distance. The following components were verified during the review: percent grade, changes in grade, SSD, length of vertical curve, and K value.

The K value of a vertical curve is simply the length of the curve divided by the change in grade of the curve. The minimum K value set forth in the FDOT *Florida Design Manual FDM Part 2,* is based on a minimum SSD requirement. If the curve K value meets the minimum criteria, the SSD criterion is also met. The minimum K value assigned to a crest vertical curve is based on the driver's ability to see over the curve, while for a sag vertical curve is based on the headlight illumination distance. The minimum lengths of the vertical curves and the percent grades were also verified against the criteria in *Table 210.10.4 of the FDM*.

The current as-built plans and existing roadway survey illustrates the presence of a split profile grade line (PGL), an independent PGL for each direction, along SR 826 from south of SW 98th Street (Station 0+00) to south of SW 98th (Station 48+88). The split PGL merges into a single PGL, for both directions, and continues north until the PGL splits again south of SR 874 (Stations 2118+00 and 700+00) to north of SR 874 (Stations 2138+00 and 725+00). The split PGL merges into a single PGL for both directions and continues north until it splits again south of Flagler Street (Stations 2237+00 and 3237+00) to north of SR 836 (Station 2325+00). The split PGL merges into a single PGL and continues north past the study limits.

Within the limits of the spilt PGL, the corridor has six crest vertical curves and 14 sag vertical curves. Along the single PGL, there are 18 crest vertical curves and 20 sag vertical curves.

Table 2.5 lists the vertical curve parameters and existing characteristics. For stationing references, see ***Appendix A***, Corridor Base Maps.

Table 2.5 – Existing Vertical Alignment Geometric Characteristics

Facility/ Location	Type of Curve	VPI Station	VPI Elevation (ft)	PGL High/Low (ft)	Grade (Back) %	Grade (Ahead) %	Length of Curve (ft)	K-Value	Design Speed (MPH)	K-Value Required for FDOT	K-Value Required for AASHTO	Min. Length FDOT	Meets FDOT Criteria K-Value/ Length	Meets AASHTO Criteria K-Value
South of SW 88th St (SR 826 NB)	Sag	42+64.6	20.39	24.52	-3.00	2.20	650	125	50	115	96	800	✓/X	✓
South of SW 88th St (SR 826 SB)	Sag	27+85.76	11.05	11.05	-5.00	0.00	872	174	60	136	136	800	✓/✓	X
South of SW 88th St (SR 826 SB)	Sag	38+13.45	11.53	11.53	0.00	2.20	300	136	60	136	136	800	✓/X	✓
SR 826 at SW 88th Interchange	Crest	2001+88	37.99	33.50	2.20	-2.20	850	193	60	245	151	1,800	X/X	✓
SR 826 South of Sunset Drive	Sag	2012+47.5	14.68	13.94	-2.20	-0.50	300	176	60	136	136	800	✓/X	✓
SR 826 South of Sunset Drive	Sag	2020+43	10.70	10.70	-0.50	0.00	180	360	60	136	136	800	✓/X	✓
SR 826 South of Sunset Drive	Sag	2045+48	15.14	14.74	0.20	3.00	400	143	60	136	136	800	✓/X	✓
SR 826 Just South of Sunset Drive	Crest	2050+93	31.49	32.68	3.00	0.50	480	192	60	245	151	1,000	X/X	✓
SR 826 Just North of Sunset Drive	Crest	2058+31	31.49	32.67	-0.50	-3.00	475	190	60	245	151	1,000	X/X	✓
SR 826 North of Sunset Drive	Sag	2064+33	13.28	13.28	-3.00	0.00	365	122	60	136	136	800	X/X	X
South of Miller Drive (SR 826)	Sag	2099+88.8	17.51	16.90	0.31	3.00	400	148	60	136	136	800	✓/X	✓
SR 826 at Miller Drive Interchange	Crest	2105+96.3	35.73	37.70	3.00	0.70	564	245	60	245	151	1,800	✓/X	✓
North of Miller Drive (SR 826 NB)	Crest	2125+55.9	49.45	46.80	0.70	-3.00	908	245	60	245	151	1,000	✓/X	✓
SR 826 NB at SR 874 Interchange	Sag	2136+30	17.23	15.27	-3.00	-1.31	300	177	60	136	136	800	✓/X	✓
North of Miller Drive (SR 826 SB)	Crest	707+04.3	48.92	46.30	0.70	-3.05	918	245	60	245	151	1,800	✓/X	✓
SR 826 SB at SR 874 Interchange	Sag	719+11.8	12.17	12.17	-3.05	0.00	730	240	60	136	136	800	✓/X	✓
North of SR 874 (SR 826 NB)	Sag	102+01.05	8.43	9.55	-0.36	3.00	700	208	60	136	136	800	✓/X	✓
SR 826 NB at Bird Road Interchange	Crest	114+31.05	45.33	34.40	3.00	-2.66	1550	274	60	245	151	1,800	✓/X	✓
North of Bird Road (SR 826 NB)	Sag	127+35.05	10.59	11.47	-2.66	0.40	508	166	60	136	136	800	✓/X	✓
North of Bird Road (SR 826 NB)	Crest	135+01.05	13.65	13.05	0.40	-0.40	600	753	60	245	151	1,000	✓/X	✓
North of SR 874 (SR 826 SB)	Sag	101+01.05	8.77	9.73	-0.36	3.00	600	179	60	136	136	800	✓/X	✓
SR 826 SB at Bird Road Interchange	Crest	114+31.05	48.67	37.64	3.00	-3.00	1470	245	60	245	151	1,800	✓/X	✓
North of Bird Road (SR 826 SB)	Sag	128+06.4	7.41	8.92	-3.00	0.50	700	200	60	136	136	800	✓/X	✓
North of Bird Road (SR 826 SB)	Crest	138+01.05	12.38	11.83	0.50	-0.39	500	563	60	245	151	1,000	✓/X	✓
SR 874 SB	Sag	61+78.23	15.23	15.23	-3.06	0.00	500	164	60	136	136	800	✓/X	✓

Table 2.5 – Existing Vertical Alignment Geometric Characteristics Continued

Facility/ Location	Type of Curve	VPI Station	VPI Elevation (ft)	PGL High/Low (ft)	Grade (Back) %	Grade (Ahead) %	Length of Curve (ft)	K-Value	Design Speed (MPH)	K-Value Required for FDOT	K-Value Required for AASHTO	Min. Length FDOT	Meets FDOT Criteria K-Value/ Length	Meets AASHTO Criteria K-Value
SR 874 SB	Crest	73+60.25	15.23	15.23	0.00	-0.88	400	455	60	245	151	1,000	✓/X	✓
SR 874 SB	Sag	77+10.25	12.15	12.52	-0.88	0.34	300	246	60	136	136	800	✓/X	✓
SR 874 SB	Crest	84+60.25	14.70	14.35	0.34	-0.36	400	569	60	245	151	1,800	✓/X	✓
SR 874 NB	Sag	61+78.23	15.23	15.23	-3.06	0.00	500	164	60	136	136	800	✓/X	✓
SR 874 NB	Crest	71+40.25	15.23	15.23	0.00	-0.50	400	800	60	245	151	1,800	✓/X	✓
SR 874 NB	Sag	74+94.25	13.46	13.74	-0.50	0.30	308	385	60	136	136	800	✓/X	✓
SR 874 NB	Crest	82+09.05	15.60	15.27	0.30	-0.36	400	606	60	245	151	1,000	✓/X	✓
South of Coral Way (SR 826)	Sag	159+74	9.76	9.76	0.00	3.00	600	200	60	136	136	800	✓/X	✓
SR 826 at Coral Way Interchange	Crest	172+41	47.76	33.81	3.00	-3.00	1860	310	60	245	151	1,800	✓/✓	✓
North of Coral Way (SR 826 SB)	Sag	185+23	9.31	8.97	-3.00	-0.11	600	208	60	136	136	800	✓/X	✓
North of Coral Way (SR 826 SB)	Sag	189+35	8.86	8.95	-0.11	0.65	200	263	60	136	136	800	✓/X	✓
North of Coral Way (SR 826 SB)	Crest	191+35	10.15	10.15	0.65	0.00	200	308	60	245	151	1,000	✓/X	✓
North of Coral Way (SR 826 NB)	Sag	185+23	9.31	8.96	-3.00	-0.12	600	208	60	136	136	800	✓/X	✓
North of Coral Way (SR 826 NB)	Sag	191+35	8.60	8.78	-0.12	0.18	200	676	60	136	136	800	✓/X	✓
South of SW 8th Street (SR 826 SB)	Sag	199+27.08	8.78	9.01	-0.30	0.30	300	500	60	136	136	800	✓/X	✓
South of SW 8th Street (SR 826 SB)	Sag	213+52.08	13.71	13.14	0.30	3.00	380	141	60	136	136	800	✓/X	✓
Just south of SW 8th Street (SR 826 SB)	Crest	218+42.08	28.41	30.89	3.00	1.02	485	245	60	245	151	1,000	✓/X	✓
South of SW 8th Street (SR 826 NB)	Sag	213+47.08	14.64	14.09	0.30	3.00	370	137	60	136	136	800	✓/X	✓
Just south of SW 8th Street (SR 826 NB)	Crest	218+72.08	30.39	30.99	3.00	0.30	400	148	60	245	151	1,000	X/X	✓
Just north of SW 8th Street (SR 826 SB)	Crest	226+92.08	26.29	29.04	-1.43	-3.00	385	245	60	245	151	1,000	✓/X	✓
North of SW 8th Street (SR 826 SB)	Sag	231+17.08	13.54	12.52	-3.00	-0.60	340	142	60	136	136	800	✓/X	✓
North of SW 8th Street (SR 826 SB)	Sag	239+57.08	8.50	9.38	-0.60	1.98	380	147	60	136	136	800	✓/X	✓
Just north of SW 8th Street (SR 826 NB)	Crest	226+87.08	26.07	28.82	-1.62	-3.00	340	246	60	245	151	1,000	✓/X	✓

Table 2.5 – Existing Vertical Alignment Geometric Characteristics Continued

Facility/ Location	Type of Curve	VPI Station	VPI Elevation (ft)	PGL High/Low (ft)	Grade (Back) %	Grade (Ahead) %	Length of Curve (ft)	K-Value	Design Speed (MPH)	K-Value Required for FDOT	K-Value Required for AASHTO	Min. Length FDOT	Meets FDOT Criteria K-Value/ Length	Meets AASHTO Criteria K-Value
North of SW 8th Street (SR 826 NB)	Sag	231+57.08	11.97	11.40	-3.00	-0.30	380	141	60	136	136	800	✓/✗	✓
North of SW 8th Street (SR 826 NB)	Sag	239+67.08	8.32	9.05	-0.50	2.10	360	138	60	136	136	800	✓/✗	✓
North of SW 8th St (SR 826 NB)	Sag	2239+23.3	8.78	9.95	-0.49	3.00	480	138	60	136	136	800	✓/✗	✓
North of W Flagler St (SR 826 NB)	Crest	2251+34.7	45.18	35.08	3.00	-2.70	1420	249	60	245	151	1,800	✓/✗	✓
North of W Flagler St (SR 826 NB)	Sag	2264+31.7	10.22	15.09	-2.70	2.66	728	136	60	136	136	800	✓/✗	✓
South of SR 836 (SR 826 NB)	Crest	2274+97.7	38.55	28.65	2.66	-3.00	1404	248	60	245	151	1,000	✓/✓	✓
North of SW 8th St (SR 826 SB)	Sag	3239+09.7	8.67	9.53	-0.43	2.94	464	138	60	136	136	800	✓/✗	✓
North of W Flagler St (SR 826 SB)	Crest	3251+67.7	45.66	34.83	2.94	-3.00	1456	245	60	245	151	1,800	✓/✗	✓
North of W Flagler St (SR 826 SB)	Sag	3264+27.7	7.38	13.53	-3.00	2.77	786	136	60	136	136	800	✓/✗	✓
South of SR 836 (SR 826 SB)	Crest	3275+37.7	38.59	28.39	2.77	-3.00	1415	245	60	245	151	1,000	✓/✓	✓

Source : As-built Plans and Project Survey

Notes : VPI = Vertical Point of Intersection
PGL = Profile Grade Line

✗ = Does not meet criteria
✓ = Meets required criteria

2.7.4 Horizontal and Vertical Clearances

Horizontal Clearance – The horizontal clearance relates to the lateral clearance between the travel way and any roadside obstruction. This roadside recovery area, called recoverable terrain, can be used by an errant vehicle to potentially regain control of the vehicle or by disabled vehicles as a place of refuge. Horizontal clearance requirements vary depending on the design speed, typical section, traffic volumes, lane type and roadside obstruction or feature.

Highways with flush shoulders where right of way is not restricted have sufficient widths to provide clear zones. Therefore, the horizontal clearance requirements for certain features and objects are based on maintaining a clear zone wide enough to provide the recoverable terrain. As set forth in the *FDM, Part 2, Chapter 215, Table 215.2.1*, the recoverable terrain widths for a design speed greater than 55 MPH are as follows:

- Travel lanes and multilane ramps: 36 feet.
- Auxiliary lanes and single lane ramps: 24 feet.

Along the SR 826 mainline, within the study limits, the recoverable terrain requirements either are met for the mainline and ramps or there are guardrail/barrier walls.

Another horizontal clearance component is the border width. A border width is a roadside area that accommodates signing, drainage features, guardrail, fencing, maintenance access and utilities. Border width on limited access facilities is measured from the edge of the outside traffic lane to the right of way line. The criteria shown in the *FDM, Part 2, Chapter 211, Section 211.6*, for freeways including interchange ramps indicate a required border width of 94 feet. The border widths along the mainline and within the interchanges (for each quadrant) are included in ***Table 2.6*** and ***Table 2.7***.

Based on the current design standards for border width, ***Table 2.6*** and ***Table 2.7*** show that the project corridor does not meet border width requirements.

Table 2.6 – Summary of Existing Border Width - Mainline

Roadway Section	Border Width (feet)		Border Width Required	
	Northbound	Southbound		
US 1 Northbound On-ramp/Off-ramp	6-151	30-75	94	✘
SW 88th Street (Kendall Drive) – SW 72nd Street (Sunset Drive)	42-76	49-53	94	✘
SW 72nd Street (Sunset Drive) – SW 56th Street (Miller Drive)	29-44	41-43	94	✘
SW 56th Street (Miller Drive) – SR 874	127-177	81-158	94	✘
SR 874 – SW 40th Street (Bird Rd)	71-400	98-152	94	✘
SW 40th Street (Bird Rd) – SW 24th Street (Coral Way)	19-137	16-122	94	✘
SW 24th Street (Coral Way) – SW 8th Street (Tamiami Trail)	16-380	13-383	94	✘
SW 8th Street (Tamiami Trail) – Flagler Street	16-519	20-379	94	✘
Flagler Street – SR 836	514-130	466-91	94	✘

Source: Project Survey,

Note: ✘ = Does not meet criteria ✓ = Meets required criteria

Table 2.7 – Summary of Existing Border Width - Interchanges

Interchange	Border Width (feet)				Border Width Required	
	NW[1]	NE[1]	SW[1]	SE[1]		
US 1 to SR 826 Northbound Ramp	19-77	51-102	-	-	94	✗
SR 826 to US 1 Southbound Ramp	-	-	28-76	40-56	94	✗
SW 88th Street (Kendall Drive)	4-57	8-36	8-73	8-70	94	✗
SW 72nd Street (Sunset Drive)	40-60	11-122	8-70	21-103	94	✗
SW 56th Street (Miller Drive)	25-47	15-94	21-36	11-87	94	✗
SR 874	67-148	-	12-28	-	94	✗
SW 40th Street (Bird Rd)	5-12	5-28	2-51	6-93	94	✗
SW 24th Street (Coral Way)	37-54	6-28	6-8	12-144	94	✗
SW 8th Street (Tamiami Trail)	326-122	28-148	18-85	15-150	94	✗
Flagler Street	16-30	19-138	6-16	5-6	94	✗
SR 836	20-300	80-245	35-245	25-242	94	✗

Source: Project Survey,

Note: [1]Interchange Quadrant ✗ = Does not meet criteria ✓ = Meets required criteria

VERTICAL CLEARANCE – The vertical clearance relates to the adequate clear height of an overpass/overhead or underpass structure/facility to the roadway and shoulder areas. In accordance with the *FDM Part I, Chapter 260, Section 260.6, Table 260.6.1*, the vertical clearance criteria for a bridge over a roadway is 16'-6", and for a roadway over railroad is 23'-6". AASHTO requires a minimum vertical clearance of 16' for structures passing over a roadway. Not all bridges within the study limits meet the minimum clearance requirements of the FDM and AASHTO. The characteristics for each bridge, including vertical clearance, are summarized in ***Table 2.46*** (see ***Section 2.22***).

2.8 Pedestrian Accommodations

SR 826 is a limited access facility. There will continue to be no designated pedestrian accommodations along SR 826, as pedestrians are not permitted on limited access corridors.

The crossing roadway interchanges have existing pedestrian accommodations. These accommodations are summarized below:

US 1 – Corridor has a five-foot wide sidewalk along the east side of the roadway, until the on-ramp to SR 826. Designated pedestrian crossings exist at all the corridor intersections.

SW 88th Street (Kendall Drive) – Corridor has a five-foot wide sidewalk along both sides of the roadway and continues through the interchange. Designated pedestrian crossings exist at all the corridor intersections.

SW 72nd Street (Sunset Drive) – Corridor has a five-foot wide sidewalk along both sides of the roadway and continues through the interchange. Designated pedestrian crossings exist at all the corridor intersections.

SW 56th Street (Miller Drive) – Corridor has a five-foot wide sidewalk along both sides of the roadway and continues through the interchange. Designated pedestrian crossings exist at all the corridor intersections.

SW 40th Street (Bird Rd) – Corridor has a five-foot wide sidewalk along both sides of the roadway and continues through the interchange. Designated pedestrian crossings exist at all the corridor intersections.

SW 24th Street (Coral Way) – Corridor has a five-foot wide sidewalk along both sides of the roadway and continues through the interchange. Designated pedestrian crossings exist at all the corridor intersections.

SW 8th Street (Tamiami Trail) – Corridor has a five-foot to twenty-foot wide sidewalk along both sides of the roadway east of the interchange. West of the interchange the corridor has six-foot wide sidewalks on the south side, which continues through the interchange. Designated pedestrian crossings exist at all the corridor intersections.

Flagler Street – Corridor has a five-foot to six-foot wide sidewalk along both sides of the roadway. The sidewalk on the south side continues through the interchange. Designated pedestrian crossings exist at all the corridor intersections.

2.9 Bicycle Facilities

SR 826 is a limited access facility. There will continue to be no bicycle accommodations along SR 826, as bicycles are not permitted on limited access corridors. SW 8th Street (Tamiami Trail) corridor has five-foot wide bike lanes on both sides of the roadway west of SW 79th Avenue, they do not continue through the interchange.

2.10 Transit Facilities

Miami-Dade County provides a mass transit system that includes Metrobus, Metrorail, Metromover and Special Transportation Service (STS). The following is a summary of the transit services available in the project area.

Metrobus

Currently, there are no Metrobus routes serving the SR 826 corridor within the study limits. The following Metrobus Routes serve major arterials that intersect the SR 826 corridor (see ***Figure 2.4*** and ***Appendix B***, *Transit Services* for details).

- US 1/Busway Route Number: 31, 34, 38, 39, 52, 73, 87, 88, 104, 204, 252, 272, 287, 288 and 500
- Kendall Drive/SW 88 Street Route Number: 87, 88, and 104
- Snapper Creek Expressway Route Number: 204, 272 and 288
- Sunset Drive/SW 72 Street Route Number: 72
- Miller Drive/SW 56 Street Route Number: 56
- Bird Road/SW 40 Street Route Number: 40 and 82
- Coral Way/SW 24 Street Route Number: 24 and 82
- SW 8 Street Route Number: 8 and 82
- Flagler Street Route Number: 7, 11, 51

Figure 2.4 – Metrobus System

Metrorail

The Metrorail system is a 25-mile dual track that runs from Kendall through South Miami, Coral Gables, and downtown Miami. Dadeland South is the closest Metrorail station, located at 9090 South Dixie Highway. This Metrorail station provides a park-and-ride facility with 1,274 parking spaces and connects to the following Metrobus routes: 31 Busway Local, 34 Express, 38 Busway MAX, 52, 73, 252 Coral Reef MAX, 287 Saga Bay MAX, and 500 Midnight Owl (see ***Appendix B***, Transit Services for details).

Special Transportation Service (STS)

Special Transportation Service is a shared-ride public transportation service of Miami-Dade County. It offers door-to-door transportation service for eligible residents with physical or mental disabilities that prevent them from using accessible public transportation independently. The service operates 24 hours a day, 7 days a week and can be used throughout Miami-Dade County (see ***Appendix B***, Transit Services for details). For more information, visit www.miamidade.gov/transit.

Park-and-Ride Facilities

The following park-and-ride facilities are located within the vicinity of the study limits.

- Dadeland South Metrorail Station
  - Station Address: 9090 South Dixie Highway
  - Connecting Metrobus Service: 31 Busway Local, 34 Express, 38 Busway MAX, 52, 73, 252 Coral Reef MAX, 287 Saga Bay MAX, 500 Midnight Owl
  - Parking Spaces: Spaces: 1,274
  - Utilization Rate: 88% (FDOT 2018 Park & Ride Facility Inspections and Performance Evaluations Report)

- Dadeland North Metrorail Station
  - Station Address: 8310 South Dixie Highway
  - Connecting Metrobus Service: 87, 88, 104, 204 Killian KAT, 272 Sunset KAT, 288 / 288A Kendall Cruiser, 500 Midnight Owl
  - Parking Spaces: Spaces: 2,032
  - Utilization Rate: 11% (FDOT 2018 Park & Ride Facility Inspections and Performance Evaluations Report)

Planned improvements and new park-and-ride facilities are currently included in the Miami-Dade Draft 2045 Long Range Transportation Plan (see ***Table 2.8***).

Table 2.8 – Draft 2045 LRTP Park-and-Ride Projects

Project	Location	Description	Plan Period*
South Dade Transitway Park-and-Ride at SW 104 Street (104 Street Station) SMART Terminal	South Dade Transitway and SW 104 Street	Lease parking with 100 parking spaces	I
South Dade Transitway Park-and-Ride at Dadeland North	Dadeland North Metrorail Station and Hwy US-1	Expand park-and-ride and construct a new parking garage with ground-floor retail and office space.	II
South Dade-Transitway-Park-and-Ride/ Terminal at Dadeland South	Dadeland South Metrorail Station and Hwy US-1	Expand park-and-ride and construct a new parking garage with ground-floor retail and office space.	II
Mall of the Americas Station SMART Terminal	From W Flagler St and NW 77 Ave to W Flagler St and NW 77 Ave	Construct park-and-ride/ transit terminal with 300 surface parking spaces and 4 bus bays	IV
Kendall/SR-826 Station SMART Terminal	Kendall Dr & SR 826	SMART Terminal	Unfunded
Tropical Station SMART Terminal	SW 40 St at SR SR 826/ Palmetto Expwy	SMART Terminal	Unfunded

Note: * I (2020-2025), II (2025-2030), III (2031-2035), IV (2036-2045)

Potential new park-and-ride lot locations are currently under evaluation along Flagler Street and Kendall Drive near the SR 826/Palmetto Expressway as part of the PD&E studies for the East-West and Kendall Corridors included in the SMART Plan.

2.11 Pavement Conditions

The FDOT Pavement Condition Unit conducts annual surveys of the entire State highway system in support of FDOT's Pavement Management Program. The data collected (in terms of crack, ride, and rut measurements) is used to assess the condition and performance of the State's roadways as well as to predict future

rehabilitation needs. Each section of pavement is rated on a 0-10 scale; with 0 being the worst and 10 the best. A crack rating of 6.4 or less is considered deficient. The minimum threshold for the ride criteria is 5.5 for speed limits less than 45 MPH and 6.5 for speed limits greater than 45 MPH. Pavement condition ratings for roadway segments within the study limits were extracted from the *2019 FDOT Pavement Condition Survey Report* and are summarized in ***Table 2.9*** below.

Table 2.9 – SR 826 Pavement Condition Survey

Section BMP	Section EMP	Direction	2019		
			Cracking	Ride	Rutting
0.000	1.063	Northbound	10.0	8.2	10.0
1.063	2.271		10.0	7.8	10.0
2.271	2.860		9.0	8.0	10.0
2.860	3.641		9.0	7.6	10.0
3.641	4.851		9.0	7.9	10.0
4.851	6.504		9.0	7.5	9.0
6.504	7.500		10.0	7.7	10.0
7.500	8.050		10.0	7.6	10.0
8.050	12.232		10.0	8.5	10.0
0.000	1.343	Southbound	10.0	7.8	10.0
1.343	2.039		10.0	8.2	10.0
2.039	3.641		9.0	8.0	10.0
3.641	5.947		9.0	7.9	10.0
5.947	6.800		10.0	7.7	10.0
6.800	7.458		10.0	7.5	10.0
7.458	8.050		10.0	8.2	10.0
8.050	12.232		10.0	8.4	10.0

Notes: BMP – Beginning Milepost / EMP – Ending Milepost
The ratings reported in the Pavement Condition Survey correspond to the mainline only.

Based on the ratings from the *2019 FDOT Pavement Condition Survey Report*, no pavement deficiencies were identified within the study limits.

2.12 Traffic Volumes and Operational Conditions

2.12.1 Data Collection

The traffic data collection efforts are documented in the *Traffic Data Collection Report*, dated May 2019. The purpose of this report is to present the traffic data collection and the 2017 base year traffic volumes in support of the PD&E Study. The tasks performed as part of this evaluation include the collection of existing

traffic volumes, the collection of existing geometric field conditions, the development of 2017 Annual Average Daily Traffic (AADT), the development of 2017 peak-hour volumes and the development of traffic factors.

The traffic data collection effort consisted of seventy-seven (77) 72-hour directional Automatic Traffic Recorder (ATR) hose-counts, twenty-eight (28) 3-hour AM/4-hour PM intersection Turning Movement Counts (TMC), and an Origin and Destination 3-day Bluetooth Survey. The ATR counts included arterials, interchange ramps and freeways within the project study limits.

AADT volumes were developed for the entire study area by following the process below:

- 2017 Average Daily Traffic (ADT) volumes were computed by calculating the arithmetic mean of the 72-hour traffic counts.
- The computed ADT volumes were converted to AADT by applying the applicable FDOT seasonal adjustment factors and axle correction factors from the FDOT 2016 Florida Transportation Information (FTI).
- 2017 AADT volumes for the study were generated by balancing, rounding and smoothing the estimates that were developed from the steps above.
- The generated AADT volumes were checked against the new traffic counts, FTI 2016 traffic counts, and FTI 2017 routine traffic counts for reasonableness.

Figure 2.5 shows the 2017 AADT volumes for the study area.

Traffic data collected for the study area was examined to identify the common AM and PM peak hours. The common peak hours identified were from 8:00-9:00 AM and from 5:00-6:00 PM. The peak-hour volumes were first established for the mainlines and ramps by balancing the calculated volumes similar to the AADT volumes. The volumes developed at the ramp terminal intersection approaches from this procedure were compared against the intersection TMCs. The difference between the two values were insignificant. Therefore, the TMCs were used as control values in the subsequent development of the intersection turning movement volumes. The peak-hour volumes developed for the study area were

checked against the new traffic counts, FTI 2016 traffic counts, and FTI 2017 routine traffic counts for reasonableness.

Figure 2.6 shows the 2017 peak-hour volumes for the study area. ***Figure 2.7*** shows the 2017 turning movement volumes for the study area.

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
FPID No.: 432639-1-22-02
ETDM No.: 14308

2017 EXISTING CONDITIONS
ANNUAL AVERAGE DAILY TRAFFIC (AADT) VOLUMES

FIGURE 2.5

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
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2017 EXISTING CONDITIONS
ANNUAL AVERAGE DAILY TRAFFIC (AADT) VOLUMES

FIGURE 2.5

NTS

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION

BRIDGE

LOCATION
EXISTING 2017 AADT

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2017 EXISTING CONDITIONS
ANNUAL AVERAGE DAILY TRAFFIC (AADT) VOLUMES

FIGURE 2.5

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ANNUAL AVERAGE DAILY TRAFFIC (AADT) VOLUMES

FIGURE 2.5

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2017 EXISTING CONDITIONS
ANNUAL AVERAGE DAILY TRAFFIC (AADT) VOLUMES

FIGURE 2.5

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2017 EXISTING CONDITIONS PEAK-HOUR VOLUMES

FIGURE 2.6

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION

BRIDGE

LOCATION
EXISTING 2017 PEAK-HOUR VOLUME AM (PM)

FLORIDA DEPARTMENT OF TRANSPORTATION
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2017 EXISTING CONDITIONS
PEAK-HOUR VOLUMES

FIGURE 2.6

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION

BRIDGE

LOCATION
EXISTING 2017 PEAK-HOUR VOLUME AM (PM)

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
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2017 EXISTING CONDITIONS
PEAK-HOUR VOLUMES

FIGURE
2.6

FDOT

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2017 EXISTING CONDITIONS
PEAK-HOUR VOLUMES

FIGURE 2.6

FLORIDA DEPARTMENT OF TRANSPORTATION
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SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY

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2017 EXISTING CONDITIONS PEAK-HOUR VOLUMES

FIGURE 2.6

FDOT

FLORIDA DEPARTMENT OF TRANSPORTATION
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SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY

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2017 EXISTING CONDITIONS
INTERSECTION TURNING MOVEMENT VOLUMES

FIGURE
2.7

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SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
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2017 EXISTING CONDITIONS
INTERSECTION TURNING MOVEMENT VOLUMES

FIGURE 2.7

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
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2017 EXISTING CONDITIONS
INTERSECTION TURNING MOVEMENT VOLUMES

FIGURE 2.7

FDOT

FLORIDA DEPARTMENT OF TRANSPORTATION
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2017 EXISTING CONDITIONS
INTERSECTION TURNING MOVEMENT VOLUMES

FIGURE 2.7

Table 2.10 shows that the average T-24 factor along the SR 826 corridor is 5.7% based on the FTI 2016.

Table 2.10 – SR 826 Corridor T-24 Factors

FDOT COSITE	Location	T-24 Factor (FTI 2016)
*1	SR 826, North of SR 836	8.70%
**2	SR 826, North of Flagler St	5.10%
**3	SR 826, North of SW 8th St	5.10%
870567	SR 826, North of SW 24th St	5.10%
***5	SR 826, North of SR 874	5.10%
**6	SR 826, North of SW 56th St	5.10%
870564	SR 826, North of SW 72nd St	5.10%
870563	SR 826, North of SW 88th St	3.20%
870562	SR 826, North of US 1	8.70%
870110	US 1, North of SW104th St	4.70%

Note: Combination of county and site values as a six-digit item
*** The T-24 Factor is based on the nearest mainline FDOT sites.**
**** These represent cross-sectional AADT including the AADT at the FDOT sites and the parallel CD systems/ramps.**
***** These represent cross-sectional AADT including the AADT at the FDOT sites and the parallel CD systems/ramps. The T-24 Factor is based on the nearest mainline FDOT sites.**

Table 2.11 is a summary of the pedestrian and bicycle counts at each intersection. The total count includes both AM and PM peak periods. At select intersections, pedestrian and bicycle counts were combined.

Table 2.11 – Pedestrian and Bicycle Counts by Intersection

Arterial	Intersection	Total	
		Pedestrians	Bicycles
SR 5/ US 1	SR 990/ SW 112th Street/ Killian Drive	104	10
	SW 104th Street	63	26
	SW 98th Street	18	10
SW 98th Street	SW 77th Avenue	13	6
	Dadeland Boulevard	0	3
SR 94/ SW 88th Street/ Kendall Drive	SW 79th Avenue	23	
	SW 77th Avenue	54	
	SR 826 Northbound On/Off Ramp	0	
	SW 73rd Place	96	
	Dadeland Boulevard	180	

Table 2.11 – Pedestrian and Bicycle Counts by Intersection (Continued)

Arterial	Intersection	Total	
		Pedestrians	Bicycles
SR 986/ SW 72nd Street/ Sunset Drive	SW 77th Court	0	0
	West of SR 826 Ramps	5	0
	East of SR 826 Ramps	6	13
	SW 72nd Avenue	14	5
SW 56th Street/ Miller Drive	SW 77th Ct	8	4
	West of SR 826 Ramps	2	2
	East of SR 826 Ramps	2	1
	SW 72nd Ave	10	4
SW 40th Street / Bird Road	SW 79th Avenue	11	
	SW 7800 Block	6	
	West of SR 826 Ramps	0	
	East of SR 826 Ramps	1	
	SW 74th Avenue	11	
	SW 72nd Avenue	20	
SW 24th Street / Coral Way	SW 82nd Avenue	18	4
	SW 79th Avenue	25	15
	West of SR 826 Ramps	1	1
	East of SR 826 Ramps	16	10
	SW 75th Avenue	60	14
	SW 74th Avenue	55	3
SW 8th Street	SW 82nd Avenue	23	5
	West of SR 826 Ramps	6	0
	East of SR 826 Ramps	13	2
	SW 74th Avenue	46	6
Flagler Street	SW 82nd Avenue	17	
	SW 79th Avenue	98	
	West of SR 826 Ramps/ SW 78th Avenue	29	
	East of SR 826 Ramps/ SW 76th Court	25	
	SW 74th Avenue	21	
	NW 72nd Avenue	29	
NW 25th Street	West of SR 826 Ramps	20	17
	East of SR 826 Ramps	19	14

Note: The data from these certain intersections was provided by the Department and/or by others. According to our data collection subconsultant, at the time, the client asked for combined ped/bike movements at these intersections therefore, some counts are combined.

2.12.2 Traffic Operational Analysis

The traffic operational analysis is documented in the *Traffic Analysis Technical Memorandum*, dated July 2019. The purpose of this report is to present the preliminary results of the existing and future traffic operational analyses completed as part of the PD&E process.

The Highway Capacity Manual (HCM), 6th Edition, as well as the Highway Capacity Software Version 7 (HCS7) and Synchro Version 10.0 were used for the operational analysis in this study. Operational analyses were performed on freeway basic segments, ramp merge/diverge junctions, weaving sections, ramp terminals, arterial segments and intersections. The HCS was used for the freeway basic segments, ramp merge/diverge junctions and weaving sections. Synchro was used for the evaluation of the intersections and arterial segments. This software uses the methodology of the HCM to determine intersection/arterial capacity and LOS.

Highway Capacity Methodology - This section presents the analysis results for the existing lane configuration under existing traffic conditions. An existing traffic operational analysis was conducted for the 2017 base condition for the freeway mainline and interchange ramps. The first part of the analysis consisted of a basic freeway segment analysis used to determine the current conditions under which the freeway mainline is operating. The second part of the analysis consisted of a ramp merge, diverge and weaving analysis used to determine the current operating conditions of the ramps entering and exiting the freeways.

FDOT recommends a target Level of Service (LOS) D for roadways in urban areas. Therefore, LOS D or better was considered an acceptable LOS.

The freeway, weaving and ramp junction analysis results for northbound and southbound directions are summarized in ***Table 2.12*** and ***Table 2.13***. The collector distributor ramps analysis results for northbound and southbound directions are summarized in ***Table 2.14*** and ***Table 2.15***. The existing operation analysis results are shown in ***Figure 2.8***.

Table 2.12 – 2017 SR 826 Existing Northbound Freeway Analysis Results

#	Segment Description	Analysis Type	Volume	Density (pc/mi/ln)	V/C Ratio	LOS	Volume	Density (pc/mi/ln)	V/C Ratio	LOS
			AM Peak				PM Peak			
46	NW 25th St WB On-ramp to NW 36th St EB Off-ramp	Basic	8,476	29.0	0.68	D	5,885	20.8	0.49	C
45	On-ramp from NW 25th St WB	Major Merge	554	-	0.31	-	660	-	0.38	-
44	NW 25th St EB Off-ramp to NW 25th St WB On-ramp	Basic	7,922	32.1	0.76	D	5,225	21.8	0.52	C
43	Off-ramp to NW 25th St EB	Weave	-	-	-	-	-	-	-	-
42	SR 836 EB On-ramp to NW 25th St EB Off-ramp		3,295	-	1.02	F	1,879	20.90	0.60	C
41	On-ramp from SR 836 EB		-	-	-	-	-	-	-	-
40	SR 836 WB On-ramp to SR 836 EB On-ramp	Basic	7,911	26.5	0.63	D	4,916	16.5	0.39	B
39	On-ramp from SR836 westbound	Major Merge	1,893	-	0.46	-	1,520	-	0.41	-
38	Flagler St WB On-ramp to SR 836 WB On-ramp	Basic	6,018	30.1	0.71	D	3,396	17.0	0.40	B
37	On-ramp from Flagler St WB	Merge	848	27.9	0.50	C	515	16.9	0.29	B
36	SR 836 Off-ramp to Flagler St WB On-ramp	Basic	5,170	26.0	0.61	C	2,881	14.5	0.34	B
35	Off-ramp to SR 836	Major Diverge	2,128	22.0	0.40	C	2,442	15.9	0.45	B
34	Flagler St WB Off-ramp to SR 836 Off-ramp	Basic	7,298	24.3	0.57	C	5,323	17.5	0.41	B
33	Off-ramp to Flagler St WB	Weave	-	-	-	-	-	-	-	-
32	On-ramp from SW 8th St WB		-	-	-	-	-	-	-	-
31	SW 8th St EB On-ramp to Flagler St WB Off-ramp		2,613	32.5	0.86	D	1,890	22.0	0.58	C
30	On-ramp from SW 8th St EB		-	-	-	-	-	-	-	-
29	SW 8th St EB Off-ramp to SW 8th St EB On-ramp	Basic	7,532	30.1	0.71	D	5,917	23.6	0.56	C
28	Off-ramp to SW 8th St EB	Major Diverge	888	25.4	0.25	C	1,262	21.6	0.32	C
27	Coral Way EB On-ramp to SW 8th St EB Off-ramp	Basic	8,420	28.3	0.66	D	7,179	24.1	0.56	C
26	On-ramp from Coral Way EB	Merge	852	24.3	0.51	C	721	21.1	0.46	C
25	Coral Way EB Off-ramp to Coral Way EB On-ramp	Basic	7,568	25.4	0.59	C	6,458	21.9	0.51	C
24	Off-ramp to Coral Way EB	Diverge	816	29.8	0.53	D	859	26.8	0.53	C
23	Bird Rd WB On-ramp to Coral Way EB Off-ramp	Basic	8,384	28.2	0.66	D	7,317	24.9	0.58	C
22	On-ramp from Bird Rd WB	Merge	738	29.8	0.43	D	642	26.2	0.39	C
21	Bird Rd EB On-ramp to Bird Rd WB On-ramp	Basic	7,646	27.4	0.64	D	6,675	23.4	0.55	C
20	On-ramp from Bird Rd EB	Merge	645	22.3	0.39	C	361	17.9	0.22	B
19	SR 874 On-ramp to Bird Rd EB On-ramp	Basic	7,001	25.1	0.59	C	6,314	22.1	0.52	C
18	On-ramp from SR 874 (toll road merge)	Major Merge	2,769	-	0.46	-	1,707	-	0.28	-
17	Miller Dr WB On-ramp to SR 874 On-ramp	Basic	4,232	22.4	0.53	C	4,607	23.9	0.56	C
16	On-ramp from Miller Dr WB	Major Merge	646	-	0.34	-	712	-	0.37	-
15	Bird Rd EB Off-ramp to Miller Dr WB On-ramp	Basic	3,586	24.9	0.60	C	3,895	26.5	0.63	D
14	Off-ramp to Bird Rd EB	Major Diverge	476	19.0	0.26	B	520	22.0	0.28	C
13	Miller Dr EB Off-ramp to Bird Rd EB Off-ramp	Basic	4,062	20.4	0.49	C	4,415	23.6	0.57	C
12	Off-ramp to Miller Rd WB	Weave	-	-	-	-	-	-	-	-
11	Sunset Drive WB On-ramp to Miller Dr EB off-ramp		1,303	25.3	0.62	C	1,446	26.8	0.67	C
10	On-ramp from Sunset Dr WB		-	-	-	-	-	-	-	-
9	Sunset Dr EB Off-ramp to Sunset Dr WB on-ramp	Basic	3,770	24.8	0.60	C	3,670	25.8	0.62	C
8	Off-ramp to Sunset Drive EB	Weave	-	-	-	-	-	-	-	-
7	SW 88th St WB On-ramps to Sunset Dr EB Off-ramp		-	-	-	-	-	-	-	-
6	On-ramp from SW 88th WB		-	-	-	-	-	-	-	-
5	SW 88th Street EB On-ramp to off ramp to Sunset Drive EB Off-ramp		1,529	29.9	0.80	D	1,948	27.3	0.90	C
4	SW 88th Street EB On-ramp		-	-	-	-	-	-	-	-
3	SW 88th St EB Off-ramp to SW 88th St EB on-ramps	Basic	2,783	27.3	0.67	D	1,990	19.7	0.48	C
2	Off-ramp to SW 88th St	Diverge	99	29.4	0.06	D	107	22.3	0.06	C
1	US 1 to SW 88th St EB Off-ramp	Ramp	2,882	-	0.70	-	2,097	-	0.51	-

Table 2.13 – 2017 SR 826 Existing Southbound Freeway Analysis Results

#	Segment Description	Analysis Type	Volume	Density (pc/mi/ln)	V/C Ratio	LOS	Volume	Density (pc/mi/ln)	V/C Ratio	LOS
			AM Peak				PM Peak			
1	NW 36th St EB On-ramp to NW 25th St WB Off-ramp	Basic	9,572	33.0	0.78	D	6,892	23.3	0.55	C
2	Off-ramp to NW 25th Street WB	Diverge	1,553	40.4	0.94	E	340	24.6	0.24	C
3	NW 25th St WB Off-ramp to NW 25th St EB On-ramp	Basic	8,019	27.6	0.65	D	6,552	22.1	0.52	C
4	On-ramp from NW 25th St EB	Weave	-	-	-	-	-	-	-	-
5	NW 25th St EB On-ramp to SR 836 WB Off-ramp*		2,898	27.1	0.92	C	2,813	37.9	0.88	E
6	Off-ramp to SR 836 WB		-	-	-	-	-	-	-	-
7	SR 836 WB Off-ramp to SR 836 Off-ramp	Basic	5,792	24.0	0.57	C	6,772	27.4	0.65	D
8	Off-ramp to SR 836	Diverge	481	24.6	0.27	C	90	24.2	0.06	C
9	SR 836 Off-ramp to Flagler St WB Off-ramp	Basic	5,311	21.2	0.51	C	6,682	26.1	0.63	D
10	Off-ramp to Flagler St WB	Major Diverge	1,752	19.6	0.49	B	1,103	24.2	0.44	C
11	Flagler St WB Off-ramp to SR 836 EB On-ramp	Basic	3,559	17.8	0.43	B	5,579	27.9	0.67	D
12	On-ramp from SR 836 EB	Major Merge	2,306	-	0.56	-	1,832	-	0.48	-
13	SR 836 EB On-ramp to Flagler St WB On-ramp	Basic	5,865	23.0	0.55	C	7,411	29.3	0.70	D
14	On-ramp from Flagler St WB	Merge	1,096	20.7	0.54	C	1,055	23.3	0.52	C
15	Flagler St WB On-ramp to SW 8th St EB On-ramp	Basic	6,961	27.2	0.65	D	8,466	33.5	0.80	D
16	On-ramp from SW 8th St EB	Weave	-	-	-	-	-	-	-	-
17	SW 8th St WB On-ramp to Flagler St WB Off-ramp**		1,461	29.1	0.70	D	2,257	-	1.01	F
18	Off-ramp to Coral Way WB		-	-	-	-	-	-	-	-
19	Coral Way WB Off-ramp to Coral Way WB On-ramp	Basic	6,620	21.3	0.52	C	8,108	26.6	0.64	D
20	On-ramp from Coral Way WB	Merge	599	21.3	0.33	C	828	27.3	0.47	C
21	Coral Way WB on-ramp to Bird Rd WB Off-ramp	Basic	7,219	23.4	0.56	C	8,936	29.6	0.71	D
22	Off-ramp to Bird Rd WB	Diverge	1,351	12.9	0.35	B	1,446	17.5	0.40	B
23	Bird Rd WB Off-ramp to SR 874 WB Off-ramp	Basic	5,868	19.3	0.46	C	7,490	24.9	0.60	C
24	Off-ramp to SR 874	Diverge	703	22.4	0.40	C	1,010	28.5	0.51	D
25	SR 874 WB Off-ramp to SR 874 Diverge	Basic	5,165	16.9	0.41	B	6,480	21.4	0.52	C
26	Diverge to SR 874	Major Diverge	1,407	15.7	0.23	B	2,469	19.9	0.40	B
27	SR 874 Diverge to Bird Rd EB On-ramp	Basic	3,758	24.1	0.58	C	4,011	26.3	0.63	D
28	On-ramp from Bird Rd WB	Weave	-	-	-	-	-	-	-	-
29	Bird Rd EB On-ramp to Sunset Dr WB Off-ramp		1,472	23.2	0.55	C	1,612	27.0	0.61	C
30	On-ramp from Miller Dr EB		-	-	-	-	-	-	-	-
31	Miller Dr EB On-ramp to Sunset Dr WB Off-ramp		-	-	-	-	-	-	-	-
32	Off-ramp to Sunset Dr WB		-	-	-	-	-	-	-	-
33	Sunset Dr WB Off-ramp to Sunset Dr EB On-ramp	Basic	3,345	21.3	0.51	C	3,895	25.3	0.61	C
34	On-ramp from Sunset Dr EB	Merge	290	21.4	0.18	C	313	24.4	0.18	C
35	Sunset Dr EB On-ramp to SW 88th St WB Off-ramp	Basic	3,635	23.3	0.56	C	4,208	26.7	0.64	D
36	Off-ramp to SW 88th St WB	Major Diverge	1,568	21.8	0.45	C	1,638	25.0	0.41	C
37	SW 88th St WB Off-ramp to SW 88th St EB On-ramp	Basic	2,067	19.9	0.48	C	2,570	24.5	0.59	C
38	On-ramp from SW 88th St EB	Merge	69	20.9	0.04	C	109	25.1	0.06	C
39	SW 88th St EB On-ramp to US 1	Basic	2,136	20.8	0.50	C	2,679	26.3	0.64	D

Note: *HCS do not support 3-lane ramp analysis **Shortest distance is considered for the worst condition

Table 2.14 – 2017 SR 826 Existing Northbound C-D Ramps Results

#	Ramp Segment	Volume (veh/hr)		Capacity (pc/h)	Volume/Capacity	
		AM	PM		AM	PM
8	On-ramp from Flagler St	800	632	4,000	0.23	0.17
7	Flagler St On-ramp to SR 826/SR 836 Off-ramp	2,467	1,349	6,000	0.44	0.24
6	Off-ramp to Flagler St	614	697	1,900	0.34	0.39
5	SR 826 off-ramp to Flagler St On-ramp	1,087	717	2,100	0.55	0.36
4	Bird Rd Ramp Terminal	1,259	1,076	4,200	0.32	0.27
3	Bird Rd Off-ramp to SR 874 On-ramp	510	606	4,000	0.14	0.16
2	Bird Rd Off-ramp/Miller Dr On-ramp	1,156	1,318	6,000	0.21	0.23
1	Miller Dr On-ramp	680	798	4,200	0.17	0.20

Note: CD – Collector Distributor

Table 2.15 – 2017 SR 826 Existing Southbound C-D Ramps Results

#	Ramp Segment	Volume (veh/hr)		Capacity (pc/h)	Volume/Capacity	
		AM	PM		AM	PM
1	SR 836 Off-ramp to Flagler St	2188	1574	4000	0.58	0.42
2	Flagler St Off-ramp to Flagler St On-ramp	1339	731	2100	0.68	0.37
3	SR 826 Off-ramp to Flagler St	849	843	1900	0.48	0.47
4	Flagler St WB off-ramp	379	256	1900	0.21	0.14
5	Flagler St On-ramp	2151	1804	4000	0.57	0.48
6	Flagler St Off-ramp to SW 8th St Off-ramp	1055	749	4000	0.28	0.2
7	SW 8th St WB Off-ramp	571	601	1900	0.32	0.34
8	SW 8th St EB Off-ramp	484	148	1900	0.27	0.08
9	Bird Rd On-ramp	856	1416	5700	0.16	0.26
10	Bird Rd On-ramp to SR 874 On-ramp	1559	2426	7600	0.22	0.34
11	SR 874 On-ramp to SR 826 On-ramp	1137	1635	3800	0.32	0.46
12	Miller Dr On-ramp	661	1057	3800	0.19	0.3

Note: CD – Collector Distributor

The freeway analysis shows that all locations are operating at an acceptable LOS for the year 2017 within the area of influence. The weaving analysis shows that one location northbound and two locations southbound will operate at an unacceptable LOS (worst peak period LOS). The ramp junction analysis shows that one location southbound will operate at an unacceptable LOS.

NTS

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION

BRIDGE

LOCATION	
EXISTING 2017 PEAK-HOUR VOLUME	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION			
EXISTING 2017 PEAK-HOUR VOLUME			
VOLUME/ CAPACITY	AM (PM)	OK / FAIL	AM (PM)

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DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
FPID No.: 432639-1-22-02
ETDM No.: 14308

2017 EXISTING CONDITIONS
OPERATIONAL ANALYSIS RESULTS

FIGURE 2.8

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION

BRIDGE

LOCATION	
EXISTING 2017 PEAK-HOUR VOLUME	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION		
EXISTING 2017 PEAK-HOUR VOLUME		
VOLUME/ CAPACITY AM (PM)	OK / FAIL AM (PM)	

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2017 EXISTING CONDITIONS
OPERATIONAL ANALYSIS RESULTS

FIGURE 2.8

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION

BRIDGE

LOCATION		OR	LOCATION	
EXISTING 2017 PEAK-HOUR VOLUME			EXISTING 2017 PEAK-HOUR VOLUME	
DENSITY AM (PM)	LOS AM (PM)		VOLUME/ CAPACITY AM (PM)	OK / FAIL AM (PM)

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ETDM No.: 14308

2017 EXISTING CONDITIONS OPERATIONAL ANALYSIS RESULTS

FIGURE 2.8

FDOT

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MIAMI, FL 33172

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SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
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ETDM No.: 14308

2017 EXISTING CONDITIONS
OPERATIONAL ANALYSIS RESULTS

FIGURE 2.8

Micro-Simulation

The existing year traffic operations micro-simulation models were calibrated to replicate the observed traffic conditions. The following traffic conditions are typical for average weekday AM and PM peak periods in the existing year.

AM peak-hour – Northbound is the peak direction of travel along SR 826 during the typical weekday AM peak period. Northbound traffic experiences relatively minor delays from US 1 to south of SR 874 and operating speeds are typically 50 MPH or higher. Congestion increases considerably north of SR 874 and operating speeds drop to below 30 MPH. Congestion continues throughout northbound SR 826 from SR 874 to SR 836. North of SR 836 there is some congestion relief and northbound operating speeds increase above 30 MPH.

During the AM peak, southbound SR 826 is the off-peak direction and experiences relatively minor delays throughout the length of the study corridor. Operating speeds are typically maintained above 50 MPH from SR 836 to US 1.

Eastbound is the peak traffic flow direction on the crossing roadways during the AM peak period. Extensive queueing is typical in the eastbound direction at the major cross streets, such as, Flagler Street, SW 8th Street, SW 24th Street, Bird Road and Miller Drive. Long queues are also typical at the off-ramps at these major roadways. Traffic signal cycle failures frequently occur at these terminal intersections. Capacity deficiency is most significant at the Bird Road terminal intersections, which experiences extensive queueing on the off-ramps and on Bird Road. Eastbound queues on the Bird Road southbound off-ramp occasionally spilled back onto the mainline. Queues on the off-ramps at other major roadways typically do not spillback to impact traffic operations along SR 826 mainline due to results from the relatively long off-ramps or CD-systems present at the interchanges.

PM peak hour – Southbound is the peak direction of travel along SR 826 during the typical weekday PM peak period. Southbound traffic experiences congestion from north of NW 25th Street to SR 836. South of SR 836 less congestion is experienced, and operating speeds steadily increase from approximately 30 MPH to above 50 MPH. From SR 874 through to SW 72nd Street operating speeds are maintained close to 60 MPH. South of SW 72nd Street, speeds along southbound SR 826 drop significantly to about 30 MPH. This drop in operating speeds occurs

as SR 826 terminates and merges into US 1, which experiences substantial congestion in the PM peak period.

During the PM peak, northbound SR 826 is the off-peak direction. Relatively minor delays are experienced from north of US 1 to south of SR 836 and operating speeds are typically maintained above 50 MPH within this segment. North of SR 836, congestion builds, and operating speeds drop to below 30 MPH.

Westbound is the peak traffic flow direction along the crossing roadways during the PM peak period. Extensive queueing is typical in the westbound direction at the major roadways, such as, Flagler Street, SW 8th Street, SW 24th Street, Bird Road and Miller Drive. Long queues are also typical at the off-ramps at these major roadways. Traffic signal cycle failures occasionally occur at these terminal intersections. Operations at the Bird Road Interchange were somewhat better in the PM peak when compared to the AM peak. However, long queues were experienced in the westbound direction and some cycle failures were observed. Queues on the off-ramps at the crossing roadways typically did not impact traffic operations on SR 826 mainline during the PM peak

Additional traffic micro-simulation information can be found in the *SIMR*, dated August 2019, a companion document to this PD&E Study.

2.13 Intersection Layout and Traffic Control

There are ten existing interchanges within the project limits. Eight of the ten interchanges provide connection to arterial/collector facilities. Two of the ten interchanges are major system-to-system interchanges; SR 826 with SR 874 and SR 826 with SR 836. These system-to-system interchanges provide a connection between major expressways, which services and distributes traffic originating from or destined to the north, south, east, and west portions of Miami-Dade County.

1) US 1
2) SW 88th Street (Kendall Drive)
3) SW 72nd Street (Sunset Drive)
4) SW 56th Street (Miller Drive)
5) SR 874
6) SW 40th Street (Bird Rd)
7) SW 24th Street (Coral Way)
8) SW 8th Street (Tamiami Trail)
9) Flagler Street
10) SR 836

There are 43 intersections that were analyzed along the arterials (27 arterial intersections and 16 terminal ramp intersections). Intersection configurations are depicted in ***Appendix A,*** Corridor Base Maps. These intersections are listed below.

1) US 1/Killian Drive
2) US 1/SW 104th Street
3) SW 98th Street/SW 77th Avenue
4) SW 98th Street/Busway

5) SW 98th Street/US 1
6) SW 88th Street/SW 79th Avenue
7) SW 88th Street/SW 77th Avenue
8) SW 88th Street/Southbound Ramp Terminal
9) SW 88th Street/Northbound Ramp Terminal
10) SW 88th Street/SW 73rd Place
11) SW 88th Street/Dadeland Boulevard
12) SW 72nd Street/SW 77th Court
13) SW 72nd Street/Southbound Ramp Terminal
14) SW 72nd Street/Northbound Ramp Terminal
15) SW 72nd Street/SW 72nd Avenue
16) SW 56th Street/SW 77th Court
17) SW 56th Street/Southbound Ramp Terminal
18) SW 56th Street/Northbound Ramp Terminal
19) SW 56th Street/SW 72nd Avenue
20) SW 40th Street/SW 79th Avenue
21) SW 40th Street/SW 7800 Block
22) SW 40th Street/Southbound Ramp Terminal
23) SW 40th Street/Northbound Ramp Terminal
24) SW 40th Street/SW 72nd Avenue
25) SW 40th Street/SW 74th Avenue
26) SW 24th Street/SW 82nd Avenue
27) SW 24th Street/SW 79th Avenue
28) SW 24th Street/Southbound Ramp Terminal

29) SW 24th Street/Northbound Ramp Terminal

30) SW 24th Street/SW 74th Avenue

31) SW 24th Street/SW 75th Avenue

32) SW 8th Street/SW 82nd Avenue

33) SW 8th Street/Southbound Ramp Terminal

34) SW 8th Street/Northbound Ramp Terminal

35) SW 8th Street/SW 74th Avenue

36) Flagler Street/NW 82nd Avenue

37) Flagler Street/NW 79th Avenue

38) Flagler Street/Southbound Ramp Terminal

39) Flagler Street/Northbound Ramp Terminal

40) Flagler Street/NW 74th Avenue

41) Flagler Street/NW 72nd Avenue

42) NW 25th Street/Southbound Ramp Terminal

43) NW 25th Street/Northbound Ramp Terminal

INTERSECTION ANALYSIS – An Intersection analysis for ramp terminals and adjacent intersections was performed at all the interchanges using existing turning movement volumes, existing lane geometry, signal timing, other relevant information obtained from Miami-Dade County and field reviews. The data was input to the Synchro software to determine the LOS and delay using the HCM methodology. A summary of the results is presented in ***Table 2.16***.

Table 2.16 – 2017 Existing Intersection LOS and Delay Results

Arterial	Intersection	AM		PM	
		LOS	Delay (s/veh)	LOS	Delay (s/veh)
SR 5/ US 1	SR 990/ SW 112th Street/ Killian Drive**	E	62.3	D	46.7
	SW 104th Street**	D	48.8	E	60.7
	SW 98th Street**	D	49	E	61.4
SW 98th Street	SW 77th Avenue**	C	26.9	B	17.1
	Busway**	B	11.1	C	21.9
SR 94/ SW 88th Street/ Kendall Drive	SW 79th Avenue**	C	28.4	C	23.8
	SW 77th Avenue*	D	41.3	D	44.7
	SR 826 Southbound On/Off Ramp	Free Flow Conditions			
	SR 826 Northbound On/Off Ramp*	A	3.3	A	2.6
	SW 73rd Place**	C	20.1	D	35.5
	Dadeland Boulevard**	B	13.2	C	26.8
SR 986/ SW 72nd Street/ Sunset Drive	SW 77th Court (HCM 6th)	C	22.8	A	7.1
	SR 826 Southbound On/Off Ramp*	D	41.1	D	42.3
	SR 826 Northbound On/Off Ramp*	C	24.5	C	24.8
	SW 72nd Avenue*	D	39.7	D	43.2
SW 56th Street/ Miller Drive	SW 77th Ct*	B	10.5	A	3.5
	SR 826 Southbound Off Ramp**	C	34.4	F	87.9
	SR 826 Northbound On/Off Ramp**	E	75.1	D	36.4
	SW 72nd Ave*	E	68.7	E	65
SW 40th Street / Bird Road	SW 79th Avenue**	C	29.9	C	30.8
	SW 7800 Block*	B	10.3	B	11.5
	Southbound Ramp Terminal**	E	76	E	58.6
	Northbound Ramp Terminal*	D	53.4	B	17.3
	SW 74th Avenue**	A	7	C	29.1
	SW 72nd Avenue*	C	30	D	41.1
SW 24th Street / Coral Way	SW 82nd Avenue*	E	55.6	E	62.6
	SW 79th Avenue*	D	36.1	C	30.4
	Southbound Ramp Terminal (AM** and PM*)	C	26	C	21.8
	Northbound Ramp Terminal**	E	60.8	D	48.7
	SW 75th Avenue (AM** and PM*)	C	27.1	E	70.1
	SW 74th Avenue (AM** and PM*)	A	4.6	A	4.2
SW 8th Street	SW 82nd Avenue**	C	30.7	C	20.6
	Southbound Ramp Terminal**	A	7.8	B	13.7
	Northbound Ramp Terminal**	C	30.5	D	48.4
	SW 74th Avenue*	C	32.6	C	30.8
Flagler Street	SW 82nd Avenue**	C	32.4	C	33.8
	SW 79th Avenue**	D	44.5	C	28.1
	Southbound Ramp Terminal*	D	36.7	C	30.3
	Northbound Ramp Terminal*	B	11.5	C	20.8
	SW 74th Avenue*	A	7.7	B	14.9
	NW 72nd Avenue*	D	54.3	F	107.6
NW 25th Street	Southbound Ramp Terminal*	C	28.9	C	23.5
	Northbound Ramp Terminal*	D	51.7	C	25.1

NOTES:

* Results reported from Synchro 10 HCM6th Edition report.

** Results reported from Synchro 10 HCM2000 report, since HCM6th Ed and HCM2010 reports not capable of reporting results.

The existing intersection operational results indicate of the 43 intersections 32 are operating at LOS D or better. Nine intersections are operating at LOS E and two intersections are operating at LOS F.

2.14 Railroad Crossing

SR 826 overpasses two railroad lines within the study limits (see ***Figure 2.9***). There are no at-grade railroad crossings within the study limits. Therefore, there are no warning devices. There are no at-grade railroad crossings within the study limits.

1. CSX Mainline Class I
    - Location: Railroad under SR 826, just south of the SR 874 junction
    - Crossing Number: 631076X
    - Owner: CSXT
    - Tracks: Single
    - Railroad Type: Freight
    - Speed: 25mph
    - ROW: 100 for tracks

2. Miami-Dade County Metrorail Green and Orange Lines
    - Location: Railroad under SR 826 Northbound on-ramp from US 1
    - Crossing Number: N/A
    - Owner: Miami-Dade Transit
    - Tracks: Dual
    - Railroad Type: Commuter
    - Speed: 25mph
    - ROW: 60ft-86ft for tracks

Figure 2.9 – Grade-Separated Highway-Rail Crossing

Appendix C, Railroad Crossing Inventory documents additional details about the railroad lines.

2.15 Crash Data and Safety Analysis

The crash analysis efforts are documented in the *Crash Analysis Report*, dated June 2019, a companion document to this PD&E Study. The purpose of this report is to summarize the crash analysis along SR 826 from US 1 to NW 25th Street. Crash data on SR 826 from US 1 to NW 25th Street was obtained from the FDOT's *Crash Analysis Reporting System*. The crash data from the latest five-year period included crashes reported between January 1, 2011 and December 31, 2015. Trends, patterns and comparison of crash rates are presented below and focuses on crashes that occurred on the mainline, within ramp junction and interchanges.

SR 826 (Section 87260000) has varying typical sections and year 2015 AADT within the study limits. The southern segment of SR 826 from US 1 (Mile Post 0.000) to north of SR 874 (MP 3.690) consists primarily of six travel lanes (three lanes in each direction) and has a 2015 AADT range of between 49,500 and 122,500 vehicles per day (vpd) based on the FDOT *Florida Traffic Online* (FTI) reports for Portable Traffic Monitoring Sites (PTMS) within the south segment for stations 87-0562, 87-0563, 87-0564, and 87-0565. In contrast, the northern segment of SR 826 from north of SR 874 (3.700) to north of NW 25 Street (MP 8.586) consists primarily of ten travel lanes (five lanes in each direction) and two undesignated HOV lanes (one in each direction) and has a 2015 AADT range of between 159,000 and 194,500 vpd based on the FDOT FTI reports for PTMS within the north segment for stations 87-0566, 87-0567, 87-0568, and 87-0569. The study corridor limits were divided in two segments for the analysis of crash data; the mainline south segment and the mainline north segment. Interchange crash analysis is documented separately from the SR 826 mainline.

2.15.1 SR 826 From US 1 to North of SR 874 – South Segment

The south segment of SR 826 from US 1 (MP 0.00) to north of SR 874 (MP 3.690) spans a total length of 3.69 miles, or approximately 43% of the entire study corridor, and traverses the SR 5/US 1 Interchange (MP 0.000), SR 94/SW 88th Street/ Kendall Drive Interchange (MP 0.858), SR 986/SW 72nd Street/Sunset Drive Interchange (MP 1.864), SW 56th Street/Miller Drive Interchange(MP 2.884), and SR 874 Interchange (MP 3.199) from south to north, respectively.

A crash summary was developed for this segment to categorize the relevant crashes by type, severity, lighting conditions, surface conditions and time of day including month of the year, day of the week and hour of the day to identify crash

patterns or clusters and determine probable causes. ***Table 2.17*** summarizes the crash statistics for the south segment of SR 826.

Overall, there were a total of 492 crashes along the south segment of SR 826 during the five-year crash period with 120 crashes in 2011, 90 crashes in 2012, 89 crashes in 2013, 88 crashes in 2014, and 105 crashes in 2015 that occurred on the south segment SR 826. Further review of these crashes by direction suggests that overall, 208 (42.3%) crashes occurred in the northbound direction, 280 (56.9%) crashes occurred in the southbound direction, and 4 (0.8%) crashes were unknown. The following summarizes the crashes by direction occurring each year:

- 120 crashes with 51 (42.5%) northbound and 69 (57.5%) southbound in 2011
- 90 crashes with 40 (44.4%) northbound, 48 (53.3%) southbound and 2 (2.2%) unknowns in 2012
- 89 crashes with 36 (40.4%) northbound, 51 (57.3%) southbound and 2 (2.2%) unknowns in 2013
- 88 crashes with 37 (42.0%) northbound and 51 (58.0%) southbound in 2014
- 105 crashes with 44 (41.9%) northbound and 61 (58.1%) southbound in 2015

Table 2.17 – SR 826 Summary of Crashes – South Segment

SR 826/Palmetto Expressway from US 1/South Dixie Highway to SR 874		Number of Crashes Year 2011	2012	2013	2014	2015	5 Year Total Crashes	Mean Crashes Per Year	%
CRASH TYPE	Rear End	54	55	49	56	75	289	58	58.7%
	Head On	0	0	0	0	0	0	0	0.0%
	Angle	0	0	0	0	0	0	0	0.0%
	Left Turn	0	0	0	0	0	0	0	0.0%
	Right Turn	0	0	0	0	0	0	0	0.0%
	Sideswipe	19	24	18	15	17	93	19	18.9%
	Backed Into	0	0	0	0	0	0	0	0.0%
	Coll. w/ Parked Car	1	0	0	1	0	2	0	0.4%
	Coll. w/ Pedestrian	0	0	0	0	0	0	0	0.0%
	Coll. w/ Bicycle	0	0	0	0	0	0	0	0.0%
	Fixed Object	28	6	13	5	5	57	11	11.6%
	Ran Off Road	0	0	0	0	0	0	0	0.0%
	Overturned	1	0	0	2	0	3	1	0.6%
	Other	17	5	9	9	8	48	10	9.8%
	Total Crashes	**120**	**90**	**89**	**88**	**105**	**492**	**98**	**100.0%**
SEVERITY	PDO Crashes	69	47	56	59	58	289	58	58.7%
	Fatal Crashes	1	1	1	0	0	3	1	0.6%
	Injury Crashes	50	42	32	29	47	200	40	40.7%
LIGHTING CONDITIONS	Daylight	76	50	66	53	66	311	62	63.2%
	Dusk	2	7	4	5	1	19	4	3.9%
	Dawn	0	1	1	0	2	4	1	0.8%
	Dark	42	30	18	30	34	154	31	31.3%
	Unknown	0	2	0	0	2	4	1	0.8%
SURFACE CONDITIONS	Dry	94	67	59	61	80	361	72	73.4%
	Wet	26	22	30	27	25	130	26	26.4%
	Others	0	1	0	0	0	1	0	0.2%
MONTH OF YEAR	January	11	7	3	1	6	28	6	5.7%
	February	14	8	9	1	8	40	8	8.1%
	March	13	8	6	10	11	48	10	9.8%
	April	9	7	5	5	8	34	7	6.9%
	May	9	6	8	10	12	45	9	9.1%
	June	5	9	7	6	12	39	8	7.9%
	July	8	1	7	3	1	20	4	4.1%
	August	13	11	6	15	12	57	11	11.6%
	September	16	13	13	11	6	59	12	12.0%
	October	3	9	9	9	16	46	9	9.3%
	November	9	7	10	8	9	43	9	8.7%
	December	10	4	6	9	4	33	7	6.7%
DAY OF WEEK	Sunday	12	12	18	16	15	73	15	14.8%
	Monday	22	16	12	20	12	82	16	16.7%
	Tuesday	14	7	20	16	15	72	14	14.6%
	Wednesday	22	12	11	12	10	67	13	13.6%
	Thursday	15	14	9	8	18	64	13	13.0%
	Friday	17	14	12	7	20	70	14	14.2%
	Saturday	18	15	7	9	15	64	13	13.0%
HOUR OF DAY	12:00 AM - 06:00 AM	17	13	5	10	18	63	13	12.8%
	06:00 AM - 09:00 AM	19	11	18	16	22	86	17	17.5%
	09:00 AM - 11:00 AM	9	8	7	5	10	39	8	7.9%
	11:00 AM - 01:00 PM	9	7	8	2	9	35	7	7.1%
	01:00 PM - 03:00 PM	11	5	2	9	11	38	8	7.7%
	03:00 PM - 06:00 PM	23	17	28	17	15	100	20	20.3%
	06:00 PM - 08:00 PM	16	13	12	13	9	63	13	12.8%
	08:00 PM - 11:59 PM	16	16	9	16	11	68	14	13.8%

Crash Distribution by Crash Type

An analysis of crash distribution by crash types was performed to identify the predominant crash patterns along the south segment of the corridor. ***Figure 2.10*** shows the crash distribution summary by crash type for the south segment of SR 826.

