

Prepared for:



Miami-Dade Transportation  
Planning Organization

SW 152nd Street Mobility Solutions  
Miami-Dade MPO GPC VI-5

# SW 127th Avenue Connector Study

Prepared by:

**ATKINS**

SW 152<sup>nd</sup> Street  
Coral Reef Drive  
MOBILITY SOLUTIONS



July 2017



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Work Order #GPC VI-5

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## SW 127<sup>th</sup> Avenue Connector Study

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## SW 127<sup>th</sup> Avenue Connector Study

### 1.0 Introduction

#### 1.1 Background

A study of multimodal improvement actions along the entire SW 152nd Street (Coral Reef Drive) corridor was recently completed for the Miami-Dade Metropolitan Transportation Planning Organization (TPO). That study identified recommendations to improve mobility for all modes with a set of prioritized actions. While not located directly on the SW 152nd Street corridor, one of the recommendations made proposed that the segments of SW 127th Avenue lying on either side of the CSX Railroad corridor at a point approximately 0.70 miles north of SW 152nd Street be connected, potentially with an overpass structure.

#### 1.2 Purpose and Approach

The purpose of this study, commissioned by the TPO, is to investigate options for the connection of SW 127th Avenue at the railroad. The analysis is undertaken at a conceptual level of detail. The study approach consists of these major elements:

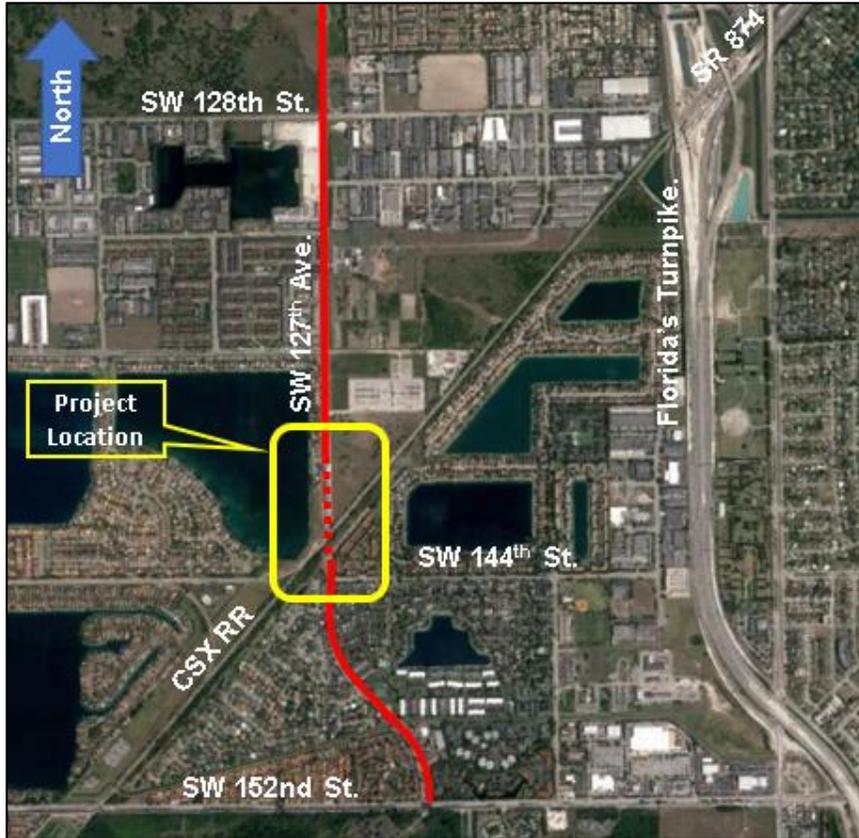
- Background information regarding the study area setting was compiled and reviewed.
- The setting of the proposed improvement was researched in terms of land uses, transportation planning, and environmental conditions.
- Field survey information was compiled along the proposed alignment centerline to establish existing topography. Elevations of overhead power lines were also determined as part of the field work.
- Roadway alignments were investigated for at-grade and grade-separated options.
- Preliminary structural requirements were determined for the overpass structure and coordinated with the vertical profiles for the roadway.
- Plan and profile drawings were prepared for the options.
- Preliminary conceptual costs were estimated.

With this information, staff at Miami-Dade County Transportation and Public Works and elected officials at the County can make an informed decision as to the best option to complete the missing segment of SW 127<sup>th</sup> Avenue.

#### 1.3 Study Corridor Description

The location of the project is along SW 127<sup>th</sup> Avenue in the vicinity of SW 140<sup>th</sup> and SW 144<sup>th</sup> Streets, at the CSX Railroad alignment in southwest Miami-Dade County as shown in **Exhibit 1.1**. SW 127<sup>th</sup> Avenue runs in the north-south direction and north of SW 144<sup>th</sup> Street is undeveloped for 620 feet. The CSX Railroad single-track line crosses the SW127th Avenue alignment at approximately a 45-degree skew. Also in the project vicinity are several major Florida Power & Light (FPL) electrical transmission and distribution lines, and a major substation on the east side of SW 127<sup>th</sup> Avenue north of the railroad line.

Exhibit 1.1: Study Location



## 2.0 Existing Conditions

This section of the report generally describes the study area setting including land uses, transportation planning, and projected traffic volumes.

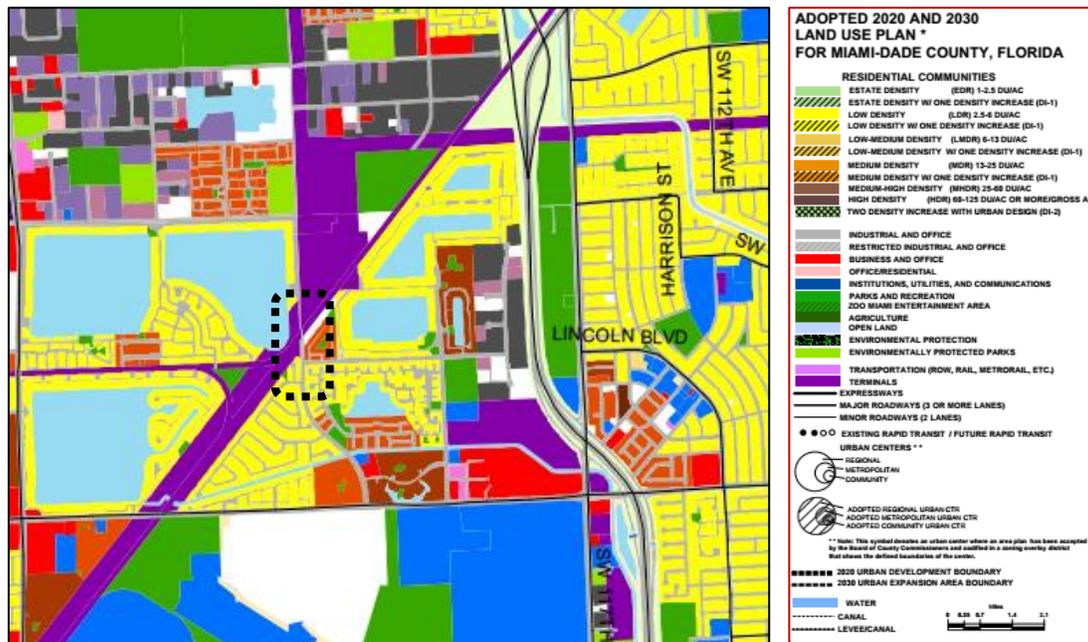
### 2.1 Land Uses

South of the CSX Railroad, the surrounding land uses consist mostly of Low Density Residential (2.5 to 4 dwelling units/acre), with a small area of Medium Density Residential (13-25 units/acre) at the northwest corner of the SW 127<sup>th</sup> Avenue/SW 144<sup>th</sup> Street intersection. The frontages along both SW 127<sup>th</sup> Avenue and SW 144<sup>th</sup> Street are free of driveways, with wooden fences separating the rear yards of residential properties from the public streets.

To the north extending along the CSX Railroad and the parallel FP&L transmission lines is the Terminal designation. This designation extends northward along the east side of SW 127<sup>th</sup> Avenue to include the large FP&L Davis Substation site. On the west side of SW 127<sup>th</sup> Avenue is a one-lot deep strip of Low Density Residential from SW 140<sup>th</sup> Street to SW 136<sup>th</sup> Street.

Exhibit 2.1 below shows the Miami-Dade County adopted land use map. It is noted that the project site is located in the unincorporated County.

*Exhibit 2.1: Adopted Land Use Map*



Information provided by the Miami-Dade County Dept. of Transportation and Public Works indicates that a development plat is being considered for a strip of land adjacent to the CSX Railroad in the southeast quadrant (see **Appendix C**). The project would be connected to SW 127<sup>th</sup> Avenue immediately north of SW 144<sup>th</sup> Street. This parcel and access to it is an obvious issue to the development of a bridge project in this area.

### 2.2 Transportation Plans

The adopted 2040 Miami-Dade Long Range Transportation Plan recognizes the improvement of the SW 127<sup>th</sup> Avenue corridor as follows:

- 
- ID Number: PW133
  - Project: 2-lane widening and 4 new lanes from SW 120<sup>th</sup> Street to SW 144<sup>th</sup> Street
  - Priority 1 (2015-2020):
    - Preliminary Engineering \$0.551 million (all costs year of expenditure)
    - ROW \$2.791 million
    - Construction \$0.590 million
  - Priority 2 (2021-2025):
    - Construction \$8.937 million
    - Operations and Maintenance: \$0.390 million
  - Priority 3 (2026-2030):
    - Operations and Maintenance: \$0.092 million
  - Priority 4 (2031-2040):
    - Operations and Maintenance: \$0.235 million
  - Total Capital Cost \$10.118 million
  - Funded Cost \$13.536 million

It is presumed that this cost was for the improvement to be at-grade at the CSX Railroad, given the level of estimated cost for the overall project. Travel demand modeling for the SW 152<sup>nd</sup> Street Mobility Solutions Study shows that demand on this connection in 2040 would be about 25,000 vehicles daily, which support the need for a four-lane roadway.

## 2.3 Other Features

### General Conditions

The study area site is relatively flat in terms of topography. There is a 620-foot gap between paved sections of SW 127<sup>th</sup> Avenue on either side of the CSX Railroad corridor. SW 127<sup>th</sup> Avenue carries a four-lane with a grass median and left-turn lanes south of the railroad and a two-lane section north of the railroad. SW 144<sup>th</sup> Street just south of the railroad has a three-lane section with a through lane in each direction, and a center left-turn lane as needed. Both SW 127<sup>th</sup> Avenue south of the railroad and SW 144<sup>th</sup> Street both have sidewalks behind the curb. There are no transit routes in the vicinity of the proposed project. There is a designated sharrows corridor (shared use lane for vehicles and bicycles) along SW 127<sup>th</sup> Avenue from SW 144<sup>th</sup> Street to SW 152<sup>nd</sup> Avenue. Bicycle lanes are proposed for SW 127<sup>th</sup> Avenue north of SW 120<sup>th</sup> Street, and the SW 127<sup>th</sup> Avenue corridor would connect to the MetroZoo facility if the missing link is completed. **Exhibit 2.2** shows views of the existing corridor conditions. SW 127<sup>th</sup> Avenue lies within a basic 80-foot ROW to the north and south of the railroad; in the vicinity of the CSX Railroad and the FP&L corridor, the Miami-Dade County Property Appraiser Office mapping shows some irregularities in ROW width.

### CSX Railroad

The CSX line lies within a 100-foot ROW with a single track. Rail traffic on this line is relatively low; the Federal Railroad Administration railroad crossing database reports one daily switching train as of February 2017. As noted elsewhere, the State Historic Preservation Officer (SHPO) has determined that the CSX Railroad is eligible for listing on the National Register of Historic Places (NRHP).

