



# Project Development & Environment (PD&E) Study

## Project Environmental Impact Report

### Simpson Road Improvements

US 192 to 560 feet south of Myers Road

*Osceola County, Florida*

*Contract No. PS-18-9908-DG*

**Osceola County**

Department of Transportation and Transit

May 2020



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

This action has been determined to be a Project Environmental Impact Report which meets the definition contained in 40 CFR 1508.4, and, based on past experience with similar actions and this analysis, does not involve significant environmental impacts.



# Project Environmental Impact Report

Simpson Road PD&E Study



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HDR Engineering, Inc.

Consulting Project Manager/  
Engineer of Record:  
Howard Newman, PE

This project has been developed without regard to race, color, national origin, age, sex, religion, disability or family status (Title VI of the Civil Rights Act of 1964, as amended).





## Project Environmental Impact Report

### 1. General Information

#### a. Project Information:

Project Name: Simpson Road

Project Limits: From US 192 to 560' South of Myers Road

County: Osceola County

ETDM Number: 14403

Financial Project Identification Number: 445416-1

Osceola County Project Manager: Joshua DeVries, AICP

#### b. Project Summary:

The Simpson Road PD&E Study involves adding capacity to a 4.2 mile section of Simpson Road (County Road 530 – CR 530), including the existing two lane segments from US 192 to Fortune Road (1.3 miles) and from Hilliard Isle Road to 560 feet south of Myers Road (1.3 miles). The segment between Fortune Road and Hilliard Isle Road (1.5 miles) is an existing five lane section with a continuous left turn lane, limited sidewalks and no bike lanes. The study evaluated a consistent roadway configuration with improved capacity, operations and multimodal facilities. The proposed improvement will add lanes for a consistent typical section through the project limits, add to and improve the sidewalk network and add bike lanes through the corridor limits creating improved system linkage. (See Section 1.1)

The purpose of the project is to enhance mobility, improve regional connectivity and improve safety. The need for the project is to provide consistency with transportation plans, system linkage, increase capacity, address transportation demands, meet social, economic needs and safety concerns.



# Project Environmental Impact Report

## Simpson Road PD&E Study



### 2. Environmental Analysis

*Issues/Resources	*Substantial Impacts				**Supporting Information
	Yes	No	Enhance	NoInv	
<b>A. Social and Economic</b>					
1. Social	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.1.1
2. Economic	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Section 2.1.2
3. Land Use Changes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.1.3
4. Mobility	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Section 2.1.4
5. Aesthetic Effects	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.1.5
6. Relocation Potential	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.1.6
<b>B. Cultural</b>					
1. Historic Sites/Districts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See Section 2.2.1
2. Archaeological Sites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See Section 2.2.2
3. Recreational Areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See Section 2.2.3
<b>C. Natural</b>					
1. Wetlands and Other Surface Waters	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.3.1
2. Aquatic Preserves and Outstanding FL Waters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See Section 2.3.2
3. Water Quality and Stormwater	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.3.3
4. Wild and Scenic Rivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See Section 2.3.4
5. Floodplains	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.3.5
6. Coastal Barrier Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.3.6
7. Protected Species and Habitat	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.3.7
8. Essential Fish Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See Section 2.3.8
<b>D. Physical</b>					
1. Highway Traffic Noise	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.4.1
2. Air Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.4.2
3. Contamination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.4.3
4. Utilities and Railroads	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.4.4
5. Construction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Section 2.4.5
6. Bicycles and Pedestrians	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Section 2.4.6
7. Navigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See Section 2.4.7

### 3. Anticipated Permits

- Environmental Resource Permit issued by South Florida Water Management District (SFWMD)
- Section 404 Dredge and Fill Permit issued by US Army Corps of Engineers (SAJ-92 or NWP 14)
- General National Pollutant Discharge Elimination System (NPDES) Permit for construction activities on more than one acre issued by Florida Department of Environmental Protection



# Project Environmental Impact Report

## Simpson Road PD&E Study



### 4. Engineering Analysis

See Section 1.0.

### 5. Commitments

Osceola County commits to the following measures:

1. Osceola County will adhere to the most current United States Fish and Wildlife Service (USFWS) Standard Protection Measures for the Eastern Indigo Snake during construction.
2. Osceola County is committed to reducing construction staging areas, which should be located in disturbed upland areas to avoid impacts to fish and wildlife habitat resources, including wetlands.
3. Osceola County will provide additional work, as requested by State Historical Preservation Officer (SHPO) at the Pond 2B proposed site to determine potential unmarked graves associated with a nearby Evans, Mason and Rull Bass Cemetery.
4. Continued coordination with the Seminole Tribe of Florida

### 6. Selected Alternative

Build Alternative B/Option 2 is preferred for Simpson Road based on the traffic operational results, safety improvements, geometric feasibility, and community input. This alternative with the intersection option improvements will provide local residents with the roadway capacity needed by 2025 to accommodate future traffic demand through 2035. In addition to improving traffic flow, the Build Alternatives also provide multimodal facilities and enhance the safety of the non-motorized users along the corridor, making Simpson Road a more traveler-friendly road for all users. See Attachment 1.5.

### 7. Approved for Public Availability (Before public hearing when a public hearing is required)

Tawny H. Olore, P.E.  
Executive Director of Transportation and Transit  
Osceola County

2 / 5 / 20

**Date**



# Project Environmental Impact Report

## Simpson Road PD&E Study



### 8. Public Involvement & Agency Coordination:

1.  A public hearing is not required.
2.  A public hearing was held February 27, 2020. The draft project documents were publicly available and any comments could be submitted to the contact below until March 9, 2020.  
Contact Information: Joshua DeVries, AICP  
Director of Planning/Senior Planner  
Osceola County  
Department of Transportation & Transit  
1 Courthouse Square, Suite 3100  
Kissimmee, Florida 34741  
Phone: (407) 742-0552  
Joshua.DeVries@Osceola.org
3.  A public hearing was held on February 27, 2020 and the transcript is available.
4.  An opportunity for a public hearing was afforded and was documented (insert date).

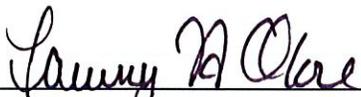
An Advanced Notification Package was sent on January 28th, 2019 identifying the project as a non-federal action; however, the Class of Action (COA) was to be determined based on coordination with the Osceola County and the Florida Department of Transportation (FDOT). In addition, this project was evaluated in the Programming Screen of the Efficient Transportation Decision Making (ETDM) process (project #14403) with the comment period beginning October 24, 2019. Based on additional coordination, it was determined a Project Environmental Impact Report (PEIR) as the appropriate COA.

Advanced Notification Package's responses were received by the Florida Fish and Wildlife, U.S. Fish and Wildlife Service and US Army Corp. A summary of the information provided through the ETDM process is included in Section 2.0 Environmental Report. With the determination of the COA as a PEIR, no further action or response to the ETDM summary report was applicable.

### 9. Approval of Final Document

This project has been developed without regard to race, color, national origin, age, sex, religion, disability, or family status.

The final PEIR reflects consideration of the PD&E Study and the Public Hearing.

  
\_\_\_\_\_  
Signing Authority

5/11/20  
Date





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## Project Environmental Impact Report

### 1.0 Project Information

#### 1.1 Project Description

The Simpson Road PD&E Study Project Environmental Impact Report (PEIR) was prepared in accordance with the FDOT PD&E Manual, Part 1, Section 10.2. The PD&E Study involves a 4.1 mile section of Simpson Road (County Road 530 – CR 530) that includes the existing two lane segments from US 192 to Fortune Road (1.3 miles) and from Hilliard Isle Road to 560 feet south of Myers Road (1.4 miles) The segment between Fortune Road and Hilliard Isle Road (1.5 miles) is an existing five lane section with a continuous left turn lane, limited sidewalks and no bike lanes. This study evaluated a consistent roadway configuration with improved capacity, operations and multimodal facilities. The proposed improvement will add lanes for a consistent typical section through the project limits, enhance multimodal connectivity by adding pedestrian and bicycle shared-use paths though the corridor limits creating improved system linkage.

The Simpson Road corridor is segmented into four construction phases, as defined by Osceola County. Construction Phase 1 is outside of the PD&E Study limits and under design by others. Construction Phases 2, 3 and 4 are within the PD&E Study limits. The proposed project considers increasing the number of lanes throughout the corridor to four lanes with the addition of continuous auxiliary lanes between Fortune Road and Buenaventura Boulevard due to the number of access cross roads, proposed signalization, and the significant traffic movements at these major intersections. Major intersection improvement alternatives are recommended at Fortune Road and Buenaventura Boulevard intersections. Pond sites and a floodplain compensation area have also been evaluated as part of this PD&E Study.