	Rear End	Sideswipe	Fixed Object	Others
2011	54	19	28	19
2012	55	24	6	5
2013	49	18	13	9
2014	56	15	5	12
2015	75	17	5	8
Total	289	93	57	53

Figure 2.10 – SR 826 Crash Distribution by Crash Type – South Segment

As shown in ***Figure 2.10***, the leading crash types include rear-end with 289 (58.7%) crashes, sideswipe with 93 (18.9%) crashes and fixed-object with 57 (11.6%) crashes. Rear-end and sideswipe type crashes are typical of highly congested roadways with frequent stop-and-go traffic conditions.

Crash Trends by Severity

An analysis of crash frequency by severity was performed to determine the overall trends along the south segment of the corridor. ***Figure 2.11*** shows the crashes by severity summary for the south segment of SR 826.

	PDO Crashes	Fatal Crashes	Injury Crashes
2011	69	1	50
2012	47	1	42
2013	56	1	32
2014	59	0	29
2015	58	0	47
Total Crashes	289	3	200

Figure 2.11 – SR 826 Crashes by Severity – South Segment

As shown in ***Figure 2.11***, there were 289 (58.7%) "Property Damage Only Crashes" and 200 (40.7 %) "Injury Crashes". Furthermore, there were 3 (0.6%) "Fatal Crashes" reported in the referenced five-year analysis period.

Crash Distribution by Lighting Conditions

An analysis of lighting conditions was performed to determine if inadequate lighting may have contributed to significant crashes along the south segment of the corridor. ***Figure 2.12*** shows the lighting conditions summary for the south segment of SR 826.

	Daylight	Dusk	Dawn	Dark	Unknown
2011	76	2	0	42	0
2012	50	7	1	30	2
2013	66	4	1	18	0
2014	53	5	0	30	0
2015	66	1	2	34	2
Total Crashes	311	19	4	154	4

Figure 2.12 – SR 826 Crash Distribution by Lighting Conditions – South Segment

As shown in ***Figure 2.12***, most of the crashes occurred during daylight conditions. Of the total 492 crashes that occurred along the south segment, 177 (36.0%) crashes occurred during dark/dusk/dawn conditions, which is greater than the five-year Districtwide average of 29%. A review of the existing conditions indicates that roadway lighting is present along the center median barrier throughout the study corridor limits.

Crash Distribution by Road Surface Conditions

An analysis of the road surface conditions was performed to determine if inadequate road surface conditions has contributed to crashes along the south segment of the corridor. ***Figure 2.13*** shows the road surface conditions summary for the south segment of SR 826.

	Dry	Wet	Others
2011	94	26	0
2012	67	22	1
2013	59	30	0
2014	61	27	0
2015	80	25	0
Total Crashes	361	130	1

Figure 2.13 – SR 826 Crash Distribution by Road Surface Conditions – South Segment

As illustrated in ***Figure 2.13***, 130 (26.4%) of the total crashes occurred during wet surface conditions, which is greater than the five-year Districtwide average for all roadways of 16%. Most crashes however, about 73%, occurred during dry surface conditions.

Crash Distribution by Time of Day

The crash distribution by time of day was analyzed to determine if the hourly variations were having a substantial effect on the crash occurrences along the south segment of the corridor. ***Figure 2.14*** shows the crash distribution summary by time of day for the south segment of SR 826.

	12:00 AM - 06:00 AM	06:00 AM - 09:00 AM	09:00 AM - 11:00 AM	11:00 AM - 01:00 PM	01:00 PM - 03:00 PM	03:00 PM - 06:00 PM	06:00 PM - 08:00 PM	08:00 PM - 11:59 PM
2011	17	19	9	9	11	23	16	16
2012	13	11	8	7	5	17	13	16
2013	5	18	7	8	2	28	12	9
2014	10	16	5	2	9	17	13	16
2015	18	22	10	9	11	15	9	11
Total Crashes	63	86	39	35	38	100	63	68

Figure 2.14 – SR 826 Crash Distribution by Time of Day – South Segment

As shown in ***Figure 2.14***, the time periods with the greatest percentage of crashes occur from 6:00 to 9:00 AM (17.5%) and from 3:00 PM to 6:00 PM (20.3%). These periods correlate with the typical AM and PM peaks, which experience the worst congestion during the day and indicates that most of the crashes can be attributed to traffic congestion rather than roadway design features.

Crash Distribution by Contributing Causes

An analysis of the contributing causes was conducted to identify the leading contributing causes for crashes along the south segment of the corridor. ***Table 2.18*** summarizes the contributing causes for crashes occurring on the south segment of SR 826.

Table 2.18 – SR 826 Crash Distribution by Contributing Causes – South Segment

Contributing Cause	Total	%
Careless or Negligent Manner	221	45%
Failed to Keep in Proper Lane	20	4%
Failed to Yield Right-Of-Way	19	4%
Drove too Fast for Conditions	13	3%
Followed too Closely	10	2%
Improper Passing	8	2%
Improper Turn	5	1%
Over-Correcting/Over-Steering	4	1%
Swerved or Avoided	4	1%
Ran Off Roadway	2	0%
Improper Backing	0	0%
Ran Red Light	0	0%
Ran Stop Sign	0	0%
Exceed Posted Speed	0	0%
Wrong Side or Wrong Way	0	0%
Disregarded Other Traffic Sign	0	0%
Disregarded other Road Markings	0	0%
Erratic, Reckless or Aggressive	0	0%
No Contributing Action	82	17%
Other Contributing Action	104	21%
Total	492	100%

As indicated in ***Table 2.18***, approximately 53% of the recorded crashes that occurred in the south segment of SR 826 is attributed to driver behaviors. These contributing causes include driving in a "Careless or Negligent Manner" with 221 (45%) crashes, "Failed To Keep In Proper Lane" with 20 (4%) crashes, and "Failed To Yield Right-Of-Way" with 19 (4%) crashes. Note, 82 (17%) crashes have "No Contributing Action" and 104 (21%) crashes have "Other Contributing Action" identified for the contributing cause of the crash.

Crash Distribution by Milepost

Total crashes were plotted by milepost to determine any sections along the south segment of the study corridor that experienced a high number of crashes. ***Figure 2.15*** summarizes the crash distribution by milepost between MP 0.000 and 3.690 along the south segment of SR 826.

	0 - 0.5	0.5 - 1.0	1.0 - 1.5	1.5 - 2.0	2.0 - 2.5	2.5 - 3.0	3.0 - 3.69
2011	10	13	5	16	5	36	35
2012	6	17	7	22	5	15	18
2013	9	14	8	14	3	20	21
2014	3	9	4	17	9	22	24
2015	7	11	7	16	11	37	16
Total Crashes	35	64	31	85	33	130	114

Figure 2.15 – SR 826 Crash Distribution by Milepost – South Segment

As shown in ***Figure 2.15***, most crashes occurred between MP 2.5 – 3.0 with 130 (26%) crashes, MP 3.0 – 3.69 with 114 (23%) crashes, and MP 1.5 – 2.0 with 85 (17%) crashes. These milepost ranges identified correspond with the SR 826 interchanges at SR 874 (south side), SR 874 (north side), and SR 986/SW 72nd Drive, respectively.

Average Crash Rates Review

The total number of crashes in the south segment of the study corridor has varied between 2011 and 2015 with an average of 98 crashes per year. The Average Daily Traffic (ADT) has increased from 79,057 vpd in 2011 to 93,675 vpd in 2015. Crash rates in million vehicle miles traveled were calculated to determine if variations in total crashes was due to an increase in ADT or influenced by driver and/or roadway conditions. Throughout the south segment, the functional classification of the corridor is consistent. Therefore, one crash rate was calculated for the corridor segment for each year of analysis. ***Table 2.19*** compares the actual crash rates (annually) to the statewide and District Six average crash rates for corridors with similar functional classification.

Table 2.19 – SR 826 Actual Crash Rate vs. Average Crash Rate – South Segment

Year	2011	2012	2013	2014	2015
Number of Crashes	120	90	89	88	105
Average Daily Traffic (ADT)	79,057	78,429	95,239	92,422	93,675
Actual Crash Rate (ACR)	1.127	0.852	0.694	0.707	0.832
District Six Average Crash Rate (A)	1.799	1.875	1.899	2.017	2.312
Average Vehicle Exposure (M)	106.478	105.632	128.273	124.479	126.166
Statewide Average Crash Rate	1.380	1.867	1.793	1.927	2.090

As indicated in ***Table 2.19***, the actual crash rate for the south segment of SR 826 is below the average crash rate for other corridors with similar functional classification (urban – other limited access) in District Six for all years between 2011 and 2015, which may be attributed to the increase in ADT. Similarly, the actual crash rate for the south segment of SR 826 is below the statewide average crash rate in all years 2011 through 2015.

High Crash List Review

The FDOT's High Crash Lists for spots (ramp junctions) and segments were reviewed to identify whether any locations experienced an abnormally high number of crashes along the south segment of the study corridor. ***Table 2.20*** provides a summary list of the spots (ramp junctions) and segments along the south segment of SR 826 identified in the 2011-2015 FDOT High Crash Lists (HCL).

Table 2.20 – SR 826 High Crash List Review – South Segment

High Crash List (HCL) Check				
Location	Spot (Ramp Junction)	Description	Segment	Description
SR 826 South Segment	2011-2015 HCL at MP 1.981 2011-2015 HCL at MP 2.800	SB SR 826 Off-Ramp to WB SR 986 SB SR 826 Off-Ramp to SW 56 St	2011-2015 HCL from MP 0.000 to MP 0.300	US 1 to S Dadeland Blvd

Note: Study limits include SR 826/Palmetto Expressway (Roadway ID # 87260000), from milepost 0.000 to 3.690.

As indicated in ***Table 2.20***, spots (ramp junctions) identified in the 2011-2015 FDOT HCL include MP 1.981 and MP 2.800, which is associated with the SR 826 southbound off-ramps to SR 986/Sunset Drive and SW 56th Street/Miller Drive, respectively. The segment identified in the 2011-2015 FDOT HCL spans between MP 0.000 and 0.300, which is associated with the section of SR 826 between SR 5/US 1 and Dadeland Boulevard.

2.15.2 SR 826 FROM NORTH OF SR 874 TO NW 25TH STREET – NORTH SEGMENT

The north segment of SR 826 from north of SR 874 (MP 3.700) to north of NW 25th Street (MP 8.586) spans a total length of 4.896 miles, or approximately 57% of the entire study corridor, and traverses the SR 976/SW 40th Street/Bird Road Interchange (MP 3.921), SW 24th Street/Coral Way Interchange (MP 4.985), SR 90/SW 8th Street Interchange (MP 5.982), SR 968/Flagler Street Interchange (MP 6.488), SR 836 Interchange (MP 7.223), and NW 25th Street Interchange (MP 8.374) from south to north, respectively.

A crash summary was developed for this segment to categorize the relevant crashes by type, severity, lighting conditions, surface conditions and time of day including month of the year, day of the week and hour of the day to identify crash patterns or clusters and determine probable causes. ***Table 2.21*** summarizes the crash statistics for the north segment of SR 826.

Table 2.21 – SR 826 Summary of Crashes – North Segment

SR 826/Palmetto Expressway from SR 874 to NW 25 Street		Number of Crashes Year 2011	2012	2013	2014	2015	5 Year Total Crashes	Mean Crashes Per Year	%
CRASH TYPE	Rear End	526	475	455	506	471	2433	487	59.9%
	Head On	0	0	0	0	0	0	0	0.0%
	Angle	0	0	0	0	0	0	0	0.0%
	Left Turn	0	0	0	0	0	0	0	0.0%
	Right Turn	0	0	0	0	0	0	0	0.0%
	Sideswipe	135	123	135	197	165	755	151	18.6%
	Backed Into	0	0	0	0	0	0	0	0.0%
	Coll. w/ Parked Car	1	2	3	1	3	10	2	0.2%
	Coll. w/ Pedestrian	0	0	0	0	0	0	0	0.0%
	Coll. w/ Bicycle	0	0	0	0	0	0	0	0.0%
	Fixed Object	49	74	69	67	88	347	69	8.5%
	Ran Off Road	0	0	0	0	0	0	0	0.0%
	Overturned	5	4	4	1	4	18	4	0.4%
	Other	118	100	93	87	102	500	100	12.3%
	Total Crashes	**834**	**778**	**759**	**859**	**833**	**4063**	**813**	**100.0%**
SEVERITY	PDO Crashes	503	517	566	622	614	2822	564	69.5%
	Fatal Crashes	0	2	0	0	4	6	1	0.1%
	Injury Crashes	331	259	193	237	215	1235	247	30.4%
LIGHTING CONDITIONS	Daylight	584	532	505	601	579	2801	560	68.9%
	Dusk	24	27	28	26	23	128	26	3.2%
	Dawn	8	14	16	14	24	76	15	1.9%
	Dark	218	203	208	211	207	1047	209	25.8%
	Unknown	0	2	2	7	0	11	2	0.3%
SURFACE CONDITIONS	Dry	662	601	575	695	676	3209	642	79.0%
	Wet	171	175	183	163	157	849	170	20.9%
	Others	1	2	1	1	0	5	1	0.1%
MONTH OF YEAR	January	79	65	49	50	44	287	57	7.1%
	February	68	71	53	56	78	326	65	8.0%
	March	73	63	54	71	73	334	67	8.2%
	April	65	57	76	47	64	309	62	7.6%
	May	55	51	65	70	72	313	63	7.7%
	June	74	63	53	91	73	354	71	8.7%
	July	57	66	80	80	51	334	67	8.2%
	August	54	75	57	60	85	331	66	8.1%
	September	68	62	71	74	94	369	74	9.1%
	October	68	95	67	101	71	402	80	9.9%
	November	87	60	65	77	75	364	73	9.0%
	December	86	50	69	82	53	340	68	8.4%
DAY OF WEEK	Sunday	107	104	124	104	132	571	114	14.1%
	Monday	141	129	105	147	136	658	132	16.2%
	Tuesday	135	98	107	124	123	587	117	14.4%
	Wednesday	115	126	121	137	127	626	125	15.4%
	Thursday	157	149	132	158	133	729	146	17.9%
	Friday	106	94	96	122	110	528	106	13.0%
	Saturday	73	78	74	67	72	364	73	9.0%
HOUR OF DAY	12:00 AM - 06:00 AM	59	70	55	69	78	331	66	8.1%
	06:00 AM - 09:00 AM	124	132	141	140	159	696	139	17.1%
	09:00 AM - 11:00 AM	76	88	73	106	87	430	86	10.6%
	11:00 AM - 01:00 PM	87	79	66	89	75	396	79	9.7%
	01:00 PM - 03:00 PM	108	99	82	98	101	488	98	12.0%
	03:00 PM - 06:00 PM	174	128	138	145	154	739	148	18.2%
	06:00 PM - 08:00 PM	104	78	108	123	87	500	100	12.3%
	08:00 PM - 11:59 PM	102	104	96	89	92	483	97	11.9%

Overall, there were a total of 4,063 crashes along the north segment of SR 826 during the five-year crash period with 834 crashes in 2011, 778 crashes in 2012, 759 crashes in 2013, 859 crashes in 2014, and 833 crashes in 2015 that occurred on the north segment SR 826. Further review of these crashes by direction suggests that overall, 2,207 (54.3%) crashes occurred in the northbound direction, 1,848 (45.5%) crashes occurred in the southbound direction, and 8 (0.2%) crashes were unknown. The following summarizes the crashes by direction occurring each year:

- 834 crashes with 453 (54.3%) northbound, 378 (45.3%) southbound and 3 (0.4%) unknowns in 2011
- 778 crashes with 408 (52.4%) northbound, 368 (47.3%) southbound and 2 (0.3%) unknowns in 2012
- 759 crashes with 433 (57.0%) northbound, 324 (42.7%) southbound and 2 (0.3%) unknowns in 2013
- 859 crashes with 460 (53.6%) northbound, 398 (46.3%) southbound and 1 (0.1%) unknown in 2014
- 833 crashes with 453 (54.4%) northbound and 380 (45.6%) southbound in 2015

Crash Distribution by Crash Type

An analysis of crash distribution by crash types was performed to identify the predominant crash patterns along the north segment of the corridor. ***Figure 2.16*** shows the crash distribution summary by crash type for the north segment of SR 826.

	Rear End	Sideswipe	Fixed Object	Coll. w/ Parked Car	Overturned	Others
2011	526	135	49	0	0	124
2012	475	123	74	1	5	100
2013	455	135	69	2	4	94
2014	506	197	67	3	4	82
2015	471	165	88	1	1	107
Total	2433	755	347	7	14	507

Figure 2.16 – SR 826 Crash Distribution by Crash Type – North Segment

As shown in ***Figure 2.16***, the leading crash types include rear-end with 2,433 (59.9%) crashes, sideswipe with 755 (18.6%) crashes and other with 500 (12.3%) crashes. Rear-end and sideswipe type crashes are typical of highly congested roadways with frequent stop-and-go traffic conditions.

Crash Trends by Severity

An analysis of crash frequency by severity was performed to determine the overall trends along the north segment of the corridor. ***Figure 2.17*** shows the crashes by severity summary for the north segment of SR 826.

	PDO Crashes	Fatal Crashes	Injury Crashes
2011	503	0	331
2012	517	2	259
2013	566	0	193
2014	622	0	237
2015	614	4	215
Total Crashes	2822	6	1235

Figure 2.17 – SR 826 Crashes by Severity – North Segment

As shown in ***Figure 2.17***, there were 2,822 (69.5%) "Property Damage Only Crashes" and 1,235 (30.4 %) "Injury Crashes". Furthermore, there were 6 (0.1%) "Fatal Crashes" reported in the referenced five-year analysis period.

Crash Distribution by Lighting Conditions

An analysis of lighting conditions was performed to determine if inadequate lighting may have contributed to significant crashes along the north segment of the corridor. ***Figure 2.18*** shows the lighting conditions summary for the north segment of SR 826.

	Daylight	Dusk	Dawn	Dark	Unknown
2011	584	24	8	218	0
2012	532	27	14	203	2
2013	505	28	16	208	2
2014	601	26	14	211	7
2015	579	23	24	207	0
Total Crashes	2801	128	76	1047	11

Figure 2.18 – SR 826 Crash Distribution by Lighting Conditions – North Segment

As shown in ***Figure 2.18***, most of the crashes occurred during daylight conditions. Of the total 4,063 crashes that occurred along the north segment, 1,251 (30.8%) crashes occurred during dark/dusk/dawn conditions, which is greater than the five-year Districtwide average of 29%. A review of the existing conditions indicates that roadway lighting is present along the center median barrier throughout the study corridor limits.

Crash Distribution by Road Surface Conditions

An analysis of the road surface conditions was performed to determine if inadequate road surface conditions has contributed to crashes along the north segment of the corridor. ***Figure 2.19*** shows the road surface conditions summary for the north segment of SR 826.

	Dry	Wet	Others
2011	662	171	1
2012	601	175	2
2013	575	183	1
2014	695	163	1
2015	676	157	0
Total Crashes	3209	849	5

Figure 2.19 – SR 826 Crash Distribution by Road Surface Conditions – North Segment

As illustrated in ***Figure 2.19***, 849 (20.9%) of the total crashes occurred during wet surface conditions, which is greater than the five-year Districtwide average for all roadways of 16%. Most crashes however, about 79%, occurred during dry surface conditions.

Crash Distribution by Time of Day

The crash distribution by time of day was analyzed to determine if the hourly variations were having a substantial effect on the crash occurrences along the north segment of the corridor. ***Figure 2.20*** shows the crash distribution summary by time of day for the north segment of SR 826.

	12:00 AM - 06:00 AM	06:00 AM - 09:00 AM	09:00 AM - 11:00 AM	11:00 AM - 01:00 PM	01:00 PM - 03:00 PM	03:00 PM - 06:00 PM	06:00 PM - 08:00 PM	08:00 PM - 11:59 PM
2011	59	124	76	87	108	174	104	102
2012	70	132	88	79	99	128	78	104
2013	55	141	73	66	82	138	108	96
2014	69	140	106	89	98	145	123	89
2015	78	159	87	75	101	154	87	92
Total Crashes	331	696	430	396	488	739	500	483

Figure 2.20 – SR 826 Crash Distribution by Time of Day – North Segment

As shown in ***Figure 2.20***, the time periods with the greatest percentage of crashes occur from 6:00 to 9:00 AM (17.1%) and from 3:00 PM to 6:00 PM (18.2%). These periods correlate with the typical AM and PM peaks, which experience the worst congestion during the day and indicates that most of the crashes can be attributed to traffic congestion rather than roadway design features.

Crash Distribution by Contributing Causes

An analysis of the contributing causes was conducted to identify the leading contributing causes for crashes along the north segment of the corridor. ***Table 2.22*** summarizes the contributing causes for crashes occurring on the north segment of SR 826.

Table 2.22 – SR 826 Crash Distribution by Contributing Causes – North Segment

Contributing Cause	Total	%
Careless or Negligent Manner	2,287	56%
Failed to Keep in Proper Lane	201	5%
Failed to Yield Right-Of-Way	167	4%
Improper Passing	75	2%
Followed too Closely	69	2%
Swerved or Avoided	28	1%
Improper Turn	20	0%
Drove too Fast for Conditions	19	0%
Over-Correcting/Over-Steering	6	0%
Wrong Side or Wrong Way	5	0%
Erratic, Reckless or Aggressive	3	0%
Improper Backing	2	0%
Ran Off Roadway	2	0%
Exceed Posted Speed	1	0%
Disregarded Other Traffic Sign	1	0%
Disregarded other Road Markings	1	0%
Ran Red Light	0	0%
Ran Stop Sign	0	0%
No Contributing Action	500	12%
Other Contributing Action	676	17%
Total	4,063	100%

As indicated in ***Table 2.22***, approximately 65% of the recorded crashes that occurred in the north segment of SR 826 is attributed to driver behaviors. These contributing causes include driving in a "Careless or Negligent Manner" with 2,287 (56%) crashes, "Failed To Keep In Proper Lane" with 201 (5%) crashes, and "Failed To Yield Right-Of-Way" with 167 (4%) crashes. Note, 500 (12%) crashes have "No Contributing Action" and 676 (17%) crashes have "Other Contributing Action" identified for the contributing cause of the crash.

Crash Distribution by Milepost

Total crashes were plotted by milepost to determine any sections along the north segment of the study corridor that experienced a high number of crashes. ***Figure 2.21*** summarizes the crash distribution by milepost between MP 3.700 and 8.586 along the north segment of SR 826.

	3.7 - 4.5	4.5 - 5.0	5.0 - 5.5	5.5 - 6.0	6.0 - 6.5	6.5 - 7.0	7.0 - 7.5	7.5 - 8.0	8.0 - 8.586
2011	190	60	62	75	136	69	76	36	130
2012	91	34	54	83	128	92	124	37	135
2013	62	37	26	74	135	111	173	35	106
2014	96	44	51	82	141	119	167	30	129
2015	69	42	34	84	116	90	180	44	174
Total Crashes	508	217	227	398	656	481	720	182	674

Figure 2.21 – SR 826 Crash Distribution by Milepost – North Segment

As shown in ***Figure 2.21***, most crashes occurred between MP 7.0 – 7.5 with 720 (18%) crashes, MP 8.0 – 8.586 with 674 (17%) crashes, and MP 6.0 – 6.5 with 656 (16%) crashes. These milepost ranges identified correspond with the SR 826 interchanges at SR 836, NW 25th Street and SR 90/SW 8th Street (north side), respectively. It's important to note that within the referenced years (2011-2015), the FDOT project (FPID#249581-1-52-01) was under construction adding lanes along SR 826 from north of SR 90/SW 8th Street to south of NW 25th Street. Further review of the crash data revealed that 544 (13.4%) crashes reported were attributed to work zone related activities, perhaps including the maintenance of traffic (MOT) for this project.

Average Crash Rates Review

The total number of crashes in the north segment of the study corridor has varied slightly between 2011 and 2015 with an average of 813 crashes per year. The Average Daily Traffic (ADT) has varied slightly from 193,929 vpd in 2011 to 194,157 vpd in 2015. Crash rates in million vehicle miles traveled were calculated to determine if variations in total crashes was due to an increase in ADT or influenced by driver and/or roadway conditions. Throughout the north segment, the functional classification of the corridor is consistent. Therefore, one crash rate was calculated for the corridor segment for each year of analysis. ***Table 2.23*** compares the actual crash rates (annually) to the statewide and District Six average crash rates for corridors with similar functional classification.

Table 2.23 – SR 826 Actual Crash Rate vs. Average Crash Rate – North Segment

Year	2011	2012	2013	2014	2015
Number of Crashes	834	778	759	859	833
Average Daily Traffic (ADT)	193,929	183,574	200,131	197,036	194,157
Actual Crash Rate (ACR)	2.411	2.376	2.127	2.445	2.406
District Six Average Crash Rate (A)	1.799	1.875	1.899	2.017	2.312
Average Vehicle Exposure (M)	345.851	327.384	356.912	351.392	346.258
Statewide Average Crash Rate	1.380	1.867	1.793	1.927	2.090

As indicated in ***Table 2.23***, the actual crash rate for the north segment of SR 826 is above the average crash rate for other corridors with similar functional classification (urban – other limited access) in District Six for all years between 2011 and 2015, which may be attributed to the other causes besides an increase in ADT, such as driver and/or roadway conditions. Similarly, the actual crash rate for the north segment of SR 826 is above the statewide average crash rate for all years 2011 through 2015. It's important to note that within the referenced years (2011-2015), the FDOT project (FPID#249581-1-52-01) was under construction adding lanes along SR 826 from north of SR 90/SW 8th Street to south of NW 25th Street. The existing crash data was filtered to identify the total number of work zone related crashes. According to the filtered data the maintenance of traffic (MOT) of this project may have been attributed to approximately 13% of the total crashes identified along this segment of SR 826.

High Crash List Review

The FDOT's High Crash Lists for spots (ramp junction) and segments were reviewed to identify whether any locations experienced an abnormally high number of crashes along the north segment of the study corridor. ***Table 2.24*** provides a summary list of the spots (ramp junctions) and segments along the north segment of SR 826 identified in the 2011-2015 FDOT High Crash Lists.

Table 2.24 – SR 826 High Crash List Review – North Segment

High Crash List (HCL) Check				
Location	**Spot (Ramp Junction)**	**Description**	**Segment**	**Description**
SR 826 North Segment	2011-2015 HCL at MP 3.828/3.831 2011-2015 HCL at MP 4.252 2011-2015 HCL at MP 4.923/4.926 2011-2015 HCL at MP 6.040 2011-2015 HCL at MP 6.072 2011-2015 HCL at MP 6.080 2011-2015 HCL at MP 6.132 2011-2015 HCL at MP 6.615/6.620 2011-2015 HCL at MP 7.184 2011-2015 HCL at MP 8.531	NB SR 826 On-Ramp from WB SR 976 SB SR 826 Off-Ramp to WB SR 976 NB SR 826 On-Ramp from SW 24 St 200 ft S of NB SR 826 On-Ramp from EB SR 90 260 ft S of SB SR 826 Off-Ramp to WB SR 90 NB SR 826 On-Ramp from EB SR 90 SB SR 826 Off-Ramp to WB SR 90 1,100 ft S of NB SR 826 Off-Ramp to EB SR 836 SR 826 Mainline under SR 836 Overpass SB SR 826 Off-Ramp to NW 25 St	2011-2015 HCL from MP 3.700 to MP 4.100 2011-2015 HCL from MP 4.900 to MP 5.100 2011-2015 HCL from MP 5.800 to MP 6.800 2011-2015 HCL from MP 7.100 to MP 7.600 2011-2015 HCL from MP 8.200 to MP 8.700	N and S of SR 976 interchange N and S of SW 24 Street interchange S of SR 90 to S of SR 836 N and S of SR 836 interchange N and S of NW 25 St interchange

Note: Study limits include SR 826/Palmetto Expressway (Roadway ID # 87260000), from milepost 3.700 to 8.586.

As indicated in ***Table 2.24***, the major spots (ramp junctions) and segments identified in the 2011-2015 FDOT HCL include mileposts associated with the interchanges of SR 826 with SR 976/SW 40th Street/Bird Road, SR 90/SW 8th Street, SR 836 and NW 25th Street. It's important to note that within the referenced years (2011-2015), the FDOT project (FPID#249581-1-52-01) was under construction adding lanes along SR 826 from north of SR 90/SW 8th Street to south of NW 25th Street. Further review of the crash data revealed that 544 (13.4%) crashes reported were attributed to work zone related activities, perhaps including the maintenance of traffic (MOT) for this project.

2.15.3 Interchange Crash Analysis

The crash analysis area covered 11 interchanges with SR 826 including NW 25th Street, SR 836/Dolphin Expressway, SR 968/Flagler Street, SR 90/SW 8th Street, SW 24th Street/Coral Way, SR 976/SW 40th Street/Bird Road, SR 874/Don Shula Expressway, SW 56th Street/Miller Drive, SR 986/SW 72nd Street/Sunset Drive, SR 94/SW 88th Street and SR 5/US 1. The following sections summarize the crash history between January 1, 2011 through December 31, 2015 that occurred within the interchange influence area including the section of mainline between ramps and the section of the arterial influenced by the ramp intersections.

NW 25th Street Interchange

NW 25th Street is a four-lane divided arterial that intersects with SR 826 and forms two signalized intersections with the northbound and southbound on/off-ramps at the interchange. ***Figure 2.22*** shows the influence area selected for the interchange and ***Table 2.25*** summarizes the crash data within the influence area. Of the total 1,171 crashes reported, 960 (82%) crashes were retrieved from the FDOT Crash Analysis Reporting System and 211 (18%) from Signal-4 Analytics.

Figure 2.22 – NW 25th Street Interchange Influence Area

A total of 1,171 crashes occurred at the NW 25th Street interchange, with 189 crashes in 2011, 190 crashes in 2012, 201 crashes in 2013, 291 crashes in 2014 and 300 crashes in 2015. Of the total crashes, 886 (75.7%) were "Property Damage Only" and 285 (24.3%) were "Injury". No fatal crashes were reported. Three hundred and eight (26.3%) crashes occurred during dark/dawn/dusk lighting conditions, which is lower than the Districtwide average of 29%. Wet roadway surface conditions were reported for 195 (16.7%) crashes, which is slightly above the Districtwide average of 16%.

Table 2.25 – NW 25th Street Interchange Crash Summary

SR 826/Palmetto Expressway AT SW 25 Street		Number of Crashes					5 Year Total Crashes	Mean Crashes Per Year	%
		Year							
		2011	2012	2013	2014	2015			
CRASH TYPE	Rear End	131	111	94	152	186	674	134.80	57.6%
	Head On	0	1	2	0	0	3	0.60	0.3%
	Angle	12	8	24	22	18	84	16.80	7.2%
	Left Turn	4	6	5	4	2	21	4.20	1.8%
	Right Turn	1	0	1	3	2	7	1.40	0.6%
	Sideswipe	26	41	47	81	61	256	51.20	21.9%
	Backed Into	0	0	1	1	1	3	0.60	0.3%
	Coll. w/ Parked Car	0	2	0	0	0	2	0.40	0.2%
	Coll. w/ Pedestrian	1	0	0	1	0	2	0.40	0.2%
	Coll. w/ Bicycle	0	0	0	0	0	0	0.00	0.0%
	Fixed Object	4	10	6	8	10	38	7.60	3.2%
	Ran Off Road	1	0	2	0	0	3	0.60	0.3%
	Overturned	0	0	1	2	1	4	0.80	0.3%
	Other	9	11	18	17	19	74	14.80	6.3%
	Total Crashes	**189**	**190**	**201**	**291**	**300**	**1171**	**234.20**	**100.0%**
SEVERITY	PDO Crashes	116	123	161	239	247	886	177.20	75.7%
	Fatal Crashes	0	0	0	0	0	0	0.00	0.0%
	Injury Crashes	73	67	40	52	53	285	57.00	24.3%
LIGHTING CONDITIONS	Daylight	144	146	141	207	221	859	171.80	73.4%
	Dusk	8	7	11	13	11	50	10.00	4.3%
	Dawn	1	2	1	6	4	14	2.80	1.2%
	Dark	36	34	45	65	64	244	48.80	20.8%
	Unknown	0	1	3	0	0	4	0.80	0.3%
SURFACE CONDITIONS	Dry	154	145	163	243	267	972	194.40	83.0%
	Wet	35	44	35	48	33	195	39.00	16.7%
	Others	0	1	3	0	0	4	0.80	0.3%
HOUR OF DAY	12:00 AM - 06:00 AM	9	7	14	18	20	68	13.60	5.8%
	06:00 AM - 09:00 AM	14	22	25	40	34	135	27.00	11.5%
	09:00 AM - 11:00 AM	18	18	23	26	23	108	21.60	9.2%
	11:00 AM - 01:00 PM	19	26	25	38	28	136	27.20	11.6%
	01:00 PM - 03:00 PM	35	34	24	35	46	174	34.80	14.9%
	03:00 PM - 06:00 PM	48	44	42	59	80	273	54.60	23.3%
	06:00 PM - 11:59 PM	46	39	48	75	69	277	55.40	23.7%

The leading crash types include rear-end with 674 (57.6%) and sideswipe with 256 (21.9%). Rear-end and sideswipe type crashes are typical of highly congested roadways and interchanges. It should be noted that the NW 25th Street viaduct project (FPID#251185-1-52-01) from NW 89th Court to SR 826 was under construction during the referenced five-year period, with the heaviest construction occurring between 2014 and 2015.

SR 836/Dolphin Expressway Interchange

SR 836/Dolphin Expressway is an eight-lane divided expressway (tolled facility) that connects to SR 826 forming a system-to-system interchange between the two expressways. ***Figure 2.23*** shows the influence area selected for the interchange and ***Table 2.26*** summarizes the crash data within the influence area.

Figure 2.23 – SR 836/Dolphin Expressway Interchange Influence Area

A total of 2,048 crashes occurred at the SR 836 interchange, with 340 crashes in 2011, 387 crashes in 2012, 419 crashes in 2013, 473 crashes in 2014 and 429 crashes in 2015. Of the total crashes, 1,403 (68.5%) were "Property Damage Only" and 641 (31.3%) were "Injury". There were 4 (0.2%) fatal crashes reported. Six hundred and ninety-five (33.9%) crashes occurred during dark/dawn/dusk lighting conditions, which is greater than the Districtwide average of 29%. Wet roadway surface conditions were reported for 407 (19.9%) crashes, which is greater than the Districtwide average of 16%.

Table 2.26 – SR 836/Dolphin Expressway Interchange Crash Summary

SR 826/Palmetto At SR 836/Dolphin Expressway		Number of Crashes					5 Year Total Crashes	Mean Crashes Per Year	%
		Year							
		2011	2012	2013	2014	2015			
CRASH TYPE	Rear End	196	204	214	284	236	1134	226.80	55.4%
	Head On	0	0	0	0	0	0	0.00	0.0%
	Angle	0	0	0	0	0	0	0.00	0.0%
	Left Turn	0	0	0	0	0	0	0.00	0.0%
	Right Turn	0	0	0	0	0	0	0.00	0.0%
	Sideswipe	66	73	80	78	66	363	72.60	17.7%
	Backed Into	0	0	0	1	0	1	0.20	0.0%
	Coll. w/ Parked Car	0	0	3	0	0	3	0.60	0.1%
	Coll. w/ Pedestrian	0	0	0	0	0	0	0.00	0.0%
	Coll. w/ Bicycle	0	0	0	0	0	0	0.00	0.0%
	Fixed Object	40	54	72	62	85	313	62.60	15.3%
	Ran Off Road	0	0	0	0	0	0	0.00	0.0%
	Overturned	2	5	1	5	3	16	3.20	0.8%
	Other	36	51	49	43	39	218	43.60	10.6%
	Total Crashes	**340**	**387**	**419**	**473**	**429**	**2048**	**409.60**	**100.0%**
SEVERITY	PDO Crashes	205	249	299	356	294	1403	280.60	68.5%
	Fatal Crashes	0	1	1	0	2	4	0.80	0.2%
	Injury Crashes	135	137	119	117	133	641	128.20	31.3%
LIGHTING CONDITIONS	Daylight	229	256	270	312	276	1343	268.60	65.6%
	Dusk	6	14	9	19	20	68	13.60	3.3%
	Dawn	1	3	10	5	12	31	6.20	1.5%
	Dark	104	109	127	135	121	596	119.20	29.1%
	Unknown	0	5	3	2	0	10	2.00	0.5%
SURFACE CONDITIONS	Dry	278	285	321	397	355	1636	327.20	79.9%
	Wet	62	101	97	75	72	407	81.40	19.9%
	Others	0	1	1	1	2	5	1.00	0.2%
HOUR OF DAY	12:00 AM - 06:00 AM	48	59	67	52	53	279	55.80	13.6%
	06:00 AM - 09:00 AM	44	89	85	88	67	373	74.60	18.2%
	09:00 AM - 11:00 AM	31	44	50	52	46	223	44.60	10.9%
	11:00 AM - 01:00 PM	43	33	35	57	53	221	44.20	10.8%
	01:00 PM - 03:00 PM	48	38	38	42	46	212	42.40	10.4%
	03:00 PM - 06:00 PM	64	52	52	63	60	291	58.20	14.2%
	06:00 PM - 11:59 PM	62	72	92	119	104	449	89.80	21.9%

The leading crash types include rear-end with 1,134 (55.4%), sideswipe with 363 (17.7%) and fixed-object with 313 (15.3%). Rear-end and sideswipe type crashes are typical of highly congested roadways. Fixed-object type crashes are typical on freeways with guardrails or concrete barriers like SR 826 and SR 836.

SR 968/Flagler Street Interchange

SR 968/Flagler Street is a six-lane divided roadway that intersects SR 826 and forms two signalized intersections with the northbound and southbound on/off-ramps at the interchange. ***Figure 2.24*** shows the influence area selected for the interchange and ***Table 2.27*** summarizes the crash data within the influence area.

Figure 2.24 – SR 968/Flagler Street Interchange Influence Area

A total of 1,069 crashes occurred at the SR 968/Flagler Street interchange, with 181 crashes in 2011, 205 crashes in 2012, 209 crashes in 2013, 250 crashes in 2014 and 224 crashes in 2015. Of the total crashes, 757 (70.8%) were "Property Damage Only" and 312 (29.2%) were "Injury". There were no fatal crashes reported in the five- year period referenced. Three hundred and thirty-four (31.2%) crashes occurred during dark/dawn/dusk lighting conditions, which is greater than the Districtwide average of 29%. Wet roadway surface conditions were reported for 178 (16.7%) crashes, which is slightly above the Districtwide average of 16%.

Table 2.27 – SR 968/Flagler Street Interchange Crash Summary

SR 826/Palmetto At SR 968/W Flagler Street		Number of Crashes					5 Year Total Crashes	Mean Crashes Per Year	%
		Year							
		2011	2012	2013	2014	2015			
CRASH TYPE	Rear End	110	128	119	156	126	639	127.80	59.8%
	Head On	0	0	0	1	0	1	0.20	0.1%
	Angle	14	12	14	16	20	76	15.20	7.1%
	Left Turn	4	7	4	6	10	31	6.20	2.9%
	Right Turn	0	0	0	1	1	2	0.40	0.2%
	Sideswipe	28	31	35	50	31	175	35.00	16.4%
	Backed Into	0	0	0	0	0	0	0.00	0.0%
	Coll. w/ Parked Car	0	0	1	0	0	1	0.20	0.1%
	Coll. w/ Pedestrian	0	1	0	0	0	1	0.20	0.1%
	Coll. w/ Bicycle	0	0	1	0	0	1	0.20	0.1%
	Fixed Object	12	13	23	8	23	79	15.80	7.4%
	Ran Off Road	0	0	0	0	0	0	0.00	0.0%
	Overturned	0	0	1	0	1	2	0.40	0.2%
	Other	13	13	11	12	12	61	12.20	5.7%
	Total Crashes	**181**	**205**	**209**	**250**	**224**	**1069**	**213.80**	**100.0%**
SEVERITY	PDO Crashes	111	144	155	185	162	757	151.40	70.8%
	Fatal Crashes	0	0	0	0	0	0	0.00	0.0%
	Injury Crashes	70	61	54	65	62	312	62.40	29.2%
LIGHTING CONDITIONS	Daylight	128	130	137	178	158	731	146.20	68.4%
	Dusk	2	11	3	9	8	33	6.60	3.1%
	Dawn	0	4	3	2	4	13	2.60	1.2%
	Dark	51	59	64	60	54	288	57.60	26.9%
	Unknown	0	1	2	1	0	4	0.80	0.4%
SURFACE CONDITIONS	Dry	155	164	159	212	200	890	178.00	83.3%
	Wet	26	40	50	38	24	178	35.60	16.7%
	Others	0	1	0	0	0	1	0.20	0.1%
HOUR OF DAY	12:00 AM - 06:00 AM	15	18	21	24	20	98	19.60	9.2%
	06:00 AM - 09:00 AM	21	37	27	27	27	139	27.80	13.0%
	09:00 AM - 11:00 AM	30	31	24	26	32	143	28.60	13.4%
	11:00 AM - 01:00 PM	24	15	26	30	23	118	23.60	11.0%
	01:00 PM - 03:00 PM	21	19	23	42	31	136	27.20	12.7%
	03:00 PM - 06:00 PM	29	27	35	44	40	175	35.00	16.4%
	06:00 PM - 11:59 PM	41	58	53	57	51	260	52.00	24.3%

The leading crash types include rear-end with 639 (59.8%) and sideswipe with 175 (16.4%). Rear-end and sideswipe type crashes are typical of highly congested roadways and interchanges.

SR 90/SW 8th Street Interchange

SR 90/SW 8th Street is a six-lane divided roadway west of SR 826 and a four-lane divided roadway east of SR 826. SR 90 intersects with SR 826 and forms two signalized intersections with the northbound and southbound on/off-ramps at the interchange. ***Figure 2.25*** shows the influence area selected for the interchange and ***Table 2.28*** summarizes the crash data within the influence area.

Figure 2.25 – SR 90/SW 8th Street Interchange Influence Area

A total of 1,284 crashes occurred at the SR 90/SW 8th Street interchange, with 241 crashes in 2011, 270 crashes in 2012, 237 crashes in 2013, 254 crashes in 2014 and 282 crashes in 2015. Of the total crashes, 887 (69.1%) were "Property Damage Only" and 396 (30.8%) were "injury". There was one (0.1%) fatality reported in the referenced five-year period. Three hundred and forty-eight (27.1%) crashes occurred during dark/dawn/dusk lighting conditions, which is lower than the

Districtwide average of 29%. Wet roadway surface conditions were reported for 271 (21.1%) crashes, which is above the Districtwide average of 16%.

Table 2.28 – SR 90/SW 8th Street Interchange Crash Summary

SR 826/Palmetto At SR 90/SW 8 Street		Number of Crashes					5 Year Total Crashes	Mean Crashes Per Year	%
		Year							
		2011	2012	2013	2014	2015			
CRASH TYPE	Rear End	123	171	122	137	126	679	135.80	52.9%
	Head On	0	0	0	0	0	0	0.00	0.0%
	Angle	22	17	23	18	36	116	23.20	9.0%
	Left Turn	4	8	4	8	12	36	7.20	2.8%
	Right Turn	1	0	2	2	3	8	1.60	0.6%
	Sideswipe	40	30	35	48	49	202	40.40	15.7%
	Backed Into	1	0	1	1	1	4	0.80	0.3%
	Coll. w/ Parked Car	0	0	1	0	1	2	0.40	0.2%
	Coll. w/ Pedestrian	2	0	0	2	0	4	0.80	0.3%
	Coll. w/ Bicycle	1	0	0	2	1	4	0.80	0.3%
	Fixed Object	26	27	29	24	28	134	26.80	10.4%
	Ran Off Road	0	0	0	0	0	0	0.00	0.0%
	Overturned	1	2	2	1	3	9	1.80	0.7%
	Other	20	15	18	11	22	86	17.20	6.7%
	Total Crashes	**241**	**270**	**237**	**254**	**282**	**1284**	**256.80**	**100.0%**
SEVERITY	PDO Crashes	144	182	169	189	203	887	177.40	69.1%
	Fatal Crashes	0	0	0	0	1	1	0.20	0.1%
	Injury Crashes	97	88	68	65	78	396	79.20	30.8%
LIGHTING CONDITIONS	Daylight	169	196	178	178	210	931	186.20	72.5%
	Dusk	7	6	8	11	5	37	7.40	2.9%
	Dawn	7	1	6	4	4	22	4.40	1.7%
	Dark	57	67	45	57	63	289	57.80	22.5%
	Unknown	1	0	0	4	0	5	1.00	0.4%
SURFACE CONDITIONS	Dry	192	211	182	206	221	1012	202.40	78.8%
	Wet	49	59	55	47	61	271	54.20	21.1%
	Others	0	0	0	1	0	1	0.20	0.1%
HOUR OF DAY	12:00 AM - 06:00 AM	12	21	13	18	29	93	18.60	7.2%
	06:00 AM - 09:00 AM	37	34	46	43	50	210	42.00	16.4%
	09:00 AM - 11:00 AM	27	34	29	43	30	163	32.60	12.7%
	11:00 AM - 01:00 PM	29	35	24	22	36	146	29.20	11.4%
	01:00 PM - 03:00 PM	32	38	31	27	34	162	32.40	12.6%
	03:00 PM - 06:00 PM	48	46	43	40	54	231	46.20	18.0%
	06:00 PM - 11:59 PM	56	62	51	61	49	279	55.80	21.7%

The leading crash types include rear-end with 679 (52.9%) and sideswipe with 202 (15.7%). Rear-end and sideswipe type crashes are typical of highly congested roadways and interchanges.

SW 24th Street/Coral Way Interchange

SW 24th Street/Coral Way is a six-lane divided roadway that intersects with SR 826 and forms two signalized intersections with the northbound and southbound on/off-ramps at the interchange. ***Figure 2.26*** shows the influence area selected for the interchange and ***Table 2.29*** summarizes the crash data within the influence area. Of the total 1,280 crashes reported, 587 (46%) crashes were retrieved from the FDOT Crash Analysis Reporting System and 693 (54%) from Signal-4 Analytics.

Figure 2.26 – SW 24th Street/Coral Way Interchange Influence Area

A total of 1,280 crashes occurred at the SW 24th Street/Coral Way interchange, with 189 crashes in 2011, 194 crashes in 2012, 225 crashes in 2013, 367 crashes in 2014 and 305 crashes in 2015. Of the total crashes, 998 (78.0%) were "Property Damage Only" and 280 (21.9%) were "Injury". There were two (0.2%) fatal crashes reported in the referenced five-year period. 290 (22.7%) crashes occurred during

dark/dawn/dusk lighting conditions, which is lower than the Districtwide average of 29%. Wet roadway surface conditions were reported for 219 (17.1%) crashes, which is above the Districtwide average of 16%.

Table 2.29 – SW 24th Street/Coral Way Interchange Crash Summary

SR 826/Palmetto At SW 24 Street		Number of Crashes					5 Year Total Crashes	Mean Crashes Per Year	%
		Year							
		2011	2012	2013	2014	2015			
CRASH TYPE	Rear End	95	88	82	169	138	572	114.40	44.7%
	Head On	0	27	42	1	0	70	14.00	5.5%
	Angle	17	16	19	29	26	107	21.40	8.4%
	Left Turn	13	7	15	39	33	107	21.40	8.4%
	Right Turn	2	0	3	6	5	16	3.20	1.3%
	Sideswipe	28	17	19	62	59	185	37.00	14.5%
	Backed Into	0	0	1	0	3	4	0.80	0.3%
	Coll. w/ Parked Car	0	4	1	5	1	11	2.20	0.9%
	Coll. w/ Pedestrian	2	3	1	0	2	8	1.60	0.6%
	Coll. w/ Bicycle	1	1	1	0	0	3	0.60	0.2%
	Fixed Object	11	12	12	18	17	70	14.00	5.5%
	Ran Off Road	3	0	1	2	5	11	2.20	0.9%
	Overturned	2	2	0	2	0	6	1.20	0.5%
	Other	15	17	28	34	16	110	22.00	8.6%
	Total Crashes	**189**	**194**	**225**	**367**	**305**	**1280**	**256.00**	**100.0%**
SEVERITY	PDO Crashes	116	143	182	305	252	998	199.60	78.0%
	Fatal Crashes	1	1	0	0	0	2	0.40	0.2%
	Injury Crashes	72	50	43	62	53	280	56.00	21.9%
LIGHTING CONDITIONS	Daylight	138	110	117	295	234	894	178.80	69.8%
	Dusk	2	3	3	7	3	18	3.60	1.4%
	Dawn	0	3	2	4	4	13	2.60	1.0%
	Dark	49	40	50	59	61	259	51.80	20.2%
	Unknown	0	38	53	2	3	96	19.20	7.5%
SURFACE CONDITIONS	Dry	148	125	133	296	268	970	194.00	75.8%
	Wet	40	32	40	70	37	219	43.80	17.1%
	Others	1	37	52	1	0	91	18.20	7.1%
HOUR OF DAY	12:00 AM - 06:00 AM	17	11	15	13	12	68	13.60	5.3%
	06:00 AM - 09:00 AM	36	34	32	72	43	217	43.40	17.0%
	09:00 AM - 11:00 AM	16	26	27	56	36	161	32.20	12.6%
	11:00 AM - 01:00 PM	19	18	24	45	44	150	30.00	11.7%
	01:00 PM - 03:00 PM	30	13	27	49	34	153	30.60	12.0%
	03:00 PM - 06:00 PM	35	35	43	65	71	249	49.80	19.5%
	06:00 PM - 11:59 PM	36	57	57	67	65	282	56.40	22.0%

The leading crash types include rear-end with 572 (44.7%) and sideswipe with 185 (14.5%). Rear-end and sideswipe type crashes are typical of highly congested roadways and interchanges.

SR 976/SW 40th Street/Bird Road Interchange

SR 976/SW 40th Street/Bird Road is an eight-lane divided roadway immediately west of SR 826 and a six-lane divided roadway east of SR 826. SR 976 intersects with SR 826 and forms two signalized intersections with the northbound and southbound on/off-ramps at the interchange. ***Figure 2.27*** shows the influence area selected for the interchange and ***Table 2.30*** summarizes the crash data within the influence area.

Figure 2.27 – SR 976/SW 40th Street/Bird Road Interchange Influence Area

A total of 1,131 crashes occurred at the SR 976/SW 40th Street/Bird Road interchange, with 264 crashes in 2011, 200 crashes in 2012, 204 crashes in 2013, 258 crashes in 2014 and 205 crashes in 2015. Of the total crashes, 806 (71.3%) were "Property Damage Only" and 321 (28.4%) were "Injury". There were 4 (0.4%) fatal crashes reported in the referenced five-year period. 327 (28.9%) crashes occurred during dark/dawn/dusk lighting conditions, which is lower than the Districtwide

average of 29%. Wet roadway surface conditions were reported for 201 (17.8%) crashes, which is above the Districtwide average of 16%.

Table 2.30 – SR 976/SW 40th Street/Bird Road Interchange Crash Summary

SR 826/Palmetto At SR 976/Bird Road		Number of Crashes					5 Year Total Crashes	Mean Crashes Per Year	%
		Year							
		2011	2012	2013	2014	2015			
CRASH TYPE	Rear End	159	117	122	143	126	667	133.40	59.0%
	Head On	0	0	0	1	0	1	0.20	0.1%
	Angle	12	10	18	22	17	79	15.80	7.0%
	Left Turn	13	5	4	7	4	33	6.60	2.9%
	Right Turn	0	5	4	1	6	16	3.20	1.4%
	Sideswipe	37	32	29	43	27	168	33.60	14.9%
	Backed Into	0	0	0	0	0	0	0.00	0.0%
	Coll. w/ Parked Car	1	0	0	0	0	1	0.20	0.1%
	Coll. w/ Pedestrian	1	0	0	1	0	2	0.40	0.2%
	Coll. w/ Bicycle	0	0	0	1	0	1	0.20	0.1%
	Fixed Object	16	17	14	23	10	80	16.00	7.1%
	Ran Off Road	0	0	0	0	0	0	0.00	0.0%
	Overturned	2	0	2	3	2	9	1.80	0.8%
	Other	23	14	11	13	13	74	14.80	6.5%
	Total Crashes	**264**	**200**	**204**	**258**	**205**	**1131**	**226.20**	**100.0%**
SEVERITY	PDO Crashes	165	142	156	198	145	806	161.20	71.3%
	Fatal Crashes	0	1	0	0	3	4	0.80	0.4%
	Injury Crashes	99	57	48	60	57	321	64.20	28.4%
LIGHTING CONDITIONS	Daylight	176	142	147	192	142	799	159.80	70.6%
	Dusk	9	6	8	13	13	49	9.80	4.3%
	Dawn	5	2	4	3	1	15	3.00	1.3%
	Dark	73	49	45	48	48	263	52.60	23.3%
	Unknown	1	1	0	2	1	5	1.00	0.4%
SURFACE CONDITIONS	Dry	223	165	173	205	164	930	186.00	82.2%
	Wet	41	35	31	53	41	201	40.20	17.8%
	Others	0	0	0	0	0	0	0.00	0.0%
HOUR OF DAY	12:00 AM - 06:00 AM	12	19	14	14	13	72	14.40	6.4%
	06:00 AM - 09:00 AM	35	27	36	40	35	173	34.60	15.3%
	09:00 AM - 11:00 AM	26	17	21	26	24	114	22.80	10.1%
	11:00 AM - 01:00 PM	30	24	21	28	24	127	25.40	11.2%
	01:00 PM - 03:00 PM	21	25	20	26	23	115	23.00	10.2%
	03:00 PM - 06:00 PM	56	41	46	54	38	235	47.00	20.8%
	06:00 PM - 11:59 PM	84	47	46	70	48	295	59.00	26.1%

The leading crash types include rear-end with 667 (59.0%) and sideswipe with 168 (14.9%). Rear-end and sideswipe type crashes are typical of highly congested roadways and interchanges.

SR 874/Don Shula Expressway Interchange

SR 874/Don Shula Expressway is a six-lane divided expressway that connects to SR 826 forming a system-to-system interchange between the two expressways. ***Figure 2.28*** shows the influence area selected for the interchange and ***Table 2.31*** summarizes the crash data within the influence area.

Figure 2.28 – SR 874/Don Shula Expressway Interchange Influence Area

A total of 85 crashes occurred at the SR 874/Don Shula Expressway interchange, with 26 crashes in 2011, 17 crashes in 2012, 13 crashes in 2013, 18 crashes in 2014 and 11 crashes in 2015. Of the total crashes, 45 (52.9%) were "Property Damage Only" and 40 (47.1%) were "Injury". There were no fatal crashes reported. Thirty-seven (43.5%) crashes occurred during dark/dawn/dusk lighting conditions, which is greater than the Districtwide average of 29%. Wet roadway surface conditions were reported for 26 (30.6%) crashes, which is greater than the Districtwide average of 16%.

Table 2.31 – SR 874/Don Shula Expressway Interchange Crash Summary

SR 826/Palmetto Expressway AT SR 986/SW 72 Street		Number of Crashes					5 Year Total Crashes	Mean Crashes Per Year	%
		Year							
		2011	2012	2013	2014	2015			
CRASH TYPE	Rear End	13	8	3	11	2	37	7.40	43.5%
	Head On	0	0	0	0	0	0	0.00	0.0%
	Angle	1	1	1	0	0	3	0.60	3.5%
	Left Turn	0	0	0	0	0	0	0.00	0.0%
	Right Turn	0	0	0	0	0	0	0.00	0.0%
	Sideswipe	3	1	3	2	2	11	2.20	12.9%
	Backed Into	0	0	1	0	0	1	0.20	1.2%
	Coll. w/ Parked Car	1	1	0	0	1	3	0.60	3.5%
	Coll. w/ Pedestrian	0	0	0	0	0	0	0.00	0.0%
	Coll. w/ Bicycle	0	0	0	0	0	0	0.00	0.0%
	Fixed Object	6	5	5	3	6	25	5.00	29.4%
	Ran Off Road	0	0	0	0	0	0	0.00	0.0%
	Overturned	0	0	0	0	0	0	0.00	0.0%
	Other	2	1	0	2	0	5	1.00	5.9%
	Total Crashes	**26**	**17**	**13**	**18**	**11**	**85**	**17.00**	**100.0%**
SEVERITY	PDO Crashes	13	8	7	12	5	45	9.00	52.9%
	Fatal Crashes	0	0	0	0	0	0	0.00	0.0%
	Injury Crashes	13	9	6	6	6	40	8.00	47.1%
LIGHTING CONDITIONS	Daylight	15	8	8	10	7	48	9.60	56.5%
	Dusk	0	3	1	1	0	5	1.00	5.9%
	Dawn	2	0	0	0	1	3	0.60	3.5%
	Dark	9	6	4	7	3	29	5.80	34.1%
	Unknown	0	0	0	0	0	0	0.00	0.0%
SURFACE CONDITIONS	Dry	19	9	10	12	9	59	11.80	69.4%
	Wet	7	8	3	6	2	26	5.20	30.6%
	Others	0	0	0	0	0	0	0.00	0.0%
HOUR OF DAY	12:00 AM - 06:00 AM	3	3	1	5	3	15	3.00	17.6%
	06:00 AM - 09:00 AM	7	0	3	3	2	15	3.00	17.6%
	09:00 AM - 11:00 AM	1	1	1	2	1	6	1.20	7.1%
	11:00 AM - 01:00 PM	1	0	1	0	1	3	0.60	3.5%
	01:00 PM - 03:00 PM	3	1	0	0	2	6	1.20	7.1%
	03:00 PM - 06:00 PM	4	6	3	4	1	18	3.60	21.2%
	06:00 PM - 11:59 PM	7	6	4	4	1	22	4.40	25.9%

The leading crash types include rear-end with 37 (43.5%), fixed-object with 25 (29.4%) and sideswipe with 11 (12.9%). Rear-end and sideswipe type crashes are typical of highly congested roadways. Fixed-object type crashes are typical on freeways with guardrails or concrete barriers like SR 826 and SR 874.

SW 56th Street/Miller Drive Interchange

SW 56th Street/Miller Drive is a four-lane divided roadway that intersects with SR 826 and forms two signalized intersections with the northbound and southbound on/off-ramps at the interchange. ***Figure 2.29*** shows the influence area selected for the interchange and ***Table 2.32*** summarizes the crash data within the influence area. Of the total 464 crashes reported, 259 (56%) crashes were retrieved from the FDOT Crash Analysis Reporting System and 205 (44%) from Signal-4 Analytics.

Figure 2.29 – SW 56th Street/Miller Drive Interchange Influence Area

A total of 464 crashes occurred at the SW 56th Street/Miller Drive interchange, with 92 crashes in 2011, 65 crashes in 2012, 95 crashes in 2013, 104 crashes in 2014 and 108 crashes in 2015. Of the total crashes, 338 (72.8%) were "Property Damage Only" and 126 (27.2%) were "Injury". There were no fatal crashes reported in the referenced five-year period. One hundred and seventeen (25.2%) crashes occurred during dark/dawn/dusk lighting conditions, which is below the

Districtwide average of 29%. Wet roadway surface conditions were reported for 70 (15.1%) crashes, which is below the Districtwide average of 16%.

Table 2.32 – SW 56th Street/Miller Drive Interchange Crash Summary

SR 826/Palmetto Expressway AT SW 56 Street/Miller Drive		Number of Crashes					5 Year Total Crashes	Mean Crashes Per Year	%
		Year							
		2011	2012	2013	2014	2015			
CRASH TYPE	Rear End	44	32	43	54	55	228	45.60	49.1%
	Head On	1	10	8	0	1	20	4.00	4.3%
	Angle	6	1	8	9	9	33	6.60	7.1%
	Left Turn	2	3	6	5	1	17	3.40	3.7%
	Right Turn	1	0	0	1	0	2	0.40	0.4%
	Sideswipe	15	7	10	15	18	65	13.00	14.0%
	Backed Into	0	0	0	1	1	2	0.40	0.4%
	Coll. w/ Parked Car	0	0	0	0	2	2	0.40	0.4%
	Coll. w/ Pedestrian	1	0	1	1	0	3	0.60	0.6%
	Coll. w/ Bicycle	0	0	0	0	0	0	0.00	0.0%
	Fixed Object	13	6	7	6	13	45	9.00	9.7%
	Ran Off Road	0	1	1	1	2	5	1.00	1.1%
	Overturned	1	0	2	0	0	3	0.60	0.6%
	Other	8	5	9	11	6	39	7.80	8.4%
	Total Crashes	**92**	**65**	**95**	**104**	**108**	**464**	**92.80**	**100.0%**
SEVERITY	PDO Crashes	58	43	78	84	75	338	67.60	72.8%
	Fatal Crashes	0	0	0	0	0	0	0.00	0.0%
	Injury Crashes	34	22	17	20	33	126	25.20	27.2%
LIGHTING CONDITIONS	Daylight	62	43	66	76	79	326	65.20	70.3%
	Dusk	1	1	0	5	2	9	1.80	1.9%
	Dawn	0	0	0	0	1	1	0.20	0.2%
	Dark	29	12	17	23	26	107	21.40	23.1%
	Unknown	0	9	12	0	0	21	4.20	4.5%
SURFACE CONDITIONS	Dry	75	52	68	83	95	373	74.60	80.4%
	Wet	17	4	15	21	13	70	14.00	15.1%
	Others	0	9	12	0	0	21	4.20	4.5%
HOUR OF DAY	12:00 AM - 06:00 AM	13	7	7	10	8	45	9.00	9.7%
	06:00 AM - 09:00 AM	15	8	15	18	22	78	15.60	16.8%
	09:00 AM - 11:00 AM	10	7	14	9	18	58	11.60	12.5%
	11:00 AM - 01:00 PM	9	6	10	11	10	46	9.20	9.9%
	01:00 PM - 03:00 PM	11	6	8	7	11	43	8.60	9.3%
	03:00 PM - 06:00 PM	15	16	22	26	14	93	18.60	20.0%
	06:00 PM - 11:59 PM	19	15	19	23	25	101	20.20	21.8%

The leading crash types include rear-end with 228 (49.1%) and sideswipe with 65 (14.0%). Rear-end and sideswipe type crashes are typical of highly congested roadways and interchanges.

SR 986/SW 72nd Street/Sunset Drive Interchange

SR 986/SW 72nd Street/Sunset Drive is a four-lane divided roadway that intersects with SR 826 and forms two signalized intersections with the northbound and southbound on/off-ramps at the interchange. ***Figure 2.30*** shows the influence area selected for the interchange and ***Table 2.33*** summarizes the crash data within the influence area.

Figure 2.30 – SR 986/SW 72nd Street/Sunset Drive Interchange Influence Area

A total of 459 crashes occurred at the SR 986/SW 72nd Street/Sunset Drive interchange, with 69 crashes in 2011, 78 crashes in 2012, 82 crashes in 2013, 114 crashes in 2014 and 116 crashes in 2015. Of the total crashes, 325 (70.8%) were "Property Damage Only" and 133 (29.0%) were "Injury". There was one (0.2%) fatality reported in the referenced five-year period. One hundred and thirty

(28.3%) crashes occurred during dark/dawn/dusk lighting conditions, which is lower than the Districtwide average of 29%. Wet roadway surface conditions were reported for 63 (13.7%) crashes, which is lower than the Districtwide average of 16%.

Table 2.33 – SR 986/SW 72nd Street/Sunset Drive Interchange Crash Summary

SR 826/Palmetto Expressway AT SR 986/SW 72 Street		Number of Crashes					5 Year Total Crashes	Mean Crashes Per Year	%
		Year							
		2011	2012	2013	2014	2015			
CRASH TYPE	Rear End	46	43	45	72	69	275	55.00	59.9%
	Head On	0	0	0	0	0	0	0.00	0.0%
	Angle	4	7	11	17	21	60	12.00	13.1%
	Left Turn	1	2	4	10	4	21	4.20	4.6%
	Right Turn	0	1	0	0	1	2	0.40	0.4%
	Sideswipe	6	7	10	6	11	40	8.00	8.7%
	Backed Into	0	0	0	0	0	0	0.00	0.0%
	Coll. w/ Parked Car	0	0	0	0	0	0	0.00	0.0%
	Coll. w/ Pedestrian	0	1	0	0	1	2	0.40	0.4%
	Coll. w/ Bicycle	0	0	1	0	0	1	0.20	0.2%
	Fixed Object	5	7	5	6	5	28	5.60	6.1%
	Ran Off Road	0	0	0	0	0	0	0.00	0.0%
	Overturned	0	0	1	0	0	1	0.20	0.2%
	Other	7	10	5	3	4	29	5.80	6.3%
	Total Crashes	**69**	**78**	**82**	**114**	**116**	**459**	**91.80**	**100.0%**
SEVERITY	PDO Crashes	39	42	64	85	95	325	65.00	70.8%
	Fatal Crashes	0	1	0	0	0	1	0.20	0.2%
	Injury Crashes	30	35	18	29	21	133	26.60	29.0%
LIGHTING CONDITIONS	Daylight	45	45	66	86	85	327	65.40	71.2%
	Dusk	4	3	3	4	3	17	3.40	3.7%
	Dawn	1	1	0	0	1	3	0.60	0.7%
	Dark	19	28	13	24	26	110	22.00	24.0%
	Unknown	0	1	0	0	1	2	0.40	0.4%
SURFACE CONDITIONS	Dry	61	67	70	100	98	396	79.20	86.3%
	Wet	8	11	12	14	18	63	12.60	13.7%
	Others	0	0	0	0	0	0	0.00	0.0%
HOUR OF DAY	12:00 AM - 06:00 AM	3	11	4	5	8	31	6.20	6.8%
	06:00 AM - 09:00 AM	7	5	9	14	14	49	9.80	10.7%
	09:00 AM - 11:00 AM	7	5	7	11	14	44	8.80	9.6%
	11:00 AM - 01:00 PM	5	11	7	18	14	55	11.00	12.0%
	01:00 PM - 03:00 PM	7	9	8	14	10	48	9.60	10.5%
	03:00 PM - 06:00 PM	15	17	30	22	24	108	21.60	23.5%
	06:00 PM - 11:59 PM	25	20	17	30	32	124	24.80	27.0%

The leading crash types include rear-end with 275 (59.9%) and angle with 60 (13.1%). Rear-end and angle type crashes are typical of highly congested roadways and signalized intersections.

SR 94/SW 88th Street/Kendall Drive Interchange

SR 94/SW 88th Street/Kendall Drive is a six-lane divided roadway that intersects with SR 826 and forms two signalized intersections with the northbound and southbound on/off-ramps at the interchange. ***Figure 2.31*** shows the influence area selected for the interchange and ***Table 2.34*** summarizes the crash data within the influence area.

Figure 2.31 – SR 94/SW 88th Street/Kendall Drive Interchange Influence Area

A total of 572 crashes occurred at the SR 94/SW 88th Street/Kendall Drive interchange, with 83 crashes in 2011, 104 crashes in 2012, 136 crashes in 2013, 122 crashes in 2014 and 127 crashes in 2015. Of the total crashes, 372 (65.0%) were "Property Damage Only" and 198 (34.6%) were "Injury". There were two (0.3%) fatal crashes reported in the referenced five-year period. One hundred and thirty-four (23.4%) crashes occurred during dark/dawn/dusk lighting conditions, which is lower than the Districtwide average of 29%. Wet roadway surface

conditions were reported for 113 (19.8%) crashes, which is greater than the Districtwide average of 16%.