*Exhibit 2.2: Existing Field Conditions*

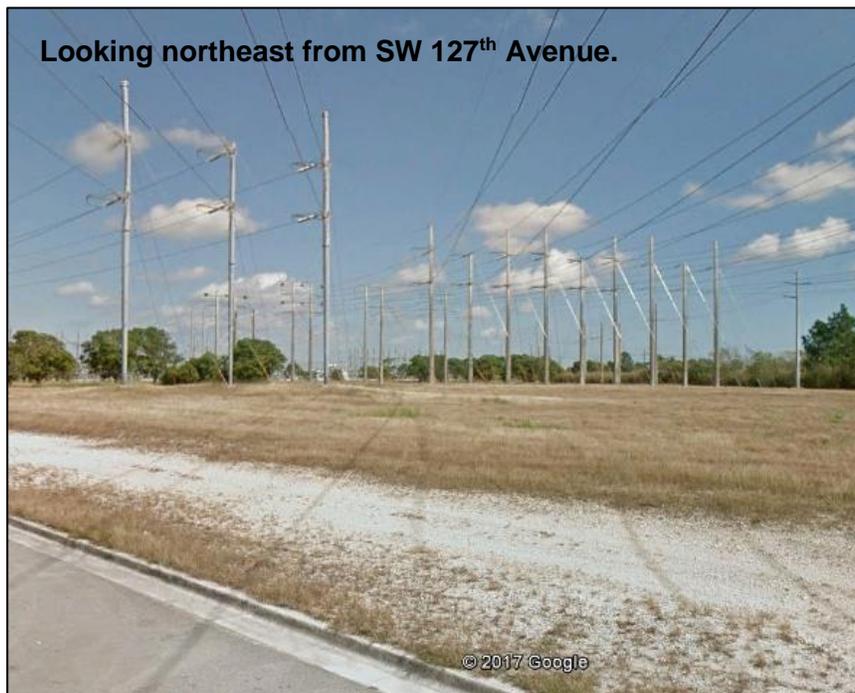


**FP&L Utility**

There is also an FP&L transmission line corridor that crosses the theoretical alignment of SW 127<sup>th</sup> Avenue. This corridor contains several crossings of the SW 127<sup>th</sup> Avenue alignment:

- Major transmission line corridor, running southwest to northeast, turning north east of SW 127<sup>th</sup> to the FP&L Davis Substation
- Distribution line running southwest to northeast along the south side of the FP&L corridor
- Distribution line running north-south along the west side of SW 127<sup>th</sup> Avenue

*Exhibit 2.3: Existing Power Lines*



### 3.0 Connection Alternatives

This section of the report develops alternative solutions to the connector along SW 127<sup>th</sup> Avenue to provide a connection and corridor continuity. The discussion covers design criteria and the identified alternatives. Three alternatives were identified:

- Alternative 1: At-grade roadway – This alternative is shown as a lower cost option and a reference for the incremental cost of an overpass.
- Alternative 2: Overpass with 5% grades – This alternative shows the project layout with 5% grades on the north and south approaches to the overpass bridge over the railroad.
- Alternative 3: Overpass with 5% and 9% grades - This alternative shows the project layout with a 5% grade on the north approach and a 9% grade on the south approach to the overpass bridge over the railroad in order to connect to the SW 144<sup>th</sup> Street intersection.

#### 3.1 Design Criteria

The project design criteria for conceptual planning purposes are presented in **Table 3.1**.

*Table 3.1: Design Criteria*

CRITERIA	AASHTO		FDOT	
	VALUE	REFERENCE	VALUE	REFERENCE
Classification	Urban Collector	AASHTO pg.1-11	Urban Collector	References AASHTO
Minimum $D_s$	30 MPH	AASHTO sect. 6.3.1	40-60 MPH	PPM V-I Table 1.9.1
Minimum Lane Widths	24' (two lane roadway)	AASHTO sect. 4.16.4	11'	PPM V-I Table 2.1.1
Cross Slope	0.015-0.4	AASHTO pg. 4-5	.02 - .04	PPM V-I 2.1.5
Shoulder Width (recommended)	4'	AASHTO pg. 6-9	8' inside 10' outside	PPM V-I Table 2.3.2
$e_{max}$	0.06	AASHTO pg. 3-31	0.05	PPM V-I Ch 2.9
$R_{min}$	340'	AASHTO Table 3-7	358'	PPM V-I Table 2.9.9
Vertical Grade (min)	0.30%	AASHTO pg.3-119, AASHTO pg. 6-12	0.30%	PPM V-I Table 2.6.4
Vertical Grade (max)	9%	AASHTO Table 6-8	9%	PPM V-I Table 2.6.1
K - crest	19	AASHTO Table 3-34	31	PPM V-I Table 2.8.5
K- sag	37	AASHTO Table 3-36	37	PPM V-I Table 2.8.6
Minimum Vertical Curve length	3V=105'	AASHTO pg. 3-153	3V=105'	PPM V-I Table 2.8.6
Max Grade Change w/o curve	N/A		1.0	PPM V-I Table 2.6.2
Vertical Clearance	28'	AASHTO Figure pg. 10-25	23.5'	PPM V-I Table 2.10.1
Sight Distance	200'	AASHTO Table 3-1	200'	PPM V-I Table 2.7.1

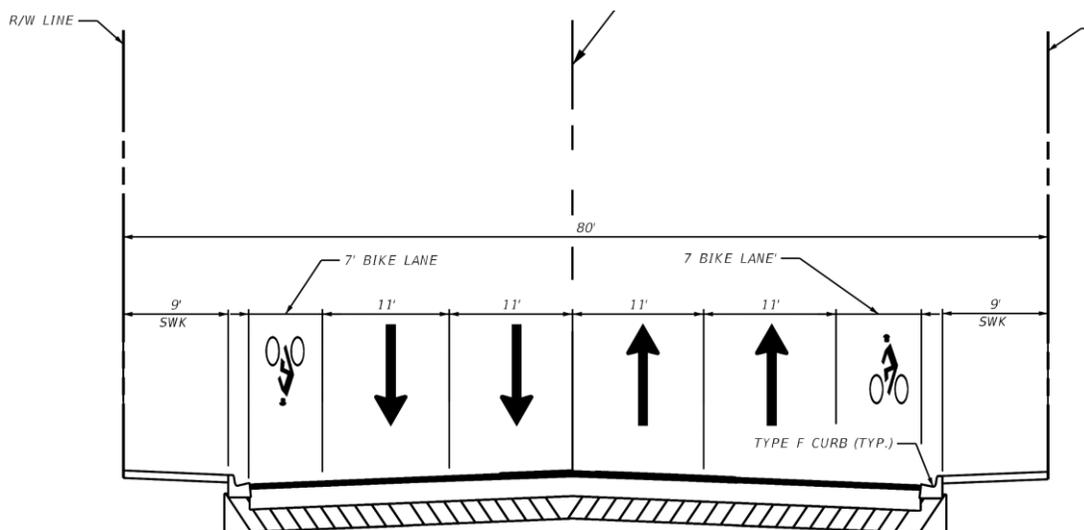
### 3.2 Alternative 1: At-Grade Roadway

The at-grade roadway alternative is the lowest cost option, but requires a railroad grade crossing with the CSX Railroad. The railroad, in its commitment to employee and public safety, is firmly opposed to the establishment of any new at-grade crossing. Both federal and state government policies discourage the creation of new at-grade crossings. In seeking to carry out this policy, both the U.S. Department of Transportation and state agencies have adopted programs to eliminate at-grade crossings by constructing bridges or by diverting traffic to existing overhead, subgrade or at-grade crossings, or by crossing consolidation. CSX notes on its website that it fully supports these policies and programs. Current practice in initiating a new railroad crossing is to at a minimum identify another crossing that can be closed, and desirably avoid an at-grade crossing with a grade-separated alignment. **Appendix D** provides information on the Florida DOT procedures for opening or closing a railroad crossing, in accordance with Florida Statutes, Chapter 335.141.

Alternative 1 consists of a typical section (**Exhibit 3.1**) with two travel lanes in each direction. The roadway is flanked by two sidewalks and two bicycle lanes. Within an 80-foot right-of-way, a median would not be possible unless the sidewalks and/or bicycle lanes were narrower. Because of right-of-way restrictions in the vicinity of SW 144<sup>th</sup> Street, it is not possible to have a southbound left turn lane to SW 144<sup>th</sup> Street in addition to the wider sidewalks and the bicycle lanes. The only option without acquiring right-of-way would be to truncate the bicycle lanes and return them to a sharrow condition. Certainly other typical sections can be explored if the project is advanced.

**Exhibit 3.2** shows the plan layout for Alternative 1. It is presumed that a traffic signal would be installed at the SW 127<sup>th</sup> Avenue/SW 144<sup>th</sup> Street intersection due to sight distance restrictions, and this element is included in the project cost estimate. It is noted that the County has received a request to plat the narrow property in the southeast quadrant (see **Appendix C**), which would have in Alternative 1 an access point to SW 127<sup>th</sup> Avenue immediately south of the railroad crossing.

*Exhibit 3.1: Typical Section – At-Grade*



*Exhibit 3.2: Alternative 1 – At-Grade (Section A) – Plan View*

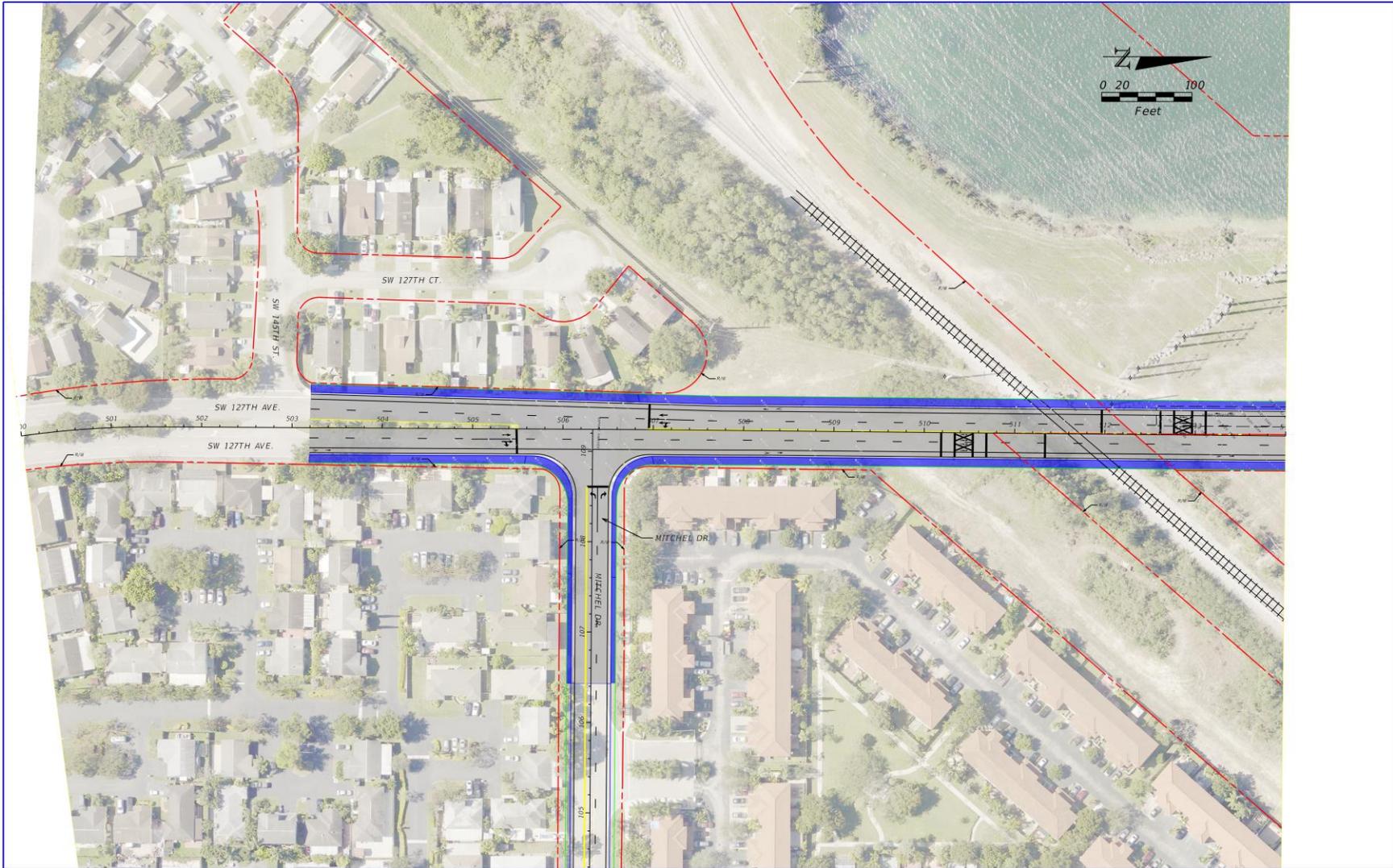


Exhibit 3.2: Alternative 1 – At-Grade (Section B) – Plan View (Continued)



Exhibit 3.2: Alternative 1 – At-Grade (Section C) – Plan View (Continued)



### 3.3 Alternative 2: Overpass with 5% Grades

This option consists of a typical section (**Exhibit 3.3**) with two travel lanes in each direction. The roadway is flanked by two sidewalks, as well as two bicycle lanes. As for Alternative 2, within an 80-foot right-of-way, a median would not be possible unless the sidewalks and/or bicycle lanes were narrower. Because of right-of-way restrictions in the vicinity of SW 144<sup>th</sup> Street, it is not possible to have a southbound left turn lane to SW 144<sup>th</sup> Street in addition to the wider sidewalks and the bicycle lanes. The only option without acquiring right-of-way would be to truncate the bicycle lanes further to the north and return them to a sharrow condition. Certainly other typical sections can be explored if the project is advanced.