The three construction phases, listed in order of construction, are as follows:

- Phase 2 - Hilliard Isle Road to 560 feet south of Myers Road
- Phase 3 - US 192 to Fortune Road
- Phase 4 - Fortune Road to Hilliard Isle Road

Figure 1 illustrates the project location and Figure 2 illustrates the project phases.



# Project Environmental Impact Report

## Simpson Road PD&E Study



Figure 1 | Project Location Map



# Project Environmental Impact Report

## Simpson Road PD&E Study



Figure 2 | Project Phases





### 1.2 Purpose and Need

The primary purpose of the project is to enhance mobility on Simpson Road from US 192 to Myers Road improving connections to the city of Kissimmee, the emerging NeoCity, the Orlando International Airport (OIA), and the emerging Medical City at Lake Nona. In addition, a secondary project purpose is to improve overall traffic operations and safety of the existing highway network within the project study area.

The primary needs for this project include providing consistency with transportation plans, establishing system linkages, increasing capacity, addressing transportation demand, improving safety, and meeting social and economic needs. In addition, the proposed project will provide improved modal interconnections.

Osceola County is conducting the study to add capacity to the existing two-lane segments of Simpson Road from US 192 to Fortune Road (1.3 miles) and from Hilliard Isle Road to 560' south of Myers Road (1.4 miles). The segment between Fortune Road and Hilliard Isle Road (1.5 miles) is an existing five-lane section with a continuous left-turn lane, limited sidewalks and no bike lanes. The study from US 192 to Myers Road is evaluating a consistent roadway configuration with improved capacity, operations, and multimodal facilities. From Myers Road to north of Osceola Parkway, Simpson Road has been improved to a four-lane divided, urban roadway within the limits of this major intersection.

#### 1.2.1 System Linkage

Simpson Road is classified by the Federal Highway Administration (FHWA) as an Urban Minor Arterial from US 192 to Boggy Creek Road to the south of OIA. In the early 2000's the segment of Simpson Road between Fortune Road and Hilliard Isle Road was widened to a five lane section with a sidewalk on the west side and no bike lanes. The proposed improvement will add lanes for a consistent typical section through the project limits and improve sidewalks and bike lanes through the corridor limits creating improved system linkage.

Simpson Road will also provide a connection to the planned extension of Osceola Parkway Extension (Central Florida Expressway Authority (CFX) study extending Osceola Parkway to Narcoossee Road) that will provide a transportation connection from south of Orlando International Airport (OIA) to the east, adjacent to the Orange/Osceola County line through Medical City at Lake Nona and future development east of Narcoossee Road.

#### 1.2.2 Capacity

In 2017, Osceola County recorded between 25,000 and 40,000 vehicles a day on Simpson Road on the existing five-lane and two-lane sections. This average annual daily traffic (AADT) translates to a user perceived level of service (LOS) between C and F. The Central Florida Regional Planning Model (CFRPM) predicts a 65% increase in travel demand between 2015 and 2045, which would bring over 25,000 additional vehicles a day on the corridor, resulting in a failing LOS throughout the project limits.





### 1.2.3 Transportation Demand

Osceola County is the second fastest growing County in Florida. Based on the Bureau of Economic and Business Research (BEBR) estimates, the County's 2017 population of 337,614 is expected to increase to 649,800 by 2045 (medium projection), representing an increase of 92%. Though much of the project corridor is developed and serves local transportation demands, Simpson Road also provides an arterial connection between Kissimmee, OIA, and the Lake Nona area with connections via Boggy Creek Road. Simpson Road will also provide a connection to the planned extension of Osceola Parkway that will provide a transportation connection from south of OIA to the east adjacent to the Orange/Osceola County line through Medical City at Lake Nona and future development east of Narcoossee Road.

### 1.2.4 Social Economic Needs

Simpson Road is a critical part of Osceola County's Economic and Community Vision. It serves as a main gateway corridor to NeoCity, which is of importance to the County's future. Simpson Road connects NeoCity to OIA and the emerging Medical City at Lake Nona. The overall success of the County and the region is dependent upon good transportation connections between the communities along Simpson Road and these important economic engines.

In addition to being a critical north-south connection just west of East Lake Toho between Boggy Creek Road and US 192 and the core of the City of Kissimmee, it also serves as one of the two commercial corridors and gathering places for the Buenaventura Lake (BVL) community. A successful project will need to safely accommodate all travel modes and respectfully serve the BVL neighborhoods and businesses in a context sensitive way while efficiently connecting some of the region's most important economic activity centers.

### 1.2.5 Modal Interrelationships

Osceola County has established a comprehensive vision for improving multimodal corridor infrastructure as demonstrated in the County's comprehensive plan. The Simpson Road Project allows the County to pursue this multimodal vision by studying options for accommodating multiple modes such as auto, transit, pedestrian, and bicycle. Recognizing the rapid advancement of automated vehicles, strategies to support automated vehicles and automated transit will be considered and incorporated into the study recommendations where appropriate. This study provides connectivity between the Osceola Parkway multimodal corridor and the US 192 multimodal corridor as demonstrated in the comprehensive plan. Additionally, the Simpson Road project has also been recognized as a multimodal system project by MetroPlan Orlando in the Orlando Urban Area FY 2023/24-2039/40 Prioritized Project List.

### 1.2.6 Safety and Enhancement Concerns

Preliminary analysis identified a total of 635 crashes, including five (5) fatalities and 12 crashes involving bicyclists or pedestrians on the corridor during the past six (6) years. The crash types were primarily rear end at 49% followed by left turns at 21%. Crashes mostly occurred during daylight in clear conditions. There were 116 crashes recorded where Simpson Road was the intersecting street. The higher crash





areas include Simpson Road at Fortune Road, Simpson Road from Lakeside Drive to Hilliard Isle Road, and Simpson Road at Osceola Parkway.

### 1.2.7 Planning Consistency

The need for improving this portion of Simpson Road is identified in the MetroPlan Orlando Cost Feasible Long Range Transportation Plan (LRTP). Technical Report 3: Plan Development & Cost Feasible Projects, Table 10, adopted January 2016 and updated December 2019. MetroPlan Orlando and the County's Capital Improvement Plan includes three (3) segments within the proposed project limits:

- The MetroPlan Orlando LRTP includes the following Phases of the Simpson Road project, consistent with the portions of the study corridor as defined and assessed in this PD&E Study:
  - CR 530 (Simpson Road) from Buenaventura Boulevard to Osceola Parkway, widen to six lanes with Right-of-Way (ROW) and construction funded by 2020
  - CR 530 (Simpson Road) from Fortune Road to Buenaventura Boulevard, widen to six lanes with PD&E, design, ROW and construction funded by 2030
  - CR 530 (Simpson Road) from Fortune Road to US 192, widen to four lanes with PD&E, design, ROW and construction funded by 2040.
- MetroPlan Orlando's fiscal year (FY) 2018/19 – 2022/23 Transportation Improvement Plan (TIP) adopted July 11, 2018 and updated December 2019 includes three (3) segments within the proposed project limits:
  - Simpson Road Phase II (Project No. 92043) from Hilliard Isle Road to Myers Road, widen to four lanes with local funding of \$1,350,000 for preliminary engineering, ROW and construction identified in FY 2023/24
  - Simpson Road Phase III (Project No. 92075) from US 192 to Fortune Road, widen to four lanes with local funding of \$1,100,000 for preliminary engineering, ROW and construction identified in FY 2023/24
  - Simpson Road Phase IV (Project No. 92112) from Fortune Road to Hilliard Isle Road, widen to four lanes with two auxiliary lanes with local funding of \$3,207,00 in FY 2022/23 and \$530,000 in FY 2023/24 for preliminary engineering, ROW and construction
- The Osceola County Five Year Capital Improvement Plan adopted as part of the Fiscal Year 2020 Final Adopted Budget includes funding under Mobility Fee East Zone (Fund 142) for the three (3) project Phases and for one (1) project Phase under the Mobility Fee West Zone (Fund 143):
  - Simpson Road Phase II (Project 3019), \$1,350,000 FY 2023 and \$2,695,00 FY 2024 under Fund 142
  - Simpson Road Phase III (Project 4397), \$660,000 FY 2023 and \$2,225,000 FY 2024 under Fund 142
  - Simpson Road Phase IV (Project T20-017), \$3,206,750 FY 2023 and \$530,136 FY 2024 under Fund 142
  - Simpson Road Phase III (Project 4397), \$440,000 FY 2023 and \$1,950,000 FY 2024 under Fund 143.