Table 2.34 – SR 94/SW 88th Street/Kendall Drive Interchange Crash Summary

SR 826/Palmetto Expwy At Kendall Drive Interchange		Number of Crashes					5 Year Total Crashes	Mean Crashes Per Year	%
		Year							
		2011	2012	2013	2014	2015			
CRASH TYPE	Rear End	26	41	63	61	53	244	48.80	42.7%
	Head On	0	0	0	1	0	1	0.20	0.2%
	Angle	17	15	10	13	21	76	15.20	13.3%
	Left Turn	8	13	12	8	12	53	10.60	9.3%
	Right Turn	0	1	0	1	0	2	0.40	0.3%
	Sideswipe	5	8	21	17	14	65	13.00	11.4%
	Backed Into	0	0	0	0	0	0	0.00	0.0%
	Coll. w/ Parked Car	0	0	0	1	0	1	0.20	0.2%
	Coll. w/ Pedestrian	4	0	2	2	0	8	1.60	1.4%
	Coll. w/ Bicycle	0	3	1	2	1	7	1.40	1.2%
	Fixed Object	13	10	18	9	16	66	13.20	11.5%
	Ran Off Road	0	0	0	0	0	0	0.00	0.0%
	Overturned	0	1	0	0	0	1	0.20	0.2%
	Other	10	12	9	7	10	48	9.60	8.4%
	Total Crashes	**83**	**104**	**136**	**122**	**127**	**572**	**114.40**	**100.0%**
SEVERITY	PDO Crashes	44	62	88	92	86	372	74.40	65.0%
	Fatal Crashes	0	0	0	1	1	2	0.40	0.3%
	Injury Crashes	39	42	48	29	40	198	39.60	34.6%
LIGHTING CONDITIONS	Daylight	65	78	108	96	87	434	86.80	75.9%
	Dusk	2	4	6	4	1	17	3.40	3.0%
	Dawn	0	1	2	1	1	5	1.00	0.9%
	Dark	15	20	20	21	36	112	22.40	19.6%
	Unknown	1	1	0	0	2	4	0.80	0.7%
SURFACE CONDITIONS	Dry	66	81	108	104	100	459	91.80	80.2%
	Wet	17	23	28	18	27	113	22.60	19.8%
	Others	0	0	0	0	0	0	0.00	0.0%
HOUR OF DAY	12:00 AM - 06:00 AM	7	6	5	6	10	34	6.80	5.9%
	06:00 AM - 09:00 AM	8	16	14	12	12	62	12.40	10.8%
	09:00 AM - 11:00 AM	13	12	11	15	11	62	12.40	10.8%
	11:00 AM - 01:00 PM	7	10	26	10	12	65	13.00	11.4%
	01:00 PM - 03:00 PM	10	11	18	16	15	70	14.00	12.2%
	03:00 PM - 06:00 PM	17	23	33	35	34	142	28.40	24.8%
	06:00 PM - 11:59 PM	21	26	29	28	33	137	27.40	24.0%

The leading crash types include rear-end with 244 (42.7%) and angle with 76 (13.3%). Rear-end and angle type crashes are typical of highly congested roadways and signalized intersections.

SR 5/US 1/South Dixie Highway Interchange

SR 5/US 1/South Dixie Highway is a six-lane divided roadway that intersects with SR 826 at the southernmost limit. ***Figure 2.32*** shows the influence area selected for the interchange and ***Table 2.35*** summarizes the crash data within the influence area.

Figure 2.32 – SR 5/US 1/South Dixie Highway Interchange Influence Area

A total of 94 crashes occurred at the SR 5/US 1/South Dixie Highway interchange, with 21 crashes in 2011, 13 crashes in 2012, 17 crashes in 2013, 19 crashes in 2014 and 24 crashes in 2015. Of the total crashes, 67 (71.30%) were "Property Damage Only" and 26 (27.7%) were "Injury". There was one (1.1%) fatality reported in the referenced five-year period. Twenty-nine (30.9%) crashes occurred during dark/dawn/dusk lighting conditions, which is above than the Districtwide average of 29%. Wet roadway surface conditions were reported for 18 (19.1%) crashes, which is greater than the Districtwide average of 16%.

Table 2.35 – SR 5/US 1/South Dixie Highway Interchange Crash Summary

SR 826 AT SR 5/US 1/South Dixie Highway		Number of Crashes					5 Year Total Crashes	Mean Crashes Per Year	%
		Year							
		2011	2012	2013	2014	2015			
CRASH TYPE	Rear End	7	6	5	5	9	32	6.40	34.0%
	Head On	0	0	0	0	0	0	0.00	0.0%
	Angle	0	2	1	5	3	11	2.20	11.7%
	Left Turn	0	0	1	0	0	1	0.20	1.1%
	Right Turn	0	1	0	0	0	1	0.20	1.1%
	Sideswipe	4	1	5	4	7	21	4.20	22.3%
	Backed Into	0	0	0	0	0	0	0.00	0.0%
	Coll. w/ Parked Car	0	0	0	0	0	0	0.00	0.0%
	Coll. w/ Pedestrian	0	0	0	0	0	0	0.00	0.0%
	Coll. w/ Bicycle	0	0	0	0	1	1	0.20	1.1%
	Fixed Object	6	1	3	1	3	14	2.80	14.9%
	Ran Off Road	0	0	0	0	0	0	0.00	0.0%
	Overturned	0	0	0	0	0	0	0.00	0.0%
	Other	4	2	2	4	1	13	2.60	13.8%
	Total Crashes	**21**	**13**	**17**	**19**	**24**	**94**	**18.80**	**100.0%**
SEVERITY	PDO Crashes	15	9	11	15	17	67	13.40	71.3%
	Fatal Crashes	1	0	0	0	0	1	0.20	1.1%
	Injury Crashes	5	4	6	4	7	26	5.20	27.7%
LIGHTING CONDITIONS	Daylight	11	7	14	16	17	65	13.00	69.1%
	Dusk	0	1	0	0	0	1	0.20	1.1%
	Dawn	0	1	0	0	1	2	0.40	2.1%
	Dark	10	4	3	3	6	26	5.20	27.7%
	Unknown	0	0	0	0	0	0	0.00	0.0%
SURFACE CONDITIONS	Dry	19	9	12	16	20	76	15.20	80.9%
	Wet	2	4	5	3	4	18	3.60	19.1%
	Others	0	0	0	0	0	0	0.00	0.0%
HOUR OF DAY	12:00 AM - 06:00 AM	3	2	0	0	2	7	1.40	7.4%
	06:00 AM - 09:00 AM	2	3	2	3	6	16	3.20	17.0%
	09:00 AM - 11:00 AM	2	1	2	2	2	9	1.80	9.6%
	11:00 AM - 01:00 PM	4	0	3	4	5	16	3.20	17.0%
	01:00 PM - 03:00 PM	0	1	2	3	3	9	1.80	9.6%
	03:00 PM - 06:00 PM	2	2	3	3	2	12	2.40	12.8%
	06:00 PM - 11:59 PM	8	4	5	4	4	25	5.00	26.6%

The leading crash types include rear-end with 32 (34.0%) and sideswipe with 21 (22.3%). Rear-end and sideswipe type crashes are typical of highly congested roadways and signalized intersections.

2.16 Drainage

This section summarizes the existing drainage systems within the study area.

The project is located in Miami-Dade County, Florida, within the jurisdictional boundary of Miami-Dade County's Department of Regulatory and Economic Resources (DRER), South Florida Water Management District (SFWMD), and United States Army Corps of Engineers (USACE).

The study area covers 21 systems with discharges into C-100A Canal, C-2/Snapper Creek Canal, C-3/Coral Gables Canal, C-4/ Tamiami Canal, Coral Gables Ditch, North Line Canal, Lake Patricia, and Tropical Park Lake. Existing facilities provide water quality treatment and attenuation of roadway runoff via wet and dry detention/retention ponds and French Drains. ***Figure 2.33*** depicts the existing drainage map of all systems. Additional details about the drainage features are documented in the *Preliminary Drainage Report*, dated August 2019, a companion document to this PD&E Study.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

AYLIN COSTA, P.E.
P.E. LICENSE NUMBER 69865
RS&H INC.
6303 BLUE LAGOON DRIVE, SUITE 325
MIAMI, FL 33126
CERTIFICATE OF AUTHORIZATION 5620

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 826	MIAMI-DADE	432639-1-22-01

FIGURE 2.23 - DRAINAGE SYSTEMS

SHEET NO.
2-102

$USER$ $DATE$ $TIME$ $FILE$

System 1 – Drainage system 1 starts just south of the begin project limit at the intersection of US 1 and SW 124th Street (Chapman Field Drive) and extends north terminating at the C-100A Canal. The drainage areas within this system were delineated along the existing FDOT right of way lines and include US 1 northbound, southbound and the adjacent US 1 South Dade Busway. Land uses adjacent to the right of way are mostly commercial with some abutting residential properties draining away from the back of existing sidewalk and not hydraulically connected to the FDOT right of way. Stormwater runoff from US 1 is collected by curb inlets and conveyed to slab covered trenches, French drains and trunkline pipes that run north along the US 1 median and connect to two outfalls into the C-100A Canal. Stormwater runoff from the Busway is collected along a roadside ditch/swale area connected to the US 1 drainage system sharing the same outfalls. Flood routing calculations show this portion of US 1 experiences flooding in the existing condition for the 25-year and 100-year storm events

System 2 – Drainage system 2 starts at the C-100A Canal and extends north terminating at the US 1/SR 826 Interchange. From the C-100A Canal to SW 100th Street this drainage system includes basins along US 1 northbound, southbound and the US 1 South Dade Busway. North of the SW 100th Street drainage basin areas are split and run along the US 1/SR 826 Interchange northbound and southbound ramps limited access right of way. System 2 terminates at the southbound and northbound ramp bridge crossing over Old Dixie Highway and the Metrorail tracks.

From the C-100A Canal to SW 100th Street, the drainage areas within this system were delineated along the existing FDOT right of way lines and include US 1 northbound, southbound and the adjacent US 1 South Dade Busway. Land uses adjacent to the right of way are mostly commercial with some abutting residential properties draining away from the back of existing sidewalk and not hydraulically connected to the FDOT right of way. Stormwater runoff from US 1 is collected by curb inlets and conveyed to slab covered trenches, French drains and trunkline pipes that run south along US 1 and connect to an existing outfall into the C-100A Canal. Stormwater runoff from the Busway is collected along a roadside ditch/swale area connected to the US 1 drainage system and shares the same existing outfall. Flood routing calculations show US 1 experiences flooding in the existing condition for the 25-year and 100-year storm events.

From SW 100th Street and up to the System 2 and 3 divide line, the drainage areas were delineated to match existing permit drainage maps. Land uses adjacent to the right of way are mostly commercial with some abutting residential properties draining away from the right of way. Stormwater runoff from the interchange ramps sheet flows over the shoulders into adjacent ditches, swales and ponds, or is collected via barrier wall inlets and shoulder gutter inlets and conveyed to the nearest ditch, swale and/or pond. Existing ponds along the SR 826/ US 1 Interchange northbound ramp are interconnected and overflow into the US 1 drainage system.

System 3 – Drainage System 3 covers the limited access right of way areas of the SR 826 northbound and southbound ramps from US 1, beginning at the bridge crossing over Old Dixie Highway and the Metrorail tracks and extends north through the Kendall Drive Interchange, terminating at the SR 826 mainline bridge crossing over the C-2/Snapper Creek Canal. Within System 3, the land uses adjacent to the right of way are mostly commercial with some abutting medium density residential properties draining away from right of way. Stormwater runoff from the SR 826 mainline and ramps sheet flows over the shoulders into adjacent ditches, swales and ponds or is collected via barrier wall and shoulder gutter inlets and conveyed to the nearest ditches, swales and ponds. Stormwater runoff from the Kendall Drive basins is collected by curb inlets and conveyed to the interchange ditches, swales and ponds, via a closed drainage system. Stormwater runoff along northbound SW 77th Avenue is comingled with the SR 826 southbound mainline drainage. An existing swale running along the east side of the northbound US 1 to SR 826 ramp provides water quality treatment and runoff attenuation for the associated basins. Swale 301 is connected to the Kendall Drive interchange ditches and ponds via a control structure under the US 1/ SR 826 to Kendall Drive northbound ramp. The existing dry ditch running along the west side of the southbound SR 826 to US 1 ramp is connected to the Kendall Drive interchange infield ponds at multiple locations. Stormwater from all other areas is treated and attenuated within the interchange existing ponds/swales and generally flows north. Discharges into the C-2/Snapper Creek Canal are controlled by structures connected to two existing outfall pipes running parallel to SR 826 along the east and west side.

System 4 – Drainage System 4 covers the limited access right of way areas along SR 826 beginning at the bridge crossing over the C-2/Snapper Creek Canal and terminating at the System 4 and 5 divide line just north of SW 66th Street. System 4

also receives runoff from the SR 878 (Snapper Creek Expressway) limited access right of way areas immediately east and west of the SR 878 bridge crossing over SR 826. Within the Sunset Drive interchange, System 4 also receives runoff from SR 986/Sunset Drive, from SW 82nd Avenue to SW 72nd Court. Numerous offsite areas along SW 76th Avenue and SW 77th Avenue also drain into the FDOT right of way. Within System 4, the land uses adjacent to the right of way consist mostly of medium and low-density residential properties, some of which drain into the FDOT right of way. Stormwater runoff from the SR 826 and SR 878 sheet flows over the shoulders into adjacent ditches, swales and ponds or is collected via barrier wall inlets and shoulder gutter inlets and conveyed to the nearest ditches, swales and ponds. Stormwater runoff from the Sunset Drive basins is collected by ditch bottom inlets and conveyed to the interchange ditches, swales and ponds, via a closed drainage system consisting of pipes and slab covered trenches. Stormwater from SW 76th Avenue and SW 77th Avenue and offsite areas is comingled with the SR 826 mainline drainage.

Stormwater from all basin areas within System 4 is treated and attenuated in the existing swales and ponds within the interchange infield areas and along the east and west side of SR 826. Stormwater within System 4 generally flows to the south along the existing swales on either side of SR 826 up to the Snapper Creek Expressway. From the Snapper Creek Expressway to the C-2/ Snapper Creek Canal, runoff is conveyed south via drainage pipes.

Discharges into the C-2/Snapper Creek Canal are controlled by structures connected to two existing outfall pipes running parallel to SR 826 along the east and west side.

System 5 – Drainage System 5 starts at the System 4 and 5 divide line just north of SW 66th Street and extends north terminating just south of the Miller Drive interchange. System 5 also receives runoff from offsite areas along SW 76th Avenue and SW 77th Avenue. Within System 5, the land uses adjacent to the east right of way consist of mostly low-density residential properties. Miami Memorial Pak Cemetery is located along the west side of the SW 77th Avenue right of way. Stormwater runoff from the SR 826 is collected by barrier wall inlets and conveyed to existing French drain trunkline, located under existing swales between the barrier wall and the limited access right of way. Stormwater from SW 76th Avenue and SW 77th Avenue and offsite areas is comingled with the SR 826 mainline drainage.

Stormwater from all basin areas within System 5 is treated and attenuated in the existing French drains. System 5 is considered a self-contained system with emergency overflow ditch block weirs into System 4.

System 6 – Drainage System 6 starts at the System 5 and 6 divide line just south of the Miller Drive interchange and extends north terminating at the SR 826 bridge crossing over the CSX Railroad. System 6 receives runoff from offsite areas along the west right of way from SW 58th Street to Miller Drive.

Within System 6, the land uses adjacent to the right of way consist of mostly medium and low-density residential properties. At the southwest quadrant of the interchange, part of a property owned by a religious organization drains into the FDOT right of way. Stormwater runoff from the SR 826 and the Miller Drive interchange ramps is collected by barrier wall inlets and conveyed to an extensive network of existing French drain trunk lines interconnected with existing small ponds (stage area nodes). Stormwater from Miller Drive is collected by curb inlets and conveyed to the interchange ponds and French drains. Offsite areas draining into the right of way are comingled with the SR 826 drainage system. Stormwater from all basin areas within System 6 is treated and attenuated in existing ponds and French drains. Discharges from System 6 are controlled by an outfall structure with an overflow discharge pipe into Miller Lake located along the east right of way.

System 7 – Drainage System 7 starts just north of the Miller Drive interchange and covers the SR 826/SR 874 Interchange areas terminating at the System 7 and 8 divide line just south of SW 40th Street (Bird Road). System 7 receives runoff from areas contained within the limited access right of way and the CSX Railroad right of way.

Within System 7, the land uses adjacent to the east right of way are commercial. Along the west right of way land uses are medium density residential south of the SR 874 Interchange and recreational on the north side. Stormwater runoff from SR 826 and SR 874 mainline and ramps is primarily collected by shoulder gutter inlets and barrier wall inlets connected to an extensive network of existing French drain trunk lines interconnected with small swales/ponds (stage-area nodes). Offsite areas draining into the right of way are comingled with the SR 826 drainage system. Stormwater from all basin areas within System 7 are treated and

attenuated in existing French Drains. Discharges from System 7 are controlled by an outfall structure with an overflow discharge pipes into the Tropical Park Lake. System 7 and 8 are interconnected by French drains along the west right of way.

System 7A – Drainage System 7A starts at the SR 874 overpass bridge over Miller Drive, and extends northeast for about 3,000 feet along SR 874 terminating at the System 7 and 7A divide line, north of Miller Drive. Basin areas for System 7A are contained within the limited access right of way and the CSX Railroad right of way.

Within System 7A, the land uses adjacent to the southeast right of way are commercial and medium density residential. Along the west right of way the land use is recreational. Stormwater runoff from SR 874 is primarily collected by shoulder gutter inlets and barrier wall inlets connected to an existing French drain located under a linear pond along the west limited access right of way. Stormwater from all basin areas within System 7A are treated and attenuated in the existing French drains and dry swale. Discharges from System 7A into Patricia Lake and Tropical Park Lake are controlled by outfall structures with overflow discharge pipes.

System 7B – Drainage System 7B starts at the SR 874 overpass bridge over Galloway Road, and extends northeast along SR 874 terminating at the SR 874 overpass bridge over Miller Drive. Basin areas for System 7B are contained within the limited access right of way.

Within System 7B, the adjacent land uses are commercial and low density residential. Stormwater runoff from SR 874 northbound is primarily collected by shoulder gutter inlets and barrier wall inlets with pipes connected to existing linear ponds (swales) west of the southbound lanes. Runoff from SR 874 southbound sheet flows directly into the swales. Stormwater from all basin areas within System 7B up to the limits of Pond 7B2 are treated and attenuated in Pond 7B1 and 7B2. Runoff from drainage basins north of the outfall control structure for System 7B, are directly connected to the outfall pipe trunkline that runs from Pond 7B2 to Patricia Lake.

System 8 – Drainage System 8 starts just south of Bird Road at the System 7 and 8 divide line and extends north along SR 826 terminating at the Bird Road Interchange.

Basin areas for System 8 include all SR 826 areas within the limited access right of way and some adjacent offsite commercial and recreational areas. System 8 also receives runoff from Bird Road, from just west of SW 79th Avenue to east of SW 74th Avenue. Within the interchange limited access right of way boundary, the Bird Road contributing area is limited to the eastbound lanes.

Within System 8, the adjacent land uses are commercial and recreational. Stormwater runoff from SR 826 and the Bird Road Interchange ramps, on the southwest and southeast quadrants either sheet flows into adjacent ponds and swales or is collected by barrier wall inlets and shoulder gutter inlets and conveyed to an extensive network of existing French drain trunk lines interconnected with the infield ponds and swales. Stormwater from Bird Road contributing areas is collected by curb inlets and conveyed to the interchange ponds via a closed drainage system consisting of pipes and slab covered trenches. Offsite areas draining into the right of way are comingled with the SR 826 and Bird Road drainage system. Stormwater from all basin areas within System 8 is treated and attenuated in existing ponds and French drains. System 8 discharges to the C-3 (Coral Gables Canal) via a 54-inch outfall pipe that runs from the control structure located at the interchange southeast quadrant Pond 8E1 north through SW 75th Avenue.

System 9 – Drainage System 9 starts at the Bird Road Interchange and extends north along SR 826 terminating at SW 31st Street. Basin areas for System 9 include all SR 826 areas within the limited access right of way and over 32 acres of offsite residential areas that are comingled with the SR 826 drainage.

Within System 9, the adjacent land uses are residential, commercial and recreational. Stormwater runoff from SR 826 is collected by barrier wall inlets and shoulder gutter inlets and conveyed to an extensive network of existing French drain trunk lines interconnected with linear ponds (swales) on either side of SR 826. Stormwater from the large offsite basins sheet flows across the limited access right of way into the swales. Stormwater from all onsite basin areas within System 9 is treated and attenuated in the existing swales and French drains. System 9 discharges to the C-3 (Coral Gables Canal) via an outfall pipe that runs east from the control structure between Pond 9E5 and Pond 9E6.

System 10 – Drainage System 10 starts at SW 31st Street and extends north along SR 826 terminating at the Coral Way Interchange. Basin areas for System 10

include all SR 826 areas within the limited access right of way and some offsite residential areas that are comingled with the SR 826 drainage.

Within System 10, the adjacent land uses are residential and commercial. Stormwater runoff from SR 826 is collected by barrier wall inlets and shoulder gutter inlets and conveyed to linear ponds (swales) and French drains on either side of SR 826. Stormwater from the offsite basins sheet flows across the limited access right of way into the swales. Stormwater from all onsite basin areas within System 10 is treated and attenuated in the existing swales and French drains. System 10 discharges to the C-3 (Coral Gables Canal) via multiple outfall pipes from Pond 10E2, Pond 10E3, Pond 10E4 and Swale 11W3.

System 11 – Drainage System11 starts at the Coral Way Interchange and extends north along SR 826 terminating just north of SW 16th Street. Basin areas for System 11 include all SR 826 areas within the limited access right of way.

Within System 11, the adjacent land uses are residential and commercial. Stormwater runoff from SR 826 is collected by barrier wall inlets and shoulder gutter inlets and conveyed to ponds and an extensive network of French drains running along SR 826 southbound. Stormwater from all onsite basin areas within System 11 is treated and attenuated in the existing ponds and French drains. System 11 discharges to the Coral Gables Ditch via multiple outfall pipes from Pond 11W1, Swale 11W1 and the French drain system.

System 12 – Drainage System12 starts just north of SW 16th Street and extends north along the southbound lanes of SR 826 for a short distance, terminating at the Tamiami Trail Interchange. Basin areas for System 12 include southbound SR 826 areas within the limited access right of way including the existing ramps located within the southwest quadrant of the interchange and Tamiami Trail.

Within System 12, the adjacent land uses are residential and commercial. Stormwater runoff from SR 826 and interchange ramps either sheet flow into existing ponds or is collected by barrier wall inlets and shoulder gutter inlets and conveyed to the interchange ponds. Stormwater from all onsite basin areas within System 12 is treated and attenuated in the existing ponds. System 12 discharges to the C-4/Tamimi Canal via an existing outfall pipe under Tamiami Trail.

System 13 – Drainage System 13 starts just south of SW 17th Street and extends north along the SR 826 northbound lanes and superelevated southbound lanes, terminating at the Tamiami Trail Interchange. Basin areas for System 13 include SR 826 areas within the limited access right of way including the exiting ramps located within the southeast quadrant of the interchange and a small portion of Tamiami Trail immediately adjacent to the northbound ingress and egress ramps. Within System 13, the adjacent land uses are residential and commercial. Stormwater runoff from SR 826 and interchange ramps either sheet flows into existing ponds or is collected by barrier wall inlets and shoulder gutter inlets and conveyed to the interchange ponds. Stormwater from all onsite basin areas within System 13 is treated and attenuated in the existing ponds. System 13 discharges to the C-3/Coral Gables Canal via an existing outfall pipe under the northbound ingress/egress ramps.

System 14 – Drainage System 14 starts at the Tamiami Trail Interchange and extends north along the SR 826 southbound lanes and a portion of the northbound lanes, terminating at the Flagler Street Interchange. Basin areas for System 14 include SR 826 areas within the limited access right of way including the northwest quadrant of the interchange infield area. System 14 also received runoff from offsite residential areas along SW 77th Court, that are comingled with the SR 826 drainage.

Within System 14, the adjacent land uses are residential and commercial. Stormwater runoff from SR 826 and interchange ramp either sheet flows into existing linear swales along SR 826 southbound and interchange ponds or is collected by barrier wall inlets and shoulder gutter inlets and conveyed to the linear swales and interchange ponds. Stormwater from the offsite basins sheet flows across the limited access right of way into the linear swales. Stormwater from all onsite basin areas within System 14 is treated and attenuated in the existing ponds. System 14 discharges to the C-4/Tamiami Canal via existing triple outfall pipes from Pond 14W1.

System 15 – Drainage System 15 starts at the Tamiami Trail Interchange and extends north along the SR 826 northbound lanes, terminating at the Flagler Street Interchange. Basin areas for System 15 include SR 826 areas within the limited access right of way including the northeast quadrant of the interchange infield area north if the C-4/Tamiami Canal. System 15 also receives runoff from offsite

residential areas along SW 77th Avenue, that are comingled with the SR 826 drainage.

Within System 15, the adjacent land uses are residential and commercial. Stormwater runoff from SR 826 and interchange ramp either sheet flows into existing linear swales along SR 826 northbound and interchange ponds or is collected by barrier wall inlets and shoulder gutter inlets and conveyed to the linear swales and interchange ponds. Stormwater from the offsite basins sheet flows across the limited access right of way into the linear swales. Stormwater from all onsite basin areas within System 15 is treated and attenuated in the existing ponds. System 15 discharges to the C-4/Tamiami Canal via existing dual outfall pipes from Pond 15E1.

System 16 – Drainage System 16 starts at the Tamiami Trail Interchange ingress and egress SR 826 northbound ramps and covers a small portion of Tamiami Trail from the ramps, east up to Tamiami Canal Drive. Basin areas for System 16 include Tamiami Trail within the limited access right of way and interchange ramps termini south of the C-4/Tamiami Canal.

Within System 16, the adjacent land uses are predominantly commercial. Stormwater runoff from Tamiami Trail and interchange ramp terminal either sheet flows into an existing interchange pond or is collected by barrier wall inlets and shoulder gutter inlets and conveyed to the interchange pond. Stormwater from all onsite basin areas within System 16 is treated and attenuated in the existing pond. System 16 discharges to the C-4/Tamiami Canal via existing dual outfall pipes from Pond 16E1.

System 17 – Drainage System 17 encompasses a portion of Flagler Street and SR 826 from Flagler Street north to NW 7th Street. Basin areas for System 17 include Flagler Street, SR 826 and ramps within the limited access right of way. System 17 also receives runoff from a large commercial offsite area along the west side.

Within System 17, the adjacent land uses are residential and commercial. Stormwater runoff from SR 826, Flagler Street and ramps is routed via inlets and storm sewers into interchange ponds. All of the existing dry retention ponds also contain French drains in order to facilitate recovery of the stormwater volume following a storm event. Stormwater from all onsite basin areas within System 17 is treated and attenuated in the existing ponds. System 17 discharges directly into

the North Line Canal. The North Line Canal is maintained and controlled by the Miami-Dade County Department of Regulatory and Environmental Resources.

System 18 – Drainage System 18 encompasses SR 826 from NW 7th Street to the Interchange with SR 836 and includes the eastbound portion of SR 836 from NW 87th Avenue to the interchange with SR 826.

Within System 18, the adjacent land uses are residential and commercial. Stormwater runoff from all basins in System 18 is routed via inlets and storm sewers into SR 826/SR 836 Interchange ponds. All of the existing dry retention ponds also contain French drains in order to facilitate recovery of the stormwater volume following a storm event. Stormwater from all onsite basin areas within System 18 is treated and attenuated in the existing ponds. System 18 discharges directly into the North Line Canal. The North Line Canal is maintained and controlled by the Miami-Dade County Department of Regulatory and Environmental Resources.

System 19– Drainage System 19 encompasses SR 836 from the interchange with SR 826 east to Milam Dairy Road. Within System 19, the adjacent land uses are primarily commercial with some residential. Stormwater runoff from all basins in System 19 is routed via inlets and storm sewers into the SR 826/SR 836 Interchange infield ponds. All the existing dry retention ponds also contain French drains in order to facilitate recovery of the stormwater volume following a storm event. Stormwater from all onsite basin areas within System 19 is treated and attenuated in the existing ponds. System 19 discharges directly into the North Line Canal. The North Line Canal is maintained and controlled by the Miami-Dade County Department of Regulatory and Environmental Resources.

System 20 – Drainage System 20 encompasses SR 836 from Milam Dairy Road east to the Venetian Canal as well as Milam Dairy Road from SR 836 north to NW 12th Street, and NW 11th Street from Milam Dairy Road east to NW 72nd Avenue.

Within System 20, the adjacent land uses are predominantly commercial. Stormwater runoff is routed via inlets and storm sewers into ponds located along the north side of SR 836, and French drain located along Milam Dairy Road and NW 11th Street. All the existing dry retention ponds also contain French drains in order to facilitate recovery of the stormwater volume following a storm event. Stormwater from all onsite basin areas within System 20 is treated and attenuated in the existing ponds. System 20 discharges directly into the Venetian Canal. The

Venetian Canal is maintained and controlled by the Miami-Dade County Department of Regulatory and Environmental Resources.

System 21 – Drainage System 21 encompasses Milam Dairy Road from SR 836 south to NW 8th Street, and the eastbound on-ramp to SR 836 from Milam Dairy Road. Within System 21, the adjacent land uses are predominantly commercial. Stormwater runoff is routed via inlets and storm sewers into ponds located along the south side of SR 836. All the existing dry retention ponds also contain French drains in order to facilitate recovery of the stormwater volume following a storm event. Stormwater from all onsite basin areas within System 21 is treated and attenuated in the existing ponds. This drainage system has no overflow to any canal or surface water body, with100% of the contributing stormwater runoff maintained within the two existing ponds.

2.17 Soils and Geotechnical Data

The Soil Map of Miami-Dade County Area, Florida, published by the United States Department of Agriculture (USDA) and National Resources Conservation Service (NRCS) was reviewed for general near-surface soil information within the general project vicinity. This information indicates that there are four mapping units in the vicinity of the project. The map soil units encountered are summarized in ***Table 2.36*** and depicted in ***Figure 2.34***.

Table 2.36 – Miami-Dade County Soil Survey

Miami-Dade County Area, Florida (FL686)		
Map Unit Symbol	**Map Unit Name**	**Typical Profile**
10	Udorthents, limestone substratum-urban land complex (18.2% of AOI)	0 to 55 inches: Extremely Gravelly Loam 55 to 59 inches: Unweathered Bedrock
15	Urban Land, 0 to 2 percent slopes (77.2% of AOI)	0 to 6 inches: Cemented Material 6 to 36 inches: Paragravelly Sand 36 to 46 inches: Paragravelly Fine Sand 46 to 80 inches: Paragravelly Fine Sand
22	Opalocka sand-Rock outcrop complex (0.1% of AOI)	0 to 6 inches: Sand 6 to 10 inches: Unweathered Bedrock
99	Water (4.5% of AOI)	-

Note: AOI – Area of Influence

Custom Soil Resource Report
Soil Map

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HERNANDO R. RAMOS, P.E.
P.E. LICENSE NUMBER 42045
HR ENGINEERING SERVICES, INC
7815 NW 72ND AVENUE
MEDLEY, FLORIDA 33166
CERTIFICATE OF AUTHORIZATION 7991

DRAWN BY: ME 08-19
CHECKED BY: SS 08-19
DESIGNED BY: SS 08-19
CHECKED BY: HRR 08-19

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 826	MIAMI-DADE	432639-1-22-02

SHEET TITLE: MIAMI-DADE COUNTY AREA SOIL SURVEY MAP

PROJECT NAME: SR 826/PALMETTO EXPRESSWAY FROM US-1 TO SR 836

REF. DWG. NO. 2.34

SHEET NO. 2-115

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Custom Soil Resource Report
Soil Map

REVISIONS					
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SR 826	MIAMI-DADE	432639-1-22-02

SHEET TITLE: MIAMI-DADE COUNTY AREA SOIL SURVEY MAP

PROJECT NAME: SR 826/PALMETTO EXPRESSWAY FROM US-1 TO SR 836

REF. DWG. NO. 2.34

SHEET NO. 2-116

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Custom Soil Resource Report
Soil Map

REVISIONS					
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 826	MIAMI-DADE	432639-1-22-02

SHEET TITLE: MIAMI-DADE COUNTY AREA SOIL SURVEY MAP

PROJECT NAME: SR 826/PALMETTO EXPRESSWAY FROM US-1 TO SR 836

REF. DWG. NO. 2.34

SHEET NO. 2-117

2.18 Utilities

Utility Agency Owners (UAOs) located in the vicinity of the SR 826 were contacted and requested to provide information regarding their utility facilities within the project area. Existing UAOs and contact information are provided in ***Table 2.37***. An initial contact of UAOs was done through the District's Utility coordinator and documentation is provided in ***Appendix D***. Plans showing the approximate location of the utility facilities are provided in ***Appendix E***.

Table 2.37 – Existing UAO Contact List

Utility Agency/Owner	Facility	Contact Information	
AT&T - Florida	Telephone	Steve Low 9101 SW 24th Street Miami, FL 33165	305-222-8745 Office 305-221-0974 Fax 305-987-7351 Cell sl4504@att.com
Atlantic Broadband	Cable TV	Pete Freytag 1681 Kennedy Causeway North Bay Village, FL 33141	305-861-8069 x-5208 Office 305-865-9845 Fax 786.251.5989 Cell pfreytag@atlanticbb.com
CenturyLink / Level 3 Communications (Formerly Qwest Communications)	Fiber Optic	Mike Fitzgerald 5908 Hampton Oak Parkway, Suite A Tampa, FL 33610	813-630-2605 Mike.fitzgerald@centurylink.com
Comcast Cable	Cable TV & Fiber	Leonard Maxwell-Newbold 2601 SW 145th Ave. Miramar, FL 33027	954-447-8405 Office 954-447-8445 Fax 954-444-5113 Cell Leonard_Maxwell-Newbold@cable.comcast.com
Crown Castle Fiber	Fiber	Danny Haskett 1601 NW 136 Ave. Suite A-200 Sunrise, FL 33323	786-610-7073 Office 786-246-7827 Cell danny.haskett@crowncastle.com
Crown Castle NG	Fiber	David Antol 2000 Corporate Dr. Canonsburg, PA 15317	724-416-2180 1-888-632-0931 Opt. 2 David.Antol@crowncastle.com

Table 2.37 – Existing UAO Contact List Continued

Utility Agency/Owner	Facility	Contact Information	
Fiberlight, LLC.	Fiber Optic	Wayne Kramer 602 South Military Trail Deerfield Beach, FL 33442	754-227-4345 Office 954-596-2569 Fax 561-951-6307 Cell wayne.kramer@fiberlight.com
Florida City Gas	Natural Gas	Maria Paula Lopez 4045 NW 97 Ave. Doral, FL 33178	305-835-3638 Office 786-332-8913 Cell maria.lopez@nexteraenergy.com
Florida Department of Transportation D6 ITS	Fiber Optic	Thomas Miller	305-470-5757 305-206-2600 thomas.miller@sunguide.com
Florida Gas Transmission	Natural Gas	Joe Sanchez 2405 Lucien Way Suite 200 Maitland, FL 32751	407-838-7171 Office 407-838-7101 Fax 407-808-4607 Cell joseph.e.sanchez@energytransfer.com
Florida Power & Light Distribution	Electric	Angel Vargas 4200 W. Flagler Street Miami, FL 33134	305-442-5129 Office 305-442-5123 Fax 305-495-9253 Cell angel.vargas@fpl.com
Florida Power & Light Transmission	Electric	Michael Foley 700 Universe Blvd TS4/JW Juno Beach, FL 33408	561-904-3640 Office 561-523-9896 Cell Michael.Foley@fpl.com
Hotwire Communications	Fiber, Telephone, Cable TV, Coax	Walter Sancho-Davila 10360 USA Today Way Miramar, FL 33025	954 248-7396 Cell 954-241-1263 Fax walter.sancho-davila@hotwirecommunication.com
MCI / Verizon	Communications / Fiber Optic	Attn : Investigations MCI - Verizon Business 2400 N. Glenville Dr. Richardson, TX 75082	972-729-6322 Investigations@Verizon.com
Miami-Dade Enterprise Technology Services Dept.	Fiber Optic	Frank Dopico	305-275-7813 Office 786- 208-5658 Cell Frank.Dopico@miamidade.gov

Table 2.37 – Existing UAO Contact List Continued

Utility Agency/Owner	Facility	Contact Information	
Miami-Dade County Public Works	Traffic/ Street Lights	Octavio Vidal	305-412-0891 Ext. 201 786-345-0986 octavio.vidal@miamidade.gov
Miami-Dade Expressway Authority	Electric & Fiber	John Reese	305-637-3277 Ext. 2144 jreese@mdx-way.com
Miami-Dade Water & Sewer	Water & Sewer	Patrick Chong 3501 NW 46 ST Miami, FL. 33142	786-552-4416 Office PCHON@miamidade.gov
Redflex Traffic Systems, Inc.	Traffic Control / Street Lights	Ross Duke	480-299-3834 rduke@redflex.com
Suburban Propane	Propane	Dmitri Pressman 3800 NW 59 Street Miami, FL 33142	305-635-4427 dpressman@suburbanpropane.com
Univision Network	Not Available	Pierre Jaspar 9405 NW 41st Street Miami, FL 33178	305-421-2703 pjaspar@univision.net

Source: FDOT District Utility Office (District Six)
Notes: The UAO contact list was developed based on letters sent to each UAO or via responses received from the UAO within the SR 826 corridor.

The following is a summary of existing utility facilities within the study limits. The crossing roadways and distances described below are approximate locations.

AT&T - Florida

AT&T has substantial utility facilities located within the study corridor. These include manholes, buried and overhead telephone. The following are the locations indicated by the UAO:

- SW 108th Street
- SW 98th Street
- SR 94 / SW 88th Street
- SR 986 / SW 72nd Street
- SW 56th Street / Miller Drive
- SR 976 / Bird Road

- SW 24th Street / Coral Way
- SR 968 / W Flagler Street

Atlantic Broadband

Fiber optic cable (FOC) locations within the study corridor were provided by the UAO. The FOC utilities are indicated to be buried underground. The following are the locations indicated by the UAO:

- SR 94 / SW 88th Street
- SW 78th Street
- SW 28th Street

Centurylink / Level 3 Communications

According to the review conducted by Centurylink / Level 3 Communications, the UAO does not have existing facilities within the limits of this project.

Comcast Cable

Comcast Cable facilities include subgrade and aerial lines. The following are the locations indicated by the UAO:

- SW 112th Street / Killian Drive – aerial
- Along SR 5 / US 1 from within the limits of the study – buried
- SR 94 / SW 88th Street – buried
- SW 76th Avenue from SW 82nd Street to SW 78th Street – buried
- SW 77th Avenue from SW 88th Street to SW 80th Street – buried
- SW 82nd Street – buried
- SW 80th Street – buried
- SW 78th Street – aerial
- SW 77th Court – aerial
- SR 986 / SW 72nd Street – aerial
- SW 77th avenue from SW 70th Street to SW 58th Street – aerial
- SW 60th Street – aerial
- SW 58th Street – aerial
- SW 56th Street – buried
- SW 77th Court – aerial
- SR 976 / SW 40th Street – buried
- SW 72nd Avenue – aerial
- SW 76th Avenue from south of SW 35th Street to S Waterway Drive – aerial

- SW 32nd Terrace – aerial
- SW 28th Street – aerial
- SW 16th Street – aerial
- SR 90 / SW 8th Street / Tamiami Trail – buried
- SR 968 / W Flagler Street – buried
- NW 12th Street – buried and aerial
- NW 87th Avenue – buried
- NW 82nd Avenue – buried

Crown Castle Fiber

Fiber optic cable (FOC) locations were provided by the UAO within the study limits. The FOC utilities are indicated to be aerial and buried underground. The following are the locations indicated by the UAO:

- SR 5 / US 1 / South Dixie Highway on the west side from SW 112th Street to SW 104th Street – aerial
- SW 104th Street – aerial and buried
- SR 5 / US 1 / South Dixie Highway from south of SW 104th Street to north of SR 826 northbound – buried
- SW 104th Street – aerial and buried
- SW 77th Avenue from SW 100th Street to SW 95th Terrace – aerial and buried
- SR 94 / SW 88th Street – buried
- SW 77th Avenue from SW 86th Street to SW 80th Street – aerial and buried
- SW 76th Avenue from SW 80th Street to SW 74th Street – buried
- SW 75th Avenue from SW 74th Street to SR 976 / SW 72nd Street – aerial
- SR 976 / SW 72nd Street – aerial
- SW 75th Avenue from SW 49th Terrace to SR 976 / SW 40th Street – buried
- SR 976 / SW 40th Street – buried
- SW 34th Street – buried
- SW 24th Street / Coral Way around SW 75th Avenue – buried
- SW 16th Street – aerial
- SR 90 / SW 8th Street from SW 82nd Avenue to west of SW 79th Avenue – aerial
- SR 968 / W Flagler Street – aerial and buried
- NW 12th Street – aerial and buried

Crown Castle NG

The UAO provided the location of FOC at the southern end of the PD&E study limits. The FOC utilities are indicated to be buried underground. The following is the location indicated by the UAO:

- Buried Underground Fiber – Within the existing SW 112th Street right of way (south side), in the vicinity of the US 1 intersection.

Fiberlight, LLC.

The UAO identified buried underground FOC facilities within the study limits. The following are the locations indicated by the UAO:

- NW 12th Street from NW 84th Avenue to NW 72nd Avenue
- NW 82nd Avenue
- NW 72nd Avenue old alignment

Florida City Gas

The UAO provided as-built plans to show the location of their gas utilities within the study corridor. The documentation provided included the location of gas mains along the corridor, as well as the sizing of the facilities. Florida City Gas utilities are located within or adjacent the right of way of the study limits. The following are the locations indicated by the UAO:

- SW 98th Street – 8" gas main.
- SR 94 / SW 88th Street – 4" gas main.
- SR 976 / SW 40th Street – 4" gas main.
- SW 24th Street / Coral Way – 6" gas main.
- Private road adjacent to SR 826 ramp, between SR 968 / Flagler St and SR 836 – 2" gas main

Florida Gas Transmission (FGT)

The UAO provided the locations of their natural gas transmission pipelines within the study limits. The information was provided via base map markups during the coordination phase. The following are the locations indicated by the UAO:

- SW 104th Street – Existing 18" Outer Diameter (O.D.) x 0.250" Wall Thickness (W.T.), Grade X52 Natural Gas Transmission Pipeline (FLMEA).

- SR 5 / US 1 / South Dixie Highway from SW 104th Street to South of SR 826 northbound – Existing 4.50" O.D. x 0.219" W.T., Grade B, Natural Gas Transmission Pipeline (FLBUR).
- SW 24th Street / Coral Way from East of SW 82nd Avenue to SW 78th Place – Existing 6.625" O.D. x 0.188" W.T., Grade B Natural Gas Transmission Pipeline (FLMED).
- SR 968 / Flagler Street – Existing 18" O.D. x 0.250" W.T., Grade X52, Natural Gas Transmission Pipeline (FLMEA).
- SW 72nd Avenue from NW 7th Street to RR Tracks – Existing 18" O.D. x 0.250" W.T., Grade X52, Natural Gas Transmission Pipeline (FLMEA).
- North of NW 12th Street parallel to RR Tracks – Existing 12.75" O.D. x 0.375" W.T., Grade X42, Natural Gas Transmission Pipeline (FLMEB).

Florida Power & Light (FPL)- Distribution

The UAO provided documentation of the location of existing distribution facilities, which consist of overhead and underground lines within the study limits. The following notes were provided by FPL addressing work in the vicinity of FPL's existing facilities:

1. Contractors must maintain clearances, as required by OSHA, when working in the proximity of FPL's high-voltage transmission conductors and lower voltage distribution conductors.
2. The roadway contractor must maintain access to all FPL facilities at all times during construction.
3. All existing facilities must remain energized during road construction.

The following are the locations of FPL's distribution lines:

- SR 5 / US 1 / South Dixie Highway from SW 112th Street to SW 106th Street – overhead power line.
- Running parallel to the US 1 Busway (west side) from SW 104th Street to SW 98th Street – overhead power line.
- Running parallel to the US 1 Busway (west side) from SW 100th Street to SR 826 NB overpass – buried power line.
- SW 98th Street – buried power line.
- SR 94 / SW 88th Street – buried power line.
- SW 77th avenue from SW 86th Street to SW 74th Street – overhead power line.
- SW 85th Street – overhead power line.

- SW 78th Street – overhead power line.
- SW 74th Street – overhead power line.
- SW 77th Avenue from SW 70th Street to SW 58th Street – overhead power line.
- SW 68th Terrace – overhead power line.
- SW 62nd Street – overhead power line.
- SW 60th Street – overhead power line.
- SW 56th Street – overhead power line.
- SR 90 / SW 8th Street – overhead and buried power lines
- SW 77th Court and SW 77th Avenue from SW 2nd Street to SR 968 / West Flagler Street – overhead power line.
- NW 7th Street – buried power line.

Florida Power & Light - Transmission

The UAO provided documentation of the location of the existing transmission facilities, which consist of overhead lines. The following notes were provided by FPL regarding work in the vicinity of FPL's existing facilities:

1. Contractors must maintain clearances, as required by OSHA, when working in the proximity of FPL's high-voltage transmission conductors and lower voltage distribution conductors.
2. The roadway contractor must maintain access to all FPL facilities at all times during construction.
3. All existing facilities must remain energized during road construction.

The following are the locations of FPL's transmission lines:

- SW 80th Street – 138kV Transmission Line.
- SW 56th Street / Miller Drive – 138kV Transmission Line.
- SW 12th Street – 230kV Transmission Line.
- SW 4th Street – 138 kV Transmission Line.
- SW 77th Court from SW 4th Street to SW 2nd Street – 138 kV Transmission Line.
- SW 2nd Street – 138 kV Transmission Line.
- SR 968 / West Flagler Street – 138 kV Transmission Line.
- NW 7th Street from East of NW 79th Avenue to Milam Dairy Road – 138 kV Transmission Line.
- NW 89 Court – (2) 230kV Transmission Lines.
- SW 87th Avenue from SR 836 to NW 7th Street – 138kV Transmission Line.

- NW 7th Street from NW 87th Avenue to NW 82nd Avenue – 138 kV Transmission Line.
- NW 72nd Avenue – 138 kV Transmission Line.

Hotwire Communications
The UAO provided the locations of their underground FOC facilities via base map markups. The following are the locations indicated by the UAO:

- SR 94 / SW 88th Street – buried
- SW 86th Street – buried
- SR 976 / SW 40th Street – buried

MCI / Verizon
The UAO provided the locations of their underground FOC facilities via base map markups. The following are the locations indicated by the UAO:

- SR 94 / SW 88th Street – buried
- Dadeland Boulevard at SR 94 / SW 88th Street – buried
- SR 968 / W Flagler Street – buried
- SW 82nd Avenue at W Flagler Street – buried

Miami-Dade Enterprise Technology Services Department
According to the review conducted by MDC Enterprise Technology Services, the agency does not have any communications facilities within the project limits.

Miami-Dade County Public Works
Facilities owned or maintained by Miami-Dade County Public Works include street lighting and traffic signals. The location of the facilities was not provided by Miami-Dade County at this phase. Potential impacts to street lighting and traffic signals (if any) are to be coordinated with Miami-Dade County in future phases of the project.

Miami-Dade Expressway Authority (MDX)
MDX provided utility records within the SR 826 study limits. Their existing facilities include conduits located in the areas of the Don Shula Expressway (SR 874) interchange and the Dolphin Expressway (SR 836) interchange.

Miami-Dade Water & Sewer Department

Miami-Dade Water and Sewer Department (M-D WASD) provided utility records within the study limits. Their facilities consist of water and sanitary sewer mains along the study corridor. The following are the locations indicated by the UAO:

- US 1 at SW 108th Street – 12" Force Main
- US 1 NB at SW 100th Street – 12" Water Main
- US 1 at SW 98th Street – 8" Water Main
- US 1 at SW 98th Street – 42" Force Main
- SW 77th Avenue at SW 98th Street – 12" Water Main
- US 1 at SW 102nd Street – 8" Force Main
- SR 94 / SW 88th Street – 24" Force Main
- SR 94 / SW 88th Street – 12" Water Main
- SW 77th Avenue north of Snapper Creek Expressway – 16" Water Main
- SW 77th Court at SW 72nd Street – 16" DIP Water Main
- SW 72nd Street – 36" DIP Water Main
- SW 76th Avenue at SW 64th St. – 8" DIP Water Main
- SW 56th Street – 48" Water Main
- SW 56th Street – 8" Water Main
- SW 40th Street – 16" Water Main
- SW 40th Street – 48" Water Main
- SW 36th Street – 8" DIP Water Main
- SW 24th Street – 12" Force Main
- SW 24th Street – 30" and 16" Water Main
- Along SW 76th Court from SW 24th Street to SW 8th Street – 30", 12"and 4" Water Main
- SW 8th Street – 30" and 24" DIP Water Main
- Along SW 77th Avenue from SW 4th Street to Flagler Street – 6" Water Main
- SR 968 /Flagler Street – 12" DIP Water Main
- SR 968 /Flagler Street – 60" and 54" Force Main
- Mall of Americas – 8" Force Main
- NW 7th Street – 16" Water Main
- SW 2nd Street – 30" Force Main

Redflex Traffic Systems, Inc.

The UAO provided utility records within the study limits. The following are the locations of the Redflex Traffic System utilities:

- US 1 at SW 112th Street – buried conduit
- US 1 at SW 104th Street – buried conduit

Suburban Propane
According to the review conducted by Suburban Propane, the agency does not have any underground mains or services in the vicinity of the project.

Univision Network
According to the review conducted by Univision Network, the agency does not have existing facilities within the limits of the project.

2.19 Lighting

The existing lighting system along the SR 826 corridor consists of conventional High-Pressure Sodium cobra head luminaires mounted on aluminum poles within the project limits. Lighting is provided along the SR 826 mainline concrete median barrier. Roadway lighting on the ramps also consist of conventional cobra head luminaires located adjacent to the travel lanes. The maintaining agency for roadway lighting along the SR 826 corridor and ramps is the Florida Department of Transportation.

2.20 Signs

2.20.1 Roadway Signing

An existing corridor sign inventory was performed along the SR 826 mainline and interchanges. Signs are typically classified as regulatory, warning, guide, motorist information signs (general service signs) and Intelligent Transportation System (ITS).

As part of the documentation effort, each major roadway sign was photographed, inventoried, numbered, classified and located on aerial photography. The sign structure numbers were also collected where available. As summarized in ***Table 2.38***, a total of 214 major signs were found within the study limits. ***Appendix F*** depicts the locations of all the signs. The following quantities of major signs and classifications were identified within the study limits:

Table 2.38 – Roadway Signing Inventory

Type of Sign	Quantity by Corridors									
	SR 826	SR 94	SR 986	SW 56th Street	SR 874	SR 976	SW 24th Street	SR 90	SR 968	SR 836
Regulatory Signs	-	-	-	-	-	-	-	-	-	-
Warning Signs	1	-	-	-	-	-	-	-	-	-
Guide Signs	91	7	5	9	1	10	9	6	12	30
Motorist Information Signs	11	-	-	1	-	-	-	-	-	-
Intelligent Transportation System	4	2	2	2	1	2	2	2	2	2

2.20.2 Intelligent Transportation System

The SR 826 existing ITS infrastructure is limited to a hand full of DMS/ADMS, CCTV and MVDS within the project limit except near SR 836. The SR 826 express lane north project is near completion and has several new ITS devices that are south of SR 836 overlapping with the PD&E Study limits. The existing ITS devices within the current project limits that are currently being monitored by District Six SunGuide Traffic Management Center (TMC) are described below.

Closed Circuit Television (CCTV) Cameras – There are several CCTVs within the corridor project limits. There are two types of pan-tilt-zoom CCTVs based on their functionality: those cameras that are used for traffic surveillance, and those that are dedicated to verifying DMS information (identified as Verification CCTVs (VCCTVs)). Existing CCTVs within the current project limits are installed at the following locations (see ***Table 2.39***):

Table 2.39 – CCTV Camera Locations

Location	Type	ID # (if any)
US 1 North of Killian Drive	V-CCTV	V-CCTV 212
	CCTV	CS 213
SR 826 NB & SE of SW 88th Street	CCTV	CCTV 100
SR 826 NB & SW 82nd Street	CCTV	C 140
SR 826 NB & NE of SW 72nd Street	CCTV	CCTV 101
SR 826 SB & Don Shula Expressway	CCTV	CCTV 102
SR 826 SB & SW 32nd Street	CCTV	CCTV 103
SR 826 NB South of Coral Way	V-CCTV	No access to verify info
SR 826 SB & SW 17th Street	CCTV	CCTV 104
SR 826 NB & US41 NB Off-Ramp to SR826	CCTV	FLORIDA DOT DIST 6 - C22210-1102
SR 826 SB South of Flagler Street	CCTV	No information
	CCTV	No information
SR 826 NB NE Corner of Flagler Street	CCTV	CCTV 105
SR 826NB South of NW 7th Street	CCTV	CCTV 106
SR 826 NB South of NW 7th Street	CCTV	FLORIDA DOT DIST 6 - C22210-1000
NW corner of NW 7th Street	CCTV	CCTV 144
SR 826 South of SR 826 & SR 836 Interchange	2-CCTV	C22210-1101
SR 826 NB & SR 836 WB On-Ramp	2-CCTV	No information
SR 826 SB North of NE 12th Street	2-CCTV	No information
SR 826 NB South of NW 17th Street	CCTV	No information

Microwave Vehicle Detection System (MVDS) – MVDS sensors are part of the District Six lane detection system that provides vehicle classification and average vehicle density, speed and occupancy per lane at select time intervals. These non-intrusive pole mounted devices provide primary source of traffic congestion within the corridor. The majority of them are legacy devices that has limited detection zone lengths compared to 250 feet, the current longest detection zone length being used in new installations. Existing MVDS are at following locations (see ***Table 2.40***):

Table 2.40 – MVDS Locations

Location	(# of) Devices	ID # (if any)
SR 826 NB & SE of SW 88th Street	MVDS	No information
SR 826 NB & SW 82nd St	MVDS	No information
SR 826 NB & NE of SW 72nd St	MVDS	No information
SR 826 NB & Don Shula Expwy	MVDS	FLD6DOT826NB003.2-D6
SR 826 SB & Don Shula Expwy	MVDS	FLD6DOT826SB003.2-D6
SR 826 NB South of SW 40th Street	MVDS	No information
SR 826 SB & SW 32nd St	MVDS	No information
	MVDS	
SR 826 NB South of Coral Way	MVDS	FLD6DOT826NB004.8.LL
SR 826 SB South of Coral Way	MVDS	FLD6DOT826SB004.8.LL
SR 826 SB & SW 17th St	MVDS	FLD6DOT826NB005.4-DS-ML
	MVDS	FLD6DOT826SB005.4-DS-ML
SR 826 SB South of US41	2-MVDS	No information
SR 826 NB & US41 NB On-Ramp to SR 826	MVDS	FLD6DOT826NB5.8-9-DS
US41 NB Off-Ramp to SR 826	MVDS	No information
SR 826 SB East of SW 77th Ct	MVDS	FLD6DOT826SB006.0-DS
SR 826 NB South of Flagler St	MVDS	MVDS826-01-NB
SR 826 SB South of Flagler St	MVDS	MVDS826-02-SB
SR 826 SB NW corner of Flagler St	2-MVDS	No information
SR 826 NB NE corner of Flagler St	MVDS	FLD6DOT826NB006.3-DS
SR 826 SB NE corner of Flagler St	MVDS	FLD6DOT826SB006.3-DS
SR 826 NB North of Flagler St On-Ramp to SR 826	2-MVDS	No information
SR 826 NB Off-Ramp to SR 836 EB	2-MVDS	No information
SR 826 SB South of NW 7th St	2-MVDS	No information
SR 826 NB Off-Ramp to SR836 WB	2-MVDS	No information
SR 826 SB NW corner of NW 7th St	2-MVDS	FLD6DOT826SB006.DS
SR 826 SB South of NW 7th St	2-MVDS	FLD6DOT826SB007.6-DS
SR 826 NB & SR 836 WB On-Ramp	2-MVDS	MVDS-826-20
SR 826 NB & SR 836 WB On-Ramp	2-MVDS	MVDS-836-8
SR 826 SB North of SR 836	3-MVDS	No information
SR 826 SB North of NE 12th St	2-MVDS	No information
SR 826 NB North of NE 12th St on sign structure	2-MVDS	No information
SR 826 SB Off-Ramp to SR 836 WB	MVDS	No information
SR 826 NB South of NW 17th St	3-MVDS	No information

Travel Time System – There are no existing travel time system detectors within the corridor project limit.

Dynamic Message Sign (DMS) – Arterial and freeway DMSs are a full matrix that can display up to three-lines of text messages to disseminate travel related information to the drivers. They are installed over arterial and freeway travel lanes so that messages are clearly visible to the drivers. Existing DMS installations within the current project limit are as follows (see ***Table 2.41***):

Table 2.41 – DMS Locations

Location	Type of DMS	ID # (if any)
US 1 North of Killian Drive	ADMS	DMS 46
SR 826 NB South of Snapper Creek Expwy	DMS	FLD6DOT826NB001.3.LL
SR 826 NB South of Coral Way	DMS	FLD6DOT826NB004.8.LL

Lane Status DMS (LSDMS) – LSDMS only has a single line of 18-character text messages. These are installed under the bottom of static guide sign providing information to the general use lane traffic regarding express lanes egress points. The messages in LSDMS are controlled by the SMART SunGuide TMC. Once a message is displayed, the TMC verifies the displayed message through VCCTV. Existing LSDMS within the current project limits are installed at the following locations (see ***Table 2.42***):

Table 2.42 – LSDMS Locations

Location	Type of DMS	ID # (if any)
SR 826 NB South of Flagler St	LSDMS	No information
SR 826 NB South of SR 826 & SR 836 Interchange	LSDMS	No information

Toll Amount DMS (TADMS) – TADMS typically have a single line of 6-character text messages and primarily displays the toll amount to an interchange exit accessible to the express lanes traffic. There can be up to a maximum of 2-TADMS on a static sign. Existing TADMS within the current project limits are at the following locations (see ***Table 2.43***):

Table 2.43 – TADMS Locations

Location	Type of DMS	ID # (if any)
SR 826 NB South of W Flagler St	TADMS	No information
SR 826 NB South of SR826 & SR836 Interchange	TADMS	No information

Ramp Metering Signals – There are currently no ramp metering signals installed within the project limit along the SR 826 interchanges.

Fiber Optic (FO) Communication System – Currently deployed ITS devices are connected to a 72-count single mode underground FO trunk line system along SR 826. Drop cables to ITS device cabinets are spliced into the trunk line from nearby splice vaults. The trunk line is connected to the TMC through strategically placed master HUBs throughout District Six roadway infrastructure.

2.21 Aesthetic Features

There are no scenic views, vistas, or landscaping within the study limits. This is an urban limited access freeway corridor. Therefore, there is no vegetation within the right of way limits.

2.22 Bridges and Structures

There are 66 existing bridges and one culvert located within the study limits (see ***Figure 2.35***).

- 43 bridges along SR 826
- 14 bridges within the SR 826/SR 836 Interchange
- One bridge along SR 874
- Six bridges along SR 836
- Two pedestrian bridges

Table 2.44 identifies the locations, descriptions, and specific details about each of the bridges within the study area. The following data was collected and analyzed for each structure: location, geometrics, alignment, type of structure, and condition. ***Appendix G***, Bridge Analysis Report documents additional details about the bridge structures.

EXISTING BRIDGES LOCATION MAP

FIGURE 2.35
SHEET 2-134

EXISTING BRIDGES LOCATION MAP

FIGURE 2.35
SHEET 2-135

EXISTING BRIDGES LOCATION MAP

FIGURE 2.35
SHEET 2-136

EXISTING BRIDGES LOCATION MAP

FIGURE 2.35
SHEET 2-137

EXISTING BRIDGES LOCATION MAP

FIGURE 2.35
SHEET 2-138

Table 2.44 - Existing Bridge Characteristics

Existing Bridge Characteristics																													
LOCATION				GEOMETRICS					ALIGNMENT						STRUCTURAL								CONDITION					
Bridge ID No.	Bridge Location	Milepost	Traffic Direction	Structure Length (ft)	Deck Width (ft)	Shoulder Width		No. of Lanes	Skew Angles (Degrees)	Min. Horizontal Clearance (under)			Min. Vertical Clearance (under) / Location (*)		Number of Spans	Max. Span (ft)	Superstructure Type	Thrie Beam Connection	Location to Install Thrie Beam Connection	Traffic Railing	Exp. Joint Type	Substructure Type	Year Built/ Modified	Sufficiency Rating (%)	Health Index (%)	Inspection Date	Load Rating Status	Significant Deficiencies
						Left	Right			Left	Right	Location (*)																
Culvert	Culvert * Over C-100A	7.331	SB	80	45.33	2'-0"	2'-0"	3	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
870784	US1 Exclusive Bus Lanes Bridge over Canal C-100A	7.331	SB & NB	59	56.0417	8'-0"	8'-0"	2	0	N/A	25'-6"	Canal C-100A	6.33'	Canal C-100A	3	28.5	Reinforced Concrete Slab	W Beam No compliance (at beginning and end of bridge at both sides)	At both sides of beginning and end of bridge	32" Type F	Backer Rod	Pile Bent	1995	97.9	96.3	7/4/2019	Need LRFR	N/A
870129	SB SR-826 over SW 98th St. and Busway	0.164	SB	704.2	34.1	2'-8"	2'-4"	2	0	4'-0"	> 8'	SW 98th W.B.	22.22'	Busway	10	69.9	Prestressed Concrete Stringer/Girder	Thrie Beam Connection (at beginning and end of bridge at both sides)	N/A	Vertical Face Retrofit	Backer Rod	Hammer Head Single Column Pier / Straddle Bent Pier	1961	64.80	98.26	6/27/2016	NA	Functionally obsolete, intolerable deck geometry, intolerable underclearances, substandard bridge railings.
870128	NB SR 826 over SW 98 Street	0.189	NB	224.9	44.3	6'-0"	10'-0"	2	99	16	22.3	SW 98th St.	14.8'	SW 98th St.	3	92.8	Prestressed Concrete Stringer/Girder	W Beam No compliance (at beginning and end of bridge at both sides)	At both sides of beginning of bridge	32" Type F	Backer Rod	Multi Column Pier	1960/1997	84.00	99.88	6/27/2016	NA	None
870284	NB SR 826 over US-1 and Pinecrest Pkwy	0.398	NB	746.3	43.4	6'-0"	10'-0"	2	99	6'-4"	6'-2"	US 1 N.B.	18.2'	US 1 N.B.	11	72	Prestressed Concrete Stringer/Girder	W Beam No compliance (at beginning of bridge at both sides and end of bridge at east side). Thrie Beam Connection (at west end of bridge)	At both sides of beginning of bridge & at east side of the end of the bridge	32" Type F	Backer Rod	Multi Column Pier	1961/1997	86.20	99.82	9/30/2015	N/A	Functionally obsolete.
870792	Ramp from EB Kendall Dr to NB SR 826	0.086	EB to NB	812.4	31.7	9	6	1	0	8'-0"	14'-0"	Dadeland Circle Mall	16.75'	SR 826 S.B.	9	108.5	Steel Continuous Stringer/Girder	None	N/A	32" Type F	Strip Seal	Hammer Head Single Column Pier	1997	95.60	82.06	7/25/2016	Need LRFR	Functionally obsolete.
870773	SR 826 over Kendall Dr/SW 88th St. and Circle Mall	0.838	NB & SB	220.4	94.2	10'-6" N.B. 10'-6" S.B.	10'-4" N.B. 10'-2" S.B.	4 (2 each direction)	0	19'-8"	7'-4"	Circle Mall	17.1'	SW 88th St. E.B.	3	92.2	Prestressed Concrete Stringer/Girder	W Beam No compliance (Southbound at west side end of brdige & Northbound at east side beginning of bridge)	Northbound at east side of the beginning of bridge	32" Type F	Backer Rod	Multi Column Pier	1997	96.00	99.59	4/19/2016	Updated to LRFR	None
870793	SB SR 826 to EB Kendall Dr	0.079	SB	273.7	30.1	6'-4"	6'-4"	1	0	9'-6"	33'-4"	SW 88th St. E.B.	16.6'	Dadeland Circle Mall	3	108.3	Prestressed Concrete Stringer/Girder	W Beam (At both sides of the end of the bridge)	N/A	32" Type F	Backer Rod	Hammer Head Single Column Pier	1997	92.60	99.94	6/13/2017	N/A	None
870953	WB Kendall Dr to NB SR 826 over Dadeland Circle	0.23	NB	104	29	6'-0"	6'-0"	1	27	17'-6"	18'-4"	Dadeland Circle Mall	17.8'	Dadeland Circle Mall	1	104	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Reinforced Concrete Abutment (Single Span)	1997	99.30	99.88	7/25/2016	Need LRFR	None
870286	NB SR 826 over Snapper Creek Canal	1.1	NB	175.8	106.5	el	10'-6"	3	15	N/A	N/A	Snapper Creek Canal	N/A	Snapper Creek Canal	4	44	Prestressed Concrete Stringer/Girder	None	N/A	32" Type Fnon	Backer Rod	Pile Bent	1961/1997	92.90	99.90	5/8/2017	Need LRFR	None
870794	SB SR 826 to Kendall Dr over Snapper Creek Canal	0.016	SB	177.8	42.6	10'-4"	10'-0"	3	0	N/A	N/A	Snapper Creek Canal	N/A	Snapper Creek Canal	4	44.3	Prestressed Concrete Stringer/Girder	None (Thrie Beam Impact Atenuator at east side of beginning of approach of bridge)	N/A	32" Type F	Backer Rod	Pile Bent	1997	100.00	93.14	7/25/2016	Need LRFR	None.
870795	WB Kendall Dr to NB SR 826 over Snapper Creek Canal	0.13	NB	176.8	30.4	6'-6"	6'-0"	1	0	N/A	N/A	Snapper Creek Canal	N/A	Snapper Creek Canal	4	44	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Pile Bent	1997	99.70	84.76	7/25/2016	Need LRFR	None
874257	SW 77th Ave. over Snapper Creek Canal	0.375 on SW 77th Ave.	NB & SB	102.2	36.72	1'-9"	3'-0"	2	0	N/A	N/A	Snapper Creek Canal	N/A	Snapper Creek Canal	3	34.1	Hollow Core Slab	W Beam No compliance (at east side of beginning of bridge and at both side of end of bridge)	at four corners of the bridge	Vertical Face with Metal Rail	Backer Rod/ Sealant	Pile Bent	1965	89.20	72.16	1/30/2016	NA	None
870558	SR 878 over SR 826, SW 76th & SW 77th Ave.	2.331 on 878	EB & WB	382.5	95.8	11'-4" WB 10'-8" EB	10'-0" WB 11'-0" EB	4 (2 each direction)	0	12'-0"	42'-6"	SR 826	16.3' (**)	SR. 826 S.B.	4	97.5	Prestressed Concrete Stringer/Girder	W Beam No compliance (at northwest and southeast end of bridge). Thrie Beam Connection (at northeast and southwest beginning of bridge)	NA	32" Type F Median 32" F Shape	Strip Seal	Multi Column Pier	1978	86.70	100.00	9/15/2016	Need LRFR	Functionally obsolete
870132	SB SR 826 over SW 72 Street	1.848	SB	167	58.9	10'-1"	10'-11"	3	0	3'-8"	3'-8"	SW 72nd St.	15.19'	SW 72nd St.	3	89.9	Prestressed Concrete Stringer/Girder	W Beam No compliance (at beginning and end of bridge at west side)	At west side of beginning of bridge	32" Type F	Backer Rod	Multi Column Pier	1961/1997	90.70	99.73	11/11/2015	Need LRFR	Functionally obsolete, intolerable underclerances, substandard bridge railings and transitions
870287	NB SR 826 over SW 72nd St.	1.848	NB	167	59.3	10'-1"	10'-8"	3	0	3'-8"	3'-8"	SW 72nd St.	15.04'	SW 72nd St.	3	89.9	Prestressed Concrete Stringer/Girder	W Beam No compliance (at east side of beginning and end of brdige)	At east side of beginning of the bridge	32" Type F	Backer Rod	Multi Column Pier	1961/1997	90.70	99.86	11/11/2015	Need LRFR	Functionally obsolete, intolerable underclearances, Bridge Railings, Transitions
871013	SR 826 over SW 56 St (Miller Dr)	2.867	NB & SB	159.8	127.1	10'-4"	10'-4"	4 SB 3 NB	86	30'-7"	28'-6"	SW 56th St. E.B.	17.05'	SW 56th St.	1	159.8	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F Median 32" F Shape	Backer Rod	Reinforced Concrete Abutment (Single Span)	2011	85.00	99.95	4/19/2017	Available	None
871014	NB SR 826 off-ramp to SW 40 St over SW 56 ST (Miller Dr)	0.059	NB	597	27.9	6'-0"	6'-0"	1	0	28'-5"	6'-0"	SW 56th St. E.B.	16.95'	SW 56th St.	5	157	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Hammer Head Single Column Pier	2010	94.00	99.99	3/22/2017	Available	Functionally obsolete. Intolerable deck geometry, needs correction.