Exhibit 3.3: Overpass with 5% Grades – Typical Sections

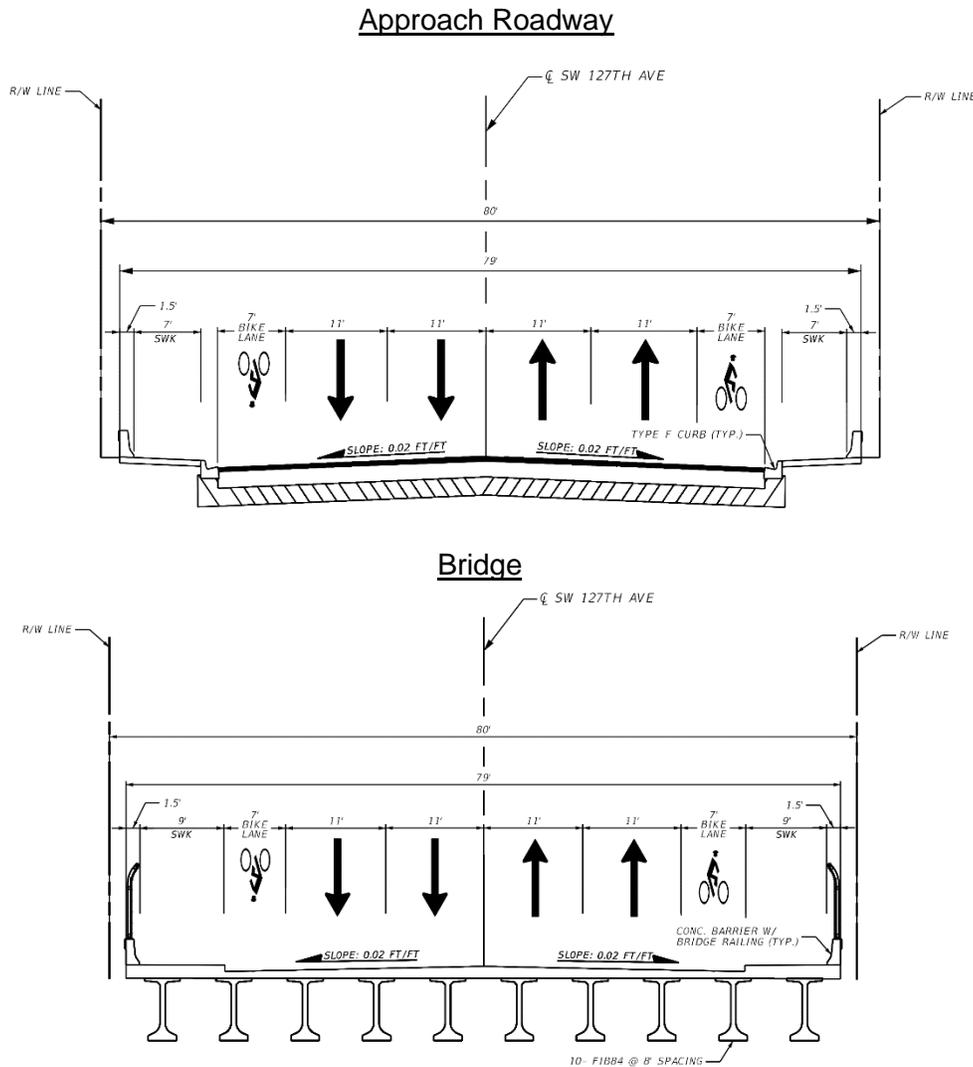


Exhibit 3.4 shows the plan layout for Alternative 2. Because the roadway profile with a 5% grade extends the south approach profile to the south, this option requires closing SW 144<sup>th</sup> Street with

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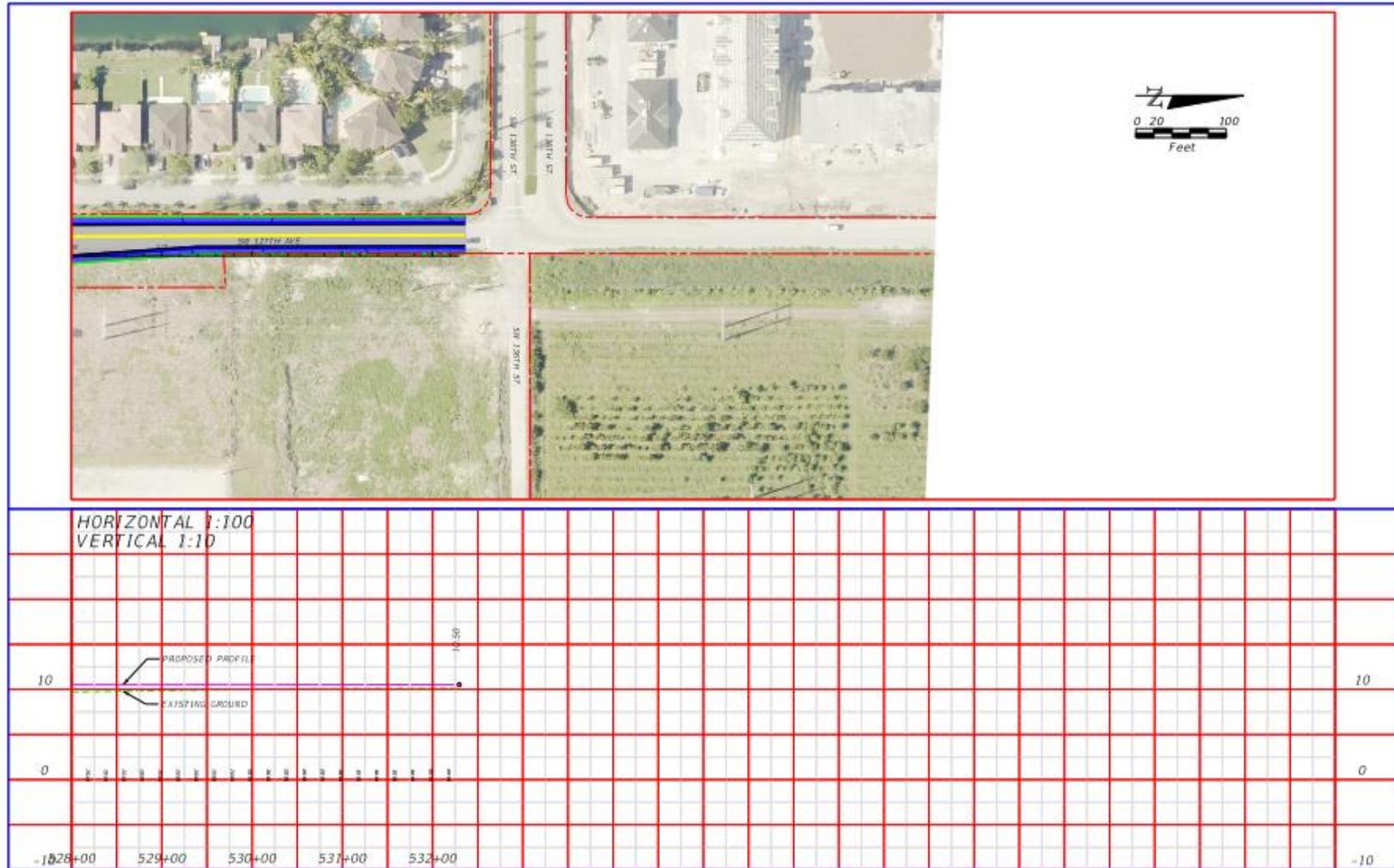
a cul-de-sac. This treatment will prevent travelsheds from the east on SW 144<sup>th</sup> Street from accessing SW 127<sup>th</sup> Avenue, possibly to use the bridge. This alternative would have retaining walls behind residences on both sides of the road south of the railroad. These walls would range up to nearly 30 feet in height behind properties on the east side of SW 127<sup>th</sup> Avenue. The proposed property plat in the southeast quadrant would be prevented from having access to SW 127<sup>th</sup> Avenue. A transition from the project typical section to the existing typical section would need to occur in the block south of SW 144<sup>th</sup> Street.



Exhibit 3.4: Alternative 2 Overpass with 5% Grades (Section B) – Plan and Profile Views (Continued)



Exhibit 3.4: Alternative 2 – Overpass with 5% Grades (Section C) – Plan and Profile Views (Continued)



### 3.4 Alternative 3: Overpass with 5% and 9% Grades

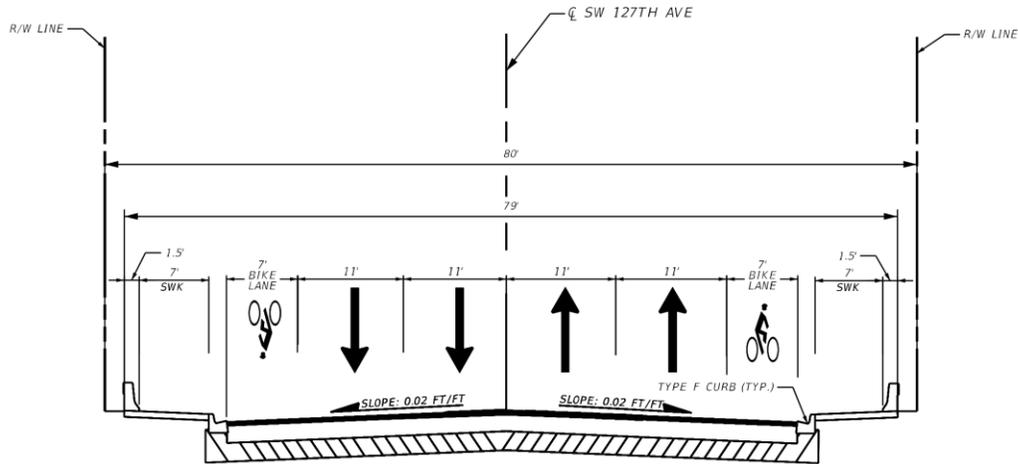
This option consists of a typical section (**Exhibit 3.5**) with two travel lanes in each direction. The roadway is flanked by two sidewalks, as well as two bicycle lanes. As for Alternative 2, within an 80-foot right-of-way, a median would not be possible unless the sidewalks and/or bicycle lanes were narrower. Because of right-of-way restrictions in the vicinity of SW 144<sup>th</sup> Street, it is not possible to have a southbound left turn lane to SW 144<sup>th</sup> Street in addition to the wider sidewalks and the bicycle lanes. The only option without acquiring right-of-way would be to truncate the bicycle lanes and return them to a sharrow condition further to the north of SW 144<sup>th</sup> Street. Certainly other typical sections can be explored if the project is advanced.

**Exhibit 3.6** shows the plan and profile layouts for Alternative 3. A 9% maximum grade is used on the roadway profile for the south approach to provide a connection with SW 144<sup>th</sup> Street. The intersection option shown is a with a right-turn-in/right-turn-out treatment for SW 144<sup>th</sup> Street. However, a full intersection with left turns and a traffic signal due to sight distance issues is possible, if the approach to SW 144<sup>th</sup> Street is raised by about 5 feet at its centerline. Since the southbound approach to the traffic signal would be at the end of relatively steep grade of 9%, it will be necessary to include a long clearance phase in the signal timing on the southbound approach. The full intersection treatment would retain the ability of travelsheds from the east along SW 144<sup>th</sup> Street to continue to access SW 127<sup>th</sup> Avenue, possibly to use the bridge. As is the case for Alternative 2, there would be retaining walls behind residences on both sides of the street south of the railroad. These walls would be range up to nearly 30 feet in height behind properties on the east side of SW 127<sup>th</sup> Avenue. The proposed property plat in the southeast quadrant would be prevented from having access to SW 127<sup>th</sup> Avenue. A transition from the project typical section to the existing typical section would need to occur in the block south of SW 144<sup>th</sup> Street.

While sidewalks are shown along the 9% roadway gradient, unless slight moderation of this grade would occur in final design should the project advance, it would otherwise be necessary to install ADA-compliant pathways on both sides of the roadway, which would require a stack of reversing “scissor ramps” from ground level up to the crown of the roadway crest curve.