### 1.3 Alternatives Analysis

#### 1.3.1 No-Build Alternative

The “No-Build” Alternative would maintain the existing configuration along the entire study corridor except at Fortune Road where Florida Department of Transportation (FDOT) intersection improvements have been planned for construction prior to 2025. Therefore, those intersection improvements were considered under the “No-Build” condition. The FDOT planned intersection configuration changes are:

- Convert the free-flow southbound right-turn lane to a signalized dual right-turn lane
- Add a second southbound left-turn lane
- Add a second eastbound and westbound through lane
- Add a northbound right-turn lane
- Install medians at all approaches

#### 1.3.2 Transportation System Management and Operations (TSMO) Considerations

The Simpson Road corridor has been improved through traffic management and intersection operations related improvements to support development. Examples of this include the realignment of Hilliard Isle Road, an additional northbound to westbound left turn from Simpson Road to Buenaventura Road, and new turn lanes added to smooth traffic flow along the corridor. The largest of these is the County’s ongoing project at Fortune Road described in the No-Build Alternative. The assumption of this project is that the demand present today and projected for the future will require additional capacity, better bicycle and pedestrian accommodations, and more attention to access management requiring reconstruction of the corridor. Therefore, no further TSMO options were developed into Alternatives as these would not have fulfilled the purpose or addressed the need.

#### 1.3.3 Multimodal Considerations

Sidewalks exist sporadically on both the west and east sides of Simpson Road. In many instances, sidewalks have been constructed concurrent with development. Approximately 34 crosswalks exist on or along the 4.2-mile segment of Simpson Road from US 192 to 560’ south of Myers Road. The development of the Build Alternatives are to address pedestrian and bicycle connectivity through the corridor to address the need. Bus service is currently provided along Simpson Road between US 192 and Fortune Road. Bus turnouts will be provided as part of the Preferred Alternative with consideration of ROW needs. Consistent with local government comprehensive plan goals, objectives and policies from the Transportation Element policy, the planning of the improvements will advance a safe and connected network providing mobility options for all ages and abilities regardless of transportation mode.

### 1.4 Build Alternatives

Two Build Alternatives, ‘A’ and ‘B’, were developed to address the corridor’s mobility needs. Each of these Alternatives provide additional roadway vehicular capacity, better bicycle and pedestrian accommodations, and the potential for integration with expanded transit service. The Alternatives differ



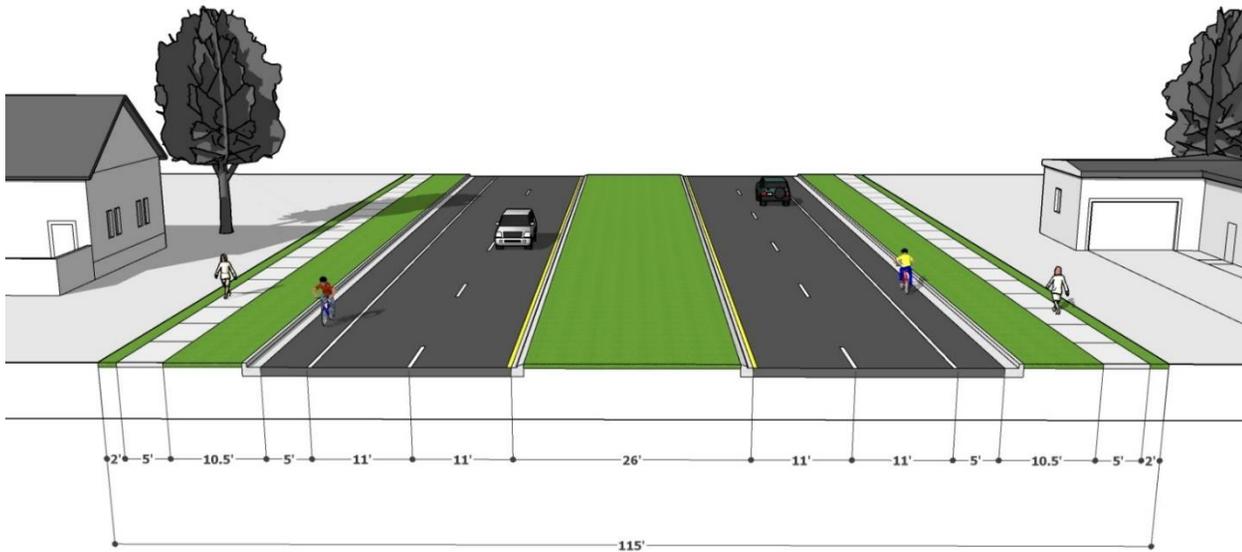


in how they address bicycle and pedestrian accommodations. The traffic operations needs are addressed via lane continuity, access management, and intersection geometry. For each of the Alternatives, two intersection options were advanced at Fortune road and Buenaventra boulevard for public comment. This section outlines the elements of each Alternative and intersection option highlighting the distinct features. Further discussion of the alternatives development and conceptual engineering analysis is provided in the Preliminary Engineering Report (PER).

### 1.4.1 Alternative Typical Sections

The Alternative 'A' typical section would include a four-lane divided roadway with a 26-foot median, a five-foot bike lane adjacent to the roadway and a five-foot sidewalk. In Phases 2 and 3, this proposed typical section would require a 115-foot ROW. In Phase 4, the ROW need would expand to 125-feet to support four lanes plus an auxiliary turn lane in each direction with a 19.5-foot median, a five-foot bike lane adjacent to the roadway, and a five-foot sidewalk. These typical sections are presented in Figures 3 and 4.