Table 2.44 - Existing Bridge Characteristics

Existing Bridge Characteristics																													
LOCATION				GEOMETRICS					ALIGNMENT						STRUCTURAL								CONDITION					
Bridge ID No.	Bridge Location	Milepost	Traffic Direction	Structure Length (ft)	Deck Width (ft)	Shoulder Width		No. of Lanes	Skew Angles (Degrees)	Min. Horizontal Clearance (under)			Min. Vertical Clearance (under) / Location (*)		Number of Spans	Max. Span (ft)	Superstructure Type	Thrie Beam Connection	Location to Install Thrie Beam Connection	Traffic Railing	Exp. Joint Type	Substructure Type	Year Built/ Modified	Sufficiency Rating (%)	Health Index (%)	Inspection Date	Load Rating Status	Significant Deficiencies
						Left	Right			Left	Right	Location (*)																
Culvert	Culvert * Over C-100A	7.331	SB	80	45.33	2'-0"	2'-0"	3	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
870526 / 870527	SR.874 Over SW 56th St. Miller Dr.	6.322	SB & NB	275	117.08	10'-0"	10'-0"	6	4	14'-1"	11'-0"	Miller Dr. (WB)	16.25'	Miller Dr. (WB)	4	84'-0"	Prestressed Concrete Stringer/Girder	Thrie Beam Connection	N/A	32" Type F	Backer Rod	Multi Column Pier	1975/2013	85.00	99.95	1/26/2018	Available	None
871016	SB SR 826 to SW 56 St. over SR 874, Off-Ramp to SW 40th St.	3.136	SB	566	42.43	6'-0"	10'-0"	2	45	8'-3"	N/A	SR. 874 Off to SW 40th St.	21.3'	SR 874 N.B.	3	204.4	Steel Continuous Stringer/Girder	None	N/A	32" Type F	Strip Seal	Multi Column Pier	2011	92.80	99.97	8/13/2015	Available	Functionally obsolete.
	Over CSX RR Crossing									50'-0"	>50'-0"	RR	24.07'	RR														
871017	SB SR 826 over SR 874 Off-Ramp to SW 40th St.	3.144	SB	716.1	58.21	9'-10"	10'-4"	3	45	8'-3"	N/A	SR. 874 Off to SW 40th St.	16.9'	SR 874 N.B.	3	267	Steel Continuous Stringer/Girder	None (Thrie Beam at west side of the north approach guardrail near beginning of bridge)	N/A	32" Type F	Strip Seal	Multi Column Pier	2010	88.00	99.99	3/15/2017	Available	None
	Over CSX RR Crossing									50'-0"	>50'-0"	RR	23.7'	RR														
871018	NB SR 826 over SR 874 Off-Ramp to SW 40 St.	3.168	NB	330	58.21	9'-8"	10'-4"	3	37	13'-8"	8'-2"	Off-Ramp to SW 40th St.	22.2'	Off-Ramp to SW 40th St.	2	190	Steel Continuous Stringer/Girder	W Beam (at west side of the north approach after end of bridge)	N/A	32" Type F	Strip Seal	Multi Column Pier	2010	88.00	100.00	3/21/2017	Available	None
	Over CSX RR Crossing									50'-0"	50'-0"	RR	23.7'	RR														
871020	Off-ramp SW 56 St to NB SR 826 over SR 874 Ramp to SW 40 St.	3.2	NB	364	54.25	6'-4"	10'-3"	2	32	13'-8"	8'-10"	Off-Ramp to SW 40th St.	17.8'	Off-Ramp to SW 40th St.	2	204	Steel Continuous Girder	None (Thrie Beam at both sides of the south approach guardrail near beginning of bridge)	N/A	32" Type F	Strip Seal	Multi Column Pier	2011	96.00	99.97	12/17/2015	Available	None
	Over CSX RR Crossing									50'-0"	50'-0"	RR	24.3'	RR														
871021	SB SR 826 over SW 40 St	3.905	SB	160.4	95.6	9'-10"	9'-9"	6	0	16'-0"	17'-0"	SW 40th St. E.B. Auxiliary Lane	16.7'	SW 40th St.	1	160.4	Prestressed Concrete Girder	None	N/A	32" Type F	Backer Rod	Reinforced Concrete Abutment (Single Span)	2011	89.70	100.00	10/27/2015	Available	None
871022	NB SR 826 over SW 40 St	3.905	NB	160.4	107.4	9'-10"	9'-9"	7	0	16	17'-0"	SW 40th St. E.B. Auxiliary Lane	16.5'	SW 40th St.	1	160.4	Prestressed Concrete Girder	Thrie Beam Connection (at the east side beginning of the bridge)	N/A	32" Type F	Backer Rod	Reinforced Concrete Abutment (Single Span)	2011	95.10	100.00	4/19/2017	Available	None
879023	Pedestrian bridge over SR 826, north of SW 40 St	4.17	E-W	286.8	10	N/A	N/A	N/A	0	12'-6"	12'-0"	SR 826 N.B.	16.67'	SR 826 N.B.	2	161.1	Prestressed Concrete Girder-Floorbeam	N/A	N/A	N/A	N/A	Single Column Pier	2011	-2.00	99.99	3/15/2017	N/A	None
870760	SB SR 826 over SW 24th St.	4.944	SB	150	109	10'-2"	10'-0"	7	0	7'-8"	19'-0"	SW 24th St. E.B.	18.05'	SW 24th St.	2	75	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Multi Column Pier	2006	85.00	99.96	5/10/2016	Need LRFR	None
870761	NB SR 826 over SW 24 Street	4.944	NB	150	109	10'-2"	10'-0"	7	0	6'-8"	Aux. Lane EB 19'-9"	SW 24th St. E.B.	16.8'	SW 24th St.	2	75	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Multi Column Pier	2007	81.00	99.56	5/10/2016	Need LRFR	Functionally obsolete.
870764	SR 826 NB Off ramp to SW 24th St. over Coral Gables Canal	1.503 on sw 24th St.	EB	97.5	30.79	6'-9"	6'-4"	1	10.6	N/A	N/A	N/A	5.8	Coral Gables Canal	4	37.5	Reinforced Concrete Slab	Thrie Beam Connection (at southwest beginning of bridge). W Beam (at northeast end of bridge)	N/A	32" Type F	Backer Rod	Pile Bent	2007	N/A	N/A	N/A	Available	N/A
870765	NB SR 826 In ramp from SW 24th St. over Coral Gables Canal	1.503 on sw 24th St.	NB	101.5	37.5	6'-4"	6'-4"	1	10.6	N/A	N/A	N/A	5.8	Coral Gables Canal	4	39	Reinforced Concrete Slab	W Beam No compliance (at southwest and southeast end of bridge)	N/A	32" Type F	Backer Rod	Pile Bent	2007	N/A	N/A	N/A	Available	N/A
874245	SW 24 St. east of SR 826 over Coral Gables Canal	1.503 on sw 24th St.	EB & WB	84	112	1'-0" (EB) 1'-0" (WB)	2'-6" (EB) 2'-6" (WB)	4 (EB) 3 (WB)	0	N/A	N/A	Coral Gables Canal	N/A	Coral Gables Canal	3	28	Reinforced Concrete Slab	W Beam No compliance (at the south side of beginning and end of bridge at eastbound & at the median full length of bridge)	At the south side of beginning of bridge at eastbound	32" Type F	Backer Rod/ Sealant	Pile Bent	1960/2004	79.90	70.73	2/27/2016	Need LRFR	None
879010	Pedestrian bridge over Off ramp SR 826 SB to SW 24th St.		E-W																									
870112	SB SR 826 over US 41/SW 8 Street and C-4 Canal	6.003	SB	363.5	85	8'-0"	10'-6"	6	14	7'-0"	11'-0"	SW 8th St. E.B.	17.3	SW 8th W.B.	7	56.5	Prestressed Concrete Stringer/Girder	Thrie Beam Connection (at beginning of bridge at west side)	N/A	32" Type F	Backer Rod	Pile Bent	1960/2007	90.10	97.44	5/12/2016	Need LRFR	Functionally obsolete
870267	NB SR 826 over US 41/SW 8th St. and C-4 Canal	5.954	NB	363.5	85	8'-0"	10'-8"	5	14	7'-0"	10'-9"	SW 8th St. E.B.	16.63	SW 8th W.B.	7	56.5	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Pile Bent	1960/2007	90.10	97.30	5/12/2016	Need LRFR	Funtionally obsolete.
870782	SB SR 826 to EB SW 8 Street	0 on ramp	SB to EB	368.5	31.1	6'-0"	6'-4"	1	14	7'-0"	6'-0"	SW 8th St. E.B.	17.5'	SW 8th St. W.B.	7	56.5	Prestressed Concrete Stringer/Girder	Thrie Beam Connection (at beginning of bridge at east side). W Beam (at end of bridge at west side)	N/A	32" Type F	Backer Rod	Pile Bent	2007	95.10	95.65	5/13/2016	NA	Functionally obsolete
870781	SB SR 826 to WB SW 8 Street over C-4 Canal	0.04 on ramp	SB to WB	240	31.1	6'-0"	6'-6"	1	99	N/A	N/A	N/A	N/A	N/A	7	35.8	Reinforced Concrete Slab	None	N/A	32" Type F	Backer Rod	Pile Bent	2007	100.00	90.54	5/13/2016	NA	None

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Existing Bridge Characteristics																													
LOCATION				GEOMETRICS					ALIGNMENT						STRUCTURAL									CONDITION					
Bridge ID No.	Bridge Location	Milepost	Traffic Direction	Structure Length (ft)	Deck Width (ft)	Shoulder Width		No. of Lanes	Skew Angles (Degrees)	Min. Horizontal Clearance (under)			Min. Vertical Clearance (under) / Location (*)		Number of Spans	Max. Span (ft)	Superstructure Type	Thrie Beam Connection	Location to Install Thrie Beam Connection	Traffic Railing	Exp. Joint Type	Substructure Type	Year Built/ Modified	Sufficiency Rating (%)	Health Index (%)	Inspection Date	Load Rating Status	Significant Deficiencies
						Left	Right			Left	Right	Location (*)																	
Culvert	Culvert * Over C-100A	7.331	SB	80	45.33	2'-0"	2'-0"	3	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
870780	EB SW 8 Street to NB SR 826	0.38 on ramp	EB to NB	368.5	31.1	6'-4"	6'-4"	1	14	7'-0"	4'-4"	SW 8th St. E.B.	18.43'	SW 8th W.B.	7	56.5	Prestressed Concrete Stringer/Girder	Thrie Beam Connection (at beginning of brdige at west side), W Beam (at end of brdige at west side)	N/A	32" Type F	Backer Rod	Pile Bent	2007	95.70	99.91	5/11/2016	Updated to LRFR	Functionally obsolete.
871000	SR.826 NB off-ramp over Coral Gables Canal		EB	119.042	32.08	6'-0"	6'-0"	1	46.4	NA	NA	NA	6.5	Coral Gables Canal	4	36.4	Reinforced Concrete Slab	Thrie Beam Connection (at beginning of bridge)	N/A	32" Type F	Backer Rod	Pile Bent	2007	N/A	N/A	N/A	Available	None
870066	SR 90 (SW 8th St) over C-3 Canal		EB & WB	92	Varies 93.03 to 96.48	6'-0"	Varies 9'-5 7/8" to 12'-11 1/4"	4	0	NA	NA	NA	6.58'	Canal C-3	4	23	Reinforced Concrete Slab	Continuous Concrete Traffic Railing Barrier	N/A	32" Type F	Backer Rod	Pile Bent	2007	N/A	N/A	N/A	N/A	N/A
871047	SB SR 826 over Flagler Street	6.443	SB	170.4	129.23	10'-0"	16'-4"	7	0	19'-2"	16'-6"	W Flagler St.	16.8	W Flagler St.	1	170.4	Prestressed Concrete Stringer/Girder	Thrie Beam connection (at west side of beginning of bridge)	N/A	32" Type F	Backer Rod	Reinforced Concrete Abutment (Single Span)	2015	85.10	100.00	9/6/2016	Available	None
871048	NB SR 826 over Flagler Street	6.471	NB	170.4	124.1	10'-0"	Varies 11'-0"-11'-10"	8	0	19'-2"	16'-0"	W Flagler St.	16.5	W Flagler St.	1	170.4	Prestressed Concrete Stringer/Girder	W Beam (at east side of end of bridge)	N/A	32" Type F	Backer Rod	Reinforced Concrete Abutment (Single Span)	2015	90.20	99.83	4/28/2017	Available	None
871045	SB SR 826 Connector from EB SR 836 to Flagler St over NW 7 St	6.69	SB	123.2	43.08	6'-10"	10'-4"	2	4	N/A	N/A	NW 7th St.	N/A (16.5')	NW 7th St.	1	123.2	Prestressed Concrete Stringer/Girder	Thrie Beam Connection (at east side of beginning of bridge)	N/A	32" Type F	Backer Rod	Reinforced Concrete Abutment (Single Span)	2015	96.10	100.00	7/16/2015	Available	None
871062	SB SR 826 On-ramp over NW 7 Street	7.01	SB	123.1	56.19	6'-6"	11'-0"	3	3	N/A	N/A	NW 7th St.	N/A (17.4')	NW 7th St.	1	123.1	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Reinforced Concrete Abutment (Single Span)	2014	98.40	100.00	12/14/2015	Available	None
871063	SB SR 826 over NW 7 Street	7.01	SB	123.1	73.08	15'-10"	10'-4"	4	0	N/A	N/A	NW 7th St.	N/A (16.5')	NW 7th St.	1	123.1	Prestressed Concrete Stringer/Girder	Thrie Beam Connection (at east side of beginning of bridge)	N/A	32" Type F	Backer Rod	Reinforced Concrete Abutment (Single Span)	2014	95.30	100.00	12/9/2015	Available	None
871064	NB SR 826 over NW 7 Street	7.012	NB	123	73.08	15'-8"	10'-4"	4	0	N/A	N/A	NW 7th St.	N/A (16.5')	NW 7th St.	1	123	Prestressed Concrete Stringer/Girder	Thrie Beam connection (at west side of beginning of bridge)	N/A	32" Type F	Backer Rod	Reinforced Concrete Abutment (Single Span)	2013	95.10	100.00	7/22/2015	Available	None
871042	NB SR 826 to WB SR 836 Flyover	7.02	NB to WB	2304.5	46.29	11'-7"	9'-0"	2	0	9'-2"	N/A	SR 826 S.B. Off to W Flagler St.	16.77'	Over Bridge 871043	11	248.1	Concrete Segmental Box Girder	None	N/A	32' Type F (LT) 42' F Type (RT)	Finger Joint	Single Column Pier	2015	93.10	100.00	10/8/2015	Available	Functionally obsolete. Intolerable underclearances, need correction.
871077	NB SR 826 to EB SR 836 over NW 7 Street	7	NB	123.6	43.08	6'-0"	10'-0"	2	5	N/A	N/A	NW 7th St.	N/A (29.4')	NW 7th St.	1	123.6	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Reinforced Concrete Abutment (Single Span)	2013	99.30	100.00	10/8/2015	Available	None
871065	NB SR 826 to EB SR 836 & Milan Dairy Rd over NW 7 St	7.01	NB	123.4	Varies 56.52 to 64.58	6'-0"	10'-0"	3	4	N/A	N/A	NW 7th St.	N/A (16.5')	NW 7th St.	1	123.4	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Reinforced Concrete Abutment (Single Span)	2013	92.90	99.24	6/27/2016	Available	None
871078	NB SR 826 to EB SR 836 (Ramp N-E) Over Ramp N-F	7.001	NB to EB	118.2	44.29	6'-0"	11'-0"	2	47	8'-5"	12'-5"	Ramp N-F	17.5'	Ramp N-F	1	118.2	Prestressed Concrete Stringer/Girder	W Beam (at east side of end of bridge)	N/A	32" Type F (RT) 42" F Type (LT)	Backer Rod	Reinforced Concrete Abutment (Single Span)	2013	95.20	100.00	10/8/2015	Available	Functionally obsolete.
871079	Ramp N-E over Ramp EBCD	7.02	EB	321.6	44.29	6'-0"	11'-0"	2	45	12'-4"	16'-0"	EBCD	17.2'	EBCD	2	189	Steel Continuous Stringer/Girder	Thrie Beam Connection (At both sides of beginning of bridge)	N/A	32" Type F (RT) 42" F Type (LT)	Backer Rod	Multi Column Pier	2013	99.30	100.00	10/8/2015	Available	None
871069	NB SR 826 to EB SR 836 over Ramp 72-C	6.691	NB to EB	163.6	43.08	6'-0"	10'-0"	2	45	8'-0"	12'-6"	EB SR 836 off-ramp to Milan Dairy Rd	16.8'	EB SR 836 off-ramp to Milan Dairy Rd	1	163.6	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Reinforced Concrete Abutment (Single Span)	2013	100.00	99.97	4/3/2017	Available	None
871038	WB SR 836 Over Milam Dairy Road	7.146	WB	244.83	Varies 114.78 to 109.02	6'-0"	10'-0"	6	44	5'-2"	6'-1"	Milam Dairy Rd.	19'-0"	Milam Dairy Rd.	2	126'-10"	Prestressed Concrete Stringer/Girder	Thrie Beam Connection (at SW corner of begin bridge)	N/A	32" Type F	Backer Rod	Multi Column Pier	2015	95.10	100.00	10/10/2017	Available	None
871039	EB SR 836 Over Milam Dairy Road	7.146	EB	225.58	Varies 113.47 to 104.23	10'-0"	10'-0"	6	40	6'-2"	6'-9"	Milam Dairy Rd.	17'-1"	Milam Dairy Rd.	2	120'-0"	Prestressed Concrete Stringer/Girder	Thrie Beam Connection (at NW corner of begin bridge)	N/A	32" Type F	Backer Rod	Multi Column Pier	2015	93.10	100.00	3/25/2019	Available	None
871043	EB SR 836 Off-ramp to NB SR 826 over EB SR 836	6.47	EB to NB	2034.1	46.29	11'-10"	8'-6"	2	90	14-0"	NA	SR 836 E.B.	16.9'	SR 836 W.B.	10	241.9	Concrete Segmental Box Girder & Prestressed Girder (last two spans)	None	N/A	32" Type F (LT) 42" F Type (RT)	Finger Joint & Backer Rod	Single Column Pier	2012	99.10	99.99	11/9/2016	Available	None
	Over RR Crossing									52'-3"	>50'-0"	RR	24.3'	RR															
871044	EB SR 836 Off-ramp to SB SR 826	6.93	EB to SB	410.9	37.3	8'-0"	11'-0"	1	49	11'-10"	N/A	SR 826 S.B.	18.1'	SR 836 W.B. to Flagler St./ SW 8th St./ SW 87th Ave.	2	213.3	Steel Continuous Stringer/Girder	Thrie Beam Connection (at both sides of beginning of bridge)	N/A	32" Type F (RT) 42' F Type (LT)	Backer Rod	Multi Column Pier	2013	97.40	100.00	1/21/2016	Available	None
871046	WB SR 836 to SB 826 Flyover	4.07	WB to SB	1103.1	46.29	11'-0"	8'-0"	2	0	20'-6"	N/A	SR 826 S.B.	16.53'	SR 836 E.B. Off to NW 72nd Ave.	5	246.5	Prestressed Concrete Continuous Segmental Box Girder	None	N/A	32" Type F (LT) 42" F Type (RT)	Finger Joint	Single Column Pier	2014	98.00	100.00	1/21/2016	Available	None

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Existing Bridge Characteristics																													
LOCATION				GEOMETRICS					ALIGNMENT						STRUCTURAL								CONDITION					
Bridge ID No.	Bridge Location	Milepost	Traffic Direction	Structure Length (ft)	Deck Width (ft)	Shoulder Width		No. of Lanes	Skew Angles (Degrees)	Min. Horizontal Clearance (under)			Min. Vertical Clearance (under) / Location (*)		Number of Spans	Max. Span (ft)	Superstructure Type	Thrie Beam Connection	Location to Install Thrie Beam Connection	Traffic Railing	Exp. Joint Type	Substructure Type	Year Built/ Modified	Sufficiency Rating (%)	Health Index (%)	Inspection Date	Load Rating Status	Significant Deficiencies
						Left	Right			Left	Right	Location (*)																
Culvert	Culvert * Over C-100A	7.331	SB	80	45.33	2'-0"	2'-0"	3	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
871050	SB SR 826 to EB SR 836 Flyover	4.07	SB to EB	2538.5	46.29	11'-0"	8'-0"	2	0	6'-4"	6'-4"	NW 12th St.	17.0'	Over Bridge 871043	11	269.4	Prestressed Concrete Continuous Segmental Box Girder	None	N/A	32" Type F (LT) 42" F Type (RT)	Finger Joint	Single Column Pier	2015	93.10	100.00	10/8/2015	Available	Funtionally obsolete
871051	WB SR 836 Off-ramp WBCD over SR 826	6.7 on 836	WB	258.5	59.2	10'-8"	10'-8"	3	20	N/A	9'-8"	SR 826 S.B.	17.5'	SR 826	2	146.5	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Multi Column Pier	2014	94.40	100.00	2/2/2016	Available	None
871052	WB SR 836 over SR 826 and North Line Canal	6.1 on 836	WB	413	87.08	26'-8"	10'-6"	4	12	16'-6"	16'-11"	SR 826	18.08'	SR 826 N.B.	3	167	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Multi Column Pier	2015	90.40	100.00	10/1/2015	Available	None
871053	EB 836 over SR 826	6.1 on 836	EB	447.4	87.08	26'-9"	10'-8"	4	13	16'-11"	16'-6"	SR 826	16.5'	SR 826 N.B.	3	169.9	Prestressed Concrete Stringer/Girder	Thrie Beam Connection (at both sides of beginning of bridge)	N/A	32" Type F	Backer Rod	Multi Column Pier	2015	93.10	100.00	3/27/2017	Available	None
871054	EBCD over SR 826	6.1 on 836	EB	514.8	55.08	6'-8"	10'-8"	3	11	12'-2"	12'-4"	SR 826 S.B Off to W. Flagler St./ SW 8th St.	16.875'	SR 826 N.B.	3	177.8	Prestressed Concrete Stringer/Girder	Thrie Beam Connection (at both sides of the beginning of bridge). W Beam (at both sides of the end of bridge)	N/A	32" Type F	Backer Rod	Multi Column Pier	2013	98.50	100.00	4/19/2017	Available	None
871081	WB SR 836 Off-ramp WBCD over Ramp W-N	7.2 on 836	WB	195.6	69.4	10'-0"	10'-0"	3	53	11'-8"	14'-0"	Ramp W-N	16.9'	Ramp W-N	1	195.6	Steel Stringer/Girder	None	N/A	32" Type F	Strip Seal	Reinforced Concrete Abutment (Single Span)	2013	98.20	100.00	2/2/2016	Available	None
871037	WB CD over Milam Dairy Rd	7.14	WB	268.94	43.083	10'-0"	6'-0"	2	53	12'-5 1/2"	6'-0"	Milam Dairy Rd Pier 2	17.9'	SB Milam Dairy Rd	2	140.52	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Multi Column Pier	2014	98.20	100.00	2/5/2018	Available	None
871040	S-E Ramp over Milam Dairy Rd	7.14	EB	223.36	Varies	10'-0"	10'-0"	4	40	6'-0"	7'-1 1/2"	Milam Dairy Rd Pier 2	18.7'	SB Milam Dairy Rd	2	120.68	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Multi Column Pier	2014	94.50	99.79	12/22/2017	Available	None
871041	EB CD over Milam Dairy Rd	7.146	EB	212.38	Varies 66.17 to 59.80	10'-0"	10'-0"	3	38	6'-11 7/8"	16'-0"	Milam Dairy Rd Pier 2	17.0'	SB Milam Dairy Rd	2	116.79	Prestressed Concrete Stringer/Girder	Thrie Beam Connection (at NW corner of begin bridge)	N/A	32" Type F	Backer Rod	Multi Column Pier	2013	99.50	99.98	2/14/2019	Available	None
871076	Ramp W-N Over Milam Dairy Rd	7.14	WB	262.01	59.08	10'-0"	10'-0"	3	47	3'-2"	5'-6"	Milam Dairy Rd Pier 2	19.38	NB Milam Dairy Rd	2	138.63	Prestressed Concrete Stringer/Girder	None	N/A	32" Type F	Backer Rod	Multi Column Pier	2015	99.50	100.00	3/1/2018	Available	None

(**) Based on FDM 2018 (260.6.1), Minimum Vertical Clearance for Construction Affecting Existing Bridge, the classification of substandard Vertical Clearance does not apply to these bridges.

Notes:

1. No bridge from this list is identified with historical significance.

2.22.1 Type of Structure

Of the 66 bridges on the SR 826 corridor the majority are composed of prestressed concrete stringer/girder superstructures supported on multi-column piers substructures or reinforced concrete abutments. Other types of structures throughout the corridor are listed below:

- Seven prestressed concrete stringer/girder superstructure supported on pile bents.
- Six steel continuous stringer/girder superstructures supported on multi-column piers.
- Four prestressed concrete stringer/girder superstructures supported on hammer head single column piers/straddle bent pier.
- Four reinforced concrete slab superstructures supported on pile bents.
- Three concrete segmental box girder superstructures supported on a single column pier.
- One steel continuous stringer/girder superstructure supported on hammer head single column pier.
- One concrete segmental box girder and prestressed girder superstructure supported on a single column pier.
- One prestressed continuous segmental box girder superstructure supported on single column pier.
- One steel girder superstructure supported on reinforced concrete abutment.
- One hollow core slab superstructure supported on pile bents.
- Two pedestrian bridges.

2.22.2 Condition

The health index is a tool that measures the overall condition of a bridge. A lower health index means that more work would be required to improve the bridge to an ideal condition, or that it would be more economical to replace the bridge than to repair it. The Bridge Inspection Reports indicate that the health index ranges from 70.73 to 100.00. The Bridge Inspection Report also indicates the sufficiency rating ranges from 64.8 to 100. Two bridges have a health index and

sufficiency rating of less than 80.0. The remaining 66 bridges have a health index and sufficiency ratings above 80.0.

2.22.3 Vertical Clearance

Vertical clearance is the least vertical distance between the bridge structure and the surface of the roadway or the top of the highest rail. The minimum vertical clearance criteria as per the FDOT *FDM Part I, Chapter 260, Section 260.6, Table 260.6.1*, is 16'-6" over roadway, and 23'-6" over railroad. Five existing bridges currently do not meet the minimum requirement for bridges over roadway, and one existing bridge does not meet the minimum requirement for bridges over railroad.

The bridges over the navigable canals must have a vertical clearance greater than the 6'-0" required for navigational purposes as per the FDOT FDM. There are no navigable canals within the study limits.

Sixteen bridges were found functionally obsolete. These bridges are proposed to be widened, demolished or replaced.

3.0 Project Design Controls and Criteria

3.1 Roadway Context Classification

Context classification does not apply to limited-access facilities.

3.2 Design Control and Criteria

Design standards are well defined for Florida's limited access facilities. Design standards and criteria provide the framework for evaluating the current geometry, existing deficiencies and future design to meet the mobility needs of the corridor. Specifically, they help establish the roadway typical section, cross-sections, and acceptable interchange configurations.

Roadway design elements and applicable design standards considered in the design of the typical sections for the corridor are summarized in ***Table 3.1***.

Table 3.1 – Roadway Design Elements and Standards

Design Element	Design Standard								Source
Lane Width									
Mainline SR 826	12 ft								FDM, Part 2, Table 210.2.1, page 3
One Lane Ramp	15 ft (Tangent)								FDM, Part 2, Table 211.2.1, page 3
Two Lanes Ramp	24 ft (Tangent)								
Express Lanes (separated or concurrent flow)	12 ft								FDM, Part 2, Section 2.11.2, page 2
Median Width									
With Barrier	26 ft								FDM, Part 2, Table 211.3.1, page 10
Shoulder Width	**Without Shoulder Gutter**				**With Shoulder Gutter**				
	Full Width		**Paved Width**		**Full Width**		**Paved Width**		
	Outside	**Median /Left**	**Outside**	**Median /Left**	**Outside**	**Median /Left**	**Outside**	**Median /Left**	
Mainline SR 826	12 ft	12 ft	10 ft	10 ft	15.5 ft	15.5 ft	8 ft	8 ft	FDM, Part 2, Table 211.4.1, page 20
One Lane Ramp	6 ft	6 ft	4 ft	2 ft	11.5 ft	11.5 ft	4 ft	4 ft	
Two Lanes Ramp	12 ft	8 ft	10 ft	4 ft	15.5 ft	13.5 ft	8 ft	6 ft	
One Lane (Express Lane)	12 ft	12 ft	12 ft	12 ft	13.5 ft	10 ft	13.5 ft	10 ft	
Two Lanes (Express Lanes)	12 ft	12 ft	12 ft	12 ft	13.5 ft	10 ft	13.5 ft	10 ft	
Bridge Shoulder Width									
Mainline-Two Lanes	6 ft Inside, 10 ft Outside								FDM, Part 2, Figures 260.1.1 – 260.1.4
Mainline-Three Lanes +	10 ft Inside and Outside								
Ramp-One Lane	6 ft Inside and Outside								
Ramp-Two Lanes	6 ft Inside, 10 ft Outside								
Separation Width for Express Lane									
Express Lanes (one lane or concurrent flow)	Minimum buffer width is 4ft								FDM 211.3.3, page 14
Roadway Cross Section Slope									
Roadway Standard Pavement	0.03 maximum (> 45 MPH)								FDM, Part 2, Figure 210.2.1, page 6
	0.04 maximum (≤ 45 MPH)								
Inside Shoulder	0.05 - 0.06								FDM, Part 2, Section 211.4.2, Figures 211.4.1 and 211.4.2, pages 21-23
Outside Shoulder	0.06								
Maximum Shoulder Cross Slope Break	0.07								FDM, Part 2, Table 210.2.3, page 9
Bridge Deck	0.02								FDM, Part 2, Section 260.4, page 7
Maximum algebraic difference between adjacent through lanes	0.04								FDM, Part 2, Table 211.2.2, page 4
Front Slope	1:6 when the height of fill is between 0 ft to 5 ft								FDM, Part 2, Table 215.2.3, page 17
	1:6 to edge of clear zone then 1:4 when the height of fill is between 5 ft to 10 ft								
	1:6 to edge of clear zone then 1:3 when the height of fill is between 10 ft to 20 ft								
	1:2 with guardrail when height of fill is greater than 20 ft								
Back Slope	1:4 or 1:3 with a standard width trapezoidal ditch and 1:6 front slope								
Transverse Slope	1:10 or flatter (freeway), 1:4 (others)								
Border Width									
Mainline SR 826	94 ft [1]								FDM, Part 2, Section 211.6, page 26
Recoverable Terrain (Clear Zone)									
Mainline SR 826	36 ft								FDM, Part 2, Table 215.2.1 ≥ 1500 AADT, Section 4.1, page 2-77
One Lane Ramp	10 - 18 ft								
Two Lane Ramp	12 - 30 ft								
Auxiliary Lane	24 ft								
Roadway Base Clearance									
	3.0 ft above the Base Clearance Water Elevation								FDM, Part 2, Section 210.10.3, page 48

[1] Measured from the edge of the outside travel lane to the right of way line.

3.2.1 Horizontal and Vertical Alignment

Design elements and applicable design standards considered in the design of the horizontal and vertical alignments such as profiles, curves, and vertical clearances are summarized in ***Table 3.2***.

Table 3.2 – Horizontal and Vertical Alignment Design Elements and Standards

Design Element	Design Standard	Source
Design Vehicle		
Mainline SR 826	WB-20 [WB-67]	AASHTO, page 2-5
Mainline SR 826	WB 62FL	FDM, Part 2, Figure 201.5.1, page 14
For Structural Loading	HL-93	AASHTO, page 8-4
Design Speed		
Mainline SR 826 and Express Lanes	60 MPH	FDM Part 1, Table 201.4.1, page 9
Ramps	30-50 MPH	FDM Part 1, Table 201.4.2, page 10
Maximum Deflection without curve		
Mainline SR 826 and Express Lanes	0° 45' 00" for V ≥ 50 MPH	FDM, Part 2, Section 210.8.1, page 36
Ramps (without Curb and Gutter)	0° 45' 00" for V ≥ 45 MPH	
	2° 00' 00" for V ≤ 40 MPH	
Length of Horizontal Curve		
Mainline SR 826 and Express Lanes (Length=30x Design Speed)	1800 ft for V = 60 MPH	FDM, Part 2, Table 211.7.1, page 32 FDM, Part 2, Table 210.8.3, Page 37
Mainline and Express Lanes (Minimum Length=15x Design Speed)	900 ft for V = 55 MPH	
Ramps (Length=15x Design Speed)	450 ft for V = 30 MPH	
Ramps (Length=15x Design Speed)	825 ft for V = 55 MPH	
Ramps (Minimum)	400 ft	

Table 3.2 – Horizontal and Vertical Alignment Design Elements and Standards (Continued)

Design Element	Design Standard	Source
Maximum Degree of Curve		
Mainline SR 826 and Express Lanes	5° 15' (60 mph)	FDM, Part 2, Table 210.9.1, page 40
Ramps	24° 45' (30 mph) with R = 231.5 ft	
	6° 30' (55 mph) with R = 882 ft	
Maximum Profile Grade		
Mainline SR 826 and Express Lanes	3%	FDM, Part 2, Table 211.9.1, page 34
Ramps	7% (25-30 MPH)	
	6% (35-40 MPH)	
	5% (45-50 MPH)	
Maximum Change in Grade without Vertical Curve		
Mainline SR 826 and Express Lanes	0.40%	FDM, Part 2, Table 210.10.2, page 46
Ramps	1.00% - 0.6%	
Minimum Stopping Sight Distance		
Mainline SR 826 and Express Lanes	570 ft	FDM, Part 2, Table 211.10.2, page 38
Ramps	200 ft - 495 ft	FDM, Part 2, Table 210.11.1, page 51
Minimum Decision Sight Distance		
Mainline SR 826 and Express Lanes	1280 ft (Urban)	AASHTO Table 3-3, page 3-7
Minimum Crest Vertical Curve Length		
Mainline SR 826 and Express Lanes	1000 ft (Expressway open highway)	FDM, Part 2, Table 211.9.3, page 36
	1800 ft (Expressway within interchanges)	
Ramps (Length=3x Design Speed)	90 ft (30 MPH) - 165 ft (55 MPH)	FDM, Part 2, Table 210.10.4, page 47

Table 3.2 – Horizontal and Vertical Alignment Design Elements and Standards (Continued)

Design Element	Design Standard	Source
K value for Crest Vertical Curve		
Mainline SR 826 and Express Lanes	245(60 MPH)	FDM, Part 2, Table 211.9.2, page 37
Minimum Sag Vertical Curve Length		
Mainline SR 826 and Express Lanes	800 ft (Freeway)	FDM, Part 2, Table 211.9.3, page 36
Ramps (Length=3x Design Speed)	90 ft (30 MPH) – 250 (55 MPH)	
K value for Sag Vertical Curve		
Mainline SR 826 and Express Lanes	136(60 MPH)	FDM, Part 2, Table 211.9.2, page 37
Superelevation (e)		
Maximum Superelevation for an Urban Freeway	0.1	FDM, Part 2, Table 210.9.1, page 42
Superelevation Transition Rate (55-60 mph)	1:180for 6 lanes	FDM, Part 2, Table 210.9.3, page 44
	1:170 for 8 lanes	
Superelevation Transition Ratio (Curve:Tangent)	20:80 preferred	FDM, Part 2, Section 210.9.1, page 40
	50:50 minimum	
Minimum Vertical Clearances		
Bridge over Roadways	16.5 ft	FDM, Part 2, Table 260.6.1, page 9
Roadway over Railroad	23.5 ft	
Pedestrian Bridge over Roadway	17.5 ft	
Overhead Sign Structure	17.5 ft	FDM, Part 2, Section 210.10.3, page 49
Overhead DMS Structures	19.5 ft	
Minimum Spacing Between Ramps		
Off-ramp to Off-ramp	1000 ft	AASHTO Figure 10-68, page 10-106
On-ramp to On-ramp	1000 ft	
On-ramp to Off-ramp (Weaving)	2000 ft	
Off-ramp to On-ramp	500 ft	

3.2.2 Drainage Criteria

The design criteria presented in this section are based on the design parameters outlined in the following references:

- 2019 FDOT, Drainage Manual (DM)
- 2019 FDOT, Florida Design Manual (FDM)
- 2019 FDOT, Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway Systems
- 2019 FDOT, Standard Specifications for Roadway and Bridge Construction
- 2014 SFWMD, Environmental Resource Permit Information Manual, Volume IV

Design criteria considered in the development of the drainage for this project are summarized in ***Table 3.3***.

Table 3.3 – Drainage Design Criteria

Design Element	Design Standard	Source
Open Channel Design Frequency	10 Year for Ditches/Swales	DM Section 2.2
	25 Year for Outfall Ditches and Canals	
Open Channel Minimum Slope	0.0005 ft/ft	DM Section 2.4.2
Channel Velocity (Maximum)	4 fps for Sod Lining	DM Table 2.5
	5 fps for Stake Sod Lining	
	6 fps for Riprap Rubble Lining	
	10 fps for Rigid Lining	
Storm Drain Design Frequency	3 Year for General Design	DM Section 3.3
	10 Year for Interstate Facilities	
Storm Drain Design Tailwater	Stormwater Ponds: Peak stage in the pond during storm drain design event	DM Section 3.4
	French Drains: Design Head over the outlet control structure	
	Regulated Canals: Agency regulated control elevation	
Minimum Time of Concentration	10 Minutes	DM Section 3.5.1
Minimum Pipe Slope	Minimum Slope which produces a storm drain velocity of 2.5 fps when full and no greater than 15 fps when the storm drain is flowing full	DM Section 3.6.1

Table 3.3 – Drainage Design Criteria (Continued)

Design Element	Design Standard	Source
Hydraulic Gradient	When minor the Hydraulic Grade Line (HGL) energy losses are not considered, HGL shall be 1 ft below the theoretical gutter elevation	DM Section 3.6.2
Outlet Velocity	When outlet velocity exceeds 6 fps provide special channel lining and/or energy dissipater	DM Section 3.6.3
Spread Standards	Spread resulting from 4 inches per hour shall be limited to: ½ lane for < 45 MPH 8 ft of lane clear for 45 MPH to 55 MPH No encroachment for > 55 MPH	DM Section 3.9 Table 3.9.1
Minimum Pipe Size	18 inches	DM Section 3.10.1
Maximum Pipe Length	Pipe without French Drains 300 ft for 18 inches pipes 400 ft for 24 to 36 inches pipes 500 ft for > 42 inches pipes French Drains (Minimum Length from Access) 150 ft for 18 to 30 inches pipes 200 ft for > 36 inches pipes	DM Section 3.10.1
Cross Drains Design Frequency	50 years for Mainline Interstate and Facilities with projected 20 year ADT > 1500 25 years for Facilities with projected 20 year ADT < 1500 10 years for roadside ditch culverts	DM Section 4.3
Wet Detention and Retention Ponds Maintenance Berm	20 ft minimum between top edge of normal pool elevation and right of way line, 15 ft adjacent to the water sloped at 1:8 or flatter	DM Section 5.4.4.2 SFWMD ERP Manual Section 7.5
Detention and Retention Ponds Freeboard	1 ft freeboard required above peak design stage for ponds and 0.5 foot minimum freeboard for linear treatment swales	DM Section 5.4.4.2
Wet Detention and Retention Ponds Requirements	Total Area = 0.5 acre minimum Slopes between control elevation and 2 ft below it shall be 1:4 or flatter	DM Figure 5-1 SFWMD ERP Manual Section 7.4
Water Quality Requirements	Wet Detention: Greater of 1 inch over total project area or 2.5 inches over total impervious Dry Detention: 75% of wet detention Wet/Dry Retention: 50% of wet or dry detention accordingly	SFWMD ERP Manual Section 5.2.1

Table 3.3 – Drainage Design Criteria (Continued)

Design Element	Design Standard	Source
Water Quality Requirements	Post Development discharge rate equal to or less than pre development discharge rate for 25 year – 3 day storm event, or rates specified in district criteria	SFWMD ERP Manual Section 6.2 and 6.3
Floodplain Encroachment	No encroachment allowed	SFWMD ERP Manual Section 6.4
Outfall Structures	Structures shall include baffles systems. Structures shall include bleed down notch or orifice that allows ½ inches of the detention volume to be discharged within 24 hours.	SFWMD ERP Manual Section 7.1 and 7.2

4.0 Alternative Analysis

4.1 Previous Planning Studies

In 2016 FDOT District Six evaluated the feasibility of implementing express lanes on SR 826 from US 1 to SR 836. The study evaluated and screened concepts which focused on preliminary engineering efforts and future traffic projections. A conceptual design analysis evaluated corridor concepts to identify logical project termini, a preliminary typical section and the alignment of the proposed express lanes system. The Feasibility Study evaluation process followed six steps:

1. Travel Demand Forecasting — This step focused on the validation and calibration of the Southeast Regional Planning Model (SERPM) and the development of the future No-Build travel demand forecast.
2. Engineering and Geometrics — This step included the identification and evaluation of seven corridor concepts plus the No-Build scenario.
3. Right of Way Impacts — This step evaluated the right of way impacts of each of the seven corridor concepts evaluated. The impacts were categorized by land use.
4. Construction Costs — This step developed an estimated construction cost of each of the seven corridor concepts evaluated. The construction costs were developed using the FDOT Long Range Estimate (LRE) cost estimating system.
5. Traffic Conceptual Analysis — This step evaluated the conditions of the corridor future traffic projected for the 2040 design year for each of the seven corridor concepts evaluated. This effort also included the evaluation of the No-Build scenario.
6. Other Corridor Impacts — This step evaluated, listed and documented all potential impacts for each of the seven corridor concepts evaluated.

The Feasibility Study determined that adding express lanes was feasible, viable and constructible. The study recommended a detailed analysis and further evaluations to support the feasibility and viability of these corridor concepts during the PD&E Study phase. The planning study is documented in the *SR*

826/Palmetto Expressway Express Lanes Feasibility Study Report, dated September 2016.

No future policy assumptions were used in the transportation planning process during the Feasibility Study. The only change that occurred in the area after the Feasibility Study is that MDX is no longer considering the implementation of express lanes in any of their expressway systems in Miami-Dade County.

4.2 No-Build (No-Action) Alternative

The No-Build Alternative proposes to keep the existing corridor into the future without corridor improvements. No traffic capacity, operation, or safety improvements would be implemented throughout the corridor. The effect associated with this alternative includes the acceptance of existing highly congested traffic conditions. Also, travel demand and truck traffic will increase significantly over the next 20 years, given the continued growth expected in this area of Miami-Dade County. This alternative is considered to be a viable alternative to serve as a comparison to the study's proposed corridor alternatives.

The No-Build Alternative has a number of positive aspects, since it would not require expenditure of public funds for design, construction, right of way and/or utility relocation. Traffic would not be temporarily disrupted due to construction, avoiding inconveniences to local residents and businesses. Also, there would be no direct or secondary impacts to the environment, the socio-economic characteristics, community cohesion, or system linkage of the area. The No-Build Alternative includes the existing transportation network and any funded, planned or programmed improvements open to traffic by the design year 2045. The No-Build Alternative includes improvements that are elements of the MPO's Transportation Improvement Program, the 2040 Miami-Dade Cost Feasible Long Range Transportation Plan (LRTP), the FDOT's Adopted Five-Year Work Program, any local government comprehensive plans and/or any development mitigation improvement projects that are elements of approved development orders.

The SR 826 corridor, north of SR 874, has a 14-foot wide inside travel lane. This lane was intended to be a High Occupancy Vehicle (HOV) lane once the final improvements were completed at the SR 826/SR 836 Interchange. However, these lanes were never officially designated. This lane was designated as an HOV lane as part of the previous SR 826 Corridor Master Plan and PD&E Study.

The No-Build Alternative traffic congestion offers little time savings to carpools/vanpools and transit users on SR 826. As a result of the corridor being over capacity, travel demand is shifting vehicles onto less appropriate facilities. This, in turn, is negatively impacting the quality of life in local neighborhoods, as well as increasing driver frustration, reducing safety and increasing trip travel time. Without improvements, the project corridor will continue to experience high delays and will continue to operate at LOS F by the design year of 2045 in over 27 locations along the corridor. Driving conditions for residents and commuters along the adjacent corridors connecting with SR 826 will also deteriorate well below acceptable LOS standards. The HCM operational analysis results are summarized at the end of this section. The No-Build Alternative will not address the 4,555 crashes along this section of SR 826 (five-year crash period). The leading crash types include rear-end (59.9%), sideswipe (18.6-18.9%) and fixed-object (11.6%). Rear-end and sideswipe type crashes are typical of highly congested roadways with frequent stop-and-go traffic conditions, which are the current conditions of SR 826.

The No-Build roadway typical sections, within the study limits, are the same as the existing sections plus any future planned improvements. SR 826, between US 1 and SR 874, consists of five to six 12-foot wide general use lanes (three lanes in the northbound direction and two to three lanes in the southbound direction) with 12-foot wide auxiliary lanes at selected locations, 11.5-foot to 13-foot wide paved outside shoulders, 11-foot wide paved inside shoulders, a 2-foot wide median barrier wall, and outside barrier walls. Between SR 874 and SR 836 the corridor consists primarily of twelve 11-foot to 14-foot general use lanes (six lanes in each direction), 8-foot to 10.5-foot wide outside shoulders, 11-foot wide paved inside shoulders, a 2-foot wide center barrier wall, and outside barrier walls. The two typical sections for SR 826 are depicted in ***Figure 4.1*** and ***Figure 4.2.***

FDOT is currently constructing a SR 826 project adding express lanes between SW 8th Street and I-75 (FPID# 432687-1-52-01), which partially overlaps with the PD&E Study limits. These improvements are expected to be open to traffic before the implementation of this project. Therefore, these improvements will be considered as part of the No-Build Alternative (see ***Figure 4.3*** and ***Figure 4.4***).

Figure 4.1 – No-Build Roadway Typical Section between US 1 and SR 874

Figure 4.2 – No-Build Roadway Typical Section between SR 874 and SR 836

Figure 4.3 – No-Build Alternative Schematic Line Diagram

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DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
FPID No.: 432639-1-22-02
ETDM No.: 14308

NO-BUILD ALTERNATIVE
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.4

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826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
FPID No.: 432639-1-22-02
ETDM No.: 14308

NO-BUILD ALTERNATIVE
LANE GEOMETRY AND CONFIGURATION

FIGURE
4.4

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1000 NW 111TH AVENUE
MIAMI, FL 33172

826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
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NO-BUILD ALTERNATIVE
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.4

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DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
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NO-BUILD ALTERNATIVE
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.4

HCM Operational Analysis Results

This section presents the analysis results for the 2025 and 2045 future proposed lane configuration under projected traffic conditions. This analysis followed the same process and methodology as the existing traffic operational analysis.

2025 Analysis – The freeway analysis shows that zero locations northbound and one location southbound will operate at an unacceptable LOS (worst peak period LOS) by the year 2025 within the area of influence. The weaving analysis shows that two locations northbound and two locations southbound will operate at an unacceptable LOS. The ramp junction analysis shows zero locations northbound and one location southbound will operate at an unacceptable LOS. The collector distributor capacity analysis shows all ramps will operate within capacity.

2045 Analysis – The freeway analysis shows that nine locations northbound and twelve locations southbound will operate at an unacceptable LOS (worst peak period LOS) by the year 2045 within the area of influence. The weaving analysis shows that five locations northbound and three locations southbound will operate at an unacceptable LOS. The ramp junction analysis shows four locations northbound and four locations southbound will operate at an unacceptable LOS. The collector distributor capacity analysis shows all ramps will operate within capacity.

Figure 4.5 summarizes the 2025 results and ***Figure 4.6*** summarizes the 2045 results.

Intersection Analysis – An intersection analysis for ramp terminals and adjacent intersections was performed at all the interchanges using 2025 and 2045 turning movement volumes, lane geometry, signal timing, other relevant information obtained from Miami-Dade County and field reviews. The data was input to the Synchro software to determine the LOS and delay using the HCM methodology. A summary of the results is presented in ***Table 4.1***.

NTS

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION
BRIDGE
GENERAL USE LANE
EXPRESS LANE
EXPRESS LANE (BUSES ONLY)
ELEVATED EXPRESS LANE
ROADWAY IMPROVEMENTS
MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2025 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION			
DESIGN YEAR 2025 PEAK-HOUR VOLUME AM(PM)			
VOLUME/ CAPACITY	AM (PM)	OK / FAIL	AM (PM)

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2025 OPENING YEAR NO-BUILD ALTERNATIVE OPERATIONAL ANALYSIS RESULTS

FIGURE 4.5

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION
BRIDGE
GENERAL USE LANE
EXPRESS LANE
EXPRESS LANE (BUSES ONLY)
ELEVATED EXPRESS LANE
ROADWAY IMPROVEMENTS
MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2025 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION			
DESIGN YEAR 2025 PEAK-HOUR VOLUME AM(PM)			
VOLUME/ CAPACITY	AM (PM)	OK / FAIL	AM (PM)

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FIGURE 4.5

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION

BRIDGE

GENERAL USE LANE

EXPRESS LANE

EXPRESS LANE (BUSES ONLY)

ELEVATED EXPRESS LANE

ROADWAY IMPROVEMENTS

MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2025 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION		
DESIGN YEAR 2025 PEAK-HOUR VOLUME AM(PM)		
VOLUME/ CAPACITY AM (PM)	OK / FAIL AM (PM)	

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2025 OPENING YEAR NO-BUILD ALTERNATIVE OPERATIONAL ANALYSIS RESULTS

FIGURE 4.5

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2025 OPENING YEAR NO-BUILD ALTERNATIVE OPERATIONAL ANALYSIS RESULTS

FIGURE 4.4

NTS

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION

BRIDGE

GENERAL USE LANE

EXPRESS LANE

EXPRESS LANE (BUSES ONLY)

ELEVATED EXPRESS LANE

ROADWAY IMPROVEMENTS

MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION			
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)			
VOLUME/ CAPACITY	AM (PM)	OK / FAIL	AM (PM)

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2045 DESIGN YEAR NO-BUILD ALTERNATIVE OPERATIONAL ANALYSIS RESULTS

FIGURE 4.6

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION
BRIDGE
GENERAL USE LANE
EXPRESS LANE
EXPRESS LANE (BUSES ONLY)
ELEVATED EXPRESS LANE
ROADWAY IMPROVEMENTS
MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION			
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)			
VOLUME/ CAPACITY	AM (PM)	OK / FAIL	AM (PM)

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2045 DESIGN YEAR NO-BUILD ALTERNATIVE OPERATIONAL ANALYSIS RESULTS

FIGURE 4.6

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION
BRIDGE
GENERAL USE LANE
EXPRESS LANE
EXPRESS LANE (BUSES ONLY)
ELEVATED EXPRESS LANE
ROADWAY IMPROVEMENTS
MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION		
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)		
VOLUME/ CAPACITY AM (PM)	OK / FAIL AM (PM)	

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2045 DESIGN YEAR NO-BUILD ALTERNATIVE OPERATIONAL ANALYSIS RESULTS

FIGURE 4.6

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2045 DESIGN YEAR NO-BUILD ALTERNATIVE OPERATIONAL ANALYSIS RESULTS

FIGURE 4.6

Table 4.1 – 2025 and 2045 No-Build Intersection LOS and Delay Results

Arterial	Intersection	No-Build Alternative (2025)				No-Build Alternative (2045)			
		AM		PM		AM		PM	
		LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)
SR 5/ US 1	SR 990/ SW 112th Street/ Killian Drive**	E	69.5	F	111.8	F	112.7	F	159.0
	SW 104th Street**	F	88.9	F	95.4	F	138.8	F	145.3
	SW 98th Street**	D	35.7	C	32.5	D	39.0	D	41.5
SW 98th Street	SW 77th Avenue**	C	27.2	C	26.0	C	28.4	C	31.1
	Busway**	B	10.0	C	23.8	A	9.9	C	26.6
SR 94/ SW 88th Street/ Kendall Drive	SW 79th Avenue**	C	30.6	C	27.0	D	35.7	E	70.1
	SW 77th Avenue*	D	43.2	D	49.7	D	49.9	E	57.7
	SR 826 Southbound On/Off Ramp*	Free Flow Conditions				Free Flow Conditions			
	SR 826 Northbound On/Off Ramp*	A	3.8	A	2.7	A	5.0	A	3.2
	SW 73rd Place**	C	24.8	D	43.9	D	46.1	E	76.8
	Dadeland Boulevard**	B	16.2	C	32.6	C	24.7	E	64.9
SR 986/ SW 72nd Street/ Sunset Drive	SW 77th Court*	C	24.4	A	7.7	C	23.2	A	8.4
	SR 826 Southbound On/Off Ramp*	D	47.7	D	50.4	E	70.5	F	103.5
	SR 826 Northbound On/Off Ramp*	C	24.3	C	25.1	C	23.9	C	26.2
	SW 72nd Avenue*	D	45.2	D	54.3	E	69.1	E	67.0
SW 56th Street/ Miller Drive	SW 77th Ct*	B	10.9	A	3.8	B	12.2	A	4.0
	SR 826 Southbound Off Ramp**	D	35.8	E	65.3	D	50.3	F	117.3
	SR 826 Northbound On/Off Ramp**	F	90.4	D	39.5	F	81.7	D	45.1
	SW 72nd Ave*	E	71.2	F	80.3	F	91.2	F	112.6
SW 40th Street / Bird Road	SW 79th Avenue**	C	24.7	C	26.7	C	24.5	C	26.8
	SW 7800 Block*	A	7.7	A	6.5	A	6.9	A	6.0
	Southbound Ramp Terminal**	E	60.9	D	44.7	F	110.1	E	63.6
	Northbound Ramp Terminal*	D	54.1	B	17.5	F	81.3	D	37.3
	SW 74th Avenue**	A	7.2	C	24.8	A	9.6	D	40.2
	SW 72nd Avenue*	D	53.7	C	29.1	F	101.5	D	54.4
SW 24th Street / Coral Way	SW 82nd Avenue*	C	29.3	D	45.4	D	45.3	E	74.0
	SW 79th Avenue*	C	29.3	A	7.5	C	32.3	B	10.0
	Southbound Ramp Terminal (AM** and PM*)	C	23.9	C	32.6	C	32.3	C	34.0
	Northbound Ramp Terminal**	D	43.8	D	36.2	E	57.5	D	43.3
	SW 75th Avenue (AM** and PM*)	C	29.4	E	59.4	D	40.5	F	115.3
	SW 74th Avenue (AM** and PM*)	A	5.9	A	4.5	A	7.3	A	6.6
SW 8th Street	SW 82nd Avenue**	D	44.7	D	37.6	F	195.1	F	108.5
	Southbound Ramp Terminal**	B	10.4	A	8.0	C	26.5	B	15.3
	Northbound Ramp Terminal**	B	13.7	E	62.8	D	37.9	F	100.2
	SW 74th Avenue*	D	41.1	E	57.7	E	74.1	F	94.1
Flagler Street	SW 82nd Avenue**	C	27.0	C	31.3	C	28.1	E	69.5
	SW 79th Avenue**	C	26.3	C	31.9	C	31.0	E	67.8
	Southbound Ramp Terminal*	D	43.4	D	38.1	E	63.4	E	66.6
	Northbound Ramp Terminal*	B	13.2	B	18.0	B	15.4	C	26.2
	SW 74th Avenue*	A	7.6	B	16.4	B	10.2	C	29.7
	NW 72nd Avenue*	E	61.6	F	94.6	F	100.5	F	182.9
NW 25th Street	Southbound Ramp Terminal*	C	33.1	B	19.5	D	39.0	E	70.4
	Northbound Ramp Terminal*	D	38.4	C	31.9	F	134.4	C	34.4

As shown in ***Table 4.1***, the 2025 No-Build Alternative intersection operational results indicate of the 43 intersections 33 will operate at LOS D or better. Five intersections will operate at LOS E and five intersections will operate at LOS F. The 2045 No-Build Alternative intersection operational results indicate of the 43 intersections 17 will operate at LOS D or better. 11 intersections will operate at LOS E and 15 intersections will operate at LOS F.

4.3 Transportation Systems Management and Operations Alternative (TSM&O)

Transportation Systems Management and Operations (TSM&O) alternatives are comprised of minor improvement options that are typically developed to alleviate specific traffic congestion and safety problems, or to get the maximum utilization out of the existing facility by improving operational efficiency. TSM&O alternatives may include, but not limited to, the following improvements to the mainline and interchanges:

- Add auxiliary lanes between interchanges
- Add exclusive turn lanes at the interchange ramp terminals and adjacent intersections
- Increase turn-lane storage at the interchange ramp terminals and adjacent intersections
- Capacity improvements at the ramp junctions
- Signal optimization
- Enhance signage
- New ITS technologies and infrastructure

A TSM&O Alternative will not significantly improve the system capacity and/or linkage needs within the study area. Long-term improvements are necessary to mitigate the existing traffic conditions and increase capacity to accommodate future travel demand. The TSM&O Alternative will not significantly reduce congestion on the system nor will it provide the regional area interconnections needed to enhance mobility for this section of Miami-Dade County.

The TSM&O Alternative would provide some short-term relief throughout the corridor. However, the TSM&O Alternative alone would not be consistent with the purpose and need of this project. TSM&O improvements are only viable in combination with the build alternative improvements. FDOT is in the process of discussing internally with the District TSM&O Group what strategies are planned along the SR 826 corridor and which ones should be considered in the build alternatives. These strategies will be listed and documented in the *System Interchange Modification Report*, a companion document to this PD&E Study.

4.4 Future Conditions

This project is not expected to affect the current or future land use of the area, other than the localized effects of potential relocations for the three build alternatives.

The year 2045 No-Build travel demand forecasting along SR 826 is expected to increase to an average of 176,000 vehicles per day between US 1 and SR 874 (an increase of 26%). Between SR 874 and SR 836 the demand is expected to increase to an average of 345,800 vehicles per day (an increase of 35%). The compound annual growth rate between the years 2017 and 2045 is expected to vary between 0.4% and 1.1%. During peak-hours, the rate is expected to vary between 0.5% and 1.8%. The Southeast Florida Regional Planning Model Version (SERPM) 7.071 was used to develop the travel demand forecasting for this study. A detailed travel demand forecasting methodology was developed and approved, as documented in the *Florida Department of Transportation Interchange Access Request Methodology Letter of Understanding (MLOU)* dated July 2018, a companion document to this study.

As part of this PD&E Study, a 2040 No-Build and three 2040 Build networks (Alternatives 1, 2 and 3) were developed during the modeling process. These networks incorporate the I-75, HEFT, SR 924 and SR 826 future improvements, matching the latest designs. The 2045 design traffic volumes were extrapolated using the 2040 balanced volumes. The future Annual Average Daily Traffic (AADT) volumes were developed from the SR 826 subarea model by combining AM, PM and off-peak period volumes. The future Directional Design Hourly Volumes (DDHV) development process for the study did not involve the application of the standard procedure of multiplying the AADT volumes with the K_{30} and D_{30} traffic factors. The DDHV volumes were developed using diurnal factors applied to the model estimated peak periods AM and PM volumes. Diurnal factors convert the peak period volume to peak-hour. The advantage of this method is that it uses the SERPM model's time-of-day feature efficiently, and forecasts more realistic design traffic. Selection of AM and PM peak periods was aimed to be consistent with the regional model's peak periods. The No-Build and Build model results were verified by performing reasonableness checks using Historic Trend Line Forecasts and Compound Growth Factors, which are independent projection methods. Additional details about the travel demand forecasting is documented in the *Project Traffic Forecasting Memorandum* dated May 2019 and in the

Systems Interchange Modification Report (SIMR) dated August 2019, both companion documents to this study.

4.5 Build Alternatives

The objective of this PD&E Study is to evaluate alternatives that will address existing and projected traffic operating deficiencies along this section of SR 826. In order to keep up with the growing traffic demand within the study area, three build alternatives (Alternatives 1, 2 and 3) were considered in this PD&E Study. All three alternatives propose to add express lanes (extend to the south) along this segment of SR 826 with access points at selected locations to enter and exit the express lanes system. The express lanes will be buffer-separated from the general use lanes with express lane markers matching the same design of the express lanes project to the north. The build alternatives were developed with the idea of continuing the express lanes system south to either SR 874 and/or US 1 with a potential connection to the US 1 Busway. These build alternatives were evaluated in the Feasibility Study as concepts, where it was later recommended at the end of the planning phase a detailed analysis and further evaluations to support the feasibility and viability of the concepts during the PD&E phase.

Appendix H shows the conceptual plans for all three alternatives including, but not limited to, the following elements:

- Project corridor study limits
- Existing limited access right of way
- Existing right of way
- Existing centerline of construction
- Existing bridge structures
- Existing barrier walls
- Proposed corridor improvements
- Proposed new/widened bridge structures
- Bridge structure modifications
- Proposed shoulder pavement
- Proposed barrier/retaining walls
- Proposed limited access right of way
- Proposed pavement markings
- Impacted parcel properties
- Sidewalk
- Median/Greenspace

Alternative Eliminated

One concept recommended as part of the Feasibility Study was a Reversible Express Lanes Alternative. The reversible express lanes were evaluated during the Feasibility Study to tie to a SR 836 express lane facility, like I-75 and I-595 in Broward County. The assumption during the MLOU was that MDX will evaluate express lanes along SR 836 as one of the build alternatives. However, during early coordination in the PD&E Study with MDX, FDOT was told that SR 836 will no longer be considered a candidate for express lanes. Therefore, there was no system along SR 836 to tie to the reversible express lanes.

The reversible lanes concept initial design included three reversible express lanes in the peak direction, with no express lanes along the off-peak direction. The overall two-way express lanes AADT volumes were found lower than the other build alternatives. The reversible express lanes demand was similar to the demand of the other build alternatives. However, the construction and operating costs were too high when compared to other build alternatives. Therefore, the reversible express lanes concept was no longer considered a viable alternative.

4.5.1 Alternative 1

Alternative 1 proposes one express lane in each direction between SW 56th Street and SR 874 and two express lanes in each direction between SR 874 and SR 836. The express lanes system will begin and end one lane on SR 874 and one lane south of SW 56th Street. This alternative recommends four express lane access points, which includes a SR 836 ramp flyover system-to-system connecting SR 826 northbound to SR 836 eastbound and SR 836 westbound to SR 826 southbound median-to-median (see ***Figure 4.7***).

Alternative 1 is also proposing interchange, intersection and arterial improvements to support the optimal operations of the corridor. ***Figure 4.8*** depicts all the improvements proposed by Alternative 1.

Figure 4.7 – Alternative 1 Schematic Line Diagram

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ALTERNATIVE 1
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.8

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ALTERNATIVE 1
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.8

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ALTERNATIVE 1
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.8

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ALTERNATIVE 1
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.8

4.5.2 ALTERNATIVE 2

Alternative 2 proposes one express lane in each direction between US 1 and SR 874 and two express lanes between SR 874 and SR 836. The express lanes system will begin and end one lane on SR 874 and one lane north of US 1. This alternative proposes four express lanes access points, which includes a SR 836 ramp flyover system-to-system connecting SR 826 northbound to SR 836 eastbound and SR 836 westbound to SR 826 southbound median-to-median (see ***Figure 4.9***). The express lanes in this alternative will have a direct connection with the Miami-Dade Transit (MDT) US 1 South Miami-Dade Busway Corridor. In the northbound direction, buses will enter the express lanes facility just north of SW 98th Street through a proposed intersection connection with the South Miami-Dade Busway (under the southbound ramp from SR 826). Buses will continue north at-grade along the east side of the SR 826 southbound lanes. Just south of SW 88th Street the buses will continue north entering/merging with the SR 826 northbound lanes separated by express lane markers. Buses only will continue north until just north of SW 72nd Street where personal cars will be able to access the express lanes facility. In the southbound direction, personal cars will exit the express lanes facility just north of SW 72nd Street. The express lane will continue south (buses only) at-grade along the east side of the SR 826 southbound lanes buffer separated, until reaching the proposed intersection with the Busway. Buses will have the option to travel northbound or southbound along the Busway.

Alternative 2 is also proposing interchange, intersection and arterial improvements to support the optimal operations of the corridor. ***Figure 4.10*** depicts all the improvements proposed by Alternative 2.

Figure 4.9 – Alternative 2 Schematic Line Diagram

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ALTERNATIVE 2
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.10

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ALTERNATIVE 2
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.10

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ALTERNATIVE 2
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.10

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ALTERNATIVE 2
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.10

4.5.3 ALTERNATIVE 3

Alternative 3 proposes one express lane in each direction between US 1 and SR 874 and two express lanes between SR 874 and SR 836, one at-grade and one elevated. The elevated express lanes will be located along the median and the at-grade express lanes will be located between the median and the general use lanes separated by a buffer with express lane markers. This alternative proposes four express lanes access points. In this alternative the elevated express lanes will only service traffic between SR 874 and SR 836 to and from the east. The elevated express lanes will not have any access with the at-grade express lanes or the SR 826 general use lanes. The objective of the elevated express lanes concept is to completely bypass the SR 826 corridor between SR 874 and SR 836, which is the main origin and destination pattern of the area. The SR 836 connection will be a ramp flyover system-to-system connecting SR 874 northbound to SR 836 eastbound and SR 836 westbound to SR 874 southbound median-to-median (see ***Figure 4.11***). The express lanes in this alternative will have a direct connection with the MDT US 1 South Miami-Dade Busway Corridor. In the northbound direction, buses will enter the express lanes facility just north of SW 104th Street. The ramp will bridge over US 1 and will touch down on the inside of the SR 826 northbound ramp from US 1 northbound separated by a 4-foot wide buffer with express lane markers. Buses only will continue north until just north of SW 72nd Street where personal cars will be able to access the express lanes facility. The SR 826 northbound ramp from US 1 will be widened to accommodate the additional lane and buffer. In the southbound direction, personal cars will exit the express lanes facility just north of SW 72nd Street. The express lane will continue south separated by a buffer with express lane markers (buses only) along the west side of northbound SR 826. The ramp will bridge over the railroad line turning southwest and touching down between the railroad line and the Busway just north of SW 98th Street. Buses will then merge with the southbound Busway just south of SW 98th Street.

Alternative 3 is also proposing interchange, intersection and arterial improvements to support the optimal operations of the corridor. ***Figure 4.12*** depicts all the improvements proposed by Alternative 3.

Figure 4.11 – Alternative 3 Schematic Line Diagram

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ALTERNATIVE 3
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.12

FDOT

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
FPID No.: 432639-1-22-02
ETDM No.: 14308

ALTERNATIVE 3
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.12

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY

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ALTERNATIVE 3
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.12

FDOT

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ALTERNATIVE 3
LANE GEOMETRY AND CONFIGURATION

FIGURE 4.12

4.5.4 Typical Sections

4.5.4.1 Alternative 1

The Alternative 1 roadway typical section between US 1 and SR 874 will remain the same as the No-Build Alternative, consisting of five to six 12-foot wide general use lanes (three lanes in the northbound direction and two to three lanes in the southbound direction) with 12-foot wide auxiliary lanes at selected locations, 11.5-foot to 13-foot wide paved outside shoulders, 11-foot wide paved inside shoulders, a 2-foot wide median barrier wall, and outside barrier walls. Between SR 874 and SR 836 the corridor will consist primarily of ten 11-foot to 12-foot wide general use lanes (five lanes in the northbound direction and five lanes in the southbound direction) with 11-foot to 12-foot wide auxiliary lanes at selected locations, four 11-foot to 12-foot wide express lanes (two lanes in each direction), 10-foot to 12-foot wide inside and outside shoulders, a 2-foot wide median barrier wall, 2-foot to 4-foot wide buffer with express lane markers, and outside barrier walls. The two express lanes along this section of SR 826 will be implemented by converting the existing inside lane (undesignated HOV lane) to an express lane and by adding a second express lane through widening. The two typical sections for SR 826 are depicted in ***Figure 4.13*** and ***Figure 4.14.*** The express lanes will be constructed along SR 826 with major widening to the outside, approximately 10-32 feet, with a new set of bridge overpasses crossing over SR 874.

Figure 4.13 – Alternative 1 Roadway Typical Section between US 1 and SR 874

Figure 4.14 – Alternative 1 Roadway Typical Section between SR 874 and SR 836

4.5.4.2 ALTERNATIVE 2

The Alternative 2 roadway typical section between US 1 and SR 874 will consist primarily of six 12-foot wide general use lanes (three lanes in each direction) with 12-foot wide auxiliary lanes at selected locations, two 12-foot wide express lanes (one lane in each direction), 12-foot wide paved inside and outside shoulders, a 2-foot wide median barrier wall, 4-foot wide buffer with express lane markers, and outside barrier walls. Between SR 874 and SR 836 the corridor will consist primarily of ten 11-foot to 12-foot wide general use lanes (five lanes in the northbound direction and five lanes in the southbound direction) with 11-foot to 12-foot wide auxiliary lanes at selected locations, four 11-foot to 12-foot wide express lanes (two lanes in each direction), 10-foot to 12-foot wide inside and outside shoulders, a 2-foot wide median barrier wall, 2-foot to 4-foot wide buffer with express lane markers, and outside barrier walls. The two express lanes along this section of SR 826 will be implemented by converting the existing inside lane (undesignated HOV lane) to an express lane and by adding a second express lane through widening. The two typical sections for SR 826 are depicted in ***Figure 4.15*** and ***Figure 4.16.*** The express lanes will be constructed along SR 826 with major widening to the outside, approximately 10-36 feet, with a new set of bridge overpasses crossing over SR 874.