*Exhibit 3.5: Alternative 3 – Overpass with 5% and 9% Grades – Typical Sections*

Approach Roadway



Bridge

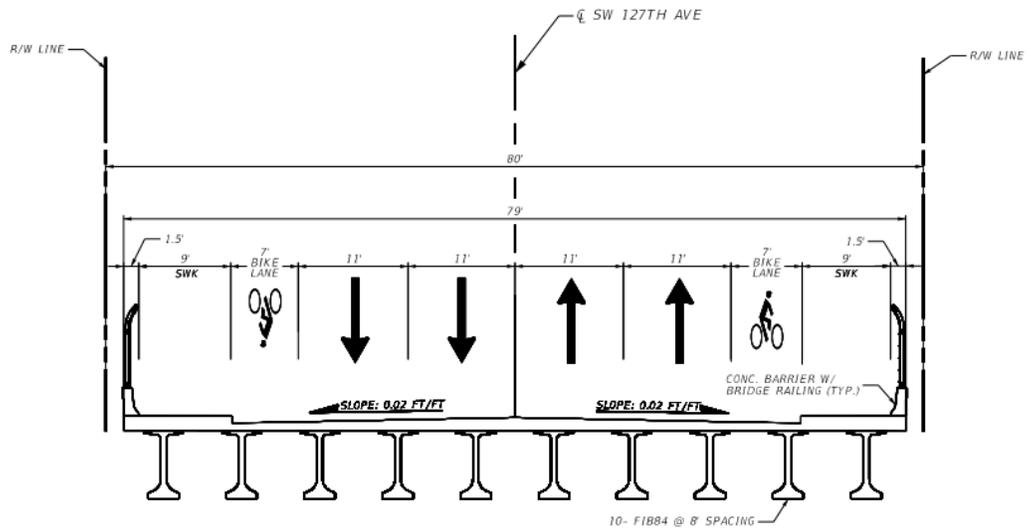
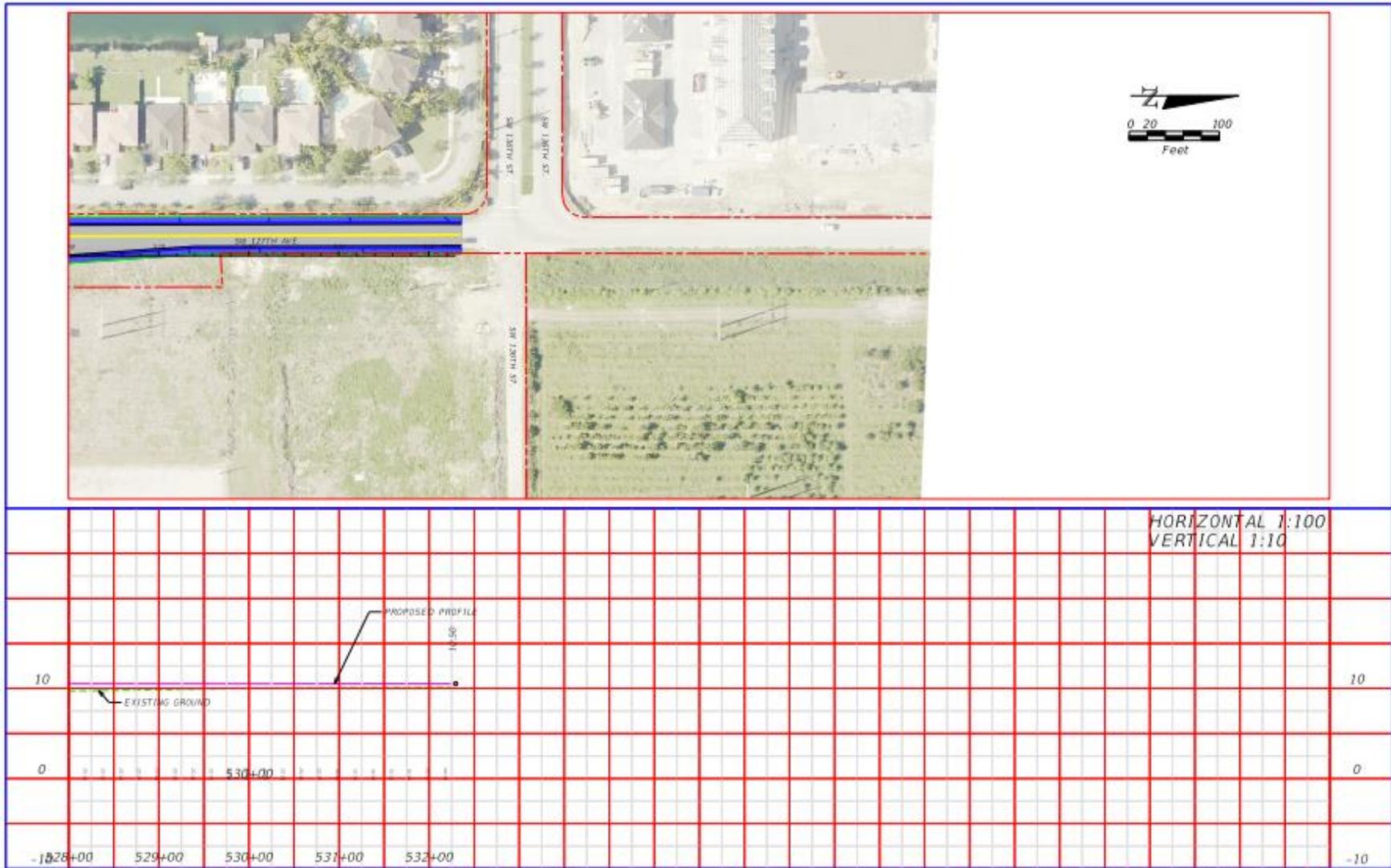




Exhibit 3.6: Alternative 3 – Overpass with 5% and 9% Grades (Section B) – Plan and Profile Views (Continued)



Exhibit 3.6: Alternative 3 – Overpass with 5% and 9% Grades (Section C) – Plan and Profile Views (Continued)



## 4.0 Summary Comparison of Alternatives

This section summarizes the results of the development of conceptual alternatives for the SW 127<sup>th</sup> Avenue connection that was studied. Based on the information developed in the study, a set of findings and conclusions are offered to guide further development of this project.

### 4.1 Conceptual Cost Estimates

For each of the identified alternatives, an estimate of probable construction cost was developed using Florida Department of Transportation Long Range Estimation procedures and data. The estimates are provided in **Appendix B**, and summarized as follows:

- Alternative 1: At-grade Roadway (with railroad crossing)                     \$ 4,880,000
- Alternative 2: Overpass Alternative with 5% Grades                             \$14,280,000
- Alternative 3: Overpass Alternative with 5% and 9% Grades                 \$13,600,000

These conceptual capital cost estimates are based on the following assumptions:

- Based on 2017 unit costs.
- Includes a 20% contingency allowance.
- Does include an allowance for relocation of affected electrical utility transmission and distribution lines. This is a placeholder as detailed assessment of this component was not possible.
- Does not include further environmental reconnaissance, permitting, subsurface utility relocations, landscaping, engineering design, or construction administration services.
- Does not include costs of right-of-way, environmental mitigation that may be required.
- Does not include possible property damages due to the site access issue in the southeast quadrant.

The results show that Alternative 1: At-grade Roadway is about one-third the cost of the overpass options. Alternative 3 is slightly less costly than Alternative 2 as its steeper grade on the south approach reduces material quantities slightly.

### 4.2 Environmental Factors

A review of environmental factors was performed for the project alignment. The full review is provided in **Appendix A**, and summarized below:

- **Wetlands and Water Bodies:** No impacts to wetlands or other surface waters are anticipated from the proposed project.
- **Endangered or Threatened Species, Wildlife, and Critical Habitats:** This review element is summarized as follows:
  - Atkins evaluated the potential presence of listed endangered or threatened species by performing an online records review of various available data resources.
  - Based on the evaluation, the project is within the USFWS’s Consultation Areas for the American crocodile, Everglade snail kite, Florida bonneted bat, and Miami-Dade Keys plants. The project is also within the Florida bonneted bat Focal Area and the Core Foraging Area (CFA) for at least one wood stork colony.

- 
- There are no wetlands or other surface waters within or immediately adjacent to the project area; thus, the project area does not contain suitable nesting or foraging habitat for the American crocodile, Everglade snail kite, or wood stork and no impacts to these species are anticipated from the proposed project. There may be suitable wood stork foraging habitat along the littoral shelf of Common Nighthawk Lake, located approximately 180 feet west of the project corridor. The proposed project should avoid impacts to this lake that may require mitigation of wood stork foraging habitat.
  - The Florida bonneted bat (FBB) is a state- and federally-listed endangered species. The project is located within the USFWS's FBB Consultation Area and FBB Focal Area. A FBB survey will likely be required for this project. Coordination with the USFWS will be required for the proposed project.
  - The project area is located within the USFWS's Miami-Dade Keys plants Consultation Area. A field survey will be required to determine whether any listed plant species occur within or adjacent to the project area. Vegetated areas occur at several locations in proximity to the proposed project.
  - No USFWS designated critical habitat for any protected species was identified within the project corridor. However, designated critical habitat for two plants (Florida Brickell-bush, and Carter's small-flowered flax, and the Bartram's scrub-hairstreak butterfly is located east of the project area within the Tamiami Pineland Complex Addition.
- **Protected Lands:** Based on the evaluation, protected lands were not identified within or adjacent to the project area. However, it should be noted that Tamiami Pineland Complex Addition (TPCA), a Miami-Dade County Natural Forested Community (NFC), is located approximately 1,000 feet east of the project corridor on the north side of SW 136<sup>th</sup> Street. The TCPA property is public land containing pine rockland community that is managed by Miami-Dade County Environmentally Endangered Lands (EEL) Program. As mentioned above, the TCPA contains designated critical habitat for three listed species. Impacts to the TCPA property are not anticipated from the proposed project.
  - **Section 106 of the National Historic Preservation Act:** The review identified the CSX Railroad Historic Linear Resource (DA10753). The State Historic Preservation Officer (SHPO) has determined that the CSX Railroad is eligible for listing on the National Register of Historic Places (NRHP). No previously-documented archaeological sites were identified.
  - **Section 4(f) of the Department of Transportation Act:** There are no documented public parks, recreational areas, wildlife/waterfowl refuges, or archeological sites located within or immediately adjacent to the proposed project limits.
  - **Contamination:** No contamination impacts are currently anticipated in association with the proposed project.
  - **Noise:** Noise-sensitive land uses potentially impacted by the project consist of single-family residences adjacent on the east and west of the project corridor.

- **Local Traffic Patterns:** Overpass alternatives would alter the traffic movements at the SW 127<sup>th</sup> Avenue/SW144<sup>th</sup> Street intersection, causing changes in subarea traffic circulation in the area south of the overpass.
- **Potential Controversy:** Given the potential issues associated with noise, visual impacts, and traffic circulation changes, overpass alternatives have the potential for public controversy. Public outreach and involvement activities are strongly suggested for the proposed project.

#### 4.3 Other Considerations

Besides cost and environmental factors, the following other points were identified relative to the identified alternatives:

- The construction of any alternative would benefit commuters and local area travel by providing a new north-south connection lying between Florida's Turnpike and SW 137<sup>th</sup> Avenue.
- The new link will provide expanded access to the new ramp connecting SR 874 to SW 128<sup>th</sup> Street, providing direct access for this district to SR 874 and avoiding the SW 152 Street interchange with Florida's Turnpike.
- The connection will facilitate bicycle and pedestrian circulation, and provide a potential new corridor for transit services as well.

#### 4.4 Observations and Conclusions

Based on the conceptual analyses conducted, the following observations and conclusions are offered:

- The cost of the elevated overpass alternatives is nearly triple that of the at-grade solution.
- Information from the Miami-Dade County Dept. of Transportation and Public Works indicates that a development plat is being considered for a strip of land adjacent to the CSX Railroad in the southeast quadrant (see **Appendix C**). That land is proposed to have at-grade access to the existing stub of SW 127<sup>th</sup> Avenue south of the track and north of SW 144<sup>th</sup> Street. That connection is compatible only with no SW 127<sup>th</sup> Avenue connection or with the at-grade option. In addition, construction of a bridge could trigger property damages claim on the grounds that property access would be denied.
- The at-grade connection of Alternative 1 requires the opening of a railroad grade crossing. **Appendix D** documents the required process per Florida DOT procedures. In addition, the CSX Railroad policy discourages new crossings and requires removal of at least one other crossing. This regulatory requirements and related policy issues will require further investigation if the connection project is to be advanced.
- Due to the proximity of the CSX Railroad to SW 144<sup>th</sup> Street, a 9% grade on the south approach is needed to attempt to maintain full access at the SW 127<sup>th</sup> Avenue/SW 144<sup>th</sup> Street intersection. The 5% grade on the south approach results in a profile that is elevated 15 feet at the centerline of SW 144<sup>th</sup> Street, and thus precludes an intersection.
- While further engineering may incrementally improve Alternative 3 to retain the SW 144<sup>th</sup> Street intersection, that intersection approach will be at the foot of long steeper grade, creating possible speeding and crash hazards.