**Figure 3 | Phases 2 & 3 – Alternative A  
115ft w/ 4 Lanes and On-Street Bike Lane**

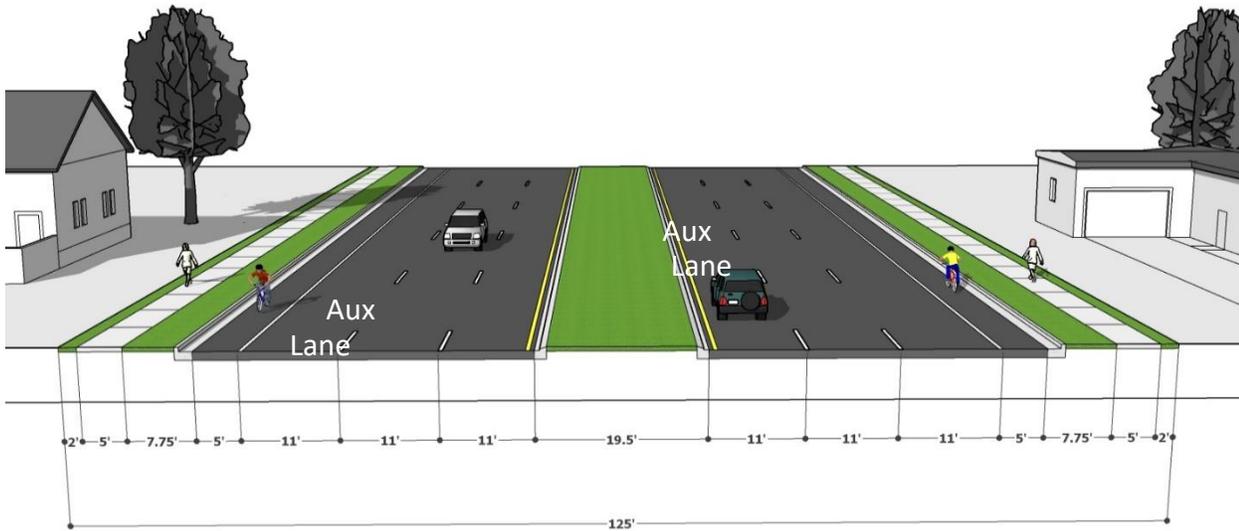


# Project Environmental Impact Report

## Simpson Road PD&E Study

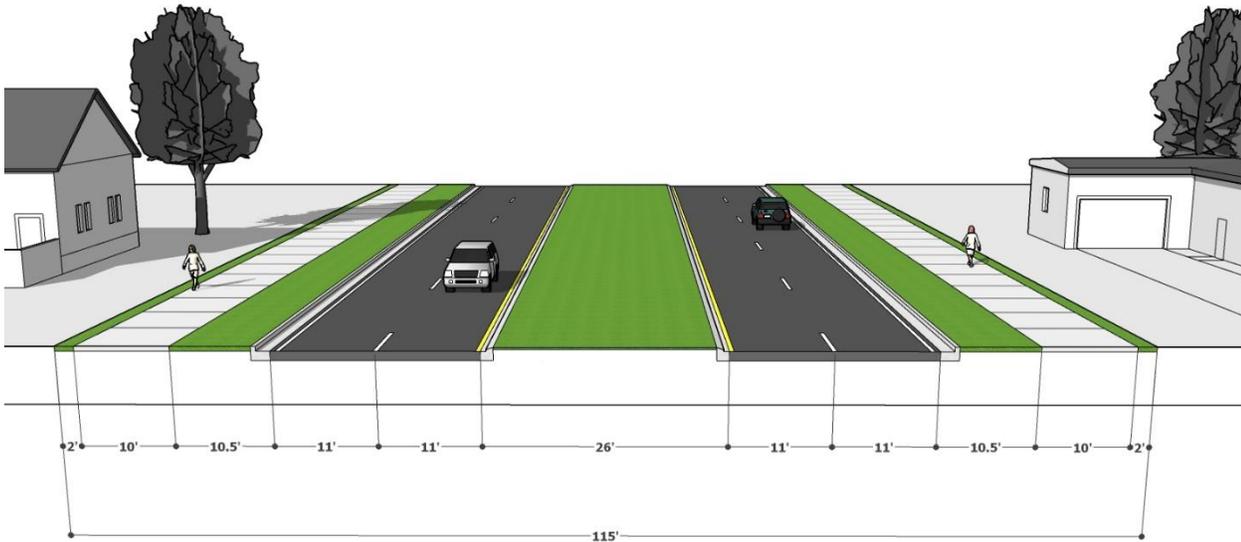


**Figure 4 | Phase 4 – Alternative A**  
**125ft w/ 4 Lanes Plus 2 Auxiliary Lanes and On-Street Bike Lane**



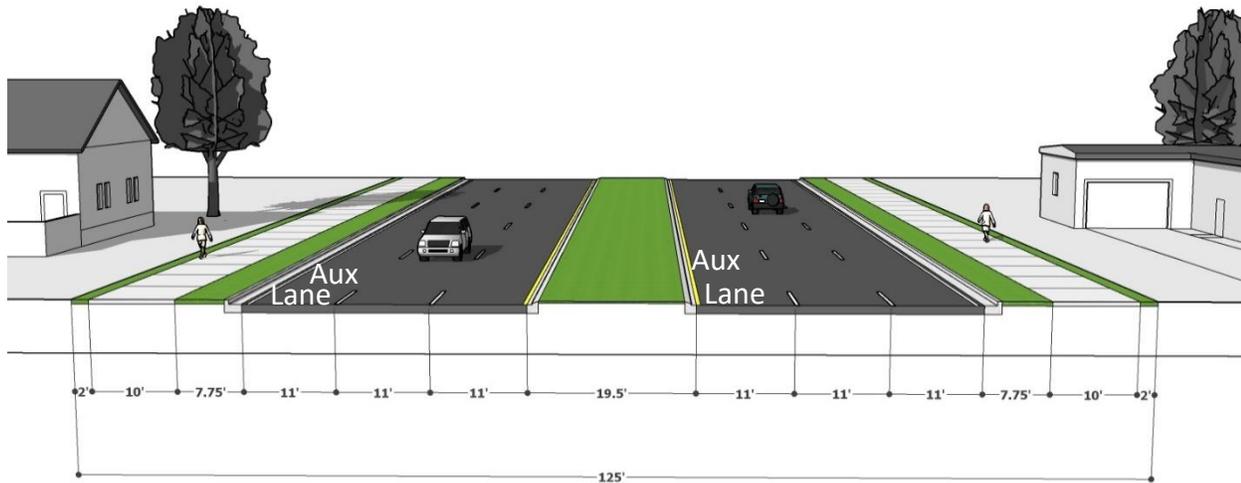
The Alternative 'B' typical section in Phases 2 and 3 would include a four-lane divided roadway with a 26-foot median. This Alternative would include a 10-foot shared path for both bicycles and pedestrians and would require a 115-foot ROW. In Phase 4, the ROW with a 10-foot shared-use path for bikes and pedestrians and two auxiliary lanes would require 125-feet. These typical sections are presented in Figures 5 and 6.

**Figure 5 | Phase 2 & 3 - Alternative B**  
**Shared-Use Path within 115' of ROW**





**Figure 6 | Phase 4 – Alternative B  
Shared-Use Path within 125' of ROW**



### 1.4.2 Intersection Alternatives

Intersection operations at Fortune Road and Buenaventura Boulevard significantly impact the efficacy of any roadway Alternative selected. The FDOT Intersection Control Evaluation (ICE) process was used to consider a broad range of Alternative intersection configurations for both traffic operations and crash conditions. Included in the range of alternative intersections was a roundabout option at the Fortune Road intersection. Based on the Capacity Analysis for Planning of Junctions (CAP-X) and Safety Performance for ICE (SPICE) outputs, the roundabout option was eliminated due to the higher volume to capacity (V/C) ratios. The results of that exercise are outlined in detail in the Simpson Road Project Traffic Analysis Report (PTAR). Additionally, the projected traffic operations for each option, including those not advanced to public meetings, are included in the PTAR for review.

Ultimately, two options for both the Fortune Road and Buenaventura Boulevard intersections were presented. Option 1 – Conventional provided additional turn lanes to support the standard eight-phase traffic operations and confine impacts to the immediate intersection area. Option 2 – Quad Road added an additional roadway segment that would allow for high left turn movements to avoid the primary intersection by diverting to the new roadway. In both cases, this additional connection improves circulation, but produces new project impacts to properties not immediately adjacent to the intersection.

#### *Option 1 – Conventional*

The conventional options would maximize the standard intersection configurations by adding lanes, extending turn-bays, and optimizing signal phasing. The configurations for Fortune Road and Buenaventura Boulevard are presented in Figure 7 and Figure 8, respectively.

At Fortune Road, three eastbound left-turn lanes would service future demand. The southbound right-turn lanes would run on their own phase and as an overlap phase in conjunction with the eastbound left-turn. The westbound left-turn would require one lane, with a striped out section available for a future left-turn lane addition.





Figure 7 | Intersection Option 1 Conventional Concept Layout for Fortune Road



At Buenaventura Boulevard, a second eastbound right-turn lane would be added with a signal phase allowing a coinciding move with the northbound left-turn. The northbound left-turn bay would be extended to accommodate the entire queue. The southbound left-turn lane would be converted from a permitted only phase to a protected-permitted phase.

Figure 8 | Intersection Option 1 Conventional Concept Layout for Buenaventura Boulevard