Figure 4.15 – Alternative 2 Roadway Typical Section between US 1 and SR 874

Figure 4.16 – Alternative 2 Roadway Typical Section between SR 874 and SR 836

4.5.4.3 ALTERNATIVE 3

The Alternative 3 roadway typical section between US 1 and SR 874 will consist primarily of six 12-foot wide general use lanes (three lanes in each direction) with 12-foot wide auxiliary lanes at selected locations, two 12-foot wide express lanes (one lane in each direction), 12-foot wide paved inside and outside shoulders, a 2-foot wide median barrier wall, 4-foot wide buffer with express lane markers, and outside barrier walls. Between SR 874 and SR 836 the corridor has two express lanes in each direction, one at-grade and one elevated. The at-grade section consists primarily of nine 11-foot to 12-foot wide general use lanes (four lanes in the northbound direction and five lanes in the southbound direction) with 11-foot to 12-foot wide auxiliary lanes at selected locations, two 12-foot wide express lanes (one lane in each direction), 10-foot to 12-foot wide paved inside and outside shoulders, 2-foot to 4-foot wide buffer with express lane markers, and inside/outside barrier walls. The elevated section consists primarily of two 12-foot wide express lanes (one lane in each direction), 10-foot wide inside and outside shoulders, and a 2-foot wide median barrier wall. The two typical sections for SR 826 are depicted in ***Figure 4.17*** and ***Figure 4.18.*** The express lanes will be constructed along SR 826 with major widening to the outside, approximately 10-36 feet, with a new set of bridge overpasses crossing over SR 874. The two express lanes between SR 874 and SR 836 will be implemented by converting the existing inside lane (undesignated HOV lane) to an express lane and by adding a second elevated express lane through widening.

Figure 4.17 – Alternative 3 Roadway Typical Section between US 1 and SR 874

Figure 4.18 – Alternative 3 Roadway Typical Section between SR 874 and SR 836

4.5.5 Horizontal and Vertical Alignment

The design of the build alternative strives to adhere to the design standards depicted in ***Section 3.0***. This section summarizes the proposed geometric changes for the proposed horizontal and vertical alignments along the corridor.

Horizontal Alignment

All three build alternatives propose to maintain most of the existing horizontal alignment design except for the new alignment construction areas.

Alternative 1 – This alternative has no improvements south of Sunset Drive. North of Sunset Drive this alternative proposes to maintain most of the existing horizontal alignment design except at the following two locations:

1. Section between SR 874 and south of Coral Way – The SR 826 southbound lanes horizontal alignment was designed to shift to the west side in order to avoid impacting the residential homes along the east side of the corridor and to open up the median to accommodate the new express lanes system.
2. Section between Coral Way and SW 8th Street – The SR 826 northbound lanes horizontal alignment was designed to shift to the east side in order to avoid impacting the residential homes along the west side of the corridor and to open up the median to accommodate the new express lanes system.

The new centerline of construction offset will vary between 1 and 56 feet from the existing centerline of construction, depending on the location.

Alternatives 2 and 3 – These alternatives propose to maintain most of the existing horizontal alignment design except at the following three locations:

1. SR 826 southbound off-ramp to US 1 – The two-lane bridge ramp over the existing US 1 Busway and SW 98th Street will be reconstructed as a three-lane bridge with proper shoulder width and stopping sight distance. The new bridge structure will be shifted about 24 feet to the west from the existing bridge.
2. Section between SR 874 and south of Coral Way – The SR 826 southbound lanes horizontal alignment was designed to shift to the west side in order to avoid impacting the residential homes along the east side of the

corridor and to open up the median to accommodate the new express lanes system.

3. Section between Coral Way and SW 8th Street – The SR 826 northbound lanes horizontal alignment was designed to shift to the east side in order to avoid impacting the residential homes along the west side of the corridor and to open up the median to accommodate the new express lanes system.

The new centerline of construction offset for Alternative 2 will vary between 1 and 56 feet from the existing centerline of construction, depending on the location. The new centerline of construction offset for Alternative 3 will vary between 1 and 48.5 feet from the existing centerline of construction, depending on the location.

Interchanges – All three build alternatives are proposing to widen the existing typical section in order to accommodate the new roadway section. Therefore, every interchange ramp (on-ramp and offramp) will need to be realigned in order to tie in to the new mainline typical section.

The extent of the ramp realignment is depicted in ***Appendix H***, Concept Plans. The geometry at each location was kept as close as possible to the existing one by introducing compound curves and/or offsetting the ramps toward the right of way line while preserving the existing design speed of each ramp.

Vertical Alignment

All three build alternatives propose to maintain most of the existing vertical alignment design except for the new alignment construction areas. In most places there will be some overbuild and cross slope corrections to optimize the overall safety and comfort of the corridor, meet latest criteria and to address rainfall runoff.

Alternatives 1 and 2 – These alternatives propose to maintain most of the existing vertical alignment design except at the following two locations:

1. Section between SR 874 and south of Coral Way – These alternatives propose a new second level SR 826 express lanes system bridge structure along the median. The vertical alignment of this bridge will generally follow the vertical curvature of the existing facility but will be about 30 to 40 feet higher.

2. SR 826/SR 836 Interchange – These alternatives propose an express lanes ramp flyover system-to-system connecting SR 826 northbound to SR 836 eastbound and SR 836 westbound to SR 826 southbound median-to-median. This ramp flyover was designed vertically between the second level and the highest level of the recently constructed interchange. An envelope was purposely designed by the previous interchange project to accommodate this ramp.

Alternative 3 – This alternative proposes to maintain most of the existing vertical alignment design except at the following two locations:

1. Section between SR 874 and south of Coral Way – These alternatives propose a new second level SR 826 express lanes system bridge structure along the median. The vertical alignment of this bridge will generally follow the vertical curvature of the existing facility but will be about 30 to 40 feet higher.
2. Section between SR 874 and SR 836 – This alternative proposes a 4.5-mile long second level bridge structure from SR 874 to SR 836 completely bypassing SR 826. This bridge is proposed to be at the third level above the second level SR 826 express lanes bridge. After the second level SR 826 bridge touches down south of Coral Way, the third level bridge becomes a second level bridge above SR 826 and continues north to SR 836.
3. SR 826/SR 836 Interchange – These alternatives propose an express lanes ramp flyover system-to-system connecting SR 826 northbound to SR 836 eastbound and SR 836 westbound to SR 826 southbound median-to-median. This ramp flyover was designed vertically between the second level and the highest level of the recently constructed interchange. An envelope was purposely designed by the previous interchange project to accommodate this ramp.

Appendix H, Concept Plans depict all three build alternatives.

4.5.6 Right of Way

A right of way cost was determined based on the proposed geometry of each build alternative. The estimated cost was generated based on the proposed conceptual design plans. The cost includes property, support, relocation of personal property/signs and administrative costs. The parcels impacted are business/commercial, residential properties, vacant land and governmental. The number of parcels impacted and estimated right of way cost is summarized in ***Table 4.2***.

Table 4.2 – Right of Way Impacts

Type of Parcel	Partial Impact		
	Alternative 1	Alternative 2	Alternative 3
Commercial	8	13	12
Residential	21	37	77
Miscellaneous	7	3	3
Partial Impact	12	28	24
Potential Relocation	24	25	68
Total Parcel Impacts	36	53	92
Total Area Impact (S.F.)	309,938	386,092	507,647
Total Area Impact (Acre)	7.115	8.863	11.654
Estimated Right of Way Cost	Underway by FDOT	$78,633,000	Underway by FDOT

4.5.7 Access Management

The FDOT Access Management Classification System determines the access class and type of each roadway based on the segment location, spacing between cross streets, posted speed, median type and/or median opening spacing. The access management classification for SR 826 is Class 1.2, Freeway in an existing urbanized area with limited access. Based on the access and type, the minimum interchange spacing allowed is two miles in accordance with the *FDM, Part 2, Chapter 201, Table 201.3.1*. The interchange spacing along the corridor is not in compliance with the FDOT Access Management Guideline Rule 14.97 (see ***Table 4.3***).

Table 4.3 – SR 826 Access Management/Interchange Spacing

Cross Street	Current Spacing to Next Interchange (Miles)	Complies with Interchange Spacing?
SW 88th Street to SW 72nd Street	0.998	No
SW 72nd Street to SW 56th Street	1.02	No
SW 56th Street to SR 874	0.329	No
SR 874 to Bird Road	0.717	No
Bird Road to Coral Way	1.05	No
Coral Way to SW 8th Street	0.984	No
SW 8th Street to Flagler Street	0.510	No
Flagler Street to SR 836	0.743	No
SR 836 to NW 25th Street	1.138	No

No access management modifications are proposed as part of the build alternatives.

4.5.7.1 Express Lanes

All three build alternatives propose four access points at selected locations to enter and exit the express lanes system.

Alternative 1

- **SR 826 northbound ingress south of SW 56th Street** – This access point will service drivers wanting to enter the express lanes system from the following upstream corridors:
  - SW 72nd Street
  - SW 88th Street
  - US 1

- **SR 874 northbound ingress west of the SR 826 Interchange** – This access point will service drivers wanting to enter the express lanes system from the following upstream corridor:
  - SR 874

- **SR 826 northbound egress south of SR 836 (ramp flyover)** – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following corridor:
    - SR 836 Eastbound

- **SR 826 northbound egress south of SR 836** – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following downstream corridors:
    - NW 25th Street and interchanges to the north

- **SR 826 southbound ingress south of SR 836** – This access point will service drivers wanting to enter the express lanes system from the following upstream corridors:
    - NW 25th Street and interchanges to the north

- **SR 826 southbound ingress south of SR 836 (ramp flyover)** – This access point will service drivers wanting to enter the express lanes system from the following corridor:
    - SR 826 Westbound

- **SR 874 southbound egress west of the SR 826 Interchange** – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following downstream corridor:
    - SR 874

- **SR 826 southbound egress north of SW 56th Street** – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following downstream corridors:
    - SW 72nd Street
    - SW 88th Street
    - US 1

Alternative 2

- **SR 826 northbound ingress north of SW 72nd Street** – This access point will service drivers wanting to enter the express lanes system from the following upstream corridors:
  - SW 88th Street
  - US 1

- **SR 874 northbound ingress west of the SR 826 Interchange** – This access point will service drivers wanting to enter the express lanes system from the following upstream corridor:
  - SR 874

- **SR 826 northbound egress south of SR 836 (ramp flyover)** – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following corridor:
  - SR 836 Eastbound

- **SR 826 northbound egress south of SR 836** – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following downstream corridors:
  - NW 25th Street and interchanges to the north

- **SR 826 southbound ingress south of SR 836** – This access point will service drivers wanting to enter the express lanes system from the following upstream corridors:
  - NW 25th Street and interchanges to the north

- **SR 826 southbound ingress south of SR 836 (ramp flyover)** – This access point will service drivers wanting to enter the express lanes system from the following corridor:
  - SR 826 Westbound

- **SR 874 southbound egress west of the SR 826 Interchange** – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following downstream corridor:
  - SR 874

- **SR 826 southbound egress north of SW 72nd Street** – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following downstream corridors:
  - SW 88th Street
  - US 1

Alternative 3

- **SR 826 northbound ingress north of SW 72nd Street** – This access point will service drivers wanting to enter the express lanes system from the following upstream corridors:
  - SW 88th Street
  - US 1

- **SR 874 northbound ingress west of the SR 826 Interchange** – This access point will serve as a direct connection from SR 874 to SR 836 eastbound.

- **SR 826 northbound egress south of SR 836** – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following downstream corridors:
  - NW 25th Street and interchanges to the north

- **SR 826 southbound ingress south of SR 836** – This access point will service drivers wanting to enter the express lanes system from the following upstream corridors:
  - NW 25th Street and interchanges to the north

- **SR 874 southbound egress west of the SR 826 Interchange** – This access point will service as a direct connection from SR 836 westbound to SR 874.

- **SR 826 southbound egress north of SW 72nd Street** – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following downstream corridors:
  - SW 88th Street
  - US 1

4.5.8 Bridges and Structures

Alternative 1

Build Alternative 1 includes ten proposed new bridges, one proposed bridge replacement, four proposed bridge demolitions, 16 proposed bridge widenings, three proposed culverts and 21 existing bridges to remain. The proposed improvements of each bridge structure along the corridor are summarized in ***Figure 4.19*** and ***Table 4.4***.

Alternative 2

Build Alternative 2 includes 13 proposed new bridges, six proposed bridge replacements, eight proposed bridge demolitions, 20 proposed bridge widenings, four proposed culverts and 31 existing bridges to remain. The proposed improvements of each bridge structure along the corridor are summarized in ***Figure 4.20*** and ***Table 4.5***.

Alternative 3

Build Alternative 3 includes 14 proposed new bridges, seven proposed bridge replacement, six proposed bridge demolitions, 19 proposed bridge widenings, four proposed culverts and 23 existing bridges to remain. The proposed improvements of each bridge structure along the corridor are summarized in ***Figure 4.21*** and ***Table 4.6***.

Appendix G, Bridge Analysis Report documents the details of each proposed bridge structure, design, and widening approach.

SUMMARY OF STRUCTURES	
ITEM	QUANTITY
PROPOSED NEW BRIDGES (2 LEVEL) PROPOSED NEW BRIDGES (2/3 LEVEL)	10
PROPOSED BRIDGE REPLACEMENTS	1
PROPOSED BRIDGE DEMOLITIONS	4
PROPOSED BRIDGE WIDENINGS	16
PROPOSED CULVERTS	3
EXISTING BRIDGES TO REMAIN	21

* CATEGORY 2 STRUCTURES

ALTERNATIVE 1 PROPOSED BRIDGE LOCATION MAP

FIGURE 4.19
SHEET 4-56

ALTERNATIVE 1 PROPOSED BRIDGE LOCATION MAP

FIGURE 4.19
SHEET 4-57

ALTERNATIVE 1 PROPOSED BRIDGE LOCATION MAP

FIGURE 4.19
SHEET 4-58

ALTERNATIVE 1 PROPOSED BRIDGE LOCATION MAP

FIGURE 4.19
SHEET 4-59

Table 4.4 - Alternative 1 Proposed Bridge Characteristics												
Location			Geometrics		Alignment		Structural					
Bridge No.	Bridge Location	Direction	Overall Bridge Length / Span Arrangement (ft)	Deck Width (ft)	Min. Vertical Clearance (ft)	Underneath Roadway Designation	#Spans	Max Span (ft)	Superstructure Type	Substructure Type	Bridge Category	Structure Type
870526	SR 874 over SW 56th St./Miller Drive-- MDX bridge	EB to WB	56'+84'+84'+51' = 275'	134.42' Min / 138.08' Max	16.5'	SW 56th St./Miller Drive	4	84	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871013	SR 826 NB/SB over SW 56th St./Miller Drive	NB and SB	159.75'	164.67' Min / 168.25' Max	16.5'	SW 56th St./Miller Drive	1	159.75	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871017	SR 826 SB over SR 874 and CSX RR	SB	203.31'+266.99'+245.77' = 716.07'	58.67'	16.5'	SR 874 and CSX RR	3	266.99	Steel Plate Girder	Reinforced Concrete Column Piers	2	Widening
871018	SR 826 NB over SCL RR and SR 874	NB	190'+140' = 330'	58.67'	16.5'	SCL RR and SR 874	2	190	Steel Plate Girder	Reinforced Concrete Column Piers	2	Widening
1	SR 826 Express Lanes SB over SR 874 and CSX RR	SB	172.25'+200'+255.25' = 627.5'	34.67'	16.5'	SR over SR 874 and CSX RR	3	255.25	Steel Plate Girder	Reinforced Concrete Column Piers	2	New
2	SR 826 Express Lanes NB over SR 874 and SCL RR	NB	174.17'+200+206.33 = 580.5'	34.67'	16.5'	SR over SR 874 and SCL RR	3	206.33	Steel Plate Girder	Reinforced Concrete Column Piers	2	New
3	SR 826 Express Lanes NB/SB over SR 874 (3 Level)	NB and SB	Unit 1 = 225'+225'+225'+225'+160' = 1060' Unit 2 = 160'+225'+225'+225'+225'+225'+160' = 1445' Unit 3 = 160'+225'+225'+220'+230'+225'+185' = 1470' Unit 4 = 185'+225'+225'+225'+225'+225'+160' = 1470' Unit 5 = 160'+225'+225'+160' = 770' (Total = 6215')	68.67'	16.5'	SR 874	30	230	Concrete Segmental	Reinforced Concrete Column Piers	2	New
871021	SR 826 SB over SR 976/Bird Rd./SW 40th St.	SB	160.42'	103.08' Min / 112.58' Max	16.5'	SR 676/Bird Rd./SW 40th St.	1	160.42	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
4	Pedestrian Overpass over SR 826	E/W	170'+161' = 331'	10.0'	16.5'	SR 826	2	170	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	New
879010	Pedestrian Overpass over SR 826 SB To/From SW 24th	E/W	144'	10.0'	16.5'	SR 826 SB To/From SW 24th St.	1	144	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Replacement
CVRT-2	Culvert by Coral Way Pedestrial Overpasss	NS	TBD	NA	NA	NA	NA		NA	Concrete	1	New
CVRT-3	Culvert Along East Side of SR 826 & N. of Coral Way	NS	TBD	NA	NA	NA	NA		NA	Concrete	1	New
870760	SR 826 SB over SR 972/SW 24th St.	SB	75'+75' = 150'	125.83' Min / 133.25' Max	16.5'	SR 972/SW 24th St.	2	75	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
870761	SR 826 NB over SR 972/SW 24th St.	NB	75'+75' = 150'	119.17' Min / 122.58' Max	16.5'	SR 972/SW 24th St.	2	75	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
870764	SR 826 NB to SR 972 over Coral Gables Canal	NB	27.45'+39'+31' = 97.45'	44.67' Min / 69.08' Max	16.5'	Coral Gables Canal	3	39	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
5	SR 826 SB/US 41 EB over US 41 /SR 90	SB	47.37'+55.72'+56.86'+56.75'+57.36'+56.28'+40.82' = 371.16'	29.67'	16.5'	US 41/SR 90	7	57.36	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	New
6	SR 826 SB to US 41 WB over Tamiami Canal	SB to WB	51.5'+50'+50'+50'+50'+50'+51.5' = 353'	29.67'	16.5'	Tamiami Canal	7	51.5	Flat Slab Concrete	Reinforced Concrete/Piles	2	New
870112	SR 826 SB over US 41/SR90/SW 8th St.	SB	40.52'+56.5'+56.5'+56.5'+56.5'+56.5'+40.52' = 363.54'	117.67' Min / 123.83' Max	16.5'	US 41/SR 90/SW 8th St.	7	56.5	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening

Table 4.4 - Alternative 1 Proposed Bridge Characteristics Continued												
Location			Geometrics		Alignment		Structural					
Bridge No.	Bridge Location	Direction	Overall Bridge Length / Span Arrangement (ft)	Deck Width (ft)	Min. Vertical Clearance (ft)	Underneath Roadway Designation	#Spans	Max Span (ft)	Superstructure Type	Substructure Type	Bridge Category	Structure Type
870267	SR 826 NB over US 41/SR90/SW 8th St.	NB	40.52'+56.5'+56.5'+56.5'+56.5'+56.5'+40.52' = 363.54'	105.33' Min / 110.33' Max	16.5'	US 41/SR 90/SW 8th St.	7	56.5	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
871047	SR 826 SB over SR 968/West Flagler St.	SB	170.36'	149.67' Min / 154.42' Max	16.5'	SR 968/West Flager St.	1	170.36	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871048	SR 826 NB over SR 968/West Flagler St.	NB	170.36'	145.92' Min / 153.67' Max	16.5'	SR 968/West Flager St.	1	170.36	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
CVRT-4	Culvert along East Side of SR 826 from SW 8th St South	NS	TBD	NA	NA	NA	NA		NA	Concrete	1	New
871045	SB SR 826 Off-ramp over NW 7th St.	SB	123.24'	22.58' Min / Max 24.25'	16.5'	NW 7th St.	1	123.4	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871062	SR 826 SB over NW 7th St. (SR 836 WB exit to SR 826)	SB	123.07'	9.0' Min / 12.5' Max	16.5'	NW 7th St. (SR 836 WB exit to SR 826)	1	123.07	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871063	SR 826 SB over NW 7th St.	SB	123.01'	91.0' Min/ Max 91.25'	16.5'	NW 7th St.	1	123.01	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
7	SR 826 SB Express Lanes over NW 7th St.	SB	123'	29.67'	16.5'	NW 7th St.	1	123	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	New
8	SR 826 NB Express Lanes over NW 7th St.	NB	123'	29.67'	16.5'	NW 7th St.	1	123	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	New
871064	SR 826 NB over NW 7th St.	NB	123'	90.67'	16.5'	NW 7th St.	1	123	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
9	Flyover SR 826 to SR 836 from SR 836 WB to SR 826 SB (3 Level) -- (Aesthetic Level 2)	WB	160'+230'+150'+150'+144'+188'+302' = 1324'	33.67'	16.5'	SR 836/SR 826	7	302	Concrete Segmental	Reinforced Concrete Column Piers	2	New
10	Flyover SR 826 and SR 836 from SR 826 NB to SR 836 EB (3 Level) -- (Aesthetic Level 2)	NB	175'+245'+220'+230'+230'+160' = 1260'	33.67'	16.5'	SR 836/SR 827	6	245	Concrete Segmental	Reinforced Concrete Column Piers	2	New

Note: EB - Eastbound, WB - Westbound, NB - Northbound, SB - Southbound

SUMMARY OF STRUCTURES	
ITEM	QUANTITY
PROPOSED NEW BRIDGES (2 LEVEL) PROPOSED NEW BRIDGES (2/3 LEVEL)	13
PROPOSED BRIDGE REPLACEMENTS	6
PROPOSED BRIDGE DEMOLITIONS	8
PROPOSED BRIDGE WIDENINGS	20
PROPOSED CULVERTS	4
EXISTING BRIDGES TO REMAIN	31

* CATEGORY 2 STRUCTURES

ALTERNATIVE **2** PROPOSED BRIDGE LOCATION MAP

FIGURE 4.20
SHEET 4-62

ALTERNATIVE **2** PROPOSED BRIDGE LOCATION MAP

FIGURE 4.20
SHEET 4-63

ALTERNATIVE **2** PROPOSED BRIDGE LOCATION MAP

FIGURE 4.20
SHEET 4-64

ALTERNATIVE **2** PROPOSED BRIDGE LOCATION MAP

FIGURE 4.20
SHEET 4-65

ALTERNATIVE **2** PROPOSED BRIDGE LOCATION MAP

FIGURE 4.20
SHEET 4-66

Table 4.5 - Alternative 2 Proposed Bridge Characteristics												
Location			Geometrics		Alignment		Structural					
Bridge No.	Bridge Location	Direction	Overall Bridge Length / Span Arrangement (ft)	Deck Width (ft)	Min. Vertical Clearance (ft)	Underneath Roadway Designation	#Spans	Max Span (ft)	Superstructure Type	Substructure Type	Bridge Category	Structure Type
CVRT-1	Culvert expansion at C-100A Canal	EW	TBD	NA	NA	NA	NA		NA	Concrete	1	Widening
870129	SR 826 SB over SW 98th St. SB	SB	94.6'+110.4'+121.8'+173.25'+123.86'+126.11' = 750.02'	58.67'	16.5'	SW 98th St.	6	173.25	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	2	Replacement
870792	SR 826 NB from EB SW 88th St. to NB SR 826	NB from EB to NB	152'+216'+160'+160'+162.25'+127' = 977.25'	29.67' Min / 33.67' Max	16.5'	EB SW 88th St. to NB SR.826	6	216	Steel Plate Girder	Reinforced Concrete Column Piers	2	Replacement
870773	SR 826 over SW 88th St. NB and SB	NB and SB	92.5'+72.75'+54.25' = 219.5'	150.67'	16.5'	SW 88th St,	3	92.5	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
1	SR 826 SB off-ramp over SW 88th St.	SB	92.5'+72.75'+108.25' = 273.5'	29.67'	16.5'	SW 88th St,	3	108.25	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	New
870953	Kendall EB – SR 826 NE over Dadeland Mall Access	EB	104.67'	43.33' Min / 47.17' Max	16.5'	Dadeland Mall Access	1	104.67	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
2	SW 77th Ave.NB and SB over Snapper Creek Canal	NB and SB	38.0'+34.0'+38.5' = 110.5'	38.67'	NA	Snapper Creek Canal	3	38.5	Prestress Concrete, FIBs	Concrete Pile Bents	1	New
3	SR 826 SB to SR 94 over Snapper Creek Canal	SB	36.93'+43.95'+52.88"+42' = 175.76'	42.67'	NA	Snapper Creek Canal	4	52.88	Prestress Concrete, FIBs	Concrete Pile Bents	1	New
870286	SR 826 NB/SB over Snapper Creek Canal	NB and SB	44.25'+43.83'+44'+43.88' = 175.96'	162.67'	NA	Snapper Creek Canal	4	44.25	Prestress Concrete, FIBs	Concrete Pile Bents	1	Widening
870795	WB Kendal -826 NB over Snapper Creek Canal	NB	44.25'+43.83'+44'+43.88' = 175.96'	29.67'	NA	Snapper Creek Canal	4	44.25	Prestress Concrete, FIBs	Concrete Pile Bents	1	Replacement
870132	SR 826 SB over SW 72nd St./Sunset Drive	SB	162.5'	176.67'	16.5'	Sw 72nd St./Sunset Drive	1	168.4	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Replacement
870287	SR 826 NB over SW 72nd St./ Sunset Drive	NB	162.5'		16.5'	Sw 72nd St./Sunset Drive	1	168.4	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Replacement
870526	SR 874 over SW 56th St./Miller Drive-- MDX bridge	EB to WB	56'+84'+84'+51' = 275'	134.42' Min / 138.08' Max	16.5'	SW 56th St./Miller Drive	4	84	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871013	SR 826 NB/SB over SW 56th St./Miller Drive	NB and SB	159.75'	164.67' Min / 168.25' Max	16.5'	SW 56th St./Miller Drive	1	159.75	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871017	SR 826 SB over SR 874 and CSX RR	SB	203.31'+266.99'+245.77' = 716.07'	58.67'	16.5'	SR 874 and CSX RR	3	266.99	Steel Plate Girder	Reinforced Concrete Column Piers	2	Widening
871018	SR 826 NB over SCL RR and SR 874	NB	190'+140' = 330'	58.67'	16.5'	SCL RR and SR 874	2	190	Steel Plate Girder	Reinforced Concrete Column Piers	2	Widening
4	SR 826 Express Lanes SB over SR 874 and CSX RR	SB	172.25'+200'+255.25' = 627.5'	34.67'	16.5'	SR over SR 874 and CSX RR	3	255.25	Steel Plate Girder	Reinforced Concrete Column Piers	2	New
5	SR 826 Express Lanes NB over SR 874 and SCL RR	NB	174.17'+200+206.33 = 580.5'	34.67'	16.5'	SR over SR 874 and SCL RR	3	206.33	Steel Plate Girder	Reinforced Concrete Column Piers	2	New

Table 4.5 - Alternative 2 Proposed Bridge Characteristics Continued												
Location			Geometrics		Alignment		Structural					
Bridge No.	Bridge Location	Direction	Overall Bridge Length / Span Arrangement (ft)	Deck Width (ft)	Min. Vertical Clearance (ft)	Underneath Roadway Designation	#Spans	Max Span (ft)	Superstructure Type	Substructure Type	Bridge Category	Structure Type
6	SR 826 Express Lanes NB/SB over SR 874 (3 Level)	NB and SB	Unit 1 = 225'+225'+225'+225'+160' = 1060' Unit 2 = 160'+225'+225'+225'+225'+225'+160' = 1445' Unit 3 = 160'+225'+225'+220'+230'+225'+185' = 1470' Unit 4 = 185'+225'+225'+225'+225'+225'+160' = 1470' Unit 5 = 160'+225'+225'+160' = 770' (Total = 6215')	68.67'	16.5'	SR 874	30	230	Concrete Segmental or Steel Box Girder	Reinforced Concrete Column Piers	2	New
871021	SR 826 SB over SR 976/Bird Rd./SW 40th St.	SB	160.42'	103.08' Min / 112.58' Max	16.5'	SR 676/Bird Rd./SW 40th St.	1	160.42	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
7	Pedestrian Overpass over SR 826	E/W	170'+161' = 331'	10.0'	16.5'	SR 826	2	170	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	New
879010	Pedestrian Overpass over SR 826 SB To/From SW 24th	E/W	144'	10.0'	16.5'	SR 826 SB To/From SW 24th St.	1	144	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Replacement
CVRT-2	Culvert by Coral Way Pedestrial Overpasss	NS	TBD	NA	NA	NA	NA		NA	Concrete	1	New
CVRT-3	Culvert Along East Side of SR 826 & N. of Coral Way	NS	TBD	NA	NA	NA	NA		NA	Concrete	1	New
870760	SR 826 SB over SR 972/SW 24th St.	SB	75'+75' = 150'	125.83' Min / 133.25' Max	16.5'	SR 972/SW 24th St.	2	75	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
870761	SR 826 NB over SR 972/SW 24th St.	NB	75'+75' = 150'	119.17' Min / 122.58' Max	16.5'	SR 972/SW 24th St.	2	75	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
870764	SR 826 NB to SR 972 over Coral Gables Canal	NB	27.45'+39'+31' = 97.45'	44.67' Min / 69.08' Max	16.5'	Coral Gables Canal	3	39	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
8	SR 826 SB/US 41 EB over US 41 /SR 90	SB	47.37'+55.72'+56.86'+56.75'+57.36'+56.28'+40.82' = 371.16'	29.67'	16.5'	US 41/SR 90	7	57.36	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	New
9	SR 826 SB to US 41 WB over Tamiami Canal	SB to WB	51.5'+50'+50'+50'+50'+50'+51.5' = 353'	29.67'	16.5'	Tamiami Canal	7	51.5	Flat Slab Concrete	Reinforced Concrete/Piles	2	New
870112	SR 826 SB over US 41/SR90/SW 8th St.	SB	160.00'+160.00' = 320.00'	123.75' Min / 117.67' Max	16.5'	US 41/SR 90/SW 8th St.	7	160	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Replacement
870267	SR 826 NB over US 41/SR90/SW 8th St.	NB	160.00'+160.00' = 320.00'	105.31' Min / 110.31' Max	16.5'	US 41/SR 90/SW 8th St.	7	160	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Replacement
871047	SR 826 SB over SR 968/West Flagler St.	SB	170.36'	149.67' Min / 154.42' Max	16.5'	SR 968/West Flager St.	1	170.36	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871048	SR 826 NB over SR 968/West Flagler St.	NB	170.36'	145.92' Min / 153.67' Max	16.5'	SR 968/West Flager St.	1	170.36	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
CVRT-4	Culvert along East Side of SR 826 from SW 8th St South	NS	TBD	NA	NA	NA	NA		NA	Concrete	1	New
871045	SB SR 826 Off-ramp over NW 7th St.	SB	123.24'	22.58' Min / Max 24.25'	16.5'	NW 7th St.	1	123.4	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871062	SR 826 SB over NW 7th St. (SR 836 WB exit to SR 826)	SB	123.07'	9.0' Min / 12.5' Max	16.5'	NW 7th St. (SR 836 WB exit to SR 826)	1	123.07	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening

Table 4.5 - Alternative 2 Proposed Bridge Characteristics Continued												
Location			Geometrics		Alignment		Structural					
Bridge No.	Bridge Location	Direction	Overall Bridge Length / Span Arrangement (ft)	Deck Width (ft)	Min. Vertical Clearance (ft)	Underneath Roadway Designation	#Spans	Max Span (ft)	Superstructure Type	Substructure Type	Bridge Category	Structure Type
871063	SR 826 SB over NW 7th St.	SB	123.01'	91.0' Min/ Max 91.25'	16.5'	NW 7th St.	1	123.01	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
10	SR 826 SB Express Lanes over NW 7th St.	SB	123'	29.67'	16.5'	NW 7th St.	1	123	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	New
11	SR 826 NB Express Lanes over NW 7th St.	NB	123'	29.67'	16.5'	NW 7th St.	1	123	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	New
871064	SR 826 NB over NW 7th St.	NB	123'	90.67'	16.5'	NW 7th St.	1	123	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
12	Flyover SR 826 to SR 836 from SR 836 WB to SR 826 SB (3 Level) -- (Aesthetic Level 2)	WB	160'+230'+150'+150'+144'+188'+302' = 1324'	33.67'	16.5'	SR 836/SR 826	7	302	Concrete Segmental or Steel Box Girder	Reinforced Concrete Column Piers	2	New
13	Flyover SR 826 and SR 836 from SR 826 NB to SR 836 EB (3 Level) -- (Aesthetic Level 2)	NB	175'+245'+220'+230'+230'+160' = 1260'	33.67'	16.5'	SR 836/SR 827	6	245	Concrete Segmental or Steel Box Girder	Reinforced Concrete Column Piers	2	New
871039	SR 826 EB over NW 72 Ave (partial removal of 871038)	EB	111.5'+111.5' = 223'	9.33'	16.5'	NW 72 Ave	2	111.5	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening

Note: EB - Eastbound, WB - Westbound, NB - Northbound, SB - Southbound

SUMMARY OF STRUCTURES	
ITEM	QUANTITY
PROPOSED NEW BRIDGES (2 LEVEL) PROPOSED NEW BRIDGES (2/3 LEVEL) PROPOSED NEW BRIDGES (3/4 LEVEL)	14
PROPOSED BRIDGE REPLACEMENTS	7
PROPOSED BRIDGE DEMOLITIONS	6
PROPOSED BRIDGE WIDENINGS	19
PROPOSED CULVERTS	4
EXISTING BRIDGES TO REMAIN	23

* CATEGORY 2 STRUCTURES

ALTERNATIVE **3** PROPOSED BRIDGE LOCATION MAP

FIGURE 4.21
SHEET 4-70

ALTERNATIVE **3** PROPOSED BRIDGE LOCATION MAP

FIGURE 4.21
SHEET 4-71

ALTERNATIVE **3** PROPOSED BRIDGE LOCATION MAP

FIGURE 4.21
SHEET 4-72

ALTERNATIVE **3** PROPOSED BRIDGE LOCATION MAP

FIGURE 4.21
SHEET 4-73

ALTERNATIVE **3** PROPOSED BRIDGE LOCATION MAP

FIGURE 4.21
SHEET 4-74

Table 4.6 - Alternative 3 Proposed Bridge Characteristics												
Location			Geometrics		Alignment		Structural					
Bridge No.	Bridge Location	Direction	Overall Bridge Length / Span Arrangement (ft)	Deck Width (ft)	Min. Vertical Clearance (ft)	Underneath Roadway Designation	#Spans	Max Span (ft)	Superstructure Type	Substructure Type	Bridge Category	Structure Type
CVRT-1	Culvert expansion at C-100A Canal	EW	TBD	NA	NA	NA	NA		NA	Concrete	1	Widening
1	NB Busway to NB SR 826	NB	200'+286' = 486'	29.67'	16.5'	US 1	2	286	Steel Plate Girder	Reinforced Concrete Column Piers	2	New
870129	SR 826 SB over SW 98th St. SB	SB	94.6'+110.4'+121.8'+173.25'+123.86'+126.11' = 750.02'	58.67'	16.5'	SW 98th St.	6	173.25	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	2	Replacement
870128	NB Ramp to SR 826 over SW 98th Street	NB	81.17'+91'+48.58'=220.75'	84.33' Min / 87.92' Max	16.5'	SW 98th Street	3	91	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
870284	NB Ramp to SR 826 over US-1 and Busway	NB	58.08'+71'+71'+43'+71'+70.92'+70.83'+71.08'+73.92' +67.83'+71.08' = 739.74	70.83' Min / 71.08' Max	16.5'	US-1 & SW 98th Street	11	73.92	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	2	Widening
2	SB Ramp from SR 826 to Busway	SB	160'+225'+160'=545'	29.67'	16.5'	Busway	3	225	Steel Plate Girder	Reinforced Concrete Column Piers	2	New
870792	SR 826 NB from EB SW 88th St. to NB SR 826	NB from EB to NB	152'+216'+160'+160'+162.25'+127' = 977.25'	29.67' Min / 33.67' Max	16.5'	EB SW 88th St. to NB SR.826	6	216	Steel Plate Girder	Reinforced Concrete Column Piers	2	Replacement
870773	SR 826 over SW 88th St. NB and SB	NB and SB	92.5'+72.75'+54.25' = 219.5'	150.67'	16.5'	SW 88th St,	3	92.5	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
3	SR 826 SB off-ramp over SW 88th St.	SB	92.5'+72.75'+108.25' = 273.5'	29.67'	16.5'	SW 88th St,	3	108.25	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	New
870953	Kendall EB – SR 826 NE over Dadeland Mall Access	EB	104.67'	43.33' Min / 47.17' Max	16.5'	Dadeland Mall Access	1	104.67	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
4	SW 77th Ave.NB and SB over Snapper Creek Canal	NB and SB	38.0'+34.0'+38.5' = 110.5'	38.67'	NA	Snapper Creek Canal	3	38.5	Prestress Concrete, FIBs	Concrete Pile Bents	1	New
5	SR 826 SB to SR 94 over Snapper Creek Canal	SB	36.93'+43.95'+52.88"+42' = 175.76'	42.67'	NA	Snapper Creek Canal	4	52.88	Prestress Concrete, FIBs	Concrete Pile Bents	1	New
870286	SR 826 NB/SB over Snapper Creek Canal	NB and SB	44.25'+43.83'+44'+43.88' = 175.96'	162.67'	NA	Snapper Creek Canal	4	44.25	Prestress Concrete, FIBs	Concrete Pile Bents	1	Widening
870795	WB Kendal -826 NB over Snapper Creek Canal	NB	44.25'+43.83'+44'+43.88' = 175.96'	29.67'	NA	Snapper Creek Canal	4	44.25	Prestress Concrete, FIBs	Concrete Pile Bents	1	Replacement
870132	SR 826 SB over SW 72nd St./Sunset Drive	SB	162.5'	176.67'	16.5'	Sw 72nd St./Sunset Drive	1	168.4	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Replacement
870287	SR 826 NB over SW 72nd St./ Sunset Drive	NB	162.5'		16.5'	Sw 72nd St./Sunset Drive	1	168.4	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Replacement
870526	SR 874 over SW 56th St./Miller Drive-- MDX bridge	EB to WB	56'+84'+84'+51' = 275'	134.42' Min / 138.08' Max	16.5'	SW 56th St./Miller Drive	4	84	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Replacement
6	SR 874 SB over Miller Dr (SW 56th Street)	SB	56'+84'+84'+51' = 275'	58.67'	16.5'	Miller Dr./SW 56 Street	4	84	Prestress Concrete, FIBs	Reinforced Concrete/Piles	2	New

Table 4.6 - Alternative 3 Proposed Bridge Characteristics Continued												
Location			Geometrics		Alignment		Structural					
Bridge No.	Bridge Location	Direction	Overall Bridge Length / Span Arrangement (ft)	Deck Width (ft)	Min. Vertical Clearance (ft)	Underneath Roadway Designation	#Spans	Max Span (ft)	Superstructure Type	Substructure Type	Bridge Category	Structure Type
7	Viadut from SR 836 to SR 874	SB/NB	Unit 1 = 160'+225'+225'+160' = 770' Unit 2 = 160'+225'+225'+225'+225'+225'+188' = 1473' Unit 3 = 135'+210'+230'+225'+170' = 970' Unit 4 = 170'+225'+225'+225'+225'+225'+160' = 1455' Unit 5 = 160'+225'+225'+225'+225'+225'+160' = 1445' Unit 6 = 160'+225'+225'+225'+225'+160' = 1220' Unit 7 = 160'+225'+225'+225'+225'+225'+160' = 1445' Unit 8 = 160'+225'+225'+225'+225'+225'+160' = 1445' Unit 9 = 160'+225'+225'+225'+225'+230'+195' = 1485' Unit 10 = 195'+230'+225'+225'+225'+225'+170' = 1495' Unit 11 = 170'+225'+225'+225'+225'+225'+160' = 1455' Unit 12 = 160'+225'+225'+225'+225'+225'+160' = 1445' Unit 13 = 160'+225'+225'+230'+230'+230'+194.5' = 1494.5 Unit 14 = 194.5'+230'+225'+225'+225'+225'+160' = 1484.5 Unit 15 = 160'+225'+225'+225'+225'+225'+225'+175' = 1685' Unit 16 = 175'+225'+225'+225'+225'+235'+190' = 1500' Total = 22267'	68.67' Min / Max 72.67'	16.5	SR 826	107	235	Concrete Segmental	Reinforced Concrete Column Piers	2	New
871013	SR 826 NB/SB over SW 56th St./Miller Drive	NB and SB	159.75'	164.67' Min / 168.25' Max	16.5'	SW 56th St./Miller Drive	1	159.75	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
8	SR 826 Express Lanes SB over SR 874 and CSX RR	SB	172.25'+200'+255.25' = 627.5'	34.67'	16.5'	SR over SR 874 and CSX RR	3	255.25	Steel Plate Girder	Reinforced Concrete Column Piers	2	New
9	SR 826 Express Lanes NB over SR 874 and SCL RR	NB	174.17'+200+206.33 = 580.5'	34.67'	16.5'	SR over SR 874 and SCL RR	3	206.33	Steel Plate Girder	Reinforced Concrete Column Piers	2	New
10	SR 826 Express Lanes NB/SB over SR 874 (3 Level)	NB and SB	Unit 1 = 225'+225'+225'+225'+160' = 1060' Unit 2 = 160'+225'+225'+225'+225'+225'+160' = 1445' Unit 3 = 160'+225'+225'+220'+230'+225'+185' = 1470' Unit 4 = 185'+225'+225'+225'+225'+225'+160' = 1470' Unit 5 = 160'+225'+225'+160' = 770' (Total = 6215')	68.67'	16.5'	SR 826 & SR 874	30	230	Concrete Segmental	Reinforced Concrete Column Piers	2	New
871017	SR 826 SB over SR 874 and CSX RR	SB	203.31'+266.99'+245.77' = 716.07'	58.67'	16.5'	SR 874 and CSX RR	3	266.99	Steel Plate Girder	Reinforced Concrete Column Piers	2	Widening
871018	SR 826 NB over SCL RR and SR 874	NB	190'+140' = 330'	58.67'	16.5'	SCL RR and SR 874	2	190	Steel Plate Girder	Reinforced Concrete Column Piers	2	Widening
871021	SR 826 SB over SR 976/Bird Rd./SW 40th St.	SB	160.42'	103.08' Min / 112.58' Max	16.5'	SR 676/Bird Rd./SW 40th St.	1	160.42	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
879010	Pedestrian Overpass over SR 826 SB To/From SW 24th	E/W	144'	10.0'	16.5'	SR 826 SB To/From SW 24th St.	1	144	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Replacement
CVRT-2	Culvert by Coral Way Pedestrial Overpasss	NS	TBD	NA	NA	NA	NA		NA	Concrete	1	New

Table 4.6 - Alternative 3 Proposed Bridge Characteristics Continued												
Location			Geometrics		Alignment		Structural					
Bridge No.	Bridge Location	Direction	Overall Bridge Length / Span Arrangement (ft)	Deck Width (ft)	Min. Vertical Clearance (ft)	Underneath Roadway Designation	#Spans	Max Span (ft)	Superstructure Type	Substructure Type	Bridge Category	Structure Type
CVRT-3	Culvert Along East Side of SR 826 & N. of Coral Way	NS	TBD	NA	NA	NA	NA		NA	Concrete	1	New
870760	SR 826 SB over SR 972/SW 24th St.	SB	75'+75' = 150'	125.83' Min / 133.25' Max	16.5'	SR 972/SW 24th St.	2	75	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
870761	SR 826 NB over SR 972/SW 24th St.	NB	75'+75' = 150'	119.17' Min / 122.58' Max	16.5'	SR 972/SW 24th St.	2	75	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
870764	SR 826 NB to SR 972 over Coral Gables Canal	NB	27.45'+39'+31' = 97.45'	44.67' Min / 69.08' Max	16.5'	Coral Gables Canal	3	39	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
11	SR 826 SB/US 41 EB over US 41 /SR 90	SB	47.37'+55.72'+56.86'+56.75'+57.36'+56.28'+40.82' = 371.16'	29.67'	16.5'	US 41/SR 90	7	57.36	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	New
12	SR 826 SB to US 41 WB over Tamiami Canal	SB to WB	51.5'+50'+50'+50'+50'+50'+51.5' = 353'	29.67'	16.5'	Tamiami Canal	7	51.5	Flat Slab Concrete	Reinforced Concrete/Piles	2	New
870112	SR 826 SB over US 41/SR90/SW 8th St.	SB	40.52'+56.5'+56.5'+56.5'+56.5'+56.5'+40.52' = 363.54'	117.67' Min / 123.83' Max	16.5'	US 41/SR 90/SW 8th St.	7	56.5	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
870267	SR 826 NB over US 41/SR90/SW 8th St.	NB	40.52'+56.5'+56.5'+56.5'+56.5'+56.5'+40.52' = 363.54'	105.33' Min / 110.33' Max	16.5'	US 41/SR 90/SW 8th St.	7	56.5	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
871047	SR 826 SB over SR 968/West Flagler St.	SB	170.36'	149.67' Min / 154.42' Max	16.5'	SR 968/West Flager St.	1	170.36	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871048	SR 826 NB over SR 968/West Flagler St.	NB	170.36'	145.92' Min / 153.67' Max	16.5'	SR 968/West Flager St.	1	170.36	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
CVRT-4	Culvert along East Side of SR 826 from SW 8th St South	NS	TBD	NA	NA	NA	NA		NA	Concrete	1	New
871045	SB SR 826 Off-ramp over NW 7th St.	SB	123.24'	22.58' Min / Max 24.25'	16.5'	NW 7th St.	1	123.4	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871062	SR 826 SB over NW 7th St. (SR 836 WB exit to SR 826)	SB	123.07'	9.0' Min / 12.5' Max	16.5'	NW 7th St. (SR 836 WB exit to SR 826)	1	123.07	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871063	SR 826 SB over NW 7th St.	SB	123.01'	91.0' Min/ Max 91.25'	16.5'	NW 7th St.	1	123.01	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871064	SR 826 NB over NW 7th St.	NB	123'	90.67'	16.5'	NW 7th St.	1	123	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
13	Flyover SR 826 and SR 836 from SR 826 NB to SR 836 EB (3 Level) -- (Aesthetic Level 2)	NB	175'+245'+220'+230'+230'+160' = 1260'	33.67'	16.5'	SR 836/SR 826	6	245	Concrete Segmental	Reinforced Concrete Column Piers	2	New
14	Flyover SR 826 to SR 836 from SR 836 WB to SR 826 SB (3 Level) -- (Aesthetic Level 2)	WB	160'+230'+150'+150'+144'+188'+302' = 1324'	33.67'	16.5'	SR 836/SR 826	7	302	Concrete Segmental	Reinforced Concrete Column Piers	2	New

Note: EB - Eastbound, WB - Westbound, NB - Northbound, SB - Southbound

The study considered four different superstructure alternatives. The superstructure types are: concrete segmental box girders, composite steel box girders, prestressed concrete I-Girders and composite steel plate girders. Prestressed I-Girders are typically used in concrete widenings and second level bridges. However, for aesthetic considerations, they are not considered in structures with high visibility and/or third level bridges. Other aesthetic considerations include integral pier caps to minimize structural depth and optimizing the vertical clearance under the proposed over pass structures. Different span arrangements were studied in order to maximize the efficiency of the proposed superstructure, enhance appearance, and to satisfy geometric constraints.

Based on the conceptual cost estimate, bridge widenings are proposed, and they are mostly prestress concrete structures. Replacements structures are either made of prestress concrete or steel plate girders. For the new structures, Bridges 12 and 13, in the core of the SR 826/SR 836 Interchange and in between the second and third level segmental flyovers, have been considered also concrete precast segmental to match the highly visible flyovers in the interchange. These two bridges will also incorporate the aesthetics features of the MDX bridges. As it is, the desire of the Department to minimize the number of piers along the highly visible Bridge 6, a 6,250 feet long structure, the average span is over 200 feet. For these bridge units, we also considered concrete precast segmental. As the viaduct approaches SR 874 and US 1, Bridges 4 and 5 (over SR 874 and CSX) are a continuation of Bridge 6. Therefore, these are also considered concrete segmental. In accordance with the FDOT structures design guidelines, precast segmental is slightly more economical than steel box girders, which makes these the most cost-effective option. Considering this project is only in the preliminary study phase, and considering the magnitude of the cost, the study recommends further development of both alternatives before selecting one superstructure type over the other.

In keeping with the aesthetic requirements of the project, the study recommends to further develop both the steel box girder superstructure type and the segmental box girder superstructure type as the design alternatives for Bridges 4, 5 and 6.

4.5.9 Transit Accommodations and Bicycle/Pedestrian Facilities

Alternative 1 does not include any additional Transit Accommodations.

Alternative 2 and Alternative 3 were developed with the vision of allowing a Bus Rapid Transit (BRT) system along the express lanes and providing access to the South Miami-Dade Busway Corridor.

The Palmetto Express Bus (South) Project, included in the Draft 2045 LRTP as an unfunded project, intends to create a new express bus service from the Dadeland North Metrorail Station to the Dolphin Station Transit Terminal. The express bus project will allow a more effective connection to the proposed rapid transit systems included in the Strategic Miami Area Rapid Transit (SMART) Plan, specifically, the East-West Corridor and the Kendall Corridor.

The proposed express lanes will provide a direct system-to-system connection from northbound SR 826 to eastbound SR 836 and from westbound SR 836 to southbound SR 826, which will enhance connectivity to and from the Miami Intermodal Center (MIC) and Miami International Airport (MIA). Alternatives 2 and 3 will also provide a direct connection to the existing US 1 South Miami-Dade Busway, just north of SW 98th Street.

The following transit projects are included in the Draft 2045 LRTP.

Table 4.7 – Draft 2045 LRTP Transit Projects in Study Area

Project	Location	Description	Plan Period*
South Dade Transitway Park-and-Ride at SW 104 Street (104 Street Station) SMART Terminal	South Dade Transitway and SW 104 Street	Lease parking with 100 parking spaces	I
South Dade Transitway	From Dadeland South Metrorail Station to SW 344 St Park-and-Ride	Implement BRT along the Transitway	I
Drop-off/Pick-up at South Dade Transitway Stations	From SW 344 Street/ Transitway to Dadeland South Metrorail Station	Drop-off/Pick-up at all (30) Transitway Stations	I

Table 4.7 – Draft 2045 LRTP Transit Projects in Study Area (continued)

Project	Location	Description	Plan Period*
South Miami-Dade Express (BERT)	From SW 344 South Dade Transitway Station to Dadeland North Metrorail Station	Implement Bus Express Rapid Transit Service	I
Dadeland South Intermodal Station - Ramps	Dadeland South Metrorail Station	Construct direct ramps to/from elevated Bus Rapid Transit (BRT) platform, improvements and refurbishment of existing Metrorail station	II
South Dade Transitway Park-and-Ride at Dadeland North	Dadeland North Metrorail Station and Hwy US-1	Expand park-and-ride and construct a new parking garage with ground-floor retail and office space.	II
South Dade Transitway Park-and-Ride/Terminal at Dadeland South	Dadeland South Metrorail Station and Hwy US-1	Expand park-and-ride and construct a new parking garage with ground-floor retail and office space.	II
Kendall Corridor	From West Kendall Transit Terminal at Kendall Dr and SW 162 Ave to Dadeland area Metrorail Stations	Rapid Transit connecting the West Kendall Transit Terminal to the Dadeland area Metrorail Stations	IV
Mall of the Americas Station - SMART Terminal	From W Flagler St and NW 77 Ave to W Flagler St and NW 77 Ave	Construct park-and-ride/ transit terminal with 300 surface parking spaces and 4 bus bays	IV
East-West Corridor	From FIU/Dolphin Station to MIC	Rapid Transit connecting western Miami-Dade County to downtown Miami via the MIC	Partially Funded
Flagler Corridor (BRT)	From Tamiami Station to Downtown Intermodal Terminal	Implement Bus Rapid Transit Service	Partially Funded

Table 4.7 – Draft 2045 LRTP Transit Projects in Study Area (continued)

Project	Location	Description	Plan Period*
Kendall BRT	From West Kendall Transit Terminal at Kendall Dr & SW 162 Ave to Dadeland North Metrorail Station	Improve the speed, reliability, identity, comfort and convenience of transit.	Unfunded
Kendall/SR-826 Station SMART Terminal	Kendall Dr & SR 826	SMART Terminal	Unfunded
Palmetto Express Bus (new)	From Palmetto Intermodal Terminal to SW 104 St Station & Transitway	Provide a regional connection and serve new markets. Improve the speed, reliability, image, comfort and convenience of transit. Attract choice riders.	Unfunded
Palmetto Express Bus (South)	From Dadeland North Metrorail Station to Dolphin Station at NW 12 St & HEFT	Provide a regional connection and serve new markets. Improve the speed, reliability, image, comfort and convenience of transit. Attract choice riders.	Unfunded
Palmetto Express Bus (West)	From SW 147 Ave and SW 8 St (Tamiami Station) to Palmetto Intermodal Terminal	Provide a regional connection and serve new markets. Improve the speed, reliability, image, comfort and convenience of transit. Attract choice riders.	Unfunded
Ramps between the Busway and Palmetto Expressway	From South Dade Busway to Palmetto Expressway	Provide greater connectivity and reduce transit travel time.	Unfunded
South Dade Transitway Extension to Dadeland North	From Dadeland South Metrorail Station to Dadeland North Metrorail Station	South Dade Transitway Extension	Unfunded
South Dade Transitway Metrorail Extension	From Dadeland South Metrorail Station to SW 344 St Park-and-Ride	Metrorail Extension	Unfunded

Table 4.7 – Draft 2045 LRTP Transit Projects in Study Area (continued)

Project	Location	Description	Plan Period*
Sunset Dr / SW 72 St Enhanced Bus	From West Kendall Transit Terminal at Kendall Dr and SW 162 Ave to South Miami Metrorail Station	Improve the speed, reliability, identity, comfort and convenience of transit.	Unfunded
Miller Drive (SW 56 St) Enhanced Bus	From Tamiami Station to University Metrorail Station	Improve the speed, reliability, identity, comfort and convenience of transit.	Unfunded
SW 40 St (Bird Rd) Enhanced Bus	From SW 8 St / SW 147 Ave to Douglas Metrorail Station	Improve the speed, reliability, identity, comfort and convenience of transit.	Unfunded
Tropical Station – SMART Terminal	SW 40 St at SR 826/ Palmetto Expwy	SMART Terminal	Unfunded
Coral Way Enhanced Bus	From SW 147 Ave & SW 8 St Brickell Metrorail Station	Improve the speed, reliability, identity, comfort and convenience of transit.	Unfunded
SW 8 St Enhanced Bus	From FIU-MMC to Brickell Metrorail Station	Improve the speed, reliability, identity, comfort and convenience of transit.	Unfunded
NW 7 St Enhanced Bus	From Dolphin Station (HEFT & NW 12 St) to Government Center	Improve the speed, reliability, image, comfort and convenience of transit.	Unfunded

Note: * I (2020-2025), II (2025-2030), III (2031-2035), IV (2036-2045)

SR 826 is a limited access facility. There will continue to be no designated pedestrian or bicycle accommodations along these corridors, as pedestrians and bicycles are not permitted on limited access corridors.

Below are the pedestrian and bicycle improvements proposed within the crossing roadway interchange limits:

- **US 1** – No bicycle or pedestrian improvements are proposed for US 1. (Alternatives 2 and 3)
- **SW 88th Street (Kendall Drive)** – No proposed improvements through the interchange. Eight-foot wide sidewalks are proposed west of SR 826 near SW 79th Avenue and SW 77th Avenue. (Alternatives 2 and 3)
- **SW 72nd Street (Sunset Drive)** – Eight-foot wide sidewalks, five-foot wide bike lanes are proposed on both sides of the roadway and continue through the interchange. (Alternatives 2 and 3)
- **SW 56th Street (Miller Drive)** –Eight-foot wide sidewalks are proposed on both sides of the roadway within the interchange. (Alternatives 1, 2 and 3)
- **SW 40th Street (Bird Rd)** – Eight-foot wide sidewalks are proposed on both sides of the roadway within the interchange. Eight-foot sidewalks are also proposed from SW 75th Avenue to Tropicaire Shopping Center Entrance the north side of the roadway. (Alternatives 1, 2 and 3)
- **SW 24th Street (Coral Way)** – No proposed improvements through the interchange. An eight-foot wide sidewalk is proposed from SW 80th Court to SW 82nd Avenue on the north side as well as a new pedestrian bridge over the southbound ramp terminal. (Alternatives 1, 2 and 3)
- **SW 8th Street (Tamiami Trail)** – No proposed improvements through the interchange. Seven-foot wide bike lanes are proposed on the north side of the roadway west of SW 79th Avenue. (Alternatives 1, 2 and 3)
- **Flagler Street** – No proposed improvements through the interchange. Eight-foot wide sidewalks are proposed on SW 78th Avenue and SW 79th Avenue. (Alternatives 1, 2 and 3)

4.5.10 Traffic Volumes and Operational Conditions

The information presented in this section is a summary of the *SR 826 Traffic Analysis Technical Memorandum (TATM)*, companion document to this study.

The purpose of the TATM is to present the preliminary results of the existing and future traffic operation analyses completed as part of the PD&E process. The objective of the report is to document the analysis and the screening process of the alternatives considered.

The Highway Capacity Manual (HCM), 6th Edition, as well as the Highway Capacity Software Version 7 (HCS7) and Synchro Version 10.0 were used for the operational analysis in this study. Operational analyses were performed on freeway basic segments, ramp merge/diverge junctions, weaving sections, ramp terminals, arterial segments and intersections. The HCS was used for the freeway basic segments, ramp merge/diverge junctions and weaving sections. Synchro was used for the evaluation of the intersections and arterial segments. This software uses the methodology of the HCM to determine intersection/arterial capacity and LOS.

This section presents the traffic operational analysis results for the 2045 future proposed lane configuration under projected traffic conditions. This analysis followed the same process and methodology as the existing traffic operational analysis.

Tables 4.8 – 4.19 and ***Figures 4.22 – 4.24*** summarize the future operational analysis results as well as link-by-link traffic volumes.

HCM Operational Analysis Results

Alternative 1 – The freeway analysis shows that 13 locations northbound and 11 locations southbound will operate at an unacceptable LOS (worst peak period LOS) by the year 2045. The weaving analysis shows that four locations northbound and three locations southbound will operate at an unacceptable LOS. The ramp junction analysis shows three locations northbound and four locations southbound will operate at an unacceptable LOS. The C-D capacity analysis shows one location southbound will operate over capacity.

Alternative 2 – The freeway analysis shows that six locations northbound and nine locations southbound will operate at an unacceptable LOS (worst peak period LOS) by the year 2045. The weaving analysis shows that two locations northbound and three locations southbound will operate at an unacceptable LOS. The ramp junction analysis shows one location northbound and three locations southbound

will operate at an unacceptable LOS. The C-D capacity analysis shows one location southbound will operate over capacity.

Alternative 3 – The freeway analysis shows that ten locations northbound and 12 locations southbound will operate at an unacceptable LOS (worst peak period LOS) by the year 2045. The weaving analysis shows that four locations northbound and four locations southbound will operate at an unacceptable LOS. The ramp junction analysis shows four locations northbound and four locations southbound will operate at an unacceptable LOS. The C-D capacity analysis shows all locations will operate within capacity.