- 
- The at-grade solution avoids the roadway profile issues just discussed, while retaining the full intersection with SW 144<sup>th</sup> Street. It also avoids significant relocation of FP&L (raising of the lines over the overpass). The at-grade alternative has a capital cost that is one-third of the overpass alternatives, but requires the approval of an at-grade rail crossing which is a challenge. It also could accommodate access to the proposed development plat in the southeast quadrant.
  - Any alternative will require certain environmental reconnaissance and research as well as cognizant agency consultations, but it appears that there are no fatal flaw environmental impacts based on research conducted.
  - There are distinct advantages and disadvantages for each of the alternatives, and the tradeoffs between each will need to be carefully weighed to arrive at the preferred alternative for implementation.

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## Appendices

Appendix A:	Environmental Conditions
Appendix B:	Conceptual Cost Estimates
Appendix C:	Proposed Plat in Southeast Quadrant
Appendix D:	Railroad Crossing Procedures

## APPENDIX A

### Environmental Conditions

A high-level desktop review of the project area was conducted to evaluate known and potential environmental constraints that may impact the proposed project. This evaluation is based on a review of various electronic and Geographic Information System (GIS) resources (listed in the individual sections below), as well as aerial photographs and street maps. Potential environmental constraints and issues are discussed below.

#### Wetlands and Waterbodies

The project area was evaluated for the presence of surface waters and jurisdictional wetlands by reviewing the National Wetlands Inventory (NWI) Wetlands Mapper online tool, South Florida Water Management District (SFWMD) land cover data, Miami-Dade County's Department of Regulatory and Economic Resources GIS data, and an examination of Google Earth aerial and street view imagery. Based on a review of these resources, there are no wetlands or other surface waters within or immediately adjacent to the project area. The closest water body is Common Nighthawk Lake, located approximately 180 feet west of the SW 127<sup>th</sup> Avenue project corridor. **Figure 1** shows the location of wetlands and surface waters in the project vicinity. No impacts to wetlands or other surface waters are anticipated from the proposed project.

#### Endangered or Threatened Species, Wildlife, and Critical Habitats

Under the Endangered Species Act (ESA), species may be listed as either endangered or threatened. "Endangered" is designated for a species that is in danger of extinction throughout all or a significant portion of its range. "Threatened" is designated for a species that is likely to become endangered within the foreseeable future. All species of plants and animals, except pest insects, are eligible for listing as endangered or threatened. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments.

Atkins evaluated the potential presence of listed species by performing an online records review of the U.S Fish and Wildlife Service's (USFWS) Environmental Conservation Online System, the Florida Natural Areas Inventory's (FNAI) Biodiversity Matrix Map Service, the Efficient Transportation Decision Making (ETDM) Environmental Screening Tool (EST), and the Florida Fish and Wildlife Conservation Commission (FWC) Geographic Information System (GIS) records, including the Bald Eagle Nest Database.

Based on the evaluation, the project is within the USFWS's Consultation Areas for the American crocodile (*Crocodylus acutus*), Everglade snail kite (*Rostrhamus sociabilis plumbeus*), Florida bonneted bat (*Eumops floridanus*), and Miami-Dade Keys plants. The project is also within the Florida bonneted bat Focal Area and the Core Foraging Area (CFA) for at least one wood stork (*Mycteria americana*) colony.

There are no wetlands or other surface waters within or immediately adjacent to the project area; thus, the project area does not contain suitable nesting or foraging habitat for the American crocodile, Everglade snail kite, or wood stork and no impacts to these species are anticipated from the proposed project. There may be suitable wood stork foraging habitat along the littoral shelf of Common Nighthawk Lake, located approximately 180 feet west of the project corridor.

The proposed project should avoid impacts to this lake, as impacts to wood stork foraging habitat may require mitigation.

The Florida bonneted bat (FBB) is a state- and federally-listed endangered species. The project is located within the USFWS's FBB Consultation Area and FBB Focal Area (**Figure 2**). Florida bonneted bats are known to nest in tree cavities, buildings, and occasionally palm tree foliage. A FBB survey will likely be required for this project. Any trees requiring trimming or removal should be inspected for cavities which may contain bat roosts. Coordination with the USFWS will be required for the proposed project.

The project area is located within the USFWS's Miami-Dade Keys plants Consultation Area. A field survey will be required to determine whether any listed plant species occur within or adjacent to the project area. The project area contains a vegetated area located in the vicinity of the CSX Railroad crossing. In addition, a vegetated area is located adjacent to the east side of the project corridor south of SW 136<sup>th</sup> Street.

No USFWS designated critical habitat for any protected species was identified within the project corridor. However, designated critical habitat for two plants (Florida Brickell-bush, *Brickellia mosieri*, and Carter's small-flowered flax, *Linum carteri* var. *carteri*) and the Bartram's scrub-hairstreak butterfly (*Strymon acis bartrami*) is located east of the project area within the Tamiami Pineland Complex Addition. **Figure 2** shows the location of the designated critical habitats relative to the proposed project corridor. The following section below provides additional information on the Tamiami Pineland Complex Addition property.

### Protected Lands

The project area was evaluated for the presence of protected lands, including conservation areas, sensitive habitats, and Natural Forest Communities (NFC). The evaluation was conducted using the Florida Natural Areas Inventory (FNAI), the Florida Department of Environmental Protection's (FDEP) Map Direct, and Miami-Dade County's GIS mapping tool.

Based on the evaluation, protected lands were not identified within or adjacent to the project area. However, it should be noted that Tamiami Pineland Complex Addition (TPCA), a Miami-Dade County Natural Forested Community (NFC), is located approximately 1,000 feet east of the project corridor on the north side of SW 136<sup>th</sup> St. The TCPA property is public land containing pine rockland community that is managed by Miami-Dade County Environmentally Endangered Lands (EEL) Program. **Figure 3** shows the location of the TPCA. As mentioned above, the TCPA contains designated critical habitat for three listed species. Impacts to the TCPA property are not anticipated from the proposed project.

### Section 106 of the National Historic Preservation Act

The project area was evaluated for the presence of historic properties and archaeological sites by reviewing the Efficient Transportation Decision Making (ETDM) Environmental Screening Tool (EST). The review identified the CSX Railroad Historic Linear Resource (DA10753) which crosses the project area north of SW 144<sup>th</sup> Street. **Figure 4** shows the location of the CSX Railroad. The State Historic Preservation Officer (SHPO) has determined that the CSX Railroad is eligible for listing on the National Register of Historic Places (NRHP). No previously-documented archaeological sites were identified. According to the ETDM EST, the most recent cultural resource survey that encompassed the project area occurred in 1989 (i.e., *Dade County Historic Survey Phase II: Final Report*, Survey #2127, conducted by Metropolitan Dade County). A

Cultural Resources Assessment Survey and coordination with the SHPO will be required for the proposed project.

### Section 4(f) of the Department of Transportation Act

The project area was evaluated for the presence of potential Section 4(f) resources by reviewing the ETDM EST and FDEP's Map Direct. Based on the evaluation, there are no documented public parks, recreational areas, wildlife/waterfowl refuges, or archeological sites located within or immediately adjacent to the proposed project limits. As mentioned above, one NRHP-eligible historic linear resource (i.e., CSX Railroad – DA10753) crosses the project area north of SW 144<sup>th</sup> Street. Section 4(f) analysis and documentation will be required for the proposed project.

### Contamination

The project area was evaluated for the presence of potential contamination concerns by reviewing the ETDM EST, FDEP's Map Direct, and FDEP's Contamination Locator Map. The Florida Power and Light (FPL) Davis Substation (FLR000109132), located at 12701 SW 136<sup>th</sup> Street, was identified on the Compliance & Enforcement Tracking - Hazardous Waste Facilities database as a conditionally-exempt small quantity generator. **Figure 5** shows the location of the FPL Davis Substation. There is no indication of any contamination associated with this facility. No other potential sources of contamination were identified within the project vicinity and no contamination impacts are currently anticipated in association with the proposed project.

### Noise

The proposed project has the potential for long-term noise impacts since the project includes the addition of new travel lanes. Noise-sensitive land uses potentially impacted by the project consist of single-family residences adjacent on the east and west of the project corridor. A noise assessment will be required for this project.

### Local Traffic Patterns

The proposed alternatives may completely or partially the connection between SW 144<sup>th</sup> Street and SW 127<sup>th</sup> Avenue. These changes could affect the existing local traffic patterns for those residential communities located south of the CSX Railroad.

### Potential Controversy

The proposed project corridor is surrounded by residential communities and includes the addition of new travel lanes and changes to the existing traffic patterns at the intersection of SW 127<sup>th</sup> Avenue and SW 144<sup>th</sup> Street. The possibility exists that the proposed project may have noise impacts to the surrounding residents. Furthermore, the proposed MSE walls and bridge associated with Alternatives 2 and 3 may result in visual impacts for the residents. Thus, the proposed project has the potential for public controversy. Thorough public outreach and involvement activities are strongly suggested for the proposed project.





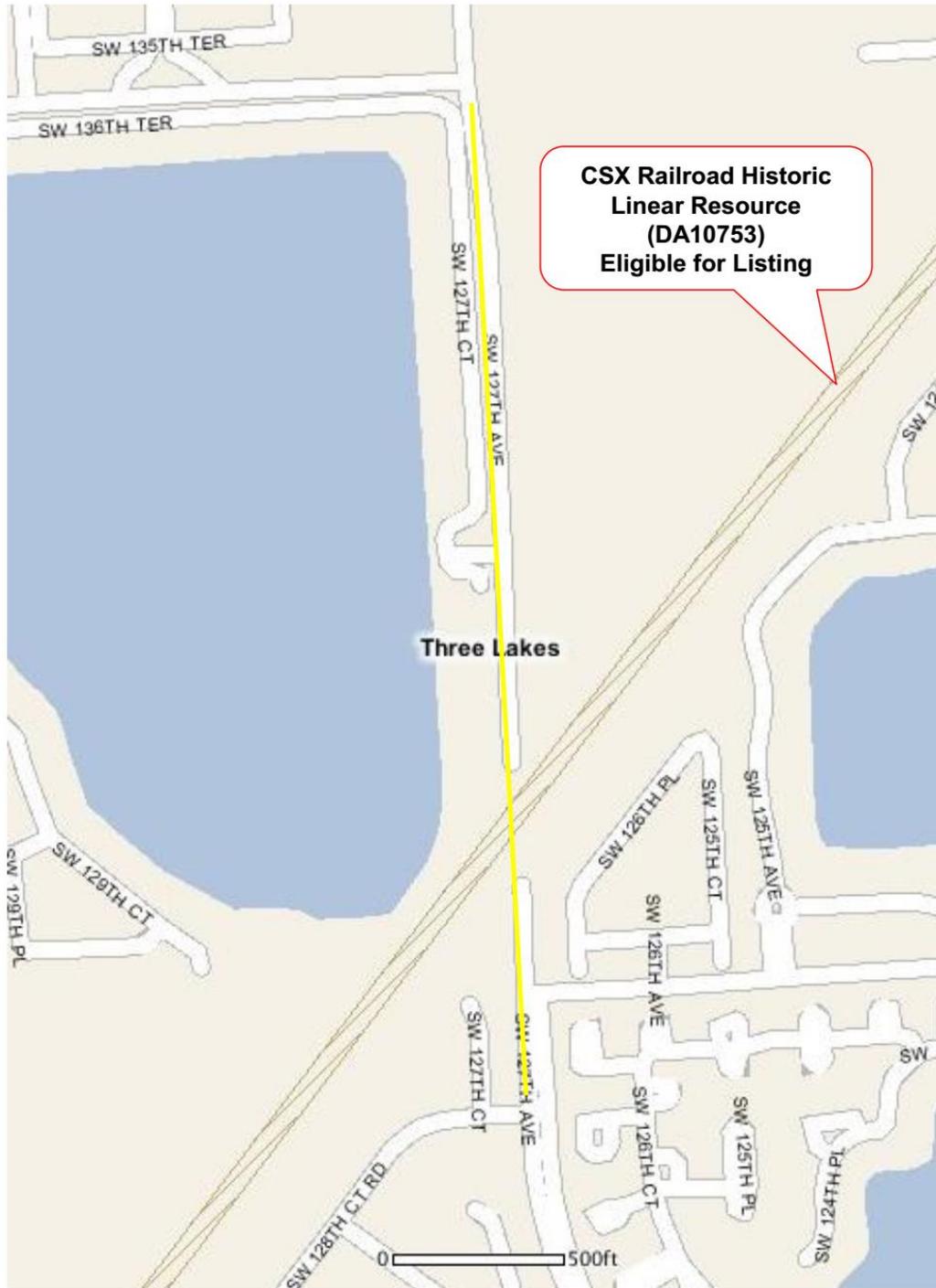
SW 127<sup>th</sup> Avenue Overpass Study  
 Proposed Project Corridor

DATE:  
6/23/17

**ATKINS**  
 2001 NW 107TH AVENUE  
 MIAMI, FLORIDA 33172

Figure 2  
 Florida Bonnetted Bat Focal Area  
 and USFWS Critical Habitat





**SW 127<sup>th</sup> Avenue Connector Study**  
 Proposed Project Corridor

DATE:  
6/23/17

**ATKINS**  
 2001 NW 107TH AVENUE  
 MIAMI, FLORIDA 33172

**Figure 4**  
**Historic Resources**



## APPENDIX B

### Conceptual Cost Estimates

A high-level desktop review of the project area was conducted to evaluate known and potential environmental constraints that may impact the proposed project. This evaluation is based on a review of various electronic and Geographic Information System (GIS) resources (listed in the individual sections below) as well as aerial photographs and street maps. Potential environmental constraints and issues are discussed below.