# Project Environmental Impact Report

## Simpson Road PD&E Study

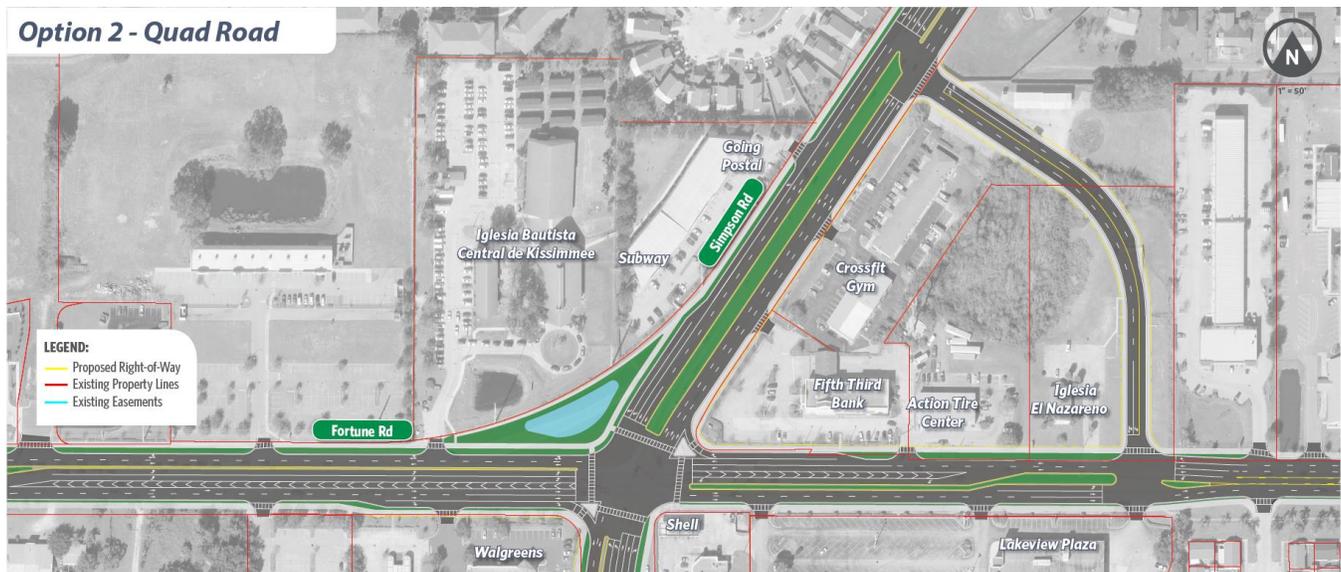


### Option 2 – Quad Road

The Quad Road option would utilize short connector-roads or “Quad Roads” to re-route traffic near Fortune Road and Buenaventura Boulevard. The Quad Roads would improve traffic flow by distributing traffic across the entire network and alleviating the demand at major intersections.

At Fortune Road, the Quad Road would be constructed in the northeast quadrant to service the southbound left-turn and the westbound right-turn at Fortune Road (Figure 9). The southbound left-turn lane would be removed from the main intersection to facilitate use of the Quad Road. However, the westbound right-turn would remain to provide access to businesses on the east side of Simpson Road. The Quad Road would service the majority of the westbound right-turn volume since it would provide a “short cut” to bypass the main intersection. Two new signalized intersections would be required to support the Quad Road.

**Figure 9 | Intersection Option 2 – Quad Road Concept for Fortune Road**



At Buenaventura Boulevard, the Quad Road would be constructed in the southwest quadrant utilizing existing roads adjacent to the shopping center (Figure 10). This Quad Road would serve 10% to 20% of the northbound left-turn and eastbound right-turn traffic at Buenaventura Boulevard. The Buenaventura Boulevard intersection would remain the primary intersection for all movements; however, the Quad Road would support bypass traffic to the shopping center or nearby residential communities.





Figure 10 | Intersection Option 2 – Quad Road Concept for Buenaventura Boulevard



### 1.4.3 Pond Alternatives

Pond site alternatives were evaluated within each basin/sub-basin, which involved coordination with property owners and Osceola County. Twelve pond site alternatives and one (1) floodplain compensation area were evaluated across seven (7) drainage basins (**Figure 11**). The recommended eight (8) pond site alternatives (i.e. Pond 1B, 2B, 3A, 4A, 5A, 5B, 6A, and 7A) and one (1) floodplain compensation site are discussed below:

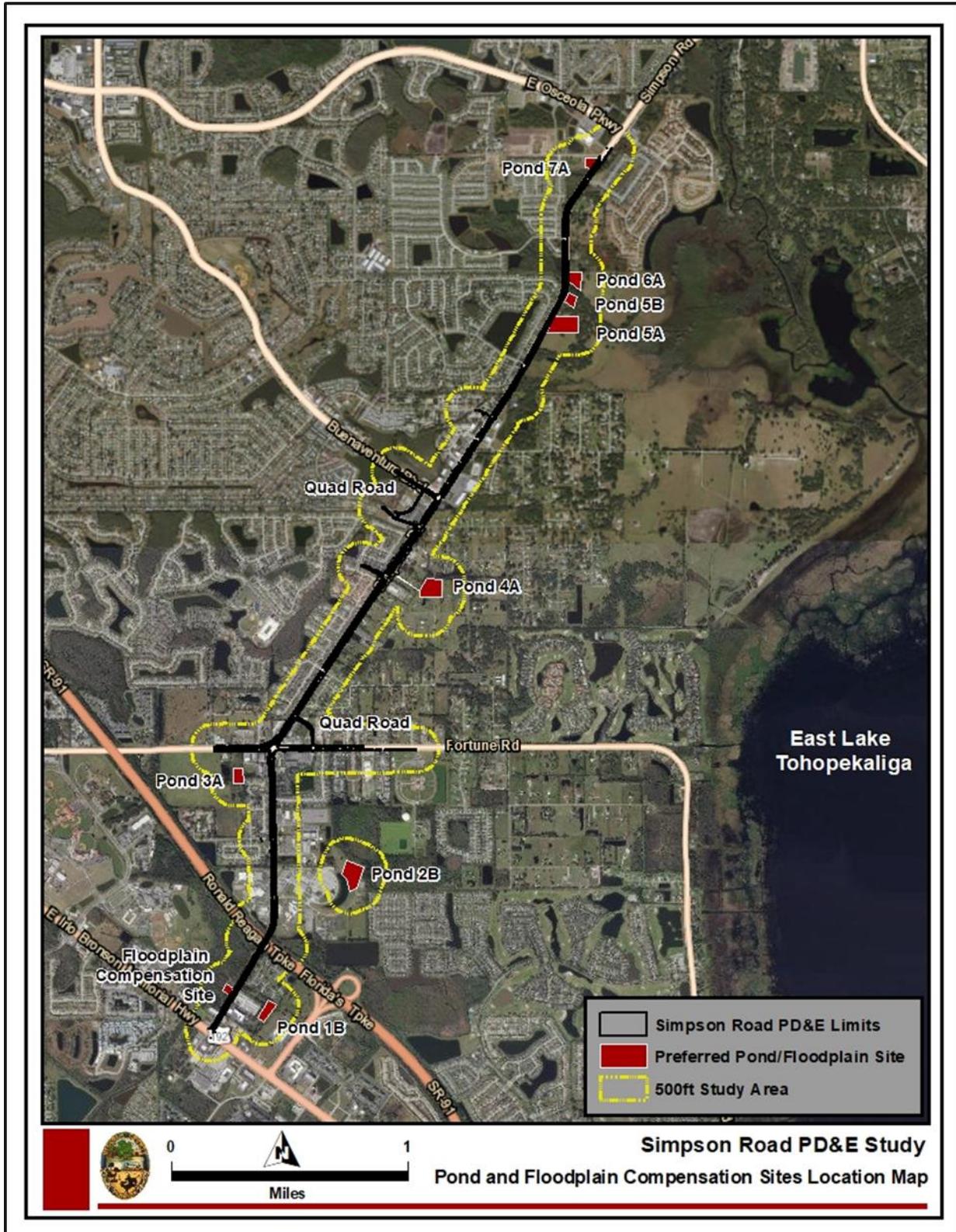
- **Basin 1:** Pond 1B was the preferred alternative, which would impact floodplain. A Floodplain Compensation Site would be needed to offset floodplain impacts in this Basin.
- **Basin 2:** Two pond sites were evaluated. Through coordination with Osceola County, the expansion of an existing School District of Osceola County pond was identified as the recommended Pond 2B.
- **Basin 3:** Two pond sites were evaluated. Pond 3A was recommended as it would enable direct connection to the basin outfall.
- **Basin 4:** Two pond sites were evaluated. Pond 4A was recommended including the easement to convey runoff from Simpson Road to the basin outfall.
- **Basin 5:** Two pond sites were evaluated in coordination with the property owner and Osceola County. Basins 5A and 5B were both recommended with an option for potential shared use in the future.
- **Basin 6:** Two pond sites were evaluated in coordination with the property owner and Osceola County. Pond 6A was recommended.
- **Basin 7:** Two pond sites were evaluated. Pond 7A was recommended, which would involve expansion of an existing pond.

# Project Environmental Impact Report

## Simpson Road PD&E Study



Figure 11 | Intersection Preferred Option – Quad Road Concept for Fortune Road





### 1.5 Preferred Alternative

With public participation, coordination with Osceola County staff, and approval from the Osceola Board of County Commissioners, the alternatives advancing for further engineering development and environmental analyses are Alternative B for the corridor roadway improvements and Option 2 for the intersection improvements at Fortune Road and Buenaventura Boulevard, including the use of standard intersection designs for the interim period.

Build Alternative A and Build Alternative B both result in the same impacts to physical, natural, and cultural resources within the study area. There are minimal differences in the impacts resulting from Intersection Option 1 and Option 2. Build Alternative B/Option 2 results in minimal impacts to wetlands, floodplains, threatened and endangered species, and any potentially contaminated sites.