Table 4.8 – 2045 SR 826 Alternative 1 Northbound Freeway Analysis Results

#	Segment Description	Analysis Type	Volume	Density (pc/mi/ln)	V/C Ratio	LOS	Volume	Density (pc/mi/ln)	V/C Ratio	LOS
			AM Peak				PM Peak			
51	NW 25th St WB On-ramp to NW 36th St EB Off-ramp	Basic	12,975	-	1.07	F	10,273	36.2	0.85	E
50	On-ramp from NW 25th St WB	Major Merge	1,486	-	0.81	-	1,343	-	0.73	-
49	NW 25th St EB Off-ramp to NW 25th St WB On-ramp	Basic	11,489	-	1.10	F	8,930	34.1	0.85	D
48	Off-ramp to NW 25th St EB	Weave	-	-	-	-	-	-	-	-
47	SR 836 EB On-ramp to NW 25th St EB Off-ramp		4,005	-	1.25	F	3,039	39.9	0.95	E
46	On-ramp from SR 836 EB		-	-	-	-	-	-	-	-
45	SR 836 WB On-ramp to SR 836 EB On-ramp	Basic	11,853	42.7	0.97	E	8,680	29.7	0.71	D
44	On-ramp from SR 836 WB	Major Merge	3,298	-	0.80	-	2,312	-	0.56	-
43	Flagler St WB On-ramp to SR 836 WB On-ramp	Basic	8,555	-	1.04	F	6,368	32.6	0.77	D
42	On-ramp from Flagler St WB	Merge	1,594	39.1	0.82	F	1,232	30.1	0.63	D
41	EL Merge to Flagler St WB On-ramp	Basic	6,961	35.7	0.84	E	5,136	26.3	0.62	D
40	Express Lane Merge	Major Merge	543	-	0.26	-	866	-	0.42	-
39	SR 836 Off-ramp to EL Merge	Basic	6,418	-	1.04	F	4,270	29.2	0.69	D
38	Off ramp to SR 836	Major Diverge	1,854	30.9	0.47	D	1,858	22.9	0.47	C
37	Flagler St WB Off-ramp to SR 836 Off-ramp	Basic	8,272	34.1	0.80	D	6,128	25.2	0.59	C
36	Flagler St WB Off-ramp	Weave	-	-	-	-	-	-	-	-
35	SW 8th St WB On-ramp to EL		-	-	-	-	-	-	-	-
34	On-ramp from SW 8th St WB		-	-	-	-	-	-	-	-
33	SW 8th St EB On-ramp to Flagler St WB Off-ramp		3,183	-	0.98	F	2,340	30	0.72	D
32	On-ramp from SW 8th St EB		-	-	-	-	-	-	-	-
31	SW 8th St EB Off-ramp to SW 8th St EB On-ramp	Basic	8,187	44.5	0.99	E	6,584	33.9	0.80	D
30	Off-ramp to SW 8th St EB	Major Diverge	1,632	36.7	0.41	E	1,911	31.7	0.48	D
29	Coral Way EB On-ramp to SW 8th St EB Off-ramp	Basic	9,819	41.7	0.96	E	8,495	35.3	0.83	E
28	On-ramp from Coral Way EB	Merge	1,086	28.9	0.62	D	870	23.9	0.49	C
27	Coral Way EB Off-ramp to Coral Way EB On-ramp	Basic	8,733	36.3	0.85	E	7,625	31.7	0.74	D
26	Off-ramp to Coral Way EB	Diverge	1,262	36.0	0.72	E	1,131	31.3	0.64	D
25	Bird Rd WB On-ramp to Coral Way EB Off-ramp	Basic	9,995	42.9	0.97	E	8,756	36.4	0.85	E
24	On-ramp from Bird Rd WB	Merge	1,079	33.2	0.58	D	1,167	29.9	0.63	D
23	Bird Rd EB On-ramp to Bird Rd WB On-ramp	Basic	8,916	37.1	0.87	E	7,589	31.6	0.74	D
22	On-ramp from Bird Rd EB	Merge	740	24.2	0.42	C	518	19.7	0.29	B
21	SR 874 On-ramp to Bird Rd EB On-ramp	Basic	8,176	34.0	0.80	D	7,071	29.4	0.69	D
20	On-ramp from SR 874 (toll road merge)	Major Merge	2,103	-	0.51	-	2,031	-	0.49	-
19	Miller Dr WB On-ramp to SR 874 On-ramp	Basic	6,073	31.2	0.74	D	5,040	25.9	0.61	C
18	On-ramp from Miller Dr WB	Major Merge	1,331	-	0.67	-	1,204	-	0.61	-
17	EL Diverge to Miller Dr WB On-ramp	Basic	4,742	31.9	0.76	D	3,836	25.8	0.62	C
16	Off-ramp to Express Lane	Diverge	829	35.0	0.41	D	1,142	31.3	0.56	D
15	Bird Rd EB Off-ramp to EL Diverge	Basic	5,571	37.9	0.90	E	4,978	33.5	0.80	D
14	Off-ramp to Bird Rd EB	Major Diverge	683	29.2	0.35	D	700	26.5	0.35	C
13	Miller Dr EB Off-ramp to Bird Rd EB Off-ramp	Basic	6,254	31.4	0.75	D	5,678	28.5	0.68	D
12	Off-ramp to Miller Rd WB	Weave	-	-	-	-	-	-	-	-
11	Sunset Dr WB On-ramp to Miller Rd EB Off-ramp		1,876	39.1	0.91	E	1,888	33.6	0.84	D
10	On-ramp from Sunset Dr WB		-	-	-	-	-	-	-	-
9	Sunset Dr EB Off-ramp to Sunset Drive WB On-ramp	Basic	5,507	36.6	0.88	E	4,613	30.4	0.73	D
8	Sunset Dr EB Off-ramp	Weave	-	-	-	-	-	-	-	-
7	On-ramp to Sunset Dr EB Off- ramp		-	-	-	-	-	-	-	-
6	SW 88th St WB On-ramp		-	-	-	-	-	-	-	-
5	SW 88th ST EB On-ramp to Sunset Dr EB Off-ramp		2,648	-	1.2	F	2,509	-	1.14	F
4	Loop On ramp from SW 88th St EB		-	-	-	-	-	-	-	-
3	SW 88th St EB Off-ramp to SW 88th St EB on-ramps	Basic	3,455	34.4	0.84	D	2,555	25.3	0.62	C

Table 4.8 – 2045 SR 826 Alternative 1 Northbound Freeway Analysis Results (Continued)

#	Segment Description	Analysis Type	Volume	Density (pc/mi/ln)	V/C Ratio	LOS	Volume	Density (pc/mi/ln)	V/C Ratio	LOS
			AM Peak				PM Peak			
2	Off-ramp to SW 88th Street	Diverge	171	36.7	0.09	E	145	27.9	0.08	C
1	US 1 to SW 88th St EB Off-ramp	Ramp	3,626	-	0.89	-	2,700	-	0.66	-

Table 4.9 – 2045 SR 826 Alternative 1 Southbound Freeway Analysis Results

#		Analysis Type	Volume	Density (pc/mi/ln)	V/C Ratio	LOS	Volume	Density (pc/mi/ln)	V/C Ratio	LOS
			AM Peak				PM Peak			
1	NW 36th St EB On-ramp to NW 25th St WB Off-ramp	Basic	12,951	-	1.07	F	11,225	39.6	0.92	E
2	Off-ramp to NW 25th St WB	Diverge	2,047	-	1.15	F	1,281	43.7	0.72	E
3	NW 25th St WB Off-ramp to NW 25th St EB On-ramp	Basic	10,904	38.2	0.90	E	9,944	34.6	0.82	D
4	On-ramp from NW 25th Street EB	Major Merge	1,215	-	0.32	-	2,490	-	0.66	-
5	NW 25th St EB On-ramp to SR 836 WB Off-ramp*	Weave	3,600	-	1.13	F	4,287	-	1.34	F
6	NW 25th St EB On-ramp to SR 836 WB Off-ramp	Basic	12,119	35.6	0.85	E	12,434	36.6	0.87	E
7	Off-ramp to SR 836 WB	Major Diverge	2,983	32.6	0.56	D	2,998	33.4	0.56	D
8	SR 836 WB Off-ramp to SR 836 Off-ramp	Basic	9,136	38.5	0.90	E	9,436	40.1	0.93	E
9	Off-ramp to SR 836	Diverge	924	36.5	0.53	E	459	35.5	0.26	E
10	SR 836 Off-ramp to Flagler St WB Off-ramp	Basic	8,212	33.1	0.79	D	8,977	36.4	0.87	E
11	Off-ramp to Flagler St WB	Major Diverge	3,336	30.7	0.84	D	2,423	33.5	0.61	D
12	Flagler St WB Off-ramp to SR 836 EB On-ramp	Basic	4,876	24.6	0.59	C	6,554	33.1	0.79	D
13	Express Lane Diverge	Diverge	982	28.4	0.48	D	540	33.5	0.27	D
14	EL Diverge to SR 836 EB On-ramp	Basic	3,894	19.6	0.47	C	6,014	30.4	0.73	D
15	On-ramp from SR 836 EB	Major Merge	2,987	-	0.76	-	1,990	-	0.51	-
16	SR 836 EB On-ramp to Flagler St WB On-ramp	Basic	6,881	34.7	0.83	D	8,004	42.4	0.97	E
17	On-ramp from Flagler St WB	Merge	1,620	-	0.41	-	1,476	-	0.38	-
18	Flagler St WB On-ramp to SW 8th St EB On-ramp	Basic	8,501	34.1	0.82	D	9,480	38.8	0.91	E
19	On-ramp from SW 8th St EB	Weave	-	-	-	-	-	-	-	-
20	SW 8th St WB On-ramp to Flagler St WB Off-ramp		2,165	-	0.97	F	2,727	-	1.22	F
21	Off-ramp to Coral Way WB		-	-	-	-	-	-	-	-
22	Coral Way WB Off-ramp to Coral Way WB On-ramp	Basic	8,344	33.2	0.80	D	9,279	37.5	0.89	E
23	On-ramp from Coral Way WB	Merge	893	-	0.50	-	1,025	-	0.58	-
24	Coral Way WB on-ramp to Bird Rd WB Off-ramp	Basic	9,237	30.9	0.74	D	10,304	34.5	0.83	D
25	Off-ramp to Bird Rd WB	Diverge	1,945	28.7	0.47	D	1,968	32.1	0.48	D
26	Bird Rd WB Off-ramp to SR 874 WB Off-ramp	Basic	7,292	29.4	0.70	D	8,336	33.6	0.81	D
27	Off-ramp to SR 874	Diverge	1,032	29.8	0.53	D	1,770	37.0	0.90	E
28	SR 874 WB Off-ramp to SR 874 Diverge	Basic	6,260	25.1	0.60	C	6,566	26.4	0.63	D
29	Diverge to SR 874	Major Diverge	2,140	23.4	0.35	C	1,997	24.5	0.32	C
30	SR 874 Diverge to Bird Rd EB On-ramp	Basic	4,120	27.6	0.66	D	4,569	30.6	0.73	D
31	Express Lane Merge	Merge	1,156	30.9	0.57	D	940	31.8	0.46	D
32	EL Merge to Bird Rd EB On-ramp	Basic	5,276	26.5	0.64	D	5,509	27.6	0.66	D
33	On-ramp from Bird Rd WB	Weave	-	-	-	-	-	-	-	-
34	Bird Road EB On-ramp to Sunset Dr WB Off-ramp**		2,119	37.2	0.8	E	2,419	41.8	0.87	E
35	On-ramp from Miller Dr EB		-	-	-	-	-	-	-	-
36	Miller Drive EB On-ramp to Sunset Dr WB Off-ramp		-	-	-	-	-	-	-	-
37	Off-ramp to Sunset Dr WB		-	-	-	-	-	-	-	-
38	Sunset Dr WB Off-ramp to Sunset Drive EB On-ramp	Basic	4,964	32.9	0.79	D	5,346	35.5	0.85	E
39	On-ramp from Sunset Drive EB	Merge	332	30.1	0.18	D	363	32.2	0.20	D
40	Sunset Drive EB On-ramp to SW 88th St WB Off-ramp	Basic	5,296	35.0	0.84	D	5,709	38.4	0.91	E
41	Off-ramp to SW 88th St WB	Major Diverge	2,676	32.8	0.68	D	2,704	35.3	0.69	E
42	Off-ramp to SW 88th St WB to SW 88th St EB On-ramp	Basic	2,620	26.1	0.63	D	3,005	29.9	0.72	D
43	SW 88th St EB On-ramp	Merge	124	26.5	0.07	C	284	31.0	0.16	D
44	SW 88th St EB On-ramp to US1 Merge	Basic	2,744	34.1	0.69	D	3,289	40.9	0.82	E

Notes:
*HCS do not support 3-lane ramp analysis **Shortest distance is considered for the worst condition

Table 4.10 – 2045 SR 826 Alternative 1 Northbound C-D Ramp Results

#	Ramp Segment	Volume (veh/hr)		Capacity (pc/h)	Volume/Capacity	
		AM	PM		AM	PM
8	On-ramp from Flagler St	1,934	1,664	4,000	0.52	0.44
7	Flagler St On-ramp to SR 826/SR 836 Off-ramp	3,159	2,492	6,000	0.56	0.44
6	Off-ramp to Flagler St	705	824	1,900	0.40	0.46
5	SR 826 off-ramp to Flagler St On-ramp	1,225	828	2,100	0.62	0.42
4	Bird Rd Ramp Terminal	1,777	1,749	4,200	0.45	0.44
3	Bird Rd Off-ramp to SR 874 On-ramp	839	904	4,000	0.22	0.24
2	Bird Rd Off-ramp/Miller Dr On-ramp	2,170	2,108	6,000	0.39	0.37
1	Miller Dr On-ramp	1,487	1,408	4,200	0.38	0.36

Note: CD – Collector Distributor

Table 4.11 – 2045 SR 826 Alternative 1 Southbound C-D Ramp Results

#	Ramp Segment	Volume (veh/hr)		Capacity (pc/h)	Volume/Capacity	
		AM	PM		AM	PM
1	SR 836 Off-ramp to Flagler St	3,837	3,016	6,000	0.68	0.54
2	Flagler St Off-ramp to Flagler St On-ramp	1,904	1,333	4,000	0.51	0.36
3	SR 826 Off-ramp to Flagler St	1,933	1,683	1,900	**1.09**	0.94
4	Flagler St WB off-ramp	932	1,317	1,900	0.52	0.74
5	Flagler St On-ramp	2,836	2,650	6,000	0.50	0.47
6	Flagler St Off-ramp to SW 8th St Off-ramp	1,216	1,174	4,000	0.32	0.31
7	SW 8th St WB Off-ramp	655	690	1,900	0.37	0.39
8	SW 8th St EB Off-ramp	561	484	1,900	0.32	0.27
9	Bird Rd On-ramp	1,892	2,352	5,700	0.35	0.44
10	Bird Rd On-ramp to SR 874 On-ramp	2,924	4,122	7,600	0.41	0.58
11	SR 874 On-ramp to SR 826 On-ramp	1,937	2,687	3,800	0.54	0.75
12	Miller Dr On-ramp	1,203	1,683	3,800	0.34	0.47

Note: CD – Collector Distributor

NTS

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION
BRIDGE
GENERAL USE LANE
EXPRESS LANE
EXPRESS LANE (BUSES ONLY)
ELEVATED EXPRESS LANE
ROADWAY IMPROVEMENTS
MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION	
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)	
VOLUME/ CAPACITY AM (PM)	OK / FAIL AM (PM)

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
FPID No.: 432639-1-22-02
ETDM No.: 14308

2045 DESIGN YEAR ALTERNATIVE 1
DIRECTIONAL DESIGN HOURLY VOLUMES

FIGURE 4.22

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
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2045 DESIGN YEAR ALTERNATIVE 1
DIRECTIONAL DESIGN HOURLY VOLUMES

FIGURE 4.22

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

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SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY

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2045 DESIGN YEAR ALTERNATIVE 1
DIRECTIONAL DESIGN HOURLY VOLUMES

FIGURE 4.22

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
FPID No.: 432639-1-22-02
ETDM No.: 14308

2045 DESIGN YEAR ALTERNATIVE 1
DIRECTIONAL DESIGN HOURLY VOLUMES

FIGURE 4.22

Table 4.12 – 2045 SR 826 Alternative 2 Northbound Freeway Analysis Results

#	Segment Description	Analysis Type	Volume	Density (pc/mi/ln)	V/C Ratio	LOS	Volume	Density (pc/mi/ln)	V/C Ratio	LOS
			AM Peak				PM Peak			
50	NW 25th St WB On-ramp to NW 36th St EB Off-ramp	Basic	12,987	-	1.07	F	10,240	36.1	0.85	E
49	On-ramp from NW 25th St WB	Major Merge	1,515	-	0.82	-	1,303	-	0.71	-
48	NW 25th St EB Off-ramp to NW 25th St WB On-ramp	Basic	11,472	-	1.10	F	8,937	34.1	0.85	D
47	Off-ramp to NW 25th St EB	Weave	-	-	-	-	-	-	-	-
46	SR 836 EB On-ramp to NW 25th St EB Off-ramp		3,919	-	0.98	F	2,943	39.3	0.92	E
45	On-ramp from SR 836 EB		-	-	-	-	-	-	-	-
44	SR 836 WB On-ramp to SR 836 EB On-ramp	Basic	11,782	42.2	0.97	E	8,804	30.1	0.72	D
43	On-ramp from SR 836 WB	Major Merge	3,347	-	0.81	-	2,421	-	0.59	-
42	Flagler St WB On-ramp to SR 836 WB On-ramp	Basic	8,435	-	1.02	F	6,368	32.6	0.77	D
41	On-ramp from Flagler St WB	Merge	1,655	39.0	0.85	E	1,217	30.1	0.62	D
40	EL Merge to Flagler St WB On-ramp	Basic	6,780	34.8	0.82	D	5,166	26.5	0.63	D
39	Express Lane Merge	Merge	500	28.8	0.25	D	546	23.6	0.27	C
38	SR 836 Off-ramp to EL Merge	Basic	6,280	32.2	0.76	D	4,620	23.7	0.56	C
37	Off ramp to SR 836	Major Diverge	1,099	23.0	0.21	C	1,339	18.5	0.25	B
36	Flagler St WB Off-ramp to SR 836 Off-ramp	Basic	7,379	25.3	0.60	C	5,959	20.5	0.48	C
35	Off-ramp to Flagler St WB	Weave	-	-	-	-	-	-	-	-
34	SW 8th St WB On-ramp to Flagler St WB Off-ramp		-	-	-	-	-	-	-	-
33	On-ramp from SW 8th St WB		-	-	-	-	-	-	-	-
32	SW 8th St EB On-ramp to Flagler St WB Off-ramp		3,137	35.7	0.96	E	2,195	25.5	0.67	C
31	On-ramp from SW 8th St EB		-	-	-	-	-	-	-	-
30	SW 8th St EB Off-ramp to SW 8th St EB On-ramp	Basic	7,760	40.7	0.94	E	6,362	32.8	0.77	D
29	Off-ramp to SW 8th St EB	Weave	-	-	-	-	-	-	-	-
28	Coral Way EB On-ramp to SW 8th St EB Off-ramp		2,529	37.2	0.78	E	2,394	30.6	0.73	D
27	On-ramp from Coral Way EB		-	-	-	-	-	-	-	-
26	Coral Way EB Off-ramp to Coral Way EB On-ramp	Basic	8,552	35.6	0.83	E	7,409	30.8	0.72	D
25	Off-ramp to Coral Way EB	Weave	-	-	-	-	-	-	-	-
24	Bird Rd WB On-ramp to Coral Way EB Off-ramp		2,094	-	1.18	F	1,986	-	1.05	F
23	On-ramp from Bird Rd WB		-	-	-	-	-	-	-	-
22	SR 874 On-ramp to Bird Rd WB On-ramp	Basic	8,178	33.3	0.79	D	6,889	28.1	0.67	D
21	On-ramp from SR 874 (toll road merge)	Major Merge	1,813	-	0.44	-	1,498	-	0.36	-
20	Miller Dr WB On-ramp to SR 874 On-ramp	Basic	6,365	32.7	0.77	D	5,391	27.7	0.65	D
19	On-ramp from Miller Dr WB	Major Merge	1,471	-	0.74	-	1,244	-	0.63	-
18	Bird Rd EB Off-ramp to EL Diverge	Basic	4,894	32.9	0.79	D	4,147	27.9	0.67	D
17	Off-ramp to Bird Rd EB	Major Diverge	626	25.8	0.32	C	627	22.3	0.32	C
16	Miller Dr EB Off-ramp to Bird Rd EB Off-ramp	Basic	5,520	27.7	0.67	D	4,774	23.9	0.58	C
15	Off-ramp from Miller Dr WB	Weave	-	-	-	-	-	-	-	-
14	Sunset Dr WB On-ramp to Miller Dr EB Off-ramp		1,788	34.5	0.82	D	1,850	28.6	0.83	D
13	On-ramp from Sunset Dr WB		-	-	-	-	-	-	-	-
12	EL Diverge to Sunset Dr WB On-ramp	Basic	4,878	32.1	0.78	D	3,795	25.0	0.60	C
11	EL Diverge	Major Diverge	838	26.5	0.40	C	1,027	22.4	0.50	C
10	Sunset Dr EB Off-ramp to Sunset Dr WB On-ramp	Basic	5,716	28.2	0.68	D	4,822	23.8	0.58	C
9	Off-ramp to Sunset Dr EB	Weave	-	-	-	-	-	-	-	-
8	On-ramp to Sunset Dr EB Off- ramp**		2,540	26.3	0.79	C	2,431	23.5	0.82	C
7	On-ramp to Sunset Dr EB Off- ramp***		1,607	30.2	0.64	D	1,777	25.7	0.56	C
6	SW 88th St WB On-ramp		-	-	-	-	-	-	-	-
5	SW 88th ST EB On-ramp to Sunset Dr EB Off-ramp	Basic	4,868	25.4	0.60	C	3,620	18.9	0.45	C
4	Loop On ramp from SW 88th St EB	Major Merge	1,106	-	0.59	-	778	-	0.41	-
3	SW 88th St EB Off-ramp to SW 88th St EB on-ramp	Basic	3,762	24.8	0.61	C	2,842	18.8	0.46	C
2	Off-ramp to SW 88th Street	Diverge	171	27.0	0.09	C	145	21.8	0.08	C
1	US 1 to SW 88th St EB Off-ramp	Ramp	3,933	-	0.96	-	2,987	-	0.73	-

Notes:
*HCS do not support 3-lane ramp analysis **Shortest distance is considered for the worst condition *** Alt 1 is reported as the worst condition

Table 4.13 – 2045 SR 826 Alternative 2 Southbound Freeway Analysis Results

#	Segment Description	Analysis Type	Volume	Density (pc/mi/ln)	V/C Ratio	LOS	Volume	Density (pc/mi/ln)	V/C Ratio	LOS
			AM Peak				PM Peak			
1	NW 36th St EB On-ramp to NW 25th St WB Off-ramp	Basic	13,528	-	1.11	F	11,106	39.0	0.91	E
2	Off-ramp to NW 25th St WB	Diverge	2,022	-	1.14	F	1,416	44.0	0.80	E
3	NW 25th St WB Off-ramp to NW 25th St EB On-ramp	Basic	11,506	41.1	0.95	E	9,690	33.7	0.80	D
4	On-ramp from NW 25th Street EB	Major Merge	936	-	0.25	-	2,264	-	0.60	-
5	NW 25th St EB On-ramp to SR 836 WB Off-ramp*	Weave	3,543	-	1.11	F	3,689	-	1.15	F
6	NW 25th St EB On-ramp to SR 836 WB Off-ramp	Basic	12,442	36.6	0.87	E	11,954	35.1	0.84	E
7	Off-ramp to SR 836 WB	Major Diverge	3,069	33.5	0.58	D	2,294	32.2	0.59	D
8	SR 836 WB Off-ramp to SR 836 Off-ramp	Basic	9,373	39.8	0.93	E	9,660	41.5	0.95	E
9	Off-ramp to SR 836	Diverge	791	37.0	0.45	E	209	34.9	0.12	D
10	SR 836 Off-ramp to Flagler St WB Off-ramp	Basic	8,582	34.6	0.83	D	9,451	38.8	0.91	E
11	Off-ramp to Flagler St WB	Major Diverge	2,643	32.0	0.67	D	2,276	35.3	0.58	E
12	Flagler St WB Off-ramp to SR 836 EB On-ramp	Basic	5,939	30.0	0.72	D	7,175	36.3	0.87	E
13	Express Lane Diverge	Diverge	949	31.2	0.47	D	517	34.4	0.25	D
14	EL Diverge to SR 836 EB On-ramp	Basic	4,990	25.2	0.60	C	6,658	33.6	0.80	D
15	On-ramp from SR 836 EB	Major Merge	1,748	-	0.44	-	1,642	-	0.42	-
16	SR 836 EB On-ramp to Flagler St WB On-ramp	Basic	6,738	34.0	0.81	D	8,300		1.00	F
17	On-ramp from Flagler St WB	Major Merge	1,053	-	0.27	-	1,251	-	0.32	-
18	Flagler St WB On-ramp to SW 8th St EB On-ramp	Basic	7,791	31.3	0.75	D	9,551	39.2	0.92	E
19	On-ramp from SW 8th St EB	Weave	-	-	-	-	-	-	-	-
20	SW 8th St WB On-ramp to Flagler St WB Off-ramp		1,973	34.3	0.71	D	2,867	-	0.91	F
21	Off-ramp to Coral Way WB		-	-	-	-	-	-	-	-
22	Coral Way WB Off-ramp to Coral Way WB On-ramp	Basic	7,621	30.4	0.73	D	9,435	38.4	0.91	E
23	On-ramp from Coral Way WB****	Major Merge	-	-	-	-	1,030	-	0.58	-
24	Coral Way WB on-ramp to Bird Rd WB Off-ramp	Weave	2,363	30.3	0.73	D	2,606	-	-	-
25	Off-ramp to Bird Rd WB	Major Diverge	-	-	-	-	1,962	32.6	0.48	D
26	Bird Rd WB Off-ramp to SR 874 WB Off-ramp	Basic	6,303	25.4	0.61	C	8,503	34.3	0.82	D
27	Off-ramp to SR 874	Diverge	902	13.7	0.23	B	1,817	22.6	0.46	C
28	SR 874 WB Off-ramp to SR 874 Diverge	Basic	5,401	21.7	0.52	C	6,686	26.8	0.65	D
29	Diverge to SR 874	Major Diverge	1,372	20.2	0.22	C	1,605	25.0	0.26	C
30	SR 874 Diverge to Bird Rd EB On-ramp	Basic	4,029	27.0	0.65	D	5,081	34.0	0.82	D
31	On-ramp from Bird Rd WB	Major Merge	691	-	0.35	-	1,063	-	0.54	-
32	On-ramp from Bird Rd EB to Miller Rd EB On-ramp**	Weave	1,922	26.4	0.86	C	2,451	-	1.10	F
33	On-ramp from Bird Rd EB to Miller Rd EB On-ramp	Basic	4,720	23.7	0.57	C	6,144	30.8	0.74	D
34	On-ramp from Miller Dr EB	Major Merge	518	-	0.28	-	586	-	0.31	-
35	Miller Dr EB On-ramp to Sunset Dr WB Off-ramp	Weave	-	-	-	-	-	-	-	-
36	Miller Drive EB On-ramp to Sunset Dr WB Off-ramp	Basic	5,238	21.0	0.51	C	6,730	27.0	0.65	D
37	Off-ramp to Sunset Dr WB	Major diverge	1,325	19.6	0.34	B	1,573	25.1	0.40	C
38	Sunset Dr WB Off-ramp to EL Merge	Basic	3,913	25.9	0.62	C	5,157	34.2	0.82	D
39	Express Lane Merge	Major Merge	1,293	-	0.62	-	744	-	0.36	-
40	EL Merge to Sunset Dr EB On-ramp	Basic	5,206	25.9	0.62	C	5,901	29.3	0.71	D
41	On-ramp from Sunset Drive EB	Merge	332	23.0	0.18	C	356	25.6	0.19	C
42	Sunset Drive EB On-ramp to SW 88th St WB Off-ramp	Basic	5,538	27.4	0.66	D	6,257	31.0	0.75	D
43	Off-ramp to SW 88th St WB	Major Diverge	2,785	25.7	0.71	C	2,618	29.1	0.66	D
44	Off-ramp to SW 88th St WB to SW 88th St EB On-ramp	Basic	2,753	18.3	0.44	C	3,639	24.1	0.58	C
45	SW 88th St EB On-ramp	Merge	138	14.3	0.08	B	502	21.7	0.29	C
46	SW 88th St EB On-ramp to US1 Merge	Basic	2,891	24.0	0.48	C	4,141	34.3	0.69	D

Notes:
*HCS do not support 3-lane ramp analysis **Shortest distance is considered for the worst condition *** Alt 1 is reported as the worst condition
****AM analyzed as weaving

Table 4.14 – 2045 SR 826 Alternative 2 Northbound C-D Ramp Results

#	Ramp Segment	Volume (veh/hr)		Capacity (pc/h)	Volume/Capacity	
		AM	PM		AM	PM
8	On-ramp from Flagler St	1,912	1,674	4,000	0.51	0.45
7	Flagler St On-ramp to SR 826/SR 836 Off-ramp	3,370	2,381	6,000	0.60	0.42
6	Off-ramp to Flagler St	705	822	1,900	0.40	0.46
5	SR 826 off-ramp to Flagler St On-ramp	1,458	707	2,100	0.74	0.36
4	Bird Rd Ramp Terminal	1,649	1,554	4,200	0.42	0.39
3	Bird Rd Off-ramp to SR 874 On-ramp	722	645	4,000	0.19	0.17
2	Bird Rd Off-ramp/Miller Dr On-ramp	2,193	1,889	6,000	0.39	0.34
1	Miller Dr On-ramp	1,567	1,262	4,200	0.40	0.32

Note: CD – Collector Distributor

Table 4.15 – 2045 SR 826 Alternative 2 Southbound C-D Ramp Results

#	Ramp Segment	Volume (veh/hr)		Capacity (pc/h)	Volume/Capacity	
		AM	PM		AM	PM
1	SR 836 Off-ramp to Flagler St	3,144	2,869	6,000	0.56	0.51
2	Flagler St Off-ramp to Flagler St On-ramp	1,194	1,171	4,000	0.32	0.31
3	SR 826 Off-ramp to Flagler St	1,950	1,698	1,900	**1.09**	0.95
4	Flagler St WB off-ramp	1,226	1,338	1,900	0.69	0.75
5	Flagler St On-ramp	2,420	2,509	6,000	0.43	0.45
6	Flagler St Off-ramp to SW 8th St Off-ramp	1,367	1,258	4,000	0.36	0.34
7	SW 8th St WB Off-ramp	806	690	1,900	0.45	0.39
8	SW 8th St EB Off-ramp	561	568	1,900	0.32	0.32
9	Bird Rd On-ramp	1,784	2,195	5,700	0.33	0.41
10	Bird Rd On-ramp to SR 874 On-ramp	2,686	4,012	7,600	0.38	0.56
11	SR 874 On-ramp to SR 826 On-ramp	1,744	2,679	3,800	0.49	0.75
12	Miller Dr On-ramp	1,053	1,616	3,800	0.30	0.45

Note: CD – Collector Distributor

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION
BRIDGE
GENERAL USE LANE
EXPRESS LANE
EXPRESS LANE (BUSES ONLY)
ELEVATED EXPRESS LANE
ROADWAY IMPROVEMENTS
MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION	
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)	
VOLUME/ CAPACITY AM (PM)	OK / FAIL AM (PM)

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ETDM No.: 14308

2045 DESIGN YEAR ALTERNATIVE 2
OPERATIONAL ANALYSIS RESULTS

FIGURE 4.23

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION
BRIDGE
GENERAL USE LANE
EXPRESS LANE
EXPRESS LANE (BUSES ONLY)
ELEVATED EXPRESS LANE
ROADWAY IMPROVEMENTS
MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION			
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)			
VOLUME/ CAPACITY	AM (PM)	OK / FAIL	AM (PM)

FLORIDA DEPARTMENT OF TRANSPORTATION
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MIAMI, FL 33172

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SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
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2045 DESIGN YEAR ALTERNATIVE 2
OPERATIONAL ANALYSIS RESULTS

FIGURE 4.23

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
MIAMI, FL 33172

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SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY

From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
FPID No.: 432639-1-22-02
ETDM No.: 14308

2045 DESIGN YEAR ALTERNATIVE 2 OPERATIONAL ANALYSIS RESULTS

FIGURE 4.23

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SIX
1000 NW 111TH AVENUE
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SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
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ETDM No.: 14308

2045 DESIGN YEAR ALTERNATIVE 2
OPERATIONAL ANALYSIS RESULTS

FIGURE 4.23

Table 4.16 – 2045 SR 826 Alternative 3 Northbound Freeway Analysis Results

#	Segment Description	Analysis Type	Volume	Density (pc/mi/ln)	V/C Ratio	LOS	Volume	Density (pc/mi/ln)	V/C Ratio	LOS
			AM Peak				PM Peak			
51	NW 25th St WB On-ramp to NW 36th St EB Off-ramp	Basic	12,814	-	1.06	F	10,266	36.2	0.85	E
50	On-ramp from NW 25th St WB	Major Merge	1,490	-	0.81	-	1,382	-	0.75	-
49	NW 25th St EB Off-ramp to NW 25th St WB On-ramp	Basic	11,324	-	1.08	F	8,884	33.8	0.85	D
48	Off-ramp to NW 25th St EB	Weave	-	-	-	-	-	-	-	-
47	SR 836 EB On-ramp to NW 25th St EB Off-ramp		3,889	-	1.21	F	3,017	39.3	0.94	E
46	On-ramp from SR 836 EB		-	-	-	-	-	-	-	-
45	SR 836 WB On-ramp to SR 836 EB On-ramp	Basic	11,694	41.8	0.96	E	8,956	30.7	0.73	D
44	On-ramp from SR 836 WB	Major Merge	3,252	-	0.79	-	2,371	-	0.58	-
43	Flagler St WB On-ramp to SR 836 WB On-ramp	Basic	8,442	-	1.02	F	6,585	33.7	0.80	D
42	On-ramp from Flagler St WB	Merge	1,627	38.9	0.83	E	1,308	31.2	0.67	D
41	EL Merge to Flagler St WB On-ramp	Basic	6,815	35.0	0.83	D	5,277	27.1	0.64	D
40	Express Lane Merge	Major Merge	463	-	0.22	-	401	-	0.19	-
39	SR 836 Off-ramp to EL Merge	Basic	6,352	-	1.03	F	4,876	33.4	0.79	D
38	Off ramp to SR 836	Major Diverge	1,822	30.5	0.46	D	1,688	24.5	0.43	C
37	Flagler St WB Off-ramp to SR 836 Off-ramp	Basic	8,174	33.7	0.79	D	6,564	27.0	0.64	D
36	Off-ramp to Flagler St WB	Weave	-	-	-	-	-	-	-	-
35	SW 8th St WB On-ramp to Flagler St WB Off-ramp		-	-	-	-	-	-	-	-
34	On-ramp from SW 8th St WB		-	-	-	-	-	-	-	-
33	SW 8th St EB On-ramp to Flagler St WB Off-ramp		3,126	-	0.96	F	2,306	31.7	0.73	D
32	On-ramp from SW 8th St EB		-	-	-	-	-	-	-	-
31	SW 8th St EB Off-ramp to SW 8th St EB On-ramp	Basic	8,169	44.3	0.99	E	6,958	35.8	0.84	E
30	Off-ramp to SW 8th St EB	Major Diverge	1,649	36.7	0.42	E	1,845	32.9	0.47	D
29	Coral Way EB On-ramp to SW 8th St EB Off-ramp	Basic	9,818	41.7	0.96	E	8,803	36.6	0.86	E
28	On-ramp from Coral Way EB	Merge	1,057	28.7	0.60	D	905	24.6	0.51	C
27	Coral Way EB Off-ramp to Coral Way EB On-ramp	Basic	8,761	36.5	0.85	E	7,898	32.9	0.77	D
26	Off-ramp to Coral Way EB	Weave	-	-	-	-	-	-	-	-
25	Bird Rd WB On-ramp to Coral Way EB Off-ramp		2,031	-	1.13	F	1,933	41.3	0.87	E
24	On-ramp from Bird Rd WB		-	-	-	-	-	-	-	-
23	Bird Rd EB On-ramp to Bird Rd WB On-ramp	Basic	9,045	37.6	0.88	E	7,784	32.4	0.76	D
22	On-ramp from Bird Rd EB	Merge	740	24.6	0.42	C	440	19.8	0.25	B
21	SR 874 On-ramp to Bird Rd EB On-ramp	Basic	8,305	34.5	0.81	D	7,344	30.6	0.71	D
20	On-ramp from SR 874 (toll road merge)	Major Merge	2,149	-	0.52	-	1,843	-	0.45	-
19	Miller Dr WB On-ramp to SR 874 On-ramp	Basic	6,156	31.6	0.75	D	5,501	28.2	0.67	D
18	On-ramp from Miller Dr WB	Major Merge	1,164	-	0.59	-	1,133	-	0.57	-
17	Bird Rd EB Off-ramp to Miller Dr WB On-ramp	Basic	4,992	33.6	0.80	D	4,368	29.4	0.70	D
16	Off-ramp to Bird Rd EB	Major Diverge	544	25.8	0.28	C	611	23.2	0.31	C
15	Miller Dr EB Off-ramp to Bird Rd EB Off-ramp	Basic	5,536	27.8	0.67	D	4,979	25.0	0.60	C
14	Off-ramp to Miller Rd WB	Weave	-	-	-	-	-	-	-	-
13	Sunset Dr WB On-ramp to Miller Dr EB Off-ramp		1,749	34.3	0.81	D	1,814	29.4	0.81	D
12	On-ramp from Sunset Dr WB		-	-	-	-	-	-	-	-
11	EL Diverge to Sunset Dr WB On-ramp	Basic	4,881	32.1	0.78	D	3,980	26.2	0.63	D
10	EL Diverge	Major Diverge	819	35.3	0.40	E	730	30.7	0.36	D
9	Sunset Dr EB Off-ramp to Sunset Dr WB On-ramp	Basic	5,700	38.3	0.91	E	4,710	31.0	0.75	D
8	Off-ramp to Sunset Dr EB	Weave	-	-	-	-	-	-	-	-
7	SW 88th ST WB On-ramp to Sunset Dr EB Off-ramp		1,813	41.9	0.85	E	1,825	33.8	0.83	D
6	On-ramp from SW88th St WB		-	-	-	-	-	-	-	-
5	SW 88th ST EB On-ramp to Sunset Dr EB Off-ramp	Basic	4,533	31.6	0.75	D	3,457	24.1	0.57	C
4	On-ramp from SW88th St EB	Major Merge	1,055	-	0.56	-	778	-	0.41	-
3	SW 88th St EB Off-ramp to SW 88th St EB On-ramp	Basic	3,478	34.7	0.85	D	2,679	26.5	0.65	D
2	Off-ramp to SW 88th Street	Diverge	162	36.9	0.09	E	140	29.1	0.08	D
1	Off-ramp to SW 88th Street	Basic	3,640	-	0.89	-	2,819	-	0.69	-

Table 4.17 – 2045 SR 826 Alternative 3 Southbound Freeway Analysis Results

#	Segment Description	Analysis Type	Volume	Density (pc/mi/ln)	V/C Ratio	LOS	Volume	Density (pc/mi/ln)	V/C Ratio	LOS
			AM Peak				PM Peak			
1	NW 36th St EB On-ramp to NW 25th St WB Off-ramp	Basic	13,447	-	1.11	F	11,211	39.6	0.92	E
2	Off-ramp to NW 25th St WB	Diverge	2,003	54.5	1.13	F	1,258	43.5	0.71	E
3	NW 25th St WB Off-ramp to NW 25th St EB On-ramp	Basic	11,444	40.8	0.94	E	9,953	34.7	0.82	D
4	On-ramp from NW 25th Street EB	Major Merge	1,009	-	0.27	-	2,369	-	0.63	-
5	NW 25th St EB On-ramp to SR 836 WB Off-ramp*	Weave	3,637	-	1.14	F	4,153	-	1.3	F
6	NW 25th St EB On-ramp to SR 836 WB Off-ramp	Basic	12,453	36.7	0.87	E	12,322	-	0.87	E
7	Off-ramp to SR 836 WB	Major Diverge	3,136	33.5	0.59	D	2,898	33.1	0.74	D
8	SR 836 WB Off-ramp to SR 836 Off-ramp	Basic	9,317	39.4	0.92	E	9,424	40.1	0.93	E
9	Off-ramp to SR 836	Diverge	791	36.9	0.45	E	256	34.4	0.15	D
10	SR 836 Off-ramp to Flagler St WB Off-ramp	Basic	8,526	34.4	0.82	D	9,168	37.3	0.89	E
11	Off-ramp to Flagler St WB	Major Diverge	2,754	31.8	0.70	D	2,422	34.2	0.61	D
12	Flagler St WB Off-ramp to SR 836 EB On-ramp	Basic	5,772	29.1	0.70	D	6,746	34.0	0.81	D
13	Express Lane Diverge	Diverge	482	29.6	0.24	D	514	34.2	0.25	D
14	EL Diverge to SR 836 EB On-ramp	Basic	5,290	26.7	0.64	D	6,232	31.4	0.75	D
15	On-ramp from SR 836 EB	Major Merge	2,478	-	0.63	-	1,982	-	0.50	-
16	SR 836 EB On-ramp to Flagler St WB On-ramp	Basic	7,768	40.3	0.94	E	8,214	44.3	0.99	E
17	On-ramp from Flagler St WB	Major Merge	1,082	-	0.28	-	1,427	-	0.36	-
18	Flagler St WB On-ramp to SW 8th St EB On-ramp	Basic	8,850	35.6	0.85	E	9,641	39.8	0.93	E
19	On-ramp from SW 8th St EB	Weave	-	-	-	-	-	-	-	-
20	SW 8th St WB On-ramp to Flagler St WB Off-ramp		2,172	-	0.98	F	2,764	-	1.24	F
21	Off-ramp to Coral Way WB		-	-	-	-	-	-	-	-
22	Coral Way WB Off-ramp to Coral Way WB On-ramp	Basic	8,870	35.5	0.85	E	9,528	38.9	0.92	E
23	On-ramp from Coral Way WB	Major Merge	811	-	0.46	-	1,030	-	0.58	-
24	Coral Way WB on-ramp to Bird Rd WB Off-ramp	Basic	9,681	32.4	0.78	D	10,558	35.4	0.85	E
25	Off-ramp to Bird Rd WB	Major Diverge	2,088	30.1	0.51	D	1,958	32.8	0.48	D
26	Bird Rd WB Off-ramp to SR 874 WB Off-ramp	Basic	7,593	30.7	0.73	D	8,600	34.7	0.83	D
27	Off-ramp to SR 874	Diverge	945	30.3	0.48	D	1,762	37.8	0.90	E
28	SR 874 WB Off-ramp to SR 874 Diverge	Basic	6,648	26.7	0.64	D	6,838	27.4	0.66	D
29	Diverge to SR 874	Major Diverge	1,850	24.8	0.30	C	1,974	25.5	0.32	C
30	SR 874 Diverge to Bird Rd EB On-ramp	Basic	4,798	32.1	0.77	D	4,864	32.5	0.78	D
31	On-ramp from Bird Rd WB	Weave	-	-	-	-	-	-	-	-
32	Bird Rd EB On-ramp to Sunset Dr WB Off-ramp**		2,053	33.7	0.74	D	2,529	40.3	0.84	E
33	On-ramp from Miller Dr EB		-	-	-	-	-	-	-	-
34	Miller Dr EB On-ramp to Sunset Dr WB Off-ramp		-	-	-	-	-	-	-	-
35	Off-ramp to Sunset Dr WB		-	-	-	-	-	-	-	-
36	Sunset Dr WB Off-ramp to EL Merge	Basic	4,456	29.5	0.71	D	4,994	33.1	0.80	D
37	Express Lane Merge	Major Merge	806	29.8	0.39	D	880	33.4	0.43	D
38	EL Merge to Sunset Dr EB On-ramp	Basic	5,262	34.9	0.84	D	5,874	40.1	0.94	E
39	On-ramp from Sunset Drive EB	Merge	343	31.6	0.19	D	379	34.9	0.20	D
40	Sunset Drive EB On-ramp to SW 88th St WB Off-ramp	Basic	5,605	37.5	0.89	E	6,253	44.6	1.00	E
41	Off-ramp to SW 88th St WB	Major Diverge	2,515	34.7	0.64	D	2,592	38.7	0.66	E
42	Off-ramp to SW 88th St WB to SW 88th St EB On-ramp	Basic	3,090	30.7	0.74	D	3,661	36.6	0.87	E
43	SW 88th St EB On-ramp	Merge	147	-	0.08	-	472	-	0.25	-
44	SW 88th St EB On-ramp to US1 Merge	Ramp	3,237	21.9	0.53	C	4,133	27.9	0.68	D

Notes:
*HCS do not support 3-lane ramp analysis **Shortest distance is considered for the worst condition

Table 4.18 – 2045 SR 826 Alternative 3 Northbound C-D Ramp Results

#	Ramp Segment	Volume (veh/hr)		Capacity (pc/h)	Volume/Capacity	
		AM	PM		AM	PM
8	On-ramp from Flagler St	1,767	1,560	4,000	0.47	0.42
7	Flagler St On-ramp to SR 826/SR 836 Off-ramp	2,992	2,316	6,000	0.53	0.41
6	Off-ramp to Flagler St	705	824	1,900	0.40	0.46
5	SR 826 off-ramp to Flagler St On-ramp	1,225	756	2,100	0.62	0.38
4	Bird Rd Ramp Terminal	1,855	1,535	4,200	0.47	0.39
3	Bird Rd Off-ramp to SR 874 On-ramp	889	711	4,000	0.24	0.19
2	Bird Rd Off-ramp/Miller Dr On-ramp	2,053	1,844	6,000	0.37	0.33
1	Miller Dr On-ramp	1,509	1,233	4,200	0.38	0.31

Note: CD – Collector Distributor

Table 4.19 – 2045 SR 826 Alternative 3 Southbound C-D Ramp Results

#	Ramp Segment	Volume (veh/hr)		Capacity (pc/h)	Volume/Capacity	
		AM	PM		AM	PM
1	SR 836 Off-ramp to Flagler St	3,255	3,015	6,000	0.58	0.54
2	Flagler St Off-ramp to Flagler St On-ramp	1,535	1,307	4,000	0.41	0.35
3	SR 826 Off-ramp to Flagler St	1,720	1,708	1,900	0.97	0.96
4	Flagler St WB off-ramp	1,027	1,366	1,900	0.58	0.77
5	Flagler St On-ramp	2,562	2,673	6,000	0.46	0.48
6	Flagler St Off-ramp to SW 8th St Off-ramp	1,480	1,246	4,000	0.39	0.33
7	SW 8th St WB Off-ramp	919	690	1,900	0.52	0.39
8	SW 8th St EB Off-ramp	561	556	1,900	0.32	0.31
9	Bird Rd On-ramp	1,664	2,349	5,700	0.31	0.44
10	Bird Rd On-ramp to SR 874 On-ramp	2,609	4,111	7,600	0.37	0.58
11	SR 874 On-ramp to SR 826 On-ramp	1,723	2,781	3,800	0.48	0.78
12	Miller Dr On-ramp	1,105	1,605	3,800	0.31	0.45

Note: CD – Collector Distributor

LEGEND

- 5 > NUMBER OF LANES AND TRAFFIC DIRECTION
- BRIDGE
- GENERAL USE LANE
- EXPRESS LANE
- EXPRESS LANE (BUSES ONLY)
- ELEVATED EXPRESS LANE
- ROADWAY IMPROVEMENTS
- MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION		
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)		
VOLUME/ CAPACITY AM (PM)	OK / FAIL AM (PM)	

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MIAMI, FL 33172

826

SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY

From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
FPID No.: 432639-1-22-02
ETDM No.: 14308

2045 DESIGN YEAR ALTERNATIVE 3
DIRECTIONAL DESIGN HOURLY VOLUMES

FIGURE 4.24

FDOT

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2045 DESIGN YEAR ALTERNATIVE 3
DIRECTIONAL DESIGN HOURLY VOLUMES

FIGURE 4.24

LEGEND

- 5 > NUMBER OF LANES AND TRAFFIC DIRECTION
- BRIDGE
- GENERAL USE LANE
- EXPRESS LANE
- EXPRESS LANE (BUSES ONLY)
- ELEVATED EXPRESS LANE
- ROADWAY IMPROVEMENTS
- MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION		
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)		
VOLUME/ CAPACITY AM (PM)	OK / FAIL AM (PM)	

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FIGURE 4.24

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2045 DESIGN YEAR ALTERNATIVE 3
DIRECTIONAL DESIGN HOURLY VOLUMES

FIGURE 4.24

4.6 Comparative Alternatives Evaluation

4.6.1 Evaluation Matrix

Evaluation of transportation projects to select the most desirable alternative is often based on a wide range of performance criteria that reflect the concerns of all the key stakeholders. The No-Build and Build Alternatives were evaluated based on a selected criterion of variables and parameters.

The various criteria used in the evaluation are summarized in ***Table 4.20***. The evaluation methodology used in this study involves a combination of both comparative qualitative and quantitative analyses to determine the preferred alternative. The evaluation matrix is presented in ***Table 4.21***.

Table 4.20 – Performance Evaluation Criteria

Engineering
Multimodal Facilities: Measures the availability of multi-modal facilities and their amenities and how each alternative enhances the ability to promote other transportation modes.
Mobility: Measures the ability of an alternative to provide adequate capacity and minimize travel time delay through the corridor.
Safety Improvements: Provides consideration for an alternative's physical, geometric and operational features identifying to what extent they would minimize actual or potential safety hazards.
Drainage Analysis: Evaluates storm water treatment and attenuation within the project limits. Determines and estimates the storm water management facility requirements to serve the drainage needs of the proposed improvements.
Structures Analysis: Evaluates the needed structural improvements of all the bridges within the project limits. This analysis also determines if new bridges are required to accommodate the proposed improvements.
Utility Impacts: Measures the utility impacts of the alternatives. This includes potential conflicts and relocation of the utility lines that are located within the FDOT right of way.
Maintenance of Traffic: Measures the effectiveness of the proposed traffic control schemes during construction to minimize effects on the local residents, business, and traveling public and emergency management services.
Purpose and Need: Measures the ability of an alternative to comply with the purpose and need of the project.
Traffic: Measures the level of service along the corridor.
Socio-Economic
Right of Way Impacts: Identifies the level and type of any residential and/or business disruptions associated with an alternative.
Social and Neighborhood Impacts: Identifies whether an alternative has impacts on social and neighborhood issues, including visual and aesthetic concerns.
Economic and Employment Impacts: Identifies whether an alternative impacts economic issues along the corridor.
Community Services/Features: Measures the effect and/or compatibility of an alternative to meet the surrounding visual environment needs from both the roadway user and the supporting community. Also provides a degree of impact to the community's services (Fire, Police, Parks, etc.)
Environmental
Noise Impacts: Measures the ability of an alternative to meet pre-established noise standards.
Air Quality: Measures the ability of an alternative to meet pre-established air quality standards.
Contamination: Measures the potential impact on existing or potential hazardous material sites and/or generators.
Listed Species: Identifies the degree of potential effect of threatened and endangered species.
Wetland Impacts: Identifies the degree of potential impacts to wetland habitat.
Cultural/Historic/Archaeological Impacts: Measures the degree of impact associated with historic structures or archaeological sites that may be caused by the development of a specific corridor or concept.
Project Cost
Construction Cost: Compares each alternative based on construction costs only.
Right of Way/Business Damages: Addresses variations in right of way impact costs between alternatives.

Table 4.21 – Evaluation Matrix

Variables/Parameters	No-Build Alternative	Build Alternative 1	Build Alternative 2	Build Alternative 3
ENGINEERING				
Multimodal Facilities	No change	Provides the ability to enhance local bus service operations. Provides the ability to add Bus Rapid Transit. Improves bicycle and pedestrian facilities (at selected interchanges).	Provides the ability to enhance local bus service operations. Provides the ability to add Bus Rapid Transit. Improves bicycle and pedestrian facilities (at selected interchanges). Enhances mobility by connecting the express lanes to the US 1 Busway.	Provides the ability to enhance local bus service operations. Provides the ability to add Bus Rapid Transit. Improves bicycle and pedestrian facilities (at selected interchanges). Enhances mobility by connecting the express lanes to the US 1 Busway.
Mobility	Increased congestion	Adds capacity. Improves the traffic operations of the area. Connects to SR 826 express lanes north of SR 836.	Adds capacity. Improves the traffic operations of the area. Connects to SR 826 express lanes north of SR 836. Connects to US 1 Busway.	Adds capacity. Improves the traffic operations of the area. Connects to SR 826 express lanes north of SR 836. Connects to US 1 Busway. Proposes MDX direct connection between SR 874 and SR 836.
Safety Improvements	Includes planned/ programmed improvements	Reduces long-term crashes related to heavy congestion, mainline weaving maneuvers, mainline and ramp speed differentials and interchange access between SR 874 and SR 836.	Reduces long-term crashes related to heavy congestion, mainline weaving maneuvers, mainline and ramp speed differentials and interchange access between US 1 and SR 836.	Reduces long-term crashes related to heavy congestion, mainline weaving maneuvers, mainline and ramp speed differentials and interchange access between US 1 and SR 836. Separates SR 874-SR 836 traffic from SR 826. Proposes 2nd level roadway over SR 826 from SR 874 to SR 836.
Drainage Analysis	No impact	Additional right of way is not required beyond the proposed roadway right of way limits in order to meet minimum drainage and permitting criteria. Proposed drainage improvements are less than Alternatives 2 and 3.	Additional right of way is not required beyond the proposed roadway right of way limits in order to meet minimum drainage and permitting criteria. Proposed drainage improvements are more than Alternative 1, but less than Alternative 3.	Additional right of way may be required beyond the proposed roadway right of way limits in order to meet minimum drainage and permitting criteria. Proposed drainage improvements are more than Alternatives 1 and 2.
Structures Analysis	No change	New bridges = 10 Bridge widenings = 16 Bridge Culverts = 3 Less new bridges than Alternatives 2 and 3 Less widening bridges than Alternatives 2 and 3	New bridges = 13 Bridge widenings = 20 Bridge Culverts = 4 More new bridges than Alternatives 1, but less than Alternative 3 More widening bridges than Alternative 1	New bridges = 14 Bridge widenings = 20 More new bridges than Alternatives 1 and 2 More widening bridges than Alternative 1, but same for Alternative 2 Proposes a 4.5-mile second level bridge structure from SR 874 to SR 836.
Utility Impacts	No impact	Impacts 10 utilities at 28 potential locations	Impacts 12 utilities at 62 potential locations	Impacts 12 utilities at 76 potential locations
Maintenance of Traffic	No impact	Moderate impacts during construction Less impacts than Alternatives 2 and 3	Moderate impacts during construction More impacts than Alternative 1, but less than Alternative 3	Significant impacts during construction More impacts than Alternatives 1 and2
Purpose and Need	Does not meet	Does Not Meet: Capacity – Does not add capacity improvements to the corridor south of Miller Drive Safety – Does not address safety improvements south of Miller Drive System Linkage – Does not connect the express lanes to the US 1 Busway Emergency Evacuation – Does not provide corridor improvements south of Miller Drive that could enhance emergency evacuation and response	Meets	Meets
2045 Traffic Analysis	37 locations below LOS D Most of the corridor is above capacity	24 freeway locations will operate below LOS D 7 weaving locations will operate below LOS D 7 ramp locations will operate below LOS D Adds corridor capacity between SR 874 and SR 836 Demands 4% more traffic on average than the No-Build	15 locations below LOS D 5 weaving locations will operate below LOS D 4 ramp locations will operate below LOS D Adds corridor capacity between US 1 and SR 836 Demands 10% more traffic on average than the No-Build	22 locations below LOS D 8 weaving locations will operate below LOS D 8 ramp locations will operate below LOS D Adds corridor capacity Adds more capacity than Alternatives 1 and 2 Demands 7% more traffic on average than the No-Build Separates SR 874-SR 836 traffic from SR 826

Table 4.21 – Evaluation Matrix Continued

Variables/Parameters	No-Build Alternative	Build Alternative 1	Build Alternative 2	Build Alternative 3
SOCIO-ECONOMIC				
Right of Way Impacts	None	Total Number of Parcels Affected = 36 Commercial = 8 Residential = 21 Miscellaneous = 7 Alternative 1 has less right of way impacts than Alternatives 2 and 3.	Total Number of Parcels Affected = 53 Commercial = 13 Residential = 37 Miscellaneous = 3 Alternative 2 has more right of way impacts than Alternative 1 and but less than Alternative 3.	Total Number of Parcels Affected = 92 Commercial = 12 Residential = 77 Miscellaneous = 3 Alternative 3 has more right of way impacts than Alternatives 1 and 2.
Social and Neighborhood Impacts	None/No change	No anticipated impacts to existing access ways or routes. Provides the ability to enhance/improve bus service between SR 874 and SR 836, which offers an alternative to auto travel and addresses needs of low-income users and disadvantaged groups.	No anticipated impacts to existing access ways or routes. Provides the ability to enhance/improve bus service between US 1 and SR 836, which offers an alternative to auto travel and addresses needs of low-income users and disadvantaged groups. Enhances mobility by connecting to the US 1 Busway.	No anticipated impacts to existing access ways or routes. Provides the ability to enhance/improve bus service between US 1 and SR 836, which offers an alternative to auto travel and addresses needs of low-income users and disadvantaged groups. Enhances mobility by connecting to the US 1 Busway. Potential impacts to viewshed due to the 2nd and 3rd level express lane bridge structure.
Economic, Mobility and Employment Impacts	No change	Improves mobility, throughput, travel speeds and travel time for this vital SIS facility and cross streets SR 874 and SR 836. Supports economic development and reduces congestion.	Improves mobility, throughput, travel speeds and travel time for this vital SIS facility and cross streets between US 1 and SR 836. Supports economic development and reduces congestion. Adds Bus Rapid Transit connecting US 1 and SR 826 via express lanes improving movement of people.	Improves mobility, throughput, travel speeds and travel time for this vital SIS facility and cross streets between US 1 and SR 836. Supports economic development and reduces congestion. Adds Bus Rapid Transit connecting US 1 and SR 826 via express lanes improving movement of people.
Community Services/ Features	No change	No impacts to community services are anticipated (Fire, Police, Hospitals, churches, etc.)	No impacts to community services are anticipated (Fire, Police, Hospitals, churches, etc.)	No impacts to community services are anticipated (Fire, Police, Hospitals, churches, etc.) Impacts to Gulliver Preparatory School
ENVIRONMENT				
Noise Impacts	No effect Does not have the ability to add noise abatement	Lower number of impacted noise sensitive sites when compared to Alternatives 2 and 3. Consideration of noise abatement measures/noise barriers will be warranted for all impacted sites.	Higher number of impacted noise sensitive sites when compared to Alternative 1, but lower than Alternative 3. Consideration of noise abatement measures/noise barriers will be warranted for all impacted sites.	Higher number of impacted noise sensitive sites when compared to Alternatives 1 and 2. Consideration of noise abatement measures/noise barriers will be warranted for all impacted sites.
Air Quality	Project is located within an attainment area. Minimal potential impacts may occur from increased congestion	The project is located within an attainment area. No significant air quality impacts are anticipated. Project is anticipated to decrease congestion.	The project is located within an attainment area. No significant air quality impacts are anticipated. Project is anticipated to decrease congestion.	The project is located within an attainment area. No significant air quality impacts are anticipated. Project is anticipated to decrease congestion.
Contamination	No change	4 - High Risk Sites 6 - Medium Risk Sites 4 - Low Risk Sites 9 - No Risk Sites	4 - High Risk Sites 6 - Medium Risk Sites 4 - Low Risk Sites 9 - No Risk Sites	4 - High Risk Sites 6 - Medium Risk Sites 4 - Low Risk Sites 9 - No Risk Sites
Listed Species	No impact	Low-Moderate impacts anticipated to Florida Bonneted Bat habitat, West Indian Manatee habitat, and Wood Stork foraging habitat	Low-Moderate impacts anticipated to Florida Bonneted Bat habitat, West Indian Manatee habitat, and Wood Stork foraging habitat	Low-Moderate impacts anticipated to Florida Bonneted Bat habitat, West Indian Manatee habitat, and Wood Stork foraging habitat
Wetland Impacts	No impact	Wetland and surface water impacts will total 382,464.20 square feet.	Wetland and surface water impacts will total 391,261.93 square feet.	Wetland and surface water impacts will total 385,058.78 square feet.
Cultural/Historic/ Archaeological Impacts	No impact	5 National Register–Eligible/Considered–Eligible Cultural Resources	8 National Register–Eligible/Considered–Eligible Cultural Resources	8 National Register–Eligible/Considered–Eligible Cultural Resources
COST				
Construction Cost	No construction, No cost involved = $0	$326.5 million	$375 million	$696 million
Right of Way/ Business Damages	None = $0	$25.6 million	$78.6 million	$90.0 million

The TSM&O Alternative would provide some short-term relief throughout the corridor. However, the TSM&O Alternative alone would not be consistent with the purpose and need of this project. TSM&O improvements are only viable in combination with the build alternative improvements. Therefore, a TSM&O Alternative was not evaluated in detail.

4.6.2 Value Engineering

A Value Engineering (VE) Study was conducted during the week of May 6, 2019 through May 10, 2019 for the preferred alternative only. A VE Preferred Alternative was not identified during the VE Study. However, the VE Team developed 23 Design Alternatives and 10 Design Suggestions. In addition, 29 creative ideas were thoroughly explored, and it was found that they were neither cost effective nor technically feasible. The PD&E Study team reviewed and accepted 16 of the VE recommendations. Most of the recommendations will be evaluated further during the Design phase of the project. Details about the Value Engineering Study are documented in the *Value Engineering Study Report dated May 2019,* a companion document to the PD&E Study.

4.7 Selection of Preferred Alternative

The preferred alternative for the SR 826 corridor is Alternative 2. Alternative 2 was selected based on the alternative alignment analysis and the evaluation results summarized in the evaluation matrix. Alternative 2 will add the capacity improvements necessary to improve traffic operations, safety, transit, system linkage, regional connectivity, freight, interchange access and emergency evacuation. Alternative 2 is the most prudent when compared with the other build alternatives for the following reasons:

- **System Linkage –** Alternative 2 will match the planned improvements for the adjacent projects south and north of the project limits. The MDT project to the south is reconfiguring and optimizing the operations of the US 1 Busway corridor including a potential Bus Rapid Transit route connecting to the SR 826 express lanes. The FDOT project to the north is constructing tolled express lanes from SR 836 to I-75 and is currently designing tolled express lanes from I-75 to I-95. Alternative 2 will provide a seamless express lanes system connection between US 1, I-75 and I-95 making the use of the express lanes more attractive within Miami-Dade County and across the county line with Broward County.

- **Regional Network Connectivity –** Alternative 2 is consistent with the FDOT Regional Managed Lanes Concept vision of having a series of express lanes systems along SR 826, I-75, I-95, I-595, and Florida's Turnpike.
- **Transit Envelope –** Alternative 2 will create an opportunity for a Bus Rapid Transit service operating within the express lanes system that will connect with the rest of the express lanes network. This transit service could have potential scheduled stops to other park-and-ride lots within the County. The additional capacity along the corridor will provide opportunities for transit expansions along the crossing roadways and along the SR 826 general use lanes.
- **Evacuation Route –** In the case of an evacuation event, SR 826 will have additional lanes between US 1 and SR 836 with Alternative 2. The additional lanes will make the corridor more effective during emergency evacuation events and emergency response.
- **Safety –** Alternative 2 will be able to separate long trips (especially from SR 874 and SR 836) from short trips with the use of the express lanes. Separating traffic from the general use lanes will alleviate traffic congestion approaching the interchanges, reduce weaving maneuvers within interchange segments and maximize throughput along the corridor. Alternative 2 is anticipated to reduce crashes related to heavy congestion, weaving maneuvers, speed differentials and interchange access.
- **Traffic Operations –** Express lanes between US 1 and SR 836 will provide superior, consistent and dependable travel times, particularly during peak travel periods. More efficient use of the existing facility is accomplished by encouraging transit and carpools to use the express lanes. Encouraging transit and carpools will reduce the number of cars in the road during peak travel periods. Through the use of dynamic pricing, FDOT can manage the amount of traffic in the express lanes and maintain free-flowing speeds even when the general use lanes are congested. Motorists who choose to use the express lanes will benefit from faster and reliable travel times. With more reliable travel speeds, transit agencies can enhance transit service along the entire corridor. Long trip motorists that commute daily between US 1 and SR 836 will benefit from using the express lanes by improving their travel time during peak travel periods. While trucks are not allowed in express lanes, the enhanced traffic conditions along SR 826 would aid in the movement and delivery of freight. Alternative 2 provides the most locations with LOS D or better throughout the corridor when compared against the other build alternatives.

- **Capacity –** Alternative 2 adds corridor capacity between US 1 and SR 836. The proposed improvements recommended along the corridor will process 10% more traffic on average than the No-Build Alternative, which is higher than the other build alternatives.
- **Project Cost and Schedule –** Alternative 2, when compared against Alternative 3, will cost significantly less with a shorter construction schedule and less complexed maintenance of traffic plan.

Based on the evaluation conducted and documented in this report, it is clear that Alternative 2 will meet the purpose and need of the project and the overall project objectives of this PD&E Study.

5.0 Project Coordination and Public Involvement

5.1 Agency Coordination

Efficient Transportation Decision Making (ETDM) comments were used to provide the Environmental Technical Advisory Team (ETAT) feedback for all PD&E environmental impact topics. ETAT comments were taken into account with the environmental analysis that was conducted for each alternative. The comments provided gave us preliminary insight to the perceived environmental concerns along this corridor. Each comment was addressed through the analysis of the respective environmental impact topic and the results of the analysis was used to develop the alternatives to avoid and/or minimize the potential for significant environmental impacts to result from construction. In addition, if impacts were determined to be unavoidable, the ETDM comments assisted the PD&E team with analyzing potential mitigation options for any unavoidable impacts.

A Public Involvement Plan (PIP) was developed and is being implemented for the SR 826 PD&E Study from US 1 to SR 836 in Miami-Dade County. The PIP is a working document that is updated and amended throughout the project development process to incorporate the latest public involvement policies and techniques as they evolve during the life of the project. The PIP outlines the public involvement approach and activities required to be undertaken with the project, including lists of the contact persons, such as citizens, private groups (residential/business), officials, agencies, stakeholders, and media, and the means used to involve them in the process.

Briefings were held with the following Elected Officials/Agencies/Stakeholders prior to the Public Meetings:

- City of Doral
- City of South Miami Village of Pinecrest
- City of South Miami
- Commissioner Jose Diaz, District 12
- Commissioner Rebecca Sosa's Special Project Liaison, District 6
- Commissioner Xavier L. Suarez's Aid, District 7
- Village of Pinecrest

A PD&E Study newsletter and project exhibits were presented during these briefings.

5.2 Public Involvement

The PIP focused on the ETDM process, elected official and agency meetings, a series of public informational meetings and several community outreach techniques including a project website and project newsletters. These elements are described herein and in ***Appendix I***, Public Information Records includes, documents from selected meetings.

Public information meetings began in the winter of 2017 and have continued throughout the study process. Exhibits and project information has been provided for public review and comment at each meeting. Exhibit and project information is also available on the project website. Florida Department of Transportation (FDOT) representatives have been available at each meeting to discuss the project and answer questions, as well as members of the consultant team.

Elected Officials/Agencies/Stakeholders Briefings – Briefings have been held with the following Elected Officials/Agencies/Stakeholders prior to the Kick-Off Meetings:

- City of Doral
- City of South Miami
- Village of Pinecrest
- Commissioner Rebecca Sosa's Special Project Liaison, District 6
- Commissioner Xavier L. Suarez's Aid, District 7

Kick-Off Meetings – Both an Elected Officials/Agency and Public Kick-Off Meetings were held in December 2017 in Miami-Dade County. The purpose of these meetings was to provide the officials and the community a forum through which to learn about the improvements being studied as well as the PD&E process in general, and to provide FDOT with initial concerns and areas to look into as part of the study. Numerous exhibits and project information were provided for public review. A project newsletter describing the PD&E Study was distributed to all the attendees.

Additional outreach included distributing Public Kick-Off Meeting notices to the following locations:

- Florida International University
- Florida Medical College
- Dolphin Mall

- Mall of Americas
- Dadeland Mall
- International Mall
- Flagami NET Office
- Versailles Gardens II Condominium
- Flagler Corporate Center
- The Greenery Mall Administrative Office
- Downtown Dadeland Administrative Office
- The Honorable Rebeca Sosa's Office
- The Honorable Xavier L. Suarez's Office
- The Honorable Jose "Pepe" Diaz's Office
- West Dade Regional Library
- South Miami Branch Library
- Kendall Branch Library
- Village of Pinecrest
- Alpha & Omega Church
- Suniland Shopping Center
- Pinecrest Gardens

The following is a summary of the items discussed in the meeting:

- PD&E Study Process
- Project Study Area
- Needs of the Project
- No-Build Alternative Conditions
- Existing Conditions
- South Florida Express Lanes
- PD&E Study Milestone Schedule

The Kick off meetings were held on Tuesday, December 5, 2017 at the West Dade Regional Library, Auditorium 1, 9445 Coral Way, Miami, Florida 33165. A total of four written comments were received at these meetings. Approximately 29 people attended these meetings.

The following are some of the comment topics provided at the meetings:

- Noise Walls
- Project Schedule

Elected Officials/Agencies/Stakeholders Briefings – Briefings have been held with the following Elected Officials/Agencies/Stakeholders prior to the Alternatives Public Workshop:

- City of Doral
- City of South Miami
- Village of Pinecrest
- Commissioner Jose Diaz, District 12

Alternatives Public Workshop – An Alternatives Public Workshop was held in March 2019 in Miami-Dade County. The purpose of this workshop was to present alternative highway improvement concepts along the study area. Numerous of exhibits and project information were provided for review. A project newsletter with information on the PD&E Study to date was distributed to all the attendees.

Additional outreach included distributing Alternatives Public Workshop notices to the following locations:

- Florida International University
- Florida Medical College
- Dolphin Mall
- Mall of Americas
- Dadeland Mall
- Miami International Mall
- Flagami NET Office
- Versailles Gardens II Condominium
- Flagler Corporate Center
- The Greenery Mall Administrative Office
- The Honorable Rebeca Sosa's Office
- The Honorable Xavier L. Suarez's Office
- The Honorable Jose "Pepe" Diaz's Office
- West Dade Regional Library
- South Miami Branch Library
- Kendall Branch Library
- Village of Pinecrest
- Alpha & Omega Church
- City of Sweetwater
- City of South Miami
- Village of Pinecrest
- Pinecrest Gardens

The following is a summary of the items discussed in the meeting:

- PD&E Study Process
- Project Study Area
- Needs of the Project
- Existing Conditions
- No-Build Alternative Conditions
- South Florida Express Lanes
- Milestone Project Schedule
- Alternatives
- Roadway Typical Sections
- Evaluation Matrix
- Environmental Features

The workshop was held on Thursday, March 7, 2019 at the West Dade Regional Library, Auditorium 1, 9445 Coral Way, Miami, Florida 33165. A total of eight written comments were received at this workshop. Approximately 45 people attended the meeting.

The following are some of the comment topics provided at the meetings:

- Interest in Express Lanes
- Intersection Timing Plans
- Noise Walls
- Transit Improvements
- The Right of Way acquisition process

Public Hearing – A Public Hearing is tentatively scheduled for November 2019. The purpose of this hearing will be to present to the public the preferred alternative and seek public input. Numerous of exhibits and project information will be provided for public review. A project newsletter describing the PD&E Study to date will be distributed to all the attendees.

*This section will be completed after the Public Hearing.

6.0 Design Features of the Preferred Alternative

6.1 Engineering Details of the Preferred Alternative

6.1.1 Typical Sections

The preferred alternative roadway typical section between US 1 and SR 874 will consist primarily of six 12-foot wide general use lanes (three lanes in each direction) with 12-foot wide auxiliary lanes at selected locations, two 12-foot wide express lanes (one lane in each direction), 12-foot wide paved inside and outside shoulders, a 2-foot wide median barrier wall, 4-foot wide buffer with express lane markers, and outside barrier walls. Between SR 874 and SR 836 the corridor will consist primarily of ten 11-foot to 12-foot wide general use lanes (five lanes in the northbound direction and five lanes in the southbound direction) with 11-foot to 12-foot wide auxiliary lanes at selected locations, four 11-foot to 12-foot wide express lanes (two lanes in each direction), 10-foot to 12-foot wide inside and outside shoulders, a 2-foot wide median barrier wall, 2-foot to 4-foot wide buffer with express lane markers, and outside barrier walls. The two express lanes along this section of SR 826 will be implemented by converting the existing inside lane (undesignated HOV lane) to an express lane and by adding a second express lane through widening. The two typical sections for SR 826 are depicted in ***Figure 6.1*** and ***Figure 6.2.*** The express lanes will be constructed along SR 826 with major widening to the outside, approximately 10-36 feet, with a new set of bridge overpasses (express lanes system) crossing over SR 874.

The typical section package will be prepared during the design phase.

Figure 6.1 – Preferred Alternative Roadway Typical Section between US 1 and SR 874

GENERAL USE LANE
AUXILIARY LANE
EXPRESS LANE

Figure 6.2 – Preferred Alternative Roadway Typical Section between SR 874 and SR 836

6.1.2 Bridges and Structures

As part of the preferred alternative 13 new bridges are anticipated to be added, 20 bridges are anticipated to be widened, and 8 are anticipated to be removed (***see Figure 6.3***). The proposed information of each bridge structure along the corridor is summarized in ***Table 6.1*** and ***Appendix G***, Bridge Analysis Report**.** ***Appendix H*** details each proposed bridge structure design and widening approach.

Table 6.1 summarizes the proposed geometrics, alignment, minimum vertical clearance, widening, and type of structure.

The study considered four different superstructure alternatives. The superstructure types are: concrete segmental box girders, composite steel box girders, prestressed concrete I-Girders and composite steel plate girders. Prestressed I-Girders are typically used in concrete widenings and second level bridges. However, for aesthetic considerations, they are not considered in structures with high visibility and/or third level bridges. Other aesthetic considerations include integral pier caps to minimize structural depth and optimizing the vertical clearance under the proposed over pass structures. Different span arrangements were studied in order to maximize the efficiency of the proposed superstructure, enhance appearance, and to satisfy geometric constraints.

Based on the conceptual cost estimate, bridge widenings are proposed, and they are mostly prestress concrete structures. Replacement structures are either made of prestress concrete or steel plate girders. For the new structures, Bridges 12 and 13, in the core of the SR 826/SR 836 Interchange and in between the second and third level segmental flyovers, have been considered also concrete precast segmental to match the highly visible flyovers in the interchange. These two bridges will also incorporate the aesthetics features of the MDX bridges. As it is, the desire of the Department to minimize the number of piers along the highly visible Bridge 6, a 6,250 feet long structure, the average span is over 200 feet. For these bridge units, we also considered concrete precast segmental. As the viaduct approaches SR 874 and US 1, Bridges 4 and 5 (over SR 874 and CSX) are a continuation of Bridge 6. Therefore, these are also considered concrete segmental. In accordance with the FDOT structures design guidelines, precast segmental is slightly more economical than steel box girders, which makes these the most cost-effective option.