#### Alternative 1: At-Grade Roadway

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>** ARTERIAL ROADS **</b>				
4 LANE DIVIDED (CLOSED DRAINAGE - 16' MED.)	0.043	MI	\$4,175,944	\$179,566
4 LANE DIVIDED (CLOSED DRAINAGE - 4' MED.)	0.330	MI	\$3,996,855	\$1,318,962
MEDIAN CROSSING AT INTERSECTION (16' EXTRA PAVEMENT)	0.025	MI	\$128,285	\$3,207
ADDITIONAL TURN LANE (12' EXTRA PAVEMENT)	0.020	MI	\$345,662	\$6,913
4 LANE TRANSITION TO 2 LANES	0.121	MI	\$3,280,690	\$396,964
2 LANE UNDIVIDED (CLOSED DRAINAGE)	0.056	MI	\$2,564,525	\$143,613
MITCHEL DR. RECONSTRUCTION	0.019	MI	\$2,734,668	\$51,959
<b>** DEMOLITION **</b>				
DEMOLISH 2 LANE CLOSED DRAINAGE	0.375	MI	\$336,650	\$126,244
DEMOLISH 3 LANE CLOSED DRAINAGE	0.019	MI	\$452,250	\$8,593
DEMOLISH 4 LANE CLOSED DRAINAGE DIVIDED	0.063	MI	\$623,310	\$39,269
<b>** INTERSECTION SIGNALIZATION **</b>				
2 LANE ARTERIAL x 4 LANE DIVIDED ARTERIAL (W/TURN LANES)	1	EA	\$139,010	\$139,010
<b>** ADDITIONAL ITEMS **</b>				
OVERHEAD LIGHTING (INCLUDES WIRING) (1 SIDE, 200' SPACING)	0.117	MI	\$276,796	\$32,247
OVERHEAD LIGHTING (INCLUDES WIRING) (2 SIDES, 200' SPACING)	0.434	MI	\$553,592	\$239,982
TWO POST SIGNS	3	EA	\$5,000	\$15,000
RETENTION POND CONSTRUCTION (15% of Total Acreage)	0.7	AC	\$290,778	\$203,544
RAILROAD TRACK CROSSING (STARTRACK PANELS)	110	LF	\$1,400	\$154,000
RAILROAD CROSSING GATES & SIGNALS	2	EA	\$75,000	\$150,000
TRAFFIC SIGNAL AT SW 127th AVE./SW 144TH ST. INTERSECTION				\$150,000
LANDSCAPING AND RELOCATION OF SUBSURFACE UTILITIES				Not Included
SUB-TOTAL				\$3,359,072
EROSION CONTROL / TEMPORARY DRAINAGE (0.5%)				\$16,795
SUB-TOTAL				\$3,375,867
MAINTENANCE OF TRAFFIC (2%)				\$67,517
RAILROAD FLAGGING & INSURANCE ALLOWANCE				\$250,000
SUB-TOTAL				\$3,693,385
MOBILIZATION (10%)				\$369,338
SUB-TOTAL				\$4,062,723
CONTINGENCY (20%)				\$812,545
<b>TOTAL (2017 CONSTRUCTION COST)</b>				<b>\$4,875,267.72</b>
ENGINEERING / ADMINISTRATION / LEGAL				NOT INCLUDED
RIGHT - OF - WAY				NOT INCLUDED
ENVIRONMENTAL MITIGATION				NOT INCLUDED
<b>GRAND TOTAL CONSTRUCTION COST (2017 DOLLARS - ROUNDED)</b>				<b>\$4,880,000</b>

## Alternative 2: Overpass with 5% Grades

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>** ARTERIAL ROADS **</b>				
4 LANE DIVIDED (CLOSED DRAINAGE - 16' MED.)	0.032	MI	\$4,175,944	\$133,630
4 LANE DIVIDED (CLOSED DRAINAGE - 4' MED.)	0.250	MI	\$3,996,855	\$999,214
4 LANE 16' MED. TRANSITION TO 4 LANE 4' MED.	0.061	MI	\$4,086,400	\$249,270
4 LANE TRANSITION TO 2 LANES	0.121	MI	\$3,280,690	\$396,964
2 LANE UNDIVIDED (CLOSED DRAINAGE)	0.056	MI	\$2,564,525	\$143,613
MITCHEL DR. RECONSTRUCTION	0.008	MI	\$2,734,668	\$21,877
TYPICAL 30' RAD. CUL-DE-SAC	1	EA	\$39,193	\$39,193
<b>** DEMOLITION **</b>				
DEMOLISH 2 LANE CLOSED DRAINAGE	0.375	MI	\$336,650	\$126,244
DEMOLISH 3 LANE CLOSED DRAINAGE	0.019	MI	\$452,250	\$8,593
DEMOLISH 4 LANE CLOSED DRAINAGE DIVIDED	0.063	MI	\$623,310	\$39,269
<b>** BRIDGES **</b>				
<i>NW 157th Ave. over Railroad</i>				
CONCRETE BRIDGE (156.93' x 65')	10,200	SF	\$150	\$1,530,000
EXTRA EMBANKMENT FOR APPROACH	46,270	CY	\$20	\$925,400
APPROACH SLABS	2	EA	\$39,000	\$78,000
RETAINED EARTH WALL (SW) (705' x (3' to 33'))	12,690	SF	\$32	\$406,080
RETAINED EARTH WALL (SE) (738' x (3' to 33'))	13,284	SF	\$32	\$425,088
RETAINED EARTH WALL (UNDER BRIDGE S) (110' x 25')	2,750	SF	\$32	\$88,000
RETAINED EARTH WALL (UNDER BRIDGE N) (110' x 25')	2,750	SF	\$32	\$88,000
RETAINED EARTH WALL (NW) (779' x (33' to 4'))	14,412	SF	\$32	\$461,184
RETAINED EARTH WALL (NE) (695' x (33' to 4'))	12,858	SF	\$32	\$411,456
BARRIER WALL ON TOP OF REWALL	2,917	LF	\$160	\$466,720
ATTENUATORS	2	EA	\$20,000	\$40,000
TYPE R FENCE	314	LF	\$30	\$9,420
<b>** ADDITIONAL ITEMS **</b>				
OVERHEAD LIGHTING (INCLUDES WIRING) (1 SIDE, 200' SPACING)	0.117	MI	\$276,796	\$32,247
OVERHEAD LIGHTING (INCLUDES WIRING) (2 SIDES, 200' SPACING)	0.434	MI	\$553,592	\$239,982
OVERHEAD TRUSS SIGNS	0	EA	\$250,000	\$0
OVERHEAD CANTILEVER SIGNS	0	EA	\$50,000	\$0
BRIDGE MOUNTED SIGNS	0	EA	\$10,000	\$0
TWO POST SIGNS	0	EA	\$5,000	\$0
RETENTION POND CONSTRUCTION (15% of Total Acreage)	0.7	AC	\$290,778	\$203,544
ALLOWANCE FOR RELOCATION OF OVERHEAD POWER LINES				\$2,500,000
LANDSCAPING AND RELOCATION OF SUBSURFACE UTILITIES				Not Included
SUB-TOTAL				\$10,062,988
EROSION CONTROL / TEMPORARY DRAINAGE (0.5%)				\$50,315
SUB-TOTAL				\$10,113,303
MAINTENANCE OF TRAFFIC (2%)				\$202,266
RAILROAD FLAGGING & INSURANCE ALLOWANCE				\$500,000
SUB-TOTAL				\$10,815,569
MOBILIZATION (10%)				\$1,081,557
SUB-TOTAL				\$11,897,125
CONTINGENCY (20%)				\$2,379,425
<b>TOTAL (2017 CONSTRUCTION COST)</b>				<b>\$14,276,550.56</b>
ENGINEERING / ADMINISTRATION / LEGAL				NOT INCLUDED
RIGHT - OF - WAY				NOT INCLUDED
ENVIRONMENTAL MITIGATION				NOT INCLUDED
<b>GRAND TOTAL CONSTRUCTION COST (2017 DOLLARS - ROUNDED)</b>				<b>\$14,280,000</b>