The Alternative B typical section in Phase 2 and 3 (refer to Figure 5) would include a four-lane divided roadway with a 26-foot median. This alternative would include a 10-foot shared path for both bicycles and pedestrians and requires a 115-foot right-of-way (ROW). In Phase 4, the ROW need expands to 125-feet to support four-lanes plus an auxiliary turn lane in each direction with a 10-foot shared use path for bikes and pedestrians (refer to Figure 6).

Build Alternative B/Option 2 is preferred for Simpson Road based on the traffic operational results, safety improvements, geometric feasibility, and community input. This Alternative will provide local residents with the roadway capacity needed by 2025 to accommodate future traffic demand through 2035. In addition to improving traffic flow, the Build Alternatives also provide multimodal facilities and increase the safety of the corridor, making Simpson Road a more traveler-friendly road for all users. Figure 12 shows the Preferred Option for Fortune Road. The Preferred Option at Buenaventura Boulevard has been refined to minimize ROW impacts (Figure 13).

**Figure 12 | Intersection Preferred Option – Quad Road Concept for Fortune Road**

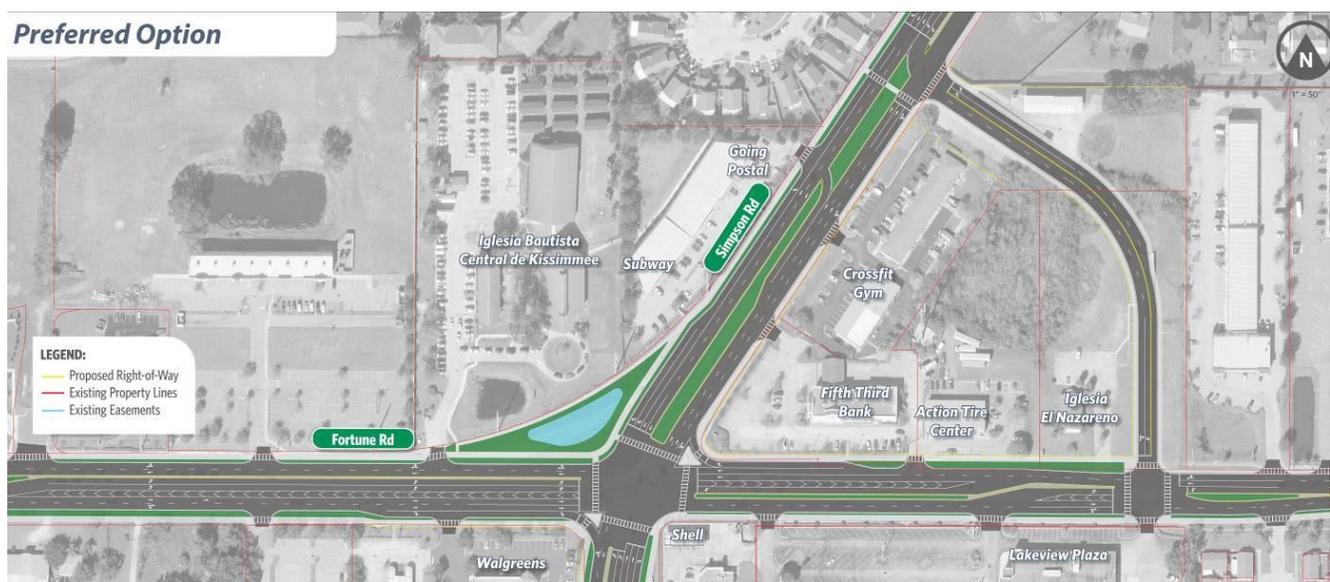




Figure 13 | Intersection Preferred Option – Quad Road Concept for Buenaventura Boulevard





## 2.0 Environmental Analysis

The following sections summarize the results of the socio-economic, cultural, and environmental data collection and analysis conducted as part of this PD&E Study. The purpose of this analysis was to determine the effects associated with the proposed roadway improvements of Simpson Road from US 192 to 560' south of Myers Road. This analysis was conducted utilizing information obtained from comments made by the various Environmental Technical Advisory Team (ETAT) members using the Environmental Screening Tool (EST) and studies of the natural, physical and social environment performed for this project. The Efficient Transportation Decision Making (ETDM) Programming Screen is available for review at <https://etdmpub.florida-etat.org/> (ETDM number 14403). The Degree of Effect (DOE) assigned for each resource during the programming screen, through the EST, are as follows:

- **Enhanced:** Land Use Changes, Mobility
- **Moderate:** Social, Relocation Potential, Farmland, Historic and Archaeological, Wetlands and Surface Waters, Water Quality and Quantity, Floodplains, Noise, Contamination, Infrastructure
- **Minimal:** Economic, Aesthetic Effects, Wildlife and Habitat, Air Quality
- **None:** Recreation

The completion of the ETDM planning process and responses to the ETAT comments was not completed with the COA determination of a PEIR. The description of impacts identified in Part 2, Environmental Analysis, and as described in the following sections are reflective of the environmental impacts documented as part of this PD&E Study.

### 2.1 Social & Economic

The proposed project is anticipated to support growth in the study area by providing consistency with transportation plans, system linkage, increase capacity, address transportation demands, and meet social and economic needs. The project will not have significant social and economic impacts. Below is a summary of the evaluation performed.

#### 2.1.1 Social

Community features identified in the study corridor include: two (2) institutional facilities, seven (7) public or private schools, five (5) group care facilities, seven (7) religious centers, and six (6) healthcare facilities. There are no recreational facilities, existing recreational trails, assisted housing facilities, or fire stations identified through the study corridor.

The seven (7) schools are Sunflower Day Care Center, La Petit Academy, IBCK Educational Center, Integrity Tabernacle Christian Academy, Adult Learning Center Osceola, Professional and Technical High School, and Challenger Learning. The institutional facilities are the Osceola County Sheriff's Corrections Department and the Osceola County School District Transportation Center. The seven (7) religious facilities are Iglesia Bautista Central, Iglesia Christiana de Kissimmee, Iglesia Cristo Misionera El Tabernacula, Iglesia de Dios, Iglesia Presbiteriana El Buen, Hispanic Church – Nazarene and the Church of God of Prophecy.



# Project Environmental Impact Report

## Simpson Road PD&E Study



The area of potential impact has considerable diversity. The EST was used to capture data for the project corridor. According to the 2016 American Community Survey (ACS) findings in the EST, the area of potential impact has a population of approximately 51,049 with 16,467 housing units. The racial background of this community is composed of 70% White, 13% African American, 9% Another Race, 5% Two or More Races, 2% Asian, 0.2% Native American, and 0.03% Hawaiian/Pacific Islander. Within these racial groups, the ethnicity most prominent is that of Hispanic/Latino origin with 67% identifying with this cultural origin. The social factors evaluated include demographics, community cohesion, safety, and community goals/quality of life.

According to 2016 ACS findings, approximately 2,217 households identify as limited English speaking with 70% of these being Spanish language speakers. Additionally, findings indicated approximately 9% of individuals identifying as having a disability. The largest population age group within the study area is 5 to 17 (21%) with the next largest age group being 50 to 64 (15.6%).

The City of Kissimmee boundaries interweave the Simpson Road corridor, mostly on the northeast and southwest quadrants of the study area. The City of Kissimmee identifies as a “community of neighborhoods for families” with priorities of quality of life and civic involvement. The City’s population is approximately 71,000 based on the recent US Census estimates (2017). It is also important to note the roadway corridor serves an important function to the Buenaventura Lakes (BVL) community. BVL is located along the northwest quadrant of the study corridor and is a Census Designated Place with a growing, diverse community. According to the 2010 US Census, BVL had a population of 26,079 and a density of 4,675 persons per square mile. This is much higher than the 2010 density per square mile for Osceola County which was 202.4 persons per square mile. Also, this is a very diverse community with a strong Hispanic/Latino population, 74% in 2010. The BVL residential community, in addition to the area schools, makes the location a prime area for pedestrian and bicycle activity. Of the total 26,079 population, approximately 44% are of Hispanic origin, and 28% of the residents in this community are under age 18 while about 13% are age 65 or older.

Another area municipality with an interest in this project is the City of St. Cloud. St. Cloud is a community of 51,282 persons, based on the recent US Census estimates (2017). While the project is not located in St. Cloud, it is in close proximity to the area where there is currently a Joint Planning Agreement between the municipality and Osceola County.