SUMMARY OF STRUCTURES	
ITEM	QUANTITY
PROPOSED NEW BRIDGES (2 LEVEL) PROPOSED NEW BRIDGES (2/3 LEVEL)	13
PROPOSED BRIDGE REPLACEMENTS	6
PROPOSED BRIDGE DEMOLITIONS	8
PROPOSED BRIDGE WIDENINGS	20
PROPOSED CULVERTS	4
EXISTING BRIDGES TO REMAIN	31

* CATEGORY 2 STRUCTURES

PREFERRED ALTERNATIVE PROPOSED BRIDGE LOCATION MAP

FIGURE 6.3
SHEET 6-4

PREFERRED ALTERNATIVE PROPOSED BRIDGE LOCATION MAP

FIGURE 6.3
SHEET 6-5

PREFERRED ALTERNATIVE PROPOSED BRIDGE LOCATION MAP

FIGURE 6.3
SHEET 6-6

PREFERRED ALTERNATIVE PROPOSED BRIDGE LOCATION MAP

FIGURE 6.3
SHEET 6-7

PREFERRED ALTERNATIVE PROPOSED BRIDGE LOCATION MAP

FIGURE 6.3
SHEET 6-8

Table 6.1 - Preferred Alternative Proposed Bridge Characteristics												
Location			Geometrics		Alignment		Structural					
Bridge No.	Bridge Location	Direction	Overall Bridge Length / Span Arrangement (ft)	Deck Width (ft)	Min. Vertical Clearance (ft)	Underneath Roadway Designation	#Spans	Max Span (ft)	Superstructure Type	Substructure Type	Bridge Category	Structure Type
CVRT-1	Culvert expansion at C-100A Canal	EW	TBD	NA	NA	NA	NA		NA	Concrete	1	Widening
870129	SR 826 SB over SW 98th St. SB	SB	94.6'+110.4'+121.8'+173.25'+123.86'+126.11' = 750.02'	58.67'	16.5'	SW 98th St.	6	173.25	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	2	Replacement
870792	SR 826 NB from EB SW 88th St. to NB SR 826	NB from EB to NB	152'+216'+160'+160'+162.25'+127' = 977.25'	29.67' Min / 33.67' Max	16.5'	EB SW 88th St. to NB SR.826	6	216	Steel Plate Girder	Reinforced Concrete Column Piers	2	Replacement
870773	SR 826 over SW 88th St. NB and SB	NB and SB	92.5'+72.75'+54.25' = 219.5'	150.67'	16.5'	SW 88th St,	3	92.5	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
1	SR 826 SB off-ramp over SW 88th St.	SB	92.5'+72.75'+108.25' = 273.5'	29.67'	16.5'	SW 88th St,	3	108.25	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	New
870953	Kendall EB – SR 826 NE over Dadeland Mall Access	EB	104.67'	43.33' Min / 47.17' Max	16.5'	Dadeland Mall Access	1	104.67	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
2	SW 77th Ave.NB and SB over Snapper Creek Canal	NB and SB	38.0'+34.0'+38.5' = 110.5'	38.67'	NA	Snapper Creek Canal	3	38.5	Prestress Concrete, FIBs	Concrete Pile Bents	1	New
3	SR 826 SB to SR 94 over Snapper Creek Canal	SB	36.93'+43.95'+52.88"+42' = 175.76'	42.67'	NA	Snapper Creek Canal	4	52.88	Prestress Concrete, FIBs	Concrete Pile Bents	1	New
870286	SR 826 NB/SB over Snapper Creek Canal	NB and SB	44.25'+43.83'+44'+43.88' = 175.96'	162.67'	NA	Snapper Creek Canal	4	44.25	Prestress Concrete, FIBs	Concrete Pile Bents	1	Widening
870795	WB Kendal -826 NB over Snapper Creek Canal	NB	44.25'+43.83'+44'+43.88' = 175.96'	29.67'	NA	Snapper Creek Canal	4	44.25	Prestress Concrete, FIBs	Concrete Pile Bents	1	Replacement
870132	SR 826 SB over SW 72nd St./Sunset Drive	SB	162.5'	176.67'	16.5'	Sw 72nd St./Sunset Drive	1	168.4	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Replacement
870287	SR 826 NB over SW 72nd St./ Sunset Drive	NB	162.5'		16.5'	Sw 72nd St./Sunset Drive	1	168.4	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Replacement
870526	SR 874 over SW 56th St./Miller Drive-- MDX bridge	EB to WB	56'+84'+84'+51' = 275'	134.42' Min / 138.08' Max	16.5'	SW 56th St./Miller Drive	4	84	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871013	SR 826 NB/SB over SW 56th St./Miller Drive	NB and SB	159.75'	164.67' Min / 168.25' Max	16.5'	SW 56th St./Miller Drive	1	159.75	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871017	SR 826 SB over SR 874 and CSX RR	SB	203.31'+266.99'+245.77' = 716.07'	58.67'	16.5'	SR 874 and CSX RR	3	266.99	Steel Plate Girder	Reinforced Concrete Column Piers	2	Widening
871018	SR 826 NB over SCL RR and SR 874	NB	190'+140' = 330'	58.67'	16.5'	SCL RR and SR 874	2	190	Steel Plate Girder	Reinforced Concrete Column Piers	2	Widening
4	SR 826 Express Lanes SB over SR 874 and CSX RR	SB	172.25'+200'+255.25' = 627.5'	34.67'	16.5'	SR over SR 874 and CSX RR	3	255.25	Steel Plate Girder	Reinforced Concrete Column Piers	2	New
5	SR 826 Express Lanes NB over SR 874 and SCL RR	NB	174.17'+200+206.33 = 580.5'	34.67'	16.5'	SR over SR 874 and SCL RR	3	206.33	Steel Plate Girder	Reinforced Concrete Column Piers	2	New

Table 6.1 - Preferred Alternative Proposed Bridge Characteristics Continued												
Location			Geometrics		Alignment		Structural					
Bridge No.	Bridge Location	Direction	Overall Bridge Length / Span Arrangement (ft)	Deck Width (ft)	Min. Vertical Clearance (ft)	Underneath Roadway Designation	#Spans	Max Span (ft)	Superstructure Type	Substructure Type	Bridge Category	Structure Type
6	SR 826 Express Lanes NB/SB over SR 874 (3 Level)	NB and SB	Unit 1 = 225'+225'+225'+225'+160' = 1060' Unit 2 = 160'+225'+225'+225'+225'+225'+160' = 1445' Unit 3 = 160'+225'+225'+220'+230'+225'+185' = 1470' Unit 4 = 185'+225'+225'+225'+225'+225'+160' = 1470' Unit 5 = 160'+225'+225'+160' = 770' (Total = 6215')	68.67'	16.5'	SR 874	30	230	Concrete Segmental or Steel Box Girder	Reinforced Concrete Column Piers	2	New
871021	SR 826 SB over SR 976/Bird Rd./SW 40th St.	SB	160.42'	103.08' Min / 112.58' Max	16.5'	SR 676/Bird Rd./SW 40th St.	1	160.42	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
7	Pedestrian Overpass over SR 826	E/W	170'+161' = 331'	10.0'	16.5'	SR 826	2	170	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	New
879010	Pedestrian Overpass over SR 826 SB To/From SW 24th	E/W	144'	10.0'	16.5'	SR 826 SB To/From SW 24th St.	1	144	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Replacement
CVRT-2	Culvert by Coral Way Pedestrial Overpasss	NS	TBD	NA	NA	NA	NA		NA	Concrete	1	New
CVRT-3	Culvert Along East Side of SR 826 & N. of Coral Way	NS	TBD	NA	NA	NA	NA		NA	Concrete	1	New
870760	SR 826 SB over SR 972/SW 24th St.	SB	75'+75' = 150'	125.83' Min / 133.25' Max	16.5'	SR 972/SW 24th St.	2	75	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
870761	SR 826 NB over SR 972/SW 24th St.	NB	75'+75' = 150'	119.17' Min / 122.58' Max	16.5'	SR 972/SW 24th St.	2	75	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening
870764	SR 826 NB to SR 972 over Coral Gables Canal	NB	27.45'+39'+31' = 97.45'	44.67' Min / 69.08' Max	16.5'	Coral Gables Canal	3	39	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
8	SR 826 SB/US 41 EB over US 41 /SR 90	SB	47.37'+55.72'+56.86'+56.75'+57.36'+56.28'+40.82' = 371.16'	29.67'	16.5'	US 41/SR 90	7	57.36	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	New
9	SR 826 SB to US 41 WB over Tamiami Canal	SB to WB	51.5'+50'+50'+50'+50'+50'+51.5' = 353'	29.67'	16.5'	Tamiami Canal	7	51.5	Flat Slab Concrete	Reinforced Concrete/Piles	2	New
870112	SR 826 SB over US 41/SR90/SW 8th St.	SB	160.00'+160.00' = 320.00'	123.75' Min / 117.67' Max	16.5'	US 41/SR 90/SW 8th St.	7	160	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Replacement
870267	SR 826 NB over US 41/SR90/SW 8th St.	NB	160.00'+160.00' = 320.00'	105.31' Min / 110.31' Max	16.5'	US 41/SR 90/SW 8th St.	7	160	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Replacement
871047	SR 826 SB over SR 968/West Flagler St.	SB	170.36'	149.67' Min / 154.42' Max	16.5'	SR 968/West Flager St.	1	170.36	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871048	SR 826 NB over SR 968/West Flagler St.	NB	170.36'	145.92' Min / 153.67' Max	16.5'	SR 968/West Flager St.	1	170.36	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
CVRT-4	Culvert along East Side of SR 826 from SW 8th St South	NS	TBD	NA	NA	NA	NA		NA	Concrete	1	New
871045	SB SR 826 Off-ramp over NW 7th St.	SB	123.24'	22.58' Min / Max 24.25'	16.5'	NW 7th St.	1	123.4	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
871062	SR 826 SB over NW 7th St. (SR 836 WB exit to SR 826)	SB	123.07'	9.0' Min / 12.5' Max	16.5'	NW 7th St. (SR 836 WB exit to SR 826)	1	123.07	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening

Table 6.1 - Preferred Alternative Proposed Bridge Characteristics Continued												
Location			Geometrics		Alignment		Structural					
Bridge No.	Bridge Location	Direction	Overall Bridge Length / Span Arrangement (ft)	Deck Width (ft)	Min. Vertical Clearance (ft)	Underneath Roadway Designation	#Spans	Max Span (ft)	Superstructure Type	Substructure Type	Bridge Category	Structure Type
871063	SR 826 SB over NW 7th St.	SB	123.01'	91.0' Min/ Max 91.25'	16.5'	NW 7th St.	1	123.01	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
10	SR 826 SB Express Lanes over NW 7th St.	SB	123'	29.67'	16.5'	NW 7th St.	1	123	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	New
11	SR 826 NB Express Lanes over NW 7th St.	NB	123'	29.67'	16.5'	NW 7th St.	1	123	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	New
871064	SR 826 NB over NW 7th St.	NB	123'	90.67'	16.5'	NW 7th St.	1	123	Prestress Concrete, FIBs	Reinforced Concrete/Piles	1	Widening
12	Flyover SR 826 to SR 836 from SR 836 WB to SR 826 SB (3 Level) -- (Aesthetic Level 2)	WB	160'+230'+150'+150'+144'+188'+302' = 1324'	33.67'	16.5'	SR 836/SR 826	7	302	Concrete Segmental or Steel Box Girder	Reinforced Concrete Column Piers	2	New
13	Flyover SR 826 and SR 836 from SR 826 NB to SR 836 EB (3 Level) -- (Aesthetic Level 2)	NB	175'+245'+220'+230'+230'+160' = 1260'	33.67'	16.5'	SR 836/SR 827	6	245	Concrete Segmental or Steel Box Girder	Reinforced Concrete Column Piers	2	New
871039	SR 826 EB over NW 72 Ave (partial removal of 871038)	EB	111.5'+111.5' = 223'	9.33'	16.5'	NW 72 Ave	2	111.5	Prestress Concrete, FIBs	Reinforced Concrete Column Piers	1	Widening

Note: EB - Eastbound, WB - Westbound, NB - Northbound, SB - Southbound

6.1.3 Right of Way and Relocations

A right of way cost was determined based on the proposed geometry of the preferred alternative. The estimated cost was generated based on the proposed conceptual design plans. The cost includes property, support, relocation of personal property/signs and administrative costs. The parcels impacted are business/commercial, residential properties, vacant land and governmental. Approximately 8.863 acres of additional right of way will be necessary to accommodate the proposed improvements. The number of parcels impacted and estimated right of way cost is summarized in ***Table 6.2***.

Table 6.2 – Right of Way Impacts

Type of Parcel	Partial Impact
Commercial	13
Residential	37
Miscellaneous	3
Partial Impact	28
Potential Relocation	25
Total Parcel Impacts	53
Total Area Impact (S.F.)	386,092
Total Area Impact (Acre)	8.863
Estimated Right of Way Cost	$78,633,000

6.1.4 Horizontal and Vertical Geometry

The design of the build alternative strives to adhere to the design standards depicted in ***Section 3.0***. This section summarizes the geometric characteristics for the proposed horizontal and vertical alignment along the corridor.

Horizontal Alignment

The preferred alternative proposes to maintain most of the existing horizontal alignment design except for the following new alignment construction areas:

1. SR 826 southbound off-ramp to US 1 – The two-lane bridge ramp over the existing US 1 Busway and SW 98th Street will be reconstructed as a three-lane bridge with proper shoulder width and stopping sight distance. The new bridge structure will be shifted about 24 feet to the west from the existing bridge.

2. Section between SR 874 and south of Coral Way – The SR 826 southbound lanes horizontal alignment was designed to shift to the west side in order to minimize impacting the residential homes along the east side of the corridor and to open up the median to accommodate the new express lanes system.
3. Section between Coral Way and SW 8th Street – The SR 826 northbound lanes horizontal alignment was designed to shift to the east side in order to minimize impacting the residential homes along the west side of the corridor and to open up the median to accommodate the new express lanes system.

The new centerline of construction offset will vary between 1 and 56 feet from the existing centerline of construction, depending on the location.

Interchanges – The preferred alternative proposes to widen the existing typical section in order to accommodate the new roadway section. Therefore, every interchange ramp (on-ramp and off-ramp) will need to be realigned in order to tie in to the new mainline typical section.

The extent of the ramp realignment is depicted in ***Appendix J***, Preferred Alternative Concept Plans. The geometry at each location was kept as close as possible to the existing one by introducing compound curves and/or offsetting the ramps toward the right of way line while preserving the existing design speed of each ramp. A new horizontal baseline alignment for the preferred alternative will be developed during the Design phase.

Vertical Alignment

The preferred alternative proposes to maintain most of the existing vertical alignment design except for the following new alignment construction areas:

1. Section between SR 874 and south of Coral Way – The preferred alternative proposes a new second level SR 826 express lanes system bridge structure along the median. The vertical alignment of this bridge will generally follow the vertical curvature of the existing facility but will be about 30 to 40 feet higher.
2. SR 826/SR 836 Interchange – The preferred alternative proposes an express lanes ramp flyover system-to-system connecting SR 826 northbound to SR 836 eastbound and SR 836 westbound to SR 826 southbound median-to-median. This ramp flyover was designed vertically between the second

level and the highest level of the recently constructed interchange. An envelope was purposely designed by the previous interchange project to accommodate this ramp.

In most places there will be some overbuild and cross slope corrections to optimize the overall safety and comfort of the corridor, meet latest criteria and to address rainfall runoff. ***Appendix K*** shows the vertical alignment profiles of the new second level SR 826 express lanes system bridge structure along the median and the express lanes ramp flyover system-to-system connecting SR 826 to SR 836. ***Appendix J***, Preferred Alternative Concept Plans depicts the preferred alternative. A new vertical alignment for the preferred alternative will be developed during the Design phase.

6.1.5 Bicycle and Pedestrian Accommodations

SR 826 is a limited access facility. There will continue to be no designated pedestrian or bicycle accommodations along these corridors, as pedestrians and bicycles are not permitted on limited access corridors.

Below are the pedestrian and bicycle improvements proposed within the crossing roadway interchange limits:

- US 1 – No bicycle or pedestrian improvements are proposed for US 1.
- SW 88th Street (Kendall Drive) – No proposed improvements through the interchange. Eight-foot wide sidewalks are proposed west of SR 826 near SW 79th Avenue and SW 77th Avenue.
- SW 72nd Street (Sunset Drive) – Eight-foot wide sidewalks, five-foot wide bike lanes are proposed on both sides of the roadway and continue through the interchange.
- SW 56th Street (Miller Drive) – Eight-foot wide sidewalks are proposed on both sides of the roadway within the interchange.
- SW 40th Street (Bird Rd) – An eight-foot wide sidewalk is proposed in the middle of the roadway within the interchange. Eight-foot sidewalks are also proposed from SW 75th Avenue to Tropicaire Shopping Center Entrance the north side of the roadway.

- SW 24th Street (Coral Way) – No proposed improvements through the interchange. An eight-foot wide sidewalk is proposed from SW 80th Court to SW 82nd Avenue on the north side as well as a new pedestrian bridge over the southbound ramp terminal.
- SW 8th Street (Tamiami Trail) – No proposed improvements through the interchange. Seven-foot wide bike lanes are proposed on the north side of the roadway west of SW 79th Avenue.
- Flagler Street – No proposed improvements through the interchange. Eight-foot wide sidewalks are proposed on SW 78th Avenue and SW 79th Avenue.

6.1.6 Multi-Modal Accommodations

The preferred alternative was developed with the vision of allowing a Bus Rapid Transit (BRT) system along the express lanes and providing access to the US 1 South Miami-Dade Busway Corridor.

The Palmetto Express Bus (South) Project, included in the Draft 2045 LRTP as an unfunded project, intends to create a new express bus service from the Dadeland North Metrorail Station to the Dolphin Station Transit Terminal. The express bus project will allow a more effective connection to the proposed rapid transit systems included in the Strategic Miami Area Rapid Transit (SMART) Plan, specifically, the East-West Corridor and the Kendall Corridor.

The proposed express lanes will provide a direct system-to-system connection from northbound SR 826 to eastbound SR 836 and from westbound SR 836 to southbound SR 826, which will enhance connectivity to and from the Miami Intermodal Center (MIC) and Miami International Airport (MIA). The preferred alternative will also provide a direct connection to the existing US 1 South Miami-Dade Busway, just north of SW 98th Street.

The express bus project can be an integral element for this project, enhancing route connections and subsequently expanding bus service region-wide within the express lanes network. Transit users will benefit from a faster, more reliable, and more expanded service offered by buses in the express lanes.

The preferred alternative includes impacts and improvements to transit facilities (bus stops, sidewalks and bicycle lanes) at the following major arterials that intersect the SR 826 corridor.

Sunset Drive/SW 72nd Street

- Requires relocation of existing bus stops at SW 72nd Avenue, SW 73rd Court and SW 75th Avenue due to roadway widening.
- Provides new bicycle lane on both directions from SW 72nd Avenue to SR 826/Palmetto Expressway.

Bird Road/SW 40th Street

- Requires relocation of existing bus stop at SW 7800 Block due to roadway widening.

Coral Way/SW 24th Street

- Requires relocation of existing bus stop at SW 80th Avenue due to roadway widening.
- Provides a new pedestrian bridge over the interchange terminal.

SW 8th Street

- Requires relocation of existing pedestrian bridge at SW 82nd Avenue due to new bridge over canal.

Flagler Street

- Requires relocation of existing bus stop at NW 79th Avenue due to roadway widening.

SR 826

- Provides a new pedestrian bridge north of Bird Road.

6.1.7 Access Management

The FDOT Access Management Classification System determines the access class and type of each roadway based on the segment location, spacing between cross streets, posted speed, median type and/or median opening spacing. The access management classification for SR 826 is Class 1.2, Freeway in an existing urbanized area with limited access. Based on the access and type, the minimum interchange spacing allowed is two miles in accordance with the *FDM, Part 2, Chapter 201, Table 201.3.1*. The interchange spacing along the corridor is not in compliance with the FDOT Access Management Guideline Rule 14.97 (see ***Table 6.3***). The project is not changing the access management classification for SR 826. Therefore, it is in compliance with 335.199, FS.

Table 6.3 – SR 826 Access Management/Interchange Spacing

Cross Street	Current Spacing to Next Interchange (Miles)	Complies with Interchange Spacing?
SW 88th Street to SW 72nd Street	0.998	No
SW 72nd Street to SW 56th Street	1.02	No
SW 56th Street to SR 874	0.329	No
SR 874 to Bird Road	0.717	No
Bird Road to Coral Way	1.05	No
Coral Way to SW 8th Street	0.984	No
SW 8th Street to Flagler Street	0.510	No
Flagler Street to SR 836	0.743	No
SR 836 to NW 25th Street	1.138	No

No access management modifications are proposed as part of the preferred alternative.

6.1.7.1 Express Lanes

The preferred alternative proposes four access points in each direction at selected locations to enter and exit the express lanes system.

- SR 826 northbound ingress north of SW 72nd Street – This access point will service drivers wanting to enter the express lanes system from the following upstream corridors:
  - SW 88th Street
  - US 1

- SR 874 northbound ingress west of the SR 826 Interchange – This access point will service drivers wanting to enter the express lanes system from the following upstream corridor:
  - SR 874

- SR 826 northbound egress south of SR 836 (ramp flyover) – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following corridor:
  - SR 836 Eastbound

- SR 826 northbound egress south of SR 836 – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following downstream corridors:
  - NW 25th Street and interchanges to the north

- SR 826 southbound ingress south of SR 836 – This access point will service drivers wanting to enter the express lanes system from the following upstream corridors:
  - NW 25th Street and interchanges to the north

- SR 826 southbound ingress south of SR 836 (ramp flyover) – This access point will service drivers wanting to enter the express lanes system from the following corridor:
  - SR 826 Westbound

- SR 874 southbound egress west of the SR 826 Interchange – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following downstream corridor:
  - SR 874

- SR 826 southbound egress north of SW 72nd Street – This access point will service drivers wanting to exit the express lanes system from SR 826 to the following downstream corridors:
  - SW 88th Street
  - US 1

6.1.8 Intersection and Interchange Concepts

The preferred alternative is proposing interchange, intersection and arterial improvements to support the optimal operations of the corridor. ***Figure 6.4*** depicts all the improvements proposed by the preferred alternative. The preferred alternative proposes interchange improvements to all ten interchanges. The improvements will vary from minor to major capacity enhancements (see ***Appendix J***, Preferred Concept Plans).

The approach to evaluate the proposed interchange improvements is summarized below:

- Maintain the existing interchange configuration and freeway bridge structures by adding capacity to the ramps and ramp terminal intersections.
- Additional lane capacity was determined by incrementally increasing the number of lanes until the desired LOS was achieved. This process was limited based on impacts to right of way, adjacent properties and impacts to the existing freeway bridge structures.
- Maximum allowed number of intersection turn lanes were set to three left turn lanes and three right turn lanes.

All interchanges will maintain the existing configuration except for the SR 826/Bird Road Interchange. After adding all possible capacity improvements, the existing interchange configuration continued to have unacceptable LOS. Two other interchange concepts were preliminarily evaluated; a Single Point Urban Interchange (SPUI) and a Diverging Diamond Interchange (DDI). The available right of way at this location is constrained by two parks caddy corner to each other; Tropical Park and Humble Mini Park. Therefore, interchange reconfiguration options were limited to only two. The SPUI was eliminated early from the study for not achieving an acceptable LOS and because it required to replace the freeway bridge structures. The DDI was the only other configuration that shows a significant operational improvement without replacing the freeway bridge structures and without impacting the two parks.

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ETDM No.: 14308

PREFERRED ALTERNATIVE
LANE GEOMETRY AND CONFIGURATION

FIGURE 6.4

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PREFERRED ALTERNATIVE
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FIGURE 6.4

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PREFERRED ALTERNATIVE
LANE GEOMETRY AND CONFIGURATION

FIGURE 6.4

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LANE GEOMETRY AND CONFIGURATION

FIGURE 6.4

Below is a summary of the overall interchange improvements:

- US 1
  - Southbound off-ramp widening to three lanes
  - Express lanes direct connection to the MDT US 1 South Miami-Dade Busway Corridor

- SW 88th Street
  - Horizontal realignment of all ramps to fit the new SR 826 mainline roadway section

- Sunset Drive
  - Horizontal realignment of all ramps to fit the new SR 826 mainline roadway section
  - Northbound off-ramp widening to two lanes
  - Replace SR 826 mainline bridge structures

- Miller Drive
  - Horizontal realignment of all ramps to fit the new SR 826 mainline roadway section

- SR 874
  - Horizontal realignment of all ramps to fit the new SR 826 mainline roadway section
  - One express lane in each direction will be elevated along the median within the interchange limits

- Bird Road
  - Redesign the interchange layout to a Diverging Diamond Interchange configuration

- Coral Way
  - Horizontal realignment of all ramps to fit the new SR 826 mainline roadway section
  - Southbound off-ramp widening to two lanes

- SW 8th Street
    - Horizontal realignment of all ramps to fit the new SR 826 mainline roadway section
    - Northbound on-ramp widening to two lanes
    - Redesign and realign the southbound off-ramps to tie to the new southbound collector distributor roadway system between SR 836 and SW 8th Street

- Flagler Street
    - Horizontal realignment of all ramps to fit the new SR 826 mainline roadway section
    - Redesign and realign the southbound off and on-ramps to tie to the new southbound collector distributor roadway system between SR 836 and SW 8th Street

- SR 836
    - Express lanes ramp flyover system-to-system connecting SR 826 northbound to SR 836 eastbound and SR 836 westbound to SR 826 southbound median-to-median

The preferred alternative is proposing intersection widening and/or turn lane modifications along the crossing roadways to facilitate the ramp modifications and improve the access and operation of the corridors upstream and downstream from the interchanges. ***Figure 6.4*** and ***Appendix J***, Preferred Concept Plans, depict all the improvements proposed by the preferred alternative. The following selected signalized intersections will have capacity improvements:

- US 1/Killian Drive – Additional southbound lane
- US 1/SW 104th Street – Additional southbound lane
- SW 88th Street/SW 79th Avenue – Additional turn lanes
- SW 88th Street/SW 77th Avenue – Additional turn lanes
- SW 88th Street/Northbound Ramp Terminal – Additional turn lane
- SW 88th Street/SW 73rd Place – Additional turn lane
- SW 72nd Street/SW 77th Court – Additional eastbound lane
- SW 72nd Street/Northbound Ramp Terminal – Additional eastbound lane and turn lanes
- SW 72nd Street/SW 72nd Avenue – Additional turn lane

- SW 56th Street/SW 77th Court – Additional eastbound and westbound lanes and turn lanes
- SW 56th Street/Southbound Ramp Terminal – Additional westbound lane and turn lane
- SW 56th Street/Northbound Ramp Terminal – Additional eastbound and westbound lanes and turn lane
- SW 56th Street/SW 72nd Avenue – Additional turn lane
- SW 40th Street/Southbound Ramp Terminal – new interchange configuration
- SW 40th Street/Northbound Ramp Terminal – new interchange configuration
- SW 24th Street/SW 82nd Avenue – Additional northbound lane and turn lane
- SW 24th Street/Southbound Ramp Terminal – Additional turn lanes
- SW 24th Street/Northbound Ramp Terminal – Additional turn lanes
- SW 8th Street/SW 82nd Avenue – Additional turn lanes
- SW 8th Street/Southbound Ramp Terminal – Additional turn lanes
- SW 8th Street/Northbound Ramp Terminal – Additional westbound lane and turn lanes
- SW 8th Street/SW 74th Avenue – Additional turn lane
- Flagler Street/NW 82nd Avenue – Additional turn lane
- Flagler Street/NW 79th Avenue – Additional turn lanes
- Flagler Street/Southbound Ramp Terminal – Additional turn lane

A SR 826 Conceptual Signing Master Plan (CSMP) was developed to confirm that the proposed improvements signage approach is according to the current design guidelines. The plan depicts all the guide signs needed within the study limits for the preferred alternative design configuration. The CSMP is documented in the *Systems Interchange Modification Report*, a companion document to the PD&E Study.

6.1.9 Traffic Volumes and Operational Conditions

This section summarizes the operational analysis of the preferred alternative.

HCM Operational Analysis Results

2025 Analysis – The freeway analysis shows that no locations northbound or southbound will operate at an unacceptable LOS (worst peak period LOS) by the year 2025 within the area of influence. The weaving analysis shows that two locations northbound and two locations southbound will operate at an unacceptable LOS. The ramp junction analysis shows all locations will operate within capacity. The collector distributor capacity analysis shows all ramps will operate within capacity.

2045 Analysis – The freeway analysis shows that six locations northbound and nine locations southbound will operate at an unacceptable LOS (worst peak period LOS) by the year 2045 within the area of influence. The weaving analysis shows that two locations northbound and three locations southbound will operate at an unacceptable LOS. The ramp junction analysis shows one location northbound and three locations southbound will operate at an unacceptable LOS. The C-D capacity analysis shows one location southbound will operate over capacity.

Figure 6.5 summarizes the 2025 results and ***Figure 6.6*** summarizes the 2045 results.

Intersection Analysis – An intersection analysis for ramp terminals and adjacent intersections was performed at all the interchanges using existing turning movement volumes, existing lane geometry, signal timing, other relevant information obtained from Miami-Dade County and field reviews. The data was input to the Synchro software to determine the LOS and delay using the HCM methodology. A summary of the results is presented in ***Table 6.4***.

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION
BRIDGE
GENERAL USE LANE
EXPRESS LANE
EXPRESS LANE (BUSES ONLY)
ELEVATED EXPRESS LANE
ROADWAY IMPROVEMENTS
MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2025 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION	
DESIGN YEAR 2025 PEAK-HOUR VOLUME AM(PM)	
VOLUME/ CAPACITY AM (PM)	OK / FAIL AM (PM)

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2025 OPENING YEAR PREFERRED ALTERNATIVE OPERATIONAL ANALYSIS RESULTS

FIGURE 6.5

LEGEND

5 > NUMBER OF LANES AND TRAFFIC DIRECTION
BRIDGE
GENERAL USE LANE
EXPRESS LANE
EXPRESS LANE (BUSES ONLY)
ELEVATED EXPRESS LANE
ROADWAY IMPROVEMENTS
MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2025 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION			
DESIGN YEAR 2025 PEAK-HOUR VOLUME AM(PM)			
VOLUME/ CAPACITY	AM (PM)	OK / FAIL	AM (PM)

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FIGURE 6.5

LEGEND

- 5 > NUMBER OF LANES AND TRAFFIC DIRECTION
- BRIDGE
- GENERAL USE LANE
- EXPRESS LANE
- EXPRESS LANE (BUSES ONLY)
- ELEVATED EXPRESS LANE
- ROADWAY IMPROVEMENTS
- MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2025 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION		
DESIGN YEAR 2025 PEAK-HOUR VOLUME AM(PM)		
VOLUME/ CAPACITY AM (PM)	OK / FAIL AM (PM)	

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FIGURE 6.5

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FIGURE 6.5

LEGEND

- 5 > NUMBER OF LANES AND TRAFFIC DIRECTION
- BRIDGE
- GENERAL USE LANE
- EXPRESS LANE
- EXPRESS LANE (BUSES ONLY)
- ELEVATED EXPRESS LANE
- ROADWAY IMPROVEMENTS
- MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION		
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)		
VOLUME/ CAPACITY AM (PM)	OK / FAIL AM (PM)	

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2045 DESIGN YEAR PREFERRED ALTERNATIVE OPERATIONAL ANALYSIS RESULTS

FIGURE 6.6

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FIGURE 6.6

LEGEND

- 5 > NUMBER OF LANES AND TRAFFIC DIRECTION
- BRIDGE
- GENERAL USE LANE
- EXPRESS LANE
- EXPRESS LANE (BUSES ONLY)
- ELEVATED EXPRESS LANE
- ROADWAY IMPROVEMENTS
- MDX PLANNED IMPROVEMENTS

LOCATION	
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)	
DENSITY AM (PM)	LOS AM (PM)

OR

LOCATION			
DESIGN YEAR 2045 PEAK-HOUR VOLUME AM(PM)			
VOLUME/ CAPACITY	AM (PM)	OK / FAIL	AM (PM)

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FIGURE 6.6

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SR 826 PROJECT DEVELOPMENT & ENVIRONMENT STUDY
From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
FPID No.: 432639-1-22-02
ETDM No.: 14308

2045 DESIGN YEAR PREFERRED ALTERNATIVE OPERATIONAL ANALYSIS RESULTS

FIGURE 6.6

Table 6.4 – 2025 and 2045 Preferred Alternative Intersection LOS and Delay Results

Arterial	Intersection	Preferred Alternative (2025)				Preferred Alternative (2045)			
		AM		PM		AM		PM	
		LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)
SR 5/ US 1	SR 990/ SW 112th Street/ Killian Drive**	E	65.9	E	62.9	F	111.0	F	123.8
	SW 104th Street**	F	96.7	E	79.0	F	147.0	F	166.6
	SW 98th Street**	D	35.7	C	32.4	D	46.0	D	41.6
SW 98th Street	SW 77th Avenue**	C	27.2	C	25.9	C	28.5	C	31.1
	Busway**	B	10.1	C	20.2	A	9.7	C	26.4
SR 94/ SW 88th Street/ Kendall Drive	SW 79th Avenue**	C	31.0	C	27.3	D	35.0	D	41.3
	SW 77th Avenue*	B	15.3	C	21.7	C	25.4	B	18.2
	SR 826 Southbound On/Off Ramp*	Free Flow Conditions				Free Flow Conditions			
	SR 826 Northbound On/Off Ramp*	A	3.9	A	3.2	A	5.4	A	3
	SW 73rd Place**	C	28.0	C	34.6	D	51.7	F	84.7
	Dadeland Boulevard**	B	18.4	C	33.1	C	34.5	D	39.1
SR 986/ SW 72nd Street/ Sunset Drive	SW 77th Court*	C	22.2	A	7.4	C	25.5	A	7.9
	SR 826 Southbound On/Off Ramp*	D	39.6	D	37.8	D	40.4	D	44.5
	SR 826 Northbound On/Off Ramp*	C	22.9	C	24.0	C	22.9	C	27.5
	SW 72nd Avenue*	D	51.5	E	56.1	E	61.8	E	73.5
SW 56th Street/ Miller Drive	SW 77th Ct*	B	10.3	A	3.5	B	11.2	A	3.7
	SR 826 Southbound Off Ramp**	C	33.6	D	39.7	D	39.0	E	59.2
	SR 826 Northbound On/Off Ramp**	D	38.0	D	36.6	D	40.8	D	39.3
	SW 72nd Ave*	E	66.2	F	83.4	E	78.5	F	147.7
SW 40th Street / Bird Road	SW 79th Avenue**	C	24.6	C	26.8	C	25.4	C	26.8
	SW 7800 Block*	A	7.6	A	6.6	B	16.4	B	12.4
	Southbound Ramp Terminal**	D	42.4	C	33.3	D	54.1	D	36.2
	Northbound Ramp Terminal*	D	36.4	D	41.5	D	54.4	E	68.1
	SW 74th Avenue**	A	7.1	C	25.0	A	8.6	D	42.3
	SW 72nd Avenue*	D	54.5	C	29.2	F	141.1	F	92.3
SW 24th Street / Coral Way	SW 82nd Avenue*	C	26.8	D	42.5	D	35.7	E	68.5
	SW 79th Avenue*	B	11.1	B	13.0	B	18.3	B	10.9
	Southbound Ramp Terminal (AM** and PM*)	C	20.6	D	35.5	C	20.2	C	29.7
	Northbound Ramp Terminal**	C	26.9	C	26.0	C	33.3	B	14.6
	SW 75th Avenue (AM** and PM*)	C	29.4	E	56.6	D	42.9	F	93.9
	SW 74th Avenue (AM** and PM*)	A	5.9	A	4.4	A	7.6	A	5.9
SW 8th Street	SW 82nd Avenue**	D	41.9	D	42.2	F	100.3	F	162.8
	Southbound Ramp Terminal**	B	10.0	B	11.9	A	10.0	B	13.4
	Northbound Ramp Terminal**	C	27.2	B	19.5	E	55.9	C	22.8
	SW 74th Avenue*	D	44.8	D	50.3	F	80.1	F	89.7
Flagler Street	SW 82nd Avenue**	C	25.6	C	29.8	C	27.5	D	39.6
	SW 79th Avenue**	C	27.5	C	25.7	C	26.4	D	35.3
	Southbound Ramp Terminal*	D	47.8	D	38.9	E	60.7	D	52
	Northbound Ramp Terminal*	B	14.4	C	21.0	B	17.3	C	26.5
	SW 74th Avenue*	B	11.2	C	24.0	B	17.5	D	37.6
	NW 72nd Avenue*	E	69.6	F	92.6	F	133.1	F	132.9
NW 25th Street	Southbound Ramp Terminal*	C	34.0	B	19.1	D	37.9	E	58.6
	Northbound Ramp Terminal*	D	38.8	C	30.1	F	151.2	C	30.1

NOTES:

* Results reported from Synchro 10 HCM6th Edition report.

** Results reported from Synchro 10 HCM2000 report, since HCM6th Ed and HCM2010 reports not capable of reporting results.

As shown in ***Table 6.4***, the 2025 preferred alternative intersection operational results indicate of the 43 intersections 37 will operate at LOS D or better. Three intersections will operate at LOS E and three intersections will operate at LOS F. The 2045 preferred alternative intersection operational results indicate of the 43 intersections 27 will operate at LOS D or better. Seven intersections will operate at LOS E and nine intersections will operate at LOS F.

Micro-Simulation Operational Analysis Results

The information presented in this section is a summary of the *SR 826 Systems Interchange Modification Report (SIMR)*, companion document to this study.

The operational analysis conducted for the SIMR confirmed that the proposed improvements to SR 826 mainline and interchange modifications will not have any significant adverse impacts on safety and operations along SR 826. The proposed modifications will improve traffic operations and enhance safety. When compared with the No-Build Alternative, the preferred alternative significantly improves operations along SR 826. In the preferred alternative, average operating speeds along northbound SR 826 general use lanes during the AM peak direction increase by approximately 5 MPH (from 46 MPH to 51 MPH) and total throughput increases by approximately 1,022 vehicles (10% above No-Build). In the southbound direction along SR 826 general use lanes PM peak direction, average operating speeds show an increase of approximately 10 mph (from 40 mph to 50 mph) and throughput increases by approximately 470 vehicles (4% above No-Build). The proposed express lanes will operate at LOS D or better with operating speeds above 50 mph in the AM and PM peak periods. At the networkwide level the preferred alternative performs better than the No-Build in terms of total vehicle miles travelled (4.5% increase in the AM peak and 1.0% increase in the PM peak); vehicle hours of delay (decrease by 2.3% in the AM peak and decrease 15.6% in the PM peak) and average operating speeds (increase by 2.7% in the AM peak and increase by 6.1% in the PM peak). Furthermore, the proposed express lanes along SR 826 will provide added operational benefits to support express bus services, emergency response services and improved travel time reliability for express lanes choice users.

6.1.10 Intelligent Transportation System and TSM&O Strategies

Widening the SR 826 corridor through lane addition would conflict with the existing ITS infrastructure. Therefore, the existing infrastructure would have to be removed in order to incorporate new ITS infrastructure for the new Express Lanes system. The proposed ITS infrastructure would include new DMS, ADMS, LSDMS, DMS, CCTV, VCCTV, MVDS, Bluetooth readers, fiber optic cable trunk line, drop cable system and ITS cabinets. Potential ramp metering locations will be discussed with FDOT District Six and recommended locations will be incorporated in to the ITS Technical Memorandum during the next phase. Additional information regarding proposed ITS system can also be found in the preliminary *Concept of Operations* and *Project*

Systems Engineering Management Plan (*PSEMP*) companion documents to the PD&E Study. A high-level overview map with the proposed major device locations is shown in ***Figure 6.7***. Once right of way and field observable overhead utilities are identified. The requirements and location of these devices will be reviewed and refined during the development of RFP package for the Design-Build contract. The device functional requirement will be addressed during the RFP development as well to capture the device improvements due to technological advancements. All the devices (except for the US 1 Busway devices) are anticipated to be controlled and monitored by the District Six SunGuide TMC. The ITS device type and location within the US 1 Busway will be identified and coordinated with both MDT and District Six during the Request for Proposal (RFP) development process.

TSM&O improvements for this project are only viable in combination with the build alternative improvements. FDOT is in the process of discussing internally with the District TSM&O Group what strategies are planned along the SR 826 corridor and which ones should be considered in the preferred alternative. These strategies will be listed and documented in the *System Interchange Modification Report*, a companion document to this PD&E Study.

Figure 6.7 – High-level Overview of Proposed ITS System

6.1.10.1 CONCEPT OF OPERATIONS

Express lane projects need to include a Concept of Operations starting during the planning phase of the project. A concept of Operations is a planning level document describing the operations, incident management, maintenance, stakeholder roles and responsibilities, connectivity, and integration of pricing and toll collection activities for the express lanes facility. It is intended to be a living document that will continue to get refined as the design and build process continues. The objective of this report is to document the consensus built among the partnering agencies. As a critical component to the systems engineering process, the Concept of Operations provide a framework for the future development of functional/design requirements. ***Figure 6.8*** shows the SR 826 Express Lanes System Overview.

Figure 6.8 – SR 826 Express Lanes System Overview

The Concept of Operations reflect the latest scope of the express lanes system and is aligned with the system requirements, design and implementation to ensure successful system testing, system validation, operations and maintenance. It identifies recommended system and operational improvements to accommodate the express lanes and transitway connector, such as; segment-based pricing signs, license plate reader technology for identification of non-bus use of the transitway connector, ramp signal system, and toll site coordination. Stakeholders meetings are required to verify some of the assumptions identified related to the operations regarding the MDX Maintenance limits, Florida Highway Patrol enforcement of transitway connector violations, Miami-Dade Department of Transportation and Public Works bus operations for access to/from the express lanes, and the development of performance measures to validate the proposed system being implemented along the corridor. The *Concept of Operations* is a companion document to the PD&E Study.

6.1.11 Utilities

Utility Agency Owners (UAOs) with known facilities within the study limits were contacted at the beginning of the PD&E Study and requested to provide the location of their existing and planned facilities. ***Table 6.5*** lists the contact information of each UAO. A preliminary evaluation for potential utility impacts associated with the preferred alternative was performed along SR 826 within the study limits. A summary of the impacts to each UAO is presented below. ***Appendix L***, Potential Utility Impacts documents the plans showing the specific location of the potential utility impacts.

Table 6.5 – UAO Contact List

Utility Agency/Owner	Facility	Contact Information	
AT&T - Florida	Telephone	Steve Low 9101 SW 24th Street Miami, FL 33165	305-222-8745 Office 305-221-0974 Fax 305-987-7351 Cell sl4504@att.com
Atlantic Broadband	Cable TV	Pete Freytag 1681 Kennedy Causeway North Bay Village, FL 33141	305-861-8069 x-5208 Office 305-865-9845 Fax 786.251.5989 Cell pfreytag@atlanticbb.com
CenturyLink / Level 3 Communications (Formerly Qwest Communications)	Fiber Optic	Mike Fitzgerald 5908 Hampton Oak Parkway, Suite A Tampa, FL 33610	813-630-2605 Mike.fitzgerald@centurylink.com
Comcast Cable	Cable TV & Fiber	Leonard Maxwell-Newbold 2601 SW 145th Ave. Miramar, FL 33027	954-447-8405 Office 954-447-8445 Fax 954-444-5113 Cell Leonard_Maxwell-Newbold@cable.comcast.com
Crown Castle Fiber	Fiber	Danny Haskett 1601 NW 136 Ave. Suite A-200 Sunrise, FL 33323	786-610-7073 Office 786-246-7827 Cell danny.haskett@crowncastle.com
Florida City Gas	Natural Gas	Maria Paula Lopez 4045 NW 97 Ave. Doral, FL 33178	305-835-3638 Office 786-332-8913 Cell maria.lopez@nexteraenergy.com
Florida Department of Transportation D6 ITS	Fiber Optic	Thomas Miller	305-470-5757 305-206-2600 thomas.miller@sunguide.com
Florida Gas Transmission	Natural Gas	Joe Sanchez 2405 Lucien Way Suite 200 Maitland, FL 32751	407-838-7171 Office 407-838-7101 Fax 407-808-4607 Cell joseph.e.sanchez@energytransfer.com
Florida Power & Light Distribution	Electric	Angel Vargas 4200 W. Flagler Street Miami, FL 33134	305-442-5129 Office 305-442-5123 Fax 305-495-9253 Cell angel.vargas@fpl.com

Table 6.5 – UAO Contact List Continued

Utility Agency/Owner	Facility	Contact Information	
Florida Power & Light Transmission	Electric	Michael Foley 700 Universe Blvd TS4/JW Juno Beach, FL 33408	561-904-3640 Office 561-523-9896 Cell Michael.Foley@fpl.com
MCI / Verizon	Communications / Fiber Optic	Attn : Investigations MCI - Verizon Business 2400 N. Glenville Dr. Richardson, TX 75082	972-729-6322 Investigations@Verizon.com
Miami-Dade County Public Works	Traffic/ Street Lights	Octavio Vidal	305-412-0891 Ext. 201 786-345-0986 octavio.vidal@miamidade.gov
Miami-Dade Expressway Authority	Electric & Fiber	John Reese	305-637-3277 Ext. 2144 jreese@mdx-way.com
Miami-Dade Water & Sewer	Water & Sewer	Patrick Chong 3501 NW 46 ST Miami, FL. 33142	786-552-4416 Office PCHON@miamidade.gov
Redflex Traffic Systems, Inc.	Traffic Control / Street Lights	Ross Duke	480-299-3834 rduke@redflex.com

AT&T - Florida

Potential impacts to manholes and buried telephone were identified at the following locations:

- US 1 at SW 108th Street
- SW 77th Avenue at SW 88th Street
- SW 79th Avenue at SW 88th Street
- SW 72nd Street
- SW 72nd Street at SW 73rd Court
- SW 77th Avenue at SW 70th Street

- SW 56th Street / Miller Drive
- SW 40th Street / Bird Road
- SW 4th Street at SW 77th Court
- SW 4th Street at SW 77th Avenue
- SW 2nd Street at SW 77th Avenue
- Flagler Street

Atlantic Broadband

Potential impacts to buried Fiber Optic Cable (FOC) facilities were identified at the following locations:

- SW 88th Street
- SW 79th Street

Centurylink / Level 3 Communications

No impact anticipated.

Comcast Cable

Potential impacts to subgrade and aerial lines were identified at the following locations:

- SW 88th Street – buried
- SW 77th Avenue from SW 88th Street to Snapper Creek Expressway – buried
- SW 77th Avenue at SW 82nd Street – buried
- SW 56th Street – buried
- SW 77th Court – aerial
- SW 8th Street – buried
- Flagler Street – buried

Crown Castle Fiber

Potential impacts to underground and aerial FOC were identified at the following locations:

- SW 79th Avenue and Flagler Street – buried
- US 1 at SW 112th Street – buried
- SW 104th Street – buried

- SW 98th Street – buried
- Along SR 826 southbound near SW 98th Street – buried
- SW 88th Street – buried
- SW 77th Avenue from SW 86th Street to SW 80th Street – aerial and buried
- SW 80th Street – buried
- SW 40th Street / Bird Road – buried
- SW 34th Street – buried

Crown Castle NG

No impact anticipated.

Fiberlight, LLC.

No impact anticipated.

Florida City Gas

Potential impacts to 4" gas main were identified at the following locations:

- SW 88th Street
- SW 40th Street / Bird Road

Florida Gas Transmission

Potential impacts to gas pipelines due to proposed roadway widening, were identified at the following locations:

- SW 104th Street – Existing 18" Outer Diameter (O.D.) x 0.250" Wall Thickness (W.T.), Grade X52 Natural Gas Transmission Pipeline (FLMEA).
- SW 24th Street / Coral Way from East of SW 82nd Avenue to SW 78th Place – Existing 6.625" O.D. x 0.188" W.T., Grade B Natural Gas Transmission Pipeline (FLMED).
- Flagler Street – Existing 18" O.D. x 0.250" W.T., Grade X 52, Natural Gas Transmission Pipeline (FLMEA).

Florida Power & Light - Distribution

Potential impacts to power distribution facilities were identified at the following locations:

- Busway at SW 98th Street – buried power line.
- SW 88th Street – buried power line.

- SW 77th Avenue from SW 86th Street to SW 74th Street – overhead power line.
- SW 82nd Avenue & and SW 8th Street – overhead power line

Florida Power & Light - Transmission

Potential impacts to power transmission facilities were identified at the following locations:

- SW 77th Court from SW 4th Street to SW 2nd Street – 138 kV Transmission Line.
- SW 2nd Street – 138 kV Transmission Line.

Hotwire Communications

No impact anticipated.

MCI / Verizon

Potential impacts to underground fiber optic facilities were identified at the following locations:

- SW 88th Street
- Flagler Street intersection with SW 78th Avenue

Miami-Dade Enterprise Technology Services Department

No impact anticipated.

Miami-Dade Expressway Authority (MDX)

Potential impacts to utility facilities in the median and roadside were identified at the following interchanges:

- SR 874
- SR 836

Miami-Dade Water & Sewer Department

Potential impacts to water and sewer facilities were identified at the following locations:

- US 1 at SW 108th Street – 12" Force Main
- US 1 northbound at SW 104th Street – 12" Water Main
- US 1 at SW 102nd Street – 8" Force Main
- SW 88th Street – 24" Force Main
- SW 72nd Street – 36" and 16" DIP Water Main
- SW 76th Avenue at SW 64th St. – 8" DIP Water Main

- SW 56th Street – 8" Water Main
- SW 40th Street / Bird Road – 16" Water Main
- SW 40th Street / Bird Road – 48" Water Main
- SW 24th Street – 30" and 16" Water Main
- SW 8th Street – 24" and 12" DIP Water Main
- Along SW 77th Avenue from SW 4th Street to Flagler Street – 6" Water Main
- Flagler Street – 12" DIP Water Main

Redflex Traffic Systems, Inc.

Potential impacts to buried conduit were identified at the following locations:

- US 1 and SW 112th Street
- US 1 and SW 104th Street

Suburban Propane

No impact anticipated.

Univision Network

No impact anticipated.

Coordination with the UAOs will continue during the Design phase. Further refinement of the proposed design and utility field verification (verified vertical and horizontal (VVH) data) will be performed during final design. Special construction equipment and techniques may be utilized to avoid utility conflicts.

The FDOT Utility coordinator is currently working with the UAOs to determine the following information:

- Costs associated with relocating utilities.
- If utilities are located in FDOT right of way by permit or easement.

6.1.12 Drainage and Stormwater Facilities

The project is located in Miami-Dade County, Florida, contained within unincorporated Miami-Dade, and is within the jurisdictional boundary of Miami-Dade Regulatory and Economic Resources (DRER), South Florida Water Management District (SFWMD) and the United States Army Corps of Engineers (USACE).

SFWMD and DRER have established several criteria for water quality, depending on the proposed type of stormwater treatment facility. Existing facilities provide water quality treatment and attenuation of roadway runoff via wet and dry detention/retention ponds and French Drains. All proposed stormwater management facilities will provide the necessary water quality treatment volume and limit the post-development peak discharge rate into the C-100 A Canal, C-2 (Snapper Creek), C-3 (Coral Gables Canal), C-4 (Tamiami Canal) and Northline Canal to the pre-development peak discharge rate. Water quality treatment and discharge attenuation will be provided via existing and proposed dry and wet detention/retention ponds, linear swales and French Drains. The proposed stormwater management facilities have been designed to maintain all offsite flows into FDOT right of way while maintaining maximum pre-development flood elevations.

Based on the conceptual drainage design evaluation for the proposed improvements, the stormwater management facilities will meet FDOT drainage criteria as well as SFWMD/DRER criteria. The improvements will have no negative drainage impacts to the surrounding areas and the proposed stormwater management facilities will have the capacity to adequately treat and attenuate roadway runoff within the project limits.

A description of the post development conditions at each system is summarized below. ***Figure 6.9*** depicts the existing drainage map of all systems. Additional details about the drainage features are documented in the *Preliminary Drainage Report*, dated August 2019, a companion document to this PD&E Study.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

AYLIN COSTA, P.E.
P.E. LICENSE NUMBER 69865
RS&H INC.
6303 BLUE LAGOON DRIVE, SUITE 325
MIAMI, FL 33126
CERTIFICATE OF AUTHORIZATION 5620

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 826	MIAMI-DADE	432639-1-22-01

FIGURE 6.9 - DRAINAGE SYSTEMS

SHEET NO.
6-49

$USER$ $DATE$ $TIME$ $FILE$

System 1 – In the post development condition, the proposed widening along US 1 southbound will add additional impervious areas, increasing runoff and reducing the available conveyance ditch/swale capacity between US 1 southbound and the US Busway. Since the existing roadway will remain and only minor widening is proposed for turn lane improvement at the intersection of SW 114th Street and US 1, compensatory water quality treatment via French drains will be provided for the additional impervious area only. To minimize construction impacts along US 1, the proposed French drains will be connected to the US 1 trunkline but located under an existing swale that runs along the west right of way between Killian Drive and SW 110th Street. The Interconnected Channel and Pond Routing (ICPR) model for the post-development conditions shows discharge rates into the C-100A Canal are reduced, and stages within critical nodes are either maintained or reduced when compared to the pre-development stages.

System 2 – In the post development condition, the proposed widening along US 1 southbound and the SR 826 southbound egress ramp will add additional impervious areas increasing runoff and reducing the available conveyance ditch/swale capacity between US 1 southbound and the US 1 Busway. Since the existing roadway will remain and only minor widening is proposed along US 1, compensatory water quality treatment via French drains will be provided for the additional impervious area only. To minimize construction impacts along US 1, the proposed French drains will be connected to the US 1 trunkline but located under an existing swale that runs along the west right of way between SW 104th Street and SW 100th Street.

System 3 – In the post development condition, milling and resurfacing is proposed along US 1 northbound to the SR 826/Kendall Drive ramp, which contributes runoff to Swale 301. Water quality treatment and runoff attenuation for the contributing areas to Swale 301 can be provided without changes to the swale grading and control structure (SwaleCS301) with a weir elevation of 7.20 feet – NAVD.

Widening and reconstruction of the SR 826 mainline and ramps within the System 3 limits will add additional impervious area increasing runoff and reducing existing pond and swale areas north of Kendall Drive. The System 3 post-development total area is greater than the pre-development area in order to account for the proposed right of way along SW 77th Avenue. Water quality treatment for all onsite basin areas within the System 3 limits will be provided by the expansion of existing ponds and swales within the Kendall Drive interchange infield, converting Pond

303 from dry to wet retention and adding French drain along SW 77th Avenue and the SR 826/Kendall Drive ingress and egress ramps north of Kendall Drive. New pipe connections between ponds and swales will also be required in order to equalize stages upstream of the proposed outfall control structure into the C-2/Snapper Creek Canal. French drains for drawdown of dry ponds and swales will require further evaluation during final design. A proposed outfall structure (CSPR305E) and 54-inch pipe into the C-2 Canal will replace the two existing outfalls, which will be impacted by the proposed reconstruction of the SR 826 mainline, ramps and SW 77th Avenue bridges. The proposed control elevation for the 8-foot vertical weir is 3.90 feet-NAVD.

System 4 – In the post development condition, widening and reconstruction of the SR 826 mainline and ramps within the System 4 limits will add additional impervious area, increasing runoff and reducing existing swale areas along either side of SR 826, north of the Snapper Creek Expressway. The System 4 post-development total area is greater than the pre-development area in order to account for the proposed right of way and impacts due to reconstruction along SW 77th Avenue. Water quality treatment for all onsite basin areas within the System 4 limits will be provided by expansion of existing Pond 401, maximization of storage within a proposed swale between the SR 826 northbound lanes and SW 76th Avenue and proposed French drain along SW 76th Avenue and SW 77th Avenue. Infield areas within the Sunset Drive Interchange will be regraded to provide attenuation. New pipe connections between the pond, swale, infield areas and French drain will be required to equalize stages upstream of the proposed outfall control structure into the C-2/Snapper Creek Canal. French drains for drawdown of dry ponds and swales will require further evaluation during final design.

System 5 – In the post development condition, widening and reconstruction of the SR 826 mainline within the System 5 limits will add additional impervious area, increasing runoff and reducing existing swale areas and impacting existing French drains along either side of SR 826. The System 5 post-development total area is greater than the pre-development area in order to account for the proposed limited access right of way and impacts/reconstruction along SW 76th Avenue and SW 77th Avenue. Water quality treatment for all onsite basin areas within the System 5 limits will be provided by a proposed Pond 5E14, located within proposed right of way. Additionally, proposed French drain along SW 76th Avenue and SW 77th Avenue will replace the existing French drains on either side of SR 826,

which will be impacted by the proposed widening. System 5 will continue to function as a self-contained system with overflow into System 4. French drain for drawdown of the proposed dry pond will require further evaluation during final design.

System 6 – In the post development condition, widening and reconstruction of the SR 826 mainline and ramps within the Miller Drive Interchange will add additional impervious area increasing runoff and reducing existing swale/pond areas and impacting existing French drains. The System 6 post-development total area is greater than the pre-development area in order to account for impacts/reconstruction along SW 76th Avenue and SW 77th Avenue. Water quality treatment for all onsite basin areas within the system 6 limits will be provided by expanding existing Ponds 6W1, Pond 6W2, maximizing storage within Swale 6E1 and French drains. French drains for drawdown of dry retention ponds and swales will require further evaluation during final design. The existing outfall structure (CS6S65) and 30-inch pipe into Miller Lake will remain.

System 7 – In the post development condition, widening and reconstruction of the SR 826/SR 874 Interchange to accommodate the proposed improvements will add impervious area, increasing runoff and impacting existing French drains. Water quality treatment for all onsite basin areas within the System 7 limits will be provided by replacing the impacted French drains and adding new French drains within the infield swales. The existing outfall structures EX7S69 and EX7S76, as well as the corresponding 54-inch and 24-inch pipes into Tropical Park Lake, will remain. System 7 is connected to Systems 7A and 8 by French drains and pipe links across system boundaries.

System 7A – In the post development condition, widening of the SR 874 mainline to accommodate the proposed improvements will add impervious area. Existing French drain and swale along the northwest limited access right of way will not be impacted, since retaining walls are proposed around the toll gantry infrastructure and widening area. Water quality treatment for all onsite basin areas within the System 7A limits will be provided by extending the existing French drains within the roadside swales. The existing outfall structures EX7AS12 and EX7S1B, as well as the corresponding 30-inch pipes into Tropical Park Lake and Patricia Lake, will remain. System 7A is connected to Systems 7 and 7B by French drains and pipe links across system boundaries.

System 7B – In the post development condition, minor widening of the SR 874 southbound lanes to accommodate the proposed improvements will add a small amount of impervious area. Existing swale along the northwest limited access right of way will be slightly impacted by the proposed widening. Water quality treatment for all onsite basin areas within the System 7B limits, including previously untreated runoff, will be provided by maximizing the existing swales capacity and by grading the proposed swale bottoms up the back of the roadway retaining walls. The existing outfall structure EX7BS05 weir will be raised to elevation 5.75 feet NAVD, while the corresponding 42-inch outfall pipe into Patricia Lake will remain.

System 8 – In the post development condition, the addition of the express lanes viaduct bridges over existing lanes and Bird Road Interchange ramps reconfiguration will result in a net reduction in impervious area. However, reconstruction of the interchange ramps will impact the existing infield ponds and some of the existing French drains. Water quality treatment for all onsite basin areas within the System 8 limits will be provided by maximizing the capacity of proposed infield ponds Pond8E1 and Pond 8E2. French drains for drawdown of dry retention ponds and swales will require further evaluation during final design. The existing outfall structure will be modified (PR8S207) with a proposed weir at 2.99 feet NAVD, while the existing 54-inch pipe into C-3/Coral Gables Canal Loop will remain. System 8 is connected to Systems 7 and 9 by French Drains and pipe links across system boundaries.

System 9 – In the post development condition, proposed SR 826 mainline widening to accommodate the proposed improvements will add impervious area increasing runoff and impacting existing swales/ponds and French drains on either side of SR 826 north of the Bird Road Interchange. Water quality treatment for all onsite basin areas within the System 9 limits will be provided by maximizing the capacity of existing ponds and swales to remain, a proposed linear Pond 9W5, located within the proposed limited access right of way and additional French drains. French drains for drawdown of dry retention ponds and swales will require further evaluation during final design. The existing outfall structures EX9S80 and EX9S80A will remain with weir elevation at 2.99. However, the third existing outfall structure will be modified (PR9S209) with a proposed weir at 2.99 feet NAVD. The existing 30-inch pipe into C-3/Coral Gables Canal Loop will remain. System 9 is connected to System 8 by French Drains and pipe links across system boundaries.

System 10,11,12 and 13 – Within the System 10 limits in the post development condition, the proposed SR 826 mainline widening to accommodate the improvements will add a significant amount of impervious area increasing runoff and impacting existing swales/ponds and French drains on either side of SR 826 south of the Coral Way Interchange. Issues encountered during the drainage analysis to limit the offsite area maximum stages to the pre-development condition, while meeting water quality criteria and discharge attenuation within the reduced pond and swale areas in this system, was resolved by interconnecting Systems 10, 11, 12 and 13. The proposed connection between the systems allowed for lower weir elevations that allowed water quality criteria and discharge attenuate to be provided, while maximizing the use of available surplus storage on Systems 12 and 13. This approach also allows for a reduction in the overall stages across all basins south of Coral Way to Tamiami Trail. Water quality treatment for all onsite basin areas within the System 10 limits will be provided by maximizing the capacity of existing ponds and swales to remain, maximizing the capacity of a proposed linear Pond 10W7 located within the proposed limited access right of way, and additional French drains. French drains for drawdown of dry retention ponds and swales will require further evaluation during final design.

In System 10 the existing outfall structures EXCS10S69 from Pond 10E2 will remain with weir elevation at 3.68 feet NAVD, since this pond is not hydraulically connected to Pond 10E3 and 10W7. Proposed outfall structures are required for Ponds 10E3 and Pond 10E4. Pond 10E4 will remain isolated, while Pond 10E3 and Pond 10W7, both adjacent to the SR 826 mainline, will require a jack and bore equalizer. System 10 is connected to Systems 11 by a proposed jack and bore equalizer under Coral Way from/to Pond 10W7 and Pond 11W2.

Within the System 11 limits in the post development condition, the proposed SR 826 mainline widening to accommodate the improvements will add a significant amount of impervious area, increasing runoff and impacting existing swales/ ponds and French drains on the west side of SR 826, since the Coral Gables Canal runs along the east. The main challenge within System 11 is conveyance of stormwater back to the Coral Way Interchange ponds across an existing culvert that connects the Coral Gables Ditch west of SR 826 to the Coral Gables Canal on the east. Connecting over the culvert is not feasible because the pipe inverts will be higher than the proposed weir elevations. Therefore, a connection under the culvert or Coral Gables ditch are the only other possible alternatives.

Connecting under the culvert along SR 826 will be challenging while maintaining traffic and temporary drainage. Therefore, the proposed connection to Pond 11W2 is shown under the Coral Gables Ditch and southbound ramps. The crossing location will require a permanent drainage easement and temporary construction easements in order to construct a micro tunnel or jack and bore pit on the west side. Water quality treatment for all onsite basin areas within the System 11 limits will be provided by maximizing the capacity of existing Pond 11W1, adding a control structure to Pond 11W2 and proposed French drains along SW 77th Avenue. System 11 is connected to System 13 with a proposed pipe crossing under an existing offsite outfall at SW 16th Street.

Within System 12, storage in the infield ponds will be maximized by expanding the existing wet Pond 12W4 and converting Pond 12W1 from dry retention to wet retention. New equalizer pipe connections will be required between the proposed wet ponds. System 12 and 13 will be connected by a proposed jack and bore under SR 826 between Pond 12W1 and 13E3.

Within System 13, storage in the infield ponds will be maximized by expanding the existing wet Pond 13E3 and converting Pond 13E1 from dry retention to wet retention. New equalizer pipe connections will be required between the proposed wet ponds.

System 14 – In the post development condition, proposed SR 826 mainline widening and southbound off ramp reconfigurations at the Tamiami Trail Interchange will add impervious area, increasing runoff and impacting existing swales/ponds and French drains on either side of SR 826 north of the Tamiami Trail interchange. Water quality treatment for all onsite basin areas within the System 14 limits will be provided by maximizing the capacity of existing ponds and swales to remain, converting Pond 14W1 from dry retention to wet retention and adding French drains along SW 77th Court. The existing outfall structures from Pond 14W1 will be replaced. The existing pipes into the C-4/Tamiami Canal will remain.

System 15 – In the post development condition, the proposed SR 826 mainline widening and southbound off ramp reconfigurations at the Tamiami Trail Interchange will add impervious area, increasing runoff and impacting existing swales/ponds and French drains on either side of SR 826 north of the Tamiami Trail Interchange. Water quality treatment for all onsite basin areas within the System 15 limits will be provided by maximizing the capacity of existing Pond 15E1, Pond

15E2 and adding French drains along SW 77th Avenue. The existing outfall structures from Pond 15E1 will be replaced, while the existing pipes into the C-4/Tamiami Canal will remain.

System 16 – In the post development condition, the Tamiami Trail northbound interchange ramps reconfiguration will result in a net reduction in impervious area within System 16. Additionally, improvements along Tamiami Trail do not affect existing Pond 16B1. Water quality treatment for all onsite basin areas within the System 16 limits will be provided by the existing Pond 16E1 and a short run of additional French drains along Tamiami Trail under the south side reconfigured sidewalk. The existing outfall structures from Pond 16E1 and pipes into the C-4/Tamiami Canal will remain.

System 17 – In the post development condition, the proposed improvements to SR 826 will add impervious drainage area, increasing runoff. Water quality treatment for all onsite basin areas within the System 17 limits will be provided by increasing the storage capacity of the SR 826 / Flagler Street Interchange, Ponds 17W1, 17W3, 17E1, and 17E2 by extending their footprint towards the proposed adjacent retaining wall from the proposed roadway improvements. In addition, it is proposed to add French drain within Pond 17W1, 17E1, and 17E5. The proposed drainage improvements will reduce the discharge rates into the North Line Canal and maintain stages within the dry retention ponds.

System 18 – In the post development condition, the proposed improvements to SR 826 will increase the contributing impervious drainage area, increasing runoff. In addition, the roadway widening along the southbound SR 826 will reduce the footprint and thus the storage capacity of Pond 18W1. Water quality treatment for all onsite basin areas within the System 18 limits will be provided by proposed French drain within Pond 18W1 and south of SR 836 eastbound. The proposed drainage improvements will reduce the discharge rates into the North Line Canal and maintain stages within the dry retention ponds.

System 19 – In the post development condition, the proposed improvements to SR 826 will increase the contributing impervious drainage area, increasing runoff. In addition, the roadway widening along SR 836 will reduce the footprint and thus the storage capacity of Pond 19W12. Proposed French drain within Pond 19W13 and 19W12 will reduce the discharge rates into the North Line Canal and maintain stages within the dry retention ponds at or below pre-development levels.

However, the required water quality treatment volume will not be able to be provided within this drainage system due in part to the poor exfiltration rates of the existing soils and limited right of way for the construction of additional retention areas. Excess water quality treatment volumes provided within Drainage Systems 17 and 18, which also discharge into the North Line Canal, will provide compensatory treatment to make up for the shortfall of System 19.

System 20 – In the post development condition, proposed improvements to SR 836 will increase the contributing impervious drainage area, increasing runoff. Water quality treatment for all onsite basin areas within the System 20 limits will be provided by proposed French drain within Pond 20W4 in order to help maintain stages at or below pre-development levels and reduce the discharge rates into the Venetian Canal to below pre-development levels.

System 21 – In the post development condition, the proposed improvements to SR 836 will only slightly increase the contributing impervious drainage area and thus, only slightly increase the stormwater runoff. No drainage system improvements are necessary in order to maintain stages at or below pre-development levels and provide for the required water quality treatment volume.

6.1.13 Floodplain Analysis

The project corridor lies within Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) Panel numbers 12086C0462L, 12086C0454L, 12086C0452L, 12086C0289L, and 12086C0287L and is predominantly located within the 100-year floodplain, within Zones AE and AH with base flood elevations (BFE) varying between 5.5-19.5 feet-NAVD88. Zone AE designates flood hazard areas inundated by 100-year flood; Zone AH designates shallow flooding areas where average depths are between 1 and 3 feet for the 100-year flood; and Zone X designates flood hazard areas outside the 100-year flood zone but within the 500-year flood zone.

In accordance with Executive Order 11988 "Floodplain Management", USDOT Order 5650.2, "Floodplain Management Protection", and Federal-Aid Policy Guide 23 CFR 650A, floodplains must be protected. The intent of these regulations is to avoid or minimize highway encroachments within the base floodplains, and to avoid supporting land use development incompatible with floodplain values.

Given the significant increase in storage within the corridor for stormwater management, there is no change in flood "risk" or adverse floodplain impacts

associated with this project. The modifications to drainage structures included in this project will result in an insignificant change in their capacity to carry floodwater. This change will cause minimal increases in flood heights and flood limits. These minimal increases will not result in any significant change in flood risks or damage. There will not be a significant change in the potential for interruption or termination of emergency services or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.

6.1.14 Transportation Management Plan

A conceptual Transportation Management Plan was developed as part of this PD&E Study to determine constructability and the ability to maintain traffic for the preferred alternative. Many of the components required to develop a plan will be developed in accordance with the FDOT standards during the subsequent phases of the project. The plan proposes to keep all travel lanes open at all times during construction. Short lane closures may be necessary during off-peaks to change construction phases. Advance notice of any lane closure will be given to minimize disruption to roadway users. The SR 826 mainline roadway typical sections general maintenance of traffic were divided into two segments, between US 1 and SR 874 and between SR 874 and SR 836. ***Appendix M*** documents the detailed maintenance of traffic phases throughout the rest of the corridor, including the bridge structures.

The SR 826 roadway mainline will consist of three maintenance of traffic phases (see ***Figures 6.10 – 6.17***).