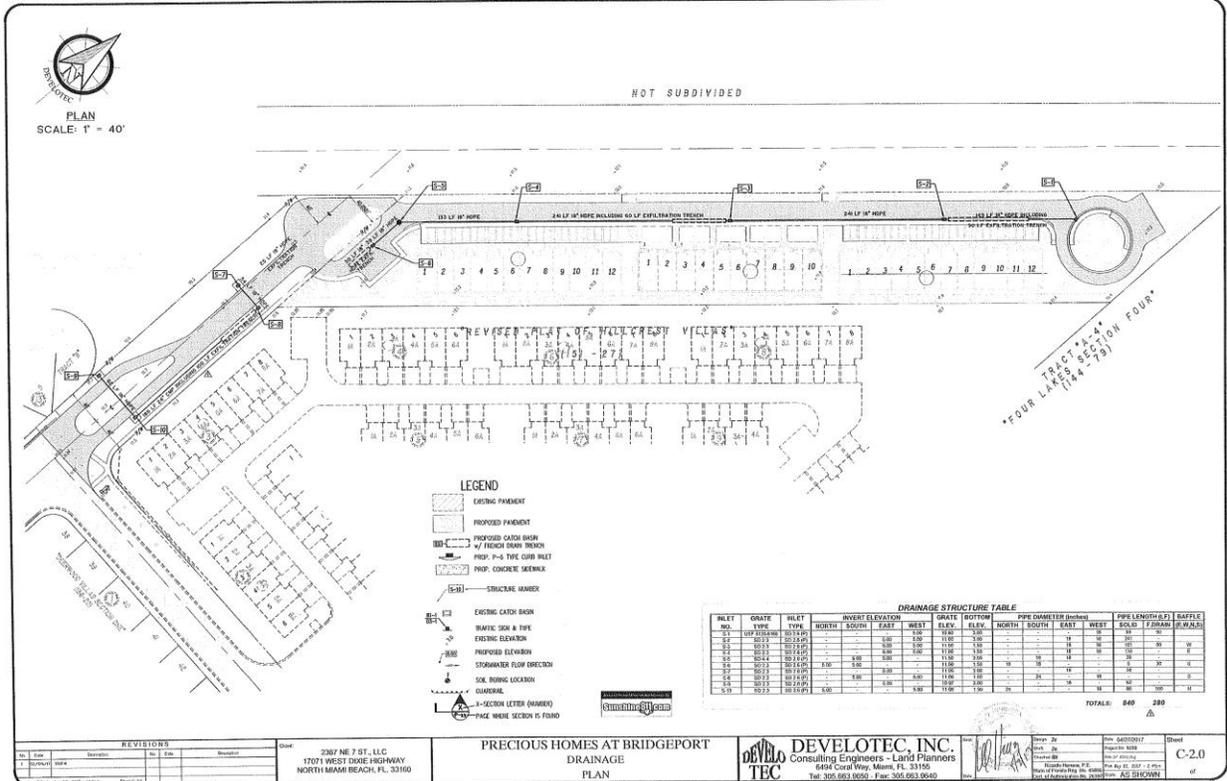


### Alternative 3: Overpass with 5% and 9% Grades

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>** ARTERIAL ROADS **</b>				
4 LANE DIVIDED (CLOSED DRAINAGE - 16' MED.)	0.040	MI	\$4,134,115	\$165,365
4 LANE DIVIDED (CLOSED DRAINAGE - 4' MED.)	0.250	MI	\$3,954,004	\$988,501
4 LANE 16' MED. TRANSITION TO 4 LANE 4' MED.	0.053	MI	\$4,044,060	\$214,335
4 LANE TRANSITION TO 2 LANES	0.121	MI	\$3,259,265	\$394,371
2 LANE UNDIVIDED (CLOSED DRAINAGE)	0.056	MI	\$2,564,525	\$143,613
MITCHEL DR. RECONSTRUCTION	0.019	MI	\$2,734,668	\$51,959
<b>** DEMOLITION **</b>				
DEMOLISH 2 LANE CLOSED DRAINAGE	0.375	MI	\$336,650	\$126,244
DEMOLISH 3 LANE CLOSED DRAINAGE	0.019	MI	\$452,250	\$8,593
DEMOLISH 4 LANE CLOSED DRAINAGE DIVIDED	0.063	MI	\$623,310	\$39,269
<b>** BRIDGES **</b>				
<i>NW 157th Ave. over Railroad</i>				
CONCRETE BRIDGE (156.93' x 63')	9.887	SF	\$150	\$1,483,050
EXTRA EMBANKMENT FOR APPROACH	34.881	CY	\$20	\$697,620
APPROACH SLABS	2	EA	\$37,800	\$75,600
RETAINED EARTH WALL (SW) (705' x (3' to 33'))	12.690	SF	\$32	\$406,080
RETAINED EARTH WALL (SE) (412' x (9' to 33'))	8.652	SF	\$32	\$276,864
RETAINED EARTH WALL (UNDER BRIDGE S) (109' x 25')	2.725	SF	\$32	\$87,200
RETAINED EARTH WALL (UNDER BRIDGE N) (109' x 25')	2.725	SF	\$32	\$87,200
RETAINED EARTH WALL (NW) (779' x (33' to 4'))	14.412	SF	\$32	\$461,184
RETAINED EARTH WALL (NE) (695' x (33' to 4'))	12.858	SF	\$32	\$411,456
BARRIER WALL ON TOP OF REWALL	2.591	LF	\$160	\$414,560
ATTENUATORS	2	EA	\$20,000	\$40,000
TYPE R FENCE	157	LF	\$30	\$4,710
<b>** ADDITIONAL ITEMS **</b>				
OVERHEAD LIGHTING (INCLUDES WIRING) (1 SIDE, 200' SPACING)	0.117	MI	\$276,796	\$32,247
OVERHEAD LIGHTING (INCLUDES WIRING) (2 SIDES, 200' SPACING)	0.434	MI	\$553,592	\$239,982
TWO POST SIGNS	2	EA	\$5,000	\$10,000
RETENTION POND CONSTRUCTION (15% of Total Acreage)	0.7	AC	\$290,778	\$203,544
ALLOWANCE FOR RELOCATION OF OVERHEAD POWER LINES				\$2,500,000
LANDSCAPING AND RELOCATION OF SUBSURFACE UTILITIES				Not Included
SUB-TOTAL				\$9,563,546
EROSION CONTROL / TEMPORARY DRAINAGE (0.5%)				\$47,818
SUB-TOTAL				\$9,611,364
MAINTENANCE OF TRAFFIC (2%)				\$192,227
RAILROAD FLAGGING & INSURANCE ALLOWANCE				\$500,000
SUB-TOTAL				\$10,303,591
MOBILIZATION (10%)				\$1,030,359
SUB-TOTAL				\$11,333,950
CONTINGENCY (20%)				\$2,266,790
<b>TOTAL (2017 CONSTRUCTION COST)</b>				<b>\$13,600,740.21</b>
ENGINEERING / ADMINISTRATION / LEGAL				NOT INCLUDED
RIGHT - OF - WAY				NOT INCLUDED
ENVIRONMENTAL MITIGATION				NOT INCLUDED
<b>GRAND TOTAL CONSTRUCTION COST (2017 DOLLARS - ROUNDED)</b>				<b>\$13,600,000</b>

**APPENDIX C**

**Proposed Plat in Southeast Quadrant**



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## APPENDIX D

### Railroad Crossing Procedures

Information from the Florida DOT Central Office Rail Crossing Opening/Closure Program is provided in this appendix.

#### **Schnettler, Jack S**

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**From:** Regalado, Laura <Laura.Regalado@dot.state.fl.us>  
**Sent:** Monday, August 28, 2017 2:24 PM  
**To:** Hurtado, Javier; Schnettler, Jack S; Quero, Ana; Richardson, Dionne G.  
**Subject:** FW: Rail Crossing Opening Process  
**Attachments:** Program Outline (4).doc; Flow Chart.pdf; Current Application.doc; 14-57.012 FAC Public Railroad-Highway Grade Crossings - Opening and Closure.docx; FS 335.141 Regulation of Public Railroad-Highway Grade Crossings.pdf

All,

Below are the steps in the process the Department of Transportation uses (as well as the authority granting the Department oversight in the process) in opening or closing a highway-rail grade crossing.

Please contact me directly with any specific questions regarding openings and closures.

Thank you.

#### **AUTHORITY:**

Chapter 335.141, Florida Statutes, allows the Department to govern the regulation of public railroad-highway grade crossings:

##### **Florida Statute**

##### **335.141 Regulation of public railroad-highway grade crossings; reduction of hazards.--**

(1)(a) The department shall have regulatory authority over all public railroad-highway grade crossings in the state, including the authority to issue permits which shall be required prior to the opening and closing of such crossings.

##### **Florida Administrative Code governing the opening and closing process.**

**Rule 14-57.012, Florida Administrative Code, states: In considering an application to open a public railroad-highway grade crossing, the following criteria will apply:**

1. Safety.
2. Necessity for rail and vehicle traffic.
3. Alternate routes.
4. Effect on rail operations and expenses
5. Closure of one or more public railroad-grade crossings to offset opening a new crossing.
6. Design of the grade crossing and road approaches.
7. Presence of multiple tracks and their effect upon railroad and highway operations.

#### **PROCESS:**

The work process flow chart and outline attached, pertaining to the opening and closing of public highway-rail grade crossings, will provide you an overview of the steps that may occur in the application process.

A crossing application and questionnaire have been attached for your review.

When you submit the application, please submit a response to the attached information request. Please include plans, support documentation, etc.

**The application for opening a new crossing, that originates from an individual, developer, or private company, must have as co-applicant the governmental entity that will be responsible for the maintenance of the road (i.e., the City, County or State).**

*Laura Regalado*

Rail Crossing Opening/Closure Program

Florida Department of Transportation  
Office of Freight, Logistics, and Passenger Operations  
605 Suwannee Street, MS-25  
Tallahassee, Florida 32399-0450

Phone: (850) 414-4528

Fax: (850) 414-4508

E-Mail: [Laura.Regalado@dot.state.fl.us](mailto:Laura.Regalado@dot.state.fl.us)



## Opening/Closing - Public Highway-Rail Grade Crossing Program

- FDOT receives application to open or close crossing
  - Opening applicant can be railroad; govt. entity having jurisdiction over street highway; agent (attorney, consultant, developer, etc.) acting as co-applicant with jurisdictional entity.
  - Closing applicant can be railroad; govt. entity; FDOT; individual citizen; no governmental groups (i.e., neighborhood associations, concerned citizens group etc.)
  
- FDOT reviews application to ensure that all necessary information is provided and the crossing is a public, at-grade crossing.
  
- FDOT acknowledges receipt of the application to all relevant parties.
  
- FDOT seeks response to application by affected parties (example: if city/county submit opening, FDOT will ask railroad to state their position).
  
- FDOT does preliminary evaluation. Applicant is informed that the criteria established in Rule 14-57.012, FAC, must be addressed.
  
- FDOT conducts fact-finding. Public input is sought. Depending on circumstances, FDOT may facilitate negotiation to resolve differences.
  
- If opening/closing meets FAC criteria and is agreeable to all parties, FDOT will draft Stipulation of Parties (i.e., agreement outlining each party's responsibilities). Execution of Stipulation of Parties (SOP) serves as Final Order and permit to open or close crossing. Following execution of SOP, Crossing Inventory Form is submitted to Federal Railroad Administration and is entered into FDOT Railroad Highway Crossing Inventory.
  
- If affected party(ies) or FDOT opposes Stipulation, FDOT will issue a Notice of Intent (NOI) to permit or deny the opening or closing of the subject crossing. The NOI is submitted to all parties with Notice of Administrative Hearing Rights.
  
- Parties with standing have 21 days, following receipt of the NOI, to request an administrative hearing.
  
- Acceptance of the NOI by all parties or failure to file a request for a hearing in accordance with Chapter 120.57, F.S., by the petitioning party will result in execution and distribution of the Final Order.
  
- If a party of standing requests an administrative hearing within the required 21 days receipt of the NOI, FDOT will refer the petition to the Division of Administration for scheduling.
  
- An administrative hearing will be conducted. A Recommended Order will be issued by the Administrative Law Judge.
  
- Exceptions may be filed within 15 days receipt of the Recommended Order.
  
- The Final Order is executed by the FDOT Secretary. This Final Order may overrule the Administrative Law Judge's Recommended Order.
  
- An appeal may be filed by the petitioning party in the District Court of Appeal within 30 days.



adopt reasonable rules to carry out the provisions of this subsection. Such rules shall, at a minimum, provide for public input prior to the issuance of any such order.

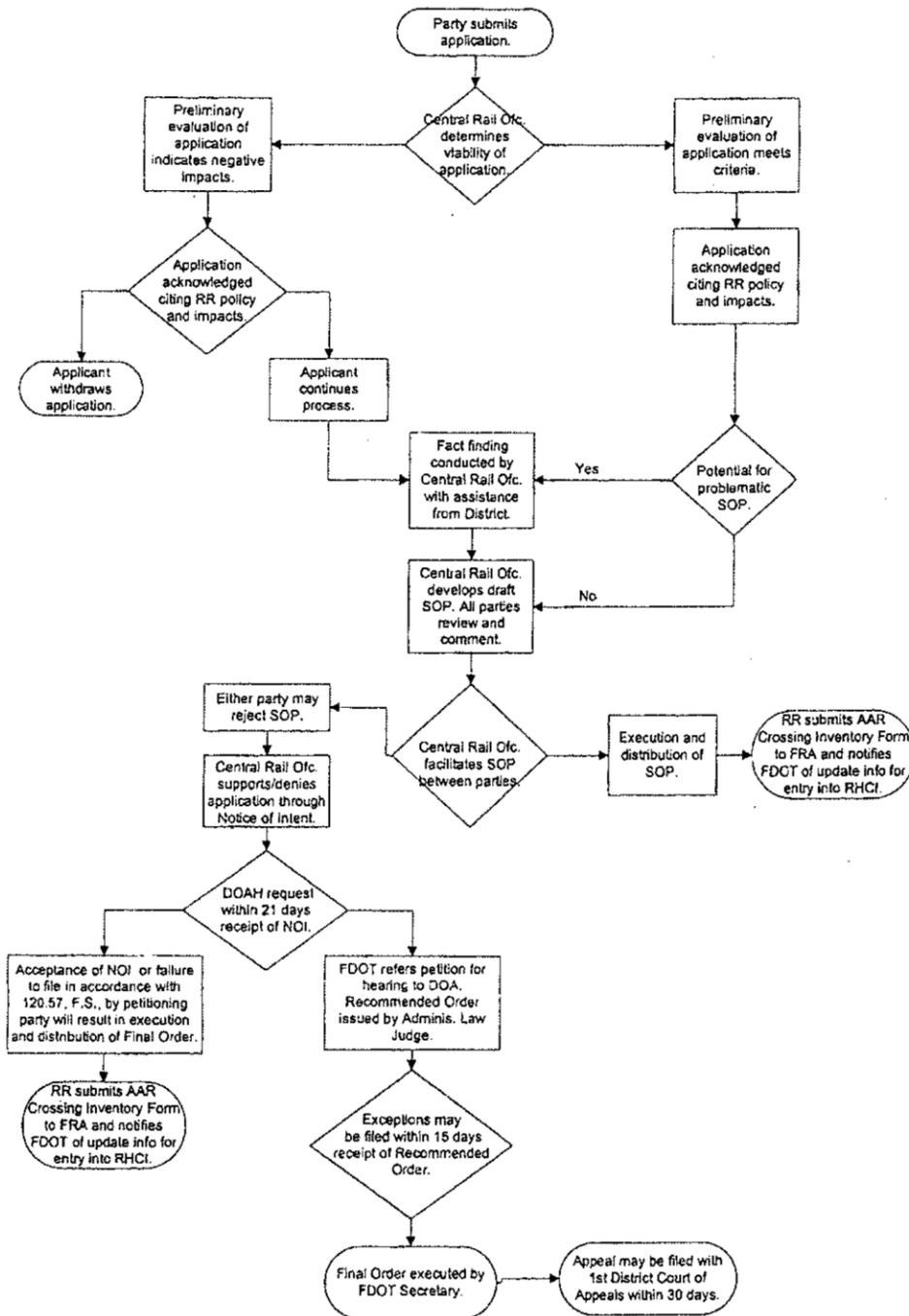
(4) Jurisdiction to enforce such orders shall be as provided in s. 316.640, and any penalty for violation thereof shall be imposed upon the railroad company guilty of such violation. Nothing herein shall prevent a local governmental entity from enacting ordinances relating to the blocking of streets by railroad engines and cars.