This project will support increasing social and economic demands expected due to continued population and employment growth in this area. The proposed project is anticipated to improve traffic flow and safety for the surrounding communities and businesses. The Preferred Alternative will enhance and improve the pedestrian and bicycle facilities through the study limits.

There are no residential relocations resulting from the project and therefore the demographic make-up of the community is expected to remain the same under the No Build Alternative or the Preferred Alternative.

### 2.1.2 Economic

Simpson Road connects economic centers with its proximity to the US 192 corridor, Valencia College/University of Central Florida Osceola Campus, Tupperware Brands Corporation, Orlando International Airport (OIA), Lake Nona, and the area communities of Kissimmee, and BVL. Additionally,





the southern end of the study corridor leads to the entrance of NeoCity, a 500-acre technology district which is expected to further drive job creation in the area. This project is expected to benefit local commuters and the local communities by enhancing mobility of people and goods within the study area resulting in a positive economic benefit. The proposed improvements will enhance the economy in this area by improving mobility, access to jobs and connectivity between new and existing economic drivers.

### **2.1.3 Land Use Changes**

Land uses within study area are largely developed with few vacant parcels. Vacant land is associated with Institutional uses and low areas. Land use patterns are not expected to change as a result of the proposed project. As such, land use impacts are not anticipated for the Simpson Road improvements.

### **2.1.4 Mobility**

Pedestrian and bicyclist mobility improvements along Simpson Road include 10-foot shared-use paths on each side of the roadway. Pedestrian and bicycle safety and connectivity for users and the area communities will be improved.

In coordination with Osceola County School District, bus turnouts have been provided on Simpson Road north of the Turnpike bridge structure to Country Lane. These turnouts are coordinated with Osceola County at existing bus stops within the immediate vicinity of the School District's bus maintenance and storage/layover site. LYNX continues to evaluate bus service through the Simpson Road corridor, coordination during the design phase may identify other opportunities to add bus turnouts with the reduction of median width and/or the grassed utility strip between the curb and shared-use path. The proposed mobility improvements along Simpson Road will enhance access to transportation for multi-modal users including students, cyclists, pedestrians, and transit riders.

### **2.1.5 Aesthetics Effects**

The proposed improvements will have no anticipated aesthetic effects. Simpson Road is located in a highly residential area with community facilities as well as businesses located adjacent to Simpson Road. Visual features within the ROW include utility poles on both sides with limited vegetation throughout the study limits.

### **2.1.6 Relocation Potential**

There are 39 parcels affected by the proposed roadway corridor improvements impacting a total of 29.89 acres. Of these impacts one is a business impact (car wash) and one includes affecting an out building associated with the Iglesia Del Nazareno Casa. Both of these direct impacts are due to the Quad Road intersection option at Fortune Road. Of the total ROW impacts, 8.45 acres occur along the roadway corridor and 21.44 acres from the recommended ponds plus the floodplain compensation pond. Impacts include residential, commercial and agriculture land uses.

No residential or institutional relocations are proposed with the Simpson Road Improvements. One business will be impacted with business damages incurred. The Preferred Alternative will have no effect on relocation potential.





## 2.2 Cultural Resources

The project will not have significant impacts to cultural resources. Below is a summary of the evaluation performed. A full assessment of the cultural resources is provided in the Cultural Resource Assessment Survey.

### 2.2.1 Historic Sites/Districts

The Preferred Alternative will not impact any historical sites.

### 2.2.2 Archaeological Sites

Florida Master Site File (FMSF) data from October 2018 was reviewed to identify any previously recorded cultural resources within the study area. The FMSF review indicates that 14 previous cultural resource surveys intersect the current study area. The review identified three (3) previously recorded cultural resources within the study area. However, the Preferred Alternative will not impact any of these sites.

### 2.2.3 Recreational Areas

There are no existing public recreational parks or Florida Managed Lands in the project area. The Osceola County Parks Master Plan Phases II and III, January 2018, were reviewed and there are no planned parks in the study area. Therefore, the Preferred Alternative will have no impacts to any recreational areas.

## 2.3 Natural Resources

The project will not have significant impacts to natural resources. Below is a summary of the evaluation performed:

### 2.3.1 Wetlands and Other Surface Waters

The Preferred Alternative results in impacting 4.02 acres of wetlands and surface waters. The roadway impacts are 0.92 acres of wetlands. This includes minimal impacts to Forested freshwater wetland (0.17 acres), Non-forested freshwater wetland (0.04 acres), Hydric-cut Surface Water (0.44 acres), and Upland-cut Surface Water (0.27 acres). The recommended pond sites will impact 3.1 acres of wetlands that include approximately 2.22 acres of exotic wetland hardwoods to construct Pond Site 4A and an estimated 0.88 acres to upland-cut surface waters to construct Pond Sites 1B, 2B, and 7A. The full wetland impact analysis is provided in the in the Natural Resource Evaluation (NRE) report.

### 2.3.2 Aquatic Preserves and Outstanding FL Waters

There are no Aquatic Preserves or Outstanding Florida Waters within the project area.

### 2.3.3 Water Quality and Stormwater

The drainage patterns in the proposed condition will remain similar to the existing condition. The principal change will be conversion to a closed storm drain system with curb inlets and gutters for stormwater





collection and conveyance. The modified drainage pattern will be where southbound (SB) and northbound (NB) Simpson Road have separate outfall locations in the existing condition. Both SB and NB will be collected by a storm drain system and conveyed to a proposed pond for these sections in the proposed condition. Discussion of the existing basin divides are detailed in the project's Pond Siting Report. Offsite drainage will be collected and conveyed to the existing receiving water. Enhanced water quality will be provided within the project limits.

A Water Quality Impact Evaluation (WQIE) was completed for the project to comply with the Clean Water Act and the Safe Drinking Water Act. The results of the WQIE confirm that the proposed stormwater facility design will include the minimum water quantity requirements for water quality impacts as required by the SFWMD in chapter 62-302 of the FAC. It is anticipated that no adverse effects will occur to water quality within the project limits.

Osceola County will continue to coordinate water quality and quantity impacts and stormwater management with the appropriate regulatory agencies as required through the design and permitting phases of the project, and during and after construction.

### **2.3.4 Wild and Scenic Rivers**

There are no Wild and Scenic Rivers in the project area.

### **2.3.5 Floodplains**

Within Phase 3, between US 192 and Turnpike, Simpson Road is immediately adjacent to a FEMA floodplain designated as Zone AE. With an established flood elevation, less than four (4) acres are identified in the buffer area. The Preferred Alternative will result in impacting 0.87 acres of floodplains.

The floodplain compensation pond site identified is an abandoned building pad. The compensation is to restore the site to the historic floodplain conditions with removal of the in-place fill. The floodplain impact analysis is provided in the NRE and Location Hydraulics Report (LHR).

Based on the FDOT's floodplain categories, this project falls under Category 3: PROJECTS INVOLVING MODIFICATION TO EXISTING DRAINAGE STRUCTURES. Work under this type of project will not involve the replacement of any existing drainage structures or the construction of any new drainage structures to convey offsite flood waters across the roadway. Work will only involve modification of existing structures (e.g., extending cross drains, and adding headwalls).

Modifications to existing drainage structures included in this project will result in an insignificant change in their hydraulic capacity to carry floodwater. These modifications may cause minimal increases in flood heights and flood limits, which will not result in any significant adverse impact on the natural and beneficial floodplain values or any significant change in flood risks or damage. There will be no significant change in the potential for interruption or termination of emergency service or emergency evacuation routes as a result of the existing drainage structures modifications. Therefore, it has been determined that the floodplain encroachments associated with the Simpson Road improvements are not significant.





### 2.3.6 Coastal Zone Consistency

The State of Florida, through the Advanced Notification and ETDM process, has determined that the project is consistent with the Florida Coastal Zone Management Plan.

### 2.3.7 Protected Species and Habitat

The Preferred Alternative would have minimal effect on federal and state-listed threatened or endangered species. Federally protected wildlife which could have the potential to occur within the project study area based on existing conditions and/or U.S. Fish and Wildlife Service (USFWS) Consultation Area boundaries included reptiles (Eastern indigo snake, sand skink, and blue-tailed mole skink) and birds (wood stork, crested caracara, Everglade snail kite, red-cockaded woodpecker, Florida scrub-jay, and Florida grasshopper sparrow). Six of the federal species (i.e. sand skink, blue-tailed mole skink, Everglade snail kite, Florida scrub-jay, red-cockaded woodpecker, and Florida grasshopper sparrow) were given a determination of no effect based on site conditions and field surveys. Three of the federal species (i.e. Eastern indigo snake, wood stork, and crested caracara) received a may affect, not likely to adversely affect based on observations and/or potential habitat. USFWS designated critical habitat, as defined by Congress 50 CFR § 17.94, was not present for any federal species; therefore, the proposed project would not result in the destruction or adverse modification of critical wildlife habitat. Based on existing conditions, seven (7) state protected species (i.e. gopher tortoise, short-tailed snake, Florida pine snake, Florida sandhill crane, Florida burrowing owl, Southeastern American kestrel, and little blue heron) were given a determination of no adverse effect anticipated. The full analysis on threatened and endangered species within the project study area has been provided in the NRE report.