Figure 6.10 – Existing Roadway Section South of Sunset Drive

Figure 6.11 – Phase 1 Maintenance of Traffic Roadway Section South of Sunset Drive

Figure 6.12 – Phase 2 Maintenance of Traffic Roadway Section South of Sunset Drive

Figure 6.13 – Phase 3 Maintenance of Traffic Roadway Section South of Sunset Drive

Figure 6.14 – Existing Roadway Section North of Coral Way

Figure 6.15 – Phase 1 Maintenance of Traffic Roadway Section North of Coral Way

Figure 6.16 – Phase 2 Maintenance of Traffic Roadway Section North of Coral Way

GENERAL USE LANE
AUXILIARY LANE

Figure 6.17 – Phase 3 Maintenance of Traffic Roadway Section North of Coral Way

- Phase 1 – Shift traffic to the inside to construct the outside proposed widening section
    - Reduce the travel lane widths to 11 feet wide.
    - Reduce the inside shoulder widths (varies throughout the corridor).
    - Provide a 2-foot wide shoulder width on the outside traveled way.
    - Place a Type K Temporary Concrete Barrier System installed as Anchored (Standard Plans Index 102-110).
    - Provide a 1-foot wide pavement/asphalt width behind the anchored Type K Temporary Concrete Barrier System.
    - Provide a temporary retaining wall system on the outside of the northbound approach for MSE wall construction (applies only to the northern segment).
    - Construct an MSE wall (applies only to the northern segment).
    - Remove the temporary retaining wall system (applies only to the northern segment).
    - Construct the outside proposed widening section, shoulders and roadside barriers.

- Phase 2 – Shift traffic to the outside to reconstruct the median and construct the express lanes
    - Shift all lanes to the outside newly widened roadway.
    - Continue with a minimum of 11 feet wide travel lane.
    - Reduce the outside shoulder widths to a minimum of 8 feet (varies throughout the corridor).
    - Provide a minimum of 2-foot wide shoulder width on the inside traveled way.
    - Place Type K Temporary Concrete Barrier System installed as Anchored (Standard Plans Index 102-110).
    - Provide a minimum of 1-foot wide pavement/asphalt width behind the anchored Type K Temporary Concrete Barrier System.
    - Construct the inside proposed widening section, shoulders and barrier wall along the median.

- Phase 3 – Shift travel lanes to final location
    - Stripe buffered separation and express lanes in the median.
    - Install express lane markers.

- Overbuild the pavement and make cross slope/crown point adjustments as necessary.
- Resurface the pavement corridor to final grade with final pavement markings.

6.1.15 Special Features

The corridor currently has noise walls. These noise walls are currently being evaluated as part of a Noise Study Analysis. This study is currently underway and will be summarized under ***Section 6.2.7***.

Details on retaining walls are documented in the Bridge Analysis Report (see ***Appendix G***). Pending description and location of retaining walls.

6.1.16 Design Variation and Design Exceptions

Design controls and criteria that will need a Design Variation or Design Exception are summarized in ***Table 6.6***.

Table 6.6 – Design Variations and Exceptions

Design Element Location/Description	Begin	End	Length (ft)	Proposed (ft)	Criteria	Variation/Exception	Comment
Shoulder Width SR 826 NB inside shoulder	Just south of Snapper Creek Expressway overpass (2025+70)	Just north of Snapper Creek Expressway overpass (2027+40)	170	10	FDM: 12 ft (min.) AASHTO: 10 ft (min.)	Variation	Necessary to avoid the replacement of the Snapper Creek Expressway overpass.
Shoulder Width SR 826 NB outside shoulder	Just south of Snapper Creek Expressway overpass (2025+70)	Just north of Snapper Creek Expressway overpass (2026+50)	170	4	FDM: 12 ft (min.) AASHTO: 10 ft (min.)	Exception	Necessary to avoid the replacement of the Snapper Creek Expressway overpass.
Buffer Width SR 826 NB	Just south of SW 88th Street (2000+00)	North of Snapper Creek Expressway (2038+00)	3,800	2-4	4 ft based on U.S. and FL Guidelines	-	Necessary to avoid mainline bridge replacement over SW 88th Street and the replacement of the Snapper Creek Expressway overpass.
Shoulder Width SR 874 SB inside shoulder	North of SR 826/SR 836 Interchange (90+00)	Just south of SR 826 (70+40)	1,960	10	FDM: 12 ft (min.) AASHTO: 10 ft (min.)	Variation	Segment cross section is bound by existing and proposed bridge piers on the inside and the necessity to avoid a stopping sight distance exception along the outside shoulder, Variation is required to avoid the replacement of the two major SB bridges of the SR 826/SR 836 interchange.
Buffer Width SR 874 SB	North of SR 826/SR 836 Interchange (90+00)	North of Miller Drive (54+90)	3,510	2-4	4 ft based on U.S. and FL Guidelines	-	Segment cross section is bound by existing and proposed bridge piers on the inside and the necessity to avoid a stopping sight distance exception along the outside shoulder. This reduced buffer is required to avoid the replacement of the two major SB bridges of the SR 826/SR 836 interchange.
Lane Width SR 826 NB express lane(s)	Just south of SW 8th Street (220+07)	Beyond the north project limit	>8,000	11	FDM: 12 ft (min.) AASHTO: 12 ft (min.)	Exception	Necessary to avoid significant linear ROW impacts to numerous residential, industrial and major retail sites; necessary to avoid reconstruction of the recently completed SR 826/SR 836 multi-level interchange.
Lane Width SR 826 NB general-use lanes (all)	Just south of SW 8th Street (219+98)	Beyond the north project limit	>8,000	11	FDM: 12 ft (min.) AASHTO: 12 ft (min.)	Exception	Necessary to avoid significant linear ROW impacts to numerous residential, industrial and major retail sites; necessary to avoid reconstruction of the recently completed SR 826/SR 836 multi-level interchange.
Shoulder Width SR 826 NB inside shoulder	North of Flagler (2255+48)(NB baseline)	South of NW 7th Street (2260+01)	453	6-10	FDM: 12 ft (min.) AASHTO: 10 ft (min.)	Exception	Forced by geometry north and south of this segment
Shoulder Width SR 826 NB inside shoulder	Just north of NW 7th Street (2279+00)	Beyond the north project limit	>2,000	2-10	FDM: 12 ft (min.) AASHTO: 10 ft (min.)	Exception	Necessary to avoid significant linear ROW impacts to industrial and major retail sites; necessary to avoid reconstruction of the recently completed SR 826/SR 836 multi-level interchange.
Shoulder Width SR 826 NB inside shoulder	Just south of SW 8th Street (220+27)	North of Flagler (2255+48)(NB baseline)	3,600	10-12	FDM: 12 ft (min.) AASHTO: 10 ft (min.)	Variation	Necessary to avoid significant linear ROW impacts to numerous homes.
Shoulder Width SR 826 NB outside shoulder	South of NW 7th Street	North of NW 7th Street	1,550	10-12	FDM: 12 ft (min.) AASHTO: 10 ft (min.)	Variation	Necessary to construct the proposed SR 826/SR 836 direct connect ramps and to avoid reconstruction of the NB to WB 4th level ramp of the SR 826/SR 836 interchange.
Buffer Width SR 826 NB	Just south of SW 8th Street (220+27)	Beyond the north project limit	>8,000	1-4	4 ft based on U.S. and FL Guidelines	-	Necessary to avoid significant linear ROW impacts to numerous residential, industrial and major retail sites; necessary to avoid reconstruction of the recently completed SR 826/SR 836 multi-level interchange.
Lane Width SR 826 SB express lane(s)	Before the north project limit	Just south of SW 8th Street (220+37)	>8,000	11	FDM: 12 ft (min.) AASHTO: 12 ft (min.)	Exception	Necessary to avoid significant linear ROW impacts to numerous residential, industrial and major retail sites; necessary to avoid reconstruction of the recently completed SR 826/SR 836 multi-level interchange.
Lane Width SR 826 SB general-use lanes (all)	Before the north project limit	Just south of SW 8th Street (220+61)	>8,000	11	FDM: 12 ft (min.) AASHTO: 12 ft (min.)	Exception	Necessary to avoid significant linear ROW impacts to numerous residential, industrial and major retail sites; necessary to avoid reconstruction of the recently completed SR 826/SR 836 multi-level interchange.
Shoulder Width SR 826 SB inside shoulder	Before the north project limit	Within the SR 826/SR 836 Interchange (3286+20)(SB baseline)	>500	2-4	FDM: 12 ft (min.) AASHTO: 10 ft (min.)	Exception	Necessary to avoid reconstruction of the recently completed SR 826/SR 836 multi-level interchange.
Shoulder Width SR 826 SB inside shoulder	North of Flagler (3260+25)	At Flagler (3249+00)	1,125	8-10	FDM: 12 ft (min.) AASHTO: 10 ft (min.)	Exception	Necessary to avoid ROW impacts to a major retail site.
Shoulder Width SR 826 SB inside shoulder	At Flagler (3249+00)	Just south of SW 8th Street (220+37)	2,820	10-12	FDM: 12 ft (min.) AASHTO: 10 ft (min.)	Variation	Necessary to avoid ROW impacts to a major retail site, commercial sites and homes.
Shoulder Width SR 826 SB outside shoulder	At Flagler (3248+60)	South of Flagler (235+35)	1,315	10-12	FDM: 12 ft (min.) AASHTO: 10 ft (min.)	Variation	Necessary to avoid ROW impacts to commercial sites and homes.
Buffer Width SR 826 SB	Before the north project limit	Just south of SW 8th Street (220+37)	>8,000	1-4	4 ft based on U.S. and FL Guidelines	-	Necessary to avoid significant linear ROW impacts to numerous residential, industrial and major retail sites; necessary to avoid reconstruction of the recently completed SR 826/SR 836 multi-level interchange.
Border Width (throughout the project)	-	-	-	Varies	FDM: 94 ft	Variation	Necessary to avoid significant ROW impacts along both sides of nearly the entire project.

The Design Variations/Exceptions have not been approved at this point. The Design Variations and Exceptions package will be prepared during the design phase.

6.1.17 Cost Estimate

The PD&E Study developed a project cost estimate for the preferred alternative. The estimated construction cost was generated using the FDOT Long Range Estimate (LRE) cost estimating system. The project cost estimate includes the major cost components typically associated with highway construction and right of way acquisition. The total cost estimate for the preferred alternative is approximately $683.5 million. ***Table 6.7*** summarizes the construction cost estimate and total cost estimate. These costs are preliminary in nature and will be refined as the project enters subsequent transportation phases.

Table 6.7 – Total Cost Estimate

Category	Cost
Construction Cost	$375.5 million
Maintenance of Traffic (10%)	$37.5 million
Mobilization (8%)	$33.0 million
Project Unknown (12%)	$53.5 million
Utilities	$12.5 million
Environmental	$15.5 million
Design (8%)	$34.4 million
Right of Way	$78.6 million
Construction Engineering and Inspection (10%)	$43.0 million
Total Cost Estimate	$683.5 million

6.2 Summary of Environmental Impacts of the Preferred Alternative

6.2.1 Future Land Use

Existing land use was assessed through the review of current zoning map information and GIS shapefiles downloaded from the Florida Geographic Data Library. ***Table 6.8*** reports the total area by zoning description found within SR 826, between US 1 and SR 874. The predominant land use present is residential (51.28 %) followed by Retail/Office (14.15 %) and Public/Semi-Public (11.57 %). ***Figure 6.18*** shows the location of each zoning district.

Table 6.8 – Study Area Generalized Land Use

Zoning Description	Acres	Percent
Acreage Not Zoned for Agriculture	11.12	0.44%
Agricultural	0.95	0.04%
Centrally Assessed	17.53	0.70%
Industrial	85.35	3.39%
Institutional	96.62	3.84%
Parcels with No Values	15.75	0.63%
Public/Semi-Public	291.27	11.57%
Recreation	18.88	0.75%
Residential	1291.03	51.28%
Retail/Office	356.12	14.15%
Vacant Nonresidential	70.80	2.81%
Vacant Residential	261.27	10.38%
Water	0.92	0.04%

SR 826 is located within the Miami-Dade urban growth boundary as a limited access expressway. The corridor is consistent with the character and intensity of the surrounding development. Other than the localized effects of potential relocations as part of the preferred alternative, this project is not expected to affect the current or future land use of the area.

Figure 6.18 – Project Corridor Land Use Map

6.2.2 SECTION 4(F)

In compliance with the Department of Transportation Act of 1966 [Title 49, U.S. Code, Section 1653(f)], as amended, and in accordance with the FDOT PD&E Manual, Part 2 – Section 4(f) Evaluations (dated January 14, 2019), the study corridor was evaluated for potential Section 4(f) involvement. The provisions of Section 4(f) apply to any significant publicly-owned parks, recreation areas, or wildlife and waterfowl refuges; historic and archeological sites; and properties which represent public multiple-use land holdings. Two publicly-owned parks are adjacent to the project corridor: Tropical Park and Humble Mini Park.

Tropical Park lies adjacent to the preferred alternative proposed in the PD&E Study. The Miami-Dade County owned park supports a variety of recreational uses such as picnicking, individual and team sporting activities, equestrian activities, fishing, biking, walking/jogging and paddle boarding. Concept plans for the preferred alternative show no modification to the local roadway network in the area of the park's entrances and no incorporation of the park into the right of way. No change in access, either temporary or permanent, is expected to result from the proposed action. As a commitment, FDOT will not stage materials or make temporary use of the park during construction. Additionally, no indirect use of the park would occur. The preferred alternative would expand the right of way without encroaching on areas within Tropical Park. No direct impacts to the park would occur.

Humble Mini Park lies adjacent to the preferred alternative proposed in the PD&E Study. The Miami-Dade County owned property functions as a public park that supports passive use of a public green space. Concept plans for the preferred alternative show no modification to SW 39th Terrace in the area of the park's entrance and no incorporation of the park into the right of way. No change in access, either temporary or permanent, is expected to result from the proposed action. As a commitment, FDOT will not stage materials or make temporary use of the park during construction. Additionally, no indirect use of the park would occur. The preferred alternative would expand the right of way without encroaching on areas within Humble Mini Park. No direct impacts to the park would occur.

Veterans Wayside Park lies adjacent to the preferred alternative in the PD&E Study. The Village of Pinecrest owned property functions as a passive 4.5-acre park with a freshwater lake, picnic tables, and open recreation areas. Concept

plans for the preferred alternative show no modification to the roads surrounding the park (US 1 / South Dixie Highway, Killian Drive, SW 79th Avenue, and SW 110th Street) and no incorporation of the park into the right of way. No change in access, either temporary or permanent, is expected to result from the proposed action. As a commitment, FDOT will not stage materials or make temporary use of the park during construction. Additionally, no indirect use of the park would occur. No direct impacts to the park would occur.

South Dade Trail Mini Park lies adjacent to the preferred alternative in the PD&E Study. The Miami-Dade County owned property includes open landscaped green space that supports passive recreational use. Concept plans for the preferred alternative show no modification to the roads surrounding the park (US 1 / South Dixie Highway, Killian Drive, and SW 80th Avenue) and no incorporation of the park into the right of way. No change in access, either temporary or permanent, is expected to result from the proposed action. As a commitment, FDOT will not stage materials or make temporary use of the park during construction. Additionally, no indirect use of the park would occur. No direct impacts to the park would occur.

A determination of no-use was made by the FDOT for Tropical Park and Humble Mini Park. The Section 4(f) no use determination forms were completed and approved by Office of Environmental Management (OEM) on 4/22/19. A no-use form for Veterans Wayside Park and South Dade Trail Mini Park has been submitted to the FDOT. A determination is pending. A copy of the signed forms for Tropical and Humble Mini Park have been appended to the environmental document and uploaded to the project file in SWEPT.

6.2.3 Cultural Resources

A Cultural Resource Assessment Survey (CRAS) was conducted for the proposed project in accordance with Stipulation VII of the Section 106 Programmatic Agreement among the FHWA, the Advisory Council on Historic Preservation (ACHP), the Florida Division of Historical Resources (FDHR), the State Historic Preservation Officer (SHPO), and the FDOT Regarding Implementation of the Federal-Aid Highway Program in Florida (Section 106 Programmatic Agreement, effective March 2016, amended June 7, 2017).

A Research Design was prepared to establish the Area of Potential Effect (APE) used throughout the project corridor. The APE was determined by considering the type of improvements being proposed, the character of the project corridor and the potential effects these improvements could have on cultural resources. Based on this, the archaeological resources APE consists of the footprint of any subsurface activities proposed within and extending outside of the existing Right of Way (ROW), as well as the footprint of newly proposed ROW. The historic resources APE consists of the footprint of all proposed improvements and proposed ROW, adjacent parcels for a distance of up to 150 feet from the proposed at-grade improvements and proposed ROW, and a distance of 250 feet from the proposed elevated improvements. Any proposed elevated improvements range in height from 40-68 feet. The APE established in the Research Design was reviewed and accepted by FDOT. Additionally, the Research Design identified any previously recorded cultural resources, areas with the potential for containing unrecorded cultural resources, and preliminary archaeological site potential zones.

No newly recorded archaeological sites were identified within the archaeological APE. One previously recorded archaeological site within the archaeological APE was previously monitored and found to have been destroyed by development. Two shovel tests excavated within the archaeological APE yielded no archaeological material. Subsurface testing was not feasible within the rest of the archaeological APE due to the presence of existing at-grade roadways, elevated highways, sidewalks, driveways, parking lots and other hardscape; landscaping; canals, berms, storm sewer, and other drainage and water management features; buried and overhead utilities, including electric, sewer, water, fiber optic cable, Intelligent Transportation Systems (ITS), signalization, and lighting; and existing buildings and structures. The pedestrian survey and subsurface testing of the archaeological APE confirmed the developed nature of the project corridor and a low potential for finding intact archaeological sites.

The historic resources survey resulted in the identification of a total of 416 historic resources within the historic resource APE. The historic resources consist of 378 buildings, 14 linear resources, 12 bridges, ten resource groups, and two cemeteries. Of the identified historic resources, 26 are previously recorded and 390 are newly recorded. Additionally, the field survey revealed that eight previously recorded resources plotted within the APE have been demolished or otherwise removed.

Three previously recorded historic resources are considered eligible for listing in the National Register: Fairholm House (8DA2892), FEC Railway (8DA10107), and CSX Railroad (8DA10753). These three resources were not previously evaluated by SHPO within the current APE. Fourteen previously recorded resources have been determined by SHPO to be ineligible for listing in the National Register. Nine historic linear resources were not previously recorded within the current APE. Evaluations of National Register eligibility were made for all extant historic resources as part of this study.

Four newly recorded historic resources are considered eligible for the National Register: Miami Memorial Park (8DA17261), Sunset Montessori School (8DA17305), South Miami Lutheran Church (8DA17315), and 780 Tamiami Canal Road (8DA17609). Three hundred and eighty-six of the 390 newly recorded historic resources exhibit common architecture and design types found throughout South Florida, and they have no known associations with significant people or events. Furthermore, several of these resources exhibit modifications that affect their historic physical integrity. Therefore, these 386 newly recorded historic resources are considered ineligible for listing in the National Register either individually or as part of a historic district.

The CRAS was submitted to SHPO on September 27, 2019. The document is currently under review. Final concurrence of the findings of the CRAS is pending completion.

For additional information regarding cultural and historical resources, please refer to the Cultural Resource Assessment Survey report completed for this project located in the SWEPT project file.

6.2.4 WETLANDS

Wetland evaluations were conducted in accordance with Part 2, Section 9 of the FDOT PD&E Manual (January 14, 2019). The field review was conducted on November 13th, 14th, 15th, and 18th, 2018 and December 10th and 13th, 2018. No viable vegetated wetland resources exist within the project corridor. The proposed surface water feature impact locations are identified on aerial photographs (***Figure 6.19***). The existing surface waters within the project study area all provide low quality habitat due to their location within a densely developed urban area and proximity to the existing roadway corridor. The

proposed surface water impacts will occur to excavated stormwater management facilities/drainage features (wet swales, wet retention/detention features, wet drainage conveyance features, etc.) associated with SR 826 in which water quality/quantity impacts will be addressed through improvements to the existing stormwater management system. Therefore, all surface water impacts will be offset by in-kind replacement of drainage features. As such, compensatory mitigation is not proposed, and a wetland functional assessment was not conducted as part of the Natural Resource Evaluation (NRE). ***Table 6.9*** below provides a summary of proposed impacts to individual surface water features within the project study for the preferred alternative. Individual impact areas were determined based on the footprint of proposed new roadway construction (not the total acreage of each surface water feature within the project right-of-way). For more information regarding wetlands and surface waters please refer to the NRE, which can be found in the SWEPT database at the FDOT District 6 office.

Table 6.9 – Wetland and Surface Water Impacts

	Surface Waters	Stormwater Drainage Features	Total
Preferred Alternative	295,569.78	95,692.15	391,261.93 sq ft / 8.98 acres

Figure 6.19 – Individual Surface Water Locations (1 of 8)

Figure 6.19 – Individual Surface Water Locations (2 of 8)

Figure 6.19 – Individual Surface Water Locations (3 of 8)

Figure 6.19 – Individual Surface Water Locations (4 of 8)

Figure 6.19 – Individual Surface Water Locations (5 of 8)

Figure 6.19 – Individual Surface Water Locations (6 of 8)

Figure 6.19 – Individual Surface Water Locations (7 of 8)

Figure 6.19 – Individual Surface Water Locations (8 of 8)

6.2.4.1 Avoidance and Minimization

Avoidance and minimization of impacts were demonstrated through utilization of the existing, previously disturbed right of way for the majority of the study area. Additionally, the potential for any incidental surface water feature impacts will be minimized to the greatest extent practicable during the project's design and permitting phase, and best management practices (BMPs) will be implemented during construction and operation of the project in accordance with the *FDOT's Standard Specifications for Road and Bridge Construction (FDOT 2017)*.

6.2.5 Protected Species and Habitat

The project study area was evaluated for potential occurrences of federally listed and state listed plant and animal species in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended; the Fish and Wildlife Conservation Act; the Migratory Bird Treaty Act (MBTA); Part 2, Chapter 16 (Protected Species and Habitat) of the FDOT PD&E Manual; and Chapters 5B-40 and 68A-27, F.A.C. Field reviews were conducted on November 13th, 14th, 15th, and 16th, 2018 and December 10th and 13th, 2018. A Florida bonneted bat survey was also conducted. The project study area was also evaluated for the occurrence of federally-designated Critical Habitat as defined by Congress in 50 C.F.R. 17. Based on this evaluation, it was determined that state-designated Critical Habitat for the West Indian manatee (*Trichechus manatus*) is present within the limits of the Build Alternatives. The project is also located within the US Fish and Wildlife Service (FWS) Consultation Areas for the Everglade snail kite (*Rostrhamus sociabilis plumbeus*), American Crocodile (*Crocodylus acutus*), and the Florida bonneted bat (*Eumops floridanus)*. It is important to note that all federally listed species are also considered state listed species.

The project was screened through the ETDM Process (ETDM Project #14308) in 2017. During this time, the FWS and Florida Fish and Wildlife Conservation Comission (FWC) commented on potential effects of the project to wildlife and habitat resources. The FWS indicated that the project may contain suitable wood stork (*Mycteria americana*) foraging habitat. Both the FWC and FWS also indicated that the West Indian manatee (*Trichechus manatus*) may occur within or adjacent to the project study area. The FWS further indicated that the following federally listed species have potential to utilize habitats within the project study area: eastern indigo snake (*Drymarchon corais couperi*) and the Florida bonneted bat (*Eumops floridanus*).

6.2.5.1 Species Occurrence and Effect Determinations

The preferred alternative was evaluated for potential occurrences of federally listed and state listed plant and animal species in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended; the Fish and Wildlife Conservation Act; the Migratory Bird Treaty Act (MBTA); Part 2, Chapter 16 (Protected Species and Habitat) of the FDOT PD&E Manual; and Chapters 5B-40 and 68A-27 Florida Administrative Code (F.A.C.). Based on this evaluation, a total of six federally listed animal species, four state listed animal species, three state listed plant species, and two federally listed plant species were identified as potentially occurring within the limits of the preferred alternative. Additionally, while not state or federally listed under the ESA, the bald eagle (*Haliaeetus leucocephalus*) and the osprey (*Pandion haliaetus*) were included in the protected species analysis due to the regulatory protections associated with these species. ***Table 6.10*** and ***Table 6.11*** provides a summary of the federally listed and state listed animal and plant species with potential to occur within the limits of the preferred alternative, along with their corresponding effect determinations.

Table 6.10 – Listed/Protected Wildlife Species, Designation, and Potential for Occurrence

Common Name	Scientific Name	Federal Status	State Status	Occurrence Potential	Effect Determination
Mammals					
Florida Bonneted Bat	*Eumops floridanus*	E	FE	Low	May affect, not likely to adversely affect
West Indian Manatee[1]	*Trichechus manatus*	T	FT	High	May affect, not likely to adversely affect
Reptiles					
American Crocodile	*Crocodylus acutus*	T	FT	Low	No effect
Eastern Indigo Snake	*Drymarchon corais couperi*	T	FT	Low	No effect
Birds					
Bald Eagle[2]	*Haliaeetus leucocephalus*	NL	NL	Moderate	N/A
Osprey[2]	*Pandion haliaetus*	NL	NL	High	N/A
Everglade Snail Kite	*Rostrhamus sociabilis plumbeus*	E	FE	Low	No effect
Wood Stork	*Mycteria americana*	T	FT	Moderate	May affect, not likely to adversely affect
Little Blue Heron	*Egretta caerulea*	NL	ST	Moderate	No effect anticipated
Reddish Egret	*Egretta rufescens*	NL	ST	Low	No effect anticipated
Roseate Spoonbill	*Platalea ajaja*	NL	ST	Low	No effect anticipated
Southeastern American Kestrel	*Falco sparverius paulus*	NL	ST	High	No effect anticipated

Federal Status: E = Endangered, T = Threatened, NL = Not Listed

State Status: FE = Federally-designated endangered, FT = Federally-designated threatened, NL = Not Listed, ST = State threatened.

[1] The West Indian manatee, including the Florida manatee subspecies, is also federally-protected by the *Marine Mammal Protection Act*.

[2] The bald eagle and osprey are not listed by the FWS or FWC but still federally-protected by the *Bald and Golden Eagle Protection Act* and the *Migratory Bird Treaty Act*.

Table 6.11 below provides the occurrence probability for federal and state listed/protected plant species. Although none of the federally listed plant species listed below have a potential to naturally occur in the project area due to lack of suitable habitat, they are included because they are mentioned in the FWS' IPaC resource list (FWS 2019) generated for this project. The state listed plant species were identified based on review of the FNAI database. All existing state-listed specimens have been planted. Therefore, their occurrence potential has been listed as 'High'.

Table 6.11 – Listed/Protected Plant Species, Designation, and Potential for Occurrence

Common Name	Scientific Name	Federal Status	State Status	Occurrence Potential	Effect Determination
West Indian mahogany	*Swietenia mahagoni*	NL	T	High	No effect (planted as part of landscaping along roadway)
Florida royal palm	*Roystonea regia*	NL	E	High	No effect (planted as part of landscaping along roadway)
Simpson's stopper	*Myrcianthes fragrans*	NL	T	High	No effect (planted as part of landscaping along roadway)
Carter's small-flowered Flax	Linum carteri carteri	E	FE	Low	No effect
Florida brickell-bush	Brickellia mosieri	E	FE	Low	No effect

Notes: Federal Status: E = Endangered, T = Threatened, NL = Not Listed
State Status: FE = Federally-designated Endangered, FT = Federally-designated threatened, NL = Not Listed

A discussion of potential impacts to each of the species listed in the above tables (***Table 6.10*** and ***Table 6.11***) is included in the NRE, a companion document for this project. The discussion includes characterizations of each species and potential impacts resulting from each of the proposed viable build alternatives. Conservation and/or minimization of impacts measures are also included in the discussion of the NRE. The resulting effect determinations of these discussions for each of these species is included in the tables above. A copy of the NRE has been appended to the environmental document and uploaded to the project file in SWEPT.

The FDOT submitted an ESA Section 7 Consultation/Concurrence letter to the FWS on September 18, 2019 to request written concurrence on the effects to the listed species. A copy of the NRE was appended to that letter for FWS review. FWS concurred with the effect determinations and concluded that the proposed action is not likely to adversely affect and federally listed species or designated critical habitat protected by the ESA on September 24, 2019. A copy of the ESA Section 7 Consultation/Concurrence letter and the FWS response letter has been appended to the environmental document and uploaded to the project file in SWEPT.

6.2.5.2 Critical Habitats

Critical habitat is a specific, federally-designated, geographic area that is essential for the conservation of a threatened or endangered species that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species, but that will be needed for its recovery. An area is designated as critical habitat after the FWS publishes a proposed federal regulation in the Federal Register and then receives public comments on the proposal. The final boundaries of the critical habitat areas are also published in the Federal Register.

Critical Habitat for the West Indian manatee exists within the proposed limits of the Build Alternatives [C-3 (Coral Gables Canal), C-4 (Tamiami Canal), North Line, and Loop Canal]. As discussed above, in-water work for each of these waterways with the exception of the Loop Canal is anticipated to occur as a result of this project. Bridge replacements, bridge removals, bridge widenings, culvert replacements, and culvert installations will take place throughout the project corridor. Although construction will occur within the limits of these features, no adverse impacts to the limits of these waterways are anticipated to occur. For the portions of the waterways that will be culverted, the culverts will be greater than 8 feet in diameter and air risers will be installed every 100-150 feet along the culverted sections to maintain water/air quality. Manatee exclusion devices/grates will not be necessary due to the size of the culverts. Although the proposed alternatives will result in minor impacts to the overall critical habitat area within the project corridor, these impacts will not inhibit manatee movement. Therefore, no long-term adverse impacts to these waterways (i.e. Critical Habitat) will occur as a result of this project.

In addition, Critical Habitat for Carter's small-flowered flax (*Linum carteri carteri)* and Florida brickell-bush (*Brickellia mosieri*) occurs within close proximity of the proposed project (***Figure 6.20***), however these locations are outside the limits of the proposed project and will not be impacted.

The FDOT submitted an ESA Section 7 Consultation/Concurrence letter to the FWS on September 18, 2019 to request written concurrence on the effects to critical habitat. A copy of the NRE was appended to that letter for FWS review. FWS concurred with the effect determinations and concluded that the proposed action is not likely to adversely affect and federally listed species or designated critical habitat protected by the ESA on September 24, 2019. A copy of the ESA Section 7 Consultation/Concurrence letter and the FWS response letter has been appended to the environmental document and uploaded to the project file in SWEPT.

Figure 6.20 – Notable Communities in Close Proximity to the Project Corridor

6.2.6 Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (MSFCMA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established procedures designed to identify, conserve, and enhance Essential Fish Habitat (EFH) for those species regulated under a federal fisheries management plan (FMP). Section 305(b)(2) of the MSFCMA requires federal action agencies to consult with National Oceanographic Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) on all actions or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH. EFH is defined in the MSFCMA as "…those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity."

Coordination with NMFS has occurred through the ETDM Screening Tool and through direct conversations with staff. The ETDM response stated that the proposed project would not impact areas that support NMFS trust resources. Therefore, no action is required pursuant to the EFH requirements of the Magnuson-Stevens Act.

6.2.7 Highway Traffic Noise

The information presented in this section is a summary of the *SR 826 Noise Study Report (NSR)*, companion document to this study. A traffic noise study was performed in accordance with *23 CFR 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise* (July 13, 2010), the FDOT's PD&E Manual, Part 2, Chapter 18, *Highway Traffic Noise* (January 14, 2019), and *FDOT's Traffic Noise Modeling and Analysis Practitioners Handbook* (January 1, 2016).

Design year (2045) traffic noise levels for the preferred alternative will approach, meet, or exceed the Noise Abatement Criteria (NAC) at 824 residences and 12 special land use sites within the project limits. In accordance with FHWA and FDOT policies, the feasibility and reasonableness of noise barriers were considered for those impacted noise sensitive sites.

Noise barriers were not considered a feasible abatement option at 56 impacted residences within NSAs 7, 28, 29, 44, 47, 65, 66, 67 and eight special land use sites within NSAs 26, 48, 56, 69, 72, 75, 79, and 93. Noise barriers at these locations would restrict access to these sites and/or other properties, would require additional right

of way to be acquired or represents an isolated impacted residence. The locations of these NSAs are depicted in ***Figure 6.21***.

Noise barriers were evaluated for 768 of 824 residences and four of the 12 special land use sites that approach, meet, or exceed the NAC. Twenty-five separate common noise environments (CNEs) were used to assess noise barriers at these locations. The results of the noise barrier analysis for each of these CNEs are summarized in ***Table 6.12***. Of the 25 CNEs presented in ***Table 6.12***, noise barriers are recommended for further consideration during the project's design phase and for public input at 14 locations. Noise barriers are not recommended for further consideration at 11 locations. The locations and limits of the noise barriers (both recommended and not recommended) are depicted on ***Figure 6.21*** and presented in ***Table 6.12***.

The 14 CNEs where noise barriers are recommended include: S2-1W, S2-2E, S2-2W, S4-1E, S5-1E, S5-1W, S6-1E, S6-1W, S7-1E, S7-1W, S8-1E, S8-1SW, S8-2SW, and S9-1E. Noise barriers at six of the 14 CNEs were determined to be preliminarily feasible and cost reasonable for the noise sensitive sites (i.e., S2-1W, S2-2E, S2-2W, S4-1E, S5-1E, and S8-2SW). The cost per benefited receptor site at these six conceptual noise barrier design locations are within FDOT's noise barrier cost criteria of equal to or less than $42,000 per benefited receptor site and they will meet FDOT's noise reduction reasonableness criteria of 7 dB(A) at one or more impacted sites.

Noise barriers at eight of the 14 CNEs where noise barriers have been recommended for further consideration represent replacement noise barriers (i.e., S5-1W, S6-1E, S6-1W, S7-1E, S7-1W, S8-1E, S8-1SW, and S9-1E). At these locations, the existing noise barriers or segments of the existing noise barriers, would be physically impacted by the proposed improvements and be required to be removed. The conceptual designs of these replacement noise barriers would be, at a minimum, an in-kind replacement or optimized to maximize the amount of noise reduction at the impacted residences in order to maintain the FDOT's previous noise commitments. In addition, the recommended conceptual noise barrier designs will meet the minimum noise reduction design goal of 7 dB(A) for at least one impacted residence. Since these are replacement noise barriers, the reasonable cost criteria of equal to or less than $42,000 per benefited receptor site is not applicable since these barriers.

SR 826/Palmetto Expressway from
US 1/SR 5/South Dixie Highway to
SR 836/Dolphin Expressway Express Lanes
Miami-Dade County, Florida
FPID: 432639-1-22-01

FDOT

Date: October 2019

Recommended Noise Barrier

Height

- 8-Foot Tall
- 14-Foot Tall

- Non-Recommended Noise Barrier
- Existing Noise Barrier To Be Replaced
- Existing Noise Barrier
- Proposed Improvements
- Noise Sensitive Areas

Noise Barrier Recommendation Map
Sheet 1 of 4

FIGURE 6.21
SHEET 6-91

SR 826/Palmetto Expressway from
US 1/SR 5/South Dixie Highway to
SR 836/Dolphin Expressway Express Lanes
Miami-Dade County, Florida
FPID: 432639-1-22-01

FDOT

Date: October 2019

Recommended Noise Barrier

Height

- 8-Foot Tall
- 14-Foot Tall

- Non-Recommended Noise Barrier
- Existing Noise Barrier To Be Replaced
- Existing Noise Barrier
- Proposed Improvements
- Noise Sensitive Areas

0 300 600 1,200 Feet

Noise Barrier Recommendation Map Sheet 2 of 4

FIGURE 6.21
SHEET 6-92

Segment 5
SW 56th Street
to SW 40th Street

Segment 6
SW 40th Street to SW 24th Street

Segment 7
SW 24th Street to SW 8th Street

Non-Recommended Noise Barrier S5-2W Segment 1 of 2 Begin Station 50+00 End Station 90+00

Non-Recommended Noise Barrier S5-2W Segment 2 of 2 Begin Station 90+00 End Station 113+00

Recommended 14' Tall Shoulder Mounted Noise Barrier S6-1W Begin Station 127+00 End Station 167+00 (Replacement Noise Barrier)

Recommended 14' Tall Shoulder Mounted Noise Barrier S7-1W Begin Station 177+50 End Station 198+00 (Replacement Noise Barrier)

Recommended 14' Tall Shoulder Mounted Noise Barrier S6-1E Begin Station 116+00 End Station 168+00 (Replacement Noise Barrier)

Recommended 14' Tall Shoulder Mounted Noise Barrier S7-1E Begin Station 172+00 End Station 217+50 (Replacement Noise Barrier)

SW 82ND AVE
SW 40TH ST
SW 24TH ST
Cayo Esquivel Seafood
East Coast Medical Rehab Center
874
826

NSA 64
NSA 69
NSA 70
NSA 71
NSA 72
NSA 73
NSA 74
NSA 76

Tropical Park
Tropical Manor Condominiums
Target
Baker Manor
Sunrise Manor
Coral Way Village
Coral Way Homesites
Suarez Optical
Perez Dental
Coral Way Acres
Miracle Manor West
The Montessori Garden
Vicky's Bakery
Preferred Care Partners Medical Group
Coral Way
Palmetto Office Park
Coral Way Plaza
Hardwood Village
West Miami Middle School
Central Miami
Westchester General Hospital
West Gables Health Care Center
Humble Mini Park
Lucila Bakery
Prima Industrial Park

SR 826/Palmetto Expressway from
US 1/SR 5/South Dixie Highway to
SR 836/Dolphin Expressway Express Lanes
Miami-Dade County, Florida
FPID: 432639-1-22-01

Date: October 2019

Recommended Noise Barrier

Height

- 8-Foot Tall
- 14-Foot Tall

- Non-Recommended Noise Barrier
- Existing Noise Barrier To Be Replaced
- Existing Noise Barrier
- Proposed Improvements
- Noise Sensitive Areas

0 300 600 1,200 Feet

Noise Barrier Recommendation Map Sheet 3 of 4

FIGURE 6.21
SHEET 6-93

SR 826/Palmetto Expressway from
US 1/SR 5/South Dixie Highway to
SR 836/Dolphin Expressway Express Lanes
Miami-Dade County, Florida
FPID: 432639-1-22-01

Date: October 2019

Recommended Noise Barrier

Height

- 8-Foot Tall
- 14-Foot Tall

- Non-Recommended Noise Barrier
- Existing Noise Barrier To Be Replaced
- Existing Noise Barrier
- Proposed Improvements
- Noise Sensitive Areas

0 300 600 1,200 Feet

Noise Barrier Recommendation Map
Sheet 4 of 4

FIGURE 6.21
SHEET 6-94

Table 6.12 - Noise Barrier Evaluation Summary and Recommendations (Sheet 1 of 4)

Noise Sensitive Area Name / Number	Common Noise Environment (CNE) Identification Number	Conceptual Noise Barrier Design Number (Type)	Height (feet)	Length (feet)	Begin Station Number	End Station Number	Number of Impacted Receptor Sites	Number of Impacted/ Benefited Receptor Sites	Number of Benefited Receptor Sites/ Not Impacted	Total Number of Benefited Receptor Sites	Average Noise Reduction for all Benefited Receptor Sites dB(A)	Maximum Noise Reduction for all Benefited Receptor Sites dB(A)	Cost ($30 per square foot)	Average Cost/Site Benefited	Does Optimal Barrier Design Meet FDOT's Reasonable Noise Abatement Criteria of $42,000 per Benefited Receptor Site and 7.0 dB(A) Noise Reduction Design Goal?	Noise Barrier Recommended for Further Consideration and Public Input?	Comments
Noise Study Segment 1 (SR 826 from North of SW 116th Street to SW 104th Street - See Figure 4.1 Sheet 1)																	
Silver Palm Plantation and Killian Green Estates - West of US 1 between Killian Parkway and 104th Street / NSA 5	S1-1W	GM-CD3 (Ground Mounted Noise Barrier)	18	850	1033+50	1042+00	3	3	8	11	7.2	9.2	$459,000	$41,727	YES	NO	Represents the optimal conceptual noise barrier design at this location but is not recommended for further consideration and public input during the project's design phase. The additional construction costs associated with utility relocations (i.e., overhead electric) and drainage modifications to accommodate the noise barrier at this location would result in an exceedance of the Reasonableness Cost Criteria.
South Dade Trail Mini Park - West of US 1 between Killian Parkway and 104th Street / NSA 4	S1-1SDTMP	SDTMP-CD3 (Ground Mounted Noise Barrier)	22	450	1033+50	1038+00	Special Land Use	--	--	--	5.0	5.0	$297,000	--	NO	NO	The conceptual design does not meet either FDOT's 7.0 dB(A) Noise Reduction Design Goal or the Reasonableness Cost Criteria for special land uses. A noise barrier is not recommended for further consideration or public input during the project's design phase.
Veterans Wayside Park - East of US 1 and North of Killian Parkway / NSA 6	S1-VMP	VWP-CD1 (Ground Mounted Noise Barrier)	18	700	1034+00	1041+00	Special Land Use	--	--	--	7.3	14.9	$378,000	--	NO (Usage of park less than required to be cost reasonable)	NO	The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria for special land uses. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Noise Study Segment 2 (SR 826 from SW 104 Street to Snapper Creek Expressway - See Figure 4.1 Sheet 1)																	
Pearl Dadeland and Toscano Condos - East of SR 826 between 104th Street and Snapper Creek Expressway / NSA 29	S2-1E	GM-CD1 (Ground Mounted Noise Barrier	16	660	44+00	2001+30	94	0	5	5	6.2	7.5	$316,800	$63,360	NO	NO	Represents the lowest cost conceptual noise barrier design; The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Woodside Kendall Condos, Colony Apartments, Ken Dade Condos, and Summit Tower of Dadeland - West of SR 826 between 104th Street and Snapper Creek Expressway / NSAs 21, 22 and 23	S2-1W	SM-CD2 (Shoulder Mounted Noise Barrier)	8	300	20+00	23+00	55	51	81	132	9.9	13.7	$870,000	$6,591	YES	***YES***	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase; Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer in accordance with FDOT's noise policy.
			14	1,900	23+00	42+00											
Village at Dadeland and Dadeland Park - East of SR 826 between 104th Street and Snapper Creek Expressway / NSA 36 and NSA 37	S2-2E	SM-CD2 (Shoulder Mounted Noise Barrier)	8	100	2013+00	2014+00	41	41	9	50	8.8	11.9	$426,000	$8,520	YES	***YES***	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase; Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer in accordance with FDOT's noise policy.
			14	900	2014+00	2025+00											
			8	100	2025+00	2026+00											
Paradise at Dadeland Condos, Kings Creek South Condos and The Village at Kings Creek Condos - West of SR 826 between 104th Street and Snapper Creek Expressway / NSAs 30, 34, and 35	S2-2W	SM-CD2 Segment 1 of 2 (Shoulder Mounted Noise Barrier)	14	1,200	2003+00	2015+00	158	60	59	119	7	9.5	$1,260,000	$10,588	YES	***YES***	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase. Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer in accordance with FDOT's noise policy.
			8	100	2015+00	2016+00											
			14	900	2016+00	2025+00											
			8	200	2025+00	2027+00											
		SM-CD2 Segment 2 of 2 (Shoulder Mounted Noise Barrier)	8	400	2000+00	2004+00											
			14	500	2004+00	2009+00											

Table 6.12 - Noise Barrier Evaluation Summary and Recommendations (Sheet 2 of 4)

Noise Sensitive Area Name / Number	Common Noise Environment (CNE) Identification Number	Conceptual Noise Barrier Design Number (Type)	Height (feet)	Length (feet)	Begin Station Number	End Station Number	Number of Impacted Receptor Sites	Number of Impacted/ Benefited Receptor Sites	Number of Benefited Receptor Sites/ Not Impacted	Total Number of Benefited Receptor Sites	Average Noise Reduction for all Benefited Receptor Sites dB(A)	Maximum Noise Reduction for all Benefited Receptor Sites dB(A)	Cost ($30 per square foot)	Average Cost/Site Benefited	Does Optimal Barrier Design Meet FDOT's Reasonable Noise Abatement Criteria of $42,000 per Benefited Receptor Site and 7.0 dB(A) Noise Reduction Design Goal?	Noise Barrier Recommended for Further Consideration and Public Input?	Comments
Noise Study Segment 3 (Snapper Creek Expressway to SW 72nd Street/Sunset Drive - See Figure 4.1 Sheet 2)																	
Andrews Estates - East of SR 826 between Snapper Creek Expressway and SW 72nd Street / NSA 39	S3-1E	SM-CD4 (Shoulder Mounted Noise Barrier)	14	1,050	2026+50	2037+00	3	3	5	8	7.3	10.4	$441,000	$55,125	NO	NO	Represents the lowest cost conceptual noise barrier design; The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Windsor Estates - East of SR 826 between Snapper Creek Expressway and SW 72nd Street / NSA 39	S3-2E	GM-CD1 (Ground Mounted Noise Barrier)	14	700	2040+00	2047+00	3	3	0	3	8.9	9.8	$294,000	$98,000	NO	NO	Represents the lowest cost conceptual noise barrier design; The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Kendall Creek Grove and Jennings Estates - West of SR 826 between Snapper Creek Expressway and SW 72nd Street / NSA 38	S3-1W	SM-CD2 (Shoulder Mounted Noise Barrier)	14	2,670	2028+50	2054+20	13	8	12	20	6.6	7.9	$1,121,400	$56,070	NO	NO	Represents the lowest cost conceptual noise barrier design; The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Noise Study Segment 4 (SW 72nd Street/Sunset Drive to SW 56th Street/Miller Road - See Figure 4.1 Sheet 2)																	
Residential Subdivision 1 - East of SR 826 and North of SW 72nd Street / NSA 46	S4-1E	SM-CD1 (Shoulder Mounted Noise Barrier)	8	4,820	2058+00	2106+00	33	20	8	28	6.9	10.1	$1,156,800	$41,314	YES	***YES***	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase.
Green Tree Estates - West of SR 826 and North of SW 72nd Street / NSA 52	S4-1W	SM-CD1 (Shoulder Mounted Noise Barrier)	8	2,000	2057+00	2077+00	7	7	2	9	6.6	7.9	$480,000	$53,333	NO	NO	Represents the lowest cost conceptual noise barrier design; The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Miami Memorial Park Cemetery - West of SR 826 and North of SW 72nd Street / NSA 53	S4 - 2W	MMPC-CD1 (Ground Mounted)	18	3,200	2073+00	2105+00	Special Land Use	--	--	--	7.9	12.7	$1,728,000	---	NO (Usage of cemetery less than required to be cost reasonable)	NO	The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria for special uses. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Noise Study Segment 5 (SW 56th Street/Miller Road to SW 40th Street/Bird Road - See Figure 4.1 Sheets 2 and 3)																	
Lakewood Villas, Miller Lake, and Lakeview Gardens (East Side) - North of 56th Street and Between SR 826 and SR 874 / NSA 57	S5-1E	SM-CD3 Segment 1 of 2 (Shoulder Mounted Noise Barrier)	14	1,300	2109+00	2122+00	29	6	54	60	6.9	12.0	$894,000	$14,900	YES	***YES***	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase; Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer in accordance with FDOT's noise policy.
		SM-CD3 Segment 2 of 2 (Shoulder Mounted Noise Barrier)	8	400	2106+00	2110+00											
			14	600	2110+00	2116+00											
Lakewood Villas, Miller Lake, and Lakeview Gardens (West Side) - North of 56th Street and Between SR 826 and SR 874 / NSA 57	S5-1W	SM-CD2 (Shoulder Mounted Noise Barrier	14	950	113+00 (SR 874)	50+50 (SR 874)	29	10	39	49	6.5	9.5	$1,311,000	Not Applicable-Replacement Noise Barrier	Meets Noise Reduction Goal; Reasonable Cost Criteria Not Applicable	***YES***	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input in the project's design phase; Represents an in-kind replacement noise barrier; Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer in accordance with FDOT's noise policy.
			8	300	50+50 (SR 874)	53+50 (SR 874)											
			14	2,000	53+50 (SR 874)	73+50 (SR 874)											
Tropical Park - West of SR 826 and North of SW 56th Street / NSA 64	S5-2W	TP-CD1 Segment 1 of 2 (Shoulder Mounted Noise Barrier)	8	3,850	50+00	90+00	Special Land Use	--	--	--	7.6	11.1	$2,166,000	---	NO (Usage of park less than required to be cost reasonable)	NO	The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria for special uses. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
		TP-CD1 Segment 2 of 2 (Shoulder Mounted Noise Barrier)	18	2,300	90+00	113+00											

Table 6.12 - Noise Barrier Evaluation Summary and Recommendations (Sheet 3 of 4)

Noise Sensitive Area Name / Number	Common Noise Environment (CNE) Identification Number	Conceptual Noise Barrier Design Number (Type)	Height (feet)	Length (feet)	Begin Station Number	End Station Number	Number of Impacted Receptor Sites	Number of Impacted/ Benefited Receptor Sites	Number of Benefited Receptor Sites/ Not Impacted	Total Number of Benefited Receptor Sites	Average Noise Reduction for all Benefited Receptor Sites dB(A)	Maximum Noise Reduction for all Benefited Receptor Sites dB(A)	Cost ($30 per square foot)	Average Cost/Site Benefited	Does Optimal Barrier Design Meet FDOT's Reasonable Noise Abatement Criteria of $42,000 per Benefited Receptor Site and 7.0 dB(A) Noise Reduction Design Goal?	Noise Barrier Recommended for Further Consideration and Public Input?	Comments
Noise Study Segment 6 (SW 40th Street/Bird Road - SW 24th Street/Coral Way - See Figure 4.1 Sheet 3)																	
Central Miami Subdivision - East of SR 826 Between SW 40th Street and SW 24th Street / NSA 70	S6-1E	SM-CD2 (Shoulder Mounted Noise Barrier)	14	5,180	116+00	168+00	53	45	0	45	10.5	14.3	$2,175,600	Not Applicable-Replacement Noise Barrier	Meets Noise Reduction Goal; Reasonable Cost Criteria Not Applicable	***YES***	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input in the project's design phase; Replaces existing barrier with 14-foot-tall barrier; Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer per FDOT's noise policy.
Baker Way Manor, Sunrise Manor and Coral Way - West of SR 826 between SW 24th St and SW 40th Street / NSA 72	S6-1W	SM-CD2 (Shoulder Mounted Noise Barrier)	14	4,000	127+00	167+00	35	32	8	40	7.4	9.9	$1,680,000	Not Applicable-Replacement Noise Barrier	Meets Noise Reduction Goal; Reasonable Cost Criteria Not Applicable	***YES***	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input in the project's design phase; Replaces existing barrier with 14- foot-tall barrier; Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer per FDOT's noise policy.
Noise Study Segment 7 (SW 24th Street/Coral Way - SW 8th Street/Tamiami Trail - See Figure 4.1 Sheets 3 and 4)																	
Hardwood Village and Miami Gateway Communities - East of SR 826 between SW 24th Street and SW 8th Street / NSA 74	S7-1E	SM-CD2 (Replacement Shoulder Mounted Noise Barrier)	14	4,470	172+00	217+50	59	59	4	63	7.6	11.2	$1,877,400	Not Applicable-Replacement Noise Barrier	Meets Noise Reduction Goal; Reasonable Cost Criteria Not Applicable	**YES**	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input in the project's design phase; Replaces existing barrier with 14-foot-tall barrier; Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer in accordance with FDOT's noise policy.
Coral Way Plaza and Miracle Manor Communities - West of SR 826 between SW 24th Street and SW 8th Street / NSA 76	S7-1W	Existing Shoulder Mounted Noise Barrier Segment to Remain	12	1,175	198+00	215+50	N/A										
		SM-CD2 (Replacement Shoulder Mounted Noise Barrier)	14	2,040	177+50	198+00	24	22	8	30	7.7	11.2	$856,800	Not Applicable-Replacement Noise Barrier	Meets Noise Reduction Goal; Reasonable Cost Criteria Not Applicable	**YES**	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input in the project's design phase; Replaces existing barrier with 14-foot-tall barrier; Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer in accordance with FDOT's noise policy.
Noise Study Segment 8 (SW 8th Street/Tamiami Trail to Flagler Street - See Figure 4.1 Sheet 4)																	
Flagami East - East of SR 826 and North of SW 8th Street / NSA 88	S8-1E	SM-CD3 (Replacement Shoulder Mounted Noise Barrier)	14	2,040	227+00	2246+00	36	30	8	38	6.6	8.2	$1,000,800	Not Applicable-Replacement Noise Barrier	Meets Noise Reduction Goal; Reasonable Cost Criteria Not Applicable	***YES***	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input in the project's design phase; Replaces existing barrier with an 8-foot and 14-foot-tall barrier; Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer per FDOT's noise policy
			8	600	2246+00	2252+00											
Flagami West - West of SR 826 and North of SW 8th Street / NSA 90	S8-1SW	SM-CD2 (Replacement Shoulder Mounted Noise Barrier)	14	1,700	231+00	2248+00	21	20	3	23	7.8	9.8	$714,000	Not Applicable-Replacement Noise Barrier	Meets Noise Reduction Goal; Reasonable Cost Criteria Not Applicable	***YES***	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input in the project's design phase; Replaces existing barrier with 14-foot-tall barrier; Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer per FDOT's noise policy.
Flagami West - West of SR 826 and North of SW 8th Street / NSA 90 and NSA 91	S8-2SW	SM-CD2 (Ground Mounted Noise Barrier)	14	2,270	1873+00	224+50	16	16	25	41	8.6	10.5	$953,400	$23,254	YES	***YES***	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input in the project's design phase; Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer per FDOT's noise policy.

Table 6.12 - Noise Barrier Evaluation Summary and Recommendations (Sheet 4 of 4)

Noise Sensitive Area Name / Number	Common Noise Environment (CNE) Identification Number	Conceptual Noise Barrier Design Number (Type)	Height (feet)	Length (feet)	Begin Station Number	End Station Number	Number of Impacted Receptor Sites	Number of Impacted/ Benefited Receptor Sites	Number of Benefited Receptor Sites/ Not Impacted	Total Number of Benefited Receptor Sites	Average Noise Reduction for all Benefited Receptor Sites dB(A)	Maximum Noise Reduction for all Benefited Receptor Sites dB(A)	Cost ($30 per square foot)	Average Cost/Site Benefited	Does Optimal Barrier Design Meet FDOT's Reasonable Noise Abatement Criteria of $42,000 per Benefited Receptor Site and 7.0 dB(A) Noise Reduction Design Goal?	Noise Barrier Recommended for Further Consideration and Public Input?	Comments
Noise Study Segment 9 (Flagler Street to SR 836 - See Figure 4.1 Sheet 4)																	
Winona Park Subdivision - East of SR 826 Between W Flagler Street and SR 836 / NSA 99	S9-1E	Existing Shoulder Mounted Noise Barrier Segment to Remain	12	1175	2251+00	2262+00	N/A										
		SM-CD3 (Replacement Shoulder Mounted Noise Barrier)	14	1,120	2262+00	2273+00	7	6	4	10	10.8	15.3	$470,400	Not Applicable-Replacement Barrier	Meets Noise Reduction Goal; Reasonable Cost Criteria Not Applicable	YES	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input in the project's design phase; Replaces existing barrier with 14-foot-tall barrier; Note that any of the 14-foot-tall shoulder mounted noise barriers to be constructed on a retaining wall will need approval in writing by the State Structures Design Engineer per FDOT's noise policy.
Royal Palm Apartments - West of SR 826 Between W Flagler Street and SR 836 / NSA 100	S9-1W	Segment 1 of 2 (Shoulder Mounted Noise Barrier)	14	1,500	2270+00	3285+00	100	24	18	42	5.5	6.2	$1,491,000	$35,500	NO	NO	Represents the lowest cost conceptual noise barrier design; The conceptual design meets the Reasonableness Cost Criteria but does not meet FDOT's 7.0 dB(A) Noise Reduction Design Goal. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
		Segment 2 of 2 (Shoulder Mounted Noise Barrier)		2,050	2270+00	12+00 (Ramp - SR 836 to SR 826)											

X:\P\Noise_Studies\Palmetto_ELs_PD&E\Noise Study Report\Tables\[Tables_5-1_SR826EL_NoiseBarrierAnalysis&Summary_10-15-2019.xlsx]SummaryTable

Notes:

Represents the Conceptual Design of the Recommended Replacement Noise Barrier

The recommended noise barriers at these 14 CNEs are expected to reduce traffic noise by at least 5 dB(A) at 720 residences including 310 of the 824 impacted residences along the project corridor. The estimated cost of the recommended noise barriers is $15,646,200. Additional noise barrier analysis will be performed during the project's design phase when more detailed project design information is available. It is during the project's design phase that final decisions regarding noise barrier length and height are made and an engineering constructability review is conducted to confirm that the noise barrier is feasible and support for noise barriers from the benefited noise sensitive sites is determined. Note that any of the 14-foot tall shoulder mounted noise barriers recommended for construction on a retaining or MSE wall will need approval in writing by the State Structures Design Engineer in accordance with FDOT's noise policy.

Noise barriers were not found to be feasible or cost reasonable at 11 CNEs. Seven of the 11 CNEs represent residential areas (i.e., S1-1W, S2-1E, S3-1E, S3-2E, S3-1W, S4-1W, and S9-1W) and the remaining four represent non-residential/special land use sites (i.e., S1-SDTMP, S1-VMP, S4-2W, and S5-2W). The cost to construct noise barriers at these seven residential areas would exceed FDOT's reasonable cost criteria of equal to or less than $42,000 per benefited receptor site or the optimal conceptual noise barrier design did not meet the minimum noise reduction design goal of 7 dB(A) for at least one impacted residence. The high cost of providing noise abatement at these locations is attributed to the low number of benefited residences related to the low density of residences in these areas especially between Snapper Creek Expressway and SW 56th Street. Also, the effectiveness of noise barriers is limited for providing noise abatement to the impacted residences (i.e., patios) associated with the high-rise residential buildings (i.e., up to nine floors) in the vicinity of Kendall Drive and SR 836. The patios are above the maximum height of a noise barrier (i.e., 22 feet). Based on the noise analysis performed to date, there appears to be no apparent solutions available to mitigate the noise impacts at 514 of the 824 impacted residences or at 12 special land use sites along the project corridor. Therefore, impacts to these and other noise sensitive sites along the project corridor are an unavoidable consequence of the project.

Statement of Likelihood

FDOT is committed to the construction of feasible noise abatement measures (i.e., recommended noise barriers) at the noise impacted locations identified in ***Table 6.12*** and ***Figure 6.21*** upon the following conditions:

- Final recommendations on the construction of abatement measures is determined during the project's design and through the public involvement process;
- Detailed noise analyses during the final design process support the need, feasibility and reasonableness of providing abatement;
- Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion;
- Community input supporting types, heights, and locations of the noise barrier(s) is provided to the District Office; and
- Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

It is likely that the noise abatement measures for the identified locations will be constructed if found feasible based on the contingencies listed above. If, during the project's design phase, any of the contingency conditions listed above cause abatement to no longer be considered reasonable or feasible for a given location(s), such determination(s) will be made prior to requesting approval for construction advertisement. Commitments regarding the exact abatement measure locations, heights, and type (or approved alternatives) will be made during project reevaluation and at a time before the construction advertisement is approved.

6.2.8 Contamination

After a review of all available data, such as regulatory agency file reviews, database reports, historic and current aerial photography, and a site reconnaissance, contamination of soil and groundwater has been documented at several locations near the project corridor. A total of 23 sites of potential contamination concern were identified along the project corridor. Of these, four sites are rated as "High risk", seven sites are rated as "Medium risk", and twelve sites are rated as "Low risk" (***Table 6.13*** and ***Figure 6.22***). Remaining sites identified in the above-referenced sources are not considered to pose potential contamination concerns due to the current regulatory status of the site and/or the distance from the project corridor.

The FDOT District VI Planning and Environmental Management Office will utilize the information contained in this report to determine the need for additional investigation during the design phase of the Project. The Level II Contamination Assessment investigation may be conducted prior to any right-of-way acquisition and/or during the design phase, should any become necessary. Based on the findings of updated future review and Level II investigation, the design engineers may be instructed to avoid the areas of concern or to include special provisions with the plans to require that the construction activities performed in the areas of concern be performed or supervised by a contamination assessment and remediation contractor specified by the FDOT.

It must be recognized that the possibility exists that some contaminated substances, petroleum products, or environmental contamination not identified during this assessment may exist on or in the immediate vicinity of the project. This is because regulatory agency records are not always complete; not all leaks, spills, and discharges are reported; not all USTs and ASTs are registered. It is unknown if any registered substances were illegally dumped or were deposited during past construction activities.

If construction dewatering will be necessary during construction, a Water Use Permit from SFWMD may be required. The contractor will be held responsible for ensuring compliance with any necessary dewatering permit(s). The dewatering plan will need to consider the radius of influence of any dewatering activity on nearby contamination plumes to avoid potential contamination plume exacerbation. The status of the sites will be updated accordingly at each future design phase. All permits will be obtained in accordance with Federal, State, and local laws and regulations and in coordination with the District Contamination Impact Coordinator (DCIC). For more information regarding contamination, please refer to the Contamination Screening Evaluation Report (CSER), which can be found in the SWEPT database at the FDOT District 6 office.

Table 6.13 – Potential Contaminated Sites in the Vicinity of the PD&E Study

Site ID	Property Description	Facility ID	Environmental Compliance Agency	Regulated Storage Tanks	Distance from Project	Contamination Concern/ Regulatory Status	Risk Rating	Alternative Risk Rating		
								A1	A2	A3
L1	Amoco - Suniland 11675 S Dixie Highway Miami, FL 33156	8506127	FDEP	No	125 feet east	Historic petroleum contamination. SRCO approved in October 2018	LOW	LOW	LOW	LOW
L2	Kendall Toyota 10943 S Dixie Highway Miami, FL 33156	9046819	FDEP	Yes	300 feet east	No regulatory files indicating type of contamination available. NFA approved in July 2011	LOW	LOW	LOW	LOW
L3	Super Care Car Wash 9650 S Dixie Highway Kendall FL 33156	8504345	FDEP	No	400 feet east	Historic petroleum contamination. NFA approved in January 1998	LOW	LOW	LOW	LOW
L4	Frasse Helen F Estate 7601 SW 76th Avenue, Miami, FL 33143	9202815	FDEP	No	250 feet east	NREQ status approved in October 2005	LOW	LOW	LOW	LOW
L5	Pamsco Transport Fuel Spill Highway 826, Miami, FL 33143	9802998	FDEP	No	Along the Corridor	No regulatory files indicating type of contamination available.	LOW	LOW	LOW	LOW
L6	Tolco Inc 4550 SW 75th Avenue, Miami FL 33155	9101569	FDEP	No	260 feet east	Historic discharge occurred at the site. No additional information available regarding cleanup.	LOW	LOW	LOW	LOW

Table 6.13 – Potential Contaminated Sites in the Vicinity of the PD&E Study (Continued)

Site ID	Property Description	Facility ID	Environmental Compliance Agency	Regulated Storage Tanks	Distance from Project	Contamination Concern/ Regulatory Status	Risk Rating	Alternative Risk Rating		
								A1	A2	A3
L7	Camilo Muebles Inc 4400 SW 75th Avenue, Miami, FL 33155	8622877	FDEP	No	350 feet east	Historic petroleum contamination. NFA approved in July 1993	LOW	LOW	LOW	LOW
L8	Epperson Crane Service Inc Jack 4300 SW 75th Avenue, Miami, FL 33155	8942952	FDEP	No	300 feet east	Historic petroleum contamination. SRCO approved in February 2007	LOW	LOW	LOW	LOW
L9	Alcazar - Tio Pepe 7701 SW 40th Street Miami, FL 33155	9047482	FDEP	No	300 feet west	No regulatory files indicating type of contamination available.	LOW	LOW	LOW	LOW
L10	Sunshine #201 7798 SW 24th Street, FL 33155	8506212	FDEP	Yes	350 feet west	Multiple discharges reported at the site for PAH and TRPH contamination. Site awaiting SRCO approval.	LOW	LOW	LOW	LOW
L11	Barnett Bank of S-FL-Midway 7760 W Flagler Street Miami, FL 33144	8736978	DERM	No	350 feet east	Historic petroleum contamination. NFA approved in August 2007	LOW	LOW	LOW	LOW
L12	Miami International Airport Ash Landfill Perimeter Road and NW 72nd Avenue Miami	56827	FDEP	No	1100 feet north of 836 E extension	Vinyl chloride exceedance reported in 2017. All other CoCs reported having concentrations under MCLs.	LOW	LOW	LOW	LOW

Table 6.13 – Potential Contaminated Sites in the Vicinity of the PD&E Study (Continued)

Site ID	Property Description	Facility ID	Environmental Compliance Agency	Regulated Storage Tanks	Distance from Project	Contamination Concern/ Regulatory Status	Risk Rating	Alternative Risk Rating		
								A1	A2	A3
M1	Marios Finest Dry Cleaners and Shirt Salon 12117 South Dixie Highway Miami, FL	9500300/ ERIC_4315	DERM	No	175 feet east	TCE and cis-1,2 DCE contamination in groundwater and soil was contaminated with VOH. RAP operated during 1992. Post RAP, DERM requested additional assessments	MEDIUM	NO	MEDIUM	MEDIUM
M2	Suniland Dry Cleaners 11723 South Dixie Highway Miami, FL 33156	9501329/ ERIC_4388	FDEP	No	150 feet east	Historical PCE and cis-DCE contamination at the site. Remediation conducted at the site during 1996. Existing contamination at the site	MEDIUM	NO	MEDIUM	MEDIUM
M3	Perlmutter Petroleum 10601 S Dixie Highway Miami, FL 33156	8505104	FDEP	No	150 feet east	Historical PAH and TRPH contamination. Most recent assessment did not indicate presence of CoCs. Additional assessments planned for the site	MEDIUM	NO	MEDIUM	MEDIUM
M4	7-Eleven Store #37580 10345 S Dixie Hwy, Miami, FL 33156	8505459	FDEP	Yes	120 feet east	PAH contamination in soil between 0-4 feet and TRPH, PAH and BTEX contamination in groundwater.	MEDIUM	NO	MEDIUM	MEDIUM

Table 6.13 – Potential Contaminated Sites in the Vicinity of the PD&E Study (Continued)

Site ID	Property Description	Facility ID	Environmental Compliance Agency	Regulated Storage Tanks	Distance from Project	Contamination Concern/ Regulatory Status	Risk Rating	Alternative Risk Rating		
								A1	A2	A3
M5	Dryclean USA #11121 7420 SW 88th Street Miami FL 33156	9502314/ ERIC_4432	FDEP	No	400 feet east	Historic tetrachloroethene contamination in soil. Currently quarterly monitoring being conducted	MEDIUM	NO	MEDIUM	MEDIUM
M6	Chevron #202666 7625 SW 40th Street Miami, FL - 33155	8504531	FDEP	Yes	400 feet east	Benzene contamination existing at the site. Contamination plume contained within the site.	MEDIUM	MEDIUM	MEDIUM	MEDIUM
M7	Chevron #47667 - Tonys 780 NW 72nd Avenue Miami, FL 33126	8506267	FDEP	No	500 feet south of 836 E extension	Free product found at the site. No assessments conducted at the site.	MEDIUM	MEDIUM	MEDIUM	MEDIUM
H1	Sunshine 262 10401 S Dixie Hwy, Miami, FL 33156	8504621	FDEP	Yes	100 feet east	TRPH and BTEX/MTBE contamination in soil and groundwater. Limited scope remedial action plan to be implemented at the site	HIGH	NO	HIGH	HIGH
H2	FL Gasoline Station 10045 S Dixie Hwy, Miami, FL 33156	8735575	FDEP	No	150 feet east	PAH contamination present in soil at 2-feet and in shallow groundwater. Lead contamination also present in groundwater. Remedial action plan pending to be implemented at the site	HIGH	NO	HIGH	HIGH

Table 6.13 – Potential Contaminated Sites in the Vicinity of the PD&E Study (Continued)

Site ID	Property Description	Facility ID	Environmental Compliance Agency	Regulated Storage Tanks	Distance from Project	Contamination Concern/ Regulatory Status	Risk Rating	Alternative Risk Rating		
								A1	A2	A3
H3	Last Detail Inc 9790 S Dixie Hwy, Miami FL 33156	884224	FDEP	No	150 feet east	TRPH contamination present in soil. TRPH, BTEX and lead contamination present in groundwater. Pilot test study for remedial action plan is pending to be implemented.	HIGH	NO	HIGH	HIGH
H4	Bridgestone Aircraft – Former (Thompson @ Corp) 7775 NW 12th Street Miami, FL - 33126	9100886	FDEP	No	450 feet west	Discharge reported in 1995. Cleanup activities planned but not performed yet to meet the groundwater petroleum cleanup criteria	HIGH	HIGH	HIGH	HIGH

Figure 6.22 – Potential Contamination Concerns (1 of 9)

Figure 6.22 – Potential Contamination Concerns (2 of 9)

Figure 6.22 – Potential Contamination Concerns (3 of 9)

Figure 6.22 – Potential Contamination Concerns (4 of 9)

Figure 6.22 – Potential Contamination Concerns (5 of 9)

Figure 6.22 – Potential Contamination Concerns (6 of 9)

Figure 6.22 – Potential Contamination Concerns (7 of 9)

Figure 6.22 – Potential Contamination Concerns (8 of 9)

Figure 6.22 – Potential Contamination Concerns (9 of 9)