(5) Any local governmental entity or other public or private agency planning a public event, such as a parade or race, that involves the crossing of a railroad track shall notify the railroad as far in advance of the event as possible and in no case less than 72 hours in advance of the event so that the coordination of the crossing may be arranged by the agency and railroad to assure the safety of the railroad trains and the participants in the event.

History.—s. 131, ch. 29965, 1955; s. 1, ch. 63-88; ss. 23, 35, ch. 69-106; s. 1, ch. 72-165; s. 49, ch. 76-31; s. 56, ch. 78-95; s. 2, ch. 82-90; s. 51, ch. 84-309; s. 27, ch. 86-243; s. 1, ch. 88-88; s. 34, ch. 91-221.

Note.—Former s. 338.21.

**FDOT Opening and Closing Program  
for Public Highway Railroad Grade Crossings**



AAR - Association of American Railroads. FDOT - Florida Department of Transportation.  
 Central Rail Ofc. - Central Rail Office, Florida Department of Transportation, responsible for the Public Highway Railroad Grade Crossing Opening and Closing Program.  
 DOAH - Department of Administrative Hearings may be requested by party to overturn NOI.  
 FRA - Federal Railroad Administration.  
 First District Court of Appeals - The Court to which a party appeals to overturn Final Order by FDOT Secretary.

NOI - Notice of Intent is a document issued by FDOT Central Rail Ofc. presenting all basic findings of fact, final conditions required, and the Department's decision to issue or deny Applicant's request.  
 RHC - Rail-Highway Crossing Inventory, a compilation of data on railroad-highway grade crossings in Florida.  
 RR - Railroad company.  
 SOP - Stipulation of Parties is a legal agreement between concerned parties authorizing the opening or closing of a public highway railroad grade crossing.



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
**RAILROAD GRADE CROSSING APPLICATION**

ROAD NAME OR NUMBER	COUNTY/CITY NAME

**A. IDENTIFICATION**

Submitted By:

Application For:

Applicant: \_\_\_\_\_

**Closing** a public highway-rail grade crossing  
by:

Office: \_\_\_\_\_

roadway removal

Telephone: \_\_\_\_\_

**Opening** a public highway-rail grade crossing  
by:

Address: \_\_\_\_\_

new rail line construction

new roadway construction

conversion of private to public highway-rail  
grade crossing

**B. CROSSING LOCATION**

FDOT/AAR Crossing Number: \_\_\_\_\_

Jurisdiction for Street or Roadway by Authority of:  City  County  State

Local Popular Name of Street or Roadway: \_\_\_\_\_

Railroad Company: \_\_\_\_\_

Railroad Mile Post: \_\_\_\_\_

Submitted for the Applicant by: \_\_\_\_\_ DATE: \_\_\_\_\_  
Name and Title

Application FDOT Review by: \_\_\_\_\_ DATE: \_\_\_\_\_  
Central Rail Office

**REFERENCES:**

(Specific Legal Authority) 334.044 F.S., 120.57 F.S.

(Law Implemented) 335.141 F.S.

(Administrative Rule) 14-57.012 F.A.C.

**CLOSING APPLICATION QUESTIONNAIRE**

**Maps, aerials, and supporting documentation must be provided with the application.**

If all parties, Applicant, Railroad, and Department, fail to agree to the rail crossing closure through a Stipulation of Parties, the Applicant must establish the closure meets the criteria found in Rule 14-57.012, Florida Administrative Code. This questionnaire will assist the Department in evaluating the criteria and is not intended to be an exclusive list of factors. If the information is not available or unknown, please mark N/A.

**Florida Administrative Code criteria:**

**A) Safety**

- a-1. How will the crossing closure affect safety to drivers, pedestrians, cyclists, and rail personnel?
- a-2. What, if any, safety measures are proposed for adjacent crossings?
- a-3. Identify all highway traffic control devices and highway traffic signals at adjacent crossings that may be improved or upgraded if the subject crossing is closed.
- a-4. What is the distance from the subject crossing to the nearest intersection? Identify the street.
- a-5. Are there structures, fences, or vegetation near the subject crossing that inhibits sight distance?
- a-6. Identify major traffic generators (i.e., businesses, shopping malls, recreational areas, special events, etc.) in this area. Specify type, location, and distance to subject crossing.
- a-7. Is the crossing located on a designated evacuation route?
- a-8. Provide a traffic operations and safety analysis, with traffic issues evaluated for the railroad crossing closure. This analysis should include all adjacent rail crossings and roadways in the immediate vicinity and the increase in traffic predicted on these roadways from rerouting.

**B) Necessity for rail and vehicle traffic**

- b-1. Is the crossing necessary to access property?
- b-2. Provide description of land use on each side of the rail crossing.
- b-3. Are there any churches, schools, or hospitals within a mile or less of the subject crossing? Please list by name and location.
- b-4. Annual Average Daily Traffic (AADT) at the crossing?
- b-5. Level of service at the crossing?
- b-6. Percentage of truck traffic?
- b-7. Do trucks carrying hazardous materials use the crossing? If so, approximately how many trips per day or week?
- b-8. How many school buses use the crossing daily?
- b-9. What is the estimated number of pedestrians and bike riders that use the subject crossing (daily/weekly)?
- b-10. Is the subject crossing on a local transit route?
- b-11. Please provide any corridor studies or other preliminary traffic engineering studies that pertain to this crossing.

**C) Alternate Routes**

- c-1. Are there access roads available to property owners if the crossing is closed?
- c-2. Name routes that can be used if the crossing is closed?
- c-3. Are there traffic signals on these routes?
- c-4. How does the proposed crossing closure impact the AADT at nearby public crossings? Provide estimated traffic count changes.
- c-5. By driving alternate routes, during peak times, calculate the additional travel time and distance between two points (nearest intersection or major access) on either side of the subject crossing. Provide calculated times, routes, and distances.

**D) Effect on rail operations and expenses**

- d-1. Provide current number and type of rail tracks at the subject crossing.
- d-2. Are there rail sidings or switches in the location of the subject crossing?
- d-3. Is there a nearby rail yard? If so, what is the distance of the yard to the subject crossing.
- d-4. Provide the current number of daily train movements (number of switching or thru trains; number of passenger or freight trains).
- d-5. Provide the approximate times during the day and evening that the crossing is blocked.
- d-6. Provide the approximate length of time (i.e., minutes) that the crossing is blocked.



- d-7. Provide minimum and maximum train speeds at the subject crossing.
- d-8. What is the anticipated expansion of tracks and/or train movements?
- d-9. What is the distance from the subject crossing to adjacent public crossings? (Identify adjacent crossings by road name and crossing number.)
  
- E) Excessive restriction to emergency type vehicles resulting from closure**
  - e-1. Provide response from the Sheriff/Police Chief and Fire Chief to the proposed crossing closure.
  - e-2. Based on observation, the response from the City/County, or traffic studies, is this a route that emergency rescue would typically use?
  - e-3. How many emergency rescue vehicles have used the crossing to respond to calls in the past 2-3 years?
  
- F) Design of the grade crossing and road approaches**
  - f-1. Identify and describe the condition of: crossing surface, rail warning devices (including pavement markings, signs, and highway traffic signals), sidewalks, bike lanes, and approaches on each side of subject crossing.
  - f-2. Is the crossing surface and track higher than either side of the road (i.e., hump crossing)?
  - f-3. What is the vehicular design speed at the subject crossing?
  - f-4. Number of lanes at the crossing?
  - f-5. Width of crossing?
  - f-6. Condition of roadway?
  
- G) Presence of multiple tracks and their effect upon railroad and highway operations**
  - g-1. Please confirm the number of tracks at the location and identify each track.
  - g-2. How many train movements occur on each track and the types of trains that run on each track (passenger, thru freight, or switching freight and the number of cars)?

**OPENING APPLICATION QUESTIONNAIRE**

**Design plans, maps, aerials, and supporting documentation must be provided with the application.**

If all parties, Applicant, Railroad, and Department, fail to agree to the rail crossing opening through a Stipulation of Parties, the Applicant must establish the crossing meets the criteria found in Rule 14-57.012, Florida Administrative Code. This questionnaire will assist the Department in evaluating the criteria and is not intended to be an exclusive list of factors. If the information is not available or unknown, please mark N/A.

**Florida Administrative Code criteria:**

**A) Safety**

- a-1. How will the proposed crossing affect safety to drivers, pedestrians, cyclists, and rail personnel?
- a-2. Has grade separation been considered in planning the crossing? If not, why?
- a-3. What crossings will be submitted for closure to offset the safety impacts of a new crossing opening?
- a-4. What safety measures are designed for the proposed crossing?
- a-5. What is the distance from the proposed crossing to the nearest intersection? Identify the street.
- a-6. Are there plans for any structures to be built near the crossing intersection?
- a-7. Identify all major traffic generators (i.e., businesses, shopping malls, recreational areas, special events, etc.) in this area. Specify type, location, and distance to proposed crossing.
- a-8. Provide a traffic operations and safety analysis, with traffic issues evaluated for the railroad crossing, train traffic movements, and railroad preemption. This analysis should include all proposed developments in the immediate vicinity and the increase in traffic predicted from the developments.

**B) Necessity for rail and vehicle traffic**

- b-1. Why is the crossing necessary?
- b-2. Provide excerpts from the Comprehensive Plan or any other transportation plans relative to the proposed crossing.
- b-3. Provide description of land use on each side of the rail crossing.
- b-4. Provide predicted Annual Average Daily Traffic (AADT) at the crossing.
- b-5. Provide level of service at the crossing.
- b-6. Provide anticipated AADT and level of service in 5 years.
- b-7. Provide predicted percentage of truck traffic and anticipated truck traffic 5 years out.
- b-8. Will trucks carry hazardous materials? If so, approximately how many trips per day or week?
- b-9. Will school buses use the crossing? If so, how many school buses will use the crossing per day or week?
- b-10. Will emergency rescue vehicles use the crossing? If so, approximately how many trips per day or week?
- b-11. What is the predicted number of pedestrians and bike riders that will use the proposed crossing? What is the predicted number of users 5 years out?
- b-12. Please provide any corridor studies or other preliminary traffic engineering studies that pertain to this crossing.

**C) Alternate Routes**

- c-1. Are there access roads available to property owners if the crossing is not there?
- c-2. Name routes currently used or intended for use if the crossing is not approved?
- c-3. Are there traffic signals on these routes?
- c-4. How does the proposed crossing, if built, affect the AADT at nearby public crossings? Provide estimated traffic count changes, if any.

**D) Effect on rail operations and expenses**

- d-1. Provide current number and type of rail tracks.
- d-2. Are there rail sidings or switches in the location of the proposed crossing?
- d-3. Is there a nearby rail yard? If so, what is the distance of the yard to the proposed crossing.
- d-4. Provide the current number of daily train movements (number of switching or thru trains; number of passenger or freight trains).
- d-5. Provide the approximate times during the day and evening that the crossing will be blocked.
- d-6. Provide the approximate length of time (i.e., minutes) that the crossing is blocked.
- d-7. Provide minimum and maximum train speeds at the proposed crossing.
- d-8. What is the anticipated expansion of tracks and/or train movements?



- d-9. What is the distance from the proposed crossing to adjacent public crossings? (Identify adjacent crossings by road name and crossing number.)
- d-10. What are the estimated costs of the crossing installation and annual maintenance? Who will be responsible for the costs of installation and maintenance?
- E) Closure of one or more public crossings to offset opening a new crossing**
  - e-1. Provide the names and crossing numbers of any crossing closure candidates that may offset the opening of the proposed crossing?
- F) Design of the grade crossing and road approaches**
  - f-1. Submit design plans, inclusive of location of sidewalks, bike lanes, and traffic control devices, including pavement markings, signs, and highway traffic signals.
  - f-2. What future changes are proposed (ex: phase one is a 2-lane roadway, left turn lane to be added in phase two)?
  - f-3. What is the vehicular design speed at the proposed crossing?
  - f-4. How many thru or turn lanes? Divided or undivided?
- G) Presence of multiple tracks and their effect upon railroad and highway operations**
  - g-1. Please confirm the number of tracks at the location and identify each track.
  - g-2. How many train movements occur on each track and the types of trains that run on each track (passenger, thru freight or switching freight, and the number of cars)?