The non-listed, but federally protected bald eagle and osprey could utilize the project area for foraging. The bald eagle receives protections through the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668d). Both the eagle and the osprey are afforded protection under the Migratory Bird Treaty Act, 16 U.S.C. 703-712 (MBTA). The project is not expected to impact these species.

Thirty protected plants could potentially occur within the project study area based on the Florida Natural Areas Inventory (FNAI) including 13 that receive federal protection and 30 that are protected by the Florida Department of Agricultural and Consumer Services. However, since suitable habitat was not located within the project area, a determination of no effect would be anticipated for both federal and state protected plants.

### 2.3.8 Essential Fish Habitat

No coastal or marine resources, including essential fish habitat, exist in the project area. An Essential Fish Habitat (EFH) Assessment was not required for this project per the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) of 1996. The project will have no effect on EFH.

## 2.4 Physical Resources

The project will not have significant impacts to physical resources. Below is a summary of the evaluation performed for these resources.





### 2.4.1 Highway Traffic Noise

The Noise Impact Memorandum completed for this study utilized Build Design Year 2045 traffic projections as approved in the PTAR. The noise analysis followed requirements consistent with Osceola County Noise Ordinance, Title 23 of the Code of Federal Regulations (C.F.R.), Part II, Chapter 18 of the FDOT Project Development and Environment Manual, Section 335.17 Florida Statutes and adhering to current Federal Highway Administration (FHWA) traffic noise analysis guidelines. The Preferred Alternative noise analysis confirmed that a substantial increase in traffic noise will not occur. Should federal funding become available for the project, a detailed Noise Study Report will be prepared during the design phase.

The construction of the proposed roadway improvements will have temporary noise impacts. Trucks, compaction equipment, earth moving equipment, pumps, and generators are sources of construction noise. During construction short-term noise may be generated by stationary and mobile construction equipment. The construction noise will be temporary and will be controlled by adherence to the most recent edition of the FDOT Standard Specifications for Road and Bridge Construction.

### 2.4.2 Air Quality

The proposed project is located in Osceola County, an area currently designated as being in attainment for the following criteria air pollutant(s): ozone, nitrogen dioxide, PM2.5 and PM10, sulfur dioxide, CO, and lead. Therefore, the Clean Air Act (CAA) conformity requirements do not apply to the project.

In accordance with Chapter 19 of the FDOT PD&E Manual, Part 2, Chapter 19, both the No-Build and Build Alternatives were subjected to a project level (hot spots) analysis using a screening model to estimate localized concentrations of CO that may exceed the NAAQS. The FDOT's screening model, CO Florida 2012, makes various worst-case assumptions related to site conditions, meteorology, and traffic and uses the latest EPA-approved software to produce estimates of one-hour and eight-hour CO at default receptor locations. The one-hour and eight-hour estimates can be directly compared to the current one- and eight-hour NAAQS for CO.

The roadway intersection with the highest forecast total approach traffic volume is Simpson Road at Fortune Road. The No-Build and Build Alternatives for both the opening year (2025) and the design year (2045) were evaluated. Estimates of CO were predicted for the default receptors, which are located 10 feet to 150 feet from the edge of the roadway. Based on the results from the screening model, the highest project-related CO levels are below the NAAQS of 35 ppm for a one-hour concentration and 9 ppm for an eight-hour concentration with either the No-Build or Build Alternatives. The full assessment of the air analysis is provided in the Air Quality Impact Technical Memorandum.

The project is not predicted to have substantial air quality impacts and has passed the NAAQS model screening. Construction activities may cause minor short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts can be minimized by adherence to all applicable local and State regulations and application of appropriate construction specifications.





### 2.4.3 Contamination

The Preferred Build Alternative has the potential risk of encountering 11 medium risk sites. The preferred intersection improvements for Fortune Road and Buenaventura Boulevard are not anticipated to impact any potentially contaminated sites. A Level II Impact to Construction Assessment is recommended for the medium risk sites to evaluate the potential presence of contamination. The full assessment on the risk of encountering petroleum or hazardous substance contamination of soil, groundwater, surface water, or sediment that could adversely affect this project is provided in the Contamination Screening Evaluation Report (CSER).

### 2.4.4 Utilities and Railroads

A Sunshine 811 design ticket request covering the study corridor recognized 18 Utility Agency Owners (UAOs). The preliminary utility coordination is based on information provided by the UAOs, the existing utilities identified on the project from the design ticket request were evaluated and potential utility impacts were identified. Requests for utility information was sent to each of the 18 UAOs with responses from nine (9) identifying utilities in the corridor. Of the remaining UAOs, four (4) responded with no utilities in the corridor, three (3) not responding and two (2) were common contacts.

To minimize existing utility impacts, particularly to facilities located in easements (KUA), measures have been taken in this study with adjustments to median widths and placement of the shared-use path. Additional measures would be taken during the design phase to mitigate impacts to minimize costs to the UAOs and disruption to customers. Further utility information is included in the Preliminary Engineering Report (PER) and the utility locations received from the UAOs is included on the Preferred Concept Plans, also included in the PER.

There are no railroads within the limits of the Simpson Road study.

### 2.4.5 Construction

The Transportation Management Plan (TMP) during construction of the preferred Alternative will follow the FDOT Standard Plans for Roadway Construction (102 series). Best management practices will be employed during construction to ensure minimization of impacts. Construction of the implementation phases along the existing Simpson Road corridor can be structured to maintain existing traffic and access to residents and businesses. Temporary pavement, detours, and diversions may be required. Existing pedestrian and bicycle access must be maintained throughout construction. Construction along the widening and reconstruction can be performed with minimal traffic impacts.

In Phase 3 the preliminary approach is to maintain traffic in the center and build the outside lanes, curb and gutter, and shared-use path. With the outside lanes constructed in both directions, traffic would be shifted to these lanes and construction of the median would occur. This approach reduces the need for temporary pavement.

The TMP for Phase 4 is similar to the Phase 3 approach with traffic using the existing interior lanes and construction occurring along the outside in two phases. To increase the space available for construction, proposed access changes will be implemented in these initial phases by removing the existing center





turn lane. With completion of the outside lanes, construction of the median and auxiliary lanes will be completed.

In Phase 2, the existing travel lanes are centered in the proposed typical sections, the preliminary approach is to construct temporary pavement along the east side of the existing edge of pavement. Traffic would be shifted to the right to use the existing travel lane and temporary pavement while the left half of the proposed typical section would be construction. Once the left side (SB lanes) are constructed, traffic would be shifted onto these travel lanes as the east side (NB lanes) went into construction. After completion of the right side, traffic would be placed into the outside lanes in both directions and the median would be completed.

Adherence to FDOT Standard Specifications for Road and Bridge Construction during the construction phase will minimize short-term impacts generated by construction activities.

### **2.4.6 Bicycles and Pedestrians**

The Preferred Alternative includes a 10-foot shared-use path for both bicycles and pedestrians on each side of the proposed roadway improvements from US 192 to Myers Road.

### **2.4.7 Navigation**

There are no navigable waters in the project area.





### 3.0 Technical Materials

The following technical materials have been prepared to support this environmental document.

- Preliminary Engineering Report (PER)
- Existing Conditions Assessment Technical Memorandum
- Project Traffic Analysis Report (PTAR)
- Location Hydraulics Report
- Pond Siting Report
- Conceptual Design Plan Set (see PER Appendix)
- Typical Section Package (see PER Appendix)
- Preliminary Roadway Soils Survey
- Noise Impact Memorandum
- Air Quality Technical Memorandum
- Level I Contamination Assessment Report (Contamination Screening Evaluation Report (CSER))
- Water Quality Impact Evaluation (WQIE)
- Natural Resource Evaluation (NRE) Report
- Cultural Resource Assessment Report (CRAS)

